



# Automation and control solutions



# Automation and control solutions

**WARNING** If not specified, the technical data in this catalogue are typical and measured at 25°C (77°F), 230 Vac, Unom, Vdc and rated current; ripple is measured at 20 MHz with probe connected to 0.1 µF. The technical data in this catalogue are typical and are not binding for Cabur and may be modified without prior notice, simply for production or improvement and/or evolution reason. Please contact our technical-commercial offices for any relevant confirmation or updates. For more informations visit our web site [www.cabur.eu](http://www.cabur.eu).

**The Company**

Founded in Italy in 1952, Cabur quickly conquered the role of leader amongst the national manufacturers of terminal blocks for electrical panels, always paying particular attention to the needs of installers and to cutting-edge technological solutions.

Today the company develops and manufactures a wide range of products for the electrotechnical and electronic industry which are renowned for their reliability even in extreme conditions of use.

The current production is the result of the many years of experience gained by Cabur as a partner of the main national bodies and companies, perfected through actions and collaborations abroad and includes:

- Connections for electrical panels
- Automation and control solutions
- Industrial marking systems
- Solutions for renewable energy

The wide and diversified offer guarantees a level of flexibility and unique ability to find solutions tailored to specific needs, which enables us to respond to the most varied and complex installation needs.

Always oriented towards the improvement of its products, in recent years Cabur has responded to the Industry 4.0 project with the expansion of production facilities and important product innovations.

In pursuing a corporate culture based on Total Quality, Cabur has adopted the main European directives of the reference market and collaborates with the most prestigious national and foreign Institutes and Laboratories.

Its products are the result of qualitative choices of particular relevance in the field of raw materials used that, in addition to providing an ample guarantee of functionality and reliability over time, also work in full compliance with all the Norms, Regulations, Laws and applicable requirements, binding and self-adopted, with full satisfaction of all compliance obligations.



**INDUSTRIAL CONNECTIVITY SOLUTIONS**



**AUTOMATION AND CONTROL SOLUTIONS**



**INDUSTRIAL MARKING SOLUTIONS**



**SOLUTIONS FOR RENEWABLE ENERGY**



## POWER SUPPLIES

INTRODUCTION .....	6	1-2-3-PHASE POWER SUPPLIES - CSW SERIES .....	41	DC BATTERY CHARGER-UPS - CSU SERIES .....	58
QUICK SELECTION TABLE .....	8	3-PHASE POWER SUPPLIES - CSO SERIES .....	47	POWER SUPPLY WITH BATTERY CHARGER .....	62
SINGLE-PHASE POWER SUPPLIES - CSD SERIES ..	10	DC/DC CONVERTERS - CSA SERIES .....	53	REDUNDANT CONNECTION ACCESSORIES .....	63
SINGLE-PHASE POWER SUPPLIES - CSF SERIES ..	15	LINEAR POWER SUPPLY - AL SERIES .....	56	COMMUNICATION INTERFACE .....	66
SINGLE-PHASE POWER SUPPLIES - CSL SERIES ..	24	FILTERED POWER SUPPLY - AR SERIES .....	57	MOTOR BRAKE CONTROLLER .....	67

CHAPTER 1

## OVERCURRENT PROTECTION DEVICES

ELECTRONIC OVERCURRENT PROTECTION .....	69
SURGE PROTECTION DEVICES .....	70

CHAPTER 2

## EMI FILTERS

TDV SERIES 3-PHASE FILTER WITHOUT NEUTRAL	72	TY SERIES COMPACT 3-PHASE FILTER WITH NEUTRAL..	77
TDS SERIES 3-PHASE FILTER WITHOUT NEUTRAL	75	DK SERIES SINGLE-CELL SINGLE-PHASE FILTER .....	78
TYT SERIES 3-PHASE FILTER WITH NEUTRAL .....	76	DP SERIES DOUBLE-CELL SINGLE-PHASE FILTER .....	80

CHAPTER 3

## SIGNAL CONDITIONERS

INTRODUCTION .....	82	CURRENT CONVERTERS .....	97	BRIDGE .....	107
QUICK SELECTION TABLE .....	84	FREQUENCY CONVERTERS .....	98	DIN RAIL ETHERNET SWITCH .....	108
ANALOGUE SIGNAL CONVERTERS .....	86	THRESHOLD MONITOR MODULES .....	99		
PASSIVE GALVANIC ISOLATORS .....	92	AUXILIARY POTENTIOMETERS FEEDER .....	102		
SIGNAL DUPLICATOR .....	93	NPN AND PNP SIGNAL INVERTER .....	103		
TEMPERATURE CONVERTERS .....	94	CONVERTER WITH MODBUS COMMUNICATION .....	104		

CHAPTER 4

## ELECTROMECHANICAL RELAY MODULES

RELAY QUICK SELECTION TABLE .....	109	CWR SERIES RELAY MODULES .....	122
R SERIES RELAY MODULES .....	110	MULTI-CHANNEL RELAY MODULE .....	124
CM SERIES RELAY MODULE .....	112	SUPER COMPACT RELAY MODULES .....	130
CKR SERIES RELAY MODULES .....	121		

CHAPTER 5

## SOLID STATE RELAY MODULES

QUICK SELECTION TABLE .....	133
SINGLE RELAYS .....	134
CKS SERIES SINGLE RELAYS MODULES .....	141
SIGNAL OPTO-ISOLATORS .....	137
MULTI-CHANNEL RELAY MODULE .....	138

CHAPTER 6

## PASSIVE INTERFACE MODULES

QUICK SELECTION TABLE .....	143	DIODES HOLDER MODULES .....	163
SUB-D / TERMINAL BLOCK .....	144	LED TESTING MODULE .....	166
FLAT-CABLE / TERMINAL BLOCK .....	151	LAMP TESTING MODULE .....	168
COMPONENTS HOLDER MODULES .....	161		

CHAPTER 7

## ACCESSORIES

PLASTIC ENCLOSURES .....	169
JUMPER BRIDGES .....	173
DIN RAIL CLAMP .....	175
MARKINGS .....	176
MOUNTING RAILS .....	177

CHAPTER 8

INDEX BY CODE .....	179
INDEX BY TYPE .....	180

Cabur continues to renew and expand its range of power supplies for use in industrial automation and control of processes and systems, improving product performance and technology to meet the needs created by the continuing changes in applications and regulations.

**QUALITY AND SAFETY:** Cabur was the first Italian company to obtain UL508 Industrial Control Equipment certification for industrial automation processes and Hazardous Location Class 1 Div. 2 for processes in dangerous areas, as well as to have been certified as conforming to the Directives on Electric Safety. It also has been EMC certified by an accredited laboratory. All of these are indispensable for the CE certified label.

**INNOVATION AND RESEARCH:**

- 1997 - Cabur is the first Italian company to produce switching power supplies for DIN-rails with 90-264Vac/110-340Vdc universal input.
- 2001 - Cabur is the first Italian company to produce high efficiency power supplies with resonant technology (the 20A 3-phase dissipates only 36W compared to over 75W for our competitors at the time).
- 2009 - With the new generation of power supplies in the catalogue, Cabur has further improved performance using "Synchronous Rectifier" technology, which reduces power dissipation and operating temperature to the minimum, an indispensable factor in minimising the size of the power supplies, which are the smallest on the market.

The lifespan of a power supply is halved by every +10°C increase in operating temperature. Hence, reducing operating temperature is fundamental to endurance and reliability, two objectives that can be achieved only by using circuit technology and next generation components. Thanks to this combination, Cabur has achieved output of over 94% (the new 20A 3-phase dissipates only 28W, compared to the 50-75W in heat dissipation found in other products currently on the market).

**HIGH OVERLOAD CAPACITY:** the new power supplies have an overload capacity of over +50% for 5 seconds or for several minutes (please see the technical data), while maintaining stable output voltage even under these conditions.

**SYSTEM COMMUNICATIONS:** all the CSF, CSG, and CSW Series models are provided with "intelligent" alarm contacts that commute when the output voltage drops below -10% of the nominal value. This allows the controls to activate automated or emergency procedures to reduce machine stoppage, production losses, and the risk to safety.

**TOTAL PROTECTION:** all models are provided with output protection against overload short circuiting, overtemperature, and overvoltage, both for input and output. Input for the 3-phase models includes the Active Surge Suppressor - Inrush Current Limiter, which avoids malfunctioning in the case of overvoltage generated by commutation of loads or malfunctions on industrial networks, where the value can reach 3-4 times the network voltage, with a duration of 1.3ms (Regulation VDE-0160), which can be destructive for the input components. This increases reliability, especially in networks subject to power surges and power malfunctions.

**SHORT CIRCUIT AND OVERLOAD PROTECTION:** this serves to protect the power supply from malfunctions due to overloading and overheating of the components. This function can be designed by starting with different application needs, with varying practical results and costs. In automated applications, the operating conditions and the nature of the loads can vary greatly and are only partially known to the power supply designer. Power supplies for automated processes need to meet a number of requirements: they need to be protected from overcurrent, but at the same time they need to be able to supply loads which call for a high peak current, working at temperatures of at least 45° C, according to regulations, and sometimes higher, in critical ventilation situations and guaranteeing high reliability and acceptable costs. The overcurrent protection must support the high peak currents required by loads such as filament lamps (cold, they make a short circuit), capacitive loads such as dc/dc converters and filter condensators (when these switch on they are seen as a short-circuit for a few tenths of a ms) or inductive loads (engines in dc, electromagnets, etc.) which at peak require currents from 5 - 30 times their nominal power. Frequently, all these loads must be started up at the same time. The breakaway starting current must be provided for a sufficient duration to "start" the load, which can go from a few tenths of a ms up to 5s.

With high-power power supplies, which power various loads protected from overcurrent, the capacity to provide overcurrent is indispensable to guarantee selectivity in protection interventions. This is because it allows the fuse of the malfunctioning load to be "burned" before the electronic protection of the power supply intervenes, disconnecting the output and hence the entire system.

**ELECTRONIC OVERLOAD POWER SUPPLY PROTECTION CAN BE OBTAINED USING VARIOUS TECHNIQUES:**

- switch off the output as soon as possible: this is cost effective but doesn't allow for either start up of heavy loads nor for protection selectivity for various loads.
- constant power protection: if the allowed overload is sufficiently high, it is possible to start up heavy loads. However, if the condition continues, the power supply will continue to operate in overload and with a high thermal stress level. Hiccup protection: combines the advantages of the techniques described above, while limiting the disadvantages because it allows over +50-100% of the overload for at least 5 seconds, and then switches off output for a longer break. In this way, the peak power necessary for heavy load peaks is obtained while component heating is decreased, as they can cool off during the break. Hiccup protection with high overcurrent output, for durations from 200 ms to over 5 sec., has been proven to satisfy the new requirements established by the Machinery Directive EN 60204-1.

**REAL OPERATING TEMPERATURE:** the operating temperature range for all Cabur models is between -20 and +50°C at full load without derating (see technical data), certified in accordance with the rigorous UL508 standard.

The project takes into consideration the ambient temperature, allowed overcurrent, and overcurrent duration when determining component size, and is always more than the 45°C required by the standards for electrical panels. Ambient temperature is a fundamental reference parameter, because this influences not only performance, but also component operating temperature and power supply duration.

**HOLD UP TIME:** this is the time in which the power supply output supplies nominal voltage at nominal load. This performance is important because it limits the cases in which machine/system stoppage can occur due to voltage "holes" in the network. EMC standards establish that Hold Up time must be at least 10ms. For all Cabur power supplies, Hold Up time is greater than that required by the official standards, which ensures better operational consistency in networks with frequent voltage holes.

**MTBF:** this figure should be taken with care, because it is the result of theoretical calculations that are easy to manipulate. For example, if we know that the mortality rate for 25 year old men is 0.1%/year, the resultant MTBF, calculated in accordance with SN29500 - IEC 61709, would be 800 years. Obviously, this result is highly unrealistic. The significant piece of information is the "life expectancy," which for men averages about 75 years - less spectacular but more realistic. The same reasoning can be applied to electronic products for which, in accordance with the calculation methods, we can use an MTBF of 750,000 hours (85 years), or a life expectancy of about 70,000 hours (7.9 years, on average). The second estimate is less optimistic, but is without doubt closer to reality. As a consequence, data published regarding MTBF must be interpreted based on the credibility of the calculation methods used. In addition to the values according to SN 29500, Cabur has also chosen to declare those according to the MIL HDBK217F standards, which are much stricter.

**CUSTOM POWER SUPPLIES:** Cabur designs and produces "custom" power supplies on request to meet the requirements of regulations and the high demanding applications. Furthermore our laboratory offers technical documentation and the measures which prove the conformity of the products with the directives on Electric Safety and Electromagnetic Compatibility, besides the necessary technical support to define the product characteristics on the basis of the client's needs and our own experience.

**THE ENVIRONMENT AND ROHS CONFORMANCE:**

Cabur was one of the first Italian companies to obtain the International Environmental Certificate UNI EN ISO 14001, certified by CSQ for ecologically compatible treatment of all the materials used in our production.

Since 2007, all Cabur products have been manufactured in conformity with the Rohs Wee directives.



## General notes

**PARALLEL AND REDUNDANT PARALLEL CONNECTION:** all Cabur power supplies can be connected in parallel to combine the power of two or more power supplies. In addition, models that already include an output separation diode (ORing diode) are available for use with redundant parallels (please see the related item in the catalogue).

We recommend adjusting the outputs of all the power supply units to the same voltage (tolerance  $\pm 50$  mV), applying the same calibration load, before connecting them in parallel. We also recommend using power supply units of the same model.

If it is necessary to connect two power supplies without internal diodes in redundant parallel, the connection must be completed as in fig. 1.

**CONNECTION IN SERIES:** all Cabur power supplies can have their outputs connected in series to double the voltage (see fig. 2) or to obtain dual voltage output, for example with  $\pm 12$  V or  $\pm 24$  V (see fig. 3).

We recommend that you use power supplies of the same model and an anti-parallel diode, of an appropriate size to resist the maximum current of the power supply.

**POWER SIGNAL OK:** this is found on all CSF, CSG, and CWS models. The 1A / 30Vdc contact commutates when output voltage falls below the threshold of -10% of nominal voltage, in the case of a short circuit on the output line or an overload that exceeds the specifications, or due to network failure.

**100-340VDC POWER SUPPLY:** available for certain models (please see technical data), which respect the following:

- power supply of 110...127 Vdc, reduces output current by 25%
- min. voltage allowed 100 Vdc, max 340 for single phase, 280...775 Vdc for single/2-phase, 564... 775Vdc for 3-phase (please see technical data)
- respect input polarity as indicated in the instructions.

## Note for power supplies with secondary input from a transformer

**ISOLATION:** this series of power supply units is not insulated.

**TYPE OF USE:** they are suitable for use in PELV (Protective Extra Low Voltage, one pole grounded) and SELV (Safety Extra Low Voltage, no pole grounded).

The transformer used must have double or reinforced isolation in accordance with CEI 14.6 / EN 60742.

In the case of use in PELV circuits, only ground one pole of the 24 Vdc of the power supply unit. In the case of use in SELV circuits, do not ground the input grounding terminal.

**Grounding one pole of the secondary of the transformer and the 24Vdc of the power supply would damage the power supply.**

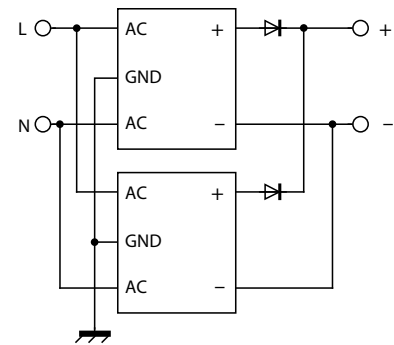


Figure 1

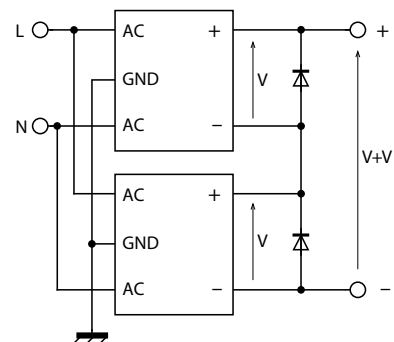


Figure 2

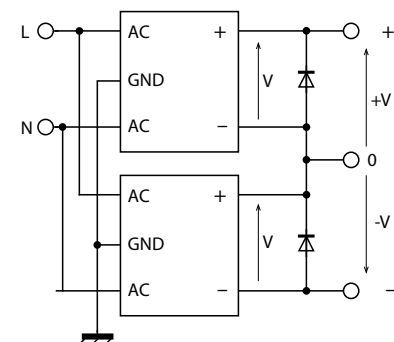


Figure 3

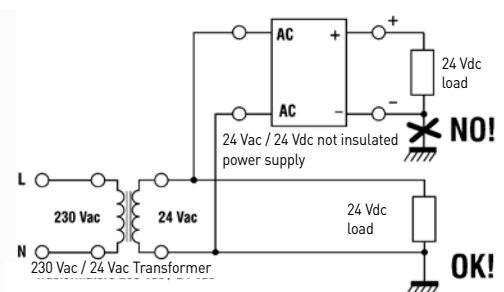


Figure 4

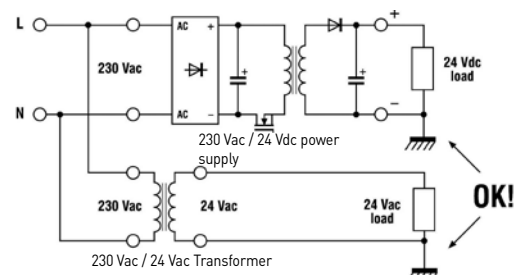


Figure 5

# POWER SUPPLIES - QUICK SELECTION TABLE



PHASE	INPUT RATED VOLTAGE(AC)	INPUT VOLTAGE AC	INPUT VOLTAGE DC	OUTPUT RATED VOLTAGE (DC)	OUTPUT ADJUSTABLE RANGE	CONTINUOUS CURRENT (A)	ALARM CONTACT	REDUNDANT VERSION	TYPE	CODE	PAGE
1	120-230	85...264	100...370	24	—	0.6	—	—	CSD1-015W/024V/AA	XCSD1015W024VAA	11
1	120-230	85...264	100...370	12	—	1.2	—	—	CSD1-015W/012V/AA	XCSD1015W012VAA	11
1	120-230	85...264	100...370	24	—	1.25	—	—	CSD1-030W/024/AA	XCSD1030W024AA	12
1	120-230	85...264	100...370	12	—	4...2.0	—	—	CSD1-030W/012/AA	XCSD1030W012AA	12
1	120-230	90...264	100...345	±12...±15	±12...±15	2X 0.6	—	—	CSD30F	XCSD30F	13
1	120-230	85...264	100...370	24	23.5... 27.5	3	—	—	CSD1-072W/024/AA	XCSD1072W024AA	14
1	120-230	85...264	100...370	12	12...15	5...4	—	—	CSD1-072W/012/AA	XCSD1072W012AA	16
1	120-230	90...264	100...320	24	—	1.2	—	—	CSF30C	XCSF30C	16
1	120-230	90...264	100...345	24	23...27.5	3.5	•	—	CSF85C	XCSF85C	17
1	120-230	90...264	100...345	24	23...27.5	3.5	•	•	CSF85CP	XCSF85CP	17
1	120-230	90...264	100...345	12	12...15	6	•	—	CSF85B	XCSF85B	18
1	120-230	90...264	100...345	24	23...27.5	5	•	—	CSF120C	XCSF120C	19
1	120-230	90...264	100...345	24	23...27.5	5	•	•	CSF120CP	XCSF120CP	19
1	120-230	90...264	100...345	48	45...55	2.5	•	•	CSF120DP	XCSF120DP	20
1	120-230	90...132 / 185...264	100...345	24	23...27.5	10	•	—	CSF240C	XCSF240C	21
1	120-230	90...132 / 185...264	100...345	24	23...27.5	10	•	•	CSF240CP	XCSF240CP	21
1	120-230	90...132 / 185...264	100...345	48	45...55	5	•	•	CSF240DP	XCSF240DP	22
1	120-230	90...132 / 185...264	100...370	24	24...28	20	•	•	CSF500C	XCSF500C	23
1	120-230	90...132 / 185...264	100...370	48	45...55	10	•	•	CSF500D	XCSF500D	23
1	120-230	85...264	100...370	24	16 ... 28	3	•	—	CSL1-072W/024V/AA	XCSL1072W024VAA	25
1	120-230	85...264	100...370	24	16 ... 28	5	•	—	CSL1-120W/024V/AA	XCSL1120W024VAA	25
1	120-230	90...264	—	24	23...27.5	3.5	—	—	CSL85C	XCSL85C	26
1	120-230	90...264	—	24	23...27.5	5	—	—	CSL120C	XCSL120C	26
1	120-230	90...132 / 185...264	—	24	23...27.5	10	—	—	CSL240C	XCSL240C	27
1	120-230	85...264	100...370	24	20 ... 28	20	•	—	CSL1-480W/024V/AA	XCSL1480W024VAA	28
1	120-230	85...264	100...370	48	40.5 ... 55.5	10	•	—	CSL1-480W/048V/AA	XCSL1480W048VAA	28
1	120-230	85...264	100...370	72	62.5 ... 81	6.6	•	—	CSL1-480W/072V/AA	XCSL1480W072VAA	29
1	120-230	85...264	100...370	24	20 ... 28	20	•	—	CSL1-480W/024V/GA	XCSL1480W024VGA	32
1	120-230	85...264	100...370	48	40.5 ... 55.5	10	•	—	CSL1-480W/048V/GA	XCSL1480W048VGA	32
1	120-230	85...264	100...370	72	62.5 ... 81	6.6	•	—	CSL1-480W/072V/GA	XCSL1480W072VGA	33
1	120-230	85...264	100...370	24	20 ... 28	20	•	—	CSL1-480W/024V/AB	XCSL1480W024VAB	36
1	120-230	85...264	100...370	48	40.5 ... 55.5	10	•	—	CSL1-480W/048V/AB	XCSL1480W048VAB	36
1	120-230	85...264	100...370	72	62.5 ... 81	6.6	•	—	CSL1-480W/072V/AB	XCSL1480W072VAB	37
1	230	187...264	—	24	23...27.5	20	•	—	CSL481C	XCSL481C	40

# POWER SUPPLIES - QUICK SELECTION TABLE



PHASE	INPUT RATED VOLTAGE(AC)	INPUT VOLTAGE AC	INPUT VOLTAGE DC	OUTPUT RATED VOLTAGE (DC)	OUTPUT ADJUSTABLE RANGE	CONTINUOUS CURRENT (A)	ALARM CONTACT	REDUNDANT VERSION	TYPE	CODE	PAGE
1-2	230-400-500	187...550	270...725	24	24...27.5	5	•	—	CSW121C	XCSW121C	42
1-2	230-400-500	187...550	270...725	12	12...15	8 - 7	•	—	CSW121B	XCSW121B	42
1-2	230 / 400-500	180...264 / 360...550	550...775	24	23...27.	40	•	—	CSW960CP	XCSW960CP	46
1-2-3	230-400-500	185...550	270...770	24	24...27.5	10	•	—	CSW241C	XCSW241C	43
1-2-3	230-400-500	185...550	270...770	12	12...15	16 - 17	•	—	CSW241B	XCSW241B	43
1-2-3	230-400-500	185...550	270...770	48	45...55	5	•	—	CSW241DP	XCSW241DP	44
1-2-3	230-400-500	187...550	250...725	24	23.3...27.5	20	•	—	CSW481C	XCSW481C	45
1-2-3	230-400-500	187...550	250...725	48	45...55	10	•	—	CSW481D	XCSW481D	45
1-2-3	230-400-500	187...550	250...725	72	72...85	6	•	—	CSW481G	XCSW481G	46
3	400-500	340...550	—	24	20 ... 28	20	•	—	CSL3-480W/024V/AA	XCSL3480W024VAA	30
3	400-500	340...550	—	48	40.5 ... 55.5	10	•	—	CSL3-480W/048V/AA	XCSL3480W048VAA	30
3	400-500	340...550	—	72	60 ... 81	6.6	•	—	CSL3-480W/072V/AA	XCSL3480W072VAA	31
3	400-500	340...550	—	24	20 ... 28	20	•	—	CSL3-480W/024V/GA	XCSL3480W024VGA	34
3	400-500	340...550	—	48	40.5 ... 55.5	10	•	—	CSL3-480W/048V/GA	XCSL3480W048VGA	34
3	400-500	340...550	—	72	60 ... 81	6.6	•	—	CSL3-480W/072V/GA	XCSL3480W072VGA	35
3	400-500	340...550	—	24	20 ... 28	20	•	—	CSL3-480W/024V/AB	XCSL3480W024VAB	38
3	400-500	340...550	—	48	40.5 ... 55.5	10	•	—	CSL3-480W/048V/AB	XCSL3480W048VAB	38
3	400-500	340...550	—	72	60 ... 81	6.6	•	—	CSL3-480W/072V/AB	XCSL3480W072VAB	39
3	400-500	340...550	—	24	23.3...27.5	20	•	—	CSG481C	XCSG481C	48
3	400-500	340...550	—	24	24...28	20	•	—	CSG500C	XCSG500C	48
3	400-500	340...550	—	24	24...28	30	•	—	CSG720C	XCSG720C	49
3	400-500	340...550	—	24	24...28	40	•	—	CSG960C	XCSG960C	49
3	400-500	340...550	—	48	45...55	20	•	•	CSG960D	XCSG960D	50
3	400-500	340...550	—	72	72...85	13.3	•	•	CSG960G	XCSG960G	50
3	400-500	340...550	—	12-24	11.5...29	100	•	•	CSG2401C	XCSG2401C	51
3	400-500	340...550	—	24-48	23...56	50	•	•	CSG2401D	XCSG2401D	51
3	400-500	340...550	—	72	50...87	33	•	•	CSG2401G	XCSG2401G	52
3	400-500	340...550	—	100-110-170	88...175	14	•	•	CSG2401R	XCSG2401R	52
—	—	—	10.5...18	24	22.5...27.5	5	—	—	CSA120BC	XCSA120BC	53
—	—	—	18...36	12...15	12...15	7	—	—	CSA120CB	XCSA120CB	53
—	—	—	18...36	24	22.5...27.5	5	—	—	CSA120CC	XCSA120CC	54
—	—	—	36...72	24	22.5...27.5	5	—	—	CSA120DC	XCSA120DC	54
—	—	—	100...130	24	23...27	10	—	•	CSA240FC	XCSA240FC	55
1	12-24	10...26	-	1.2...24	—	0.3...1.5	—	—	CL1R	XCL1R	56
1	12-24	10...26	-	1.2...24	—	0.8...5	—	—	CL5R	XCL5R	56
1	12-24	6...20	-	12...24	-	6	—	—	AR6	XAR6	57

**Single-phase switching power supply with power up to 70W** for use in civil and industrial automation applications. The technical and design characteristics of the housing, with standard modular DIN measurements for installation in control units **were planned to optimise use in home automation**. The performance level and compact size also make it an excellent solution for electrical panels and shallow containers.

High output and a contained working temperature support energy savings and longer component life.

**Suggested uses**

- Industrial automation applications
- Civil automation applications
- General applications in systems installed using small remote panels

**Main features**

- The 90...264 Vac and 110...370 Vdc inputs, make it suitable for use on all power supply networks.
- These are Isolation Class 2 power supplies that do not require a grounding connection, which reduces the times and costs of installation in remote panels and surveillance and monitoring systems.
- Their high efficiency reduces energy consumption and operating temperature and allows for use in small housings.
- The large power reserve allows continuous current to be supplied up to at least +50% higher than the rated value, ensuring safety and reliability.
- Short-circuit and overload protection designed to deliver peak currents more than 150% higher than the rated value required by heavy loads.
- Thermal protection prevents failure in cases of prolonged overload at high ambient temperatures.
- Thanks to the high performance and excellent ventilation of internal components, they are greatly reduced in size and have a degree of protection from accidental contacts of IP20 per IEC529.

**DOMOTIC POWER**



**Compact size**

Ideal for modular control units and shallow containers

**Short-circuit and overload protection**

Designed to deliver the typical peak currents required by medium loads

**Power boost**

The output power supplied reaches up to 130% of the rated value.

**High efficiency**

Designed to save energy and reduce operating temperature

**Input 90...264 Vac and 110...370 Vdc**

Appropriate for use on all power supply networks

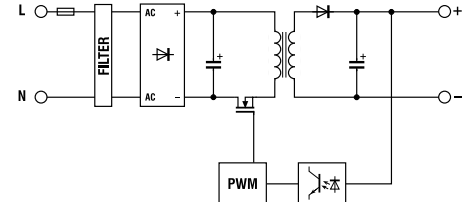
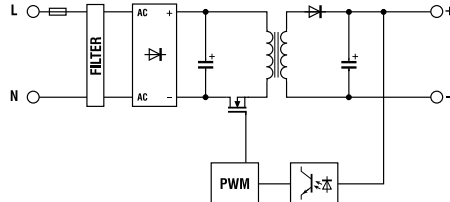


- Single phase and DC input
- Short circuit, overload, input and output overvoltage protections
- Over temperature protection
- Suitable for standard applications
- Isolation Class 2, no grounding needed



**NOTE**

Please refer to the datasheet for more details  
Above overcurrent limit, the protection starts cycling in ON/OFF mode(hiccup autoreset), the maximum current supplied depends by the line resistance



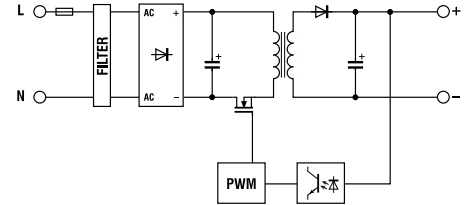
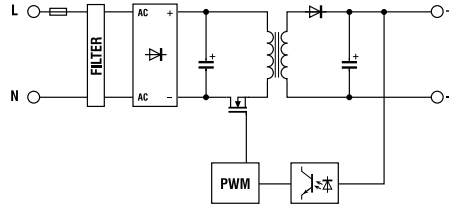
CODE TYPE	CSD1-015W/024V/AA	XCS1015W024VAA	CSD1-015W/012V/AA	XCS1015W012VAA
<b>INPUT TECHNICAL DATA</b>				
Input rated voltage	120–230 Vac		120–230 Vac	
Input voltage AC	85...264 Vac		85...264 Vac	
Input voltage DC	100...370 Vdc (derating U <sub>in</sub> <130 Vdc)		100...370 Vdc (derating U <sub>in</sub> <130 Vdc)	
Frequency	47...63 Hz		47...63 Hz	
Current consumption	0.29 A (120 Vac) / 0.18 A (230 Vac)		0.29 A (120 Vac) / 0.18 A (230 Vac)	
Inrush peak current	5 A		5 A	
Power factor	> 0.6		> 0.6	
Internal protection fuse	T 1 A		T 1 A	
External protection on AC line	MCB: C-2 A / Fuse: T-2 A		MCB: C-2 A / Fuse: T-2 A	
<b>OUTPUT TECHNICAL DATA</b>				
Output rated voltage	24 Vdc ±1%		12 Vdc ±1%	
Output adjustable range	—		—	
Continuous current	0.6 A at 60°C		1.2 A at 60°C	
Overload limiting	0.81 A		1.6 A	
Short circuit peak current	—		—	
Ripple @ nominal ratings	50 mVpp		50 mVpp	
Hold up time	12 ms (120 Vac) / 20 ms (230 Vac)		12 ms (120 Vac) / 20 ms (230 Vac)	
Status indication	LED "DC OK"		LED "DC OK"	
Alarm contact	—		—	
Parallel connection	possible		possible	
Redundant parallel connection	possible with external ORing diode		possible with external ORing diode	
<b>GENERAL TECHNICAL DATA</b>				
Efficiency	86% (120 Vac) / 86% (230 Vac)		84% (120 Vac) / 85% (230 Vac)	
Dissipated power	2.2 W (120 Vac) / 2.2 W (230 Vac)		2.7 W (120 Vac) / 2.6 W (230 Vac)	
Operating temperature range	-20...+70°C (derating -0.9 W >60°C)		-20...+70°C (derating -0.9 W >60°C)	
Input / output isolation	3 kVac / 60 s (SELV output)		3 kVac / 60 s (SELV output)	
Input / ground isolation	class 2 without PE connection		class 2 without PE connection	
Output / ground isolation	class 2 without PE connection		class 2 without PE connection	
Standard / approvals	EN 60950-1, EN 62368-1		EN 60950-1, EN 62368-1	
EMC Standards	EN 61000-6-1, EN 61000-6-2, EN 61000-6-3, EN 61000-6-4		EN 61000-6-1, EN 61000-6-2, EN 61000-6-3, EN 61000-6-4	
Overvoltage category / Pollution degree	II / 2		II / 2	
Protection degree	IP 20		IP 20	
Connection terminal IN/OUT	2.5 mm <sup>2</sup> / 2.5 mm <sup>2</sup>		2.5 mm <sup>2</sup> / 2.5 mm <sup>2</sup>	
Housing material	UL94V-0 plastic material		UL94V-0 plastic material	
Dimension	35x62x90 mm		35x62x90 mm	
Approximate weight	130 g		130 g	
Mounting information	vertical on a rail, 10 mm from adjacent components		vertical on a rail, 10 mm from adjacent components	
<b>APPROVALS</b>				
<b>ACCESSORIES</b>				
Mounting rail (IEC60715/TH35-7.5)	PR/3/AC, PR/3/AC/ZB, PR/3/AS, PR/3/AS/ZB		PR/3/AC, PR/3/AC/ZB, PR/3/AS, PR/3/AS/ZB	
Mounting rail (IEC60715/TH35-15)	PR/3/PP, PR/3/PP/ZB, PR/3/PA, PR/3/PA/ZB		PR/3/PP, PR/3/PP/ZB, PR/3/PA, PR/3/PA/ZB	
Marking tag	—		—	

- Single phase and DC input
- Short circuit, overload, input and output overvoltage protections
- Over temperature protection
- Suitable for standard applications
- Isolation Class 2, no grounding needed



NOTE

Please refer to the datasheet for more details  
Above overcurrent limit, the protection starts cycling in ON/OFF mode(hiccup autoreset), the maximum current supplied depends by the line resistance



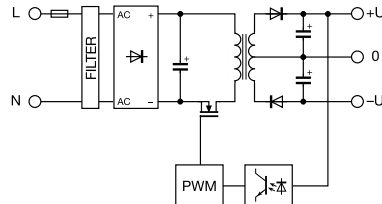
CODE TYPE	CSD1-030W/024/AA	XCSD1030W024AA	CSD1-030W/012/AA	XCSD1030W012AA
<b>INPUT TECHNICAL DATA</b>				
Input rated voltage	120-230 Vac		120-230 Vac	
Input voltage AC	85...264 Vac		85...264 Vac	
Input voltage DC	100...370 Vdc (derating Uin<130 Vdc)		100...370 Vdc (derating Uin<130 Vdc)	
Frequency	47...63 Hz		47...63 Hz	
Current consumption	0.56 A (120 Vac) / 0.34 A (230 Vac)		0.56 A (120 Vac) / 0.34 A (230 Vac)	
Inrush peak current	5 A		5 A	
Power factor	> 0.6		> 0.6	
Internal protection fuse	T 3.15 A		T 3.15 A	
External protection on AC line	MCB: C-3 A / Fuse: T-3 A		MCB: C-3 A / Fuse: T-3 A	
<b>OUTPUT TECHNICAL DATA</b>				
Output rated voltage	24 Vdc ±1%		12 Vdc ±1%	
Output adjustable range	—		—	
Continuous current	1.25 A at 50°C		4A (5V), 2.9A (10V), 2.5A (12V), 2.0A (15V) at 55°C	
Overload limiting	2.0 A		6.9...3.0 A	
Short circuit peak current	—		—	
Ripple @ nominal ratings	50 mVpp		50 mVpp	
Hold up time	12 ms (120 Vac) / 20 ms (230 Vac)		12 ms (120 Vac) / 20 ms (230 Vac)	
Status indication	LED "DC OK"		LED "DC OK"	
Alarm contact	—		—	
Parallel connection	possible		possible	
Redundant parallel connection	possible with external ORing diode		possible with external ORing diode	
<b>GENERAL TECHNICAL DATA</b>				
Efficiency	88% (120 Vac) / 87% (230 Vac)		87% (120 Vac) / 86% (230 Vac)	
Dissipated power	4 W (120 Vac) / 3.9 W (230 Vac)		4.1 W (120 Vac) / 4 W (230 Vac)	
Operating temperature range	-20...+70°C (derating -1.2 W >50°C)		-20...+70°C (derating -1.2 W >55°C)	
Input / output isolation	3 KVac / 60 s (SELV output)		3 KVac / 60 s (SELV output)	
Input / ground isolation	class 2 without PE connection		class 2 without PE connection	
Output / ground isolation	class 2 without PE connection		class 2 without PE connection	
Standard / approvals	EN 60950-1, EN 62368-1		EN 60950-1, EN 62368-1	
EMC Standards	EN 61000-6-1, EN 61000-6-2, EN 61000-6-3, EN 61000-6-4		EN 61000-6-1, EN 61000-6-2, EN 61000-6-3, EN 61000-6-4	
Overvoltage category / Pollution degree	II / 2		II / 2	
Protection degree	IP 20		IP 20	
Connection terminal IN/OUT	2.5 mm <sup>2</sup> / 2.5 mm <sup>2</sup>		2.5 mm <sup>2</sup> / 2.5 mm <sup>2</sup>	
Housing material	UL94V-0 plastic material		UL94V-0 plastic material	
Dimension	53x62x90 mm		53x62x90 mm	
Approximate weight	130 g		130 g	
Mounting information	vertical on a rail, 10 mm from adjacent components		vertical on a rail, 10 mm from adjacent components	
<b>APPROVALS</b>				
<b>ACCESSORIES</b>				
Mounting rail (IEC60715/TH35-7.5)	PR/3/AC, PR/3/AC/ZB, PR/3/AS, PR/3/AS/ZB		PR/3/AC, PR/3/AC/ZB, PR/3/AS, PR/3/AS/ZB	
Mounting rail (IEC60715/TH35-15)	PR/3/PP, PR/3/PP/ZB, PR/3/PA, PR/3/PA/ZB		PR/3/PP, PR/3/PP/ZB, PR/3/PA, PR/3/PA/ZB	
Marking tag	—		—	

- Single phase and DC input
- Short circuit, overload and input overvoltage protection
- Over temperature protection
- Suitable for standard applications
- Isolation Class 2, no grounding needed



**NOTE**

Please refer to the datasheet for more details  
Above overcurrent limit, the protection starts cycling in ON/OFF mode(hiccup autoreset), the maximum current supplied depends by the line resistance



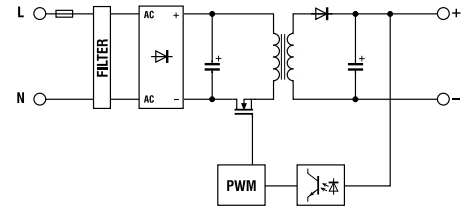
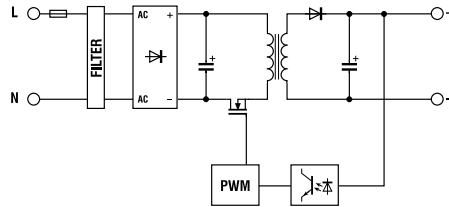
CODE TYPE	CSD30F	XCSD30F
<b>INPUT TECHNICAL DATA</b>		
Input rated voltage	120–230 Vac	
Input voltage AC	90...264 Vac	
Input voltage DC	100...345 Vdc (derating $U_{in} < 130$ Vdc)	
Frequency	47...63 Hz	
Current consumption	0.4 A (120 Vac) / 0.2 A (230 Vac)	
Inrush peak current	13 A	
Power factor	> 0.6	
Internal protection fuse	T 2 A	
External protection on AC line	MCB: C-3 A / Fuse: T-3.15 A	
<b>OUTPUT TECHNICAL DATA</b>		
Output rated voltage	$\pm 12 \dots \pm 15$ Vdc $\pm 1\%$	
Output adjustable range	$\pm 12 \dots \pm 15$ Vdc	
Continuous current	2x 0.6 A at 50°C	
Overload limiting	>2x0.8 A	
Short circuit peak current	—	
Ripple @ nominal ratings	50 mVpp	
Hold up time	50 ms (120 Vac) / 100 ms (230 Vac)	
Status indication	LED "DC OK"	
Alarm contact	—	
Parallel connection	possible	
Redundant parallel connection	possible with external ORing diode	
<b>GENERAL TECHNICAL DATA</b>		
Efficiency	87% (120 Vac) / 89% (230 Vac)	
Dissipated power	1.6 W (120 Vac) / 1.3 W (230 Vac)	
Operating temperature range	-20...+60°C (derating -0.4 W >55°C)	
Input / output isolation	3 kVac / 60 s (SELV output)	
Input / ground isolation	class 2 without PE connection	
Output / ground isolation	class 2 without PE connection	
Standard / approvals	EN 60950-1	
EMC Standards	EN 61000-6-1, EN 61000-6-2, EN 61000-6-3, EN 61000-6-4	
Overvoltage category / Pollution degree	II / 2	
Protection degree	IP 20	
Connection terminal IN/OUT	2.5 mm <sup>2</sup> / 2.5 mm <sup>2</sup>	
Housing material	UL94V-0 plastic material	
Dimension	71x62x90 mm	
Approximate weight	200 g	
Mounting information	vertical on a rail, 10 mm from adjacent components	
APPROVALS		
<b>ACCESSORIES</b>		
Mounting rail (IEC60715/TH35-7.5)	PR/3/AC, PR/3/AC/ZB, PR/3/AS, PR/3/AS/ZB	
Mounting rail (IEC60715/TH35-15)	PR/3/PP, PR/3/PP/ZB, PR/3/PA, PR/3/PA/ZB	
Marking tag	—	

- Single phase and DC input
- Short circuit, overload, input and output overvoltage protections
- Over temperature protection
- Suitable for standard applications
- Isolation Class 2, no grounding needed



NOTE

Please refer to the datasheet for more details  
Above overcurrent limit, the protection starts cycling in ON/OFF mode(hiccup autoreset), the maximum current supplied depends by the line resistance



CODE TYPE	CSD1-072W/024/AA	XCSD1072W024AA	CSD1-072W/012/AA	XCSD1072W012AA
<b>INPUT TECHNICAL DATA</b>				
Input rated voltage	120-230 Vac		120-230 Vac	
Input voltage AC	85...264 Vac		85...264 Vac	
Input voltage DC	100...370 Vdc (derating Uin<130 Vdc)		100...370 Vdc (derating Uin<130 Vdc)	
Frequency	47...63 Hz		47...63 Hz	
Current consumption	1.17 A (120 Vac) / 0.71 A (230 Vac)		1.17 A (120 Vac) / 0.71 A (230 Vac)	
Inrush peak current	15 A		15 A	
Power factor	> 0.6		> 0.6	
Internal protection fuse	T 1 A		T 1 A	
External protection on AC line	MCB: C-3 A / Fuse: T-3 A		MCB: C-3 A / Fuse: T-3 A	
<b>OUTPUT TECHNICAL DATA</b>				
Output rated voltage	24 Vdc ±1%		12 Vdc ±1%	
Output adjustable range	23.5... 27.5 Vdc		12...15 Vdc	
Continuous current	3 A at 55°C		5...4 A at 55°C	
Overload limiting	4.5 A		8.0 A	
Short circuit peak current	—		—	
Ripple @ nominal ratings	50 mVpp		50 mVpp	
Hold up time	12 ms (120 Vac) / 20 ms (230 Vac)		12 ms (120 Vac) / 20 ms (230 Vac)	
Status indication	LED "DC OK"		LED "DC OK"	
Alarm contact	—		—	
Parallel connection	possible		possible	
Redundant parallel connection	possible with external ORing diode		possible with external ORing diode	
<b>GENERAL TECHNICAL DATA</b>				
Efficiency	89% (230 Vac)		89% (230 Vac)	
Dissipated power	9.6 W (120 Vac) / 7.9 W (230 Vac)		10 W (120 Vac) / 8.5 W (230 Vac)	
Operating temperature range	-20...+70°C (derating -2.6 W >55°C)		-20...+70°C (derating -1.8 W >50°C)	
Input / output isolation	3 kVac / 60 s (SELV output)		3 kVac / 60 s (SELV output)	
Input / ground isolation	class 2 without PE connection		class 2 without PE connection	
Output / ground isolation	class 2 without PE connection		class 2 without PE connection	
Standard / approvals	EN 60950-1, EN 62368-1		EN 60950-1, EN 62368-1	
EMC Standards	EN 61000-6-1, EN 61000-6-2, EN 61000-6-3, EN 61000-6-4		EN 61000-6-1, EN 61000-6-2, EN 61000-6-3, EN 61000-6-4	
Overvoltage category / Pollution degree	II / 2		II / 2	
Protection degree	IP 20		IP 20	
Connection terminal IN/OUT	2.5 mm <sup>2</sup> / 2.5 mm <sup>2</sup>		2.5 mm <sup>2</sup> / 2.5 mm <sup>2</sup>	
Housing material	UL94V-0 plastic material		UL94V-0 plastic material	
Dimension	71x62x90 mm		71x62x90 mm	
Approximate weight	130 g		130 g	
Mounting information	vertical on a rail, 10 mm from adjacent components		vertical on a rail, 10 mm from adjacent components	
<b>APPROVALS</b>				
<b>ACCESSORIES</b>				
Mounting rail (IEC60715/TH35-7.5)	PR/3/AC, PR/3/AC/ZB, PR/3/AS, PR/3/AS/ZB		PR/3/AC, PR/3/AC/ZB, PR/3/AS, PR/3/AS/ZB	
Mounting rail (IEC60715/TH35-15)	PR/3/PP, PR/3/PP/ZB, PR/3/PA, PR/3/PA/ZB		PR/3/PP, PR/3/PP/ZB, PR/3/PA, PR/3/PA/ZB	
Marking tag	—		—	



Single-phase switching power supply with DIN-rail, designed specifically for applications in command and control panels for industrial automation and process control. Capable of delivering +60% to +80% nominal current for a prolonged period of time while maintaining a constant output voltage and equipped with a voltage threshold-controlled failure contact which is triggered when the voltage drops below 90% of the rated value. **With these features and numerous international certifications, this range of power supplies enables designers to meet the requirements of the Machinery Directive EN 60204-1**, allowing the protection devices connected to the output to trigger quickly, safely and selectively, thus ensuring continuity of service to the other parts of the system.

**Suggested uses**

- Applications in industrial automation with high performance and reliability requirements.
- Applications which require selectable overcurrent protections on DC lines
- Applications in machine automation with high command and control voltage reliability and safety requirements
- Applications in process control
- Uses with heavy loads
- Civil automation applications

**Main features**

- The 90...264 Vac and 110...370 Vdc inputs, make it suitable for use on all power supply networks.
- Threshold failure contact which is triggered when the voltage falls below 90% of the rated value.
- Versions with integrated ORing diode for redundant parallel connection, preventing the need for external devices and reducing bulk and installation costs.
- High efficiency reduces energy consumption and the operating temperature of components and allows use in small panels and severe environmental conditions.
- Large power reserve allows for delivery of at least +60-80% nominal current and voltage for several minutes, ensuring safety and reliability.
- Output voltage is adjustable and the output is protected against input surge from the DC line generated from inductive loads.
- The output is equipped with dual electronic protection which prevents dangerous voltages for powered components in the event of an internal fault.
- Thermal protection prevents faults in case of prolonged overload with high ambient temperatures.
- Construction ensures excellent ventilation capacity of internal components, with reduced sizes and a degree of protection from accidental contacts of IP20 per IEC529.
- Thanks to their high performance and excellent ventilation capacity, they are among the smallest on the market.

**COOL POWER**

48Vdc and 72-85Vdc models have been introduced, designed to reliably power engines in DC. They:

- supply peak power equal to even 4-5 times the nominal current, which is required by the engine during the peak phase
- have an output stage protected from overvoltage generated by the engines and drives during braking, which could otherwise cause malfunctions or cause the power supply to lose control over output voltage stability.

**Extremely compact dimensions**

Among the smallest on the market, optimising the use of space in the panel without compromising performance

**Power boost**

The output power reaches 120% of the nominal value for several minutes, up to 160% in the event of overload, and up to 300% during a short-circuit, to enable the protection devices connected to the output to trigger quickly, safely and selectively, without the use of additional modules.

**Short-circuit and overload protection**

Designed to deliver the strong peak currents required by heavy loads

**High efficiency**

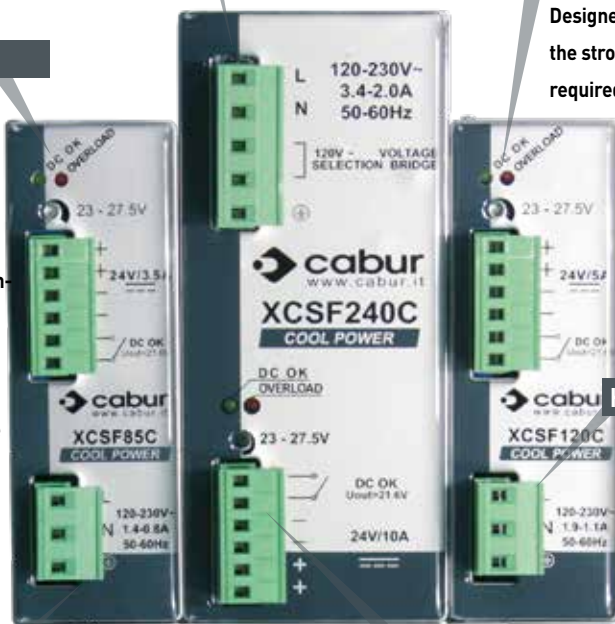
Designed to save energy and reduce operating temperature

**Input 90...264 Vac and 110...370 Vdc**

Appropriate for use on all single-phase power supply networks

**Intelligent failure contact**

Notifies when the output voltage falls below 90% of the rated value once a threshold is surpassed

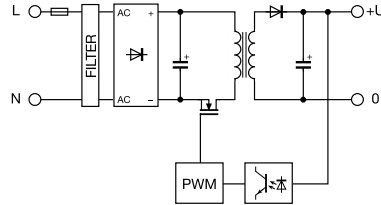


- Single phase and DC input
- Short circuit, overload and input overvoltage protection
- Compact dimension
- Suitable for standard applications
- Isolation Class 2, no grounding needed



**NOTE**

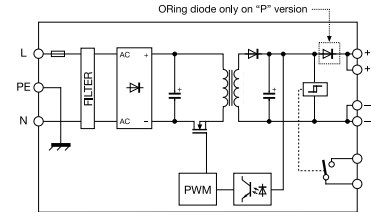
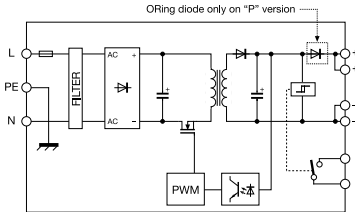
Please refer to the datasheet for more details  
 Above overcurrent limit, the protection starts cycling in ON/OFF mode(hiccup autoreset), the maximum current supplied depends by the line resistance  
 Produced on demand, contact our sales office for availability



CODE TYPE	CSF30C	XCSF30C
<b>INPUT TECHNICAL DATA</b>		
Input rated voltage	120–230 Vac	
Input voltage AC	90...264 Vac	
Input voltage DC	100...320 Vdc (derating Uin<130 Vdc)	
Frequency	47...63 Hz	
Current consumption	0.55 A (120 Vac) / 0.3 A (230 Vac)	
Inrush peak current	25 A	
Power factor	> 0.6	
Internal protection fuse	T 1.25 A	
External protection on AC line	MCB: C-2 A / Fuse: T-2 A	
<b>OUTPUT TECHNICAL DATA</b>		
Output rated voltage	24 Vdc ±1%	
Output adjustable range	—	
Continuous current	1.2 A at 50°C	
Overload limiting	1.4 A	
Short circuit peak current	—	
Ripple @ nominal ratings	50 mVpp	
Hold up time	10 ms (120 Vac) / 30 ms (230 Vac)	
Status indication	LED "DC OK"	
Alarm contact	—	
Parallel connection	possible	
Redundant parallel connection	possible with external ORing diode	
<b>GENERAL TECHNICAL DATA</b>		
Efficiency	86% (120 Vac) / 87% (230 Vac)	
Dissipated power	4.7 W (120 Vac) / 4.3 W (230 Vac)	
Operating temperature range	-20...+60°C (derating -0.75 W >50°C)	
Input / output isolation	3 kVac / 60 s (SELV output)	
Input / ground isolation	class 2 without PE connection	
Output / ground isolation	class 2 without PE connection	
Standard / approvals	EN 60950-1	
EMC Standards	EN 61000-6-2, EN 61000-6-4	
Overvoltage category / Pollution degree	II / 2	
Protection degree	IP 20	
Connection terminal IN/OUT	2.5 mm <sup>2</sup> / 2.5 mm <sup>2</sup>	
Housing material	UL94V-0 plastic material	
Dimension	23x99x82 mm	
Approximate weight	140 g	
Mounting information	vertical on a rail, 10 mm from adjacent components	
APPROVALS		
<b>ACCESSORIES</b>		
Mounting rail (IEC60715/TH35-7.5)	PR/3/AC, PR/3/AC/ZB, PR/3/AS, PR/3/AS/ZB	
Mounting rail (IEC60715/TH35-15)	—	
Marking tag	—	

- Single phase and DC input
- Short circuit, overload, input and output overvoltage protections
- Over temperature protection
- Suitable for applications that require high reliability and performance
- Smart alarm contact, signals when output voltage drops more than 10%
- High overload capability to ensure the protections selectivity and start-up of heavy loads

**NOTE**  
Please refer to the datasheet for more details  
Above overcurrent limit, the protection starts cycling in ON/OFF mode(hiccup autoreset), the maximum current supplied depends by the line resistance



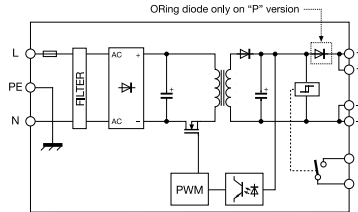
CODE TYPE	CSF85C	XCSF85C	CSF85CP	XCSF85CP
<b>INPUT TECHNICAL DATA</b>				
Input rated voltage	120–230 Vac		120–230 Vac	
Input voltage AC	90...264 Vac		90...264 Vac	
Input voltage DC	100...345 Vdc [derating Uin<130 Vdc]		100...345 Vdc [derating Uin<130 Vdc]	
Frequency	47...63 Hz		47...63 Hz	
Current consumption	1.6 A (120 Vac) / 0.9 A (230 Vac)		1.6 A (120 Vac) / 0.9 A (230 Vac)	
Inrush peak current	20 A		20 A	
Power factor	> 0.65		> 0.65	
Internal protection fuse	T 2 A		T 2 A	
External protection on AC line	MCB: C-4 A / Fuse: T 4 A		MCB: C-4 A / Fuse: T 4 A	
<b>OUTPUT TECHNICAL DATA</b>				
Output rated voltage	24 Vdc ±1%		24 Vdc ±1%	
Output adjustable range	23...27.5 Vdc		23...27.5 Vdc	
Continuous current	3.5 A at 50°C		3.5 A at 50°C	
Overload limiting	6 A for >30 s		6 A for >30 s	
Short circuit peak current	10 A for 50 ms		10 A for 50 ms	
Ripple @ nominal ratings	70 mVpp		70 mVpp	
Hold up time	20 ms (120 Vac) / 70 ms (230 Vac)		20 ms (120 Vac) / 70 ms (230 Vac)	
Status indication	LED "DC OK" / LED "Alarm"		LED "DC OK" / LED "Alarm"	
Alarm contact	dry contact, max. 1A @ 24 Vdc (Uout >21.6 Vdc)		dry contact, max. 1A @ 24 Vdc (Uout >21.6 Vdc)	
Parallel connection	possible		possible	
Redundant parallel connection	possible with external ORing diode		already fitted with internal ORing diode	
<b>GENERAL TECHNICAL DATA</b>				
Efficiency	86% (120 Vac) / 90% (230 Vac)		86% (120 Vac) / 90% (230 Vac)	
Dissipated power	14 W (120 Vac) / 10 W (230 Vac)		14 W (120 Vac) / 10 W (230 Vac)	
Operating temperature range	-20...+60°C (derating -1.45 W >45°C)		-20...+60°C (derating -1.45 W >45°C)	
Input / output isolation	3 kVac / 60 s (SELV output)		3 kVac / 60 s (SELV output)	
Input / ground isolation	1.5 kVac / 60 s		1.5 kVac / 60 s	
Output / ground isolation	0.5 kVac / 60 s		0.5 kVac / 60 s	
Standard / approvals	EN 60950-1		EN 60950-1	
EMC Standards	EN 61000-6-1, EN 61000-6-2, EN 61000-6-3, EN 61000-6-4		EN 61000-6-1, EN 61000-6-2, EN 61000-6-3, EN 61000-6-4	
Overvoltage category / Pollution degree	II / 2		II / 2	
Protection degree	IP 20		IP 20	
Connection terminal IN/OUT	2.5 mm <sup>2</sup> / 2.5 mm <sup>2</sup>		2.5 mm <sup>2</sup> / 2.5 mm <sup>2</sup>	
Housing material	aluminium		aluminium	
Dimension	40x130x115 mm		40x130x115 mm	
Approximate weight	400 g		400 g	
Mounting information	vertical on a rail, 10 mm from adjacent components		vertical on a rail, 10 mm from adjacent components	
<b>APPROVALS</b>				
<b>ACCESSORIES</b>				
Mounting rail (IEC60715/TH35-7.5)	PR/3/AC, PR/3/AC/ZB, PR/3/AS, PR/3/AS/ZB		PR/3/AC, PR/3/AC/ZB, PR/3/AS, PR/3/AS/ZB	
Mounting rail (IEC60715/TH35-15)	PR/3/PP, PR/3/PP/ZB, PR/3/PA, PR/3/PA/ZB		PR/3/PP, PR/3/PP/ZB, PR/3/PA, PR/3/PA/ZB	
Marking tag	–		–	

- Single phase and DC input
- Short circuit, overload, input and output overvoltage protections
- Over temperature protection
- Suitable for applications that require high reliability and performance
- Smart alarm contact, signals when output voltage drops more than 10%
- High overload capability to ensure the protections selectivity and start-up of heavy loads



**NOTE**

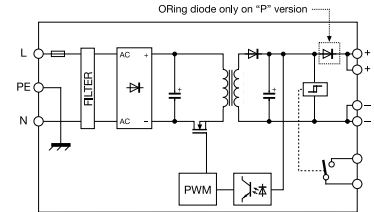
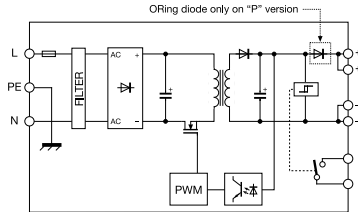
Please refer to the datasheet for more details  
Above overcurrent limit, the protection starts cycling in ON/OFF mode(hiccup autoreset), the maximum current supplied depends by the line resistance



CODE TYPE	CSF85B	XCSF85B
<b>INPUT TECHNICAL DATA</b>		
Input rated voltage	120–230 Vac	
Input voltage AC	90...264 Vac	
Input voltage DC	100...345 Vdc [derating Uin<130 Vdc]	
Frequency	47...63 Hz	
Current consumption	1.6 A (120 Vac) / 0.9 A (230 Vac)	
Inrush peak current	20 A	
Power factor	> 0.65	
Internal protection fuse	T 2 A	
External protection on AC line	MCB: C-4 A / Fuse: T 4 A	
<b>OUTPUT TECHNICAL DATA</b>		
Output rated voltage	12 Vdc ±1%	
Output adjustable range	12...15 Vdc	
Continuous current	6 A at 50°C	
Overload limiting	9A for >30 s	
Short circuit peak current	10 A for 50 ms	
Ripple @ nominal ratings	30 mVpp	
Hold up time	15 ms (120 Vac) / 60 ms (230 Vac)	
Status indication	LED "DC OK" / LED "Alarm"	
Alarm contact	dry contact, max. 1A @ 24 Vdc (Uout > 10.8 Vdc)	
Parallel connection	possible	
Redundant parallel connection	possible with external ORing diode	
<b>GENERAL TECHNICAL DATA</b>		
Efficiency	83% (120 Vac) / 87% (230 Vac)	
Dissipated power	17 W (120 Vac) / 13 W (230 Vac)	
Operating temperature range	-20...+60°C (derating -1.45 W >45°C)	
Input / output isolation	3 kVac / 60 s (SELV output)	
Input / ground isolation	1.5 kVac / 60 s	
Output / ground isolation	0.5 kVac / 60 s	
Standard / approvals	EN 60950-1	
EMC Standards	EN 61000-6-1, EN 61000-6-2, EN 61000-6-3, EN 61000-6-4	
Overvoltage category / Pollution degree	II / 2	
Protection degree	IP 20	
Connection terminal IN/OUT	2.5 mm <sup>2</sup> / 2.5 mm <sup>2</sup>	
Housing material	aluminium	
Dimension	40x130x115 mm	
Approximate weight	400 g	
Mounting information	vertical on a rail, 10 mm from adjacent components	
APPROVALS		
<b>ACCESSORIES</b>		
Mounting rail (IEC60715/TH35-7.5)	PR/3/AC, PR/3/AC/ZB, PR/3/AS, PR/3/AS/ZB	
Mounting rail (IEC60715/TH35-15)	PR/3/PP, PR/3/PP/ZB, PR/3/PA, PR/3/PA/ZB	
Marking tag	-	

- Single phase and DC input
- Short circuit, overload, input and output overvoltage protections
- Over temperature protection
- Suitable for applications that require high reliability and performance
- Smart alarm contact, signals when output voltage drops more than 10%
- High overload capability to ensure the protections selectivity and start-up of heavy loads

**NOTE**  
Please refer to the datasheet for more details  
Above overcurrent limit, the protection starts cycling in ON/OFF mode(hiccup autoreset), the maximum current supplied depends by the line resistance



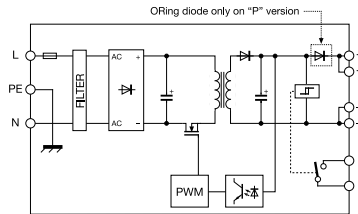
CODE TYPE	CSF120C	XCSF120CP
<b>INPUT TECHNICAL DATA</b>		
Input rated voltage	120–230 Vac	120–230 Vac
Input voltage AC	90...264 Vac	90...264 Vac
Input voltage DC	100...345 Vdc [derating Uin<130 Vdc]	100...345 Vdc [derating Uin<130 Vdc]
Frequency	47...63 Hz	47...63 Hz
Current consumption	1.9 A (120 Vac) / 1.1 A (230 Vac)	1.9 A (120 Vac) / 1.1 A (230 Vac)
Inrush peak current	20 A	20 A
Power factor	> 0.65	> 0.65
Internal protection fuse	T 3.15 A	T 3.15 A
External protection on AC line	MCB: C-4 A / Fuse: T 4 A	MCB: C-4 A / Fuse: T 4 A
<b>OUTPUT TECHNICAL DATA</b>		
Output rated voltage	24 Vdc ±1%	24 Vdc ±1%
Output adjustable range	23...27.5 Vdc	23...27.5 Vdc
Continuous current	5 A at 45°C	5 A at 45°C
Overload limiting	8 A for >30 s	8 A for >30 s
Short circuit peak current	15 A for 50 ms	15 A for 50 ms
Ripple @ nominal ratings	30 mVpp	30 mVpp
Hold up time	17 ms (120 Vac) / 72 ms (230 Vac)	17 ms (120 Vac) / 72 ms (230 Vac)
Status indication	LED "DC OK" / LED "Alarm"	LED "DC OK" / LED "Alarm"
Alarm contact	dry contact, max. 1A @ 24 Vdc (Uout >21.6 Vdc)	dry contact, max. 1A @ 24 Vdc (Uout >21.6 Vdc)
Parallel connection	possible	possible
Redundant parallel connection	possible with external ORing diode	already fitted with internal ORing diode
<b>GENERAL TECHNICAL DATA</b>		
Efficiency	86% (120 Vac) / 90% (230 Vac)	86% (120 Vac) / 90% (230 Vac)
Dissipated power	19 W (120 Vac) / 13 W (230 Vac)	19 W (120 Vac) / 13 W (230 Vac)
Operating temperature range	-20...+60°C (derating -1.9 W >45°C)	-20...+60°C (derating -1.9 W >45°C)
Input / output isolation	3 kVac / 60 s (SELV output)	3 kVac / 60 s (SELV output)
Input / ground isolation	1.5 kVac / 60 s	1.5 kVac / 60 s
Output / ground isolation	0.5 kVac / 60 s	0.5 kVac / 60 s
Standard / approvals	EN 60950-1	EN 60950-1
EMC Standards	EN 61000-6-1, EN 61000-6-2, EN 61000-6-3, EN 61000-6-4	EN 61000-6-1, EN 61000-6-2, EN 61000-6-3, EN 61000-6-4
Overvoltage category / Pollution degree	II / 2	II / 2
Protection degree	IP 20	IP 20
Connection terminal IN/OUT	2.5 mm <sup>2</sup> / 2.5 mm <sup>2</sup>	2.5 mm <sup>2</sup> / 2.5 mm <sup>2</sup>
Housing material	aluminium	aluminium
Dimension	40x130x115 mm	40x130x115 mm
Approximate weight	400 g	400 g
Mounting information	vertical on a rail, 10 mm from adjacent components	vertical on a rail, 10 mm from adjacent components
<b>APPROVALS</b>		
<b>ACCESSORIES</b>		
Mounting rail (IEC60715/TH35-7.5)	PR/3/AC, PR/3/AC/ZB, PR/3/AS, PR/3/AS/ZB	PR/3/AC, PR/3/AC/ZB, PR/3/AS, PR/3/AS/ZB
Mounting rail (IEC60715/TH35-15)	PR/3/PP, PR/3/PP/ZB, PR/3/PA, PR/3/PA/ZB	PR/3/PP, PR/3/PP/ZB, PR/3/PA, PR/3/PA/ZB
Marking tag	–	–

- Single phase and DC input
- Short circuit, overload, input and output overvoltage protections
- Over temperature protection
- Suitable for applications that require high reliability and performance
- Smart alarm contact, signals when output voltage drops more than 10%
- High overload capability to ensure the protections selectivity and start-up of heavy loads



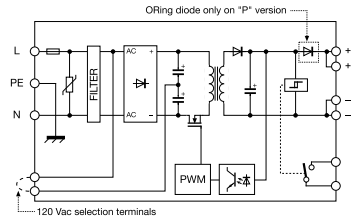
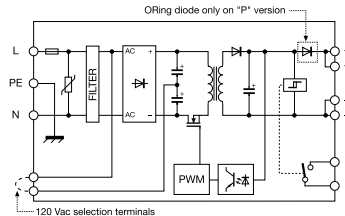
**NOTE**

Please refer to the datasheet for more details  
Above overcurrent limit, the protection starts cycling in ON/OFF mode(hiccup autoreset), the maximum current supplied depends by the line resistance



CODE TYPE	CSF120DP	XCSF120DP
<b>INPUT TECHNICAL DATA</b>		
Input rated voltage	120–230 Vac	
Input voltage AC	90...264 Vac	
Input voltage DC	100...345 Vdc (derating $U_{in} < 130$ Vdc)	
Frequency	47...63 Hz	
Current consumption	1.9 A (120 Vac) / 1.1 A (230 Vac)	
Inrush peak current	20 A	
Power factor	> 0.65	
Internal protection fuse	T 3.15 A	
External protection on AC line	MCB: C-4 A / Fuse: T 4 A	
<b>OUTPUT TECHNICAL DATA</b>		
Output rated voltage	48 Vdc $\pm 1\%$	
Output adjustable range	45...55 Vdc	
Continuous current	2.5 A at 45°C	
Overload limiting	8 A for >30 s	
Short circuit peak current	7.5 A for 50 ms	
Ripple @ nominal ratings	30 mVpp	
Hold up time	16 ms (120 Vac) / 81 ms (230 Vac)	
Status indication	LED "DC OK" / LED "Alarm"	
Alarm contact	dry contact, max. 1A @ 24 Vdc ( $U_{out} > 43.2$ Vdc)	
Parallel connection	possible	
Redundant parallel connection	already fitted with internal ORing diode	
<b>GENERAL TECHNICAL DATA</b>		
Efficiency	86% (120 Vac) / 90% (230 Vac)	
Dissipated power	20 W (120 Vac) / 13 W (230 Vac)	
Operating temperature range	-20...+60°C (derating -2.4 W >45°C)	
Input / output isolation	3 kVac / 60 s (SELV output)	
Input / ground isolation	1.5 kVac / 60 s	
Output / ground isolation	0.5 kVac / 60 s	
Standard / approvals	EN 60950-1	
EMC Standards	EN 61000-6-1, EN 61000-6-2, EN 61000-6-3, EN 61000-6-4	
Overvoltage category / Pollution degree	II / 2	
Protection degree	IP 20	
Connection terminal IN/OUT	2.5 mm <sup>2</sup> / 2.5 mm <sup>2</sup>	
Housing material	aluminium	
Dimension	40x130x115 mm	
Approximate weight	400 g	
Mounting information	vertical on a rail, 10 mm from adjacent components	
APPROVALS		
<b>ACCESSORIES</b>		
Mounting rail (IEC60715/TH35-7.5)	PR/3/AC, PR/3/AC/ZB, PR/3/AS, PR/3/AS/ZB	
Mounting rail (IEC60715/TH35-15)	PR/3/PP, PR/3/PP/ZB, PR/3/PA, PR/3/PA/ZB	
Marking tag	-	

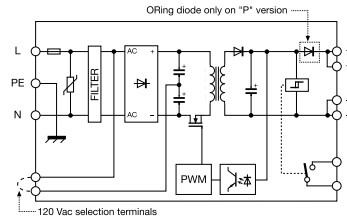
- Single phase input
- Short circuit, overload, input and output overvoltage protections
- Over temperature protection
- Suitable for applications that require high reliability and performance
- Smart alarm contact, signals when output voltage drops more than 10%
- High overload capability to ensure the protections selectivity and start-up of heavy loads



**NOTE**  
Please refer to the datasheet for more details  
Above overcurrent limit, the protection starts cycling in ON/OFF mode(hiccup autoreset), the maximum current supplied depends by the line resistance  
(1) Dual voltage with selection through external jumper

CODE TYPE	CSF240C	XCSF240C	CSF240CP	XCSF240CP
<b>INPUT TECHNICAL DATA</b>				
Input rated voltage	120–230 Vac		120–230 Vac	
Input voltage AC	90...132 Vac / 185...264 Vac (1)		90...132 Vac / 185...264 Vac (1)	
Input voltage DC	300...345 Vdc		300...345 Vdc	
Frequency	47...63 Hz		47...63 Hz	
Current consumption	3.5 A (120 Vac) / 1.8 A (230 Vac)		3.5 A (120 Vac) / 1.8 A (230 Vac)	
Inrush peak current	35 A		35 A	
Power factor	> 0.6		> 0.6	
Internal protection fuse	T 6.3 A		T 6.3 A	
External protection on AC line	MCB: C-10 A / Fuse: T 10 A		MCB: C-10 A / Fuse: T 10 A	
<b>OUTPUT TECHNICAL DATA</b>				
Output rated voltage	24 Vdc ±1%		24 Vdc ±1%	
Output adjustable range	23...27.5 Vdc		23...27.5 Vdc	
Continuous current	10 A at 45°C		10 A at 45°C	
Overload limiting	15 A for >30 s		15 A for >30 s	
Short circuit peak current	25 A for 400 ms		25 A for 400 ms	
Ripple @ nominal ratings	50 mVpp		50 mVpp	
Hold up time	30 ms (120 Vac) / 60 ms (230 Vac)		30 ms (120 Vac) / 60 ms (230 Vac)	
Status indication	LED "DC OK" / LED "Alarm"		LED "DC OK" / LED "Alarm"	
Alarm contact	dry contact, max. 1A @ 24 Vdc (Uout >21.6 Vdc)		dry contact, max. 1A @ 24 Vdc (Uout >21.6 Vdc)	
Parallel connection	possible		possible	
Redundant parallel connection	possible with external ORing diode		already fitted with internal ORing diode	
<b>GENERAL TECHNICAL DATA</b>				
Efficiency	88% (120 Vac) / 90% (230 Vac)		88% (120 Vac) / 90% (230 Vac)	
Dissipated power	32 W (120 Vac) / 27 W (230 Vac)		32 W (120 Vac) / 27 W (230 Vac)	
Operating temperature range	-20...+60°C (derating -4 W >45°C)		-20...+60°C (derating -4 W >45°C)	
Input / output isolation	3 kVac / 60 s (SELV output)		3 kVac / 60 s (SELV output)	
Input / ground isolation	1.5 kVac / 60 s		1.5 kVac / 60 s	
Output / ground isolation	0.5 kVac / 60 s		0.5 kVac / 60 s	
Standard / approvals	EN 60950-1		EN 60950-1	
EMC Standards	EN 61000-6-1, EN 61000-6-2, EN 61000-6-3, EN 61000-6-4		EN 61000-6-1, EN 61000-6-2, EN 61000-6-3, EN 61000-6-4	
Overvoltage category / Pollution degree	II / 2		II / 2	
Protection degree	IP 20		IP 20	
Connection terminal IN/OUT	2.5 mm <sup>2</sup> / 2.5 mm <sup>2</sup>		2.5 mm <sup>2</sup> / 2.5 mm <sup>2</sup>	
Housing material	aluminium		aluminium	
Dimension	63.5x135x140 mm		63.5x135x140 mm	
Approximate weight	920 g		920 g	
Mounting information	vertical on a rail, 10 mm from adjacent components		vertical on a rail, 10 mm from adjacent components	
<b>APPROVALS</b>				
<b>ACCESSORIES</b>				
Mounting rail (IEC60715/TH35-7.5)	PR/3/AC, PR/3/AC/ZB, PR/3/AS, PR/3/AS/ZB		PR/3/AC, PR/3/AC/ZB, PR/3/AS, PR/3/AS/ZB	
Mounting rail (IEC60715/TH35-15)	PR/3/PP, PR/3/PP/ZB, PR/3/PA, PR/3/PA/ZB		PR/3/PP, PR/3/PP/ZB, PR/3/PA, PR/3/PA/ZB	
Marking tag	—		—	

- Single phase input
- Short circuit, overload, input and output overvoltage protections
- Over temperature protection
- Suitable for applications that require high reliability and performance
- Smart alarm contact, signals when output voltage drops more than 10%
- High overload capability to ensure the protections selectivity and start-up of heavy loads



**NOTE**  
Please refer to the datasheet for more details  
Above overcurrent limit, the protection starts cycling in ON/OFF mode(hiccup autoreset), the maximum current supplied depends by the line resistance  
(1) Dual voltage with selection through external jumper

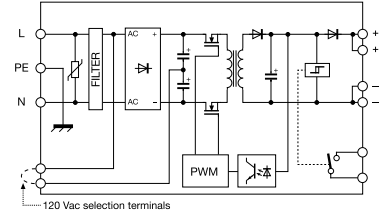
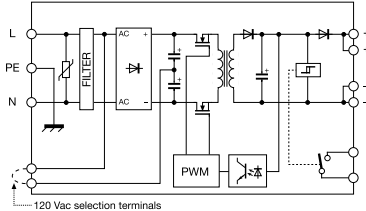
CODE TYPE	CSF240DP	XCSF240DP
<b>INPUT TECHNICAL DATA</b>		
Input rated voltage	120–230 Vac	
Input voltage AC	90...132 Vac / 185...264 Vac (1)	
Input voltage DC	300...345 Vdc	
Frequency	47...63 Hz	
Current consumption	3.5 A (120 Vac) / 1.8 A (230 Vac)	
Inrush peak current	35 A	
Power factor	> 0.6	
Internal protection fuse	T 6.3 A	
External protection on AC line	MCB: C-10 A / Fuse: T 10 A	
<b>OUTPUT TECHNICAL DATA</b>		
Output rated voltage	48 Vdc ±1%	
Output adjustable range	45...55 Vdc	
Continuous current	5 A at 45°C	
Overload limiting	7.5 A for >30 s	
Short circuit peak current	25 A for 400 ms	
Ripple @ nominal ratings	50 mVpp	
Hold up time	30 ms (120 Vac) / 60 ms (230 Vac)	
Status indication	LED "DC OK" / LED "Alarm"	
Alarm contact	dry contact, max. 1A @ 24 Vdc (Uout >43.2 Vdc)	
Parallel connection	possible	
Redundant parallel connection	already fitted with internal ORing diode	
<b>GENERAL TECHNICAL DATA</b>		
Efficiency	89% (120 Vac) / 89% (230 Vac)	
Dissipated power	28 W (120 Vac) / 28 W (230 Vac)	
Operating temperature range	-20...+60°C (derating -4 W >45°C)	
Input / output isolation	3 kVac / 60 s (SELV output)	
Input / ground isolation	1.5 kVac / 60 s	
Output / ground isolation	0.5 kVac / 60 s	
Standard / approvals	EN 60950-1	
EMC Standards	EN 61000-6-1, EN 61000-6-2, EN 61000-6-3, EN 61000-6-4	
Overvoltage category / Pollution degree	II / 2	
Protection degree	IP 20	
Connection terminal IN/OUT	2.5 mm <sup>2</sup> / 2.5 mm <sup>2</sup>	
Housing material	aluminium	
Dimension	63.5x135x140 mm	
Approximate weight	920 g	
Mounting information	vertical on a rail, 10 mm from adjacent components	
APPROVALS		
<b>ACCESSORIES</b>		
Mounting rail (IEC60715/TH35-7.5)	PR/3/AC, PR/3/AC/ZB, PR/3/AS, PR/3/AS/ZB	
Mounting rail (IEC60715/TH35-15)	PR/3/PP, PR/3/PP/ZB, PR/3/PA, PR/3/PA/ZB	
Marking tag	—	



- Single phase input
- Short circuit, overload, input and output overvoltage protections
- Over temperature protection
- Suitable for applications that require high reliability and performance
- Smart alarm contact, signals when output voltage drops more than 10%
- High overload capability to ensure the protections selectivity and start-up of heavy loads

**NOTE**

Please refer to the datasheet for more details  
 Above overcurrent limit, the protection starts cycling in ON/OFF mode(hiccup autoreset), the maximum current supplied depends by the line resistance  
 (1) Dual voltage with selection through external jumper



CODE TYPE	CSF500C	XCSF500C	CSF500D	XCSF500D
<b>INPUT TECHNICAL DATA</b>				
Input rated voltage	120-230 Vac		120-230 Vac	
Input voltage AC	90...132 Vac / 185...264 Vac (1)		90...132 Vac / 185...264 Vac (1)	
Input voltage DC	100...370 Vdc (derating Uin<130 Vdc)		100...370 Vdc (derating Uin<130 Vdc)	
Frequency	47...63 Hz		47...63 Hz	
Current consumption	4.1 A (120 Vac) / 2 A (230 Vac)		4.1 A (120 Vac) / 2 A (230 Vac)	
Inrush peak current	25 A with electronic limiter		25 A with electronic limiter	
Power factor	> 0.75		> 0.75	
Internal protection fuse	—		—	
External protection on AC line	MCB: C-16 A / Fuse: T 15 A		MCB: C-16 A / Fuse: T 15 A	
<b>OUTPUT TECHNICAL DATA</b>				
Output rated voltage	24 Vdc ±1%		48 Vdc ±1%	
Output adjustable range	24...28 Vdc		45...55 Vdc	
Continuous current	20 A at 45°C		10 A at 45°C	
Overload limiting	22 A for >5 s		12 A for >5 s	
Short circuit peak current	35 A for 5 s		20 A for 5 s	
Ripple @ nominal ratings	50 mVpp		50 mVpp	
Hold up time	12 ms (120 Vac) / 20 ms (230 Vac)		12 ms (120 Vac) / 20 ms (230 Vac)	
Status indication	LED "DC OK" / LED "Alarm"		LED "DC OK" / LED "Alarm"	
Alarm contact	dry contact, max. 1A @ 24 Vdc (Uout >21.6 Vdc)		dry contact, max. 1A @ 24 Vdc (Uout >43.2 Vdc)	
Parallel connection	possible		possible	
Redundant parallel connection	already fitted with internal ORing diode		already fitted with internal ORing diode	
<b>GENERAL TECHNICAL DATA</b>				
Efficiency	92% (120 Vac) / 92% (230 Vac)		92% (120 Vac) / 92% (230 Vac)	
Dissipated power	44 W (120 Vac) / 44 W (230 Vac)		44 W (120 Vac) / 44 W (230 Vac)	
Operating temperature range	-20...+60°C (derating -8.2 W >45°C)		-20...+60°C (derating -8.2 W >45°C)	
Input / output isolation	3 kVac / 60 s (SELV output)		3 kVac / 60 s (SELV output)	
Input / ground isolation	1.5 kVac / 60 s		1.5 kVac / 60 s	
Output / ground isolation	0.5 kVac / 60 s		0.5 kVac / 60 s	
Standard / approvals	EN 60950-1		EN 60950-1	
EMC Standards	EN 61000-6-1, EN 61000-6-2, EN 61000-6-3, EN 61000-6-4		EN 61000-6-1, EN 61000-6-2, EN 61000-6-3, EN 61000-6-4	
Overvoltage category / Pollution degree	II / 2		II / 2	
Protection degree	IP 20		IP 20	
Connection terminal IN/OUT	4 mm <sup>2</sup> / 4 mm <sup>2</sup>		4 mm <sup>2</sup> / 4 mm <sup>2</sup>	
Housing material	aluminium		aluminium	
Dimension	80x139x127 mm		80x139x127 mm	
Approximate weight	1.3 kg		1.3 kg	
Mounting information	vertical on a rail, 10 mm from adjacent components		vertical on a rail, 10 mm from adjacent components	
<b>APPROVALS</b>				
<b>ACCESSORIES</b>				
Mounting rail (IEC60715/TH35-7.5)	PR/3/AC, PR/3/AC/ZB, PR/3/AS, PR/3/AS/ZB		PR/3/AC, PR/3/AC/ZB, PR/3/AS, PR/3/AS/ZB	
Mounting rail (IEC60715/TH35-15)	PR/3/PP, PR/3/PP/ZB, PR/3/PA, PR/3/PA/ZB		PR/3/PP, PR/3/PP/ZB, PR/3/PA, PR/3/PA/ZB	
Marking tag	TAP207A, TAP128A, TAP178A, TAP209A		TAP207A, TAP128A, TAP178A, TAP209A	

**Single-phase switching power supply for DIN-rail**, for general applications in automation and installation. Offering excellent value for money, these offer a perfect and convenient solution for uses in which the powered loads do not require strong peak currents.

They can deliver over +30% of nominal current for a sustained period, keeping the output voltage stable and ensuring continuity of supply to the system. **With these features, this range of power supplies enables designers to meet the requirements of the Machinery Directive EN 60204-1**, allowing the protection devices connected to the output to trigger quickly, safely and selectively, thus ensuring continuity of service to the other parts of the system.

**Suggested uses**

- Civil automation applications
- General applications in plant installations

**Main features**

- Equipped with a 120-230 Vac input, these are suitable for use in all single-phase networks
- High efficiency reduces energy consumption and the operating temperature of components and allows use in small panels and severe environmental conditions.
- Power reserve +30% of nominal current, ensuring safety and reliability.
- Output voltage is adjustable and protected against incoming surge generated by inductive loads on the DC line, and is equipped with a double electronic protection that prevents the powered device from failing in case of an internal malfunction.
- Short-circuit, overload and thermal protection prevents faults in case of prolonged overload with high ambient temperatures.
- Construction ensures optimal capacity of ventilation of internal components, extremely reduced overall dimensions and degree of protection IP20 by accidental contact according to IEC529.
- Offer superior performance, features and reliability compared to other products of a similar power and cost.

**DOMOTIC POWER**



**Short-circuit, overload and thermal protection**  
Prevents faults in case of prolonged overload with high ambient temperatures

**Adjustable output voltage Protected**  
against incoming surge generated by inductive loads on the DC line

**Power boost**  
The output power reaches 130% in the event of overload, and up to 150% during a short-circuit



**Extremely compact dimensions**  
Among the smallest on the market, optimising the use of space in the panel without compromising performance

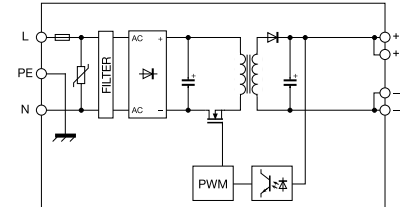
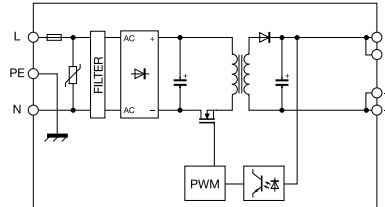
**High performance**  
Reduces the energy consumption and operating temperature of components and allows for use in small panels and in severe ambient conditions

- Single phase and DC input
- Short circuit, overload, input and output overvoltage protections
- Over temperature protection
- Suitable for standard applications
- Alarm contact



**NOTE**

Please refer to the datasheet for more details  
Above overcurrent limit, the protection starts cycling in ON/OFF mode(hiccup autoreset), the maximum current supplied depends by the line resistance



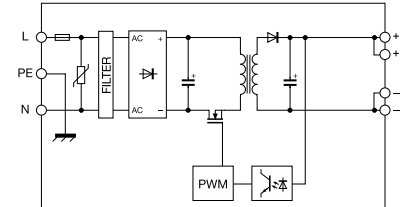
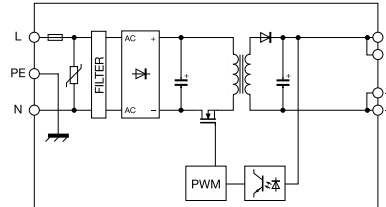
CODE TYPE	XCSL1072W024VAA	XCSL1120W024VAA
<b>INPUT TECHNICAL DATA</b>	<b>CSL1-072W/024V/AA</b>	<b>CSL1-120W/024V/AA</b>
Input rated voltage	120–230 Vac	120–230 Vac
Input voltage AC	85...264 Vac	85...264 Vac
Input voltage DC	100...370 Vdc (derating Uin<130 Vdc)	100...370 Vdc (derating Uin<130 Vdc)
Frequency	47...63 Hz	47...63 Hz
Current consumption	0.8 A (120 Vac) / 0.4 A (230 Vac)	1.5 A (120 Vac) / 0.8 A (230 Vac)
Inrush peak current	20 A	20 A
Power factor	> 0.65	> 0.65
Internal protection fuse	T 2 A	T 3.15 A
External protection on AC line	MCB: C-4 A / Fuse: T-4 A	MCB: C-4 A / Fuse: T-4 A
<b>OUTPUT TECHNICAL DATA</b>		
Output rated voltage	24 Vdc ±1%	24 Vdc ±1%
Output adjustable range	16 ... 28 Vdc	16 ... 28 Vdc
Continuous current	3 A at 50°C	5 A
Overload limiting	> 6 A per > 30 s	>6.2 A for >30 s
Short circuit peak current	15 A for 50 ms	15 A for 50 ms
Ripple @ nominal ratings	40 mVpp	50 mVpp
Hold up time	20 ms (120 Vac) / 70 ms (230 Vac)	20 ms (120 Vac) / 20 ms (230 Vac)
Status indication	LED "DC OK"	LED "DC OK"
Alarm contact	dry contact, max. 1A @ 24 Vdc (Uout >22.0 Vdc)	dry contact, max. 1A @ 24 Vdc (Uout >22.0 Vdc)
Parallel connection	possible	possible
Redundant parallel connection	possible with external ORing diode	possible with external ORing diode
<b>GENERAL TECHNICAL DATA</b>		
Efficiency	87% (120 Vac) / 87% (230 Vac)	85% (120 Vac) / 85% (230 Vac)
Dissipated power	10.8 W (120 Vac) / 10.8 W (230 Vac)	21.2 W (120 Vac) / 21.2 W (230 Vac)
Operating temperature range	-20...+70°C (derating -3 W/°C >50°C)	-20...+70°C (derating -3 W/°C >50°C)
Input / output isolation	3 kVac / 60 s (SELV output)	3 kVac / 60 s (SELV output)
Input / ground isolation	1.5 kVac / 60 s	1.5 kVac / 60 s
Output / ground isolation	0.5 kVac / 60 s	0.5 kVac / 60 s
Standard / approvals	EN 60950-1	EN 60950-1, EN 62368-1
EMC Standards	EN 61000-6-1, EN 61000-6-2, EN 61000-6-3, EN 61000-6-4	EN 61000-6-2, EN 61000-6-4
Overvoltage category / Pollution degree	II / 2	II / 2
Protection degree	IP 20	IP 20
Connection terminal IN/OUT	2.5 mm <sup>2</sup> / 2.5 mm <sup>2</sup>	2.5 mm <sup>2</sup> / 2.5 mm <sup>2</sup>
Housing material	aluminium	aluminium
Dimension	40x115x115 mm	40x115x115 mm
Approximate weight	400 g	400 g
Mounting information	vertical on a rail, 20 mm from adjacent components	vertical on a rail, 20 mm from adjacent components
<b>APPROVALS</b>	UL PENDING	UL PENDING
<b>ACCESSORIES</b>		
Mounting rail (IEC60715/TH35-7.5)	PR/3/AC, PR/3/AC/ZB, PR/3/AS, PR/3/AS/ZB	PR/3/AC, PR/3/AC/ZB, PR/3/AS, PR/3/AS/ZB
Mounting rail (IEC60715/TH35-15)	—	—
Marking tag	—	—





- Single phase input
- Short circuit, overload, input and output overvoltage protections
- Over temperature protection
- Suitable for standard applications



NOTE

Please refer to the datasheet for more details  
Above overcurrent limit, the protection starts cycling in ON/OFF mode(hiccup autoreset), the maximum current supplied depends by the line resistance



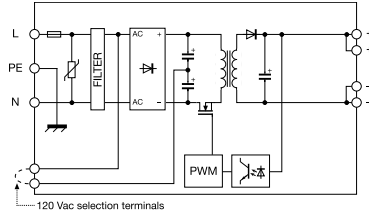
CODE TYPE	CSL85C	XCSL85C	CSL120C	XCSL120C
<b>INPUT TECHNICAL DATA</b>				
Input rated voltage	120–230 Vac		120–230 Vac	
Input voltage AC	90...264 Vac		90...264 Vac	
Input voltage DC	—		—	
Frequency	47...63 Hz		47...63 Hz	
Current consumption	1.6A (120 Vac) / 0.9 A (230 Vac)		1.9 A (120 Vac) / 1.1 A (230 Vac)	
Inrush peak current	20 A		20 A	
Power factor	> 0.65		> 0.65	
Internal protection fuse	T 2 A		T 3.15 A	
External protection on AC line	MCB: C-4 A / Fuse: T-4 A		MCB: C-4 A / Fuse: T-4 A	
<b>OUTPUT TECHNICAL DATA</b>				
Output rated voltage	24 Vdc ±1%		24 Vdc ±1%	
Output adjustable range	23...27.5 Vdc		23...27.5 Vdc	
Continuous current	3.5 A at 45°C		5 A	
Overload limiting	>5.5 A per >30 s		8 A for > 30 s	
Short circuit peak current	9 A for 50 ms		13 A for 50 ms	
Ripple @ nominal ratings	40 mVpp		30 mVpp	
Hold up time	20 ms (120 Vac) / 70 ms (230 Vac)		17 ms (120 Vac) / 72 ms (230 Vac)	
Status indication	LED "DC OK"		LED "DC OK"	
Alarm contact	—		—	
Parallel connection	possible		possible	
Redundant parallel connection	possible with external ORing diode		possible with external ORing diode	
<b>GENERAL TECHNICAL DATA</b>				
Efficiency	86% (120 Vac) / 90% (230 Vac)		86% (120 Vac) / 90% (230 Vac)	
Dissipated power	14 W (120 Vac) / 10 W (230 Vac)		19 W (120 Vac) / 13 W (230 Vac)	
Operating temperature range	-20...+60°C (derating -1.45 W >45°C)		-20...+60°C (derating -1.9 W >45°C)	
Input / output isolation	3 kVac / 60 s (SELV output)		3 kVac / 60 s (SELV output)	
Input / ground isolation	1.5 kVac / 60 s		1.5 kVac / 60 s	
Output / ground isolation	0.5 kVac / 60 s		0.5 kVac / 60 s	
Standard / approvals	EN 60950-1		EN 60950-1	
EMC Standards	EN 61000-6-1, EN 61000-6-2, EN 61000-6-3, EN 61000-6-4		EN 61000-6-2, EN 61000-6-4	
Overvoltage category / Pollution degree	II / 2		II / 2	
Protection degree	IP 20		IP 20	
Connection terminal IN/OUT	2.5 mm <sup>2</sup> / 2.5 mm <sup>2</sup>		2.5 mm <sup>2</sup> / 2.5 mm <sup>2</sup>	
Housing material	aluminium		aluminium	
Dimension	40x130x115 mm		40x130x115 mm	
Approximate weight	400 g		400 g	
Mounting information	vertical on a rail, 10 mm from adjacent components		vertical on a rail, 10 mm from adjacent components	
<b>APPROVALS</b>	 		 	
<b>ACCESSORIES</b>				
Mounting rail (IEC60715/TH35-7.5)	PR/3/AC, PR/3/AC/ZB, PR/3/AS, PR/3/AS/ZB		PR/3/AC, PR/3/AC/ZB, PR/3/AS, PR/3/AS/ZB	
Mounting rail (IEC60715/TH35-15)	PR/3/PP, PR/3/PP/ZB, PR/3/PA, PR/3/PA/ZB		PR/3/PP, PR/3/PP/ZB, PR/3/PA, PR/3/PA/ZB	
Marking tag	—		—	

- Single phase input
- Short circuit, overload, input and output overvoltage protections
- Over temperature protection
- Suitable for standard applications



**NOTE**

Please refer to the datasheet for more details  
Above overcurrent limit, the protection starts cycling in ON/OFF mode(hiccup autoreset), the maximum current supplied depends by the line resistance  
(1) Dual voltage with selection through external jumper



CODE TYPE	CSL240C	XCSL240C
<b>INPUT TECHNICAL DATA</b>		
Input rated voltage	120–230 Vac	
Input voltage AC	90...132 Vac / 185...264 Vac (1)	
Input voltage DC	—	
Frequency	47...63 Hz	
Current consumption	3.5A (120 Vac) / 1.8 A (230 Vac)	
Inrush peak current	35 A	
Power factor	> 0.6 / >0.85	
Internal protection fuse	T 6.3 A	
External protection on AC line	MCB: C-10 A / Fuse: T-10 A	
<b>OUTPUT TECHNICAL DATA</b>		
Output rated voltage	24 Vdc ±1%	
Output adjustable range	23...27.5 Vdc	
Continuous current	10 A at 45°C	
Overload limiting	15 A for >30 s	
Short circuit peak current	25 A for 400 ms	
Ripple @ nominal ratings	50 mVpp	
Hold up time	30 ms (120 Vac) / 60 ms (230 Vac)	
Status indication	LED "DC OK"	
Alarm contact	—	
Parallel connection	possible	
Redundant parallel connection	possible with external ORing diode	
<b>GENERAL TECHNICAL DATA</b>		
Efficiency	88% (120 Vac) / 90% (230 Vac)	
Dissipated power	32 W (120 Vac) / 27 W (230 Vac)	
Operating temperature range	-20...+60°C (derating -4 W >45°C)	
Input / output isolation	3 kVac / 60 s (SELV output)	
Input / ground isolation	1.5 kVac / 60 s	
Output / ground isolation	0.5 kVac / 60 s	
Standard / approvals	EN 60950-1	
EMC Standards	EN 61000-6-1, EN 61000-6-2, EN 61000-6-3, EN 61000-6-4	
Overvoltage category / Pollution degree	II / 2	
Protection degree	IP 20	
Connection terminal IN/OUT	2.5 mm <sup>2</sup> / 2.5 mm <sup>2</sup>	
Housing material	aluminium	
Dimension	63.5x135x140 mm	
Approximate weight	920 g	
Mounting information	vertical on a rail, 10 mm from adjacent components	
APPROVALS		
<b>ACCESSORIES</b>		
Mounting rail (IEC60715/TH35-7.5)	PR/3/AC, PR/3/AC/ZB, PR/3/AS, PR/3/AS/ZB	
Mounting rail (IEC60715/TH35-15)	PR/3/PP, PR/3/PP/ZB, PR/3/PA, PR/3/PA/ZB	
Marking tag	—	

- Single phase and DC input
- Short circuit, overload, input and output overvoltage protections
- Over temperature protection
- Suitable for standard applications
- Alarm contact
- High overload capability to ensure the protections selectivity and start-up of heavy loads



NOTE

Please refer to the datasheet for more details  
Above overcurrent limit, the protection decreases the output voltage (constant current mode), the maximum current supplied depends by the line resistance  
(1) Available after July 2019

CODE TYPE	XCSL1480W024VAA	XCSL1480W048VAA
<b>INPUT TECHNICAL DATA</b>	<b>CSL1-480W/024V/AA (1)</b>	<b>CSL1-480W/048V/AA (1)</b>
Input rated voltage	120-230 Vac	120-230 Vac
Input voltage AC	85...264 Vac	85...264 Vac
Input voltage DC	100...370 Vdc (derating Uin<130 Vdc)	100...370 Vdc (derating Uin<130 Vdc)
Frequency	47...63 Hz	47...63 Hz
Current consumption	4.9 A (120 Vac) / 2.4 A (230 Vac)	4.9 A (120 Vac) / 2.4 A (230 Vac)
Inrush peak current	36 A	36 A
Power factor	> 0.99	> 0.99
Internal protection fuse	—	—
External protection on AC line	MCB: C-6 A / Fuse: T-6.3 A	MCB: C-6 A / Fuse: T-6.3 A
<b>OUTPUT TECHNICAL DATA</b>		
Output rated voltage	24 Vdc ±1%	48 Vdc ±1%
Output adjustable range	20 ... 28 Vdc	40.5 ... 55.5 Vdc
Continuous current	20 A at 50°C	10 A at 50°C
Overload limiting	22.5 A (max. 40 A constant current)	11.5 A (max. 20 A constant current)
Short circuit peak current	—	—
Ripple @ nominal ratings	40 mVpp	15 mVpp
Hold up time	18 ms (120 Vac) / 18 ms (230 Vac)	18 ms (120 Vac) / 18 ms (230 Vac)
Status indication	LED "DC OK", LED "Stand-by"	LED "DC OK", LED "Stand-by"
Alarm contact	dry contact, max. 1A @ 24 Vdc (Uout >21.6 Vdc)	dry contact, max. 1A @ 24 Vdc (Uout >43.2 Vdc)
Parallel connection	possible	possible
Redundant parallel connection	possible with external ORing diode	possible with external ORing diode
<b>GENERAL TECHNICAL DATA</b>		
Efficiency		
Dissipated power		
Operating temperature range	-20...+70°C (derating -14 W/°C >50°C)	-20...+70°C (derating -14 W/°C >50°C)
Input / output isolation	3 kVac / 60 s (SELV output)	3 kVac / 60 s (SELV output)
Input / ground isolation	1.5 kVac / 60 s	1.5 kVac / 60 s
Output / ground isolation	0.5 kVac / 60 s	0.5 kVac / 60 s
Standard / approvals	EN 60950-1	EN 60950-1
EMC Standards	EN 61000-6-1, EN 61000-6-2, EN 61000-6-3, EN 61000-6-4	EN 61000-6-1, EN 61000-6-2, EN 61000-6-3, EN 61000-6-4
Overvoltage category / Pollution degree	II / 2	II / 2
Protection degree	IP 20	IP 20
Connection terminal IN/OUT	4 mm <sup>2</sup> / 4 mm <sup>2</sup>	4 mm <sup>2</sup> / 4 mm <sup>2</sup>
Housing material	aluminium	aluminium
Dimension	80x170x127 mm	80x170x127 mm
Approximate weight	1.5 kg	1.5 kg
Mounting information	vertical on a rail, 20 mm from adjacent components	vertical on a rail, 20 mm from adjacent components
<b>APPROVALS</b>	UL PENDING	UL PENDING
<b>ACCESSORIES</b>		
Mounting rail (IEC60715/TH35-7.5)	PR/3/AC, PR/3/AC/ZB, PR/3/AS, PR/3/AS/ZB	PR/3/AC, PR/3/AC/ZB, PR/3/AS, PR/3/AS/ZB
Mounting rail (IEC60715/TH35-15)	—	—
Marking tag	—	—

- Single phase and DC input
- Short circuit, overload, input and output overvoltage protections
- Over temperature protection
- Suitable for standard applications
- Alarm contact
- High overload capability to ensure the protections selectivity and start-up of heavy loads



**NOTE**

Please refer to the datasheet for more details  
Above overcurrent limit, the protection decreases the output voltage (constant current mode), the maximum current supplied depends by the line resistance  
(1) Available after July 2019

CODE TYPE	XCSL1480W072VAA
<b>INPUT TECHNICAL DATA</b>	<b>CSL1-480W/072V/AA (1)</b>
Input rated voltage	120–230 Vac
Input voltage AC	85...264 Vac
Input voltage DC	100...370 Vdc (derating Uin<130 Vdc)
Frequency	47...63 Hz
Current consumption	4.9 A (120 Vac) / 2.4 A (230 Vac)
Inrush peak current	36 A
Power factor	> 0.99
Internal protection fuse	—
External protection on AC line	MCB: C-6 A / Fuse: T-6.3 A
<b>OUTPUT TECHNICAL DATA</b>	
Output rated voltage	72 Vdc ±1%
Output adjustable range	62.5 ... 81 Vdc
Continuous current	6.6 A at 50°C
Overload limiting	7.5 A (max. 24 A constant current)
Short circuit peak current	—
Ripple @ nominal ratings	15 mVpp
Hold up time	18 ms (120 Vac) / 18 ms (230 Vac)
Status indication	LED "DC OK", LED "Stand-by"
Alarm contact	dry contact, max. 1A @ 24 Vdc (Uout >68.4 Vdc)
Parallel connection	possible
Redundant parallel connection	possible with external ORing diode
<b>GENERAL TECHNICAL DATA</b>	
Efficiency	
Dissipated power	
Operating temperature range	-20...+70°C (derating -14 W/°C >50°C)
Input / output isolation	3 kVac / 60 s (no SELV output)
Input / ground isolation	1.5 kVac / 60 s
Output / ground isolation	0.5 kVac / 60 s
Standard / approvals	EN 60950-1
EMC Standards	EN 61000-6-1, EN 61000-6-2, EN 61000-6-3, EN 61000-6-4
Overvoltage category / Pollution degree	II / 2
Protection degree	IP 20
Connection terminal IN/OUT	4 mm <sup>2</sup> / 4 mm <sup>2</sup>
Housing material	aluminium
Dimension	80x170x127 mm
Approximate weight	1.5 kg
Mounting information	vertical on a rail, 20 mm from adjacent components
<b>APPROVALS</b>	<b>CE UL PENDING</b>
<b>ACCESSORIES</b>	
Mounting rail (IEC60715/TH35-7.5)	PR/3/AC, PR/3/AC/ZB, PR/3/AS, PR/3/AS/ZB
Mounting rail (IEC60715/TH35-15)	—
Marking tag	—

- 3-phase 400-500 Vac input
- Short circuit, overload, input and output overvoltage protections
- Over temperature protection
- Suitable for standard applications
- Alarm contact
- High overload capability to ensure the protections selectivity and start-up of heavy loads



NOTE

Please refer to the datasheet for more details  
Above overcurrent limit, the protection decreases the output voltage (constant current mode), the maximum current supplied depends by the line resistance  
(1) Available after May 2019

CODE TYPE	XCSL3480W024VAA	XCSL3480W048VAA
<b>INPUT TECHNICAL DATA</b>	<b>CSL3-480W/024V/AA (1)</b>	<b>CSL3-480W/048V/AA (1)</b>
Input rated voltage	3x 400-500 Vac	3x 400-500 Vac
Input voltage AC	340...550 Vac	340...550 Vac
Input voltage DC	—	—
Frequency	47...63 Hz	47...63 Hz
Current consumption	1.2 A (120 Vac) / 1 A (230 Vac)	1.2 A (120 Vac) / 1 A (230 Vac)
Inrush peak current	22 A	22 A
Power factor	—	—
Internal protection fuse	—	—
External protection on AC line	MCB: C-4 A / Fuse: T-3.15 A	MCB: C-4 A / Fuse: T-3.15 A
<b>OUTPUT TECHNICAL DATA</b>		
Output rated voltage	24 Vdc ±1%	48 Vdc ±1%
Output adjustable range	20 ... 28 Vdc	40.5 ... 55.5 Vdc
Continuous current	20 A at 50°C	10 A at 50°C
Overload limiting	22.5 A (max. 40 A constant current)	15 A (max. 20 A constant current)
Short circuit peak current	—	—
Ripple @ nominal ratings	50 mVpp	50 mVpp
Hold up time	10 ms (120 Vac) / 10 ms (230 Vac)	10 ms (120 Vac) / 10 ms (230 Vac)
Status indication	LED "DC OK", LED "Stand-by"	LED "DC OK", LED "Stand-by"
Alarm contact	dry contact, max. 1A @ 24 Vdc (Uout > 21.6 Vdc)	dry contact, max. 1A @ 24 Vdc (Uout > 43.2 Vdc)
Parallel connection	possible	possible
Redundant parallel connection	possible with external ORing diode	possible with external ORing diode
<b>GENERAL TECHNICAL DATA</b>		
Efficiency	90.5% (400 Vac) / 90.5% (500 Vac)	91% (400 Vac) / 91% (500 Vac)
Dissipated power	48 W (400 Vac) / 48 W (500 Vac)	47.5 W (400 Vac) / 47.5 W (500 Vac)
Operating temperature range	-20...+70°C (derating -14 W/°C >50°C)	-20...+70°C (derating -14 W/°C >50°C)
Input / output isolation	3 kVac / 60 s (SELV output)	3 kVac / 60 s (SELV output)
Input / ground isolation	1.5 kVac / 60 s	1.5 kVac / 60 s
Output / ground isolation	0.5 kVac / 60 s	0.5 kVac / 60 s
Standard / approvals	EN 60950-1	EN 60950-1
EMC Standards	EN 61000-6-1, EN 61000-6-2, EN 61000-6-3, EN 61000-6-4	EN 61000-6-1, EN 61000-6-2, EN 61000-6-3, EN 61000-6-4
Overvoltage category / Pollution degree	II / 2	II / 2
Protection degree	IP 20	IP 20
Connection terminal IN/OUT	4 mm <sup>2</sup> / 4 mm <sup>2</sup>	4 mm <sup>2</sup> / 4 mm <sup>2</sup>
Housing material	aluminium	aluminium
Dimension	80x170x127 mm	80x170x127 mm
Approximate weight	1.5 kg	1.5 kg
Mounting information	vertical on a rail, 20 mm from adjacent components	vertical on a rail, 20 mm from adjacent components
<b>APPROVALS</b>	UL PENDING	UL PENDING
<b>ACCESSORIES</b>		
Mounting rail (IEC60715/TH35-7.5)	PR/3/AC, PR/3/AC/ZB, PR/3/AS, PR/3/AS/ZB	PR/3/AC, PR/3/AC/ZB, PR/3/AS, PR/3/AS/ZB
Mounting rail (IEC60715/TH35-15)	—	—
Marking tag	—	—



- 3-phase 400-500 Vac input
- Short circuit, overload, input and output overvoltage protections
- Over temperature protection
- Suitable for standard applications
- Alarm contact
- High overload capability to ensure the protections selectivity and start-up of heavy loads



**NOTE**

Please refer to the datasheet for more details  
Above overcurrent limit, the protection decreases the output voltage (constant current mode), the maximum current supplied depends by the line resistance  
(1) Available after May 2019

CODE TYPE	XCSL3480W072VAA
<b>INPUT TECHNICAL DATA</b>	<b>CSL3-480W/072V/AA (1)</b>
Input rated voltage	3x 400-500 Vac
Input voltage AC	340...550 Vac
Input voltage DC	—
Frequency	47...63 Hz
Current consumption	1.2 A (120 Vac) / 1 A (230 Vac)
Inrush peak current	22 A
Power factor	—
Internal protection fuse	—
External protection on AC line	MCB: C-4 A / Fuse: T-3.15 A
<b>OUTPUT TECHNICAL DATA</b>	
Output rated voltage	72 Vdc ±1%
Output adjustable range	60 ... 81 Vdc
Continuous current	6.6 A at 50°C
Overload limiting	9 A (max. 24 A constant current)
Short circuit peak current	—
Ripple @ nominal ratings	40 mVpp
Hold up time	10 ms (120 Vac) / 10 ms (230 Vac)
Status indication	LED "DC OK", LED "Stand-by"
Alarm contact	dry contact, max. 1A @ 24 Vdc (Uout > 68.4 Vdc)
Parallel connection	possible
Redundant parallel connection	possible with external ORing diode
<b>GENERAL TECHNICAL DATA</b>	
Efficiency	91.5% (400 Vac) / 91.5% (500 Vac)
Dissipated power	44.6 W (400 Vac) / 44.6 W (500 Vac)
Operating temperature range	-20...+70°C (derating -14 W/°C >50°C)
Input / output isolation	3 kVac / 60 s (no SELV output)
Input / ground isolation	1.5 kVac / 60 s
Output / ground isolation	0.5 kVac / 60 s
Standard / approvals	EN 60950-1
EMC Standards	EN 61000-6-1, EN 61000-6-2, EN 61000-6-3, EN 61000-6-4
Overvoltage category / Pollution degree	II / 2
Protection degree	IP 20
Connection terminal IN/OUT	4 mm <sup>2</sup> / 4 mm <sup>2</sup>
Housing material	aluminium
Dimension	80x170x127 mm
Approximate weight	1.5 kg
Mounting information	vertical on a rail, 20 mm from adjacent components
<b>APPROVALS</b>	<b>CE UL PENDING</b>
<b>ACCESSORIES</b>	
Mounting rail (IEC60715/TH35-7.5)	PR/3/AC, PR/3/AC/ZB, PR/3/AS, PR/3/AS/ZB
Mounting rail (IEC60715/TH35-15)	—
Marking tag	—

- Single phase and DC input
- Short circuit, overload, input and output overvoltage protections
- Over temperature protection
- Protective coating for extreme conditions
- Alarm contact
- High overload capability to ensure the protections selectivity and start-up of heavy loads



NOTE

Please refer to the datasheet for more details  
Above overcurrent limit, the protection decreases the output voltage (constant current mode), the maximum current supplied depends by the line resistance  
Protective coating allow installation in environment with extreme conditions

[1] Produced on demand, contact our sales office for availability

CODE TYPE	XCSL1480W024VGA	XCSL1480W048VGA
<b>INPUT TECHNICAL DATA</b>	<b>CSL1-480W/024V/GA (1)</b>	<b>CSL1-480W/048V/GA (1)</b>
Input rated voltage	120–230 Vac	120–230 Vac
Input voltage AC	85...264 Vac	85...264 Vac
Input voltage DC	100...370 Vdc (derating Uin<130 Vdc)	100...370 Vdc (derating Uin<130 Vdc)
Frequency	47...63 Hz	47...63 Hz
Current consumption	4.9 A (120 Vac) / 2.4 A (230 Vac)	4.9 A (120 Vac) / 2.4 A (230 Vac)
Inrush peak current	36 A	36 A
Power factor	> 0.99	> 0.99
Internal protection fuse	—	—
External protection on AC line	MCB: C-6 A / Fuse: T-6.3 A	MCB: C-6 A / Fuse: T-6.3 A
<b>OUTPUT TECHNICAL DATA</b>		
Output rated voltage	24 Vdc ±1%	48 Vdc ±1%
Output adjustable range	20 ... 28 Vdc	40.5 ... 55.5 Vdc
Continuous current	20 A at 50°C	10 A at 50°C
Overload limiting	22.5 A (max. 40 A constant current)	11.5 A (max. 20 A constant current)
Short circuit peak current	—	—
Ripple @ nominal ratings	40 mVpp	15 mVpp
Hold up time	18 ms (120 Vac) / 18 ms (230 Vac)	18 ms (120 Vac) / 18 ms (230 Vac)
Status indication	LED "DC OK", LED "Stand-by"	LED "DC OK", LED "Stand-by"
Alarm contact	dry contact, max. 1A @ 24 Vdc (Uout >21.6 Vdc)	dry contact, max. 1A @ 24 Vdc (Uout >43.2 Vdc)
Parallel connection	possible	possible
Redundant parallel connection	possible with external ORing diode	possible with external ORing diode
<b>GENERAL TECHNICAL DATA</b>		
Efficiency		
Dissipated power		
Operating temperature range	-20...+70°C (derating -14 W/°C >50°C)	-20...+70°C (derating -14 W/°C >50°C)
Input / output isolation	3 kVac / 60 s (SELV output)	3 kVac / 60 s (SELV output)
Input / ground isolation	1.5 kVac / 60 s	1.5 kVac / 60 s
Output / ground isolation	0.5 kVac / 60 s	0.5 kVac / 60 s
Standard / approvals	EN 60950-1	EN 60950-1
EMC Standards	EN 61000-6-1, EN 61000-6-2, EN 61000-6-3, EN 61000-6-4	EN 61000-6-1, EN 61000-6-2, EN 61000-6-3, EN 61000-6-4
Overvoltage category / Pollution degree	II / 2	II / 2
Protection degree	IP 20	IP 20
Connection terminal IN/OUT	4 mm <sup>2</sup> / 4 mm <sup>2</sup>	4 mm <sup>2</sup> / 4 mm <sup>2</sup>
Housing material	aluminium	aluminium
Dimension	80x170x127 mm	80x170x127 mm
Approximate weight	1.5 kg	1.5 kg
Mounting information	vertical on a rail, 20 mm from adjacent components	vertical on a rail, 20 mm from adjacent components
<b>APPROVALS</b>	UL PENDING	UL PENDING
<b>ACCESSORIES</b>		
Mounting rail (IEC60715/TH35-7.5)	PR/3/AC, PR/3/AC/ZB, PR/3/AS, PR/3/AS/ZB	PR/3/AC, PR/3/AC/ZB, PR/3/AS, PR/3/AS/ZB
Mounting rail (IEC60715/TH35-15)	—	—
Marking tag	—	—

- Single phase and DC input
- Short circuit, overload, input and output overvoltage protections
- Over temperature protection
- Protective coating for extreme conditions
- Alarm contact
- High overload capability to ensure the protections selectivity and start-up of heavy loads



**NOTE**

Please refer to the datasheet for more details  
 Above overcurrent limit, the protection decreases the output voltage (constant current mode), the maximum current supplied depends by the line resistance  
 Protective coating allow installation in environment with extreme conditions  
 [1] Produced on demand, contact our sales office for availability

CODE TYPE	XCSL1480W072VGA
<b>INPUT TECHNICAL DATA</b>	<b>CSL1-480W/072V/GA (1)</b>
Input rated voltage	120–230 Vac
Input voltage AC	85...264 Vac
Input voltage DC	100...370 Vdc (derating Uin<130 Vdc)
Frequency	47...63 Hz
Current consumption	4.9 A (120 Vac) / 2.4 A (230 Vac)
Inrush peak current	36 A
Power factor	> 0.99
Internal protection fuse	—
External protection on AC line	MCB: C-6 A / Fuse: T-6.3 A
<b>OUTPUT TECHNICAL DATA</b>	
Output rated voltage	72 Vdc ±1%
Output adjustable range	62.5 ... 81 Vdc
Continuous current	6.6 A at 50°C
Overload limiting	7.5 A (mAx. 24 A constant current)
Short circuit peak current	—
Ripple @ nominal ratings	15 mVpp
Hold up time	18 ms (120 Vac) / 18 ms (230 Vac)
Status indication	LED "DC OK", LED "Stand-by"
Alarm contact	dry contact, max. 1A @ 24 Vdc (Uout >68.4 Vdc)
Parallel connection	possible
Redundant parallel connection	possible with external ORing diode
<b>GENERAL TECHNICAL DATA</b>	
Efficiency	
Dissipated power	
Operating temperature range	-20...+70°C (derating -14 W/°C >50°C)
Input / output isolation	3 kVac / 60 s (no SELV output)
Input / ground isolation	1.5 kVac / 60 s
Output / ground isolation	0.5 kVac / 60 s
Standard / approvals	EN 60950-1
EMC Standards	EN 61000-6-1, EN 61000-6-2, EN 61000-6-3, EN 61000-6-4
Overvoltage category / Pollution degree	II / 2
Protection degree	IP 20
Connection terminal IN/OUT	4 mm <sup>2</sup> / 4 mm <sup>2</sup>
Housing material	aluminium
Dimension	80x170x127 mm
Approximate weight	1.5 kg
Mounting information	vertical on a rail, 20 mm from adjacent components
<b>APPROVALS</b>	<b>CE UL PENDING</b>
<b>ACCESSORIES</b>	
Mounting rail (IEC60715/TH35-7.5)	PR/3/AC, PR/3/AC/ZB, PR/3/AS, PR/3/AS/ZB
Mounting rail (IEC60715/TH35-15)	—
Marking tag	—

- 3-phase 400-500 Vac input
- Short circuit, overload, input and output overvoltage protections
- Over temperature protection
- Protective coating for extreme conditions
- Alarm contact
- High overload capability to ensure the protections selectivity and start-up of heavy loads



NOTE

Please refer to the datasheet for more details  
Above overcurrent limit, the protection decreases the output voltage (constant current mode), the maximum current supplied depends by the line resistance  
Protective coating allow installation in environment with extreme conditions

[1] Produced on demand, contact our sales office for availability

CODE TYPE	XCSL3480W024VGA	XCSL3480W048VGA
<b>INPUT TECHNICAL DATA</b>	<b>CSL3-480W/024V/GA (1)</b>	<b>CSL3-480W/048V/GA (1)</b>
Input rated voltage	3x 400–500 Vac	3x 400–500 Vac
Input voltage AC	340...550 Vac	340...550 Vac
Input voltage DC	—	—
Frequency	47...63 Hz	47...63 Hz
Current consumption	1.2 A (120 Vac) / 1 A (230 Vac)	1.2 A (120 Vac) / 1 A (230 Vac)
Inrush peak current	22 A	22 A
Power factor	—	—
Internal protection fuse	—	—
External protection on AC line	MCB: C-4 A / Fuse: T-3.15 A	MCB: C-4 A / Fuse: T-3.15 A
<b>OUTPUT TECHNICAL DATA</b>		
Output rated voltage	24 Vdc ±1%	48 Vdc ±1%
Output adjustable range	20 ... 28 Vdc	40.5 ... 55.5 Vdc
Continuous current	20 A at 50°C	10 A at 50°C
Overload limiting	22.5 A (max. 40 A constant current)	15 A (max. 20 A constant current)
Short circuit peak current	—	—
Ripple @ nominal ratings	50 mVpp	50 mVpp
Hold up time	10 ms (120 Vac) / 10 ms (230 Vac)	10 ms (120 Vac) / 10 ms (230 Vac)
Status indication	LED "DC OK", LED "Stand-by"	LED "DC OK", LED "Stand-by"
Alarm contact	dry contact, max. 1A @ 24 Vdc (Uout >21.6 Vdc)	dry contact, max. 1A @ 24 Vdc (Uout >43.2 Vdc)
Parallel connection	possible	possible
Redundant parallel connection	possible with external ORing diode	possible with external ORing diode
<b>GENERAL TECHNICAL DATA</b>		
Efficiency	90.5% (400 Vac) / 90.5% (500 Vac)	91% (400 Vac) / 91% (500 Vac)
Dissipated power	48 W (400 Vac) / 48 W (500 Vac)	47.5 W (400 Vac) / 47.5 W (500 Vac)
Operating temperature range	-20...+70°C (derating -14 W/°C >50°C)	-20...+70°C (derating -14 W/°C >50°C)
Input / output isolation	3 kVac / 60 s (SELV output)	3 kVac / 60 s (SELV output)
Input / ground isolation	1.5 kVac / 60 s	1.5 kVac / 60 s
Output / ground isolation	0.5 kVac / 60 s	0.5 kVac / 60 s
Standard / approvals	EN 60950-1	EN 60950-1
EMC Standards	EN 61000-6-1, EN 61000-6-2, EN 61000-6-3, EN 61000-6-4	EN 61000-6-1, EN 61000-6-2, EN 61000-6-3, EN 61000-6-4
Overvoltage category / Pollution degree	II / 2	II / 2
Protection degree	IP 20	IP 20
Connection terminal IN/OUT	4 mm <sup>2</sup> / 4 mm <sup>2</sup>	4 mm <sup>2</sup> / 4 mm <sup>2</sup>
Housing material	aluminium	aluminium
Dimension	80x170x127 mm	80x170x127 mm
Approximate weight	1.5 kg	1.5 kg
Mounting information	vertical on a rail, 20 mm from adjacent components	vertical on a rail, 20 mm from adjacent components
<b>APPROVALS</b>	UL PENDING	UL PENDING
<b>ACCESSORIES</b>		
Mounting rail (IEC60715/TH35-7.5)	PR/3/AC, PR/3/AC/ZB, PR/3/AS, PR/3/AS/ZB	PR/3/AC, PR/3/AC/ZB, PR/3/AS, PR/3/AS/ZB
Mounting rail (IEC60715/TH35-15)	—	—
Marking tag	—	—

- 3-phase 400-500 Vac input
- Short circuit, overload, input and output overvoltage protections
- Over temperature protection
- Protective coating for extreme conditions
- Alarm contact
- High overload capability to ensure the protections selectivity and start-up of heavy loads



**NOTE**

Please refer to the datasheet for more details  
 Above overcurrent limit, the protection decreases the output voltage (constant current mode), the maximum current supplied depends by the line resistance  
 Protective coating allow installation in environment with extreme conditions  
 [1] Produced on demand, contact our sales office for availability

CODE TYPE	XCSL3480W072VGA
<b>INPUT TECHNICAL DATA</b>	<b>CSL3-480W/072V/GA (1)</b>
Input rated voltage	3x 400-500 Vac
Input voltage AC	340...550 Vac
Input voltage DC	—
Frequency	47...63 Hz
Current consumption	1.2 A (120 Vac) / 1 A (230 Vac)
Inrush peak current	22 A
Power factor	—
Internal protection fuse	—
External protection on AC line	MCB: C-4 A / Fuse: T-3.15 A
<b>OUTPUT TECHNICAL DATA</b>	
Output rated voltage	72 Vdc ±1%
Output adjustable range	60 ... 81 Vdc
Continuous current	6.6 A at 50°C
Overload limiting	9 A (max. 24 A constant current)
Short circuit peak current	—
Ripple @ nominal ratings	40 mVpp
Hold up time	10 ms (120 Vac) / 10 ms (230 Vac)
Status indication	LED "DC OK", LED "Stand-by"
Alarm contact	dry contact, max. 1A @ 24 Vdc (Uout >68.4 Vdc)
Parallel connection	possible
Redundant parallel connection	possible with external ORing diode
<b>GENERAL TECHNICAL DATA</b>	
Efficiency	91.5% (400 Vac) / 91.5% (500 Vac)
Dissipated power	44.6 W (400 Vac) / 44.6 W (500 Vac)
Operating temperature range	-20...+70°C (derating -14 W/°C >50°C)
Input / output isolation	3 kVac / 60 s (no SELV output)
Input / ground isolation	1.5 kVac / 60 s
Output / ground isolation	0.5 kVac / 60 s
Standard / approvals	EN 60950-1
EMC Standards	EN 61000-6-1, EN 61000-6-2, EN 61000-6-3, EN 61000-6-4
Overvoltage category / Pollution degree	II / 2
Protection degree	IP 20
Connection terminal IN/OUT	4 mm <sup>2</sup> / 4 mm <sup>2</sup>
Housing material	aluminium
Dimension	80x170x127 mm
Approximate weight	1.5 kg
Mounting information	vertical on a rail, 20 mm from adjacent components
<b>APPROVALS</b>	<b>CE UL PENDING</b>
<b>ACCESSORIES</b>	
Mounting rail (IEC60715/TH35-7.5)	PR/3/AC, PR/3/AC/ZB, PR/3/AS, PR/3/AS/ZB
Mounting rail (IEC60715/TH35-15)	—
Marking tag	—

- Single phase and DC input
- Short circuit, overload, input and output overvoltage protections
- Over temperature protection
- Integrated communication port for net connection
- Alarm contact
- High overload capability to ensure the protections selectivity and start-up of heavy loads



NOTE

Please refer to the datasheet for more details  
Above overcurrent limit, the protection decreases the output voltage (constant current mode), the maximum current supplied depends by the line resistance  
The communication port allow the connection to the net through the external interface XCCI001MB  
(1) Produced on demand, contact our sales office for availability

CODE TYPE	XCSL1480W024VAB	XCSL1480W048VAB
<b>INPUT TECHNICAL DATA</b>	<b>CSL1-480W/024V/AB (1)</b>	<b>CSL1-480W/048V/AB (1)</b>
Input rated voltage	120-230 Vac	120-230 Vac
Input voltage AC	85...264 Vac	85...264 Vac
Input voltage DC	100...370 Vdc (derating Uin<130 Vdc)	100...370 Vdc (derating Uin<130 Vdc)
Frequency	47...63 Hz	47...63 Hz
Current consumption	4.9 A (120 Vac) / 2.4 A (230 Vac)	4.9 A (120 Vac) / 2.4 A (230 Vac)
Inrush peak current	36 A	36 A
Power factor	> 0.99	> 0.99
Internal protection fuse	—	—
External protection on AC line	MCB: C-6 A / Fuse: T-6.3 A	MCB: C-6 A / Fuse: T-6.3 A
<b>OUTPUT TECHNICAL DATA</b>		
Output rated voltage	24 Vdc ±1%	48 Vdc ±1%
Output adjustable range	20 ... 28 Vdc	40.5 ... 55.5 Vdc
Continuous current	20 A at 50°C	10 A at 50°C
Overload limiting	22.5 A (max. 40 A constant current)	11.5 A (max. 20 A constant current)
Short circuit peak current	—	—
Ripple @ nominal ratings	40 mVpp	15 mVpp
Hold up time	18 ms (120 Vac) / 18 ms (230 Vac)	18 ms (120 Vac) / 18 ms (230 Vac)
Status indication	LED "DC OK", LED "Stand-by"	LED "DC OK", LED "Stand-by"
Alarm contact	dry contact, max. 1A @ 24 Vdc (Uout >21.6 Vdc)	dry contact, max. 1A @ 24 Vdc (Uout >43.2 Vdc)
Parallel connection	possible	possible
Redundant parallel connection	possible with external ORing diode	possible with external ORing diode
<b>GENERAL TECHNICAL DATA</b>		
Efficiency		
Dissipated power		
Operating temperature range	-20...+70°C (derating -14 W/°C >50°C)	-20...+70°C (derating -14 W/°C >50°C)
Input / output isolation	3 kVac / 60 s (SELV output)	3 kVac / 60 s (SELV output)
Input / ground isolation	1.5 kVac / 60 s	1.5 kVac / 60 s
Output / ground isolation	0.5 kVac / 60 s	0.5 kVac / 60 s
Standard / approvals	EN 60950-1	EN 60950-1
EMC Standards	EN 61000-6-1, EN 61000-6-2, EN 61000-6-3, EN 61000-6-4	EN 61000-6-1, EN 61000-6-2, EN 61000-6-3, EN 61000-6-4
Overvoltage category / Pollution degree	II / 2	II / 2
Protection degree	IP 20	IP 20
Connection terminal IN/OUT	4 mm <sup>2</sup> / 4 mm <sup>2</sup>	4 mm <sup>2</sup> / 4 mm <sup>2</sup>
Housing material	aluminium	aluminium
Dimension	80x170x127 mm	80x170x127 mm
Approximate weight	1.5 kg	1.5 kg
Mounting information	vertical on a rail, 20 mm from adjacent components	vertical on a rail, 20 mm from adjacent components
<b>APPROVALS</b>	UL PENDING	UL PENDING
<b>ACCESSORIES</b>		
Mounting rail (IEC60715/TH35-7.5)	PR/3/AC, PR/3/AC/ZB, PR/3/AS, PR/3/AS/ZB	PR/3/AC, PR/3/AC/ZB, PR/3/AS, PR/3/AS/ZB
Mounting rail (IEC60715/TH35-15)	—	—
Marking tag	—	—

- Single phase and DC input
- Short circuit, overload, input and output overvoltage protections
- Over temperature protection
- Integrated communication port for net connection
- Alarm contact
- High overload capability to ensure the protections selectivity and start-up of heavy loads



**NOTE**

Please refer to the datasheet for more details  
 Above overcurrent limit, the protection decreases the output voltage (constant current mode), the maximum current supplied depends by the line resistance  
 The communication port allow the connection to the net through the external interface XCCI001MB  
 [1] Produced on demand, contact our sales office for availability

CODE	XCSL1480W072VAB
<b>TYPE</b>	<b>CSL1-480W/072V/AB (1)</b>
<b>INPUT TECHNICAL DATA</b>	
Input rated voltage	120–230 Vac
Input voltage AC	85...264 Vac
Input voltage DC	100...370 Vdc (derating Uin<130 Vdc)
Frequency	47...63 Hz
Current consumption	4.9 A (120 Vac) / 2.4 A (230 Vac)
Inrush peak current	36 A
Power factor	> 0.99
Internal protection fuse	—
External protection on AC line	MCB: C-6 A / Fuse: T-6.3 A
<b>OUTPUT TECHNICAL DATA</b>	
Output rated voltage	72 Vdc ±1%
Output adjustable range	62.5 ... 81 Vdc
Continuous current	6.6 A at 50°C
Overload limiting	7.5 A (max. 24 A constant current)
Short circuit peak current	—
Ripple @ nominal ratings	15 mVpp
Hold up time	18 ms (120 Vac) / 18 ms (230 Vac)
Status indication	LED "DC OK", LED "Stand-by"
Alarm contact	dry contact, max. 1A @ 24 Vdc (Uout >68.4 Vdc)
Parallel connection	possible
Redundant parallel connection	possible with external ORing diode
<b>GENERAL TECHNICAL DATA</b>	
<b>Efficiency</b>	
Dissipated power	
Operating temperature range	-20...+70°C (derating -14 W/°C >50°C)
Input / output isolation	3 kVac / 60 s (no SELV output)
Input / ground isolation	1.5 kVac / 60 s
Output / ground isolation	0.5 kVac / 60 s
Standard / approvals	EN 60950-1
EMC Standards	EN 61000-6-1, EN 61000-6-2, EN 61000-6-3, EN 61000-6-4
Overvoltage category / Pollution degree	II / 2
Protection degree	IP 20
Connection terminal IN/OUT	4 mm <sup>2</sup> / 4 mm <sup>2</sup>
Housing material	aluminium
Dimension	80x170x127 mm
Approximate weight	1.5 kg
Mounting information	vertical on a rail, 20 mm from adjacent components
<b>APPROVALS</b>	<b>CE UL PENDING</b>
<b>ACCESSORIES</b>	
Mounting rail (IEC60715/TH35-7.5)	PR/3/AC, PR/3/AC/ZB, PR/3/AS, PR/3/AS/ZB
Mounting rail (IEC60715/TH35-15)	—
Marking tag	—

- 3-phase 400-500 Vac input
- Short circuit, overload, input and output overvoltage protections
- Over temperature protection
- Integrated communication port for net connection
- Alarm contact
- High overload capability to ensure the protections selectivity and start-up of heavy loads



NOTE

Please refer to the datasheet for more details  
 Above overcurrent limit, the protection decreases the output voltage (constant current mode), the maximum current supplied depends by the line resistance  
 The communication port allow the connection to the net through the external interface XCCI001MB  
 (1) Produced on demand, contact our sales office for availability

CODE TYPE	XCSL3480W024VAB CSL3-480W/024V/AB (1)	XCSL3480W048VAB CSL3-480W/048V/AB (1)
<b>INPUT TECHNICAL DATA</b>		
Input rated voltage	3x 400-500 Vac	3x 400-500 Vac
Input voltage AC	340...550 Vac	340...550 Vac
Input voltage DC	—	—
Frequency	47...63 Hz	47...63 Hz
Current consumption	1.2 A (120 Vac) / 1 A (230 Vac)	1.2 A (120 Vac) / 1 A (230 Vac)
Inrush peak current	22 A	22 A
Power factor	—	—
Internal protection fuse	—	—
External protection on AC line	MCB: C-4 A / Fuse: T-3.15 A	MCB: C-4 A / Fuse: T-3.15 A
<b>OUTPUT TECHNICAL DATA</b>		
Output rated voltage	24 Vdc ±1%	48 Vdc ±1%
Output adjustable range	20 ... 28 Vdc	40.5 ... 55.5 Vdc
Continuous current	20 A at 50°C	10 A at 50°C
Overload limiting	22.5 A (max. 40 A constant current)	15 A (max. 20 A constant current)
Short circuit peak current	—	—
Ripple @ nominal ratings	50 mVpp	50 mVpp
Hold up time	10 ms (120 Vac) / 10 ms (230 Vac)	10 ms (120 Vac) / 10 ms (230 Vac)
Status indication	LED "DC OK", LED "Stand-by"	LED "DC OK", LED "Stand-by"
Alarm contact	dry contact, max. 1A @ 24 Vdc (Uout > 21.6 Vdc)	dry contact, max. 1A @ 24 Vdc (Uout > 43.2 Vdc)
Parallel connection	possible	possible
Redundant parallel connection	possible with external ORing diode	possible with external ORing diode
<b>GENERAL TECHNICAL DATA</b>		
Efficiency	90.5% (400 Vac) / 90.5% (500 Vac)	91% (400 Vac) / 91% (500 Vac)
Dissipated power	48 W (400 Vac) / 48 W (500 Vac)	47.5 W (400 Vac) / 47.5 W (500 Vac)
Operating temperature range	-20...+70°C (derating -14 W/°C >50°C)	-20...+70°C (derating -14 W/°C >50°C)
Input / output isolation	3 kVac / 60 s (SELV output)	3 kVac / 60 s (SELV output)
Input / ground isolation	1.5 kVac / 60 s	1.5 kVac / 60 s
Output / ground isolation	0.5 kVac / 60 s	0.5 kVac / 60 s
Standard / approvals	EN 60950-1	EN 60950-1
EMC Standards	EN 61000-6-1, EN 61000-6-2, EN 61000-6-3, EN 61000-6-4	EN 61000-6-1, EN 61000-6-2, EN 61000-6-3, EN 61000-6-4
Overvoltage category / Pollution degree	II / 2	II / 2
Protection degree	IP 20	IP 20
Connection terminal IN/OUT	4 mm <sup>2</sup> / 4 mm <sup>2</sup>	4 mm <sup>2</sup> / 4 mm <sup>2</sup>
Housing material	aluminium	aluminium
Dimension	80x170x127 mm	80x170x127 mm
Approximate weight	1.5 kg	1.5 kg
Mounting information	vertical on a rail, 20 mm from adjacent components	vertical on a rail, 20 mm from adjacent components
APPROVALS	UL PENDING	UL PENDING
<b>ACCESSORIES</b>		
Mounting rail (IEC60715/TH35-7.5)	PR/3/AC, PR/3/AC/ZB, PR/3/AS, PR/3/AS/ZB	PR/3/AC, PR/3/AC/ZB, PR/3/AS, PR/3/AS/ZB
Mounting rail (IEC60715/TH35-15)	—	—
Marking tag	—	—



- 3-phase 400-500 Vac input
- Short circuit, overload, input and output overvoltage protections
- Over temperature protection
- Integrated communication port for net connection
- Alarm contact
- High overload capability to ensure the protections selectivity and start-up of heavy loads



**NOTE**

Please refer to the datasheet for more details  
 Above overcurrent limit, the protection decreases the output voltage (constant current mode), the maximum current supplied depends by the line resistance  
 The communication port allow the connection to the net through the external interface XCCI001MB  
 (1) Produced on demand, contact our sales office for availability

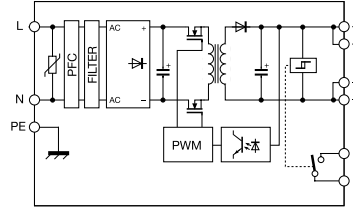
CODE TYPE	XCSL3480W072VAB
<b>INPUT TECHNICAL DATA</b>	<b>CSL3-480W/072V/AB (1)</b>
Input rated voltage	3x 400-500 Vac
Input voltage AC	340...550 Vac
Input voltage DC	—
Frequency	47...63 Hz
Current consumption	1.2 A (120 Vac) / 1 A (230 Vac)
Inrush peak current	22 A
Power factor	—
Internal protection fuse	—
External protection on AC line	MCB: C-4 A / Fuse: T-3.15 A
<b>OUTPUT TECHNICAL DATA</b>	
Output rated voltage	72 Vdc ±1%
Output adjustable range	60 ... 81 Vdc
Continuous current	6.6 A at 50°C
Overload limiting	9 A (max. 24 A constant current)
Short circuit peak current	—
Ripple @ nominal ratings	40 mVpp
Hold up time	10 ms (120 Vac) / 10 ms (230 Vac)
Status indication	LED "DC OK", LED "Stand-by"
Alarm contact	dry contact, max. 1A @ 24 Vdc (Uout > 68.4 Vdc)
Parallel connection	possible
Redundant parallel connection	possible with external ORing diode
<b>GENERAL TECHNICAL DATA</b>	
Efficiency	91.5% (400 Vac) / 91.5% (500 Vac)
Dissipated power	44.6 W (400 Vac) / 44.6 W (500 Vac)
Operating temperature range	-20...+70°C (derating -14 W/°C >50°C)
Input / output isolation	3 kVac / 60 s (no SELV output)
Input / ground isolation	1.5 kVac / 60 s
Output / ground isolation	0.5 kVac / 60 s
Standard / approvals	EN 60950-1
EMC Standards	EN 61000-6-1, EN 61000-6-2, EN 61000-6-3, EN 61000-6-4
Overvoltage category / Pollution degree	II / 2
Protection degree	IP 20
Connection terminal IN/OUT	4 mm <sup>2</sup> / 4 mm <sup>2</sup>
Housing material	aluminium
Dimension	80x170x127 mm
Approximate weight	1.5 kg
Mounting information	vertical on a rail, 20 mm from adjacent components
<b>APPROVALS</b>	<b>CE UL PENDING</b>
<b>ACCESSORIES</b>	
Mounting rail (IEC60715/TH35-7.5)	PR/3/AC, PR/3/AC/ZB, PR/3/AS, PR/3/AS/ZB
Mounting rail (IEC60715/TH35-15)	—
Marking tag	—

- Single phase input
- Short circuit, overload, input and output overvoltage protections
- Over temperature protection
- Suitable for standard applications



**NOTE**

Please refer to the datasheet for more details  
Above overcurrent limit, the protection starts cycling in ON/OFF mode(hiccup autoreset), the maximum current supplied depends by the line resistance



CODE TYPE	CSL481C	XCSL481C
<b>INPUT TECHNICAL DATA</b>		
Input rated voltage	230 Vac	
Input voltage AC	187...264 Vac	
Input voltage DC	—	
Frequency	47...63 Hz	
Current consumption	2 A (230 Vac)	
Inrush peak current	20 A	
Power factor	> 0.95	
Internal protection fuse	—	
External protection on AC line	MCB: C-6 A / Fuse: T-6.3 A	
<b>OUTPUT TECHNICAL DATA</b>		
Output rated voltage	24 Vdc ±1%	
Output adjustable range	23...27.5 Vdc	
Continuous current	20 A at 45°C	
Overload limiting	28 A	
Short circuit peak current	50 A for 0.3 s	
Ripple @ nominal ratings	100 mVpp	
Hold up time	20 ms (230 Vac)	
Status indication	LED "DC OK"	
Alarm contact	dry contact, max. 1A @ 24 Vdc (Uout > 21.6 Vdc)	
Parallel connection	possible	
Redundant parallel connection	possible with external ORing diode	
<b>GENERAL TECHNICAL DATA</b>		
Efficiency	92% (230 Vac)	
Dissipated power	42 W (230 Vac)	
Operating temperature range	-20...+60°C (derating -16 W >45°C)	
Input / output isolation	3 kVac / 60 s (SELV output)	
Input / ground isolation	1.5 kVac / 60 s	
Output / ground isolation	0.5 kVac / 60 s	
Standard / approvals	EN 60950-1	
EMC Standards	EN 61000-6-2, EN 61000-6-4	
Overvoltage category / Pollution degree	II / 2	
Protection degree	IP 20	
Connection terminal IN/OUT	2.5 mm <sup>2</sup> / 2.5 mm <sup>2</sup>	
Housing material	aluminium	
Dimension	73x137x140 mm	
Approximate weight	1 kg	
Mounting information	vertical on a rail, 10 mm from adjacent components	
APPROVALS		
<b>ACCESSORIES</b>		
Mounting rail (IEC60715/TH35-7.5)	PR/3/AC, PR/3/AC/ZB, PR/3/AS, PR/3/AS/ZB	
Mounting rail (IEC60715/TH35-15)	PR/3/PP, PR/3/PP/ZB, PR/3/PA, PR/3/PA/ZB	
Marking tag	—	

**DIN-rail based switching power supply with universal input 185...550 Vac single/2 /3-phase** for industrial automation and process control applications. Input circuit technology makes these immune to overvoltage caused by faults in 3-phase networks with neutral, increasing the reliability of application. This series offers **greater reliability in industrial environments** compared to single-phase power supplies. The input stage uses components with an operating voltage of 900 V, offering greater resistance to the voltage peaks present in industrial networks than single-phase components. The ability to operate from 185 to 550 Vac allows these power supplies to be used in both 230 V single-phase networks and 400 V 3-phase networks.

**Suggested uses**

- Wherever maximum flexibility of use is required in single- or 3-phase networks
- Applications in industrial automation and process control
- Uses with heavy loads
- Civil automation applications

**Main features**

- The 185...550 Vac extended range input is compatible with 230...240 Vac single-phase power, 208 Vac 2-phase and 400...500 Vac 2-phase and 3-phase for maximum adaptability to AC networks, eliminating the need for an isolation transformer.
- The 2-phase input offers reduced bulk, wiring, installation costs and panel space.
- Eliminates the need for a network voltage adaptation transformer.
- Versions with DC OK failure contact
- High efficiency reduces energy consumption and the operating temperature of components and allows use in small panels and severe environmental conditions.
- Large power reserve allows 5 seconds of current to be supplied at least +50% higher than the rated value, ensuring safety and reliability.
- The output is adjustable and protected against incoming surge from the DC line, and is equipped with electronic protection that turns off the output in case of an internal malfunction.
- Short-circuit and overload protection designed to supply peak currents of more than 150% of the rated value required by heavy loads, while the thermal protection prevents faults in case of prolonged overload with high ambient temperatures.
- Construction ensures excellent ventilation capacity of internal components, with reduced sizes and a degree of protection from accidental contacts of IP20 per IEC529.
- Thanks to their high performance and excellent ventilation, they are among the smallest on the market.

UNIVERSAL POWER

**Greater reliability**

This series offers greater reliability in industrial environments compared to single-phase power supplies. The input stage uses components with an operating voltage of 900 V, offering greater resistance to the voltage peaks present in industrial networks than single-phase components.

The ability to operate from 185 to 550 Vac makes these power supplies immune to network faults:

With the output powered at 230 Vac (1L-N), in case of a short in another device connected to L2-N, the neutral is increased to around 400 Vac and the input is powered phase-phase until the protection is opened, which in most cases occurs within 300 ms; this is one of the most frequent causes of malfunction in 230 Vac single-phase power supplies in industrial environments (figures 1 and 2)

Another type of fault in 230 Vac single-phase devices with phase-neutral power is due to the accidental disconnection or interruption of the panel neutral by the plant neutral: with no return to the star point, the neutral increases to phase voltage and applies to single-phase loads of around 400 Vac, and malfunction is inevitable.

185...550 Vac wide range input

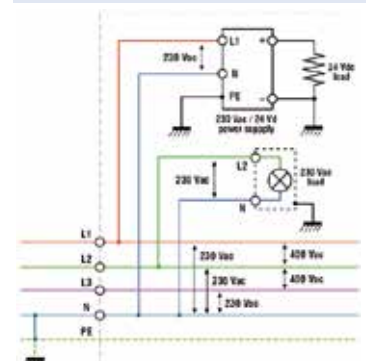
Compatible with 230...240 Vac single-phase power, 208 Vac 2-phase and 400...500 Vac 2-phase and 3-phase for maximum adaptability to AC networks, eliminating the need for an isolation transformer.

Power boost

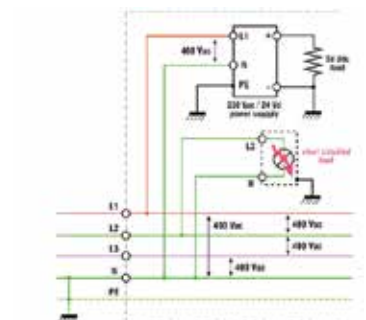
The output power reaches 120% of the nominal value for several minutes, up to 150% in the event of overload, and up to 250% during a short-circuit, to enable the protection devices connected to the output to trigger quickly, safely and selectively, without the use of additional modules.

High performance

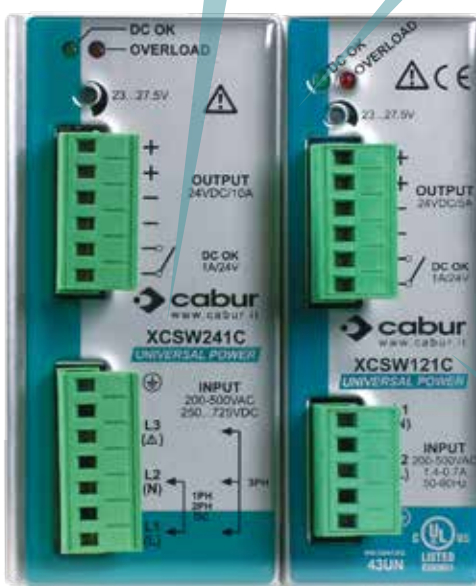
Reduces the energy consumption and operating temperature of components and allows for use in small panels



Typical application with 3-phase network with neutral. This is used to obtain a voltage of 230 Vac to power loads (a single lamp in the example) and power supplies.



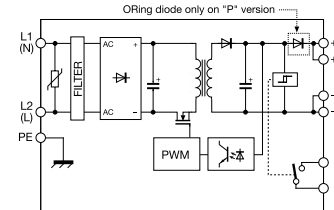
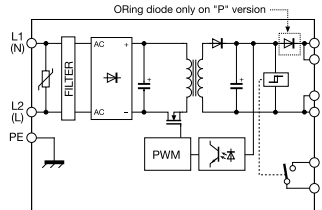
A single short-circuit on the load will raise the neutral potential and all devices connected to it will be powered between two phases, i.e. at around 340...400 Vac rather than 230 Vac.







Increased reliability in industrial environments

The input stage uses components with an operating voltage of 900 V, more resistant to the voltage peaks found in industrial networks

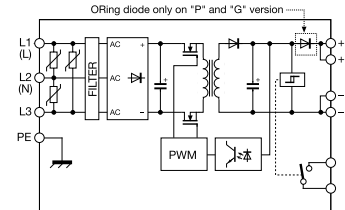
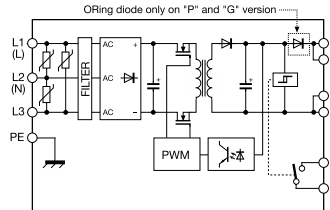
- Single phase and 2-phase input
- Short circuit, overload, input and output overvoltage protections
- Over temperature protection
- Suitable for applications that require high reliability and performance
- Smart alarm contact, signals when output voltage drops more than 10%
- High overload capability to ensure the protections selectivity and start-up of heavy loads







**NOTE**  
Please refer to the datasheet for more details  
Above overcurrent limit, the protection starts cycling in ON/OFF mode(hiccup autoreset), the maximum current supplied depends by the line resistance

CODE TYPE	CSW121C	XCSW121C	CSW121B	XCSW121B
<b>INPUT TECHNICAL DATA</b>				
Input rated voltage	1-2x 230-400-500 Vac		1-2x 230-400-500 Vac	
Input voltage AC	187...550 Vac		187...550 Vac	
Input voltage DC	270...725 Vdc		270...725 Vdc	
Frequency	47...63 Hz		47...63 Hz	
Current consumption	1.1 A (230 Vac) / 0.55 A (400 Vac)		1.1 A (230 Vac) / 0.55 A (400 Vac)	
Inrush peak current	20 A		20 A	
Power factor	> 0.65		> 0.65	
Internal protection fuse	—		—	
External protection on AC line	MCB: C-6 A / Fuse: T-4 A		MCB: C-6 A / Fuse: T-4 A	
<b>OUTPUT TECHNICAL DATA</b>				
Output rated voltage	24 Vdc ±1%		12 Vdc ±1%	
Output adjustable range	24...27.5 Vdc		12...15 Vdc	
Continuous current	5 A		8 A (12 Vdc) - 7 A (15 Vdc)	
Overload limiting	7.5 A for >30 s		10 A for >30 s	
Short circuit peak current	14 A for 0.4 s		20 A for 0.4 s	
Ripple @ nominal ratings	100 mVpp		100 mVpp	
Hold up time	20 ms (230 Vac) / 80 ms (400 Vac)		20 ms (230 Vac) / 80 ms (400 Vac)	
Status indication	LED "DC OK" / LED "Alarm"		LED "DC OK" / LED "Alarm"	
Alarm contact	dry contact, max. 1A @ 24 Vdc (Uout >21.6 Vdc)		dry contact, max. 1A @ 24 Vdc (Uout >10.8 Vdc)	
Parallel connection	possible		possible	
Redundant parallel connection	possible with external ORing diode		possible with external ORing diode	
<b>GENERAL TECHNICAL DATA</b>				
Efficiency	87% (230 Vac) / 87% (400 Vac)		84% (230 Vac) / 86% (400 Vac)	
Dissipated power	18 W (230 Vac) / 18 W (400 Vac)		20 W (230 Vac) / 17 W (400 Vac)	
Operating temperature range	-20...+60°C (derating -3 W >45°C)		-20...+60°C (derating -3 W >45°C)	
Input / output isolation	3 kVac / 60 s (SELV output)		3 kVac / 60 s (SELV output)	
Input / ground isolation	1.5 kVac / 60 s		1.5 kVac / 60 s	
Output / ground isolation	0.5 kVac / 60 s		0.5 kVac / 60 s	
Standard / approvals	EN 60950-1		EN 60950-1	
EMC Standards	EN 61000-6-1, EN 61000-6-2, EN 61000-6-3, EN 61000-6-4		EN 61000-6-1, EN 61000-6-2, EN 61000-6-3, EN 61000-6-4	
Overvoltage category / Pollution degree	II / 2		II / 2	
Protection degree	IP 20		IP 20	
Connection terminal IN/OUT	2.5 mm <sup>2</sup> / 2.5 mm <sup>2</sup>		2.5 mm <sup>2</sup> / 2.5 mm <sup>2</sup>	
Housing material	aluminium		aluminium	
Dimension	40x130x115 mm		40x130x115 mm	
Approximate weight	600 g		600 g	
Mounting information	vertical on a rail, 10 mm from adjacent components		vertical on a rail, 10 mm from adjacent components	
<b>APPROVALS</b>	 		 	
<b>ACCESSORIES</b>				
Mounting rail (IEC60715/TH35-7.5)	PR/3/AC, PR/3/AC/ZB, PR/3/AS, PR/3/AS/ZB		PR/3/AC, PR/3/AC/ZB, PR/3/AS, PR/3/AS/ZB	
Mounting rail (IEC60715/TH35-15)	PR/3/PP, PR/3/PP/ZB, PR/3/PA, PR/3/PA/ZB		PR/3/PP, PR/3/PP/ZB, PR/3/PA, PR/3/PA/ZB	
Marking tag	—		—	

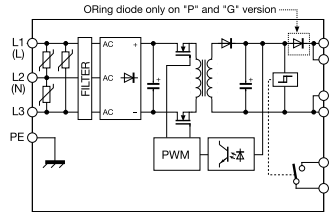
- Single phase, 2-phase and 3-phase input
- Short circuit, overload, input and output overvoltage protections
- Over temperature protection
- Suitable for applications that require high reliability and performance
- Smart alarm contact, signals when output voltage drops more than 10%
- High overload capability to ensure the protections selectivity and start-up of heavy loads



**NOTE**  
Please refer to the datasheet for more details  
Above overcurrent limit, the protection starts cycling in ON/OFF mode(hiccup autoreset), the maximum current supplied depends by the line resistance

CODE TYPE	CSW241C	XCSW241C	CSW241B	XCSW241B
<b>INPUT TECHNICAL DATA</b>				
Input rated voltage	1-2-3x 230-400-500 Vac		1-2-3x 230-400-500 Vac	
Input voltage AC	185...550 Vac		185...550 Vac	
Input voltage DC	270...770 Vdc		270...770 Vdc	
Frequency	47...63 Hz		47...63 Hz	
Current consumption	2 A (230 Vac) / 1 A (400 Vac)		2 A (230 Vac) / 1 A (400 Vac)	
Inrush peak current	20 A		20 A	
Power factor	> 0.65		> 0.65	
Internal protection fuse	—		—	
External protection on AC line	MCB: C-6 A / Fuse: T-6.3 A		MCB: C-6 A / Fuse: T-6.3 A	
<b>OUTPUT TECHNICAL DATA</b>				
Output rated voltage	24 Vdc ±1%		12 Vdc ±1%	
Output adjustable range	24...27.5 Vdc		12...15 Vdc	
Continuous current	10 A at 50°C		16 A (12 Vdc) - 157 A (15 Vdc)	
Overload limiting	15 A for >6 s		20...18 A for >6 s	
Short circuit peak current	38 A for 0.5 s		34 A for 0.5 s	
Ripple @ nominal ratings	100 mVpp		100 mVpp	
Hold up time	15 ms (230 Vac) / 100 ms (400 Vac)		15 ms (230 Vac) / 100 ms (400 Vac)	
Status indication	LED "DC OK" / LED "Alarm"		LED "DC OK" / LED "Alarm"	
Alarm contact	dry contact, max. 1A @ 24 Vdc (Uout >21.6 Vdc)		dry contact, max. 1A @ 24 Vdc (Uout >10.8 Vdc)	
Parallel connection	possible		possible	
Redundant parallel connection	possible with external ORing diode		possible with external ORing diode	
<b>GENERAL TECHNICAL DATA</b>				
Efficiency	91% (230 Vac) / 92% (400 Vac)		89% (230 Vac) / 90% (400 Vac)	
Dissipated power	24 W (230 Vac) / 21 W (400 Vac)		22 W (230 Vac) / 20 W (400 Vac)	
Operating temperature range	-20...+60°C (derating -3 W >50°C)		-20...+60°C (derating -3 W >50°C)	
Input / output isolation	3 kVac / 60 s (SELV output)		3 kVac / 60 s (SELV output)	
Input / ground isolation	2 kVac / 60 s		2 kVac / 60 s	
Output / ground isolation	0.5 kVac / 60 s		0.5 kVac / 60 s	
Standard / approvals	EN 60950-1		EN 60950-1	
EMC Standards	EN 61000-6-1, EN 61000-6-2, EN 61000-6-3, EN 61000-6-4		EN 61000-6-1, EN 61000-6-2, EN 61000-6-3, EN 61000-6-4	
Overvoltage category / Pollution degree	II / 2		II / 2	
Protection degree	IP 20		IP 20	
Connection terminal IN/OUT	2.5 mm <sup>2</sup> / 2.5 mm <sup>2</sup>		2.5 mm <sup>2</sup> / 2.5 mm <sup>2</sup>	
Housing material	aluminium		aluminium	
Dimension	55x130x115 mm		55x130x115 mm	
Approximate weight	1 kg		1 kg	
Mounting information	vertical on a rail, 10 mm from adjacent components		vertical on a rail, 10 mm from adjacent components	
<b>APPROVALS</b>	 		 	
<b>ACCESSORIES</b>				
Mounting rail (IEC60715/TH35-7.5)	PR/3/AC, PR/3/AC/ZB, PR/3/AS, PR/3/AS/ZB		PR/3/AC, PR/3/AC/ZB, PR/3/AS, PR/3/AS/ZB	
Mounting rail (IEC60715/TH35-15)	PR/3/PP, PR/3/PP/ZB, PR/3/PA, PR/3/PA/ZB		PR/3/PP, PR/3/PP/ZB, PR/3/PA, PR/3/PA/ZB	
Marking tag	—		—	

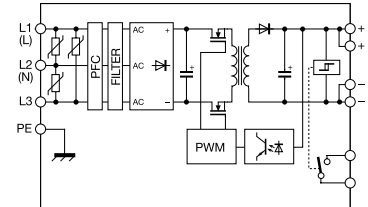
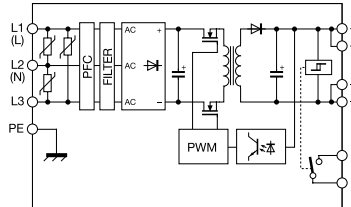
- Single phase, 2-phase and 3-phase input
- Short circuit, overload, input and output overvoltage protections
- Over temperature protection
- Suitable for applications that require high reliability and performance
- Smart alarm contact, signals when output voltage drops more than 10%
- High overload capability to ensure the protections selectivity and start-up of heavy loads







**NOTE**  
Please refer to the datasheet for more details  
Above overcurrent limit, the protection starts cycling in ON/OFF mode(hiccup autoreset), the maximum current supplied depends by the line resistance

CODE TYPE	CSW241DP	XCSW241DP
<b>INPUT TECHNICAL DATA</b>		
Input rated voltage	1-2-3x 230-400-500 Vac	
Input voltage AC	185...550 Vac	
Input voltage DC	270...770 Vdc	
Frequency	47...63 Hz	
Current consumption	2 A (230 Vac) / 1 A (400 Vac)	
Inrush peak current	20 A	
Power factor	> 0.65	
Internal protection fuse	—	
External protection on AC line	MCB: C-6 A / Fuse: T-6.3 A	
<b>OUTPUT TECHNICAL DATA</b>		
Output rated voltage	48 Vdc ±1%	
Output adjustable range	45...55 Vdc	
Continuous current	5 A at 50°C	
Overload limiting	6 A for >6 s	
Short circuit peak current	18 A for 0.5 s	
Ripple @ nominal ratings	100 mVpp	
Hold up time	15 ms (230 Vac) / 100 ms (400 Vac)	
Status indication	LED "DC OK" / LED "Alarm"	
Alarm contact	dry contact, max. 1A @ 24 Vdc (Uout >43.2 Vdc)	
Parallel connection	possible	
Redundant parallel connection	already fitted with internal ORing diode	
<b>GENERAL TECHNICAL DATA</b>		
Efficiency	91% (230 Vac) / 92% (400 Vac)	
Dissipated power	24 W (230 Vac) / 21 W (400 Vac)	
Operating temperature range	-20...+60°C (derating -3 W >50°C)	
Input / output isolation	3 kVac / 60 s (SELV output)	
Input / ground isolation	2 kVac / 60 s	
Output / ground isolation	0.5 kVac / 60 s	
Standard / approvals	EN 60950-1	
EMC Standards	EN 61000-6-1, EN 61000-6-2, EN 61000-6-3, EN 61000-6-4	
Overvoltage category / Pollution degree	II / 2	
Protection degree	IP 20	
Connection terminal IN/OUT	2.5 mm <sup>2</sup> / 2.5 mm <sup>2</sup>	
Housing material	aluminium	
Dimension	55x130x115 mm	
Approximate weight	1 kg	
Mounting information	vertical on a rail, 10 mm from adjacent components	
APPROVALS		
<b>ACCESSORIES</b>		
Mounting rail (IEC60715/TH35-7.5)	PR/3/AC, PR/3/AC/ZB, PR/3/AS, PR/3/AS/ZB	
Mounting rail (IEC60715/TH35-15)	PR/3/PP, PR/3/PP/ZB, PR/3/PA, PR/3/PA/ZB	
Marking tag	—	

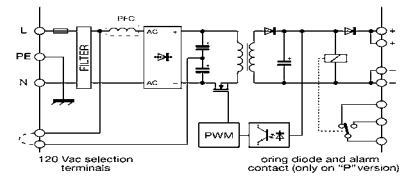
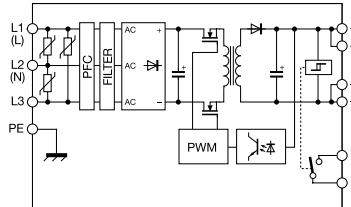
- Single phase, 2-phase and 3-phase input
- Short circuit, overload, input and output overvoltage protections
- Over temperature protection
- Suitable for applications that require high reliability and performance
- Smart alarm contact, signals when output voltage drops more than 10%
- High overload capability to ensure the protections selectivity and start-up of heavy loads



**NOTE**  
Please refer to the datasheet for more details  
Above overcurrent limit, the protection starts cycling in ON/OFF mode(hiccup autoreset), the maximum current supplied depends by the line resistance

CODE TYPE	CSW481C	XCSW481C	CSW481D	XCSW481D
<b>INPUT TECHNICAL DATA</b>				
Input rated voltage	1-2-3x 230-400-500 Vac		1-2-3x 230-400-500 Vac	
Input voltage AC	187...550 Vac		187...550 Vac	
Input voltage DC	250...725 Vdc		250...725 Vdc	
Frequency	47...63 Hz		47...63 Hz	
Current consumption	2.2 A (230 Vac) / 1 A (400 Vac)		2.2 A (230 Vac) / 1 A (400 Vac)	
Inrush peak current	20 A (230 Vac) / 40 A (500 Vac)		20 A (230 Vac) / 40 A (500 Vac)	
Power factor	> 0.95		> 0.95	
Internal protection fuse	—		—	
External protection on AC line	MCB: C-6 A / Fuse: T-6.3 A		MCB: C-6 A / Fuse: T-6.3 A	
<b>OUTPUT TECHNICAL DATA</b>				
Output rated voltage	24 Vdc ±1%		48 Vdc ±1%	
Output adjustable range	23.3...27.5 Vdc		45...55 Vdc	
Continuous current	20 A at 45°C		10 A at 45°C	
Overload limiting	28 A for >5 s		14 A for >5 s	
Short circuit peak current	50 A for 0.3 s		25 A for 0.3 s	
Ripple @ nominal ratings	100 mVpp		100 mVpp	
Hold up time	20 ms (230 Vac) / 20 ms (400 Vac)		20 ms (230 Vac) / 20 ms (400 Vac)	
Status indication	LED "DC OK" / LED "Alarm"		LED "DC OK" / LED "Alarm"	
Alarm contact	dry contact, max. 1A @ 24 Vdc (Uout >21.6 Vdc)		dry contact, max. 1A @ 24 Vdc (Uout >43.2 Vdc)	
Parallel connection	possible		possible	
Redundant parallel connection	possible with external ORing diode		possible with external ORing diode	
<b>GENERAL TECHNICAL DATA</b>				
Efficiency	92% (230 Vac) / 92% (400 Vac)		92% (230 Vac) / 92% (400 Vac)	
Dissipated power	42 W (230 Vac) / 42 W (400 Vac)		42 W (230 Vac) / 42 W (400 Vac)	
Operating temperature range	-20...+60°C (derating -16 W >45°C)		-20...+60°C (derating -16 W >45°C)	
Input / output isolation	3 kVac / 60 s (SELV output)		3 kVac / 60 s (SELV output)	
Input / ground isolation	2 kVac / 60 s		2 kVac / 60 s	
Output / ground isolation	0.5 kVac / 60 s		0.5 kVac / 60 s	
Standard / approvals	EN 60950-1		EN 60950-1	
EMC Standards	EN 61000-6-2, EN 61000-6-4		EN 61000-6-2, EN 61000-6-4	
Overvoltage category / Pollution degree	II / 2		II / 2	
Protection degree	IP 20		IP 20	
Connection terminal IN/OUT	2.5 mm <sup>2</sup> / 2.5 mm <sup>2</sup>		2.5 mm <sup>2</sup> / 2.5 mm <sup>2</sup>	
Housing material	aluminium		aluminium	
Dimension	73x137x140 mm		73x137x140 mm	
Approximate weight	1 kg		1 kg	
Mounting information	vertical on a rail, 10 mm from adjacent components		vertical on a rail, 10 mm from adjacent components	
<b>APPROVALS</b>	 		 	
<b>ACCESSORIES</b>				
Mounting rail (IEC60715/TH35-7.5)	PR/3/AC, PR/3/AC/ZB, PR/3/AS, PR/3/AS/ZB		PR/3/AC, PR/3/AC/ZB, PR/3/AS, PR/3/AS/ZB	
Mounting rail (IEC60715/TH35-15)	PR/3/PP, PR/3/PP/ZB, PR/3/PA, PR/3/PA/ZB		PR/3/PP, PR/3/PP/ZB, PR/3/PA, PR/3/PA/ZB	
Marking tag	—		—	

- Single phase, 2-phase and 3-phase input
- Short circuit, overload, input and output overvoltage protections
- Over temperature protection
- Suitable for applications that require high reliability and performance
- Smart alarm contact, signals when output voltage drops more than 10%
- High overload capability to ensure the protections selectivity and start-up of heavy loads



**NOTE**  
Please refer to the datasheet for more details  
Above overcurrent limit, the protection starts cycling in ON/OFF mode(hiccup autoreset), the maximum current supplied depends by the line resistance  
(1) Dual voltage with selection through external jumper

CODE TYPE	CSW481G	XCSW481G	CSW960CP	XCSW960CP
<b>INPUT TECHNICAL DATA</b>				
Input rated voltage	1-2-3x 230-400-500 Vac		1x 230 Vac / 2x 400-500 Vac	
Input voltage AC	187...550 Vac		180...264 Vac / 360...550 Vac (1)	
Input voltage DC	250...725 Vdc		550...775 Vdc	
Frequency	47...63 Hz		47...63 Hz	
Current consumption	2.2 A (230 Vac) / 1 A (400 Vac)		4.7A (230 Vac) / 4A (400 Vac)	
Inrush peak current	20 A (230 Vac) / 40 A (500 Vac)		16 A	
Power factor	> 0.95		> 0.6	
Internal protection fuse	—		—	
External protection on AC line	MCB: C-6 A / Fuse: T-6.3 A		MCB: C-10 A / Fuse: 1-2x T 10 A	
<b>OUTPUT TECHNICAL DATA</b>				
Output rated voltage	72 Vdc ±1%		24 Vdc ±1%	
Output adjustable range	72...85 Vdc		23...27.5 Vdc	
Continuous current	6 A at 45°C		40 A at 45°C	
Overload limiting	9 A for >5 s		50 A for >5 s	
Short circuit peak current	12 A for 0.3 s		65 A for 5 s	
Ripple @ nominal ratings	100 mVpp		200 mVpp	
Hold up time	20 ms (230 Vac) / 20 ms (400 Vac)		20 ms (230 Vac) / 20 ms (400 Vac)	
Status indication	LED "DC OK" / LED "Alarm"		LED "DC OK" / LED "Alarm"	
Alarm contact	dry contact, max. 1A @ 24 Vdc (Uout >68.4 Vdc)		dry contact, max. 1A @ 24 Vdc (Uout >21.6 Vdc)	
Parallel connection	possible		possible	
Redundant parallel connection	possible with external ORing diode		already fitted with internal ORing diode	
<b>GENERAL TECHNICAL DATA</b>				
Efficiency	91% (230 Vac) / 91% (400 Vac)		90% (400 Vac) at 230 Vac	
Dissipated power	42 W (230 Vac) / 42 W (400 Vac)		<100 W (400 Vac) at 230 Vac	
Operating temperature range	-20...+60°C (derating -16 W >45°C)		-20...+60°C (derating -32 W >45°C)	
Input / output isolation	3 kVac / 60 s (no SELV output)		3 kVac / 60 s (SELV output)	
Input / ground isolation	2 kVac / 60 s		2 kVac / 60 s	
Output / ground isolation	0.5 kVac / 60 s		0.5 kVac / 60 s	
Standard / approvals	EN 60950-1		EN 60950-1	
EMC Standards	EN 61000-6-2, EN 61000-6-4		EN 61000-6-2, EN 61000-6-4	
Overvoltage category / Pollution degree	II / 2		II / 2	
Protection degree	IP 20		IP 20	
Connection terminal IN/OUT	2.5 mm <sup>2</sup> / 2.5 mm <sup>2</sup>		4 mm <sup>2</sup> / 10 mm <sup>2</sup>	
Housing material	aluminium		aluminium	
Dimension	73x137x140 mm		80x139x127 mm	
Approximate weight	1 kg		1.2 Kg	
Mounting information	vertical on a rail, 10 mm from adjacent components		vertical on a rail, 10 mm from adjacent components	
<b>APPROVALS</b>				
<b>ACCESSORIES</b>				
Mounting rail (IEC60715/TH35-7.5)	PR/3/AC, PR/3/AC/ZB, PR/3/AS, PR/3/AS/ZB		PR/3/AC, PR/3/AC/ZB, PR/3/AS, PR/3/AS/ZB	
Mounting rail (IEC60715/TH35-15)	PR/3/PP, PR/3/PP/ZB, PR/3/PA, PR/3/PA/ZB		PR/3/PP, PR/3/PP/ZB, PR/3/PA, PR/3/PA/ZB	
Marking tag	—		TAP207A, TAP128A, TAP178A, TAP209A	



**400...500 Vac 3-phase switching power supply** for industrial automation applications. They can deliver over +50% of nominal current for a sustained period, keeping the output voltage stable and ensuring continuity of supply to the system. Equipped with voltage threshold controlled failure contact which is triggered when the voltage falls below 90% of the rated value.

**With these features and numerous international certifications, this range of power supplies enables designers to meet the requirements of the Machinery Directive EN 60204-1**, allowing the protection devices connected to the output to trigger quickly, safely and selectively, thus ensuring continuity of service to the other parts of the system.

**Suggested uses**

- Applications in machine automation with high command and control voltage reliability and safety requirements
- In applications which require selectable overcurrent protections on DC lines
- Industrial automation applications
- Uses with heavy loads

**Main features**

- With 340...550 Vac/507...770 Vdc input, making them suitable for use on all power supply networks.
- High efficiency reduces energy consumption and the operating temperature of components and allows use in small panels and severe environmental conditions.
- Large power reserve allows for delivery of at least +50% of nominal current for 5 seconds maintaining the output voltage stable, ensuring safety and reliability.
- Output voltage is adjustable and protected against incoming surge from the DC line, and is equipped with a double electronic protection that prevents damage to the powered device in case of an internal malfunction.
- Short-circuit and overload protection designed to deliver peak currents more than 150% higher than the rated value required by heavy loads.
- Thermal protection prevents faults in case of prolonged overload with high ambient temperatures.
- Construction ensures optimal capacity of ventilation of internal components, extremely reduced overall dimensions and degree of protection IP20 by accidental contact according to IEC529.

**TRIPLE POWER**

**Special power supplies for engines DC, Brushless, and relative drives**

New 48Vdc, 72-85Vdc, and 110-180Vdc models have been introduced, designed to reliably power engines in DC. They:

- supply peak power equal to even 4-5 times the nominal current, which is required by the engine during the peak phase
- have an output stage protected from overvoltage generated by the engines and drives during braking, which could otherwise cause malfunctions or cause the power supply to lose control over output voltage stability
- Provide output voltage at 48Vdc, and 72...85Vdc. By increasing the voltage of the engine power supply, the same power can be obtained at lower current, with notable advantages for performance, engine construction, connection wires, and drives.

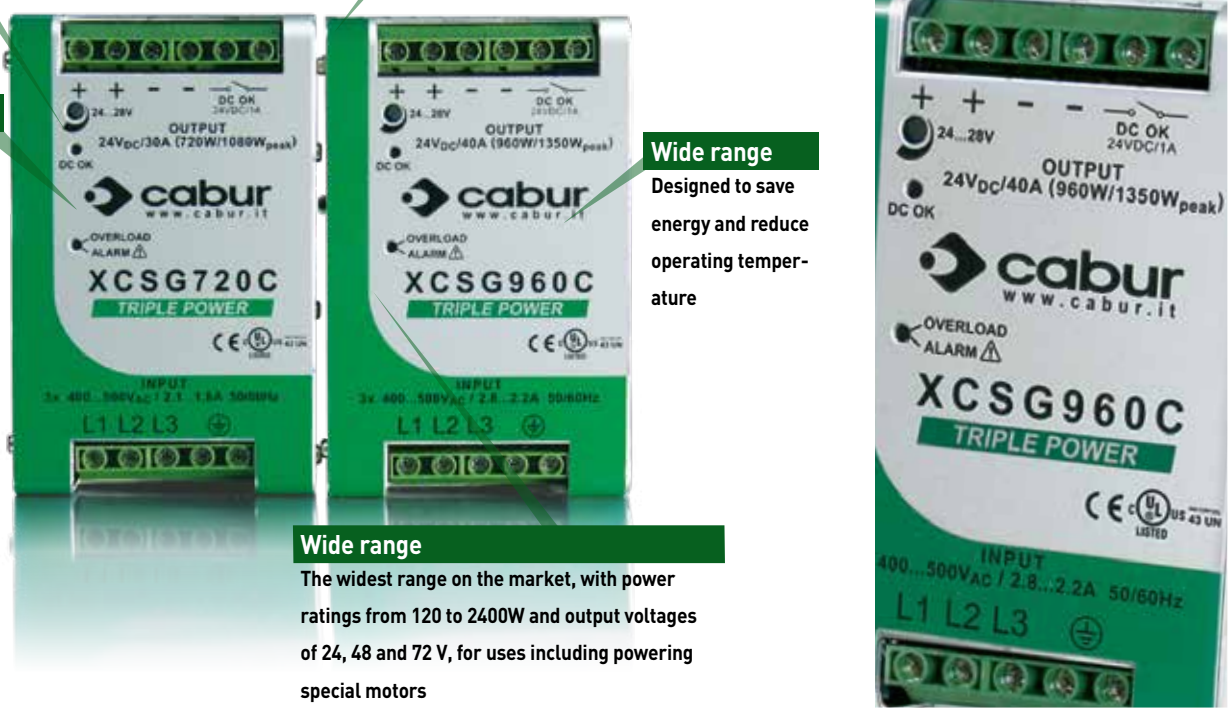
**Integrated smart alarm contact**  
Notifies when the output voltage falls below 90% of the rated value once a threshold is surpassed

**Super compact size**

**Power boost**  
The output power reaches 120% of the nominal value for several minutes, up to 150% in the event of overload, and up to 250% during a short-circuit, to enable the protection devices connected to the output to trigger quickly, safely and selectively, without the use of additional modules.

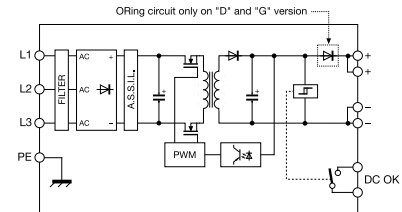
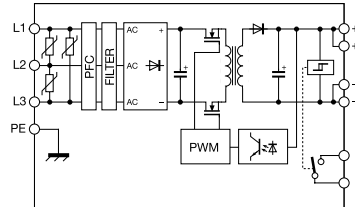
**Wide range**  
Designed to save energy and reduce operating temperature





**Wide range**  
The widest range on the market, with power ratings from 120 to 2400W and output voltages of 24, 48 and 72 V, for uses including powering special motors



- 3-phase 400-500 Vac input or 2-phase with derating
- Short circuit, overload, input and output overvoltage protections
- Over temperature protection
- Suitable for applications that require high reliability and performance
- Smart alarm contact, signals when output voltage drops more than 10%
- High overload capability to ensure the protections selectivity and start-up of heavy loads

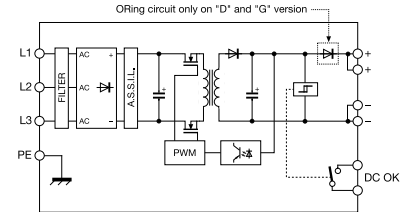
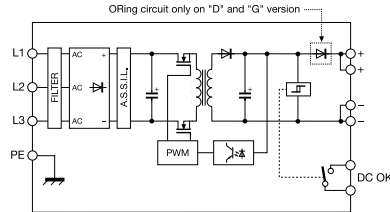
**NOTE**  
Please refer to the datasheet for more details  
Above overcurrent limit, the protection starts cycling in ON/OFF mode(hiccup autoreset), the maximum current supplied depends by the line resistance







CODE TYPE	CSG481C	XCSG481C	CSG500C	XCSG500C
<b>INPUT TECHNICAL DATA</b>				
Input rated voltage	3x 400-500 Vac		3x 400-500 Vac	
Input voltage AC	340...550 Vac		340...550 Vac	
Input voltage DC	—		—	
Frequency	47...63 Hz		47...63 Hz	
Current consumption	1.2 A (400 Vac) / 0.8 A (500 Vac)		1 A (400 Vac) / 0.6 A (500 Vac)	
Inrush peak current	40 A		35 A	
Power factor	> 0.95		> 0.75	
Internal protection fuse	—		—	
External protection on AC line	MCB: C-6 A / Fuse: T-6.3 A		MCB: C-10 A / Fuse: T-10 A	
<b>OUTPUT TECHNICAL DATA</b>				
Output rated voltage	24 Vdc ±1%		24 Vdc ±1%	
Output adjustable range	23.3...27.5 Vdc		24...28 Vdc	
Continuous current	20 A at 45°C		20 A at 50°C	
Overload limiting	28 A for >5 s		>22 A for >5 s	
Short circuit peak current	50 A for 0.3 s		35 A for 5 s	
Ripple @ nominal ratings	100 mVpp		100 mVpp	
Hold up time	50 ms (400 Vac) / 50 ms (500 Vac)		15 ms (400 Vac) / 30 ms (500 Vac)	
Status indication	LED "DC OK"		LED "DC OK" / LED "Alarm"	
Alarm contact	dry contact, max. 1A @ 24 Vdc (Uout >21.6 Vdc)		dry contact, max. 1A @ 24 Vdc (Uout >21.6 Vdc)	
Parallel connection	possible		possible	
Redundant parallel connection	possible with external ORing diode		possible with external ORing diode	
<b>GENERAL TECHNICAL DATA</b>				
Efficiency	93% (400 Vac) / 92% (500 Vac)		93% (400 Vac) / 93% (500 Vac)	
Dissipated power	36 W (400 Vac) / 42 W (500 Vac)		36 W (400 Vac) / 36 W (500 Vac)	
Operating temperature range	-20...+60°C (derating -16 W >45°C)		-20...+60°C (derating -6 W >50°C)	
Input / output isolation	3 kVac / 60 s (SELV output)		3 kVac / 60 s (SELV output)	
Input / ground isolation	2 kVac / 60 s		2 kVac / 60 s	
Output / ground isolation	0.5 kVac / 60 s		0.5 kVac / 60 s	
Standard / approvals	EN 60950-1		EN 60950-1	
EMC Standards	EN 61000-6-2, EN 61000-6-4		EN 61000-6-1, EN 61000-6-2, EN 61000-6-3, EN 61000-6-4	
Overvoltage category / Pollution degree	II / 2		II / 2	
Protection degree	IP 20		IP 20	
Connection terminal IN/OUT	2.5 mm <sup>2</sup> / 2.5 mm <sup>2</sup>		4 mm <sup>2</sup> / 4 mm <sup>2</sup>	
Housing material	aluminium		aluminium	
Dimension	73x137x140 mm		80x139x127 mm	
Approximate weight	1 kg		1.3 Kg	
Mounting information	vertical on a rail, 10 mm from adjacent components		vertical on a rail, 10 mm from adjacent components	
<b>APPROVALS</b>	 		 	
<b>ACCESSORIES</b>				
Mounting rail (IEC60715/TH35-7.5)	PR/3/AC, PR/3/AC/ZB, PR/3/AS, PR/3/AS/ZB		PR/3/AC, PR/3/AC/ZB, PR/3/AS, PR/3/AS/ZB	
Mounting rail (IEC60715/TH35-15)	PR/3/PP, PR/3/PP/ZB, PR/3/PA, PR/3/PA/ZB		PR/3/PP, PR/3/PP/ZB, PR/3/PA, PR/3/PA/ZB	
Marking tag	—		TAP207A, TAP128A, TAP178A, TAP209A	

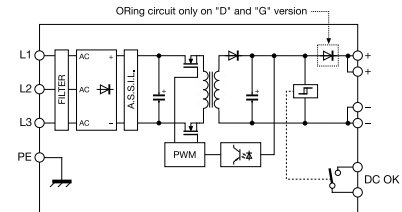
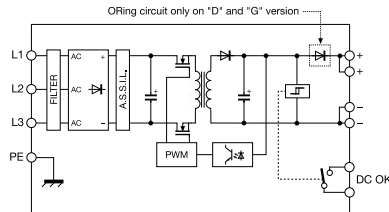
- 3-phase 400-500 Vac input or 2-phase with derating
- Short circuit, overload, input and output overvoltage protections
- Over temperature protection
- Suitable for applications that require high reliability and performance
- Smart alarm contact, signals when output voltage drops more than 10%
- High overload capability to ensure the protections selectivity and start-up of heavy loads

**NOTE**  
Please refer to the datasheet for more details  
Above overcurrent limit, the protection starts cycling in ON/OFF mode(hiccup autoreset), the maximum current supplied depends by the line resistance







CODE TYPE	CSG720C	XCSG720C	CSG960C	XCSG960C
<b>INPUT TECHNICAL DATA</b>				
Input rated voltage	3x 400-500 Vac		3x 400-500 Vac	
Input voltage AC	340...550 Vac		340...550 Vac	
Input voltage DC	—		—	
Frequency	47...63 Hz		47...63 Hz	
Current consumption	1.4 A (400 Vac) / 1.1 A (500 Vac)		2.2 A (400 Vac) / 1.1 A (500 Vac)	
Inrush peak current	30 A		20 A	
Power factor	> 0.75		> 0.65	
Internal protection fuse	—		—	
External protection on AC line	MCB: C-10 A / Fuse: T-10 A		MCB: C-10 A / Fuse: T-10 A	
<b>OUTPUT TECHNICAL DATA</b>				
Output rated voltage	24 Vdc ±1%		24 Vdc ±1%	
Output adjustable range	24...28 Vdc		24...28 Vdc	
Continuous current	30 A at 50°C		40 A at 50°C	
Overload limiting	45 A for > 5 s		44 A for >5 s	
Short circuit peak current	60 A for 1.5 s		63 A for 5 s	
Ripple @ nominal ratings	100 mVpp		100 mVpp	
Hold up time	10 ms (400 Vac) / 15 ms (500 Vac)		10 ms (400 Vac) / 15 ms (500 Vac)	
Status indication	LED "DC OK" / LED "Alarm"		LED "DC OK" / LED "Alarm"	
Alarm contact	dry contact, max. 1A @ 24 Vdc (Uout >21.6 Vdc)		dry contact, max. 1A @ 24 Vdc (Uout >21.6 Vdc)	
Parallel connection	possible		possible	
Redundant parallel connection	possible with external ORing diode		possible with external ORing diode	
<b>GENERAL TECHNICAL DATA</b>				
Efficiency	92% (400 Vac) / 92% (500 Vac)		92% (400 Vac) / 92% (500 Vac)	
Dissipated power	60 W (400 Vac) / 60 W (500 Vac)		80 W (400 Vac) / 80 W (500 Vac)	
Operating temperature range	-20...+60°C		-20...+60°C (derating -18 W >45°C)	
Input / output isolation	3 kVac / 60 s (SELV output)		3 kVac / 60 s (SELV output)	
Input / ground isolation	2 kVac / 60 s		2 kVac / 60 s	
Output / ground isolation	0.5 kVac / 60 s		0.5 kVac / 60 s	
Standard / approvals	EN 60950-1		EN 60950-1	
EMC Standards	EN 61000-6-1, EN 61000-6-2, EN 61000-6-3, EN 61000-6-4		EN 61000-6-1, EN 61000-6-2, EN 61000-6-3, EN 61000-6-4	
Overvoltage category / Pollution degree	II / 2		II / 2	
Protection degree	IP 20		IP 20	
Connection terminal IN/OUT	4 mm <sup>2</sup> / 4 mm <sup>2</sup>		4 mm <sup>2</sup> / 10 mm <sup>2</sup>	
Housing material	aluminium		aluminium	
Dimension	80x139x127 mm		80x139x127 mm	
Approximate weight	1.3 Kg		1.2 kg	
Mounting information	vertical on a rail, 10 mm from adjacent components		vertical on a rail, 10 mm from adjacent components	
<b>APPROVALS</b>	 		 	
<b>ACCESSORIES</b>				
Mounting rail (IEC60715/TH35-7.5)	PR/3/AC, PR/3/AC/ZB, PR/3/AS, PR/3/AS/ZB		PR/3/AC, PR/3/AC/ZB, PR/3/AS, PR/3/AS/ZB	
Mounting rail (IEC60715/TH35-15)	PR/3/PP, PR/3/PP/ZB, PR/3/PA, PR/3/PA/ZB		PR/3/PP, PR/3/PP/ZB, PR/3/PA, PR/3/PA/ZB	
Marking tag	TAP207A, TAP128A, TAP178A, TAP209A		TAP207A, TAP128A, TAP178A, TAP209A	

- 3-phase 400-500 Vac input or 2-phase with derating
- Short circuit, overload, input and output overvoltage protections
- Over temperature protection
- Suitable for applications that require high reliability and performance
- Smart alarm contact, signals when output voltage drops more than 10%
- High overload capability to ensure the protections selectivity and start-up of heavy loads



**NOTE**  
Please refer to the datasheet for more details  
Above overcurrent limit, the protection starts cycling in ON/OFF mode (hiccup autoreset), the maximum current supplied depends by the line resistance

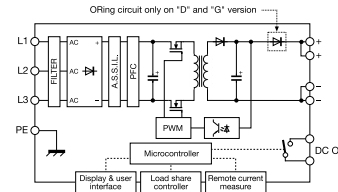
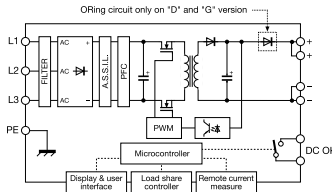
CODE TYPE	CSG960D	XCSG960D	CSG960G	XCSG960G
<b>INPUT TECHNICAL DATA</b>				
Input rated voltage	3x 400-500 Vac		3x 400-500 Vac	
Input voltage AC	340...550 Vac		340...550 Vac	
Input voltage DC	—		—	
Frequency	47...63 Hz		47...63 Hz	
Current consumption	2.2 A (400 Vac) / 1.1 A (500 Vac)		2.2 A (400 Vac) / 1.1 A (500 Vac)	
Inrush peak current	20 A		20 A	
Power factor	> 0.65		> 0.65	
Internal protection fuse	—		—	
External protection on AC line	MCB: C-10 A / Fuse: T-10 A		MCB: C-10 A / Fuse: T-10 A	
<b>OUTPUT TECHNICAL DATA</b>				
Output rated voltage	48 Vdc ±1%		72 Vdc ±1%	
Output adjustable range	45...55 Vdc		72...85 Vdc	
Continuous current	20 A at 50°C		13.3 A at 50°C	
Overload limiting	23 A for >5 s		17 A for >5 s	
Short circuit peak current	40 A for 5 s		27 A for 5 s	
Ripple @ nominal ratings	100 mVpp		100 mVpp	
Hold up time	10 ms (400 Vac) / 15 ms (500 Vac)		15 ms (400 Vac) / 18 ms (500 Vac)	
Status indication	LED "DC OK" / LED "Alarm"		LED "DC OK" / LED "Alarm"	
Alarm contact	dry contact, max. 1A @ 24 Vdc (Uout >43.2 Vdc)		dry contact, max. 1A @ 24 Vdc (Uout >68.4 Vdc)	
Parallel connection	possible		possible	
Redundant parallel connection	already fitted with internal ORing diode		already fitted with internal ORing diode	
<b>GENERAL TECHNICAL DATA</b>				
Efficiency	92% (400 Vac) / 92% (500 Vac)		94% (400 Vac) / 94% (500 Vac)	
Dissipated power	80 W (400 Vac) / 80 W (500 Vac)		60 W (400 Vac) / 60 W (500 Vac)	
Operating temperature range	-20...+60°C (derating -18 W >45°C)		-20...+60°C (derating -18 W >45°C)	
Input / output isolation	3 kVac / 60 s (SELV output)		3 kVac / 60 s (no SELV output)	
Input / ground isolation	2 kVac / 60 s		2 kVac / 60 s	
Output / ground isolation	0.5 kVac / 60 s		0.5 kVac / 60 s	
Standard / approvals	EN 60950-1		EN 60950-1	
EMC Standards	EN 61000-6-1, EN 61000-6-2, EN 61000-6-3, EN 61000-6-4		EN 61000-6-1, EN 61000-6-2, EN 61000-6-3, EN 61000-6-4	
Overvoltage category / Pollution degree	II / 2		II / 2	
Protection degree	IP 20		IP 20	
Connection terminal IN/OUT	4 mm <sup>2</sup> / 10 mm <sup>2</sup>		4 mm <sup>2</sup> / 10 mm <sup>2</sup>	
Housing material	aluminium		aluminium	
Dimension	80x139x127 mm		80x139x127 mm	
Approximate weight	1.2 kg		1.2 kg	
Mounting information	vertical on a rail, 10 mm from adjacent components		vertical on a rail, 10 mm from adjacent components	
<b>APPROVALS</b>	 		 	
<b>ACCESSORIES</b>				
Mounting rail (IEC60715/TH35-7.5)	PR/3/AC, PR/3/AC/ZB, PR/3/AS, PR/3/AS/ZB		PR/3/AC, PR/3/AC/ZB, PR/3/AS, PR/3/AS/ZB	
Mounting rail (IEC60715/TH35-15)	PR/3/PP, PR/3/PP/ZB, PR/3/PA, PR/3/PA/ZB		PR/3/PP, PR/3/PP/ZB, PR/3/PA, PR/3/PA/ZB	
Marking tag	TAP207A, TAP128A, TAP178A, TAP209A		TAP207A, TAP128A, TAP178A, TAP209A	

- 3-phase 400-500 Vac input
- Short circuit, overload, input and output overvoltage protections
- Over temperature protection
- Suitable for applications that require high reliability and performance
- Smart and programmable alarm contact
- High overload capability to ensure the protections selectivity and start-up of heavy loads



**NOTE**

Please refer to the datasheet for more details  
Overcurrent protection can be set to Hiccup or constant current mode, the maximum current supplied depends by the line resistance



**APPLICATIONS**

Series CSG2401 has an internal micro-processor that controls the many functions of the power supply, which can be programmed thanks to a user-friendly menu activated by 4 buttons on the front and shown on the front display.

**Front display:** during normal operation, this shows the output voltage value and current used by the load; during programming, it allows for the choice of the various functions available.

**Input protection:** the input circuit has been designed to avoid the most common problems seen in 3-phase networks. It therefore has:

- 1) a PFC circuit failure (latched shut-down) circuit
- 2) a system for controlling lack of phase that automatically reduces output power
- 3) an auto-restart switch-off system in the event of overvoltage and under-voltage

**Output protection:** limit current can be selected as between 10% and 100% of rated current; protection type against overload and short circuit can be chosen from:

- 1) Hiccup auto reset with limit current, equal to 150% of rated current and ON/OFF time can be altered;
- 2) constant power

**Output signals:** in addition to the "DC OK" and "FAULT" LEDs, the device also has:

- 1) an analogue signal 0...10V or 4...20mA that provides an indication of current used by the load
- 2) a programmable alarm contact able to signal and record the exceeding of the various limits to a memory: output voltage, input current, output overvoltage, over temperature and other parameters that can be defined by programming.

**Additional functions:**

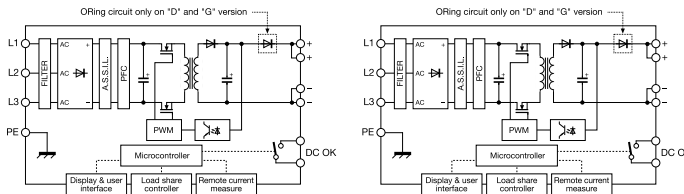
- 1) Battery charger: the acid lead battery charging function can be selected;
- 2) Remote sensing (sense): this allows for the monitoring and compensation of voltage drops on long power supply lines
- 3) The power supply can be switched off and disabled from a remote position
- 4) Auxiliary voltage: auxiliary 12 Vdc is also available, regardless of the main output voltage status
- 5) Temperature control: by connecting an external sensor (NTC), the battery charge temperature can be controlled.
- 6) Communication port: by means of an RS232 communication device the power supply can be piloted and monitored from a remote position.

CODE TYPE	CSG2401C	XCSG2401C	CSG2401D	XCSG2401D
<b>INPUT TECHNICAL DATA</b>				
Input rated voltage	3x 400-500 Vac		3x 400-500 Vac	
Input voltage AC	340...550 Vac		340...550 Vac	
Input voltage DC	—		—	
Frequency	47...63 Hz		47...63 Hz	
Current consumption	4.2 A (400 Vac) / 3.5 A (500 Vac)		4.2 A (400 Vac) / 3.5 A (500 Vac)	
Inrush peak current	10 A (with active limitation circuit)		10 A (with active limitation circuit)	
Power factor	> 0.92		> 0.92	
Internal protection fuse	—		—	
External protection on AC line	MCB: C-10 A / Fuse: T-10 A		MCB: C-10 A / Fuse: T-10 A	
<b>OUTPUT TECHNICAL DATA</b>				
Output rated voltage	12-24 Vdc ±1%		24-48 Vdc ±1%	
Output adjustable range	11.5...29 Vdc		23...56 Vdc	
Continuous current	100 A at 45°C		50 A at 45°C	
Overload limiting	150 A for >5 s		75 A for >5 s	
Short circuit peak current	150 A for 5 s		75 A for 5 s	
Ripple @ nominal ratings	200 mVpp		200 mVpp	
Hold up time	10 ms (400 Vac) / 10 ms (500 Vac)		10 ms (400 Vac) / 10 ms (500 Vac)	
Status indication	LED "DC OK" / LED "Alarm" / Display		LED "DC OK" / LED "Alarm" / Display	
Alarm contact	dry contact, max. 1A @ 24 Vdc (programmable)		dry contact, max. 1A @ 24 Vdc (programmable)	
Parallel connection	possible		possible	
Redundant parallel connection	already fitted with internal ORing diode		already fitted with internal ORing diode	
<b>GENERAL TECHNICAL DATA</b>				
Efficiency	92% (400 Vac) / 92% (500 Vac)		93% (400 Vac) / 93% (500 Vac)	
Dissipated power	200 W (400 Vac) / 200 W (500 Vac)		180 W (400 Vac) / 180 W (500 Vac)	
Operating temperature range	-20...+60°C (derating -40 W >45°C)		-20...+60°C (derating -40 W >45°C)	
Input / output isolation	3 kVac / 60 s (SELV output)		3 kVac / 60 s (SELV output)	
Input / ground isolation	1.5 kVac / 60 s		1.5 kVac / 60 s	
Output / ground isolation	0.5 kVac / 60 s		0.5 kVac / 60 s	
Standard / approvals	EN 60950-1		EN 60950-1	
EMC Standards	EN 61000-6-2, EN 61000-6-4		EN 61000-6-2, EN 61000-6-4	
Overvoltage category / Pollution degree	II / 2		II / 2	
Protection degree	IP 20		IP 20	
Connection terminal IN/OUT	4 mm <sup>2</sup> / 35 mm <sup>2</sup>		4 mm <sup>2</sup> / 35 mm <sup>2</sup>	
Housing material	aluminium		aluminium	
Dimension	234x105x130 mm		234x105x130 mm	
Approximate weight	2.8 Kg		2.8 Kg	
Mounting information	vertical on a rail, 60 mm from adjacent components		vertical on a rail, 60 mm from adjacent components	
<b>APPROVALS</b>				
<b>ACCESSORIES</b>				
Mounting rail (IEC60715/TH35-7.5)	PR/3/AC, PR/3/AC/ZB, PR/3/AS, PR/3/AS/ZB		PR/3/AC, PR/3/AC/ZB, PR/3/AS, PR/3/AS/ZB	
Mounting rail (IEC60715/TH35-15)	PR/3/PP, PR/3/PP/ZB, PR/3/PA, PR/3/PA/ZB		PR/3/PP, PR/3/PP/ZB, PR/3/PA, PR/3/PA/ZB	
Marking tag	TAP207A, TAP128A, TAP178A, TAP209A		TAP207A, TAP128A, TAP178A, TAP209A	

- 3-phase 400-500 Vac input
- Short circuit, overload, input and output overvoltage protections
- Over temperature protection
- Suitable for applications that require high reliability and performance
- Smart and programmable alarm contact
- High overload capability to ensure the protections selectivity and start-up of heavy loads

**NOTE**

Please refer to the datasheet for more details  
Overcurrent protection can be set to Hiccup or constant current mode, the maximum current supplied depends by the line resistance  
Produced on demand, contact our sales office for availability



**APPLICATIONS**

Series CSG2401 has an internal micro-processor that controls the many functions of the power supply, which can be programmed thanks to a user-friendly menu activated by 4 buttons on the front and shown on the front display.

**Front display:** during normal operation, this shows the output voltage value and current used by the load; during programming, it allows for the choice of the various functions available.

**Input protection:** the input circuit has been designed to avoid the most common problems seen in 3-phase networks. It therefore has:

- 1) a PFC circuit failure (latched shut-down) circuit
- 2) a system for controlling lack of phase that automatically reduces output power
- 3) an auto-restart switch-off system in the event of overvoltage and undervoltage

**Output protection:** limit current can be selected as between 10% and 100% of rated current; protection type against overload and short circuit can be chosen from:

- 1) hiccup auto reset with limit current, equal to 150% of rated current and ON/OFF time can be altered;
- 2) Constant power

**Output signals:** in addition to the "DC OK" and "FAULT" LEDs, the device also has:

- 1) an analogue signal 0...10V or 4...20mA that provides an indication of current used by the load
- 2) a programmable alarm contact able to signal and record the exceeding of the various limits to a memory: output voltage, input current, output overload, over temperature and other parameters that can be defined by programming.

**Additional functions:**

- 1) Battery charger: the acid lead battery charging function can be selected;
- 2) Remote sensing (sense): this allows for the monitoring and compensation of voltage drops on long power supply lines
- 3) The power supply can be switched off and disabled from a remote position
- 4) Auxiliary voltage: auxiliary 12 Vdc is also available, regardless of the main output voltage status
- 5) Temperature control: by connecting an external sensor (NTC), the battery charge temperature can be controlled.
- 6) Communication port: by means of an RS232 communication device the power supply can be piloted and monitored from a remote position.

CODE TYPE	CSG2401G	XCSG2401G	CSG2401R	XCSG2401R
<b>INPUT TECHNICAL DATA</b>				
Input rated voltage	3x 400-500 Vac		3x 400-500 Vac	
Input voltage AC	340...550 Vac		340...550 Vac	
Input voltage DC	—		—	
Frequency	47...63 Hz		47...63 Hz	
Current consumption	4.2 A (400 Vac) / 3.5 A (500 Vac)		4.2 A (400 Vac) / 3.5 A (500 Vac)	
Inrush peak current	10 A (with active limitation circuit)		10 A (with active limitation circuit)	
Power factor	> 0.92		> 0.92	
Internal protection fuse	—		—	
External protection on AC line	MCB: C-10 A / Fuse: T-10 A		MCB: C-10 A / Fuse: T-10 A	
<b>OUTPUT TECHNICAL DATA</b>				
Output rated voltage	72 Vdc ±1%		100-110-170 Vdc ±1%	
Output adjustable range	50...87 Vdc		88...175 Vdc	
Continuous current	33 A at 45°C		14 A at 45°C	
Overload limiting	50 A for >5 s		21 A for >5 s	
Short circuit peak current	50 A for 5 s		21 A for 5 s	
Ripple @ nominal ratings	200 mVpp		200 mVpp	
Hold up time	10 ms (400 Vac) / 10 ms (500 Vac)		10 ms (400 Vac) / 10 ms (500 Vac)	
Status indication	LED "DC OK" / LED "Alarm" / Display		LED "DC OK" / LED "Alarm" / Display	
Alarm contact	dry contact, max. 1A @ 24 Vdc (programmable)		dry contact, max. 1A @ 24 Vdc (programmable)	
Parallel connection	possible		possible	
Redundant parallel connection	already fitted with internal ORing diode		already fitted with internal ORing diode	
<b>GENERAL TECHNICAL DATA</b>				
Efficiency	92% (400 Vac) / 92% (500 Vac)		92% (400 Vac) / 92% (500 Vac)	
Dissipated power	200 W (400 Vac) / 200 W (500 Vac)		200 W (400 Vac) / 200 W (500 Vac)	
Operating temperature range	-20...+60°C (derating -40 W >45°C)		-20...+60°C (derating -40 W >45°C)	
Input / output isolation	3 kVac / 60 s (no SELV output)		3 kVac / 60 s (no SELV output)	
Input / ground isolation	1.5 kVac / 60 s		1.5 kVac / 60 s	
Output / ground isolation	0.5 kVac / 60 s		0.5 kVac / 60 s	
Standard / approvals	EN 60950-1		EN 60950-1	
EMC Standards	EN 61000-6-2, EN 61000-6-4		EN 61000-6-2, EN 61000-6-4	
Overvoltage category / Pollution degree	II / 2		II / 2	
Protection degree	IP 20		IP 20	
Connection terminal IN/OUT	4 mm <sup>2</sup> / 35 mm <sup>2</sup>		4 mm <sup>2</sup> / 35 mm <sup>2</sup>	
Housing material	aluminium		aluminium	
Dimension	234x105x130 mm		234x105x130 mm	
Approximate weight	2.8 Kg		2.8 Kg	
Mounting information	vertical on a rail, 60 mm from adjacent components		vertical on a rail, 60 mm from adjacent components	
APPROVALS				
ACCESSORIES				
Mounting rail (IEC60715/TH35-7.5)	PR/3/AC, PR/3/AC/ZB, PR/3/AS, PR/3/AS/ZB		PR/3/AC, PR/3/AC/ZB, PR/3/AS, PR/3/AS/ZB	
Mounting rail (IEC60715/TH35-15)	PR/3/PP, PR/3/PP/ZB, PR/3/PA, PR/3/PA/ZB		PR/3/PP, PR/3/PP/ZB, PR/3/PA, PR/3/PA/ZB	
Marking tag	TAP207A, TAP128A, TAP178A, TAP209A		TAP207A, TAP128A, TAP178A, TAP209A	

- DC wide range input
- Short circuit, overload, input and output overvoltage protections
- Over temperature protection
- Compact dimension

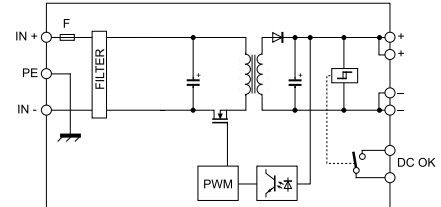
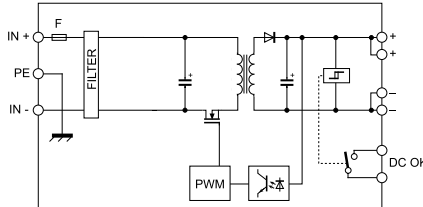
**NOTE**

Please refer to the datasheet for more details

Above overcurrent limit, the protection starts cycling in ON/OFF mode(hiccup autoreset), the maximum current supplied depends by the line resistance

Inrush current measured at Un with battery power supply; peak current varies according to the internal impedance of the current source and the resistance of the connections.

The capacitors between phase and neutral, requires that the isolation tests are carried out in DC



CODE TYPE	CSA120BC	XCSA120BC	CSA120CB	XCSA120CB
<b>INPUT TECHNICAL DATA</b>				
Input rated voltage	12 Vdc		24 Vdc	
Input voltage AC	—		—	
Input voltage DC	10.5...18 Vdc		18...36 Vdc	
Frequency	—		—	
Current consumption	10 A (12 Vdc) ±10%		5.1 A (24 Vdc) ±10%	
Inrush peak current	60 A		110 A	
Power factor	—		—	
Internal protection fuse	T 20 A		T 10 A	
External protection on AC line	MCB: C-25 A / Fuse: T-25 A		MCB: C-13 A / Fuse: T-13 A	
<b>OUTPUT TECHNICAL DATA</b>				
Output rated voltage	24 Vdc		12...15 Vdc	
Output adjustable range	22.5...27.5 Vdc		12...15 Vdc	
Continuous current	5 A (24 Vdc)		7 A (12 Vdc)	
Overload limiting	6.5 A		9.1 A	
Short circuit peak current	12 A for 300 ms		15 A for 300 ms	
Ripple @ nominal ratings	100 mVpp		100 mVpp	
Hold up time	1 ms		2 ms	
Status indication	LED "DC OK"		LED "DC OK"	
Alarm contact	—		—	
Parallel connection	possible		possible	
Redundant parallel connection	possible with external ORing diode		possible with external ORing diode	
<b>GENERAL TECHNICAL DATA</b>				
Efficiency	83% (12 Vdc)		85% (24 Vdc)	
Dissipated power	25 W (12 Vdc)		17 W (24 Vdc)	
Operating temperature range	-20...+50°C		-20...+50°C	
Input / output isolation	2.1 kVdc / 60s		2.1 kVdc / 60s	
Input / ground isolation	1.41 kVdc / 60s		1.41 kVdc / 60s	
Output / ground isolation	0.75 kVdc / 60s		0.75 kVdc / 60s	
Standard / approvals	EN 60950-1		EN 60950-1	
EMC Standards	EN 61000-6-1, EN 61000-6-2, EN 61000-6-3, EN 61000-6-4		EN 61000-6-1, EN 61000-6-2, EN 61000-6-3, EN 61000-6-4	
Overvoltage category / Pollution degree	II / 2		II / 2	
Protection degree	IP 20		IP 20	
Connection terminal IN/OUT	2.5 mm <sup>2</sup> / 2.5 mm <sup>2</sup>		2.5 mm <sup>2</sup> / 2.5 mm <sup>2</sup>	
Housing material	aluminium		aluminium	
Dimension	40x130x115 mm		40x130x115 mm	
Approximate weight	550 g		550 g	
Mounting information	vertical on a rail, 10 mm from adjacent components		vertical on a rail, 10 mm from adjacent components	
<b>APPROVALS</b>				
<b>ACCESSORIES</b>				
Mounting rail (IEC60715/TH35-7.5)	PR/3/AC, PR/3/AC/ZB, PR/3/AS, PR/3/AS/ZB		PR/3/AC, PR/3/AC/ZB, PR/3/AS, PR/3/AS/ZB	
Mounting rail (IEC60715/TH35-15)	PR/3/PP, PR/3/PP/ZB, PR/3/PA, PR/3/PA/ZB		PR/3/PP, PR/3/PP/ZB, PR/3/PA, PR/3/PA/ZB	
Marking tag	—		—	

- DC wide range input
- Short circuit, overload, input and output overvoltage protections
- Over temperature protection
- Compact dimension



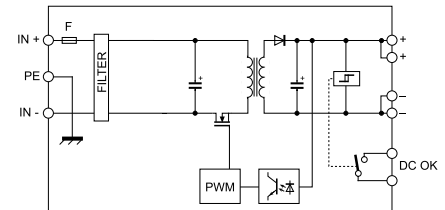
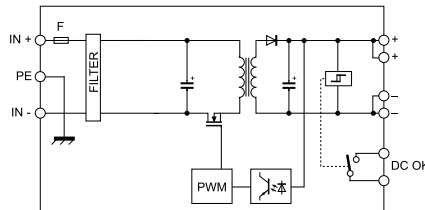
**NOTE**

Please refer to the datasheet for more details

Above overcurrent limit, the protection starts cycling in ON/OFF mode(hiccup autoreset), the maximum current supplied depends by the line resistance

Inrush current measured at Un with battery power supply; peak current varies according to the internal impedance of the current source and the resistance of the connections.

The capacitors between phase and neutral, requires that the isolation tests are carried out in DC



CODE TYPE	CSA120CC	XCSA120CC	CSA120DC	XCSA120DC
<b>INPUT TECHNICAL DATA</b>				
Input rated voltage	24 Vdc		48 Vdc	
Input voltage AC	—		—	
Input voltage DC	18...36 Vdc		36...72 Vdc	
Frequency	—		—	
Current consumption	5.8 A (24 Vdc) ±10%		2.8 A (48 Vdc) ±10%	
Inrush peak current	90 A		120 A	
Power factor	—		—	
Internal protection fuse	T 10 A		T 5 A	
External protection on AC line	MCB: C-13 A / Fuse: T-13 A		MCB: C-6 A / Fuse: T-6 A	
<b>OUTPUT TECHNICAL DATA</b>				
Output rated voltage	24 Vdc		24 Vdc	
Output adjustable range	22.5...27.5 Vdc		22.5...27.5 Vdc	
Continuous current	5 A (24 Vdc)		5A (24 Vdc)	
Overload limiting	6.5 A		6.5 A	
Short circuit peak current	12 A for 300 ms		13 A for 300 ms	
Ripple @ nominal ratings	150 mVpp		200 mVpp	
Hold up time	2 ms		4.5 ms	
Status indication	LED "DC OK"		LED "DC OK"	
Alarm contact	—		—	
Parallel connection	possible		possible	
Redundant parallel connection	possible with external ORing diode		possible with external ORing diode	
<b>GENERAL TECHNICAL DATA</b>				
Efficiency	87% (24 Vdc)		90% (48 Vdc)	
Dissipated power	18 W (24 Vdc)		13 W (48 Vdc)	
Operating temperature range	-20...+50°C		-20...+50°C	
Input / output isolation	2.1 kVdc / 60s		2.1 kVdc / 60s	
Input / ground isolation	1.41 kVdc / 60s		1.41 kVdc / 60s	
Output / ground isolation	0.75 kVdc / 60s		0.75 kVdc / 60s	
Standard / approvals	EN 60950-1		EN 60950-1	
EMC Standards	EN 61000-6-1, EN 61000-6-2, EN 61000-6-3, EN 61000-6-4		EN 61000-6-1, EN 61000-6-2, EN 61000-6-3, EN 61000-6-4	
Overvoltage category / Pollution degree	II / 2		II / 2	
Protection degree	IP 20		IP 20	
Connection terminal IN/OUT	2.5 mm <sup>2</sup> / 2.5 mm <sup>2</sup>		2.5 mm <sup>2</sup> / 2.5 mm <sup>2</sup>	
Housing material	aluminium		aluminium	
Dimension	40x130x115 mm		40x130x115 mm	
Approximate weight	550 g		550 g	
Mounting information	vertical on a rail, 10 mm from adjacent components		vertical on a rail, 10 mm from adjacent components	
<b>APPROVALS</b>				
<b>ACCESSORIES</b>				
Mounting rail (IEC60715/TH35-7.5)	PR/3/AC, PR/3/AC/ZB, PR/3/AS, PR/3/AS/ZB		PR/3/AC, PR/3/AC/ZB, PR/3/AS, PR/3/AS/ZB	
Mounting rail (IEC60715/TH35-15)	PR/3/PP, PR/3/PP/ZB, PR/3/PA, PR/3/PA/ZB		PR/3/PP, PR/3/PP/ZB, PR/3/PA, PR/3/PA/ZB	
Marking tag	—		—	



- DC wide range input
- Short circuit, overload, input and output overvoltage protections
- Over temperature protection
- Compact dimension
- Internal diode for the redundant parallel connection



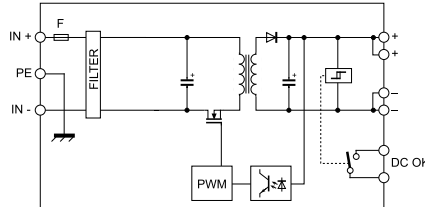
**NOTE**

Please refer to the datasheet for more details

Above overcurrent limit, the protection starts cycling in ON/OFF mode (hiccup autoreset), the maximum current supplied depends by the line resistance

Inrush current measured at  $U_n$  with battery power supply; peak current varies according to the internal impedance of the current source and the resistance of the connections.

The capacitors between phase and neutral, requires that the isolation tests are carried out in DC

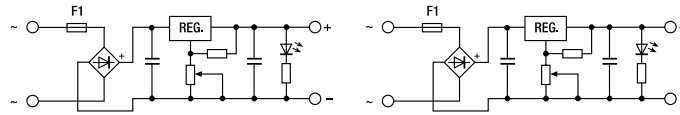


CODE TYPE	CSA240FC	XCSA240FC
<b>INPUT TECHNICAL DATA</b>		
Input rated voltage	110 Vdc	
Input voltage AC	—	
Input voltage DC	100...130 Vdc	
Frequency	—	
Current consumption	2.4 A (110 Vdc) ±10%	
Inrush peak current	150 A	
Power factor	—	
Internal protection fuse	T 5 A	
External protection on AC line	MCB: C-6 A / Fuse: T-6 A	
<b>OUTPUT TECHNICAL DATA</b>		
Output rated voltage	24 Vdc	
Output adjustable range	23...27 Vdc	
Continuous current	10 A at 50°C	
Overload limiting	15 A	
Short circuit peak current	21 A for 300 ms	
Ripple @ nominal ratings	100 mVpp	
Hold up time	4 ms	
Status indication	LED "DC OK"	
Alarm contact	—	
Parallel connection	possible	
Redundant parallel connection	already fitted with internal Oring diode	
<b>GENERAL TECHNICAL DATA</b>		
Efficiency	89% (110 Vdc)	
Dissipated power	28W (110 Vdc)	
Operating temperature range	-20...+60°C (derating -6 W >50°C)	
Input / output isolation	2.1 kVdc / 60s	
Input / ground isolation	1.41 kVdc / 60s	
Output / ground isolation	0.75 kVdc / 60s	
Standard / approvals	EN 60950-1	
EMC Standards	EN 61000-6-2, EN 61000-6-4	
Overvoltage category / Pollution degree	II / 2	
Protection degree	IP 20	
Connection terminal IN/OUT	2.5 mm <sup>2</sup> / 2.5 mm <sup>2</sup>	
Housing material	aluminium	
Dimension	40x130x115 mm	
Approximate weight	800 g	
Mounting information	vertical on a rail, 10 mm from adjacent components	
APPROVALS	<b>CE</b>	
<b>ACCESSORIES</b>		
Mounting rail (IEC60715/TH35-7.5)	PR/3/AC, PR/3/AC/ZB, PR/3/AS, PR/3/AS/ZB	
Mounting rail (IEC60715/TH35-15)	PR/3/PP, PR/3/PP/ZB, PR/3/PA, PR/3/PA/ZB	
Marking tag	—	

- Powered by a 12-24 Vac secondary transformer
- Short circuit, overload and input overvoltage protection
- Over temperature protection
- Adjustable output voltage



**NOTE**  
Please refer to the datasheet for more details



**APPLICATIONS**

Cabur CL-R series power supplies are linear stabilised with adjustable output, capable of satisfying all small load power needs with non-standard voltages at an extremely affordable cost.

They can be rail mounted in any position as long as sufficient space is left for the free circulation of air for cooling, while model CL1R has a degree of protection IP00, meaning it is to be used inside a protected container.

Even where the power supply is protected against overcurrents, it is advised to follow the nominal data indicated in the tables below.

(1) **CL1R** and **CL5R** provide the nominal performances if combined with the secondary voltages indicated in **Tab. 1**; with a secondary voltage of 24...27 Vac, the maximum obtainable current at output voltages adjusted to values below 24 Vdc is indicated in **Tab. 2**; to stabilise the output voltage and reduce ripple at full load, linear power supplies must be powered with an input voltage that exceeds the output voltage, whereas if they are powered at 24 Vac, with an output adjusted to 24 Vdc and maximum current absorption, the ripple increases and the stability of the output voltage to load variations and  $\pm 10\%$  network variations drops; voltages above 27 Vac cause significant heating, triggering the thermal protection and reducing the current supplied. Products are supplied with a default voltage of 24 Vdc at the output and 26 Vac at the input.

CODE TYPE	CL1R	XCL1R	CL5R	XCL5R
<b>INPUT TECHNICAL DATA</b>				
Input rated voltage	12-24 Vac		12-24 Vac	
Input voltage AC	10...26 Vac (see Table 1)		10...26 Vac (see Table 1)	
Input voltage DC	—		—	
Frequency	47...63 Hz		47...63 Hz	
Current consumption	2.5 A (24 Vac)		6 A (24 Vac)	
Inrush peak current	—		—	
Power factor	—		—	
Internal protection fuse	T 3 A		T 10 A	
External protection on AC line	MCB: C-4 A / Fuse: T-4 A		MCB: C-10 A / Fuse: T-10 A	
<b>OUTPUT TECHNICAL DATA</b>				
Output rated voltage	1.2...24 Vdc		1.2...24 Vdc	
Output adjustable range	(see Table 1 and Table 2)		(see Table 1 and Table 2)	
Continuous current	0.3...1.5 A (see Table 2)		0.8...5 A (see Table 2)	
Overload limiting	—		—	
Short circuit peak current	—		—	
Ripple $\Delta$ nominal ratings	< 50 mVpp at 24 Vac		< 50 mVpp at 24 Vac	
Hold up time	>20 ms		>20 ms	
Status indication	Green LED "DC OK"		Green LED "DC OK"	
Alarm contact	—		—	
Parallel connection	—		—	
Redundant parallel connection	—		—	
<b>GENERAL TECHNICAL DATA</b>				
Efficiency	—		—	
Dissipated power	—		—	
Operating temperature range	-20...+45°C		-20...+45°C	
Input / output isolation	not insulated		not insulated	
Input / ground isolation	0.5 kVac / 60 s		0.5 kVac / 60 s	
Output / ground isolation	0.5 kVac / 60 s		0.5 kVac / 60 s	
Standard / approvals	—		—	
EMC Standards	—		—	
Overvoltage category / Pollution degree	II / 2		II / 2	
Protection degree	IP 00		IP 00	
Connection terminal IN/OUT	2.5 mm <sup>2</sup> / 2.5 mm <sup>2</sup>		2.5 mm <sup>2</sup> / 2.5 mm <sup>2</sup>	
Housing material	UL94V-0 plastic material		aluminium	
Dimension	43x74x130		37x115x118	
Approximate weight	120 g		350 g	
Mounting information	vertical on a rail, 20 mm from adjacent components		vertical on a rail, 20 mm from adjacent components	
APPROVALS				
<b>ACCESSORIES</b>				
Mounting rail (IEC60715/TH35-7.5)	PR/3/AC, PR/3/AC/ZB, PR/3/AS, PR/3/AS/ZB		PR/3/AC, PR/3/AC/ZB, PR/3/AS, PR/3/AS/ZB	
Mounting rail (IEC60715/TH35-15)	—		—	
Marking tag	—		—	

INPUT (Vac)	Uout max (Vdc)	Iout max (A) XCL1R	Iout max (A) XCL5R
24...27	24	1.5	5
16...18	15	1.5	5
14...16	12	1.5	5
12...14	10	1.5	5
12	9	1.5	5
9	5	1.5	5

Table 1 (see explanation to the side)

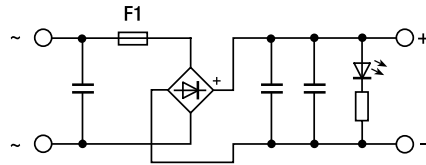
INPUT (Vac)	Uout max (Vdc)	Iout max (A) XCL1R	Iout max (A) XCL5R
24	24	1.5	5
24	15	0.8	2.5
24	12	0.7	2
24	10	0.5	1.5
24	9	0.45	1.3
24	5	0.3	0.8

Table 2 (see side explanation)

- Powered by a 12-24 Vac secondary transformer
- Rail mountable



**NOTE**  
Please refer to the datasheet for more details  
Output not protected against overcurrent and short circuit, an external fuse must be installed.



CODE TYPE	AR6	XAR6
<b>INPUT TECHNICAL DATA</b>		
Input rated voltage	12-24 Vac	
Input voltage AC	6...20 Vac	
Input voltage DC	—	
Frequency	47...63 Hz	
Current consumption	7.2 A (24 Vac)	
Inrush peak current	—	
Power factor	—	
Internal protection fuse	T 8 A	
External protection on AC line	MCB: C-10 A / Fuse: T-10 A	
<b>OUTPUT TECHNICAL DATA</b>		
Output rated voltage	$U_{out} = (U_{in} \times 1.41) - 2\text{ V}$ (full load, see Tab. 1)	
Output adjustable range	—	
Continuous current	6 A at 20°C	
Overload limiting	External fuse must be installed	
Short circuit peak current	—	
Ripple @ nominal ratings	2.5 Vpp	
Hold up time	>20 ms	
Status indication	Green LED "DC OK"	
Alarm contact	—	
Parallel connection	—	
Redundant parallel connection	—	
<b>GENERAL TECHNICAL DATA</b>		
Efficiency	—	
Dissipated power	—	
Operating temperature range	-20...+45°C	
Input / output isolation	not insulated	
Input / ground isolation	0.5 kVac / 60 s	
Output / ground isolation	0.5 kVac / 60 s	
Standard / approvals	—	
EMC Standards	—	
Overvoltage category / Pollution degree	II / 2	
Protection degree	—	
Connection terminal IN/OUT	2.5 mm <sup>2</sup> / 2.5 mm <sup>2</sup>	
Housing material	UL94V-0 plastic material	
Dimension	70x80x93	
Approximate weight	140 g	
Mounting information	vertical on a rail, 20 mm from adjacent components	
<b>APPROVALS</b>		
<b>ACCESSORIES</b>		
Mounting rail (IEC60715/TH35-7.5)	PR/3/AC, PR/3/AC/ZB, PR/3/AS, PR/3/AS/ZB	
Mounting rail (IEC60715/TH35-15)	—	
Marking tag	—	

## APPLICATIONS

The rectified and filtered power supply comprises a transformer which isolates and reduces the secondary voltage from the network voltage (not supplied), a bridge rectifier and a filter capacity that convert alternating voltage into direct voltage at an SELV value of less than 60 Vdc.

The power supply is not stabilised, therefore the output voltage varies according to the power consumed by the load and to network voltage fluctuations of  $\pm 10\%$ . The formulae described in the output technical data are used to calculate voltage at no load, 50% load and full load and to select the transformer best suited to your needs. **These power supplies are a reliable and affordable source for powering relays, contactors, solenoid valves and loads capable of operating smoothly with a relatively high (5%) alternating waste on 24 Vdc (ripple) and strong changes in output voltage, whereas in applications in which the network is highly unstable and prone to voltage dips, they may not be suitable for powering devices with microprocessors and memories, analogue converters or devices that require a highly stable power supply voltage.**

Tab. 1 Input/Output behaviour

INPUT (Vac)	OUTPUT without load (Vdc)	OUTPUT full load (Vdc)
20	28.7	24.2
18	25.4	21.4
15	21.2	17.2
12	17	15
9	12.7	8.7
6	8.5	4.5

- Connected to a DC line, allow to supply loads and charge the backup battery
- Suitable for Lead-Acid batteries
- Suitable for power supplies with adjustable output

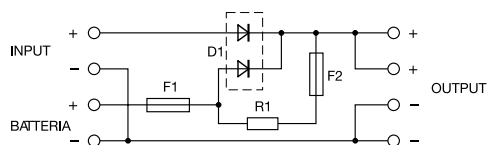


**NOTE**

Please refer to the datasheet or operating instruction for more details

In order to complete the charge, the DC output of the power supply must be 2-3 V more than nominal voltage of the battery

XCSBC does not prevent deep discharge of the battery



## APPLICATIONS

### 1. Battery charger

This module enables Cabur power supplies to charge a battery while simultaneously powering the load.

The diodes effectively block the power supply from the battery, the resistor limits the load current to prevent power supply safety cut-off and prolonging the life of the battery, and fuse F1 protects the battery in the event of a short-circuit on the load.

The connection occurs as shown below.

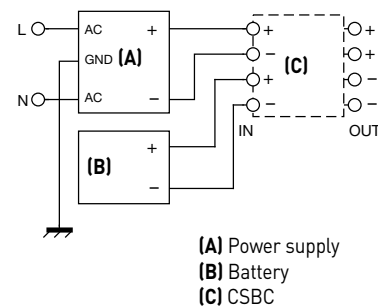
### 2. Placing power supplies in parallel

This module can be used to put two power supplies without a blocking diode in parallel, eliminating the need for fuse F2 in series with the charging current limiting resistor.

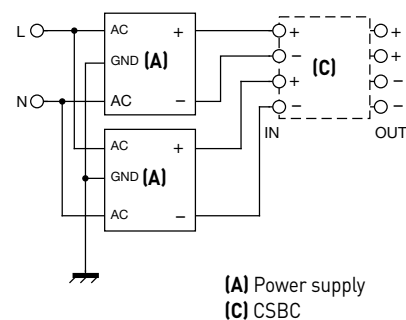
The connection occurs as shown below.

CODE TYPE	CSBC	XCSBC
<b>INPUT TECHNICAL DATA</b>		
Input rated voltage	12-24 Vdc	
Input voltage AC	—	
Input voltage DC	6...30 Vdc	
Frequency	—	
Current consumption	> 3 A	
Inrush peak current	—	
Power factor	—	
Internal protection fuse	—	
External protection on AC line	—	
<b>OUTPUT TECHNICAL DATA</b>		
Output rated voltage	12-24 Vdc ±1%	
Output voltage range	Vin-0.2 normal operation / Vbatt-0.2 battery operation (max. 29 Vdc)	
Continuous current	10 A at 45°C	
Battery safety fuse	Fuse: 6.3 A replaceable	
Status indication	—	
Alarm contact	—	
Battery type	Lead-Acid	
Battery capacity	max. 4 Ah (12 Vdc) / max. 10 Ah (24 Vdc)	
Charging current	0.5 A (12 Vdc) / 1 A (24 Vdc)	
Battery disconnection voltage	function not present	
Protections	short-circuit / battery overload	
<b>GENERAL TECHNICAL DATA</b>		
Efficiency	88%	
Dissipated power	7.5 W (12 Vdc) 15 W (24 Vdc)	
Operating temperature range	-20...+50°C	
Input / output isolation	—	
Input / ground isolation	—	
Output / ground isolation	—	
Standard / approvals	—	
EMC Standards	—	
Overvoltage category / Pollution degree	II / 2	
Protection degree	IP 00	
Connection terminal IN/OUT	2.5 mm <sup>2</sup> / 2.5 mm128	
Housing material	UL94V-0 plastic	
Dimension	26x80x93 mm	
Approximate weight	80 g	
Mounting information	vertical on a rail, 10 mm from adjacent components	
APPROVALS	<b>CE</b>	
<b>ACCESSORIES</b>		
Mounting rail (IEC60715/TH35-7.5)	PR/3/AC, PR/3/AC/ZB, PR/3/AS, PR/3/AS/ZB	
Mounting rail (IEC60715/TH35-15)	PR/3/PP, PR/3/PP/ZB, PR/3/PA, PR/3/PA/ZB	
Marking tag		

### 1. Battery charger



### 2. Placing power supplies in parallel



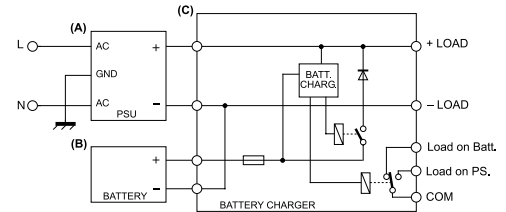
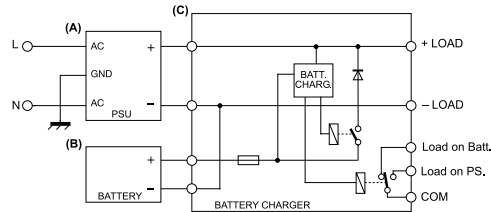
- Connected to a DC line, allow to supply loads and charge the backup battery
- Suitable for Lead-Acid batteries
- Suitable for power supplies with adjustable output
- Battery deep discharge protection
- LED status indicator and alarm contact



**NOTE**

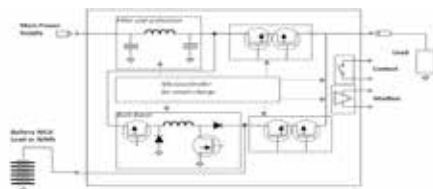
Please refer to the datasheet or operating instruction for more details

In order to complete the charge, the DC output of the power supply must be 2-3V more than nominal voltage of the battery



CODE TYPE	CS-UPS1	XCSUPS1	CS-UPS2	XCSUPS2
<b>INPUT TECHNICAL DATA</b>				
Input rated voltage	12 Vdc		24 Vdc	
Input voltage AC	—		—	
Input voltage DC	26...28.5 Vdc		12...15 Vdc	
Frequency	—		—	
Current consumption	≥ 3 A		≥ 3 A	
Inrush peak current	—		—	
Power factor	—		—	
Internal protection fuse	—		—	
External protection on AC line	—		—	
<b>OUTPUT TECHNICAL DATA</b>				
Output rated voltage	24 Vdc ±1%		12 Vdc ±1%	
Output voltage range	26...28 Vdc normal operation, 17...26 Vdc battery operation		13...15 Vdc normal operation, 9...15 Vdc battery operation	
Continuous current	10 A at 50°C		10 A at 50°C	
Battery safety fuse	Fuse: 15 A replaceable		Fuse: 15 A replaceable	
Status indication	LED "DC OK" / LED "Battery OK" / LED "Battery low" / LED "Load OK"		LED "DC OK" / LED "Battery OK" / LED "Battery low" / LED "Load OK"	
Alarm contact	dry contact, max. 1A @ 24 Vdc (Uin > 21.6 Vdc)		dry contact, max. 1A @ 24 Vdc (Uin > 21.6 Vdc)	
Battery type	Lead-Acid		Lead-Acid	
Battery capacity	max. 40 Ah [24 Vdc]		max. 20 Ah [12 Vdc]	
Charging current	2 A - 4 A selectable		2 A - 4 A selectable	
Battery disconnection voltage	≤ 18 Vdc ±0.5V		≤ 9 Vdc ±0.5V	
Protections	reverse polarity, short-circuit, battery overload, battery deep discharge		reverse polarity, short-circuit, battery overload, battery deep discharge	
<b>GENERAL TECHNICAL DATA</b>				
Efficiency	88%		88%	
Dissipated power	7.5 W [12 Vdc] 15 W [24 Vdc]		7.5 W [12 Vdc] 15 W [24 Vdc]	
Operating temperature range	-20...+50°C		-20...+50°C	
Input / output isolation	—		—	
Input / ground isolation	—		—	
Output / ground isolation	—		—	
Standard / approvals	—		—	
EMC Standards	—		—	
Overvoltage category / Pollution degree	II / 2		II / 2	
Protection degree	IP 20		IP 20	
Connection terminal IN/OUT	2.5 mm <sup>2</sup> / 2.5 mm <sup>129</sup>		2.5 mm <sup>2</sup> / 2.5 mm <sup>2</sup>	
Housing material	aluminium		aluminium	
Dimension	55x130x115 mm		55x130x115 mm	
Approximate weight	300 g		300 g	
Mounting information	vertical on a rail, 10 mm from adjacent components		vertical on a rail, 10 mm from adjacent components	
<b>APPROVALS</b>	<b>CE</b>		<b>CE</b>	
<b>ACCESSORIES</b>				
Mounting rail (IEC60715/TH35-7.5)	PR/3/AC, PR/3/AC/ZB, PR/3/AS, PR/3/AS/ZB		PR/3/AC, PR/3/AC/ZB, PR/3/AS, PR/3/AS/ZB	
Mounting rail (IEC60715/TH35-15)	—		—	
Marking tag				

- Connected to a DC line, allow to supply loads and charge the backup battery
- Suitable for Lead-Acid, NiMH and Ni-Cd batteries
- Suitable for 12 and 24 Vdc loads and batteries
- Battery deep discharge protection
- LED status indicator and alarm contact
- ModBus RTU communication port for setting and monitoring



**NOTE**  
Please refer to the datasheet or operating instruction for more details  
Internal DC/DC converter avoid to increase the output voltage of the 24V net

## APPLICATIONS

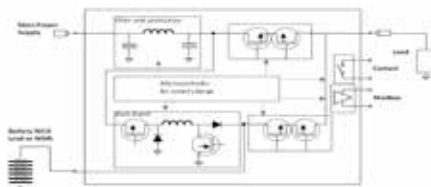
**XCSU120S** is a smart battery charger equipped with a microprocessor to determine the most appropriate charging and monitoring algorithm to ensure battery efficiency. Using an external DC power source, XCSU120S is able to charge universal and NiCd, NiMH and lead acid batteries.

## PRODUCT FEATURES:

- Independent 12 or 24 V input, output and battery voltages (microprocessor sets the voltage to the required level)
- It is no longer necessary to increase the voltage of the power supply to allow the battery to charge, resulting in an increase of the output voltage
- The device is supplied with a default setting that can be changed with a simple ModBus connection, which can also be used to monitor functions and establish a direct connection to a PLC
- Integrated software allows you to select battery type and capacity, with the microprocessor selecting the most appropriate charging algorithm and monitoring its efficiency
- System monitoring with two available remote alarms that can be set to no network power, battery on, battery efficiency, battery overtemperature, output overload
- Programmable remote control for turning battery charging, output and alarms on/off
- Programmable on/off timer
- DIP-switch programming for most functions

CODE TYPE	CSU120S	XCSU120S
<b>INPUT TECHNICAL DATA</b>		
Input rated voltage	12-24 Vdc	
Input voltage AC	—	
Input voltage DC	10...16 Vdc / 20...29 Vdc	
Frequency	—	
Current consumption	5 A	
Inrush peak current	—	
Power factor	—	
Internal protection fuse	—	
External protection on AC line	—	
<b>OUTPUT TECHNICAL DATA</b>		
Output rated voltage	12-24 Vdc ±1%	
Output voltage range	12-24 Vdc normal and battery operation	
Continuous current	5 A at 20°C / 4 A at 45°C	
Battery safety fuse	Fuse: 5 A autorestart	
Status indication	LED "DC OK" / LED "Battery" / LED "Alarm"	
Alarm contact	2 digital signal	
Battery type	Lead-Acid, NiMH, Ni-Cd	
Battery capacity	max. 4 Ah (12 Vdc) / max. 4 Ah (24 Vdc)	
Charging current	500 mA programmable	
Battery disconnection voltage	≤ 9 Vdc (12 Vdc) / 18 Vdc (24 Vdc) ±0.5V	
Protections	reverse polarity/overload/deep discharge	
<b>GENERAL TECHNICAL DATA</b>		
Efficiency	90%	
Dissipated power	2 W (12 Vdc) 2 W (24 Vdc)	
Operating temperature range	-20...+60°C (derating -2 W >50°C)	
Input / output isolation	—	
Input / ground isolation	—	
Output / ground isolation	—	
Standard / approvals	—	
EMC Standards	EN 61000-6-1, EN 61000-6-2, EN 61000-6-3, EN 61000-6-4	
Overvoltage category / Pollution degree	II / 2	
Protection degree	IP 20	
Connection terminal IN/OUT	2.5 mm <sup>2</sup> / 2.5 mm <sup>2</sup>	
Housing material	aluminium	
Dimension	70x63x88 mm	
Approximate weight	200 g	
Mounting information	vertical on a rail, 10 mm from adjacent components	
APPROVALS	<b>CE</b>	
<b>ACCESSORIES</b>		
Mounting rail (IEC60715/TH35-7.5)	PR/3/AC, PR/3/AC/ZB, PR/3/AS, PR/3/AS/ZB	
Mounting rail (IEC60715/TH35-15)	PR/3/PP, PR/3/PP/ZB, PR/3/PA, PR/3/PA/ZB	
Marking tag		

- Connected to a DC line, allow to supply loads and charge the backup battery
- Suitable for Lead-Acid, NiMH and Ni-Cd batteries
- Suitable for 12 and 24 Vdc loads and batteries
- Battery deep discharge protection
- LED status indicator and alarm contact
- ModBus RTU communication port for setting and monitoring



**NOTE**  
Please refer to the datasheet or operating instruction for more details  
Internal DC/DC converter avoid to increase the output voltage of the 24V net

## APPLICATIONS

**XCSU240S** is a smart battery charger equipped with a microprocessor to determine the most appropriate charging and monitoring algorithm to ensure battery efficiency. Using an external DC power source, XCSU240S is able to charge NiCd, NiMh and lead acid batteries.

### PRODUCT FEATURES:

- Independent 12 or 24 V input, output and battery voltages (microprocessor sets the voltage to the required level)
- It is no longer necessary to increase the voltage of the power supply to allow the battery to charge, resulting in an increase of the output voltage
- The device is supplied with a default setting that can be changed with a simple ModBus connection, which can also be used to monitor functions and establish a direct connection to a PLC
- Integrated software allows you to select battery type and capacity, with the microprocessor selecting the most appropriate charging algorithm and monitoring its efficiency
- System monitoring with two available remote alarms that can be set to no network power, battery on, battery efficiency, battery overtemperature, output overload
- Programmable remote control for turning battery charging, output and alarms on/off
- Programmable on/off timer

CODE TYPE	CSU240S	XCSU240S
<b>INPUT TECHNICAL DATA</b>		
Input rated voltage	12-24 Vdc	
Input voltage AC	—	
Input voltage DC	11... 30 Vdc	
Frequency	—	
Current consumption	10 A	
Inrush peak current	—	
Power factor	—	
Internal protection fuse	—	
External protection on AC line	—	
<b>OUTPUT TECHNICAL DATA</b>		
Output rated voltage	12-24 Vdc ±1%	
Output voltage range	Vin-0.2 normal operation / Vbatt-0.2 battery operation (max. 29 Vdc)	
Continuous current	10 A at 20°C / 9A at 40°C	
Battery safety fuse	Fuse: 10 A autorestart	
Status indication	LED "DC OK" / LED "Battery" / LED "Alarm"	
Alarm contact	2 digital signal	
Battery type	Lead-Acid, NiMH, Ni-Cd	
Battery capacity	max. 10 Ah (12 Vdc) / max. 10 Ah (24 Vdc)	
Charging current	900 mA programmable	
Battery disconnection voltage	≤ 9 Vdc (12 Vdc) / 18 Vdc (24 Vdc) ±0.5V	
Protections	reverse polarity/overload/deep discharge	
<b>GENERAL TECHNICAL DATA</b>		
Efficiency	90%	
Dissipated power	3 W (12 Vdc) 3 W (24 Vdc)	
Operating temperature range	-20...+60°C (derating -2 W >50°C)	
Input / output isolation	—	
Input / ground isolation	—	
Output / ground isolation	—	
Standard / approvals	—	
EMC Standards	EN 61000-6-1, EN 61000-6-2, EN 61000-6-3, EN 61000-6-4	
Overvoltage category / Pollution degree	II / 2	
Protection degree	IP 20	
Connection terminal IN/OUT	2.5 mm <sup>2</sup> / 2.5 mm <sup>2</sup> / 0.75 mm <sup>2</sup> (signals)	
Housing material	aluminium	
Dimension	40x130x115 mm	
Approximate weight	300 g	
Mounting information	vertical on a rail, 10 mm from adjacent components	
APPROVALS	<b>CE</b>	
<b>ACCESSORIES</b>		
Mounting rail (IEC60715/TH35-7.5)	PR/3/AC, PR/3/AC/ZB, PR/3/AS, PR/3/AS/ZB	
Mounting rail (IEC60715/TH35-15)	PR/3/PP, PR/3/PP/ZB, PR/3/PA, PR/3/PA/ZB	
Marking tag		

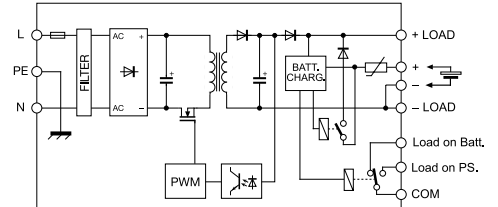
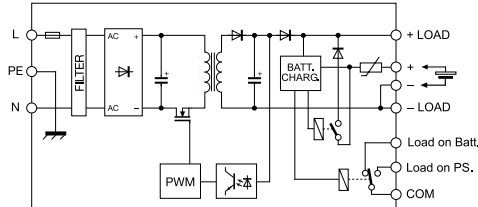
- Power supply with integrated battery charger
- Suitable for Lead-Acid batteries
- Supplies power to load and battery simultaneously
- Battery deep discharge protection
- LED status indicator and alarm contact



**NOTE**

Please refer to the datasheet or operating instruction for more details

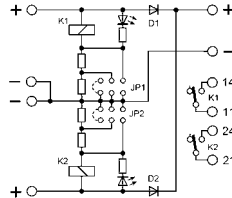
In order to complete the charge, the DC output of the power supply must be 2-3V more than nominal voltage of the battery



CODE TYPE	CSC120B	CSC120C
<b>INPUT TECHNICAL DATA</b>		
Input rated voltage	120-230 Vac	120-230 Vac
Input voltage AC	90...264 Vac	90...264 Vac
Input voltage DC	100...345 Vdc [derating Uin<130 Vdc]	100...345 Vdc (derating Uin<130 Vdc)
Frequency	47...63 Hz	47...63 Hz
Current consumption	1.6 A (120 Vac) / 0.91 A (230 Vac)	1.9 A (120 Vac) / 1.1 A (230 Vac)
Inrush peak current	20 A	20 A
Power factor	> 0.65	> 0.65
Internal protection fuse	T 3.15 A	T 3.15 A
External protection on AC line	MCB: C-4 A / Fuse: T 4 A	MCB: C-4 A / Fuse: T 4 A
<b>OUTPUT TECHNICAL DATA</b>		
Output rated voltage	12 Vdc ±1%	24 Vdc ±1%
Output voltage range	13...15 Vdc normal operation, 9...15 Vdc battery operation	26...26 Vdc normal operation, 17...25 Vdc battery operation
Continuous current	5 A at 50°C	5 A at 50°C
Battery safety fuse	???	???
Status indication	LED "DC OK" / LED "Alarm"	LED "DC OK" / LED "Alarm"
Alarm contact	dry contact, max. 1A @ 24 Vdc (Uin >21.6 Vdc)	dry contact, max. 1A @ 24 Vdc (Uin >10.8 Vdc)
Battery type	Lead-Acid	Lead-Acid
Battery capacity	max. 1.2 Ah (24 Vdc)	max. 1.2 Ah (24 Vdc)
Charging current	150 mA	150 mA
Battery disconnection voltage	≤ 9 Vdc ±0.5V	≤ 18 Vdc ±0.5V
Protections	short-circuit / battery overload	reverse polarity, short-circuit, battery overload, battery deep discharge
<b>GENERAL TECHNICAL DATA</b>		
Efficiency	81% (120 Vac) 83% (230 Vac)	84% (120 Vac) 86% (230 Vac)
Dissipated power	25 W (120 Vac) 22 W (230 Vac)	22 W (120 Vac) 19 W (230 Vac)
Operating temperature range	-20...+60°C (derating -2 W >45°C)	-20...+60°C (derating -3.2 W >45°C)
Input / output isolation	3 kVac / 60 s (SELV output)	3 kVac / 60 s (SELV output)
Input / ground isolation	1.5 kVac / 60 s	1.5 kVac / 60 s
Output / ground isolation	0.5 kVac / 60 s	0.5 kVac / 60 s
Standard / approvals	EN 60950-1	EN 60950-1
EMC Standards	EN 61000-6-1, EN 61000-6-2, EN 61000-6-3, EN 61000-6-4	EN 61000-6-1, EN 61000-6-2, EN 61000-6-3, EN 61000-6-4
Overvoltage category / Pollution degree	II / 2	II / 2
Protection degree	IP 20	IP 20
Connection terminal IN/OUT	2.5 mm <sup>2</sup> / 2.5 mm <sup>2</sup>	2.5 mm <sup>2</sup> / 2.5 mm <sup>2</sup>
Housing material	aluminium	aluminium
Dimension	40x130x115 mm	40x130x115 mm
Approximate weight	450 g	450 g
Mounting information	vertical on a rail, 10 mm from adjacent components	vertical on a rail, 10 mm from adjacent components
<b>APPROVALS</b>		
<b>ACCESSORIES</b>		
Mounting rail (IEC60715/TH35-7.5)	PR/3/AC, PR/3/AC/ZB, PR/3/AS, PR/3/AS/ZB	PR/3/AC, PR/3/AC/ZB, PR/3/AS, PR/3/AS/ZB
Mounting rail (IEC60715/TH35-15)	PR/3/PP, PR/3/PP/ZB, PR/3/PA, PR/3/PA/ZB	PR/3/PP, PR/3/PP/ZB, PR/3/PA, PR/3/PA/ZB
Marking tag		



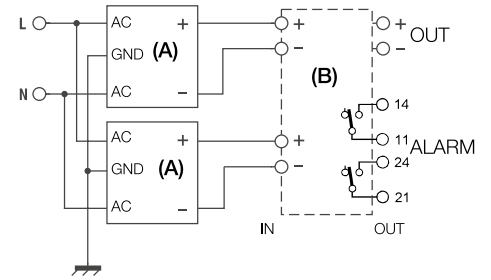
- Suitable for connecting power supplies without ORing diodes
- 12, 24 and 48 Vdc selectable operating voltages
- 2 alarm relays
- Compact dimensions



## APPLICATIONS

This module is used for placing two power supplies without blocking diodes in parallel; jumpers can be used to select the desired operating voltage, and each channel has a relay and an LED diode giving you a remote alarm signal in case a power supply switches off.

## Connection Diagram



(A) Power supply  
(B) CSBD

CODE TYPE	CSBD	XCSBD
<b>INPUT TECHNICAL DATA</b>		
Input voltage range	12-24-48 Vdc	
Input nominal current	2 x 15 A	
Internal protection fuse	—	
<b>OUTPUT TECHNICAL DATA</b>		
Output voltage range	12-24-48 Vdc selectable	
Continuous current	1 x 15 A (max. 30 A peak)	
Overload limiting	—	
Protections	—	
IN-OUT voltage drop	0.7 V at 15 A	
Status indication	LED "DC OK"	
Alarm contact	2 dry contact, max. 1A @ 24 Vdc	
<b>GENERAL TECHNICAL DATA</b>		
Efficiency	—	
Dissipated power	—	
Operating temperature range	-20...+50°C	
Input / output isolation	—	
Input / ground isolation	—	
Output / ground isolation	—	
Standard approvals	—	
EMC Standards	—	
Overvoltage category / Pollution degree	II / 2	
Protection degree	IP 00	
Connection terminal IN / OUT	2.5 mm <sup>2</sup> / 2.5 mm <sup>2</sup>	
Housing material	UL94V-0 plastic material	
Dimensions	40x130x85	
Approximate weight	120 g	
Mounting information	vertical on a rail, 10 mm from adjacent components	
<b>APPROVALS</b>		
<b>ACCESSORIES</b>		
Mounting rail (IEC60715/TH35-7.5)	PR/3/AC, PR/3/AC/ZB, PR/3/AS, PR/3/AS/ZB	
Mounting rail (IEC60715/TH35-15)	PR/3/PP, PR/3/PP/ZB, PR/3/PA, PR/3/PA/ZB	
Marking tag	—	

- Suitable for connecting power supplies without ORing diodes
- Suitable for 12 to 80 V
- CPU-controlled electronic redundancy
- Current failure and unbalance alarm
- High efficiency and low consumption



PRELIMINARY



PRELIMINARY

NOTE

[1] The "DC-OK" LED signals the status of the output, "Unbalance" LEDs signal if the current sharing is balanced or not balanced, "alarm" LED signals an unbalanced and critical situation or the failure of one power supply  
 [2] The "Alarm" contact opens in case of an unbalanced and critical situation or the failure of one power supply

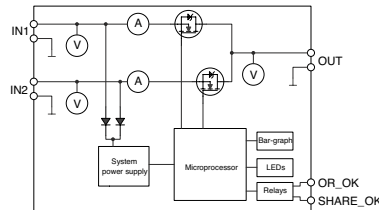
CODE TYPE	CSR-2M/20/AA	XCSR2M20AA	CSR-2M/40/AA	XCSR2M40AA
<b>INPUT TECHNICAL DATA</b>				
Input voltage range	12...80 Vdc		12...80 Vdc	
Input nominal current	2 x 20 A		2 x 40 A	
Internal protection fuse	—		—	
<b>OUTPUT TECHNICAL DATA</b>				
Output voltage range	10.8...85 Vdc		10.8...85 Vdc	
Continuous current	1 x 25 A (max. 40 A peak)		1 x 50 A (max. 80 A peak)	
Overload limiting	—		—	
Protections	—		—	
IN-OUT voltage drop	0.2 V at 25 A		0.2 V at 50 A	
Status indication	LED "DC OK" / LED "Alarm" / LED "Unbalance" (1)		LED "DC OK" / LED "Alarm" / LED "Unbalance" (1)	
Alarm contact	dry contact, max. 1A @ 24 Vdc (2)		dry contact, max. 1A @ 24 Vdc (2)	
<b>GENERAL TECHNICAL DATA</b>				
Efficiency	>98% (12 V / 50 A)		>98% (12 V / 50 A)	
Dissipated power	5 W		10 W	
Operating temperature range	-20...+50°C		-20...+50°C	
Input / output isolation	0.5 kVac / 60 s		0.5 kVac / 60 s	
Input / ground isolation	0.5 kVac / 60 s		0.5 kVac / 60 s	
Output / ground isolation	0.5 kVac / 60 s		0.5 kVac / 60 s	
Standard approvals	—		—	
EMC Standards	EN 61000-6-2, EN 61000-6-4		EN 61000-6-2, EN 61000-6-4	
Overvoltage category / Pollution degree	II / 2		II / 2	
Protection degree	IP 20		IP 20	
Connection terminal IN / OUT	16 mm <sup>2</sup> / 16 mm <sup>2</sup> / 1.5 mm <sup>2</sup> (signal)		16 mm <sup>2</sup> / 16 mm <sup>2</sup> / 1.5 mm <sup>2</sup> (signal)	
Housing material	aluminium		aluminium	
Dimensions	40x110x145		40x110x145	
Approximate weight	200 g		200 g	
Mounting information	vertical on a rail, 10 mm from adjacent components		vertical on a rail, 10 mm from adjacent components	
<b>APPROVALS</b>				
<b>ACCESSORIES</b>				
Mounting rail (IEC60715/TH35-7.5)	PR/3/AC, PR/3/AC/ZB, PR/3/AS, PR/3/AS/ZB		PR/3/AC, PR/3/AC/ZB, PR/3/AS, PR/3/AS/ZB	
Mounting rail (IEC60715/TH35-15)	—		—	
Marking tag	—		—	

- Suitable for connecting power supplies without ORing diodes
- Suitable for 12 to 85 V with currents of up to 50 A
- CPU-controlled electronic redundancy
- Current failure and unbalance alarm
- High efficiency and low consumption



**NOTE**

(1) The "DC-OK" LED signals the status of the output, "Unbalance" LEDs signal if the current sharing is balanced or not balanced, "alarm" LED signals an unbalanced and critical situation or the failure of one power supply  
 (2) The "Alarm" contact opens in case of an unbalanced and critical situation or the failure of one power supply



**APPLICATIONS**

The CSR50U is an advanced, microprocessor-controlled module for redundant parallel connections of two DC power supplies in applications where is required a higher reliability than the standard passive solution with diodes to isolate the outputs of the two power supplies.

The current measurement sensors, on each input, detect possible unbalance situation between the two power supplies. An unbalance greater than 60% indicates that one of the power supplies is failing. Detecting this situation and signalling an alarm with an SPST contact, allows preventative maintenance and increases the system's reliability.

In a standard redundant solution where the input currents are not monitored, it is not possible to avoid and detect unbalance situation between two power supplies.

An unbalance situation permits that the current is supplied by only one power source, this can cause stress and decrease the expectancy life. Furthermore, the power source which supplies less current (or no current) may not switch off its alarm signal in certain conditions. The CSR50U allows two identical power supplies to be connected for a total current output of 50 A and overall voltage from 12 to 85 Vdc.

Thanks to the decoupling and isolation between the two power supplies with the microprocessor-controlled MOSFET, the power dissipated is less than 10% than a standard redundant modules with diodes. The CSR50U provides status displays on:

- a fault or power loss in one of the two power supplies
- unbalanced current supplies greater than 60%

CODE TYPE	CSR50U	XCSR50U
<b>INPUT TECHNICAL DATA</b>		
Input voltage range	12...85 Vdc	
Input nominal current	2 x 50 A	
Internal protection fuse	—	
<b>OUTPUT TECHNICAL DATA</b>		
Output voltage range	10.8...85 Vdc	
Continuous current	1 x 50 A (max. 100 A peak)	
Overload limiting	—	
Protections	reverse polarity	
IN-OUT voltage drop	0.2 V at 50 A	
Status indication	LED "DC OK" / LED "Alarm" / LED "Unbalance" (1)	
Alarm contact	dry contact, max. 1A @ 24 Vdc (2)	
<b>GENERAL TECHNICAL DATA</b>		
Efficiency	>98% (12 V / 50 A)	
Dissipated power	10 W	
Operating temperature range	-20...+50°C	
Input / output isolation	0.5 kVac / 60 s	
Input / ground isolation	0.5 kVac / 60 s	
Output / ground isolation	0.5 kVac / 60 s	
Standard approvals	—	
EMC Standards	EN 61000-6-2, EN 61000-6-4	
Overvoltage category / Pollution degree	II / 2	
Protection degree	IP 20	
Connection terminal IN / OUT	16 mm <sup>2</sup> / 16 mm <sup>2</sup> / 1.5 mm <sup>2</sup> (signal)	
Housing material	aluminium	
Dimensions	40x110x145	
Approximate weight	200 g	
Mounting information	vertical on a rail, 10 mm from adjacent components	
<b>APPROVALS</b>		
<b>ACCESSORIES</b>		
Mounting rail (IEC60715/TH35-7.5)	PR/3/AC, PR/3/AC/ZB, PR/3/AS, PR/3/AS/ZB	
Mounting rail (IEC60715/TH35-15)	—	
Marking tag	—	

15 horizontal grey bars for writing notes.

**MBC2K** is a microprocessor-controlled device designed for braking DC bus-powered engines. It is activated by the surge generated by the engine when its drive requires braking.

When the MBC2K is connected on the DC bus powering the engine drive (see diagram in fig. 1), the device activates automatically when the DC bus voltage exceeds the set threshold and transfers the power generated by the engine to the braking resistor, where it is dissipated. MBC2k is equipped with protection against short circuit, overload and over temperature in order to guarantee reliable operation. MBC2K can be connected to any DC bus power supply with a voltage within 24 and 100 Vdc. The simplified application is illustrated in the block diagram in Figure 1, the front view of the unit with all controls and functions is shown in Figure 2. CONNECT up to 4 units in parallel to increase the peak braking power up to 8 KW. MBC2K also has a 7-segment display and an LED for instantly viewing the DC bus voltage (accuracy +/- 1 V) which helps the user during set-up and in displaying error messages.

### MBC2K setup

The MBC2K unit must be set-up prior to operation.

The menu comprises three pages, navigable using the MENU button;

The values shown can be adjusted by pressing the SET/RESET button.

- brake intervention threshold (VTH)
- brake intervention threshold hysteresis
- Master/Slave mode; for selecting single mode (Master mode) or for parallel connection of up to 4 cards (1 Master+3 Slave).

### Active protections

The MBC2K integrates active protections to ensure stable and reliable operation under normal use conditions. When it detects a fault, MBC2K turns itself off to prevent an uncontrolled flow of current through the braking resistor.

Fault status is indicated by the alarm LED flashing continuously.

And the integrated alarm relay allows the status of the module to be checked remotely.

To help the user understand which defect has occurred, an error code is shown on the 7-segment display.

### Connect up to 4 MBC2K units in parallel

Up to 4 MBC2K units can be connected in parallel to increase peak braking capacity to 8 KW. Each unit is capable of braking 2 KW of peak power, for which each unit requires its own braking resistor. To set up this configuration, MBC2K is equipped with a bus that is used to synchronise the operation of all connected units (up to 4 max.). The principle of operation is based on one MBC2K unit configured as a Master and the other MBC2K units (up to 3) configured as Slaves.

The Master measures the DC bus voltage and decides when to insert the braking resistors into the circuit, sending a command on the synchronisation bus. When the Slave units connected to the synchronisation bus receive the command from the Master unit, they insert their braking resistor into the circuit. When MBC2K is configured in Slave mode, all of its protective circuits remain operational.



Figure 1 application block diagram

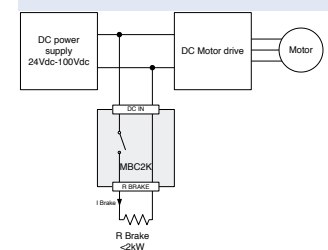


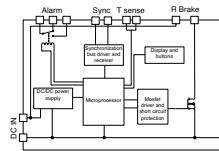
Figure 2 MBC2K - Front view

- SET / RESET:** Used to reset any errors and to change configurations in set-up mode.
- MENU:** Used to enter set-up mode and to navigate through the menu pages.
- Synchronisation bus connector:** used to connect up to 4 units in parallel.
- Braking resistor thermostat connector:** used to connect a thermostat present on the braking resistor (Klixson normally closed type is recommended; if not used, short-circuit the 2 terminals).
- Remote alarm connector:** an SPDT contact triggers the fault/malfunction signal.
- Braking resistor connector:** used to connect the external braking resistor.
- DC bus connector:** used to connect MBC2K to the 24 ...100Vdc DC bus power supply.
- Protective earth (PE) connector:** used to connect the device to the ground protection.
- 100s display:** used to view numbers >99; e.g. if the indicator is on and the display reads "03", the measurement is 103V.
- Braking indicator:** indicates that the unit is braking the engine and supplying current to the braking R.
- 7-segment display:** when the unit is in operation, this shows the DC bus voltage (accuracy +/-1V); it is also used to display menu items and error codes.
- Alarm LED:** indicates a fault or error status.

- 20 threshold levels
- Braking power until 2 kW
- Braking power until 8 kW, with allowable parallel connection
- Simple function programming
- Braking resistor temperature control



Block Diagram




## NOTE

Produced on demand, contact our sales office for availability

## APPLICATIONS

MBC2K is a microprocessor-controlled device designed for braking DC bus-powered engines. It is activated by the surge generated by the engine when its drive requires braking.

When the MBC2K is connected on the DC bus powering the engine drive (see diagram in fig. 1), the device activates automatically when the DC bus voltage exceeds the set threshold and transfers the power generated by the engine to the braking resistor, where it is dissipated. MBC2K is equipped with protection against short circuit, overload and over temperature in order to guarantee reliable operation. MBC2K can be connected to any DC bus power supply with a voltage within 24 and 100 Vdc. The simplified application is illustrated in the block diagram in Figure 1, the front view of the unit with all controls and functions is shown in Figure 2. Connect up to 4 units in parallel to increase the peak braking power up to 8 KW. MBC2K also has a 7-segment display and an LED for instantly viewing the DC bus voltage (accuracy +/- 1 V) which helps the user during set-up and in displaying error messages.

CODE TYPE	MBC2K (1)	XMBC2K
<b>INPUT TECHNICAL DATA</b>		
DC bus range	24...100 Vdc	
Maximum braking current	50 A for 1 s	
Operating voltage braking	27...106 V, threshold adjustable in 20 steps	
Threshold hysteresis	3 V or 6 V switchable	
<b>User interface</b>	2 setup buttons (SET/RESET and MENU) Two 7-segment displays 1 LED alarm status indicator (general) 1 SPDT remote failure contact (general)	
<b>Protections</b>	Under DC bus voltage (< 22 Vdc) Over DC bus voltage (> 110 Vdc) Braking resistor overtemperature (only where a thermostat is connected to the resistor) Module internal over temperature (temp. > 90°C) Braking resistor interrupted or not connected Short-circuit (or braking current > 80A) Overload (or braking time > 1 s)	
<b>Parallel connection</b>	Up to 4 MBC2Ks can be connected in parallel and synchronised through the bus to obtain a total peak braking power of 8 kW (with four 2 kW braking resistors).	
<b>GENERAL TECHNICAL DATA</b>		
Efficiency	—	
Dissipated power	20 W	
Operating temperature range	0...+70°C	
Input-output isolation	—	
Input-ground isolation	500 Vac / 60s	
Output ground isolation	—	
Standard approvals	EN60950 for SELV use up to 60 Vdc; use at higher voltages is not SELV classifiable	
EMC Standards	EN55011 Class B	
Overvoltage category pollution degree	II / 2	
Protection degree	IP 20	
Connection terminal IN-OUT	2.5 mm <sup>2</sup> / 2.5 mm <sup>2</sup>	
Housing material	aluminium	
Dimension	39x128x115	
Approximate weight	200 g	
Mounting information	vertical on a rail, 10 mm from adjacent components	
<b>APPROVALS</b>		
<b>ACCESSORIES</b>		
Mounting rail (IEC60715/TH35-7.5)	PR/3/AC, PR/3/AC/ZB, PR/3/AS, PR/3/AS/ZB	
Mounting rail (IEC60715/TH35-15)	—	
Marking tag	—	

# ADJUSTABLE ELECTRONIC OVERCURRENT PROTECTION FROM 1...10 A / 24 VDC



According to the new EN60204-1, it is **compulsory** to protect wires on SELV-PELV lines from overcurrent. The standard requires that 24 Vdc overcurrent protections intervene by cutting out the failure before the control and command 24 Vdc falls below 21.6V, cutting off power to the controls and preventing the emergency and safety features from activating.

Under EN 60204-1 and EN 61131-1 and -2, overcurrent protection on SELV/PELV lines must be capable of isolating shorts within 10 ms and hazardous overcurrents within 5 s. The use of power supplies with a high output overcurrent capacity and fast, accurate protections facilitates fault isolation before the 24 V falls below 21.6 V, leaving the controls without power.

Fuses and magneto-thermal switches inserted on 24 Vdc lines have characteristic intervention  $I/t$ s that are not suitable for isolating faults with the required speed and accuracy, while the fuses may be replaced with different types, affecting the behaviour of the protection and the safety of the system.

The proper coordination of the circuit in which the overcurrent protection is inserted must consider the total R of the line as: R connections + R wires + R protection + R residual malfunctioning load. The total R must always allow a safe current to circulate in the circuit once the protection is triggered and the protection should neither be undersized, to prevent undesirable bursts at peak load, nor oversized, to prolong its intervention t.

The entire circuit, including power supply, protection, wiring and connections, must be designed such that all overcurrents can be cut-off within 5 s before the 24 Vdc falls below 21.6 Vdc. This requirement can be met with Cabur's CSF and CSG series power supplies, designed to provide a high output overcurrent (nom.  $I > +50\%$  for  $> 5s$ ) and CEP System electronic overcurrent protections with an accuracy and speed far superior to magneto-thermal switches and fuses, whose trigger t is independent of ambient T and can be reset locally or remotely.

## Protection features

MGTs have two different intervention curves: Thermal and magnetic. The magnetic relay only triggers in the event of a short with different  $I/t$  curves; thermal relays all have the same intervention curve regardless of the MGT curve and in the event of an overload they behave as shown in figure 2: overload currents of  $1.13 \times I_n$  are cut in  $> 1h$ , and at overcurrent  $> 1.45 \times I_n$ , the trigger occurs in several minutes.

The disconnection of short-circuit currents is activated by the magnetic relay whose trigger t ranges from 0.01 to 0.1 s, and it occurs at very high currents which the power supply used may not be able to deliver: a C5 MGT used in DC has a safe trigger of  $> 70 A$ , a current which only (but not all) power supplies with a far higher nom. I, e.g. 40 A, are capable of providing, but which is not deliverable by 10 A power supplies.

Using MGT as an overcurrent protection, if the power supply used has an overload 1.2 times greater than its nominal I, disconnection will occur after 20...60 minutes, while with a current 2.5 times higher than the nominal I it will trigger after 25 s to 2 min., depending on the  $T_{amb}$ , times which are too long to guarantee stability at 24V to protect wiring and protection selectivity. In case of malfunction, until the protection triggers, the power supply remains in overload in excess of  $x 1.5 \times 5 s$  and the 24 V falls below 21.6 V, leaving normal functions and particularly the safety functions without power.

## Protection selectivity

In case of an overload or short, only the malfunctioning circuit is isolated from its protection without any effects on the power to the other loads. This feature is obtained using power supplies with a high overcurrent capacity and quick and precise protections.

## CEP system – the smart current control system

CEP "recognises" overcurrent at the lowest and most precise threshold and isolates the malfunctioning circuit in the fastest possible time. For maximum flexibility of use, the CEP system allows you to set 10 trigger currents from 1 A to 10 A in 1 A increments, and has 3 intervention curves: "Rapid – Normal – Delayed" (see fig. 3).

The protection status is indicated by two LEDs and a remote alarm transistor output, while the load can be activated/deactivated using the button on the front (fig. 5) or controlled remotely by PLC. The ability to control individual channels separately is useful during installation since various components can be activated and tested individually, while in large plants, the remote control feature can be used to gradually activate the various loads, preventing multiple simultaneous overloads at system start-up.

An additional safety feature is manual disconnection, with which even when reactivating the protections remotely the load will remain inactive, preventing hazardous operating conditions.



Figure 1



Figure 3



Figure 4

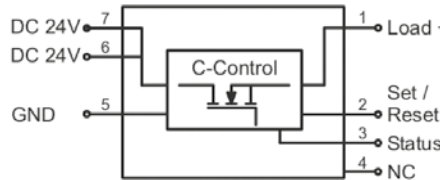


Figure 5

- Programmable from 1 A to 10 A
- 3 programmable characteristic curves
- Remote or local ON/OFF control
- Green ON/red OFF status LED and remote signalling
- Slide contact for manual disconnection
- Sealable front cover for programming protection

**NOTE**

(1) Remote control is through 24 Vdc pulses. Such pulse durations should be: = impulse > 1 s / OFF = impulse > 100 ms and < 800 ms  
 (2) The 3 standard characteristic curves are shown in the diagrams; the CEP-D3 version also has a software programmable curve.



- 1) sealable cover
- 2) programming current
- 3) identification tag
- 4) programming intervention curve
- 5) replacing the fuse

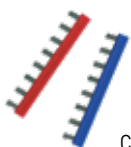
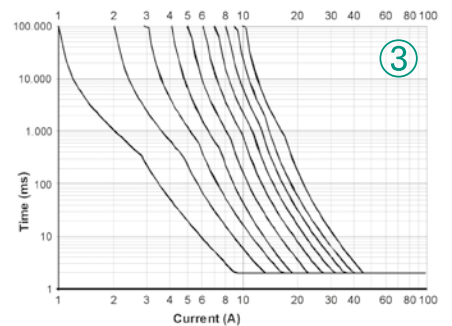
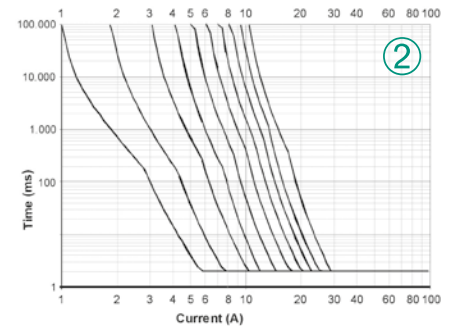
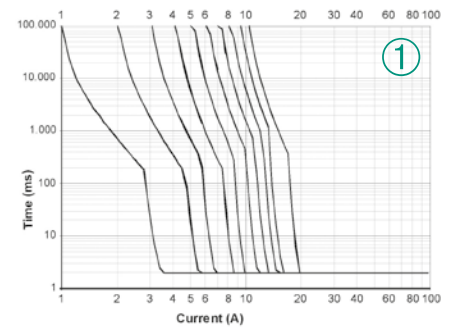
CODE TYPE	CEP-D1	XCEPD1
<b>INPUT TECHNICAL DATA</b>		
Input rated voltage	24 Vdc	
Input voltage range	18...32 Vdc	
Input current	10 A DC max	
<b>OUTPUT TECHNICAL DATA</b>		
Output rated voltage	24 Vdc (voltage drop <170 mV at Un / In)	
Continuous current	1...10 A DC programmable in 1 A increments	
Max system current	40 A DC with CEP-RCC distribution bar	
Default trip curves	slow, medium and fast	
Max connectable output capacity	10,000 µF	
Protection	electronic reverse polarity	
Remone On-OFF control	external 24 Vdc pulse	
Status indication	Green LED: constant = OK, flashing = lout at 90% of nominal, red LED: constant = output manually switched off, flashing slowly = overcurrent, flashing quickly = error	
Alarm contact	open collector transistor (overcurrent status)	
<b>GENERAL TECHNICAL DATA</b>		
Operating temperature range	-25...+60°C (derating -2 A >40°C)	
Input / output isolation	3 kVac / 60 s (SELV output)	
Standard / approvals	EN60950-1	
EMC Standards	EN61131-1, EN61131-2, EN60898, EN60947-4-1, EN50081	
Overvoltage category / Pollution degree	II / 2	
Protection degree	IP 20	
Connection terminal IN/OUT	2.5 mm <sup>2</sup> / 2.5 mm <sup>2</sup>	
Housing material	UL94V-0 plastic material	
Dimension	8x115x116 mm	
Approximate weight	120 g	
Mounting information	vertical on a rail, side by side	
<b>APPROVALS</b>		
<b>ACCESSORIES</b>		
Mounting rail (IEC60715/TH35-7.5)	PR/3/AC, PR/3/AC/ZB, PR/3/AS, PR/3/AS/ZB	
Mounting rail (IEC60715/TH35-15)	—	

**Marking tag**

- CEP-MTW (code XCEPMTW, table with 50 tags)
- CEP-SS (code XCEPSS)
- CEP-RCC (code XCEPRCC)
- CEP-RCP (code XCEPRCP)
- CEP-BCR (8 poles red)
- CEP-BCB (8 poles blue)

**Characteristic curve:**

- 1) fast
- 2) medium
- 3) slow



CEP-BCR and CEP-BCB



CEP-MTW



CEP-SS



These tables are used for quickly identifying items and verifying whether all of the product's technical details satisfy the set requirements.

### 3-phase filter without neutral 400-480 Vac

Current	Common mode (L / PE) attenuation (dB)						Differential mode (L / L) attenuation (dB)						Cat. No.	Page
	0.15 MHz	0.5 MHz	1 MHz	5 MHz	10 MHz	30 MHz	0.15 MHz	0.5 MHz	1 MHz	5 MHz	10 MHz	30 MHz		
7 A	20	60	60	60	50	35	25	60	65	60	55	40	XF07TDVST2	72
16 A	15	50	55	60	50	35	25	55	60	60	55	40	XF16TDVST2	72
30 A	15	50	55	60	50	35	25	55	60	60	55	40	XF30TDVST2	72
42 A	55	70	70	45	35	20	45	45	45	45	45	30	XF42TDVST2	73
55 A	15	55	55	55	50	35	25	55	60	60	50	40	XF55TDVST2	73
75 A	15	55	55	55	50	30	20	50	50	50	55	40	XF75TDVST2	73
100 A	35	50	45	25	15	7	30	35	35	35	30	7	XF100TDVST2	74
150 A	20	30	40	45	40	30	30	40	40	45	40	25	XF150TDS84C	75
180 A	20	30	40	45	40	30	30	40	40	45	40	25	XF180TDS84C	75

### 3-phase filter with neutral 400-480 Vac

Current	Common mode (L / PE) attenuation (dB)						Differential mode (L / L) attenuation (dB)						Cat. No.	Page
	0.15 MHz	0.5 MHz	1 MHz	5 MHz	10 MHz	30 MHz	0.15 MHz	0.5 MHz	1 MHz	5 MHz	10 MHz	30 MHz		
10 A	10	20	20	20	30	25	10	20	25	25	30	30	XF10TYG9	76
20 A	10	15	20	35	40	25	10	15	20	20	25	20	XF20TYS9	76
36 A	25	50	50	50	40	25	30	50	55	50	40	30	XF36TYT8	77
50 A	25	45	45	40	40	25	30	50	50	40	40	30	XF50TYT8	77
100 A	10	20	25	30	30	20	30	40	40	35	35	25	XF100TYT8	77

### Single-cell single-phase filter 120-250 Vac

Current	Common mode (L / PE) attenuation (dB)						Differential mode (L / L) attenuation (dB)						Cat. No.	Page
	0.15 MHz	0.5 MHz	1 MHz	5 MHz	10 MHz	30 MHz	0.15 MHz	0.5 MHz	1 MHz	5 MHz	10 MHz	30 MHz		
3 A	20	30	35	45	50	45	7	35	50	45	45	45	XF03DKBG5B	78
6 A	15	20	25	40	45	45	10	20	45	45	50	45	XF06DKBG5B	78
12 A	10	20	22	35	45	40	10	20	40	45	45	45	XF12DKBG5B	78
16 A	10	18	20	35	45	30	10	18	40	40	40	35	XF16DKCG5B	79
20 A	10	18	20	30	35	35	10	12	35	35	40	40	XF20DKCG5B	79
30 A	10	25	30	45	50	35	12	40	50	50	50	45	XF30DKCS5B	79

### Double-cell single-phase filter 120-250 Vac

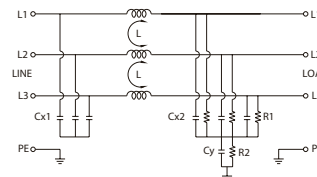
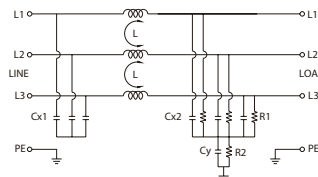
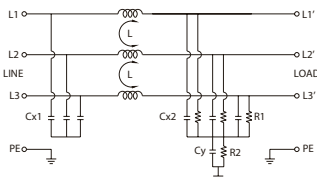
Current	Common mode (L / PE) attenuation (dB)						Differential mode (L / L) attenuation (dB)						Cat. No.	Page
	0.15 MHz	0.5 MHz	1 MHz	5 MHz	10 MHz	30 MHz	0.15 MHz	0.5 MHz	1 MHz	5 MHz	10 MHz	30 MHz		
3 A	45	60	60	55	45	45	12	45	45	45	45	45	XF03DPCG5C	80
6 A	30	50	60	55	50	35	8	45	45	45	45	45	XF06DPCG5C	80
12 A	15	25	35	55	55	35	12	40	40	35	35	40	XF12DPCG5C	80
16 A	20	35	45	60	50	35	12	40	40	45	45	50	XF16DPCG5C	81
20 A	15	40	45	50	50	40	12	45	45	45	35	50	XF20DPCG5C	81
30 A	10	30	35	55	45	30	18	45	50	40	40	40	XF30DPCG5C	81

- Models from 7 to 130 A
- Elevated attenuation from 150 kHz to 30 MHz
- Elevated attenuation even on long cables
- Compact dimension



**NOTE**

[1] Isolation test need to be made in DC voltage, according to EN 60950, cause by the internal filter capacitors



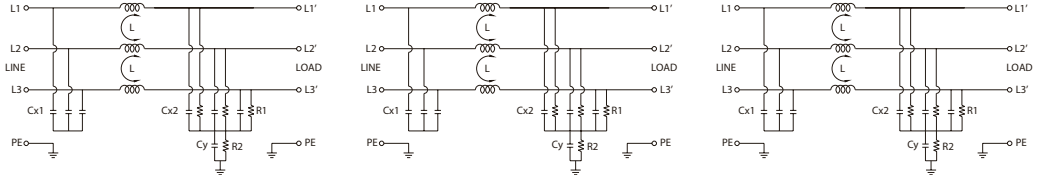
CODE TYPE	F07TDVST2	XF07TDVST2	F16TDVST2	XF16TDVST2	F30TDVST2	XF30TDVST2
<b>GENERAL TECHNICAL DATA</b>						
Rated voltage	480 Vac ± 10%		480 Vac ± 10%		480 Vac ± 10%	
Rated current	7 A		16 A		30 A	
Leakage current	30 mA		30 mA		30 mA	
Frequency	50...60 Hz		50...60 Hz		50...60 Hz	
Operating temperature range	-25...+85°C		-25...+85°C		-25...+85°C	
Isolation L/L	1.45 kVdc / 60 s [1]		1.45 kVdc / 60 s [1]		1.45 kVdc / 60 s [1]	
Isolation L/PE	2.25 kVdc / 60 s [1]		2.25 kVdc / 60 s [1]		2.25 kVdc / 60 s [1]	
Overvoltage category / Pollution degree	—		—		—	
Protection degree	IP 20		IP 20		IP 20	
Connection terminal IN/OUT	fixed screw terminal blocks		fixed screw terminal blocks		fixed screw terminal blocks	
Housing material	metallic		metallic		metallic	
Dimension	42x192x72 mm		47x252x72 mm		52x272x87 mm	
Approximate weight	—		—		—	
Mounting information	screw fixing, on metal panel		screw fixing, on metal panel		screw fixing, on metal panel	
<b>APPROVALS</b>						
<b>Common mode (L/PE) attenuation (dB)</b>						
0.15 MHz	20		15		15	
0.5 MHz	60		50		50	
1 MHz	60		55		55	
5 MHz	60		60		60	
10 MHz	50		50		50	
30 MHz	35		35		35	
<b>Differential mode (L/PE) attenuation (dB)</b>						
0.15 MHz	25		25		25	
0.5 MHz	60		55		55	
1 MHz	65		60		60	
5 MHz	60		60		60	
10 MHz	55		55		55	
30 MHz	40		40		40	
<b>ACCESSORIES</b>						
Marking tag	—		—		—	

- Models from 7 to 130 A
- Elevated attenuation from 150 kHz to 30 MHz
- Elevated attenuation even on long cables
- Compact dimension



**NOTE**

[1] Isolation test need to be made in DC voltage, according to EN 60950, cause by the internal filter capacitors



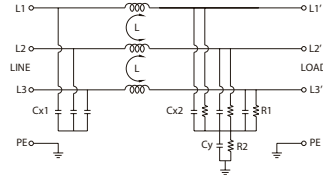
CODE TYPE	XF42TDVST2	XF55TDVST2	XF75TDVST2
<b>GENERAL TECHNICAL DATA</b>			
Rated voltage	480 Vac ± 10%	480 Vac ± 10%	480 Vac ± 10%
Rated current	42 A	55 A	75 A
Leakage current	30 mA	30 mA	30 mA
Frequency	50...60 Hz	50...60 Hz	50...60 Hz
Operating temperature range	-25...+85°C	-25...+85°C	-25...+85°C
Isolation L/L	1.45 kVdc / 60 s [1]	1.45 kVdc / 60 s [1]	1.45 kVdc / 60 s [1]
Isolation L/PE	2.25 kVdc / 60 s [1]	2.25 kVdc / 60 s [1]	2.25 kVdc / 60 s [1]
Overvoltage category / Pollution degree	—	—	—
Protection degree	IP 20	IP 20	IP 20
Connection terminal IN/OUT	fixed screw terminal blocks	fixed screw terminal blocks	fixed screw terminal blocks
Housing material	metallic	metallic	metallic
Dimension	52x312x87 mm	87x252x92 mm	92x272x137 mm
Approximate weight	—	—	—
Mounting information	screw fixing, on metal panel	screw fixing, on metal panel	screw fixing, on metal panel
<b>APPROVALS</b>			
<b>Common mode (L/PE) attenuation (dB)</b>			
0.15 MHz	55	15	15
0.5 MHz	70	55	55
1 MHz	70	55	55
5 MHz	45	55	55
10 MHz	35	50	50
30 MHz	20	35	30
<b>Differential mode (L/PE) attenuation (dB)</b>			
0.15 MHz	45	25	20
0.5 MHz	45	55	50
1 MHz	45	60	50
5 MHz	45	60	50
10 MHz	45	50	55
30 MHz	30	40	40
<b>ACCESSORIES</b>			
Marking tag	—	—	—

- Models from 7 to 130 A
- Elevated attenuation from 150 kHz to 30 MHz
- Elevated attenuation even on long cables
- Compact dimension



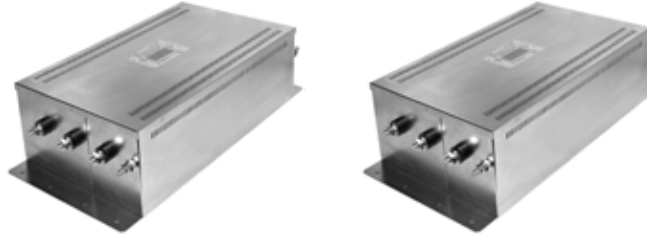
**NOTE**

[1] Isolation test need to be made in DC voltage, according to EN 60950, cause by the internal filter capacitors



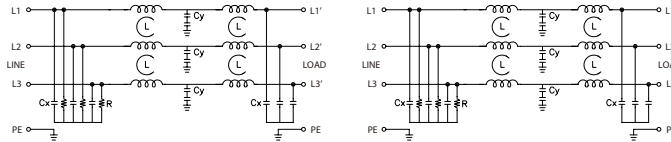
CODE TYPE	XF100TDVST2
<b>GENERAL TECHNICAL DATA</b>	
Rated voltage	480 Vac ± 10%
Rated current	100 A
Leakage current	30 mA
Frequency	50...60 Hz
Operating temperature range	-25...+85°C
Isolation L/L	1.45 kVdc / 60 s [1]
Isolation L/PE	2.25 kVdc / 60 s [1]
Overvoltage category / Pollution degree	—
Protection degree	IP 20
Connection terminal IN/OUT	fixed screw terminal blocks
Housing material	metallic
Dimension	90x270x150 mm
Approximate weight	—
Mounting information	screw fixing, on metal panel
<b>APPROVALS</b>	
<b>Common mode (L/PE) attenuation (dB)</b>	
0.15 MHz	35
0.5 MHz	50
1 MHz	45
5 MHz	25
10 MHz	15
30 MHz	7
<b>Differential mode (L/PE) attenuation (dB)</b>	
0.15 MHz	30
0.5 MHz	35
1 MHz	35
5 MHz	35
10 MHz	30
30 MHz	7
<b>ACCESSORIES</b>	
Marking tag	—

- Models from 150 to 180 A
- Elevated attenuation from 150 kHz to 30 MHz
- Elevated attenuation even on long cables



**NOTE**

- (1) Produced on demand, contact our sales office for availability  
 (2) Isolation test need to be made in DC voltage, according to EN 60950, cause by the internal filter capacitors.



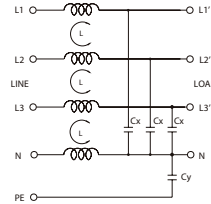
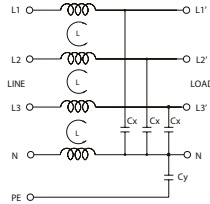
CODE TYPE	XF150TDS84C	XF180TDS84C
<b>GENERAL TECHNICAL DATA</b>	<b>F150TDS84C (1)</b>	<b>F180TDS84C (1)</b>
Rated voltage	480 Vac ± 10%	480 Vac ± 10%
Rated current	150 A	180 A
Leakage current	500 mA	500 mA
Frequency	50...60 Hz	50...60 Hz
Operating temperature range	-25...+85°C	-25...+85°C
Isolation L/L	1 kVdc / 60 s [2]	1 kVdc / 60 s [2]
Isolation L/PE	1 kVdc / 60 s [2]	2.25 kVdc / 60 s [2]
Overvoltage category / Pollution degree	—	—
Protection degree	IP 00	IP 00
Connection terminal IN/OUT	self-blocking nut	self-blocking nut
Housing material	metallic	metallic
Dimension	202x390x122 mm	202x390x122 mm
Approximate weight	—	—
Mounting information	screw fixing, on metal panel	screw fixing, on metal panel
<b>APPROVALS</b>		
<b>Common mode (L/PE) attenuation (dB)</b>		
0.15 MHz	20	20
0.5 MHz	30	30
1 MHz	40	40
5 MHz	45	45
10 MHz	40	40
30 MHz	30	30
<b>Differential mode (L/PE) attenuation (dB)</b>		
0.15 MHz	30	30
0.5 MHz	40	40
1 MHz	40	40
5 MHz	45	45
10 MHz	40	40
30 MHz	25	25
<b>ACCESSORIES</b>		
Marking tag	—	—

- Models from 10 to 20 A
- Elevated attenuation from 150 kHz to 30 MHz
- Elevated attenuation even on long cables
- Excellent quality/price/performance ratio



NOTE

- (1) Produced on demand, contact our sales office for availability  
 (2) Isolation test need to be made in DC voltage, according to EN 60950, cause by the internal filter capacitors.



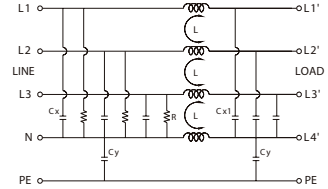
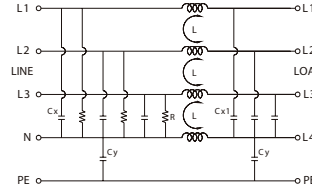
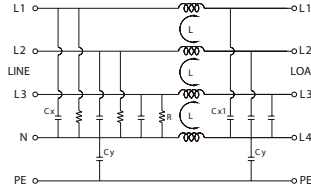
CODE TYPE	F10TYG9 (1)	XF10TYG9	F20TYS9 (1)	XF20TYS9
<b>GENERAL TECHNICAL DATA</b>				
Rated voltage	440 Vac ± 10%		440 Vac ± 10%	
Rated current	10 A		20 A	
Leakage current	0.5 mA		1.92 mA	
Frequency	50...60 Hz		50...60 Hz	
Operating temperature range	-25...+85°C		-25...+85°C	
Isolation L/L	1.45 kVdc / 60 s [2]		1.45 kVdc / 60 s [2]	
Isolation L/PE	2.25 kVdc / 60 s [2]		2.25 kVdc / 60 s [2]	
Overvoltage category / Pollution degree	—		—	
Protection degree	IP 00		IP 00	
Connection terminal IN/OUT	flat plug (10 A) and screw (20 A)		flat plug (10 A) and screw (20 A)	
Housing material	metallic		metallic	
Dimension	50x85x44mm		50.3x85x44mm	
Approximate weight	—		—	
Mounting information	screw fixing, on metal panel		screw fixing, on metal panel	
<b>APPROVALS</b>				
<b>Common mode (L/PE) attenuation (dB)</b>				
0.15 MHz	10		10	
0.5 MHz	20		15	
1 MHz	20		20	
5 MHz	20		35	
10 MHz	30		40	
30 MHz	25		25	
<b>Differential mode (L/PE) attenuation (dB)</b>				
0.15 MHz	10		10	
0.5 MHz	20		15	
1 MHz	25		20	
5 MHz	25		20	
10 MHz	30		25	
30 MHz	30		20	
<b>ACCESSORIES</b>				
Marking tag	—		—	

- Models from 36 to 100 A
- Elevated attenuation from 150 kHz to 30 MHz
- Elevated attenuation even on long cables



**NOTE**

(1) Produced on demand, contact our sales office for availability  
 (2) Isolation test need to be made in DC voltage, according to EN 60950, cause by the internal filter capacitors.



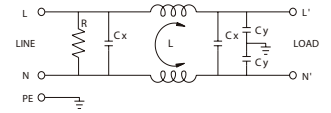
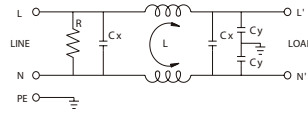
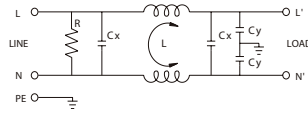
CODE TYPE	XF36TYT8	XF50TYT8	XF100TYT8
<b>GENERAL TECHNICAL DATA</b>	<b>F36TYT8 (1)</b>	<b>F50TYT8 (1)</b>	<b>F100TYT8 (1)</b>
Rated voltage	440 Vac ± 10%	440 Vac ± 10%	440 Vac ± 10%
Rated current	36 A	50 A	100 A
Leakage current	3 mA	3 mA	1.3 mA
Frequency	50...60 Hz	50...60 Hz	50...60 Hz
Operating temperature range	-25...+85°C	-25...+85°C	-25...+85°C
Isolation L/L	1.45 kVdc / 60 s [2]	1.45 kVdc / 60 s [2]	1.45 kVdc / 60 s [2]
Isolation L/PE	2.25 kVdc / 60 s [2]	2.25 kVdc / 60 s [2]	2.25 kVdc / 60 s [2]
Overvoltage category / Pollution degree	—	—	—
Protection degree	IP 20	IP 20	IP 20
Connection terminal IN/OUT	fixed screw terminal blocks	fixed screw terminal blocks	fixed screw terminal blocks
Housing material	metallic	metallic	metallic
Dimension	107x191.5x82 mm	124x194x104 mm	162x252x132 mm
Approximate weight	—	—	—
Mounting information	screw fixing, on metal panel	screw fixing, on metal panel	screw fixing, on metal panel
<b>APPROVALS</b>			
<b>Common mode (L/PE) attenuation (dB)</b>			
0.15 MHz	25	25	10
0.5 MHz	50	45	20
1 MHz	50	45	25
5 MHz	50	40	30
10 MHz	40	40	30
30 MHz	25	25	20
<b>Differential mode (L/PE) attenuation (dB)</b>			
0.15 MHz	30	30	30
0.5 MHz	50	50	40
1 MHz	55	50	40
5 MHz	50	40	35
10 MHz	40	40	35
30 MHz	30	30	25
<b>ACCESSORIES</b>			
Marking tag	—	—	—

- Models from 3 to 30 A
- Elevated attenuation from 150 kHz to 30 MHz
- Elevated attenuation even on long cables
- Compact dimension



**NOTE**

(1) Produced on demand, contact our sales office for availability  
 (2) Isolation test need to be made in DC voltage, according to EN 60950, cause by the internal filter capacitors.



CODE TYPE	XF03DKBG5B	XF06DKBG5B	XF12DKBG5B
<b>GENERAL TECHNICAL DATA</b>	<b>F03DKBG5B (1)</b>	<b>F06DKBG5B (1)</b>	<b>F12DKBG5B</b>
<b>Rated voltage</b>	115-250 Vac ± 10%	115-250 Vac ± 10%	115-250 Vac ± 10%
<b>Rated current</b>	3 A	6 A	12 A
<b>Leakage current</b>	0.40 mA (115 Vac) / 0.80 mA (250 Vac)	0.40 mA (115 Vac) / 0.80 mA (250 Vac)	0.40 mA (115 Vac) / 0.80 mA (250 Vac)
<b>Frequency</b>	50...60 Hz	50...60 Hz	50...60 Hz
<b>Operating temperature range</b>	-25...+100°C	-25...+100°C	-25...+100°C
<b>Isolation L/L</b>	1.45 kVdc / 60 s [2]	1.45 kVdc / 60 s [2]	1.45 kVdc / 60 s [2]
<b>Isolation L/PE</b>	2.25 kVdc / 60 s [2]	2.25 kVdc / 60 s [2]	2.25 kVdc / 60 s [2]
<b>Overvoltage category / Pollution degree</b>	—	—	—
<b>Protection degree</b>	IP 00	IP 00	IP 00
<b>Connection terminal IN/OUT</b>	flat plug (from 3 to 20 A) / self-blocking nut (30 A)	flat plug (from 3 to 20 A) / self-blocking nut (30 A)	flat plug (from 3 to 20 A) / self-blocking nut (30 A)
<b>Housing material</b>	metallic	metallic	metallic
<b>Dimension</b>	64.5x34x30 mm	64.5x34x30 mm	64.5x34x30 mm
<b>Approximate weight</b>	—	—	—
<b>Mounting information</b>	screw fixing, on metal panel	screw fixing, on metal panel	screw fixing, on metal panel
<b>APPROVALS</b>			
<b>Common mode (L/PE) attenuation (dB)</b>			
0.15 MHz	20	15	10
0.5 MHz	30	20	20
1 MHz	35	25	22
5 MHz	45	40	35
10 MHz	50	45	45
30 MHz	45	45	40
<b>Differential mode (L/PE) attenuation (dB)</b>			
0.15 MHz	7	10	10
0.5 MHz	35	20	20
1 MHz	50	45	40
5 MHz	45	45	45
10 MHz	45	50	45
30 MHz	45	45	45
<b>ACCESSORIES</b>			
<b>Marking tag</b>	—	—	—

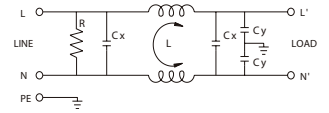
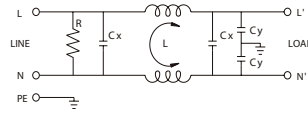
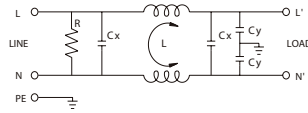


- Models from 3 to 30 A
- Elevated attenuation from 150 kHz to 30 MHz
- Elevated attenuation even on long cables
- Compact dimension



**NOTE**

(1) Produced on demand, contact our sales office for availability  
 (2) Isolation test need to be made in DC voltage, according to EN 60950, cause by the internal filter capacitors.



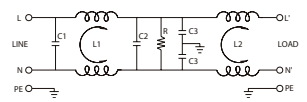
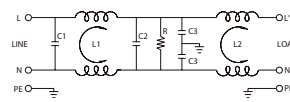
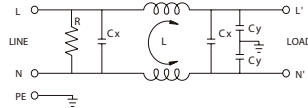
CODE TYPE	XF16DKCG5B	XF20DKCG5B	XF30DKCS5B
<b>GENERAL TECHNICAL DATA</b>	<b>F16DKCG5B</b>	<b>F20DKCG5B (1)</b>	<b>F30DKCS5B</b>
Rated voltage	115-250 Vac ± 10%	115-250 Vac ± 10%	115-250 Vac ± 10%
Rated current	16 A	20 A	30 A
Leakage current	0.40 mA (115 Vac) / 0.80 mA (250 Vac)	0.40 mA (115 Vac) / 0.80 mA (250 Vac)	1 mA (115Vac) / 2mA (250Vac)
Frequency	50...60 Hz	50...60 Hz	50...60 Hz
Operating temperature range	-25...+100°C	-25...+100°C	-25...+100°C
Isolation L/L	1.45 kVdc / 60 s [2]	1.45 kVdc / 60 s [2]	1.45 kVdc / 60 s [2]
Isolation L/PE	2.25 kVdc / 60 s [2]	2.25 kVdc / 60 s [2]	2.25 kVdc / 60 s [2]
Overvoltage category / Pollution degree	—	—	—
Protection degree	IP 00	IP 00	IP 00
Connection terminal IN/OUT	flat plug (from 3 to 20 A) / self-blocking nut (30 A)	flat plug (from 3 to 20 A) / self-blocking nut (30 A)	flat plug (from 3 to 20 A) / self-blocking nut (30 A)
Housing material	metallic	metallic	metallic
Dimension	45.5x71.5x30 mm	52x84.8x30 mm	56.5x114x46.4 mm
Approximate weight	—	—	—
Mounting information	screw fixing, on metal panel	screw fixing, on metal panel	screw fixing, on metal panel
<b>APPROVALS</b>			
<b>Common mode (L/PE) attenuation (dB)</b>			
0.15 MHz	10	10	10
0.5 MHz	18	18	25
1 MHz	20	20	30
5 MHz	35	30	45
10 MHz	45	35	50
30 MHz	30	35	35
<b>Differential mode (L/PE) attenuation (dB)</b>			
0.15 MHz	10	10	12
0.5 MHz	18	12	40
1 MHz	40	35	50
5 MHz	40	35	50
10 MHz	40	40	50
30 MHz	35	40	45
<b>ACCESSORIES</b>			
Marking tag	—	—	—

- Models from 3 to 30 A
- Elevated attenuation from 150 kHz to 30 MHz
- Elevated attenuation even on long cables
- Compact dimension



NOTE

- (1) Produced on demand, contact our sales office for availability  
 (2) Isolation test need to be made in DC voltage, according to EN 60950, cause by the internal filter capacitors.



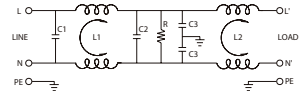
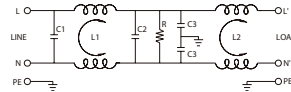
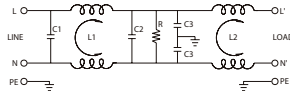
CODE TYPE	XF03DPCG5C	XF06DPCG5C	XF12DPCG5C
<b>GENERAL TECHNICAL DATA</b>	<b>F03DPCG5C (1)</b>	<b>F06DPCG5C (1)</b>	<b>F12DPCG5C</b>
Rated voltage	115-250 Vac ± 10%	115-250 Vac ± 10%	115-250 Vac ± 10%
Rated current	3 A	6 A	12 A
Leakage current	0.40 mA (115 Vac) / 0.80 mA (250 Vac)	0.40 mA (115 Vac) / 0.80 mA (250 Vac)	0.40 mA (115 Vac) / 0.80 mA (250 Vac)
Frequency	50...60 Hz	50...60 Hz	50...60 Hz
Operating temperature range	-25...+100°C	-25...+100°C	-25...+100°C
Isolation L/L	1.45 kVdc / 60 s [2]	1.45 kVdc / 60 s [2]	1.45 kVdc / 60 s [2]
Isolation L/PE	2.25 kVdc / 60 s [2]	2.25 kVdc / 60 s [2]	2.25 kVdc / 60 s [2]
Overvoltage category / Pollution degree	—	—	—
Protection degree	IP 00	IP 00	IP 00
Connection terminal IN/OUT	flat plug (from 3 to 20 A) / self-blocking nut (30 A)	flat plug (from 3 to 20 A) / self-blocking nut (30 A)	flat plug (from 3 to 20 A) / self-blocking nut (30 A)
Housing material	metallic	metallic	metallic
Dimension	45.5x71.5x30 mm	45.5x71.5x30 mm	52x84.8x29.2mm
Approximate weight	—	—	—
Mounting information	screw fixing, on metal panel	screw fixing, on metal panel	screw fixing, on metal panel
<b>APPROVALS</b>			
<b>Common mode (L/PE) attenuation (dB)</b>			
0.15 MHz	45	30	15
0.5 MHz	60	50	25
1 MHz	60	60	35
5 MHz	55	55	55
10 MHz	45	50	55
30 MHz	45	35	35
<b>Differential mode (L/PE) attenuation (dB)</b>			
0.15 MHz	12	8	12
0.5 MHz	45	45	40
1 MHz	45	45	40
5 MHz	45	45	35
10 MHz	45	45	35
30 MHz	45	45	40
<b>ACCESSORIES</b>			
Marking tag	—	—	—

- Models from 3 to 30 A
- Elevated attenuation from 150 kHz to 30 MHz
- Elevated attenuation even on long cables
- Compact dimension



NOTE

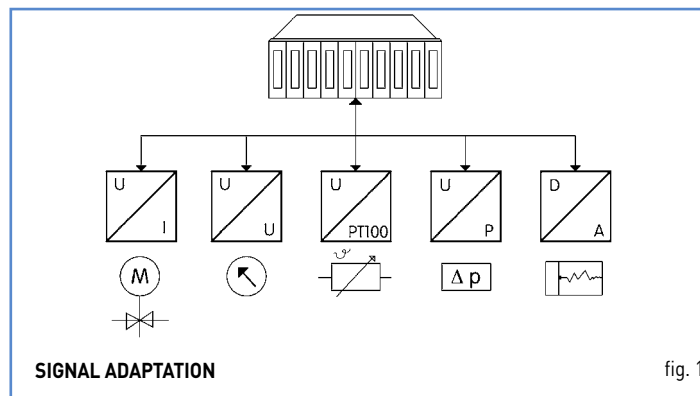
- (1) Produced on demand, contact our sales office for availability  
 (2) Isolation test need to be made in DC voltage, according to EN 60950, cause by the internal filter capacitors.



CODE TYPE	XF16DPCG5C	XF20DPCG5C	XF30DPG5C
<b>GENERAL TECHNICAL DATA</b>			
Rated voltage	115-250 Vac ± 10%	115-250 Vac ± 10%	115-250 Vac ± 10%
Rated current	16 A	20 A	30 A
Leakage current	0.40 mA (115 Vac) / 0.80 mA (250 Vac)	0.40 mA (115 Vac) / 0.80 mA (250 Vac)	1 mA (115 Vac) / 2mA (250 Vac)
Frequency	50...60 Hz	50...60 Hz	50...60 Hz
Operating temperature range	-25...+100°C	-25...+100°C	-25...+100°C
Isolation L/L	1.45 kVdc / 60 s [4]	1.45 kVdc / 60 s [4]	1.45 kVdc / 60 s [4]
Isolation L/PE	2.25 kVdc / 60 s [4]	2.25 kVdc / 60 s [4]	2.25 kVdc / 60 s [4]
Overvoltage category / Pollution degree	—	—	—
Protection degree	IP 00	IP 00	IP 00
Connection terminal IN/OUT	flat plug (from 3 to 20 A) / self-blocking nut (30 A)	flat plug (from 3 to 20 A) / self-blocking nut (30 A)	flat plug (from 3 to 20 A) / self-blocking nut (30 A)
Housing material	metallic	metallic	metallic
Dimension	52x84.8x39.2 mm	56.5x114.0x46.4 mm	86x120x58 mm
Approximate weight	—	—	—
Mounting information	screw fixing, on metal panel	screw fixing, on metal panel	screw fixing, on metal panel
<b>APPROVALS</b>			
<b>Common mode (L/PE) attenuation (dB)</b>			
0.15 MHz	20	15	10
0.5 MHz	35	40	30
1 MHz	45	45	35
5 MHz	60	50	55
10 MHz	50	50	45
30 MHz	35	40	30
<b>Differential mode (L/PE) attenuation (dB)</b>			
0.15 MHz	12	12	18
0.5 MHz	40	45	45
1 MHz	40	45	50
5 MHz	45	40	40
10 MHz	45	35	40
30 MHz	50	50	40
<b>ACCESSORIES</b>			
Marking tag	—	—	—

## Applications of analogue converters and galvanic separation

They convert electrical signals generated by sensors which take physical measurements such as temperature (thermocouples and PT100 resistance thermometers), frequency (proximity, contacts, photocells), current (TA, Hall sensors), resistance (potentiometers), voltage, pressure, level, etc. into standardised electrical signals, adapting them to PLC, DCS and industrial PC (control) outputs, or they convert a given analogue signal into a different one, adapting it to control inputs/outputs or allowing for long-distance signal transmission without interference by means of galvanic separation (fig. 1).



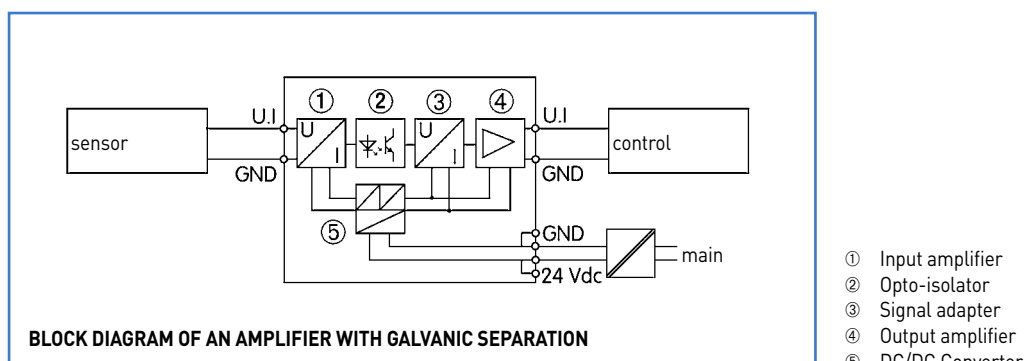
### Adaptation between sensor output signal and control input signal

physical measurement taken	sensor output	converter input	converter output
Temperature	Normally one of the following signals indicated in the next column	0 – 60 mV ±60 mV	0 – 5 V ±5 V
Frequency		0 – 100 mV ±100 mV	0 – 10 V ±10 V
Current		0 – 500 mV ±500 mV	0 – 20 mA ±20 mA
Resistance		0 – 1 V ±1 V	4 – 20 mA
Voltage		0 – 5 V ±5 V	
Pressure		0 – 10 V ±10 V	
Level measurement		0 – 5 mA ±5 mA	
		0 – 10 mA ±10 mA	
		0 – 20 mA ±20 mA	
		0 – 20 mA	

### Long-distance signal transmission

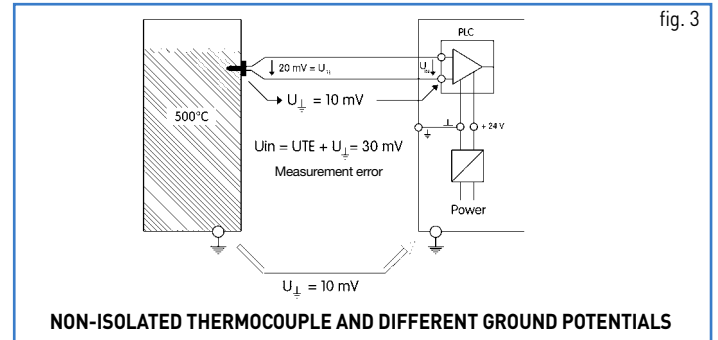
Voltage signals can reach a max. distance of 10-20 m, beyond which they lose reliability and become highly sensitive to induced and ground-derived interference, therefore in order to transmit to distances beyond 20 m a voltage signal must be converted into a current signal and galvanically separated (fig. 2).

Current signals can surpass a transmission distance of 300 m and are less sensitive to induced interference. The long-distance transmission of a current signal requires galvanic separation.

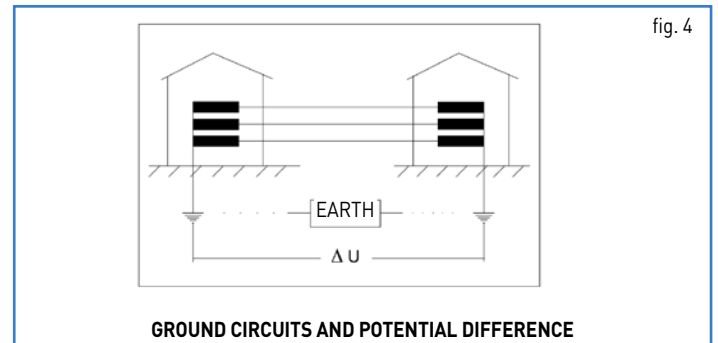


### Galvanic signal separation (signal isolation):

- isolates and electrically separates the sensor circuit from the control circuit and from the power supply circuit; each circuit therefore operates in relation to its own zero potential which, being isolated from other circuits, cannot be altered by ever-present potential differences between different ground references (fig.3)

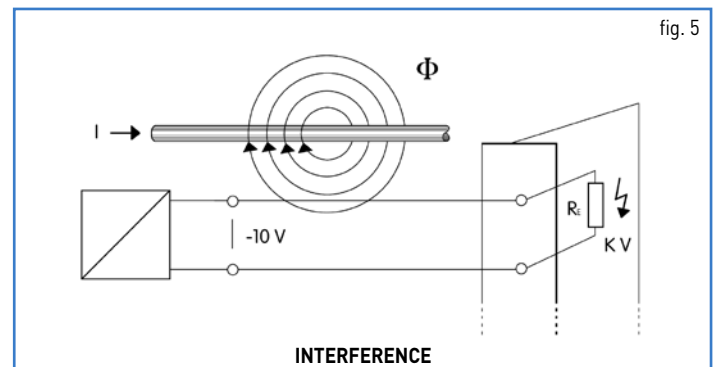


- isolates and separates different ground potentials between power supply, control and sensors/actuators
- allows for signal transmission without errors or interference and with greater reliability
- the higher the isolation (in kV), the greater the security of the transmission in the presence of ground potentials, electromagnetic or temporary interference (lightning, discharge, etc.). (fig 4)



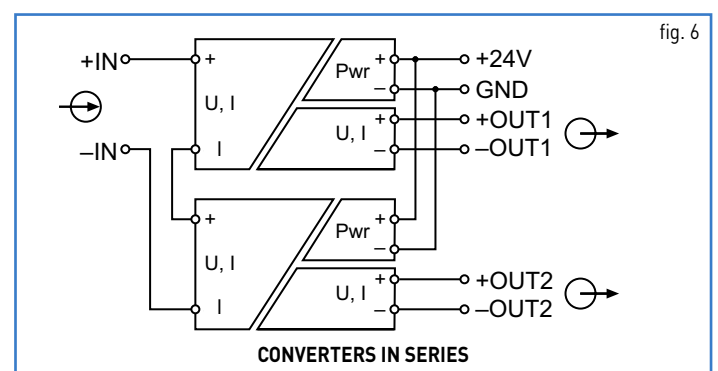
### Galvanic separation is necessary when:

- the distance between control and sensor/actuator is greater than 20 m
- ground or mass references are different
- ground potentials are high, or may become high in case of discharges or currents leaked to ground
- electromagnetic interference is present
- signal cables are wired in ducts with power cables (fig. 5)

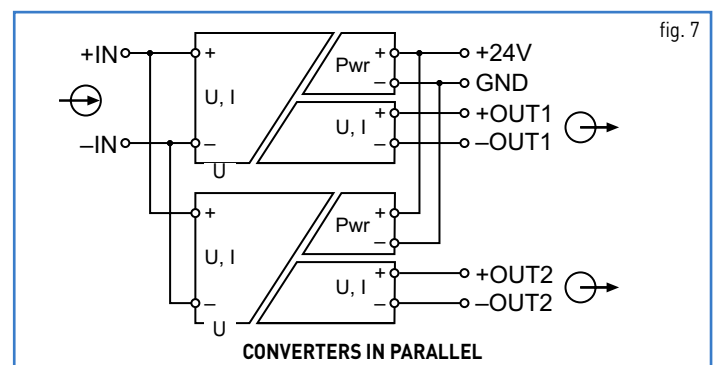


### Connection of analogue converters in series and in parallel

- To obtain signal redundancy or to simply duplicate it, multiple converter inputs can be connected to a single sensor.
- In case of current signals, the converter input will be connected in series (fig. 6)



- In case of voltage signals, the converter input will be connected in parallel (fig. 7)



# CONVERTERS - QUICK SELECTION TABLE



INPUT RANGE	OUTPUT RANGE	POWER SUPPLY VOLTAGE	INSULATION TYPE	PARAMETRIZATION	CODE	TYPE	PAGE
0...60 / 0...100 / 0...500 mV ±60 / ±100 / ±500 mV 0...1 / 0...2 / 0...5 / 0...10 V ±1 / ±2 / ±5 / ±10 V 0...5 / 0...10 / 0...20 / 4...20 mA ±5 / ±10 / ±20 mA	0...5 / 0...10 / ±5 / ±10 V 0...20 / 4...20 / ±20 mA	24 Vdc	3-way	DIP switch	XCAPI03	CAPI03	86
0...60 / 0...100 / 0...300 / 0...500 mV 0...1 / 0...10 / 0...20 / 2...20 V 0...5 / 0...10 / 0...20 / 4...20 / ±5 / ±20 mA	"0...10 V 0...20 / 4...20 mA"	24 Vac/dc	3-way	DIP switch	X756516	CWUAA 6-0516	87
0...60 / 0...100 / 0...300 / 0...500 mV 0...1/0...2/0...5/0...10 / 0...20 / 2...10 V 0...5 / 0...10 / 0...20 / 4...20 / ±5 / ±20 mA	0...10 V / 0...20 mA / 4...20 mA	24 Vac/dc	3-way	DIP switch	XCONAA516P	CON-AA-516P	
0...60 / 0...100 / 0...300 / 0...500 mV 0...1/0...2/0...5/0...10 / 0...20 / 2...10 V 0...5 / 0...10 / 0...20 / 4...20 / ±5 / ±20 mA	0...10 V / 0...20 mA / 4...20 mA	24-240 Vac/dc	3-way	DIP switch	XCONAA517P	CON-AA-517P	-
0...10 V 0...20 / 4...20 mA	0...10 V 0...20 / 4...20 mA	24 Vac/dc	3-way	DIP switch	X756539	CWNAA-7-0539	88
0-10V / 0-20mA / 4-20mA	0-10V / 0-20mA / 4-20mA	24 Vac/dc	3-way	DIP switch	XCONAA539P	CON-AA-539P	-
0...10 V	0...10 V	24 Vac/dc	3-way	—	X756530	CWAA 7-0530	89
0...10 V	0...20 mA	24 Vac/dc	3-way	—	X756531	CWAA 7-0531	89
0...10 V	4...20 mA	24 Vac/dc	3-way	—	X756532	CWAA 7-0532	89
0...20 mA	0...10 V	24 Vac/dc	3-way	—	X756533	CWAA 7-0533	90
0...20 mA	0...20 mA	24 Vac/dc	3-way	—	X756534	CWAA 7-0534	90
0...20 mA	4...20 mA	24 Vac/dc	3-way	—	X756535	CWAA 7-0535	90
4...20 mA	0...10 V	24 Vac/dc	3-way	—	X756536	CWAA 7-0536	91
4...20 mA	0...20 mA	24 Vac/dc	3-way	—	X756537	CWAA 7-0537	91
4...20 mA	4...20 mA	24 Vac/dc	3-way	—	X756538	CWAA 7-0538	91
0...10V	0...10V	24 Vac/dc	3-way	—	XCONAA530P	CON-AA-530P	-
0...10V	0...20mA	24 Vac/dc	3-way	—	XCONAA531P	CON-AA-531P	-
0...10V	4...20 mA	24 Vac/dc	3-way	—	XCONAA532P	CON-AA-532P	-
0...20 mA	0...10V	24 Vac/dc	3-way	—	XCONAA533P	CON-AA-533P	-
0...20 mA	0...20mA	24 Vac/dc	3-way	—	XCONAA534P	CON-AA-534P	-
0...20 mA	4...20 mA	24 Vac/dc	3-way	—	XCONAA535P	CON-AA-535P	-
4...20 mA	0...10V	24 Vac/dc	3-way	—	XCONAA537P	CON-AA-537P	-
4...20 mA	0...20mA	24 Vac/dc	3-way	—	XCONAA536P	CON-AA-536P	-
4...20 mA	4...20 mA	24 Vac/dc	3-way	—	XCONAA538P	CON-AA-538P	-

# CONVERTERS - QUICK SELECTION TABLE



INPUT RANGE	OUTPUT RANGE	POWER SUPPLY VOLTAGE	INSULATION TYPE	PARAMETRIZATION	CODE	TYPE	PAGE
0...20 mA, 4...20 mA	0...20 / 4...20 mA, (max 21 mA)	—	2-way	—	X756526	CWPAA 7-0526	92
4...20 mA	4...20 mA	—	2-way	—	XCONPC528P	CON-PC-528P	-
0...10 V / 0...20 mA / 4...20 mA	0...10 V/0...20 mA/0...20 mA	24 Vdc	4-way	DIP switch	X756321	LCON AASP	93
-200...+2400°C, based on sensor (2)	0...10 V/0...20 mA/0...20 mA	24 Vdc	3-way	DIP switch, FDT/DTM software	X756340	LCONTAD	94
-50...+50°C (-58...+122°F) -50...+100°C (-58...+212°F) -50...+150°C (-58...+302°F) 0...+100°C (+32...+212°F) 0...+150°C (+32...+302°F) 0...+200°C (+32...+392°F) 0...+300°C (+32...+572°F) 0...+400°C (+32...+752°F)	0...10 V 0...20 / 4...20 mA	24 Vac/dc	3-way	DIP switch	X756816	CWPT 6-0816	95
-50 °C +50 °C / -50 °C +100 °C / -50 °C +150 °C / 0 °C +100 °C / 0 °C +150 °C / 0 °C +200 °C / 0 °C +300 °C / 0 °C +400 °C	0...10 V / 0...20mA / 4...20 mA	24-240 Vac/dc	3-way	DIP switch	XCONTA817P	CON-TA-817P	-
-50...+200°C (-58...+392°F) -50...+350°C (-58...+662°F) 0...+200°C (+32...+392°F) 0...+400°C (+32...+752°F) 0...+600°C (+32...+1112°F) 0...+800°C (+32...+1472°F) 0...+1000°C (+32...+1832°F) 0...+1200°C (+32...+2192°F)	0...10 V 0...20 / 4...20 mA	24 Vac/dc	3-way	DIP switch	X756844	CWTH 6-0844	96
-50...+200 °C / -50...+350 °C / 0...+200 °C / 0...+400 °C / 0...+600 °C / 0...+800 °C / 0...+1000 °C / 0...+1200 °C	0-10 V, 0-20 mA, 4-20 mA	24 Vac/dc	3-way	DIP switch	XCONTA839P	CON-TA-839P	-
0...1 A AC/DC	0...10 V / 0...20 mA / 4...20 mA	24 Vdc	3-way	DIP switch	X756540	WAA 7-0540	97
0...5 A AC/DC	0...10 V / 0...20 mA / 4...20 mA	24 Vdc	3-way	DIP switch	X756541	WAA 7-0541	97
0...10 A AC/DC	0...10 V / 0...20 mA / 4...20 mA	24 Vdc	3-way	DIP switch	X756542	WAA 7-0542	97
0...28.8 kHz (AC/DC 0.8...30 Vpp)	0...10 V, (max. 10.6 V) 0...20 / 4...20 mA, (max 21 mA)	24 Vac/dc	3-way	DIP switch	X756524	CWNFA 6-0524	98

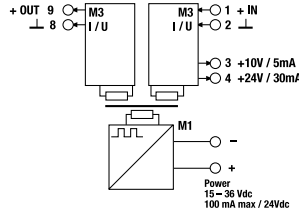
# ANALOG SIGNAL CONVERTERS PROGRAMMABLE GALVANIC ISOLATOR



- Input: 19 selectable ranges
- Output: 7 selectable ranges
- Insulation: 3.0 kVac, 3-way isolation
- Auxiliary supply for loop powered sensors
- Auxiliary supply for potentiometer

## NOTE

Factory setting: 0...10 V Input / 0...10 V output



TAB.1 - INPUT SELECTION TABLE

INPUT RANGE		SW1 (INPUT)							
UNIPOLAR	BIPOLAR	1	2	3	4	5	6	7	8
0 - 60 mV	± 60 mV								
0 - 100 mV	± 100 mV		•						
0 - 500 mV	± 500 mV			•					
0 - 1 V	± 1 V				•				
0 - 2 V	± 2 V					•			
0 - 5 V	± 5 V			•	•	•			
0 - 10 V	± 10 V								•
0 - 5 mA	± 5 mA	•		•					
0 - 10 mA	± 10 mA	•			•				
0 - 20 mA	± 20 mA	•						•	
4 - 20 mA	—	•					•		•

TAB.2 - OUTPUT SELECTION TABLE

OUTPUT RANGE	INPUT TYPE	SW2 (OUTPUT)								SW3
		1	2	3	4	5	6	7	8	
0 - 5 V	UNIP.	X		•					•	U
	BIP.	X	•						•	U
± 5 V	UNIP.	X			•				•	U
	BIP.	X		•					•	U
0 - 10 V	UNIP.	X			•					U
	BIP.	X	•						•	U
± 10 V	UNIP.	X			•					U
	BIP.	X		•						U
0 - 20 mA	UNIP.	X			•			X		I
	BIP.	X	•					X	•	I
± 20 mA	UNIP.	X			•			X		I
	BIP.	X		•				X		I
4 - 20 mA	UNIP.	X				•	•	X		I
	BIP.	X	•			•	•	X	•	I

• = ON  
= OFF  
X = ANY

CODE TYPE	CAPIPO3	XCAIPO3
<b>INPUT TECHNICAL DATA</b>		
Signal type IN	analogue	
Input range IN	19 programmable ranges (see tab. 1)	
Maximum voltage current signal IN	15 V / 30 A	
Input impedance IN	1 MΩ (voltage input) / 50 Ω (current input)	
Parametrization IN	DIP switch	
<b>OUTPUT TECHNICAL DATA</b>		
Signal type OUT	analogue	
Output range OUT	7 programmable steps (see tab. 2)	
Maximum output signal OUT	12 V / 25 mA	
Load impedance OUT	≥ 10 kΩ (voltage output) / ≤ 500 Ω (current output)	
Ripple OUT	—	
Status indication OUT	LED	
Parametrization OUT	DIP switch	
<b>GENERAL TECHNICAL DATA</b>		
Power supply voltage	24 Vdc (15...36 Vdc)	
Current consumption	100 mA (24 Vdc)	
Accuracy	0.1% FSR (23°C)	
Linearity error	< 0.1% FS	
Temperature coefficient	—	
Setting time	—	
Transmission frequency	400Hz...1kHz	
Resolution	—	
Rise time	—	
Operating temperature range	-10...+65°C	
Insulation	3.0 kVac / 60 s	
Insulation type	3-way (IN / OUT1 / power)	
Standard approvals	IEC 664-1, DIN VDE0110.1	
EMC Standards	EN 50081-2, EN 50082-2	
Overvoltage category / Pollution degree	II / 2	
Protection degree	IP 20	
Connection terminal IN / OUT	2.5 mm <sup>2</sup> / 2.5 mm <sup>2</sup> (screw)	
Housing material	UL94V-0 plastic material	
Dimensions	22.5x108x119 mm	
Approximate weight	150 g	
Mounting informations	vertical on a rail, distance 5 mm from adjacent components	
<b>APPROVALS</b>	<b>CE</b>	
<b>ACCESSORIES</b>		
Mounting rail (IEC60715/TH35-7.5)	PR/3/AC, PR/3/AC/ZB, PR/3/AS, PR/3/AS/ZB	
Mounting rail (IEC60715/TH35-15)	—	
Marking tag	—	
Plugin jumper red	—	
Plugin jumper white	—	
Plugin jumper blue	—	
Programming kit	—	

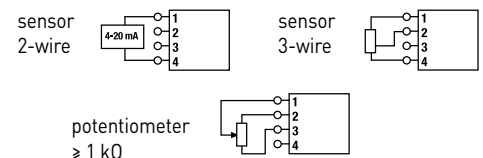
## INPUT STAGE

The module can manage single-pole and two-pole inputs selecting between steps (see TAB. 1):

- 0...60 mV ± 60 mV
- 0...100 mV ± 100 mV
- 0...500 mV ± 500 mV
- 0...1 V ± 1 V
- 0...5 V ± 5 V
- 0...10 V ± 10 V
- 0...5 mA ± 5 mA
- 0...10 mA ± 10 mA
- 0...20 mA ± 20 mA
- 4...20 mA

The input stage provides two power supplies (10 V and 24 V) for remote sensors. It is possible to run potentiometers and directly power 4...20 mA two-wire loop sensors.

Connection examples:



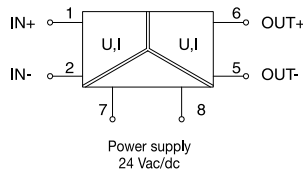
## OUTPUT STAGE

The module provides single-pole and two-pole output signals with the following steps (see Tab. 2):

- 0...5 V ± 5 V
- 0...10 V ± 10 V
- 0...20 mA ± 20 mA
- 4...20 mA



- Input: 14 selectable ranges
- Output: 3 selectable ranges
- Insulation: 1.5 kVac, 3-way isolation



## APPLICATIONS

Converts and galvanically isolates the main standardised analogue signals; input programmable with 14 signal ranges and output with the three most used standardised signals. Configuration is obtained by setting the DIP-switches on the side.

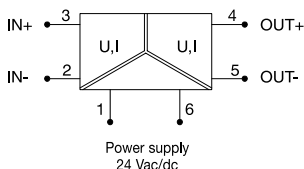
This module offers multiple in/out signal combinations, allowing for significant savings in terms of costs, time and storage space and in the management of spare parts.

3-way galvanic separation ensures total isolation between input, output and power supply which, together with automatic signal calibration, ensures excellent precision without the need for calibration.

Where multiple output channels are needed for a single signal source, multiple converters may be used connecting the signal inputs in parallel, in the case of voltage signals, or in series, in the case of current signals.



CODE TYPE	CWUAA 6-0516	X756516
<b>INPUT TECHNICAL DATA</b>		
Signal type IN	analogue	
Input range IN	14 programmable ranges (see tab. 1)	
Maximum voltage current signal IN	—	
Input impedance IN	330 kΩ (voltage input) / 100 Ω (current input)	
Parametrization IN	DIP switch	
<b>OUTPUT TECHNICAL DATA</b>		
Signal type OUT	analogue	
Output range OUT	0...10 V / 0...20 mA / 4...20 mA	
Maximum output signal OUT	21 mA (voltage input)	
Load impedance OUT	>1 kΩ (voltage output) / <400 kΩ (current output)	
Ripple OUT	<5 mV	
Status indication OUT	LED	
Parametrization OUT	DIP switch	
<b>GENERAL TECHNICAL DATA</b>		
Power supply voltage	24 Vac/dc (16.8...30 Vdc / 19.2...28.8 Vac)	
Current consumption	35 mA	
Accuracy	0.1% FSR (23°C)	
Linearity error	0.02%	
Temperature coefficient	<150 ppm / K FSR	
Setting time	—	
Transmission frequency	30 Hz	
Resolution	—	
Rise time	10 ms	
Operating temperature range	-25...+60°C	
Insulation	1.5 kVac / 60 s	
Insulation type	3-way (IN / OUT1 / power)	
Standard approvals	—	
EMC Standards	—	
Overvoltage category / Pollution degree	II / 2	
Protection degree	IP 20	
Connection terminal IN / OUT	2.5 mm <sup>2</sup> / 2.5 mm <sup>2</sup> (screw)	
Housing material	UL94V-0 plastic material	
Dimensions	17.5x79x84 mm	
Approximate weight	70 g	
Mounting informations	on a rail, side by side	
APPROVALS		
<b>ACCESSORIES</b>		
Mounting rail (IEC60715/TH35-7.5)	PR/3/AC, PR/3/AC/ZB, PR/3/AS, PR/3/AS/ZB	
Mounting rail (IEC60715/TH35-15)	—	
Marking tag	TAP207A_	
Plugin jumper red	—	
Plugin jumper white	—	
Plugin jumper blue	—	
Programming kit	—	

- Input: 3 selectable ranges
- Output: 3 selectable ranges
- Insulation: 1.5 kVac, 3-way isolation

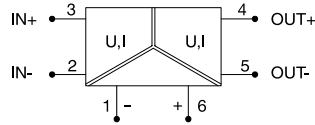


## APPLICATIONS

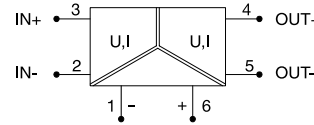
Convert and galvanically isolate the main standardised analogue signals; input programmable with 3 signal ranges and output with the 3 most used standard signals. Configuration is obtained by setting the DIP-switches on the side. Programmable in the most used signal combinations, these cards allow for a significant cost saving over the more complex 14 range version. Where multiple output channels are needed for a single signal source, multiple converters may be used connecting the signal inputs in parallel (with voltage signals) or in series (with current signals).

CODE TYPE	X756539
<b>INPUT TECHNICAL DATA</b>	
Signal type IN	analogue
Input range IN	0...10 V, 0...20 / 4...20 mA
Maximum voltage current signal IN	—
Input impedance IN	330 kΩ (voltage input) / 100 Ω (current input)
Parametrization IN	DIP switch
<b>OUTPUT TECHNICAL DATA</b>	
Signal type OUT	analogue
Output range OUT	0...10 V / 0...20 mA / 4...20 mA
Maximum output signal OUT	21 mA (voltage input)
Load impedance OUT	>1 kΩ (voltage output) / <400 kΩ (current output)
Ripple OUT	<5 mV
Status indication OUT	LED
Parametrization OUT	DIP switch
<b>GENERAL TECHNICAL DATA</b>	
Power supply voltage	24 Vac/dc (16.8...30 Vdc / 19.2...28.8 Vac)
Current consumption	13 mA
Accuracy	0.1% FSR (23°C)
Linearity error	0.1%
Temperature coefficient	<150 ppm / K FSR
Setting time	—
Transmission frequency	30 Hz
Resolution	—
Rise time	10 ms
Operating temperature range	-25...+60°C
Insulation	1.5 kVac / 60 s
Insulation type	3-way (IN / OUT1 / power)
Standard approvals	—
EMC Standards	—
Overvoltage category / Pollution degree	II / 2
Protection degree	IP 20
Connection terminal IN / OUT	1.5 mm <sup>2</sup> / 1.5 mm <sup>2</sup> (screw)
Housing material	UL94V-0 plastic material
Dimensions	6.2x90x92.5 mm
Approximate weight	40 g
Mounting informations	on a rail, side by side
APPROVALS	 
<b>ACCESSORIES</b>	
Mounting rail (IEC60715/TH35-7.5)	PR/3/AC, PR/3/AC/ZB, PR/3/AS, PR/3/AS/ZB
Mounting rail (IEC60715/TH35-15)	—
Marking tag	—
Plugin jumper red	CWBK 7-0802 (code X766802)
Plugin jumper white	CWBK 7-0803 (code X766803)
Plugin jumper blue	CWBK 7-0804 (code X766804)
Programming kit	—

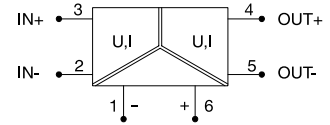
- Input: 0...10 V
- Output: 0...10 V / 0...20 mA / 4...20 mA
- Insulation: 1.5 kVac, 3-way isolation



Power supply  
24 Vac/dc



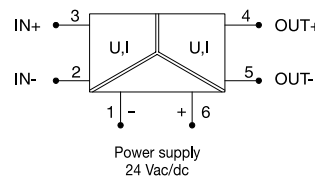
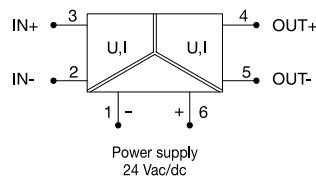
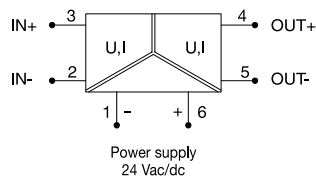
Power supply  
24 Vac/dc



Power supply  
24 Vac/dc

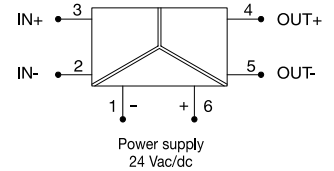
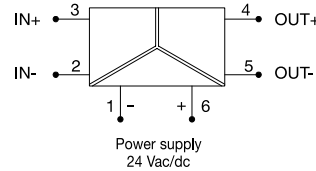
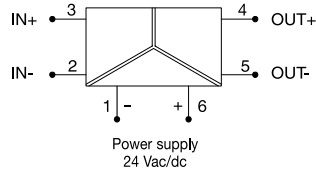
CODE TYPE	CWAA 7-0530	X756530	CWAA 7-0531	X756531	CWAA 7-0532	X756532
<b>INPUT TECHNICAL DATA</b>						
Signal type IN	analogue		analogue		analogue	
Input range IN	0...10 V		0...10 V		0...10 V	
Maximum voltage current signal IN	—		—		—	
Input impedance IN	330 kΩ		330 kΩ		330 kΩ	
Parametrization IN	—		—		—	
<b>OUTPUT TECHNICAL DATA</b>						
Signal type OUT	analogue		analogue		analogue	
Output range OUT	0...10 V		0...20 mA		4...20 mA	
Maximum output signal OUT	21 mA		—		—	
Load impedance OUT	>1 kΩ		<400 Ω		<400 Ω	
Ripple OUT	<5 mV		<5 mV		<5 mV	
Status indication OUT	LED		LED		LED	
Parametrization OUT	—		—		—	
<b>GENERAL TECHNICAL DATA</b>						
Power supply voltage	24 Vac/dc (16.8...30 Vdc / 19.2...28.8 Vac)		24 Vac/dc (16.8...30 Vdc / 19.2...28.8 Vac)		24 Vac/dc (16.8...30 Vdc / 19.2...28.8 Vac)	
Current consumption	13 mA		13 mA		13 mA	
Accuracy	0.1% FSR (23°C)		0.1% FSR (23°C)		0.1% FSR (23°C)	
Linearity error	0.1%		0.1%		0.1%	
Temperature coefficient	<150 ppm / K FSR		<150 ppm / K FSR		<150 ppm / K FSR	
Setting time	—		—		—	
Transmission frequency	30 Hz		30 Hz		30 Hz	
Resolution	—		—		—	
Rise time	10 ms		10 ms		10 ms	
Operating temperature range	-25...+60°C		-25...+60°C		-25...+60°C	
Insulation	1.5 kVac / 60 s		1.5 kVac / 60 s		1.5 kVac / 60 s	
Insulation type	3-way (IN / OUT1 / power)		3-way (IN / OUT1 / power)		3-way (IN / OUT1 / power)	
Standard approvals	—		—		—	
EMC Standards	—		—		—	
Overvoltage category / Pollution degree	II / 2		II / 2		II / 2	
Protection degree	IP 20		IP 20		IP 20	
Connection terminal IN / OUT	1.5 mm <sup>2</sup> / 1.5 mm <sup>2</sup> (screw)		1.5 mm <sup>2</sup> / 1.5 mm <sup>2</sup> (screw)		1.5 mm <sup>2</sup> / 1.5 mm <sup>2</sup> (screw)	
Housing material	UL94V-0 plastic material		UL94V-0 plastic material		UL94V-0 plastic material	
Dimensions	6.2x90x92.2 mm		6.2x90x92.2 mm		6.2x90x92.2 mm	
Approximate weight	40 g		40 g		40 g	
Mounting informations	on a rail, side by side		on a rail, side by side		on a rail, side by side	
<b>APPROVALS</b>						
<b>ACCESSORIES</b>						
Mounting rail (IEC60715/TH35-7.5)	PR/3/AC, PR/3/AC/ZB, PR/3/AS, PR/3/AS/ZB		PR/3/AC, PR/3/AC/ZB, PR/3/AS, PR/3/AS/ZB		PR/3/AC, PR/3/AC/ZB, PR/3/AS, PR/3/AS/ZB	
Mounting rail (IEC60715/TH35-15)	—		—		—	
Marking tag	—		—		—	
Plugin jumper red	CWBK 7-0802 (code X766802)		CWBK 7-0802 (code X766802)		CWBK 7-0802 (code X766802)	
Plugin jumper white	CWBK 7-0803 (code X766803)		CWBK 7-0803 (code X766803)		CWBK 7-0803 (code X766803)	
Plugin jumper blue	CWBK 7-0804 (code X766804)		CWBK 7-0804 (code X766804)		CWBK 7-0804 (code X766804)	
Programming kit	—		—		—	

- Input: 0...20 mA
- Output: 0...10 V / 0...20 mA / 4...20 mA
- Insulation: 1.5 kVac, 3-way isolation



CODE TYPE	CWAA 7-0533	X756533	CWAA 7-0534	X756534	CWAA 7-0535	X756535
<b>INPUT TECHNICAL DATA</b>						
Signal type IN	analogue		analogue		analogue	
Input range IN	0...20 mA		0...20 mA		0...20 mA	
Maximum voltage current signal IN	—		—		—	
Input impedance IN	100 Ω		100 Ω		100 Ω	
Parametrization IN	—		—		—	
<b>OUTPUT TECHNICAL DATA</b>						
Signal type OUT	analogue		analogue		analogue	
Output range OUT	0...10 V		0...20 mA		4...20 mA	
Maximum output signal OUT	21 mA		—		—	
Load impedance OUT	>1 kΩ		<400 Ω		<400 Ω	
Ripple OUT	<5 mV		<5 mV		<5 mV	
Status indication OUT	LED		LED		LED	
Parametrization OUT	—		—		—	
<b>GENERAL TECHNICAL DATA</b>						
Power supply voltage	24 Vac/dc (16.8...30 Vdc / 19.2...28.8 Vac)		24 Vac/dc (16.8...30 Vdc / 19.2...28.8 Vac)		24 Vac/dc (16.8...30 Vdc / 19.2...28.8 Vac)	
Current consumption	13 mA		13 mA		13 mA	
Accuracy	0.1% FSR (23°C)		0.1% FSR (23°C)		0.1% FSR (23°C)	
Linearity error	0.1%		0.1%		0.1%	
Temperature coefficient	<150 ppm / K FSR		<150 ppm / K FSR		<150 ppm / K FSR	
Setting time	—		—		—	
Transmission frequency	30 Hz		30 Hz		30 Hz	
Resolution	—		—		—	
Rise time	10 ms		10 ms		10 ms	
Operating temperature range	-25...+60°C		-25...+60°C		-25...+60°C	
Insulation	1.5 kVac / 60 s		1.5 kVac / 60 s		1.5 kVac / 60 s	
Insulation type	3-way (IN / OUT1 / power)		3-way (IN / OUT1 / power)		3-way (IN / OUT1 / power)	
Standard approvals	—		—		—	
EMC Standards	—		—		—	
Overvoltage category / Pollution degree	II / 2		II / 2		II / 2	
Protection degree	IP 20		IP 20		IP 20	
Connection terminal IN / OUT	1.5 mm <sup>2</sup> / 1.5 mm <sup>2</sup> (screw)		1.5 mm <sup>2</sup> / 1.5 mm <sup>2</sup> (screw)		1.5 mm <sup>2</sup> / 1.5 mm <sup>2</sup> (screw)	
Housing material	UL94V-0 plastic material		UL94V-0 plastic material		UL94V-0 plastic material	
Dimensions	6.2x90x92.2 mm		6.2x90x92.2 mm		6.2x90x92.2 mm	
Approximate weight	40 g		40 g		40 g	
Mounting informations	on a rail, side by side		on a rail, side by side		on a rail, side by side	
<b>APPROVALS</b>						
<b>ACCESSORIES</b>						
Mounting rail (IEC60715/TH35-7.5)	PR/3/AC, PR/3/AC/ZB, PR/3/AS, PR/3/AS/ZB		PR/3/AC, PR/3/AC/ZB, PR/3/AS, PR/3/AS/ZB		PR/3/AC, PR/3/AC/ZB, PR/3/AS, PR/3/AS/ZB	
Mounting rail (IEC60715/TH35-15)	—		—		—	
Marking tag	—		—		—	
Plugin jumper red	CWBK 7-0802 (code X766802)		CWBK 7-0802 (code X766802)		CWBK 7-0802 (code X766802)	
Plugin jumper white	CWBK 7-0803 (code X766803)		CWBK 7-0803 (code X766803)		CWBK 7-0803 (code X766803)	
Plugin jumper blue	CWBK 7-0804 (code X766804)		CWBK 7-0804 (code X766804)		CWBK 7-0804 (code X766804)	
Programming kit	—		—		—	

- Input: 4...20 mA
- Output: 0...10 V / 0...20 mA / 4...20 mA
- Insulation: 1.5 kVac, 3-way isolation



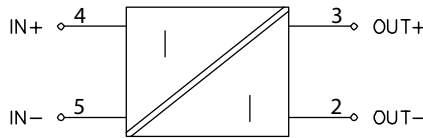
CODE TYPE	CWAA 7-0536	X756536	CWAA 7-0537	X756537	CWAA 7-0538	X756538
<b>INPUT TECHNICAL DATA</b>						
Signal type IN	analogue		analogue		analogue	
Input range IN	4...20 mA		4...20 mA		4...20 mA	
Maximum voltage current signal IN	—		—		—	
Input impedance IN	100 Ω		100 Ω		100 Ω	
Parametrization IN	—		—		—	
<b>OUTPUT TECHNICAL DATA</b>						
Signal type OUT	analogue		analogue		analogue	
Output range OUT	0...10 V		0...20 mA		4...20 mA	
Maximum output signal OUT	21 mA		—		—	
Load impedance OUT	>1 kΩ		<400 Ω		<400 Ω	
Ripple OUT	<5 mV		<5 mV		<5 mV	
Status indication OUT	LED		LED		LED	
Parametrization OUT	—		—		—	
<b>GENERAL TECHNICAL DATA</b>						
Power supply voltage	24 Vac/dc (16.8...30 Vdc / 19.2...28.8 Vac)		24 Vac/dc (16.8...30 Vdc / 19.2...28.8 Vac)		24 Vac/dc (16.8...30 Vdc / 19.2...28.8 Vac)	
Current consumption	13 mA		13 mA		13 mA	
Accuracy	0.1% FSR (23°C)		0.1% FSR (23°C)		0.1% FSR (23°C)	
Linearity error	0.1%		0.1%		0.1%	
Temperature coefficient	<150 ppm / K FSR		<150 ppm / K FSR		<150 ppm / K FSR	
Setting time	—		—		—	
Transmission frequency	30 Hz		30 Hz		30 Hz	
Resolution	—		—		—	
Rise time	10 ms		10 ms		10 ms	
Operating temperature range	-25...+60°C		-25...+60°C		-25...+60°C	
Insulation	1.5 kVac / 60 s		1.5 kVac / 60 s		1.5 kVac / 60 s	
Insulation type	3-way (IN / OUT1 / power)		3-way (IN / OUT1 / power)		3-way (IN / OUT1 / power)	
Standard approvals	—		—		—	
EMC Standards	—		—		—	
Overvoltage category / Pollution degree	II / 2		II / 2		II / 2	
Protection degree	IP 20		IP 20		IP 20	
Connection terminal IN / OUT	1.5 mm <sup>2</sup> / 1.5 mm <sup>2</sup> (screw)		1.5 mm <sup>2</sup> / 1.5 mm <sup>2</sup> (screw)		1.5 mm <sup>2</sup> / 1.5 mm <sup>2</sup> (screw)	
Housing material	UL94V-0 plastic material		UL94V-0 plastic material		UL94V-0 plastic material	
Dimensions	6.2x90x92.2 mm		6.2x90x92.2 mm		6.2x90x92.2 mm	
Approximate weight	40 g		40 g		40 g	
Mounting informations	on a rail, side by side		on a rail, side by side		on a rail, side by side	
<b>APPROVALS</b>						
<b>ACCESSORIES</b>						
Mounting rail (IEC60715/TH35-7.5)	PR/3/AC, PR/3/AC/ZB, PR/3/AS, PR/3/AS/ZB		PR/3/AC, PR/3/AC/ZB, PR/3/AS, PR/3/AS/ZB		PR/3/AC, PR/3/AC/ZB, PR/3/AS, PR/3/AS/ZB	
Mounting rail (IEC60715/TH35-15)	—		—		—	
Marking tag	—		—		—	
Plugin jumper red	CWBK 7-0802 (code X766802)		CWBK 7-0802 (code X766802)		CWBK 7-0802 (code X766802)	
Plugin jumper white	CWBK 7-0803 (code X766803)		CWBK 7-0803 (code X766803)		CWBK 7-0803 (code X766803)	
Plugin jumper blue	CWBK 7-0804 (code X766804)		CWBK 7-0804 (code X766804)		CWBK 7-0804 (code X766804)	
Programming kit	—		—		—	

- Input: 4...20 mA
- Output: 4...20 mA
- Insulation: 1.5 kVac, 2-way isolation
- Suitable for loop powered sensors



NOTE

(1) In order to ensure an output current of 20 mA, the input voltage must have a value higher than that resulting from the formula, where  $R_b$  is the resistance of the applied load (see figure 1), for greater ease we report the voltage graph minimum input according to the load variation applied at the outlet (see figure 2).



APPLICATIONS

Passive galvanic isolators are used to separate signals generated by active (i.e. powered) sensors, and are also referred to as current loop or loop powered. The load applied to them must have a resistance of below 400  $\Omega$  at 20 mA, including the resistance of the conductors. The input voltage delivered must be 2.7 V higher than the output voltage (see note 1).

When these use conditions are met, passive converters are able to reduce wiring costs for power supply cables and prevent the need for external power supplies; they are not suitable for long connection wiring since they can heavily influence the output signal level.

CODE TYPE	CWPAA 7-0526	X756526
<b>INPUT TECHNICAL DATA</b>		
Signal type IN	analogue	
Input range IN	0...20 mA, 4...20 mA	
Maximum voltage current signal IN	[20 mA x $R_b$ ] + 2.7 [1]	
Input impedance IN	1 k $\Omega$	
Parametrization IN	—	
<b>OUTPUT TECHNICAL DATA</b>		
Signal type OUT	analogue	
Output range OUT	0...20 / 4...20 mA, (max 21 mA)	
Maximum output signal OUT	21 mA	
Load impedance OUT	—	
Ripple OUT	<5 mV	
Status indication OUT	—	
Parametrization OUT	—	
<b>GENERAL TECHNICAL DATA</b>		
Power supply voltage	—	
Current consumption	—	
Accuracy	0.1% FSR (23°C)	
Linearity error	—	
Temperature coefficient	<150 ppm / K FSR	
Setting time	—	
Transmission frequency	—	
Resolution	—	
Rise time	6 ms	
Operating temperature range	-25...+60°C	
Insulation	1.5 kVac / 60 s	
Insulation type	2-way (IN / OUT)	
Standard approvals	—	
EMC Standards	—	
Overvoltage category / Pollution degree	II / 2	
Protection degree	IP 20	
Connection terminal IN / OUT	1.5 mm <sup>2</sup> / 1.5 mm <sup>2</sup> (screw)	
Housing material	UL94V-0 plastic material	
Dimensions	6.2x90x92.5 mm	
Approximate weight	35 g	
Mounting informations	on a rail, side by side	
APPROVALS		
<b>ACCESSORIES</b>		
Mounting rail (IEC60715/TH35-7.5)	PR/3/AC, PR/3/AC/ZB, PR/3/AS, PR/3/AS/ZB	
Mounting rail (IEC60715/TH35-15)	—	
Marking tag	—	
Plugin jumper red	CWBK 7-0802 (code X766802)	
Plugin jumper white	CWBK 7-0803 (code X766803)	
Plugin jumper blue	CWBK 7-0804 (code X766804)	
Programming kit	—	

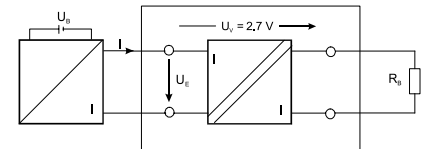


fig. 1

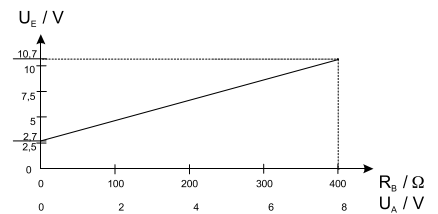
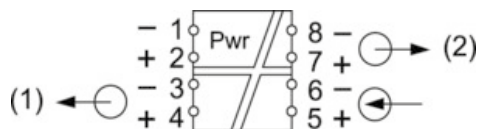


fig. 2

- Input: 3 selectable ranges
- Output: 3 selectable ranges
- Insulation: 2.5 kVac, 4-way isolation

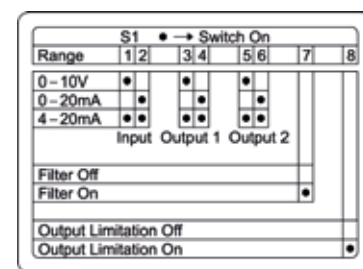
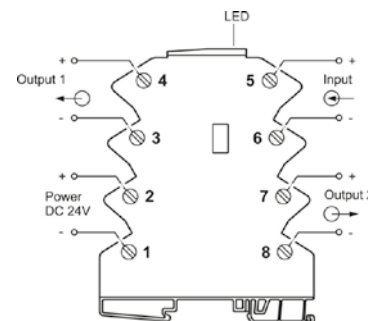


Programming kit X756894

CODE TYPE	LCON AASP	X756321
<b>INPUT TECHNICAL DATA</b>		
Signal type IN	analogue	
Input range IN	0...10 V / 0...20 mA / 4...20 mA	
Maximum voltage current signal IN	—	
Input impedance IN	500 KΩ (voltage input) / 100 Ω (current input)	
Parametrization IN	DIP switch	
<b>OUTPUT TECHNICAL DATA</b>		
Signal type OUT	double output, analogue	
Output range OUT	0...10 V / 0...20 mA / 0...20 mA	
Maximum output signal OUT	10.5 V (voltage output) / 21 mA (current output)	
Load impedance OUT	2 KΩ (voltage output) / 400 Ω (current output)	
Ripple OUT	<20 mV	
Status indication OUT	LED	
Parametrization OUT	DIP switch	
<b>GENERAL TECHNICAL DATA</b>		
Power supply voltage	24 Vdc (16.8...30 Vdc)	
Current consumption	13 mA	
Accuracy	0.1% FSR (23°C)	
Linearity error	±0.1% FSR	
Temperature coefficient	<150 ppm / K FSR	
Setting time	—	
Transmission frequency	—	
Resolution	16 bit	
Rise time	—	
Operating temperature range	-40...+70°C	
Insulation	2.5 kVac / 60 s	
Insulation type	4-way (IN / OUT1 / OUT2 / power)	
Standard approvals	EN 60947-5-1	
EMC Standards	EN 61000-6-2, EN 61000-6-4	
Overvoltage category / Pollution degree	II / 2	
Protection degree	IP 20	
Connection terminal IN / OUT	1.5 mm <sup>2</sup> / 1.5 mm <sup>2</sup> (screw)	
Housing material	UL94V-0 plastic material	
Dimensions	6.2x90x115.5 mm	
Approximate weight	60 g	
Mounting informations	on a rail, side by side	
<b>APPROVALS</b>		
<b>ACCESSORIES</b>		
Mounting rail (IEC60715/TH35-7.5)	PR/3/AC, PR/3/AC/ZB, PR/3/AS, PR/3/AS/ZB	
Mounting rail (IEC60715/TH35-15)	—	
Marking tag	—	
Plugin jumper red	CWBK 7-0802 (code X766802)	
Plugin jumper white	CWBK 7-0803 (code X766803)	
Plugin jumper blue	CWBK 7-0804 (code X766804)	
Programming kit	—	

**APPLICATIONS**

LCONAASP is a programmable 4-way isolated converter, it allows to convert, amplify and duplicate a standard analog signal. Input can be set to the standard analog signals 0 ... 20 mA, 4 ... 20 mA and 0 ... 10 V, the signal is isolated, converted and duplicated into two independent signals that can be set to 0 ... 20 mA, 4 ... 20 mA and 0 ... 10 V. The ranges can be set easily through a DIP switch



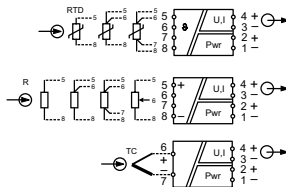
See instruction leaflet for details

- Input: PT100, PT1000, thermocouples, potentiometers
- Output: 4 selectable ranges
- Insulation: 2.5 kVac, 3-way isolation
- DIP-switch and FDT/DTM software programmable ranges



Programming kit X756894

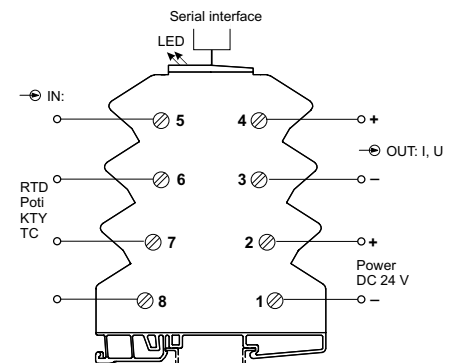
**NOTE**  
(1) Input and output signal range, can be customised using FDT/DTM software and LCONZUSB interface



CODE TYPE	LCONTAD	X756340
<b>INPUT TECHNICAL DATA</b>		
Signal type IN	PT100, PT1000, potentiometer 0...600kΩ, thermocouples (B, C, E, J, K, N, R, S, T)	
Input range IN	-200...+2400°C, based on sensor [2]	
Maximum voltage current signal IN	—	
Input impedance IN	—	
Parametrization IN	DIP switch, FDT/DTM software [1]	
<b>OUTPUT TECHNICAL DATA</b>		
Signal type OUT	analogue	
Output range OUT	0...10 V / 0...20 mA / 0...20 mA	
Maximum output signal OUT	10.5 V (voltage output) / 21 mA (current output)	
Load impedance OUT	>2 kΩ (voltage output) / <700 Ω (current output)	
Ripple OUT	—	
Status indication OUT	LED	
Parametrization OUT	DIP switch, FDT/DTM software [1]	
<b>GENERAL TECHNICAL DATA</b>		
Power supply voltage	24 Vdc (16.8...30 Vdc)	
Current consumption	18 mA	
Accuracy	0.2% FSR (for PT) / 0.4% FSR (for TC)	
Linearity error	±0.1% FSR	
Temperature coefficient	<100 ppm / K FSR	
Setting time	5...500 ms (adjustable, default 30 ms)	
Transmission frequency	—	
Resolution	16 bit	
Rise time	—	
Operating temperature range	-40...+70°C	
Insulation	2.5 kVac / 60 s	
Insulation type	3-way (IN / OUT1 / power)	
Standard approvals	—	
EMC Standards	—	
Overvoltage category / Pollution degree	II / 2	
Protection degree	IP 20	
Connection terminal IN / OUT	1.5 mm <sup>2</sup> / 1.5 mm <sup>2</sup> (screw)	
Housing material	UL94V-0 plastic material	
Dimensions	6.2x90x115.5 mm	
Approximate weight	40 g	
Mounting informations	on a rail, side by side	
<b>APPROVALS</b>		
<b>ACCESSORIES</b>		
Mounting rail (IEC60715/TH35-7.5)	PR/3/AC, PR/3/AC/ZB, PR/3/AS, PR/3/AS/ZB	
Mounting rail (IEC60715/TH35-15)	—	
Marking tag	—	
Plugin jumper red	CWBK 7-0802 (code X766802)	
Plugin jumper white	CWBK 7-0803 (code X766803)	
Plugin jumper blue	CWBK 7-0804 (code X766804)	
Programming kit	LCONZUSB (code X756894)	

**APPLICATIONS**

CWTPR 7-0360 is a “universal” converter for a wide range of analogue signals that can be used with the most popular models of analogue sensors on the market. Both input ranges and output thresholds can be changed using FDT/DTM software and a USB interface. The normally open contacts of the two output thresholds are managed by two solid state relays.



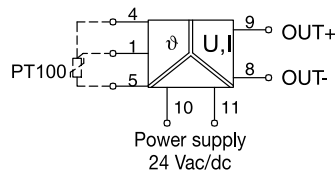
Range*	S1	S2				
Start	7	8				
End	1	2				
	3	4				
	5	6				
	7	8				
-200°C	•	0°C	•			
-150°C	•	50°C	•	•		
-100°C	•	100°C	•	•		
-50°C	•	150°C	•	•		
0°C	•	200°C	•	•		
		250°C	•	•		
		300°C	•	•		
Sensor*	S1	1	2	3		
Pt100	•	•	•	•	•	•
Pt1000	•	•	•	•	•	•
TE J	•	•	•	•	•	•
TE K	•	•	•	•	•	•
R	•	•	•	•	•	•
		550°C	•	•	•	•
		600°C	•	•	•	•
		650°C	•	•	•	•
Output*	S1	4	5	6		
0-20mA	•	•	•	•	•	•
4-20mA	•	•	•	•	•	•
0-10V	•	•	•	•	•	•
±10V	•	•	•	•	•	•
		850°C	•	•	•	•
		900°C	•	•	•	•
		950°C	•	•	•	•
		1000°C	•	•	•	•
		1050°C	•	•	•	•
		1100°C	•	•	•	•
		1150°C	•	•	•	•
		1200°C	•	•	•	•
		1250°C	•	•	•	•
		1300°C	•	•	•	•
		1350°C	•	•	•	•
		1400°C	•	•	•	•
			•	•	•	•

S1-S2 1-8 off:  
FDT/DTM

• → Switch On



- Input: PT100 2/3-wire
- Output: 3 selectable ranges
- Insulation: 4 kVac, 3-way isolation



**NOTE**

(1) May also be used with the 2-wire PT100, connecting terminal blocks 1 and 4 together

**APPLICATIONS**

The module converts and isolates signals deriving from three-wire PT100 (RTD) sensors into a proportional analogue signal and is programmable in 8 input temperature ranges and into the three main standard output signals. Configuration is obtained by setting the DIP-switches located on the side.

The converters are galvanically isolated, which ensures more precise signal reading, and can be used both with isolated and non-isolated sensors.

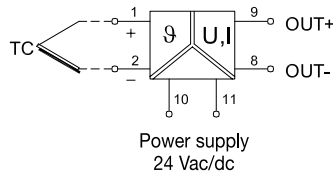
Two-wire sensors can be used by connecting terminal blocks 4 and 1 together.

CODE TYPE	CWPT 6-0816	X756816
<b>INPUT TECHNICAL DATA</b>		
Signal type IN	PT100 2/3-wire (1)	
Input range IN	8 programmable ranges (see tab. 1)	
Maximum voltage current signal IN	—	
Input impedance IN	—	
Parametrization IN	DIP switch	
<b>OUTPUT TECHNICAL DATA</b>		
Signal type OUT	analogue	
Output range OUT	0...10 V / 0...20 mA / 4...20 mA	
Maximum output signal OUT	21 mA (voltage input)	
Load impedance OUT	>1 kΩ (voltage output) / <400 Ω (current output)	
Ripple OUT	<5 mV	
Status indication OUT	LED	
Parametrization OUT	DIP switch	
<b>GENERAL TECHNICAL DATA</b>		
Power supply voltage	24 Vac/dc (16.8...30 Vdc / 19.2...28.8 Vac)	
Current consumption	10 mA	
Accuracy	0.3% FSR (23°C)	
Linearity error	0.1% FSR	
Temperature coefficient	<150 ppm / K FSR	
Setting time	5...500 ms (adjustable, default 30 ms)	
Transmission frequency	10 Hz	
Resolution	—	
Rise time	30 ms	
Operating temperature range	-25...+60°C	
Insulation	4 kVac / 60 s	
Insulation type	3-way (IN / OUT1 / power)	
Standard approvals	EN 60721-3-3, EN 50178	
EMC Standards	EN 55011, EN 61000-4-2/6	
Overvoltage category / Pollution degree	II / 2	
Protection degree	IP 20	
Connection terminal IN / OUT	2.5 mm <sup>2</sup> / 2.5 mm <sup>2</sup> (screw)	
Housing material	UL94V-0 plastic material	
Dimensions	17.5x79x84 mm	
Approximate weight	70 g	
Mounting informations	on a rail, side by side	
<b>APPROVALS</b>		
<b>ACCESSORIES</b>		
Mounting rail (IEC60715/TH35-7.5)	PR/3/AC, PR/3/AC/ZB, PR/3/AS, PR/3/AS/ZB	
Mounting rail (IEC60715/TH35-15)	—	
Marking tag	TAP207A_	
Plugin jumper red	—	
Plugin jumper white	—	
Plugin jumper blue	—	
Programming kit	—	

**Tab. 1 - Input temperature ranges**

- 50...+50°C (-58...+122°F)
- 50...+100°C (-58...+212°F)
- 50...+150°C (-58...+302°F)
- 0...+100°C (+32...+212°F)
- 0...+150°C (+32...+302°F)
- 0...+200°C (+32...+392°F)
- 0...+300°C (+32...+572°F)
- 0...+400°C (+32...+752°F)

- Input: thermocouple (J / K)
- Output: 3 selectable ranges
- Insulation: 4.0 kVac, 3-way isolation



### APPLICATIONS

The module converts and isolates signals deriving from type J (FeCuNi) or K (NiCrNi) thermocouples into a proportional analogue signal and is programmable in eight input temperature ranges and into the three main standard output signals. Configuration is obtained by setting the DIP-switches located on the side.

The converters are galvanically isolated, which ensures more precise signal reading, and can be used both with isolated and non-isolated thermocouples.

**Tab. 1 - Input temperature ranges**

- 50...+200°C (-58...+392°F)
- 50...+350°C (-58 ...+662°F)
- 0...+200°C (+32...+392°F)
- 0...+400°C (+32...+752°F)
- 0...+600°C (+32...+1112°F)
- 0...+800°C (+32...+1472°F)
- 0...+1000°C (+32...+1832°F)
- 0...+1200°C (+32...+2192°F)

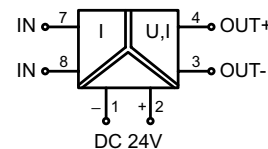
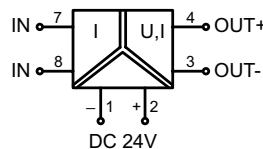
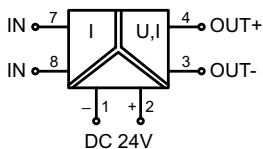
CODE TYPE	CWTH 6-0844	X756844
<b>INPUT TECHNICAL DATA</b>		
Signal type IN	thermocouple (J / K)	
Input range IN	8 programmable ranges (see tab. 1)	
Maximum voltage current signal IN	—	
Input impedance IN	—	
Parametrization IN	DIP switch	
<b>OUTPUT TECHNICAL DATA</b>		
Signal type OUT	analogue	
Output range OUT	0...10 V / 0...20 mA / 4...20 mA	
Maximum output signal OUT	21 mA (voltage input)	
Load impedance OUT	>1 kΩ (voltage output) / <400 Ω (current output)	
Ripple OUT	<5 mV	
Status indication OUT	LED	
Parametrization OUT	DIP switch	
<b>GENERAL TECHNICAL DATA</b>		
Power supply voltage	24 Vac/dc (16.8...30 Vdc / 19.2...28.8 Vac)	
Current consumption	10 mA	
Accuracy	0.5% FSR	
Linearity error	0.1% FSR	
Temperature coefficient	<150 ppm / K FSR	
Setting time	—	
Transmission frequency	10 Hz	
Resolution	—	
Rise time	30 ms	
Operating temperature range	-25...+60°C	
Insulation	4 kVac / 60 s	
Insulation type	3-way (IN / OUT1 / power)	
Standard approvals	IEC 664-1, DIN VDE	
EMC Standards	EN 50081-2, EN 50082-2	
Overvoltage category / Pollution degree	II / 2	
Protection degree	IP 20	
Connection terminal IN / OUT	2.5 mm <sup>2</sup> / 2.5 mm <sup>2</sup> (screw)	
Housing material	UL94V-0 plastic material	
Dimensions	17.5x79x84 mm	
Approximate weight	70 g	
Mounting informations	on a rail, side by side	
APPROVALS		
<b>ACCESSORIES</b>		
Mounting rail (IEC60715/TH35-7.5)	PR/3/AC, PR/3/AC/ZB, PR/3/AS, PR/3/AS/ZB	
Mounting rail (IEC60715/TH35-15)	—	
Marking tag	TAP207A_	
Plugin jumper red	—	
Plugin jumper white	—	
Plugin jumper blue	—	
Programming kit	—	

- Input: 0...1 A AC/DC
- Output: 3 selectable ranges
- Insulation: 2.5 kVac, 3-way isolation



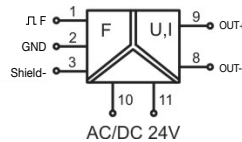
**NOTE**

(1) Do not connect directly to a 400 V line



CODE TYPE	WAA 7-0540	X756540	WAA 7-0541	X756541	WAA 7-0542	X756542
<b>INPUT TECHNICAL DATA</b>						
Signal type IN	current		current		current	
Input range IN	0...1 A AC/DC		0...5 A AC/DC		0...10 A AC/DC	
Maximum voltage current signal IN	400 V (1)		400 V (1)		400 V (1)	
Input impedance IN	0.06 Ω		0.02 Ω		0.01 Ω	
Parametrization IN	DIP switch		DIP switch		DIP switch	
<b>OUTPUT TECHNICAL DATA</b>						
Signal type OUT	analogue		analogue		analogue	
Output range OUT	0...10 V / 0...20 mA / 4...20 mA		0...10 V / 0...20 mA / 4...20 mA		0...10 V / 0...20 mA / 4...20 mA	
Maximum output signal OUT	21 mA (voltage input)		21 mA (voltage input)		21 mA (voltage input)	
Load impedance OUT	>1 kΩ (voltage output) / <400 Ω (current output)		>1 kΩ (voltage output) / <400 Ω (current output)		>1 kΩ (voltage output) / <400 Ω (current output)	
Ripple OUT	<5 mV		<5 mV		<5 mV	
Status indication OUT	LED		LED		LED	
Parametrization OUT	DIP switch		DIP switch		DIP switch	
<b>GENERAL TECHNICAL DATA</b>						
Power supply voltage	24 Vdc (16.8...30 Vdc)		24 Vdc (16.8...30 Vdc)		24 Vdc (16.8...30 Vdc)	
Current consumption	13 mA		13 mA		13 mA	
Accuracy	0.1% FSR (23°C)		0.1% FSR (23°C)		0.1% FSR (23°C)	
Linearity error	0.5% FSR (23°C)		0.5% FSR (23°C)		0.5% FSR (23°C)	
Temperature coefficient	<150 ppm / K FSR		<150 ppm / K FSR		<150 ppm / K FSR	
Setting time	—		—		—	
Transmission frequency	—		—		—	
Resolution	—		—		—	
Rise time	—		—		—	
Operating temperature range	-25...+60°C		-25...+60°C		-25...+60°C	
Insulation	2.5 kVac / 60 s		2.5 kVac / 60 s		2.5 kVac / 60 s	
Insulation type	3-way (IN / OUT1 / power)		3-way (IN / OUT1 / power)		3-way (IN / OUT1 / power)	
Standard approvals	—		—		—	
EMC Standards	—		—		—	
Overvoltage category / Pollution degree	II / 2		II / 2		II / 2	
Protection degree	IP 20		IP 20		IP 20	
Connection terminal IN / OUT	1.5 mm <sup>2</sup> / 1.5 mm <sup>2</sup> (screw)		1.5 mm <sup>2</sup> / 1.5 mm <sup>2</sup> (screw)		1.5 mm <sup>2</sup> / 1.5 mm <sup>2</sup> (screw)	
Housing material	UL94V-0 plastic material		UL94V-0 plastic material		UL94V-0 plastic material	
Dimensions	6.2x90x115.5 mm		6.2x90x115.5 mm		6.2x90x115.5 mm	
Approximate weight	55 g		55 g		55 g	
Mounting informations	on a rail, side by side		on a rail, side by side		on a rail, side by side	
<b>APPROVALS</b>	<b>CE</b>		<b>CE</b>		<b>CE</b>	
<b>ACCESSORIES</b>						
Mounting rail (IEC60715/TH35-7.5)	PR/3/AC, PR/3/AC/ZB, PR/3/AS, PR/3/AS/ZB		PR/3/AC, PR/3/AC/ZB, PR/3/AS, PR/3/AS/ZB		PR/3/AC, PR/3/AC/ZB, PR/3/AS, PR/3/AS/ZB	
Mounting rail (IEC60715/TH35-15)	—		—		—	
Marking tag	—		—		—	
Plugin jumper red	CWBK 7-0802 (code X766802)		CWBK 7-0802 (code X766802)		CWBK 7-0802 (code X766802)	
Plugin jumper white	CWBK 7-0803 (code X766803)		CWBK 7-0803 (code X766803)		CWBK 7-0803 (code X766803)	
Plugin jumper blue	CWBK 7-0804 (code X766804)		CWBK 7-0804 (code X766804)		CWBK 7-0804 (code X766804)	
Programming kit	—		—		—	

- **Input:** 21 selectable ranges of frequency signal
- **Output:** 3 selectable ranges
- **Insulation:** 2.5 kVac, 3-way isolation



**APPLICATIONS**

This module is used to convert a sinusoid or rectangular frequency signal into a standard analogue signal (e.g. 0...10 V, 0...20 mA or 4...20 mA). A microprocessor detects the signal and calculates the output value, ensuring extremely high precision and stability. Measurement range is set using a DIP switch: the device offers 64 calibrated ranges from 0...100 Hz to 0...28.8 kHz.

CODE TYPE	X756524
<b>CWNFA 6-0524</b>	
<b>INPUT TECHNICAL DATA</b>	
Signal type IN	frequency
Input range IN	0...28.8 kHz (AC/DC 0.8...30 Vpp)
Maximum voltage current signal IN	—
Input impedance IN	50 kΩ
Parametrization IN	DIP switch
<b>OUTPUT TECHNICAL DATA</b>	
Signal type OUT	analogue
Output range OUT	0...10 V, (max. 10.6 V) 0...20 / 4...20 mA, (max 21 mA)
Maximum output signal OUT	21 mA (voltage input)
Load impedance OUT	1 kΩ (voltage output) / 400 Ω (current output)
Ripple OUT	<5 mV
Status indication OUT	LED
Parametrization OUT	DIP switch
<b>GENERAL TECHNICAL DATA</b>	
Power supply voltage	24 Vac/dc (16.8...30 Vdc / 19.2...28.8 Vac)
Current consumption	20 mA
Accuracy	0.1% FSR (23°C)
Linearity error	0.02%
Temperature coefficient	<70 ppm/K
Setting time	200 ms
Transmission frequency	—
Resolution	—
Rise time	—
Operating temperature range	-25...+60°C
Insulation	2.5 kVac / 60 s
Insulation type	3-way (IN / OUT1 / power)
Standard approvals	—
EMC Standards	—
Overvoltage category / Pollution degree	II / 2
Protection degree	IP 20
Connection terminal IN / OUT	2.5 mm <sup>2</sup> / 2.5 mm <sup>2</sup> (screw)
Housing material	UL94V-0 plastic material
Dimensions	17.5x79x84 mm
Approximate weight	70 g
Mounting informations	on a rail, side by side
<b>APPROVALS</b>	<b>CE</b>
<b>ACCESSORIES</b>	
Mounting rail (IEC60715/TH35-7.5)	PR/3/AC, PR/3/AC/ZB, PR/3/AS, PR/3/AS/ZB
Mounting rail (IEC60715/TH35-15)	—
Marking tag	TAP207A_
Plugin jumper red	—
Plugin jumper white	—
Plugin jumper blue	—
Programming kit	—

S2 ● → Switch On														
Range*	1	2	3	4	5	6	8	Range*	1	2	3	4	5	6
0 - 100Hz	●	●	●	●	●	●	●	0 - 5kHz	●	●	●	●	●	●
0 - 200Hz	●	●	●	●	●	●	●	0 - 6kHz	●	●	●	●	●	●
0 - 250Hz	●	●	●	●	●	●	●	0 - 8kHz	●	●	●	●	●	●
0 - 400Hz	●	●	●	●	●	●	●	0 - 10kHz	●	●	●	●	●	●
0 - 500Hz	●	●	●	●	●	●	●	0 - 12kHz	●	●	●	●	●	●
0 - 750Hz	●	●	●	●	●	●	●	0 - 16kHz	●	●	●	●	●	●
0 - 1kHz	●	●	●	●	●	●	●	0 - 20kHz	●	●	●	●	●	●
0 - 1.5kHz	●	●	●	●	●	●	●	0 - 24kHz	●	●	●	●	●	●
0 - 2kHz	●	●	●	●	●	●	●	0 - 28.8kHz	●	●	●	●	●	●
0 - 2.5kHz	●	●	●	●	●	●	●							
0 - 3kHz	●	●	●	●	●	●	●							
0 - 4kHz	●	●	●	●	●	●	●							
Hysteresis	0.5Vpp						5Vpp							

● → Switch On				
Output	S1	1	2	3
0-10V	●	●	●	●
0-20mA	●	●	●	●
4-20mA	●	●	●	●

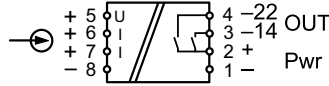
- Input: 3 selectable ranges
- Output: 2 semiconductor NO contacts
- Insulation: 2.5 kVac, 2-way isolation
- FDT/DTM software programmable ranges

NOTE

[1] Input and output signal range, can be customised using FDT/DTM software and LCONZUSB interface



Programming kit X756894

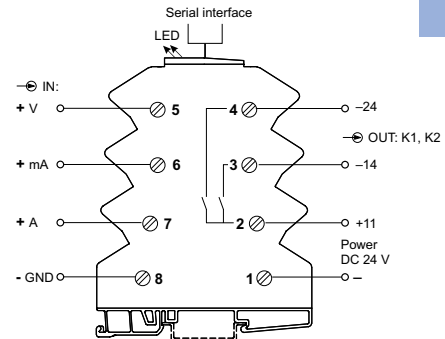


CODE TYPE	LCONALS	X756360
<b>INPUT TECHNICAL DATA</b>		
Signal type IN	analogue	
Input range IN	-30...+30 V / -50...+50 mA / -5...+5 A	
Maximum voltage current signal IN	—	
Input impedance IN	800 KΩ (voltage input) / 00.1-10 Ω (current input)	
Hysteresis	—	
Parametrization IN	FDT/DTM software [1]	
<b>OUTPUT TECHNICAL DATA</b>		
Signal type OUT	2 NA contacts (solid state relay)	
Output range OUT	30 Vdc / 100 mA	
Status indication OUT	LED	
Operating mode OUT	limit value, window, trend, inversion and memory	
Parametrization OUT	FDT/DTM software [1]	
<b>GENERAL TECHNICAL DATA</b>		
Power supply voltage	24 Vdc (16.8...30 Vdc)	
Current consumption	12 mA	
Auxiliary output voltage	—	
Accuracy	0.1% FSR (voltage output) / 0.5% FSR (voltage output)	
Linearity error	0.05% FSR (voltage output) / 0.1% FSR (voltage output)	
Temperature coefficient	<100 ppm FSR	
Setting time	1...500 ms (adjustable, default 30ms)	
Transmission frequency	—	
Resolution	16 bit	
Rise time	—	
Operating temperature range	-40...+70°C	
Insulation	2.5 kVac / 60 s	
Insulation type	2-way (IN / OUT)	
Standard approvals	—	
EMC Standards	—	
Overvoltage category / Pollution degree	II / 2	
Protection degree	IP 20	
Connection terminal IN / OUT	1.5 mm <sup>2</sup> / 1.5 mm <sup>2</sup> (screw)	
Housing material	UL94V-0 plastic material	
Dimensions	6.2x90x115.5 mm	
Approximate weight	50 g	
Mounting information	on a rail, side by side	
<b>APPROVALS</b>	<b>CE</b>	
<b>ACCESSORIES</b>		
Mounting rail (IEC60715/TH35-7.5)	PR/3/AC, PR/3/AC/ZB, PR/3/AS, PR/3/AS/ZB	
Mounting rail (IEC60715/TH35-15)	—	
Marking tag	—	
Plugin jumper red	CWBK 7-0802 (code X766802)	
Plugin jumper white	CWBK 7-0803 (code X766803)	
Plugin jumper blue	CWBK 7-0804 (code X766804)	
Programming kit	LCONZUSB (code X756894)	

APPLICATIONS

LCONAASP is a programmable 4-way isolated converter, it allows to convert, amplify and duplicate a standard analog signal. Input can be set to the standard analog signals 0 ... 20 mA, 4 ... 20 mA and 0 ... 10 V, the signal is isolated, converted and duplicated into two independent signals that can be set to 0 ... 20 mA, 4 ... 20 mA and 0 ... 10 V.

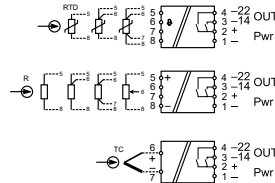
The ranges can be set easily through a DIP switch



- Input: PT100, PT1000, thermocouples, potentiometers
- Output: 2 semiconductor NO contacts
- Insulation: 2.5 kVac, 2-way isolation
- FDT/DTM software programmable ranges

NOTE

(1) Input and output signal range, can be selected using a DIP-switch or customised using FDT/DTM software and LCONZUSB interface



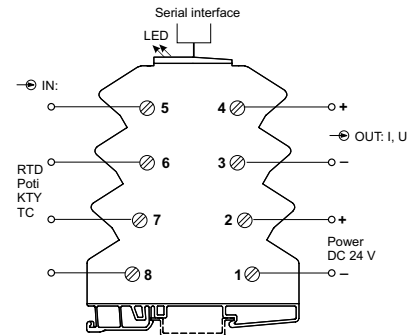
Programming kit X756894

CODE TYPE	LCONTLS	X756370
<b>INPUT TECHNICAL DATA</b>		
Signal type IN	PT100, PT1000, potentiometer, thermocouples (B, C, E, J, K, N, R, S, T)	
Input range IN	-200...+2400 °C (based on sensor) or 0...600 kΩ	
Maximum voltage current signal IN	—	
Input impedance IN	—	
Hysteresis	—	
Parametrization IN	FDT/DTM software (1)	
<b>OUTPUT TECHNICAL DATA</b>		
Signal type OUT	2 NA contacts (solid state relay)	
Output range OUT	30 Vdc / 100 mA	
Status indication OUT	LED	
Operating mode OUT	limit value, window, trend, inversion and memory	
Parametrization OUT	FDT/DTM software (1)	
<b>GENERAL TECHNICAL DATA</b>		
Power supply voltage	24 Vdc (16.8...30 Vdc)	
Current consumption	12 mA	
Auxiliary output voltage	—	
Accuracy	0.2% FSR (voltage output) / 0.4% FSR (voltage output)	
Linearity error	±0.1% FSR	
Temperature coefficient	<100 ppm/K	
Setting time	5...500 ms (adjustable, default 30 ms)	
Transmission frequency	—	
Resolution	16 bit	
Rise time	—	
Operating temperature range	-40...+70°C	
Insulation	2.5 kVac / 60 s	
Insulation type	2-way (IN / OUT)	
Standard approvals	—	
EMC Standards	—	
Overvoltage category / Pollution degree	II / 2	
Protection degree	IP 20	
Connection terminal IN / OUT	1.5 mm <sup>2</sup> / 1.5 mm <sup>2</sup> (screw)	
Housing material	UL94V-0 plastic material	
Dimensions	6.2x90x115.5 mm	
Approximate weight	40 g	
Mounting information	on a rail, side by side	
<b>APPROVALS</b>	<b>CE</b>	
<b>ACCESSORIES</b>		
Mounting rail (IEC60715/TH35-7.5)	PR/3/AC, PR/3/AC/ZB, PR/3/AS, PR/3/AS/ZB	
Mounting rail (IEC60715/TH35-15)	—	
Marking tag	—	
Plugin jumper red	CWBK 7-0802 (code X766802)	
Plugin jumper white	CWBK 7-0803 (code X766803)	
Plugin jumper blue	CWBK 7-0804 (code X766804)	
Programming kit	LCONZUSB (code X756894)	

APPLICATIONS

LCONAASP is a programmable 4-way isolated converter, it allows to convert, amplify and duplicate a standard analog signal. Input can be set to the standard analog signals 0 ... 20 mA, 4 ... 20 mA and 0 ... 10 V, the signal is isolated, converted and duplicated into two independent signals that can be set to 0 ... 20 mA, 4 ... 20 mA and 0 ... 10 V.

The ranges can be set easily through a DIP switch



# THRESHOLD MONITORING FOR CURRENT SIGNAL



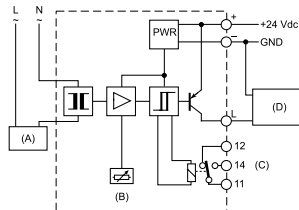
- Input: 0...40 A AC
- Output: SPDT contact
- Insulation: 3.0 kVac, 2-way isolation
- Adjustable threshold value



## NOTE

[1] The relay is turned on and the transistor output is "high" with input signal under the threshold value

[2] The insulation refers to an uninsulated conductor in contact with the toroid wall. Using insulated conductors, the insulation value of the conductor is added to the isolation value of the converter



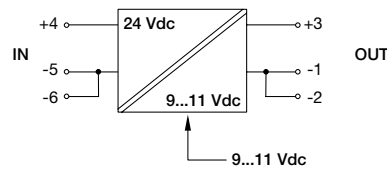
## APPLICATIONS

Inserted into a current circuit, the module can be used to set (using a precision potentiometer) the desired current value for the relay or transistor switch, obtaining a current threshold above or below which the switch occurs. The cable carrying the current must be passed through the module's toroidal sensor. The relay or the transistor switches when the set current threshold is surpassed.

- (A) AC Load
- (B) Control threshold
- (C) Exchange output contact
- (D) Transistor-controlled digital input 24 Vac/dc power supply

CODE TYPE	CCIS-2	XCCIS2
<b>INPUT TECHNICAL DATA</b>		
Signal type IN	analogue	
Input range IN	40 A (AC 50...60 Hz)	
Maximum voltage current signal IN	600 Vac / 50 A [1]	
Input impedance IN	—	
Hysteresis	—	
Parametrization IN	—	
<b>OUTPUT TECHNICAL DATA</b>		
Signal type OUT	SPDT contact , PNP open collector transistor [1]	
Output range OUT	100 mA (PNP open collector)	
Status indication OUT	LED	
Operating mode OUT	limit value	
Parametrization OUT	2...40 A ± 10% (trimmer)	
<b>GENERAL TECHNICAL DATA</b>		
Power supply voltage	24 Vdc ± 10%	
Current consumption	100 mA	
Auxiliary output voltage	—	
Accuracy	—	
Linearity error	—	
Temperature coefficient	—	
Setting time	20 ms	
Transmission frequency	—	
Resolution	—	
Rise time	—	
Operating temperature range	-20...+60°C	
Insulation	3.0 kVac / 60 s [2]	
Insulation type	2-way (IN / OUT)	
Standard approvals	—	
EMC Standards	—	
Overvoltage category / Pollution degree	II / 2	
Protection degree	IP 00	
Connection terminal IN / OUT	cable, through in a 13 mm Ø hole / 2.5 mm <sup>2</sup> (screw)	
Housing material	UL94V-0 plastic material	
Dimensions	50x93x70 mm	
Approximate weight	100 g	
Mounting information	vertical on a rail, distance 5 mm from adjacent components	
<b>APPROVALS</b>		
<b>ACCESSORIES</b>		
Mounting rail (IEC60715/TH35-7.5)	PR/3/AC, PR/3/AC/ZB, PR/3/AS, PR/3/AS/ZB	
Mounting rail (IEC60715/TH35-15)	PR/3/PP, PR/3/PP/ZB, PR/3/PA, PR/3/PA/ZB	
Marking tag	—	
Plugin jumper red	—	
Plugin jumper white	—	
Plugin jumper blue	—	
Programming kit	—	

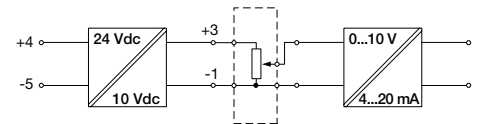
- Regulated switching converter
- Suitable for feeding potentiometers and sensors



## APPLICATIONS

A constant voltage is often required in process control in order to supply power or reference values. A constant voltage source is very often used in digital technology, especially with analogue position sensors (linear potentiometers). This is due to their extremely economical and effective measurements of absolute position, routes, angles and thicknesses. Moreover, the linear potentiometer requires only one continuous voltage and one analogue control or position indicator input.

## APPLICATIONS EXAMPLES



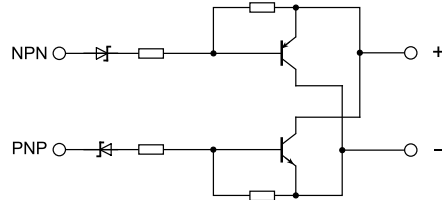
CODE TYPE	CWCV 7-6184	X766184
<b>INPUT TECHNICAL DATA</b>		
Input rated voltage	24 Vdc (16.8...30 Vdc)	
Current consumption	30 mA at 10 Vdc	
Internal protection fuse	T 1 A (external)	
<b>OUTPUT TECHNICAL DATA</b>		
Output rated voltage	10 Vdc (9...11 Vdc adjustable)	
Continuous current	60 mA	
Overload limiting	yes	
Ripple	≤ 50 mVpp	
Status indication	LED "DC OK"	
<b>GENERAL TECHNICAL DATA</b>		
Operating temperature range	-25...+60°C	
Insulation	50 Vac / 60 s	
Insulation type	2-way	
Standard approvals	EN 50081-1, EN 50082-2, EN 61000-3-2	
EMC Standards	EN61000-4-2, EN61000-4-4	
Overvoltage category / Pollution degree	II / 2	
Protection degree	IP 20	
Connection terminal IN / OUT	1.5 mm <sup>2</sup> / 1.5 mm <sup>2</sup> (screw)	
Housing material	UL94V-0 plastic material	
Dimensions	6.2x92.5x90 mm	
Approximate weight	35 g	
Mounting informations	on a rail, side by side	
APPROVALS	<b>CE</b>	
<b>ACCESSORIES</b>		
Mounting rail (IEC60715/TH35-7.5)	PR/3/AC, PR/3/AC/ZB, PR/3/AS, PR/3/AS/ZB	
Mounting rail (IEC60715/TH35-15)	—	
Marking tag	—	
Plugin jumper red	CWBK 7-0802 (code X766802)	
Plugin jumper white	CWBK 7-0803 (code X766803)	
Plugin jumper blue	CWBK 7-0804 (code X766804)	



# SIGNAL INVERTERS NPN AND PNP



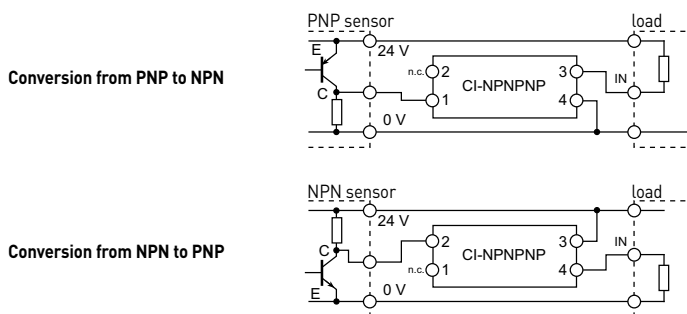
- Converts NPN sensors to PNP and vice versa
- Compact dimensions



## APPLICATIONS

Converts PNP sensor signals to NPN and vice versa. It is able to adapt all sensors on the market to any PLC input regardless of output polarity, and it is highly useful in maintenance operations where the correct replacement sensor is unavailable.

CODE TYPE	CI-NPN/PNP	XNPNPNP
<b>INPUT TECHNICAL DATA</b>		
Input rated voltage	24 Vdc (17...30 Vdc)	
Current consumption	200 mA	
Frequency	120 kHz max.	
<b>GENERAL TECHNICAL DATA</b>		
Operating temperature range	-20...50°C	
Insulation	—	
Insulation type	no	
Standard approvals	IEC 664-1, DIN VDE	
EMC Standards	EN 61000-6-2, EN 61000-6-4	
Overvoltage category / Pollution degree	II / 2	
Protection degree	IP 00	
Connection terminal IN / OUT	2.5 mm <sup>2</sup> / 2.5 mm <sup>2</sup> (screw)	
Housing material	UL94V-0 plastic material	
Dimensions	45x12x77 mm	
Approximate weight	20 g	
Mounting informations	on a rail, syde by side	
<b>APPROVALS</b>	<b>CE</b>	
<b>ACCESSORIES</b>		
Mounting rail (IEC60715/TH35-7.5)	PR/3/AC, PR/3/AC/ZB, PR/3/AS, PR/3/AS/ZB	
Mounting rail (IEC60715/TH35-15)	PR/3/PP, PR/3/PP/ZB, PR/3/PA, PR/3/PA/ZB	
Marking tag	—	
Plugin jumper red	—	
Plugin jumper white	—	
Plugin jumper blue	—	



## Modbus-RTU programmable analog converters

The XCI04 devices are analog converters, fully programmable through a PC application and with ModBus communication interface.

There are four different models:

- XCI04VMB voltage converter
- XCI04IMB current converter
- XCI04RMB thermoresistance and potentiometer converter
- XCI04TMB thermocouple converter
- XCI04RLYMB, actuation module

Each device has up to four independent channels, it is remotely configurable through the ModBus interface and in alternative with a uUSB port with no need for additional power supply.

The devices are fully programmable by means of CaburLab software application or directly accessing the ModBus registers by means of a PLC.

The XCI04RLYMB can be configured to have a default safe condition called safestate that allows to set the state of the output when the power is off and/or when the device is remotely controlled.



## Communication bridges

The XBRI series is based on two different interconnection bridge typologies.

The XBRIRS485CP is a gateway which allows the connection between RS-485 interconnected devices towards a ModBus-TCP over Ethernet network .

The XBRIRS485ET and XBRIRS485WI are bridges with the capability to connect RS-485 devices to a 10/100 Base T Ethernet network based upon TCP/IP.

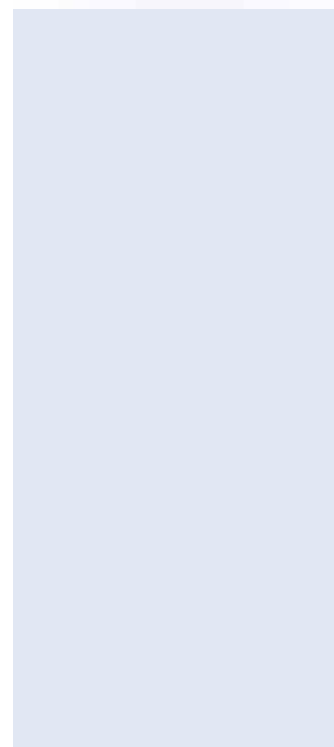
The Ethernet – RS485 communication passes through a virtual communication interface. The bridges parameters can be configured through a dedicated telnet interface (IP address, subnet mask, etc.).



## Ethernet Switches

The XSWET5UP and XSWET8UP series of Din-rail Entry-level Unmanaged Ethernet Switches for industrial applications are highly compacted 5 and 8-port Ethernet switches that support IEEE 802.3/802.3u/802.3x with 10/100M, full/half-duplex, RJ45 ports.

The XSWET5UP and XSWET8UP switches are rated to operate at temperatures ranging from -10 to 60°C. The switches can be easily installed on a DIN-rail as well as multi-directional panel mounting.



- Input:  $\pm 20$ mA
- Output: Modbus RTU
- Insulation: 3.0 kVac, 3-way isolation
- 4 input channel
- parametrization via Modbus RTU



NOTE

Factory setting:  $\pm 20$  mA input

(1) The software CaburLab is available from our web site for free.

CODE TYPE	CIO4IMB	XCIO4IMB	CIO4VMB	XCIO4VMB	CIO4RMB	XCIO4RMB
<b>INPUT TECHNICAL DATA</b>						
Signal type IN	analogue		analogue		potentiometric 0...2 k $\Omega$ , temperature PT100, PT500, PT1000, NI120, NIPE604, CU100, CU120	
Input range IN	$\pm 20$ mA programmable		$\pm 10$ V programmable		-200...+850°C based on sensor (2)	
Maximum voltage current signal IN	24 mA		12 V		—	
Input impedance IN	56 $\Omega$		1 M $\Omega$		1 M $\Omega$	
Parametrization IN	Software CaburLab (1)		Software CaburLab (1)		Software CaburLab (1)	
<b>OUTPUT TECHNICAL DATA</b>						
Signal type OUT	Modbus RTU		Modbus RTU		Modbus RTU	
Output range OUT	—		—		—	
Maximum output signal OUT	—		—		—	
Load impedance OUT	—		—		—	
Ripple OUT	—		—		—	
Status indication OUT	LED		LED		LED	
Parametrization OUT	—		—		—	
<b>GENERAL TECHNICAL DATA</b>						
Power supply voltage	24 Vdc (8...30 Vdc)		24 Vdc (8...30 Vdc)		24 Vdc (8...30 Vdc)	
Current consumption	100 mA (24 Vdc)		100 mA (24 Vdc)		100 mA (24 Vdc)	
Accuracy	0.1% FSR (23°C)		0.1% FSR (23°C)		0.1% FSR (23°C)	
Linearity error	< 0.1% FS		< 0.1% FS		< 0.1% FS	
Temperature coefficient	—		—		—	
Setting time	—		—		—	
Transmission frequency	10 Hz		10 Hz		10 Hz	
Resolution	13 bits		13 bits		13 bits	
Rise time	—		—		—	
Baud rate	1200 - 320400 bps programmable		1200 - 320400 bps programmable		1200 - 320400 bps programmable	
Parity	None, Odd, Even, Mark, Space		None, Odd, Even, Mark, Space		None, Odd, Even, Mark, Space	
Operation temperature range	-20...+70°C		-20...+70°C		-20...+70°C	
Insulation	3.0 kVac / 60 s		3.0 kVac / 60 s		3.0 kVac / 60 s	
Insulation type	3-way (IN / OUT / power)		3-way (IN / OUT / power)		3-way (IN / OUT / power)	
Standard approvals	—		—		—	
EMC Standards	EN 61000-6-1, EN 61000-6-2, EN 61000-6-3		EN 61000-6-1, EN 61000-6-2, EN 61000-6-3		EN 61000-6-1, EN 61000-6-2, EN 61000-6-3	
Overvoltage category / Pollution degree	II / 2		II / 2		II / 2	
Protection degree	IP 20		IP 20		IP 20	
Connection terminal IN / OUT	2.5 mm <sup>2</sup> / 2.5 mm <sup>2</sup> (screw)		2.5 mm <sup>2</sup> / 2.5 mm <sup>2</sup> (screw)		2.5 mm <sup>2</sup> / 2.5 mm <sup>2</sup> (screw)	
Housing material	UL94V-0 plastic material		UL94V-0 plastic material		UL94V-0 plastic material	
Dimensions	101x79x17.5 mm		101x79x17.5 mm		101x79x17.5 mm	
Approximate weight	100 g		100 g		100 g	
Mounting informations	vertical on a rail, distance 5 mm from adjacent components		vertical on a rail, distance 5 mm from adjacent components		vertical on a rail, distance 5 mm from adjacent components	
APPROVALS	CE		CE		CE	
<b>ACCESSORIES</b>						
Mounting rail (IEC60715/TH35-7.5)	PR/3/AC, PR/3/AC/ZB, PR/3/AS, PR/3/AS/ZB		PR/3/AC, PR/3/AC/ZB, PR/3/AS, PR/3/AS/ZB		PR/3/AC, PR/3/AC/ZB, PR/3/AS, PR/3/AS/ZB	
Mounting rail (IEC60715/TH35-15)	—		—		—	

- Input: thermocouple sensor J, K, S, R, B, E, T, N types, 100mV
- Output: Modbus RTU
- Insulation: 3.0 kVac, 3-way isolation
- 4 input channel
- parametrization via Modbus RTU



NOTE

Factory setting: 100mV input

(1) The software CaburLab is available from our web site for free.

CODE TYPE	XCI04TMB	XCI04RLYM
<b>INPUT TECHNICAL DATA</b>		
Signal type IN	thermocouples (J, K, S, R, B, E, T, N), 100mV	Modbus RTU
Input range IN	-270...+1820°C based on sensor (2)	—
Maximum voltage current signal IN	—	—
Input impedance IN	1 MΩ	56 Ω
Parametrization IN	Software CaburLab (1)	—
<b>OUTPUT TECHNICAL DATA</b>		
Signal type OUT	Modbus RTU	Analogue
Output range OUT	—	5 Vdc
Maximum output signal OUT	—	2.5 A max
Load impedance OUT	—	—
Ripple OUT	—	—
Status indication OUT	LED	LED
Parametrization OUT	—	Software CaburLab (1)
<b>GENERAL TECHNICAL DATA</b>		
Power supply voltage	24 Vdc (8...30 Vdc)	24 Vdc (8...30 Vdc)
Current consumption	100 mA (24 Vdc)	100 mA (24 Vdc)
Accuracy	0.1% FSR (23°C)	0.1% FSR (23°C)
Linearity error	< 0.1% FS	< 0.1% FS
Temperature coefficient	—	—
Setting time	—	—
Transmission frequency	10 Hz	10 Hz
Resolution	13 bits	13 bits
Rise time	—	—
Baud rate	1200 - 320400 bps programmable	1200 - 320400 bps programmable
Parity	None, Odd, Even, Mark, Space	None, Odd, Even, Mark, Space
Operation temperature range	-20...+70°C	-20...+70°C
Insulation	3.0 kVac / 60 s	3.0 kVac / 60 s
Insulation type	3-way (IN / OUT / power)	3-way (IN / OUT / power)
Standard approvals	—	—
EMC Standards	EN 61000-6-1, EN 61000-6-2, EN 61000-6-3	EN 61000-6-1, EN 61000-6-2, EN 61000-6-3
Overvoltage category / Pollution degree	II / 2	II / 2
Protection degree	IP 20	IP 20
Connection terminal IN / OUT	2.5 mm <sup>2</sup> / 2.5 mm <sup>2</sup> (screw)	2.5 mm <sup>2</sup> / 2.5 mm <sup>2</sup> (screw)
Housing material	UL94V-0 plastic material	UL94V-0 plastic material
Dimensions	101x79x17.5 mm	101x79x17.5 mm
Approximate weight	100 g	100 g
Mounting informations	vertical on a rail, distance 5 mm from adjacent components	vertical on a rail, distance 5 mm from adjacent components
<b>APPROVALS</b>		
<b>ACCESSORIES</b>		
Mounting rail (IEC60715/TH35-7.5)	PR/3/AC, PR/3/AC/ZB, PR/3/AS, PR/3/AS/ZB	PR/3/AC, PR/3/AC/ZB, PR/3/AS, PR/3/AS/ZB
Mounting rail (IEC60715/TH35-15)	—	—

- Communication on RS485—2 wire, Wifi or Ethernet serial line
- Power supply 8...30Vdc
- Configurable by web interface / command prompt
- Signaling LED (GREEN, RED, YELLOW, YELLOW)
- 3 way galvanic isolation
- Compact dimensions



LED "DC OK", LED "Allarm", LED "TX", LED "RX".

CODE TYPE	BRI-RS485-ET	XBRIRS485ET	BRI-RS485-WI	XBRIRS485WI	BRI-RS485-CP	XBRIRS485CP
<b>TECHNICAL DATA</b>						
WiFi connector	—		RP—SMA WIFI		—	
Serial ports	1 RS485		1 RS485		1 RS485	
Network interfaces	Ethernet 10/100 (Base TR/TX)		WiFi 802.11b/g		Ethernet 10/100 (Base TR/TX)	
Protocol	ModbusRTU/ Ethernet		ModbusRTU/ WiFi		conversion from ModbusRTU/ to Modbus TCP	
Speed	up to 1Mbit/s		up to 1Mbit/s		up to 1Mbit/s	
<b>MOBUS TECHNICAL DATA</b>						
Speed distance	0,6Km @ 38,4Kbps		0,6Km @ 38,4Kbps		0,6Km @ 38,4Kbps	
	0,9Km @ 19,2Kbps		0,9Km @ 19,2Kbps		0,9Km @ 19,2Kbps	
	1,2Km @ 9,6Kbps		1,2Km @ 9,6Kbps		1,2Km @ 9,6Kbps	
	2Km @ 4,8Kbps		2Km @ 4,8Kbps		2Km @ 4,8Kbps	
	3Km @ 2,4Kbps		3Km @ 2,4Kbps		3Km @ 2,4Kbps	
	7Km @ 1.2Kbps		7Km @ 1.2Kbps		7Km @ 1.2Kbps	
Impedance of RS485 line	120Ω		120Ω		120Ω	
Max number of connectable devices in RS485	32		32		32	
<b>GENERAL TECHNICAL DATA</b>						
Power supply voltage	8...30 Vdc		8...30 Vdc		8...30 Vdc	
Current consumption	≈ 41mA		≈ 41mA		≈ 41mA	
Baud rate	1200÷230400 bps (programmable)		1200÷230400 bps (programmable)		1200÷230400 bps (programmable)	
Parity	None,Odd, Even, Mark, Space		None,Odd, Even, Mark, Space		None,Odd, Even, Mark, Space	
Operating temperature range	−20...+70°C		−20...+70°C		−20...+70°C	
Insulation	1.5 kVac /60s		1.5 kVac /60s		1.5 kVac /60s	
Insulation type	3 way		3 way		3 way	
Standard approvals	—		—		—	
EMC Standards	EN 61000—2, EN 61000—4		EN 61000—2, EN 61000—4		EN 61000—2, EN 61000—4	
Overvoltage category / Pollution degree	III/2		III/2		III/2	
Protection degree	IP20		IP20		IP20	
Connection terminal RS485	2.5 mm <sup>2</sup>		2.5 mm <sup>2</sup>		2.5 mm <sup>2</sup>	
Connection terminal Ethernet	Shielded RJ45 connector		—		Shielded RJ45 connector	
Connection terminal WiFi	—		RP—SMA WiFi		—	
Housing material	Blend PC/ABS self—extinguishing		Blend PC/ABS self—extinguishing		Blend PC/ABS self—extinguishing	
Dimensions	23x79x101		23x79x101		23x79x101	
Approximate weight	100 g		100 g		100 g	
Mounting informations	on a rail, side by side		on a rail, side by side		on a rail, side by side	
<b>APPROVALS</b>						
<b>ACCESSORIES</b>						
Mounting rail (IEC60715/TH35-7.5)	PR/3/AC, PR/3/AC/ZB, PR/3/AS, PR/3/AS/ZB		PR/3/AC, PR/3/AC/ZB, PR/3/AS, PR/3/AS/ZB		PR/3/AC, PR/3/AC/ZB, PR/3/AS, PR/3/AS/ZB	
Mounting rail (IEC60715/TH35-15)	—		—		—	
Marking tag	—		—		—	

- 5 or 8 port, copper and LC fiber port options
- Designed to meet Level 3 (Heavy) industrial environments
- DIN rail mountable



Available on September 2019

CODE TYPE	SWET-5PU	XSWET5PU	SWET-8PU	XSWET8PU
Version	5 - RJ45		8 - RJ45	
<b>TECHNOLOGY</b>				
Standard	IEEE802.3, 802.3u, 802.3x		IEEE802.3, 802.3u, 802.3x	
Processing Type	Store and forward with IEEE802.3x full duplex, non-blocking flow control		Store and forward with IEEE802.3x full duplex, non-blocking flow control	
Protocols	IEEE802.3x flow control, back pressure flow control		IEEE802.3x flow control, back pressure flow control	
<b>SWITCH PROPERTIES</b>				
MAC table size	2K		2K	
<b>INTERFACE</b>				
RJ45 Port	10/100BaseT(X) auto negotiation speed, Full/Half duplex mode, and auto MDI/MDI-X connection		10/100BaseT(X) auto negotiation speed, Full/Half duplex mode, and auto MDI/MDI-X connection	
Fiber Port	100cBaseFX, (multi-mode or single-mode with LC connectors)		100vBaseFX, (multi-mode or single-mode with LC connectors)	
LED Indicators	Power, (Link / Speed / Activity for each port)		Power, (Link / Speed / Activity for each port)	
Optical Fiber	—		—	
Transmission distance multi mode	2 km		2 km	
Transmission distance single mode	20 km		20 km	
Centre wavelength multi mode	1310 nm		1310 nm	
Centre wavelength single mode	1310 nm		1310 nm	
Cable size multi mode	62.5/125 um		62.5/125 um	
Cable size single mode	9/125 um		9/125 um	
TX power multi mode	-20~-10 dBm		-20~-10 dBm	
TX power single mode	-15~-8 dBm		-15~-8 dBm	
RX power multi mode	< -32 dBm		< -32 dBm	
RX power single mode	< -32 dBm		< -32 dBm	
Transmission rate multi mode	100 Mbps		100 Mbps	
Transmission rate single mode	100 Mbps		100 Mbps	
<b>GENERAL TECHNICAL DATA</b>				
Power supply voltage	12-24 Vac/dc (12...36 Vdc / (10...24 Vac)		12-24 Vac/dc (12...36 Vdc / (10...24 Vac)	
Current consumption	170 mA		170 mA	
Operating temperature range	-10 to 60°C		-10 to 60°C	
Standard approvals	FCC Part15, CISPR [EN55022] Class A		FCC Part15, CISPR [EN55022] Class A	
EMC Standards	EN61000-4-2, EN61000-4-3, EN61000-4-4, EN61000-4-5, EN61000-4-6, EN61000-6-2		EN61000-4-2, EN61000-4-3, EN61000-4-4, EN61000-4-5, EN61000-4-6, EN61000-6-2	
Protection degree	IP 30		IP 30	
Connection terminal IN / OUT	1.5 mm <sup>2</sup> (screw)		1.5 mm <sup>2</sup> (screw)	
Housing material	Metal Case		Metal Case	
Dimensions	25×100×75 mm		24×145×75 mm	
Approximate weight	—		—	
Mounting informations	on a rail, syde by side		on a rail, syde by side	
<b>APPROVALS</b>				
<b>ACCESSORIES</b>				
Mounting rail (IEC60715/TH35-7.5)	PR/3/AC, PR/3/AC/ZB, PR/3/AS, PR/3/AS/ZB		PR/3/AC, PR/3/AC/ZB, PR/3/AS, PR/3/AS/ZB	
Mounting rail (IEC60715/TH35-15)	—		—	
Marking tag	—		—	

# ELECTROMECHANICAL RELAY MODULES QUICK SELECTION TABLE



INPUT CHANNELS	INPUT RATED VOLTAGE	CONTACT TYPE	NOMINAL CURRENT (RESISTIVE LOAD)	PLUGGABLE RELAY	NOT PLUGGABLE RELAY	POSITIVE CONTROL (PNP)	NEGATIVE CONTROL (NPN)	PROTECTION CIRCUIT	CODE	TYPE	PAGE
1	24 Vdc	SPST(NO)	5 A	-	•	-	-	•	XRFA024D	RFA024D	110
1	24 Vdc	SPDT	16 A	•	-	-	-	•	XRE1824D	RE1824D	111
1	24 Vdc	SPDT	16 A	-	•	-	-	•	XRF1824D	RF1824D	110
1	24 Vdc	SPDT	16 A	•	-	-	-	•	XRE1024D	RE1024D	111
1	24 Vdc	SPDT	16 A	-	•	-	-	•	XRF1024D	RF1024D	110
1	24 Vac/dc	DPDT	10 A	•	-	-	-	•	XRE2024D	RE2024D	111
1	12 Vdc	SPDT	12 A	•	-	-	-	•	XCM1C012	CM1C012	112
1	24 Vdc	SPDT	16 A	•	-	-	-	•	XCM1C024	CM1C024	112
1	48 Vdc	SPDT	10 A	•	-	-	-	•	XCM1C048	CM1C048	112
1	110 Vdc	SPDT	12 A	•	-	-	-	•	XCM1C110	CM1C0110	113
1	12 VDC	DPDT	8 A	•	-	-	-	•	XCM2C012	CM2C012	114
1	24 VDC	DPDT	10 A	•	-	-	-	•	XCM2C024	CM2C024	114
1	48 VDC	DPDT	8 A	•	-	-	-	•	XCM2C048	CM2C048	114
1	110 VDC	DPDT	8 A	•	-	-	-	•	XCM2C110	CM2C0110	115
1	24 VDC	4PDT	6 A	•	-	-	-	•	XCM4C024	CM4C024	116
1	12 VAC	SPDT	12 A	•	-	-	-	—	XCM1A012	CM1A012	117
1	24 VAC	SPDT	12 A	•	-	-	-	—	XCM1A024	CM1A024	117
1	120 VAC	SPDT	12 A	•	-	-	-	—	XCM1A120	CM1A120	117
1	230 VAC	SPDT	12 A	•	-	-	-	—	XCM1A230	CM1A230	118
1	12 VAC	DPDT	8 A	•	-	-	-	—	XCM2A012	CM2A012	119
1	24 VAC	DPDT	8 A	•	-	-	-	—	XCM2A024	CM2A024	119
1	120 VAC	DPDT	8 A	•	-	-	-	—	XCM2A120	CM2A120	119
1	230 VAC	DPDT	8 A	•	-	-	-	—	XCM2A230	CM2A230	120
1	24 VAC/DC	SPDT	6 A	-	•	•	•	•	XCKR16	CKR16	121
2	24 VAC/DC	SPST	5 A	-	•	•	•	•	XCKR25	CKR25	121
1	12 VAC/DC	SPDT	6 A	•	-	-	-	•	X766848	CWRE7-0848	122
1	24 VAC/DC	SPDT	6 A	•	-	-	-	•	X766842	CWRE7-0842	122
1	48 VAC/DC	SPDT	6 A	•	-	-	-	•	X766845	CWRE7-0845	122
1	115 VAC/DC	SPDT	6 A	•	-	-	-	•	X766846	CWRE7-0846	123
1	230 VAC	SPDT	6 A	•	-	-	-	•	X766847	CWRE7-0847	123
4	24 VDC	SPDT	16 A	•	-	•	—	•	XR041E24	R41E24	124
8	24 VDC	SPDT	16 A	•	-	•	-	•	XR081E24	R81E24	124
16	24 VDC	SPDT	16 A	•	-	•	-	•	XR161E24	R161E24	124
4	24 VAC/DC	SPDT	16 A	•	-	•	•	•	XR041EAD	R41EAD	125
8	24 VAC/DC	SPDT	16 A	•	-	•	•	•	XR081EAD	R81EAD	125
16	24 VAC/DC	SPDT	16 A	•	-	•	•	•	XR161EAD	R161EAD	125
4	24 VAC/DC	SPDT	16 A	•	-	•	•	•	XR041U24F	R41U24F	126
8	24 VAC/DC	SPDT	16 A	•	-	•	•	•	XR081U24F	R81U24F	126
16	24 VAC/DC	SPDT	16 A	•	-	•	•	•	XR161U24F	R161U24F	126
4	24 VDC	DPDT	10 A	•	-	•	-	•	XR042E24	R42E24	127
8	24 VDC	DPDT	10 A	•	-	•	-	•	XR082E24	R82E24	127
16	24 VDC	DPDT	10 A	•	-	•	-	•	XR162E24	R162E24	127
4	24 VAC/DC	DPDT	10 A	•	-	•	•	•	XR042EAD	R42EAD	128
8	24 VAC/DC	DPDT	10 A	•	-	•	•	•	XR082EAD	R82EAD	128
16	24 VAC/DC	DPDT	10 A	•	-	•	•	•	XR162EAD	R162EAD	128
8	24 VAC/DC	SPDT	16 A	•	-	•	•	•	XRMP081CM	RMP081CM	129
4	24 VAC/DC	SPDT	8 A	•	-	•	•	•	XCRE41	CRE4-1	131
4	24 VAC/DC	SPDT	8 A	-	•	•	•	•	XCR41	CR4-1	130
8	24 VAC/DC	SPST(NO)	8 A	•	-	•	•	•	XCRE81	CRE8-1	131
8	24 VAC/DC	SPST(NO)	8 A	-	•	•	•	•	XCR81	CR8-1	130
4	24 VAC/DC	DPDT	8 A	•	-	•	•	•	XCRE42SC	CRE4-2SC	131
4	24 VAC/DC	DPDT	8 A	-	•	•	•	•	XCR42SC	CR4-2SC	130
8	24 VAC/DC	SPST(NO)	8 A	•	-	•	•	•	XCRE83	CRE8-3	132
8	24 VAC/DC	SPST(NO)	8 A	-	•	•	•	•	XCR83	CR8-3	132

# ELECTROMECHANICAL RELAY MODULES SINGLE CHANNEL MODULES

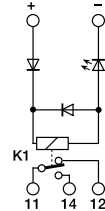
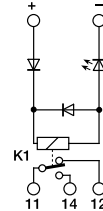
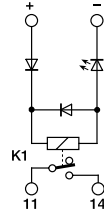


• Not-pluggable relay

**NOTE**  
Manufacturer and model of the relay is not binding, technical data are to be considered typical  
(1) Version produced upon request; contact our sales office for availability.



PRESENTATION PURPOSE ONLY



CODE TYPE	RFA024D (1)	XRFA024D	RF1824D	XRF1824D	RF1024D (1)	XRF1024D
<b>INPUT TECHNICAL DATA</b>						
Input rated voltage	24 Vdc ±10%		24 Vdc ±10%		24 Vdc ±10%	
Pull in drop out voltage type	18.4 V / 2.4 V		16.8 V / 2.4 V		16.8 V / 2.4 V	
Current consumption	15 mA ±10%		22 mA ±10%		15 mA ±10%	
Turn ON OFF time	15 ms / 5 ms		10 ms / 5 ms		10 ms / 5 ms	
Frequency	—		—		—	
Protection circuit	Free-wheel diode, Reverse polarity		Free-wheel diode, Reverse polarity		Free-wheel diode, Reverse polarity	
Connection type	2.5 mm <sup>2</sup> screw type		2.5 mm <sup>2</sup> screw type		2.5 mm <sup>2</sup> screw type	
Input channels	1 not pluggable		1 not pluggable		1 not pluggable	
<b>OUTPUT TECHNICAL DATA</b>						
Contact type	SPST(N0), 1 Form A (N0), AgSn02		SPDT, 1 form C, AgSn02		SPDT, 1 form C, AgNi	
Output voltage	—		—		—	
Nominal current	5 A (250 Vac)		16 A (250 Vac)		16 A (250 Vac)	
Max current	10 A		16 A		16 A	
Leakage current with signal 0	—		—		—	
Min applicable load	100 mA / 5 Vdc		—		—	
Max fuse current	—		—		—	
Connection type	2.5 mm <sup>2</sup> (AWG26-14), screw type		2.5 mm <sup>2</sup> (AWG26-14), screw type		2.5 mm <sup>2</sup> (AWG26-14), screw type	
Protection circuit device	—		—		—	
<b>GENERAL TECHNICAL DATA</b>						
Operating temperature range	-20...+70°C		-20...+70°C		-20...+60°C	
Input output isolation	2.5 kVac / 60 s		2.5 kVac / 60 s		2.5 kVac / 60 s	
Protection degree	IP 00		IP 00		IP 00	
Reference Standards	—		—		—	
Overvoltage category pollution degree	II / 2		II / 2		II / 2	
Status indication	LED "Input"		LED "Input"		LED "Input"	
Housing material	UL94V-0 plastic material		UL94V-0 plastic material		UL94V-0 plastic material	
Dimensions	12x77x52 mm		16.4x70x77 mm		16.4x70x77 mm	
Approximate weight	30 g		30 g		30 g	
Mounting information	on a rail, side by side		on a rail, side by side		on a rail, side by side	
<b>APPROVALS</b>	<b>CE</b>		<b>CE</b>		<b>CE</b>	
<b>ACCESSORIES</b>						
Mounting rail IEC60715 TH35 75	PR/3/AC, PR/3/AC/ZB, PR/3/AS, PR/3/AS/ZB		PR/3/AC, PR/3/AC/ZB, PR/3/AS, PR/3/AS/ZB		PR/3/AC, PR/3/AC/ZB, PR/3/AS, PR/3/AS/ZB	
Mounting rail IEC60715 TH35 15	PR/3/PP, PR/3/PP/ZB, PR/3/PA, PR/3/PA/ZB		PR/3/PP, PR/3/PP/ZB, PR/3/PA, PR/3/PA/ZB		PR/3/PP, PR/3/PP/ZB, PR/3/PA, PR/3/PA/ZB	
Marking tag	—		—		—	
Spare part relay	8904075		8904073		8904058	
End section	—		—		—	
Plugin jumper	—		—		—	

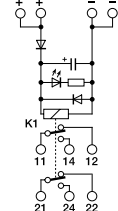
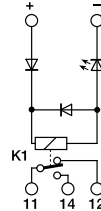
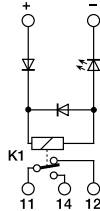


# ELECTROMECHANICAL RELAY MODULES SINGLE CHANNEL MODULES



## • Pluggable relay

**NOTE**  
Manufacturer and model of the relay is not binding, technical data are to be considered typical

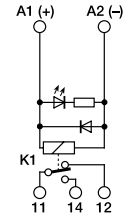
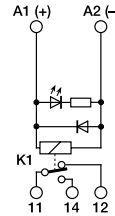
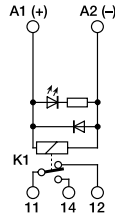


CODE TYPE	RE1824D	XRE1824D	RE1024D	XRE1024D	RE2024D	XRE2024D
<b>INPUT TECHNICAL DATA</b>						
Input rated voltage	24 Vdc ±10%		24 Vdc ±10%		24 Vac/dc ±10%	
Pull in drop out voltage type	16.8 V / 2.4 V		16.8 V / 2.4 V		16.8 V / 2.4 V	
Current consumption	22 mA ±10%		15 mA ±10%		22 mA ±10%	
Turn ON OFF time	10 ms / 5 ms		10 ms / 5 ms		10 ms / 5 ms	
Frequency	—		—		—	
Protection circuit	Free-wheel diode, Reverse polarity		Free-wheel diode, Reverse polarity		Free-wheel diode, Reverse polarity	
Connection type	2.5 mm <sup>2</sup> screw type		2.5 mm <sup>2</sup> screw type		2.5 mm <sup>2</sup> screw type	
Input channels	1 pluggable		1 pluggable		1 pluggable	
<b>OUTPUT TECHNICAL DATA</b>						
Contact type	SPDT, 1 form C, AgSnO <sub>2</sub>		SPDT, 1 form C, AgNi		DPDT, 2 form C, AgSnO <sub>2</sub>	
Output voltage	—		—		—	
Nominal current	16 A (250 Vac)		16 A (250 Vac)		10 A (250 Vac)	
Max current	16 A		16 A		10 A	
Leakage current with signal 0	—		—		—	
Min applicable load	—		—		—	
Max fuse current	—		—		—	
Connection type	2.5 mm <sup>2</sup> (AWG26-14), screw type		2.5 mm <sup>2</sup> (AWG26-14), screw type		2.5 mm <sup>2</sup> (AWG26-14), screw type	
Protection circuit device	—		—		—	
<b>GENERAL TECHNICAL DATA</b>						
Operating temperature range	-20...+70°C		-20...+60°C		-20...+70°C	
Input output isolation	2.5 kVac / 60 s		2.5 kVac / 60 s		2.5 kVac / 60 s	
Protection degree	IP 00		IP 00		IP 00	
Reference Standards	—		—		—	
Overvoltage category pollution degree	II / 2		II / 2		II / 2	
Status indication	LED "Input"		LED "Input"		LED "Input"	
Housing material	UL94V-0 plastic material		UL94V-0 plastic material		UL94V-0 plastic material	
Dimensions	16.4x70x77 mm		16.4x70x77 mm		26x93x75 mm	
Approximate weight	30 g		30 g		76 g	
Mounting information	on a rail, side by side		on a rail, side by side		on a rail, side by side	
APPROVALS	CE		CE		CE	
<b>ACCESSORIES</b>						
Mounting rail IEC60715 TH35 75	PR/3/AC, PR/3/AC/ZB, PR/3/AS, PR/3/AS/ZB		PR/3/AC, PR/3/AC/ZB, PR/3/AS, PR/3/AS/ZB		PR/3/AC, PR/3/AC/ZB, PR/3/AS, PR/3/AS/ZB	
Mounting rail IEC60715 TH35 15	PR/3/PP, PR/3/PP/ZB, PR/3/PA, PR/3/PA/ZB		PR/3/PP, PR/3/PP/ZB, PR/3/PA, PR/3/PA/ZB		PR/3/PP, PR/3/PP/ZB, PR/3/PA, PR/3/PA/ZB	
Marking tag	—		—		—	
Spare part relay	8904073		8904058		8904074	
End section	—		—		—	
Plugin jumper	—		—		—	

- Pluggable relay
- DC input voltage
- SPDT contact
- Compact dimensions
- Available plug-in jumper for potential distribution

NOTE

Manufacturer and model of the relay is not binding, technical data are to be considered typical



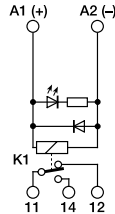
CODE TYPE	CM1C012	XCM1C012	CM1C024	XCM1C024	CM1C048	XCM1C048
<b>INPUT TECHNICAL DATA</b>						
Input rated voltage	12 Vdc ±10%		24 Vdc ±10%		48 Vdc ±10%	
Pull in drop out voltage type	8.4 V / 1.2 V		16.8 V / 2.4 V		33.6 V / 7.2 V	
Current consumption	44 mA ±10%		22 mA ±10%		20 mA ±10%	
Turn ON OFF time	10 ms / 5 ms		10 ms / 5 ms		15 ms / 5 ms	
Frequency	—		—		—	
Protection circuit	Free-wheel diode		Free-wheel diode, Reverse polarity		Free-wheel diode	
Connection type	2.5 mm <sup>2</sup> screw type		2.5 mm <sup>2</sup> screw type		2.5 mm <sup>2</sup> screw type	
Input channels	1 pluggable		1 pluggable		1 pluggable	
<b>OUTPUT TECHNICAL DATA</b>						
Contact type	SPDT, 1 form C, AgNi		SPDT, 1 form C, AgSn02		SPDT, 1 form C, AgSn02	
Output voltage	—		—		—	
Nominal current	12 A (250 Vac)		16 A (250 Vac)		10 A (250 Vac)	
Max current	12 A		16 A		10 A	
Leakage current with signal 0	—		—		—	
Min applicable load	—		—		—	
Max fuse current	—		—		—	
Connection type	2.5 mm <sup>2</sup> (AWG26-14), screw type		2.5 mm <sup>2</sup> (AWG26-14), screw type		2.5 mm <sup>2</sup> (AWG26-14), screw type	
Protection circuit device	—		—		—	
<b>GENERAL TECHNICAL DATA</b>						
Operating temperature range	-20...+60°C		-20...+60°C		-20...+60°C	
Input output isolation	2.5 kVac / 60 s		2.5 kVac / 60 s		2.5 kVac / 60 s	
Protection degree	IP 20		IP 20		IP 20	
Reference Standards	—		—		—	
Overvoltage category pollution degree	II / 2		II / 2		II / 2	
Status indication	LED "Input"		LED "Input"		LED "Input"	
Housing material	UL94V-0 plastic material		UL94V-0 plastic material		UL94V-0 plastic material	
Dimensions	16x75x68 mm		16x75x68 mm		16x75x68 mm	
Approximate weight	54 g		54 g		54 g	
Mounting information	on a rail, side by side		on a rail, side by side		on a rail, side by side	
<b>APPROVALS</b>	<b>CE</b>		<b>CE</b>		<b>CE</b>	
<b>ACCESSORIES</b>						
Mounting rail IEC60715 TH35 75	PR/3/AC, PR/3/AC/ZB, PR/3/AS, PR/3/AS/ZB		PR/3/AC, PR/3/AC/ZB, PR/3/AS, PR/3/AS/ZB		PR/3/AC, PR/3/AC/ZB, PR/3/AS, PR/3/AS/ZB	
Mounting rail IEC60715 TH35 15	—		—		—	
Marking tag	already mounted		already mounted		already mounted	
Spare part relay	8904039		8904073		8904008	
End section	—		—		—	
<b>Plugin jumper</b>	CMB16B (8poles)		CMB16B (8poles)		CMB16B (8poles)	
	—		—		—	
	—		—		—	
	—		—		—	
	—		—		—	
	—		—		—	

- Pluggable relay
- DC input voltage
- SPDT contact
- Compact dimensions
- Available plug-in jumper for potential distribution



**NOTE**

Manufacturer and model of the relay is not binding, technical data are to be considered typical

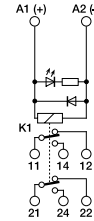
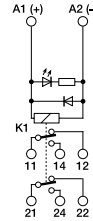
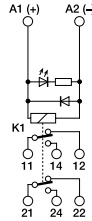


CODE	CM1C0110	XCM1C110
<b>TYPE</b>		
<b>INPUT TECHNICAL DATA</b>		
Input rated voltage	110 Vdc ±10%	
Pull in drop out voltage type	77 V / 11 V	
Current consumption	11 mA ±10%	
Turn ON OFF time	10 ms / 5 ms	
Frequency	—	
Protection circuit	Free-wheel diode	
Connection type	2.5 mm <sup>2</sup> screw type	
Input channels	1 pluggable	
<b>OUTPUT TECHNICAL DATA</b>		
Contact type	SPDT, 1 form C, AgNi	
Output voltage	—	
Nominal current	12 A (250 Vac)	
Max current	12 A	
Leakage current with signal 0	—	
Min applicable load	—	
Max fuse current	—	
Connection type	2.5 mm <sup>2</sup> (AWG26-14), screw type	
Protection circuit device	—	
<b>GENERAL TECHNICAL DATA</b>		
Operating temperature range	-20...+60°C	
Input output isolation	2.5 kVac / 60 s	
Protection degree	IP 20	
Reference Standards	—	
Overvoltage category pollution degree	II / 2	
Status indication	LED "Input"	
Housing material	UL94V-0 plastic material	
Dimensions	16x75x68 mm	
Approximate weight	54 g	
Mounting information	on a rail, side by side	
<b>APPROVALS</b>	<b>CE</b>	
<b>ACCESSORIES</b>		
Mounting rail IEC60715 TH35 75	PR/3/AC, PR/3/AC/ZB, PR/3/AS, PR/3/AS/ZB	
Mounting rail IEC60715 TH35 15	—	
Marking tag	already mounted	
Spare part relay	8904047	
End section	—	
<b>Plugin jumper</b>	CMB16B (8poles)	
	—	
	—	
	—	
	—	

- Pluggable relay
- DC input voltage
- DPDT contact
- Compact dimensions
- Available plug-in jumper for potential distribution

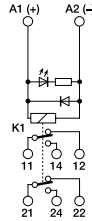
NOTE

Manufacturer and model of the relay is not binding, technical data are to be considered typical



CODE TYPE	CM2C012	XCM2C012	CM2C024	XCM2C024	CM2C048	XCM2C048
<b>INPUT TECHNICAL DATA</b>						
Input rated voltage	12 Vdc ±10%		24 Vdc ±10%		48 Vdc ±10%	
Pull indrop out voltage type	8.4 V / 1.2 V		16.8 V / 2.4 V		33.6 V / 4.8 V	
Current consumption	44 mA ±10%		22 mA ±10%		24 mA ±10%	
Turn ON OFF time	15 ms / 8 ms		10 ms / 5 ms		10 ms / 5 ms	
Frequency	—		—		—	
Protection circuit	Free-wheel diode		Free-wheel diode, Reverse polarity		Free-wheel diode	
Connection type	2.5 mm <sup>2</sup> screw type		2.5 mm <sup>2</sup> screw type		2.5 mm <sup>2</sup> screw type	
Input channels	1 pluggable		1 pluggable		1 pluggable	
<b>OUTPUT TECHNICAL DATA</b>						
Contact type	DPDT, 2 form C, AgSnO <sub>2</sub>		DPDT, 2 form C, AgSnO <sub>2</sub>		DPDT, 2 form C, AgNi	
Output voltage	—		—		—	
Nominal current	8 A (250 Vac)		10 A (250 Vac)		8 A (250 Vac)	
Max current	8 A		10 A		8 A	
Leakage current with signal 0	—		—		—	
Min applicable load	—		—		—	
Max fuse current	—		—		—	
Connection type	2.5 mm <sup>2</sup> (AWG26-14), screw type		2.5 mm <sup>2</sup> (AWG26-14), screw type		2.5 mm <sup>2</sup> (AWG26-14), screw type	
Protection circuit device	—		—		—	
<b>GENERAL TECHNICAL DATA</b>						
Operating temperature range	-20...+60°C		-20...+60°C		-20...+60°C	
Input output isolation	2.5 kVac / 60 s		2.5 kVac / 60 s		2.5 kVac / 60 s	
Protection degree	IP 20		IP 20		IP 20	
Reference Standards	—		—		—	
Overvoltage category pollution degree	II / 2		II / 2		II / 2	
Status indication	LED "Input"		LED "Input"		LED "Input"	
Housing material	UL94V-0 plastic material		UL94V-0 plastic material		UL94V-0 plastic material	
Dimensions	16x75x68 mm		16x75x68 mm		16x75x68 mm	
Approximate weight	67 g		67 g		67 g	
Mounting information	on a rail, side by side		on a rail, side by side		on a rail, side by side	
<b>APPROVALS</b>	<b>CE</b>		<b>CE</b>		<b>CE</b>	
<b>ACCESSORIES</b>						
Mounting rail IEC60715 TH35 75	PR/3/AC, PR/3/AC/ZB, PR/3/AS, PR/3/AS/ZB		PR/3/AC, PR/3/AC/ZB, PR/3/AS, PR/3/AS/ZB		PR/3/AC, PR/3/AC/ZB, PR/3/AS, PR/3/AS/ZB	
Mounting rail IEC60715 TH35 15	—		—		—	
Marking tag	already mounted		already mounted		already mounted	
Spare part relay	8904040		8904074		8904053	
End section	—		—		—	
<b>Plugin jumper</b>	CMB16B (8poles)		CMB16B (8poles)		CMB16B (8poles)	
	—		—		—	
	—		—		—	
	—		—		—	
	—		—		—	
	—		—		—	

- Pluggable relay
- DC input voltage
- DPDT contact
- Compact dimensions
- Available plug-in jumper for potential distribution



**NOTE**  
Manufacturer and model of the relay is not binding, technical data are to be considered typical

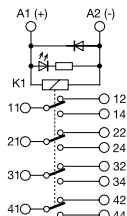
CODE TYPE	CM2C0110	XCM2C110
<b>INPUT TECHNICAL DATA</b>		
Input rated voltage	110 Vdc ±10%	
Pull in drop out voltage type	77 V / 11 V	
Current consumption	11 mA ±10%	
Turn ON OFF time	10 ms / 15 ms	
Frequency	—	
Protection circuit	Free-wheel diode	
Connection type	2.5 mm <sup>2</sup> screw type	
Input channels	1 pluggable	
<b>OUTPUT TECHNICAL DATA</b>		
Contact type	DPDT, 2 form C, AgNi	
Output voltage	—	
Nominal current	8 A (250 Vac)	
Max current	8 A	
Leakage current with signal 0	—	
Min applicable load	—	
Max fuse current	—	
Connection type	2.5 mm <sup>2</sup> (AWG26-14), screw type	
Protection circuit device	—	
<b>GENERAL TECHNICAL DATA</b>		
Operating temperature range	-20...+60°C	
Input output isolation	2.5 kVac / 60 s	
Protection degree	IP 20	
Reference Standards	—	
Overvoltage category pollution degree	II / 2	
Status indication	LED "Input"	
Housing material	UL94V-0 plastic material	
Dimensions	16x75x68 mm	
Approximate weight	67 g	
Mounting information	on a rail, side by side	
<b>APPROVALS</b>	<b>CE</b>	
<b>ACCESSORIES</b>		
Mounting rail IEC60715 TH35 75	PR/3/AC, PR/3/AC/ZB, PR/3/AS, PR/3/AS/ZB	
Mounting rail IEC60715 TH35 15	—	
Marking tag	already mounted	
Spare part relay	8904054	
End section	—	
<b>Plugin jumper</b>	CMB16B (8poles)	
	—	
	—	
	—	
	—	

- Pluggable relay
- DC input voltage
- 4PDT contact
- Compact dimensions
- Available plug-in jumper for potential distribution



**NOTE**

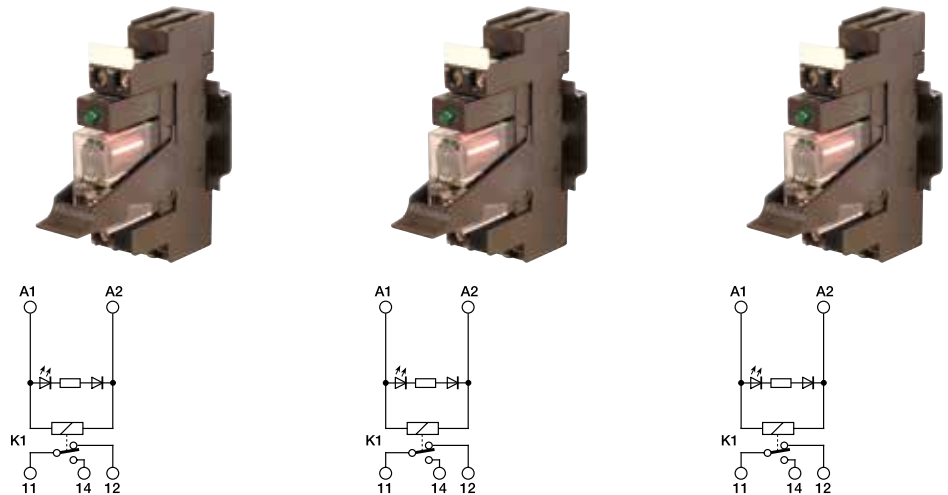
Manufacturer and model of the relay is not binding, technical data are to be considered typical



CODE TYPE	CM4C024	XCM4C024
<b>INPUT TECHNICAL DATA</b>		
Input rated voltage	24 Vdc ±10%	
Pull in drop out voltage type	18 V / 2.4 V	
Current consumption	40 mA ±10%	
Turn ON OFF time	20 ms / 20 ms	
Frequency	—	
Protection circuit	Free-wheel diode	
Connection type	2.5 mm <sup>2</sup> screw type	
Input channels	1 pluggable	
<b>OUTPUT TECHNICAL DATA</b>		
Contact type	4PDT, 4 form C, AgNi	
Output voltage	—	
Nominal current	6 A (240 Vac)	
Max current	12 A	
Leakage current with signal 0	—	
Min applicable load	10 mA / 12 V	
Max fuse current	—	
Connection type	2.5 mm <sup>2</sup> (AWG26-14), screw type	
Protection circuit device	—	
<b>GENERAL TECHNICAL DATA</b>		
Operating temperature range	-20...+60°C	
Input output isolation	2.5 kVac / 60 s	
Protection degree	IP 20	
Reference Standards	—	
Overvoltage category pollution degree	II / 2	
Status indication	LED "Input"	
Housing material	UL94V-0 plastic material	
Dimensions	27x75x68 mm	
Approximate weight	54 g	
Mounting information	on a rail, side by side	
<b>APPROVALS</b>	<b>CE</b>	
<b>ACCESSORIES</b>		
Mounting rail IEC60715 TH35 75	PR/3/AC, PR/3/AC/ZB, PR/3/AS, PR/3/AS/ZB	
Mounting rail IEC60715 TH35 15	—	
Marking tag	already mounted	
Spare part relay	8904069	
End section	—	
<b>Plugin jumper</b>	CMB27B (6 poles)	
	—	
	—	
	—	
	—	
	—	

- Pluggable relay
- AC input voltage
- SPDT contact
- Compact dimensions
- Available plug-in jumper for potential distribution

**NOTE**  
Manufacturer and model of the relay is not binding, technical data are to be considered typical



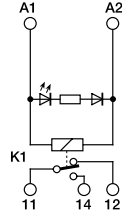
CODE TYPE	CM1A012	XCM1A012	CM1A024	XCM1A024	CM1A120	XCM1A120
<b>INPUT TECHNICAL DATA</b>						
Input rated voltage	12 Vac ±10%		24 Vac ±10%		120 Vac ±10%	
Pull in drop out voltage type	9.6 V / 3.6 V		18 V / 3.6 V		86.3 V / 17.3 V	
Current consumption	95 mA ±10%		48 mA ±10%		10.5 mA ±10%	
Turn ON OFF time	15 ms / 10 ms		10 ms / 5 ms		10 ms / 5 ms	
Frequency	—		—		—	
Protection circuit	—		—		—	
Connection type	2.5 mm <sup>2</sup> screw type		2.5 mm <sup>2</sup> screw type		2.5 mm <sup>2</sup> screw type	
Input channels	1 pluggable		1 pluggable		1 pluggable	
<b>OUTPUT TECHNICAL DATA</b>						
Contact type	SPDT, 1 form C, AgSnO <sub>2</sub>		SPDT, 1 form C, AgNi		SPDT, 1 form C, AgNi	
Output voltage	—		—		—	
Nominal current	12 A (250 Vac)		12 A (250 Vac)		12 A (250 Vac)	
Max current	12 A		12 A		12 A	
Leakage current with signal 0	—		—		—	
Min applicable load	—		—		—	
Max fuse current	—		—		—	
Connection type	2.5 mm <sup>2</sup> (AWG26-14), screw type		2.5 mm <sup>2</sup> (AWG26-14), screw type		2.5 mm <sup>2</sup> (AWG26-14), screw type	
Protection circuit device	—		—		—	
<b>GENERAL TECHNICAL DATA</b>						
Operating temperature range	-20...+60°C		-20...+60°C		-20...+60°C	
Input output isolation	2.5 kVac / 60 s		2.5 kVac / 60 s		2.5 kVac / 60 s	
Protection degree	IP 20		IP 20		IP 20	
Reference Standards	—		—		—	
Overvoltage category pollution degree	II / 2		II / 2		II / 2	
Status indication	LED "Input"		LED "Input"		LED "Input"	
Housing material	UL94V-0 plastic material		UL94V-0 plastic material		UL94V-0 plastic material	
Dimensions	16x75x68 mm		16x75x68 mm		16x75x68 mm	
Approximate weight	54 g		54 g		54 g	
Mounting information	on a rail, side by side		on a rail, side by side		on a rail, side by side	
<b>APPROVALS</b>	<b>CE</b>		<b>CE</b>		<b>CE</b>	
<b>ACCESSORIES</b>						
Mounting rail IEC60715 TH35 75	PR/3/AC, PR/3/AC/ZB, PR/3/AS, PR/3/AS/ZB		PR/3/AC, PR/3/AC/ZB, PR/3/AS, PR/3/AS/ZB		PR/3/AC, PR/3/AC/ZB, PR/3/AS, PR/3/AS/ZB	
Mounting rail IEC60715 TH35 15	—		—		—	
Marking tag	already mounted		already mounted		already mounted	
Spare part relay	8904016		8904048		8904049	
End section	—		—		—	
Plugin jumper	CMB16B (8poles)		CMB16B (8poles)		CMB16B (8poles)	
	—		—		—	
	—		—		—	
	—		—		—	
	—		—		—	
	—		—		—	
	—		—		—	

- Pluggable relay
- AC input voltage
- SPDT contact
- Compact dimensions
- Available plug-in jumper for potential distribution



**NOTE**

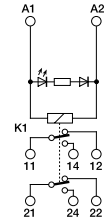
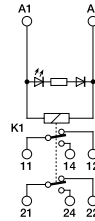
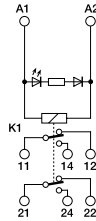
Manufacturer and model of the relay is not binding, technical data are to be considered typical



CODE TYPE	CM1A230	XCM1A230
<b>INPUT TECHNICAL DATA</b>		
Input rated voltage	230 Vac ±10%	
Pull in drop out voltage type	172.5 V / 34.5 V	
Current consumption	6 mA ±10%	
Turn ON OFF time	10 ms / 5 ms	
Frequency	—	
Protection circuit	—	
Connection type	2.5 mm <sup>2</sup> screw type	
Input channels	1 pluggable	
<b>OUTPUT TECHNICAL DATA</b>		
Contact type	SPDT, 1 form C, AgNi	
Output voltage	—	
Nominal current	12 A (250 Vac)	
Max current	12 A	
Leakage current with signal 0	—	
Min applicable load	—	
Max fuse current	—	
Connection type	2.5 mm <sup>2</sup> (AWG26-14), screw type	
Protection circuit device	—	
<b>GENERAL TECHNICAL DATA</b>		
Operating temperature range	-20...+60°C	
Input output isolation	2.5 kVac / 60 s	
Protection degree	IP 20	
Reference Standards	—	
Overvoltage category pollution degree	II / 2	
Status indication	LED "Input"	
Housing material	UL94V-0 plastic material	
Dimensions	16x75x68 mm	
Approximate weight	54 g	
Mounting information	on a rail, side by side	
<b>APPROVALS</b>		
<b>CE</b>		
<b>ACCESSORIES</b>		
Mounting rail IEC60715 TH35 75	PR/3/AC, PR/3/AC/ZB, PR/3/AS, PR/3/AS/ZB	
Mounting rail IEC60715 TH35 15	—	
Marking tag	already mounted	
Spare part relay	8904050	
End section	—	
<b>Plugin jumper</b>	CMB16B (8poles)	
	—	
	—	
	—	
	—	



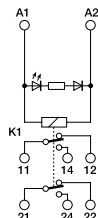
- Pluggable relay
- AC input voltage
- DPDT contact
- Compact dimensions
- Available plug-in jumper for potential distribution



**NOTE**  
Manufacturer and model of the relay is not binding, technical data are to be considered typical

CODE TYPE	CM2A012	XCM2A012	CM2A024	XCM2A024	CM2A120	XCM2A120
<b>INPUT TECHNICAL DATA</b>						
Input rated voltage	12 Vac ±10%		24 Vac ±10%		120 Vac ±10%	
Pull in drop out voltage type	9.6 V / 3.6 V		18 V / 3.6 V		86.3 V / 17.3 V	
Current consumption	95 mA ±10%		48 mA ±10%		11 mA ±10%	
Turn ON OFF time	15 ms / 10 ms		10 ms / 5 ms		10 ms / 15 ms	
Frequency	—		—		—	
Protection circuit	—		—		—	
Connection type	2.5 mm <sup>2</sup> screw type		2.5 mm <sup>2</sup> screw type		2.5 mm <sup>2</sup> screw type	
Input channels	1 pluggable		1 pluggable		1 pluggable	
<b>OUTPUT TECHNICAL DATA</b>						
Contact type	DPDT, 2 form C, AgSnO <sub>2</sub>		DPDT, 2 form C, AgNi		DPDT, 2 form C, AgSnO <sub>2</sub>	
Output voltage	—		—		—	
Nominal current	8 A (250 Vac)		8 A (250 Vac)		8 A (250 Vac)	
Max current	8 A		8 A		8 A	
Leakage current with signal 0	—		—		—	
Min applicable load	—		—		—	
Max fuse current	—		—		—	
Connection type	2.5 mm <sup>2</sup> (AWG26-14), screw type		2.5 mm <sup>2</sup> (AWG26-14), screw type		2.5 mm <sup>2</sup> (AWG26-14), screw type	
Protection circuit device	—		—		—	
<b>GENERAL TECHNICAL DATA</b>						
Operating temperature range	-20...+60°C		-20...+60°C		-20...+60°C	
Input output isolation	2.5 kVac / 60 s		2.5 kVac / 60 s		2.5 kVac / 60 s	
Protection degree	IP 20		IP 20		IP 20	
Reference Standards	—		—		—	
Overvoltage category pollution degree	II / 2		II / 2		II / 2	
Status indication	LED "Input"		LED "Input"		LED "Input"	
Housing material	UL94V-0 plastic material		UL94V-0 plastic material		UL94V-0 plastic material	
Dimensions	16x75x68 mm		16x75x68 mm		16x75x68 mm	
Approximate weight	67 g		67 g		67 g	
Mounting information	on a rail, side by side		on a rail, side by side		on a rail, side by side	
APPROVALS	CE		CE		CE	
<b>ACCESSORIES</b>						
Mounting rail IEC60715 TH35 75	PR/3/AC, PR/3/AC/ZB, PR/3/AS, PR/3/AS/ZB		PR/3/AC, PR/3/AC/ZB, PR/3/AS, PR/3/AS/ZB		PR/3/AC, PR/3/AC/ZB, PR/3/AS, PR/3/AS/ZB	
Mounting rail IEC60715 TH35 15	—		—		—	
Marking tag	already mounted		already mounted		already mounted	
Spare part relay	8904017		8904055		8904056	
End section	—		—		—	
Plugin jumper	CMB16B (8poles)		CMB16B (8poles)		CMB16B (8poles)	
	—		—		—	
	—		—		—	
	—		—		—	
	—		—		—	

- Pluggable relay
- AC input voltage
- DPDT contact
- Compact dimensions
- Available plug-in jumper for potential distribution



NOTE

Manufacturer and model of the relay is not binding, technical data are to be considered typical

CODE TYPE	CM2A230	XCM2A230
<b>INPUT TECHNICAL DATA</b>		
Input rated voltage	230 Vac ±10%	
Pull in drop out voltage type	172.5 V / 34.5 V	
Current consumption	6 mA ±10%	
Turn ON OFF time	10 ms / 5 ms	
Frequency	—	
Protection circuit	—	
Connection type	2.5 mm <sup>2</sup> screw type	
Input channels	1 pluggable	
<b>OUTPUT TECHNICAL DATA</b>		
Contact type	DPDT, 2 form C, AgNi	
Output voltage	—	
Nominal current	8 A (250 Vac)	
Max current	8 A	
Leakage current with signal 0	—	
Min applicable load	—	
Max fuse current	—	
Connection type	2.5 mm <sup>2</sup> (AWG26-14), screw type	
Protection circuit device	—	
<b>GENERAL TECHNICAL DATA</b>		
Operating temperature range	-20...+60°C	
Input output isolation	2.5 kVac / 60 s	
Protection degree	IP 20	
Reference Standards	—	
Overvoltage category pollution degree	II / 2	
Status indication	LED "Input"	
Housing material	UL94V-0 plastic material	
Dimensions	16x75x68 mm	
Approximate weight	67 g	
Mounting information	on a rail, side by side	
APPROVALS	CE	
<b>ACCESSORIES</b>		
Mounting rail IEC60715 TH35 75	PR/3/AC, PR/3/AC/ZB, PR/3/AS, PR/3/AS/ZB	
Mounting rail IEC60715 TH35 15	—	
Marking tag	already mounted	
Spare part relay	8904057	
End section	—	
Plugin jumper	CMB16B (8poles)	
	—	
	—	
	—	
	—	

- Not-pluggable relay
- Allow PNP and NPN command
- Available plug-in jumper for potential distribution

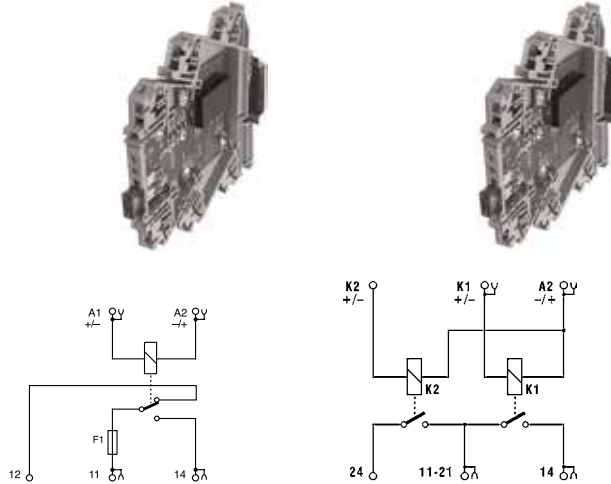
**NOTE**

Manufacturer and model of the relay is not binding, technical data are to be considered typical

(1) Produced on demand, contact our sales office for availability

(2) the output contact is protected by a 7.5 A replaceable fuse. It can be replaced with a lower value according to the output load and wiring. Greater values than 7.5 A is not allowed. The fuse is suitable for SELV ≤ 50 Vac and ≤ 75 Vdc voltages; if used with greater voltages it will not guarantee cut-off capability and safe operation.

(3) the final module must always be protected with the CK/PT end plate to ensure an IP20 protection degree



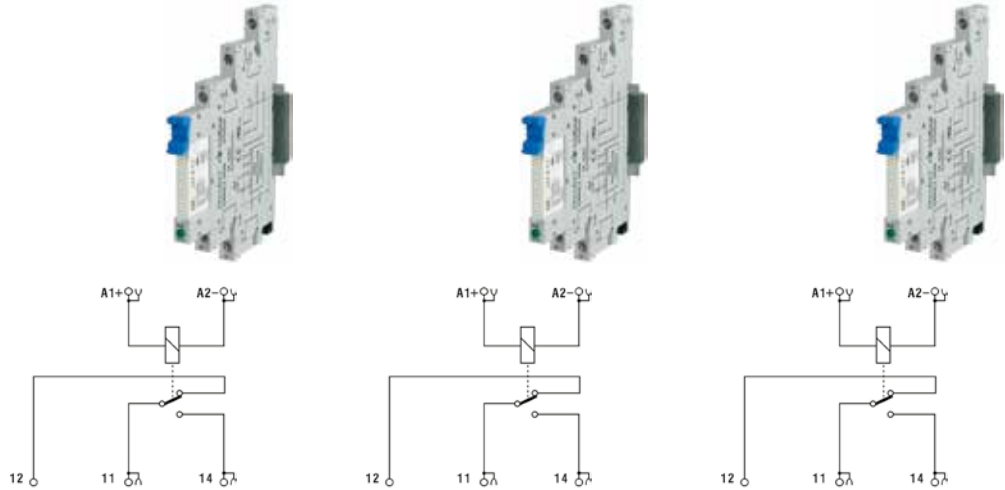
CODE TYPE	CKR16	XCKR16	CKR25 (1)	XCKR25
<b>INPUT TECHNICAL DATA</b>				
Input rated voltage	24 Vac/dc ±10%		24 Vac/dc ±10%	
Pull in/drop out voltage type	18 V / 1.2 V		18 V / 1.2 V	
Current consumption	15 mA ±10%		13 mA ±10%	
Turn ON/OFF time	10 ms / 5 ms		10 ms / 5 ms	
Frequency	—		—	
Protection circuit	Free-wheel diode		Free-wheel diode	
Connection type	2.5 mm <sup>2</sup> spring type		2.5 mm <sup>2</sup> spring type	
Input channels	1 not pluggable		2 not pluggable	
<b>OUTPUT TECHNICAL DATA</b>				
Contact type	SPDT, 1 form C, AgSnO <sub>2</sub>		SPST(NO), 1 Form A (NO), AgSnO <sub>2</sub>	
Output voltage	—		—	
Nominal current	6 A (30 Vac)		5 A (250 Vac)	
Max current	10 A peak (2)		10 A	
Leakage current with signal 0	—		—	
Min applicable load	—		—	
Max fuse current	7.5 A (2)		—	
Connection type	2.5 mm <sup>2</sup> (AWG26-14), spring type		2.5 mm <sup>2</sup> (AWG26-14), spring type	
Protection circuit device	replaceable fuse (2)		—	
<b>GENERAL TECHNICAL DATA</b>				
Operating temperature range	-20...+60°C		-20...+60°C	
Input/output isolation	3 kVac / 60 s		3 kVac / 60 s	
Protection degree	IP 00 / IP20 (3)		IP 00 / IP20 (2)	
Reference Standards	—		—	
Overvoltage category/pollution degree	II / 2		II / 2	
Status indication	LED "Input"		LED "Input"	
Housing material	UL94V-0 plastic material		UL94V-0 plastic material	
Dimensions	6x91x100 mm		6x91x100 mm	
Approximate weight	40 g		43 g	
Mounting information	on a rail, side by side		on a rail, side by side	
<b>APPROVALS</b>	<b>CE</b>		<b>CE</b>	
<b>ACCESSORIES</b>				
Mounting rail IEC60715 TH35 75	PR/3/AC, PR/3/AC/ZB, PR/3/AS, PR/3/AS/ZB		PR/3/AC, PR/3/AC/ZB, PR/3/AS, PR/3/AS/ZB	
Mounting rail IEC60715 TH35 15	—		—	
Marking tag	NU0851		NU0851	
Spare part relay	—		—	
End section	XCKPT		XCKPT	
Plugin jumper	PTC/4/02 (2 poles) PTC/4/03 (3 poles) PTC/4/04 (4 poles) PTC/4/05 (5 poles) PTC/4/10 (10 poles) PTC/4/00 (42 poles)		PTC/4/02 (2 poles) PTC/4/03 (3 poles) PTC/4/04 (4 poles) PTC/4/05 (5 poles) PTC/4/10 (10 poles) PTC/4/00 (42 poles)	

- Pluggable relay
- AC/DC input voltage
- SPDT contact
- Compact dimensions
- Available plug-in jumper for potential distribution

**NOTE**

Manufacturer and model of the relay is not binding, technical data are to be considered typical

(1) Version produced upon request; contact our sales office for availability.

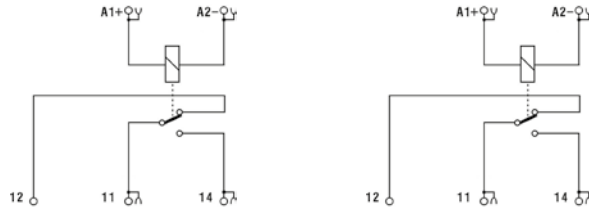






CODE TYPE	<b>CWRE7-0848 (1)</b> X766848	<b>CWRE7-0842</b> X766842	<b>CWRE7-0845 (1)</b> X766845
<b>INPUT TECHNICAL DATA</b>			
Input rated voltage	12 Vac/dc ±10%	24 Vac/dc ±10%	48 Vac/dc ±10%
Pull in/out voltage type	9 V / 0.6 V	18 V / 1.2 V	36 V / 2.4 V
Current consumption	10 mA ±10%	7 mA ±10%	5 mA ±10%
Turn ON/OFF time	8 ms / 5 ms	8 ms / 5 ms	8 ms / 5 ms
Frequency	—	—	—
Protection circuit	Free-wheel diode, Reverse polarity	Free-wheel diode, Reverse polarity	Free-wheel diode, Reverse polarity
Connection type	2.5 mm <sup>2</sup> screw type	2.5 mm <sup>2</sup> screw type	2.5 mm <sup>2</sup> screw type
Input channels	1 pluggable	1 pluggable	1 pluggable
<b>OUTPUT TECHNICAL DATA</b>			
Contact type	SPDT, 1 form C, AgSnO <sub>2</sub>	SPDT, 1 form C, AgSnO <sub>2</sub>	SPDT, 1 form C, AgSnO <sub>2</sub>
Output voltage	400 Vac max., 30 Vdc max.	400 Vac max., 30 Vdc max.	400 Vac max., 30 Vdc max.
Nominal current	6 A (250 Vac), 6 A (30 Vdc)	6 A (250 Vac), 6 A (30 Vdc)	6 A (250 Vac), 6 A (30 Vdc)
Max current	—	—	—
Leakage current with signal 0	—	—	—
Min applicable load	—	—	—
Max fuse current	—	—	—
Connection type	2.5 mm <sup>2</sup> (AWG26-14), screw type	2.5 mm <sup>2</sup> (AWG26-14), screw type	2.5 mm <sup>2</sup> (AWG26-14), screw type
Protection circuit device	—	—	—
<b>GENERAL TECHNICAL DATA</b>			
Operating temperature range	-20...+70°C	-20...+70°C	-20...+70°C
Input output isolation	4 kVac / 60 s	4 kVac / 60 s	4 kVac / 60 s
Protection degree	IP 20	IP 20	IP 20
Reference Standards	—	—	—
Overvoltage category/pollution degree	II / 2	II / 2	II / 2
Status indication	LED "Input"	LED "Input"	LED "Input"
Housing material	UL94V-0 plastic material	UL94V-0 plastic material	UL94V-0 plastic material
Dimensions	6.2x89x77 mm	6.2x89x77 mm	6.2x89x77 mm
Approximate weight	35 g	35 g	35 g
Mounting information	on a rail, side by side	on a rail, side by side	on a rail, side by side
<b>APPROVALS</b>			
<b>ACCESSORIES</b>			
Mounting rail IEC60715 TH35 75	PR/3/AC, PR/3/AC/ZB, PR/3/AS, PR/3/AS/ZB	PR/3/AC, PR/3/AC/ZB, PR/3/AS, PR/3/AS/ZB	PR/3/AC, PR/3/AC/ZB, PR/3/AS, PR/3/AS/ZB
Mounting rail IEC60715 TH35 15	—	—	—
Marking tag	NUPUTUK50	NUPUTUK50	NUPUTUK50
Spare part relay	—	8904027	—
End section	—	—	—
<b>Plugin jumper</b>	CWBK7-0813 (20 poli)	CWBK7-0813 (20 poli)	CWBK7-0813 (20 poli)
	—	—	—
	—	—	—
	—	—	—
	—	—	—
	—	—	—
	—	—	—

- Pluggable relay
- AC/DC input voltage
- SPDT contact
- Compact dimensions
- Available plug-in jumper for potential distribution

**NOTE**

Manufacturer and model of the relay is not binding, technical data are to be considered typical



CODE TYPE	<b>CWRE7-0846</b> X766846	<b>CWRE7-0847</b> X766847
<b>INPUT TECHNICAL DATA</b>		
Input rated voltage	115 Vac/dc ±10%	230 Vac ±10%
Pull in/drop out voltage type	—	—
Current consumption	4 mA ±10%	4 mA ±10%
Turn ON/OFF time	8 ms / 5 ms	8 ms / 5 ms
Frequency	—	—
Protection circuit	Free-wheel diode, Reverse polarity	Free-wheel diode, Reverse polarity
Connection type	2.5 mm <sup>2</sup> screw type	2.5 mm <sup>2</sup> screw type
Input channels	1 pluggable	1 pluggable
<b>OUTPUT TECHNICAL DATA</b>		
Contact type	SPDT, 1 form C, AgSnO <sub>2</sub>	SPDT, 1 form C, AgSnO <sub>2</sub>
Output voltage	400 Vac max., 30 Vdc max.	400 Vac max., 30 Vdc max.
Nominal current	6 A (250 Vac), 6 A (30 Vdc)	6 A (250 Vac), 6 A (30 Vdc)
Max current	—	—
Leakage current with signal 0	—	—
Min applicable load	—	—
Max fuse current	—	—
Connection type	2.5 mm <sup>2</sup> (AWG26-14), screw type	2.5 mm <sup>2</sup> (AWG26-14), screw type
Protection circuit device	—	—
<b>GENERAL TECHNICAL DATA</b>		
Operating temperature range	-20...+70°C	-20...+70°C
Input/output isolation	4 kVac / 60 s	4 kVac / 60 s
Protection degree	IP 20	IP 20
Reference Standards	—	—
Overvoltage category/pollution degree	II / 2	II / 2
Status indication	LED "Input"	LED "Input"
Housing material	UL94V-0 plastic material	UL94V-0 plastic material
Dimensions	6.2x89x77 mm	6.2x89x77 mm
Approximate weight	35 g	35 g
Mounting information	on a rail, side by side	on a rail, side by side
<b>APPROVALS</b>	 	 
<b>ACCESSORIES</b>		
Mounting rail IEC60715 TH35 75	PR/3/AC, PR/3/AC/ZB, PR/3/AS, PR/3/AS/ZB	PR/3/AC, PR/3/AC/ZB, PR/3/AS, PR/3/AS/ZB
Mounting rail IEC60715 TH35 15	—	—
Marking tag	NUPUTUK50	NUPUTUK50
Spare part relay	—	—
End section	—	—
Plugin jumper	CWBK7-0813 (20 poli) — — — — —	CWBK7-0813 (20 poli) — — — — —

# ELECTROMECHANICAL RELAY MODULES MULTI-CHANNEL MODULES

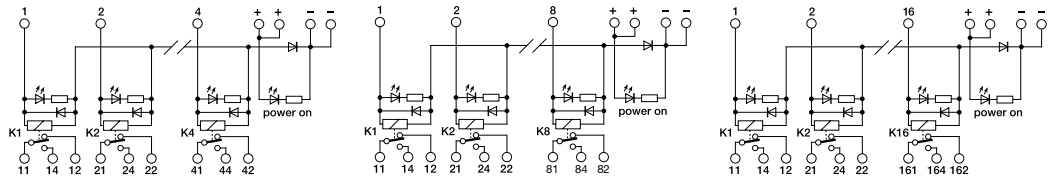


- Pluggable relay
- DC input voltage
- SPDT contact
- Coils with negative common and positive command (PNP)



## NOTE

Manufacturer and model of the relay is not binding, technical data are to be considered typical



CODE TYPE	XR041E24	XR081E24	XR161E24
<b>INPUT TECHNICAL DATA</b>			
Input rated voltage	24 Vdc ±10%	24 Vdc ±10%	24 Vdc ±10%
Pull in drop out voltage type	16.8 V / 2.4 V	16.8 V / 2.4 V	16.8 V / 2.4 V
Current consumption	22 mA ±10%	22 mA ±10%	22 mA ±10%
Turn ON OFF time	10 ms / 5 ms	10 ms / 5 ms	10 ms / 5 ms
Frequency	—	—	—
Protection circuit	Free-wheel diode, Reverse polarity	Free-wheel diode, Reverse polarity	Free-wheel diode, Reverse polarity
Connection type	2.5 mm <sup>2</sup> screw type	2.5 mm <sup>2</sup> screw type and 16 poles connector	2.5 mm <sup>2</sup> screw type and 20 poles connector
Input channels	4 pluggable	8 pluggable	16 pluggable
<b>OUTPUT TECHNICAL DATA</b>			
Contact type	SPDT, 1 form C, AgSnO <sub>2</sub>	SPDT, 1 form C, AgSnO <sub>2</sub>	SPDT, 1 form C, AgSnO <sub>2</sub>
Output voltage	—	—	—
Nominal current	16 A (250 Vac)	16 A (250 Vac)	16 A (250 Vac)
Max current	16 A	16 A	16 A
Leakage current with signal 0	—	—	—
Min applicable load	—	—	—
Max fuse current	—	—	—
Connection type	2.5 mm <sup>2</sup> (AWG26-14), screw type	2.5 mm <sup>2</sup> (AWG26-14), screw type	2.5 mm <sup>2</sup> (AWG26-14), screw type
Protection circuit device	—	—	—
<b>GENERAL TECHNICAL DATA</b>			
Operating temperature range	-20...+70°C	-20...+70°C	-20...+70°C
Input output isolation	2.5 kVac / 60 s	2.5 kVac / 60 s	2.5 kVac / 60 s
Protection degree	IP 00	IP 00	IP 00
Reference Standards	—	—	—
Overvoltage category pollution degree	II / 2	II / 2	II / 2
Status indication	LED "DC OK" / LED "Relay"	LED "DC OK" / LED "Relay"	LED "DC OK" / LED "Relay"
Housing material	UL94V-0 plastic material	UL94V-0 plastic material	UL94V-0 plastic material
Dimensions	70x93x75 mm	137x93x75 mm	250x93x75 mm
Approximate weight	188 g	342 g	657 g
Mounting information	on a rail, side by side	on a rail, side by side	on a rail, side by side
<b>APPROVALS</b>	<b>CE</b>	<b>CE</b>	<b>CE</b>
<b>ACCESSORIES</b>			
Mounting rail IEC60715 TH35 75	PR/3/AC, PR/3/AC/ZB, PR/3/AS, PR/3/AS/ZB	PR/3/AC, PR/3/AC/ZB, PR/3/AS, PR/3/AS/ZB	PR/3/AC, PR/3/AC/ZB, PR/3/AS, PR/3/AS/ZB
Mounting rail IEC60715 TH35 15	PR/3/PP, PR/3/PP/ZB, PR/3/PA, PR/3/PA/ZB	PR/3/PP, PR/3/PP/ZB, PR/3/PA, PR/3/PA/ZB	PR/3/PP, PR/3/PP/ZB, PR/3/PA, PR/3/PA/ZB
Marking tag	—	—	—
Spare part relay	8904073	8904073	8904073
End section	—	—	—
Plugin jumper	—	—	—

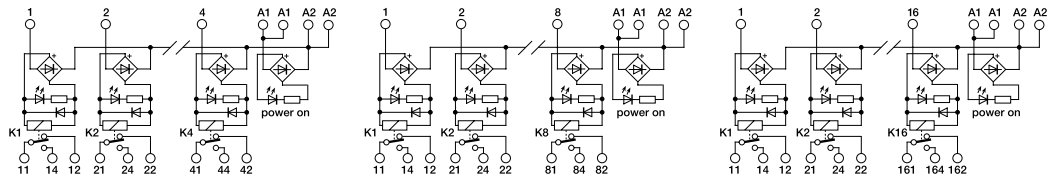
# ELECTROMECHANICAL RELAY MODULES MULTI-CHANNEL MODULES



- Pluggable relay
- AC/DC input voltage
- SPDT contact
- Allow PNP and NPN command



**NOTE**  
Manufacturer and model of the relay is not binding, technical data are to be considered typical



CODE TYPE	R41EAD	XR041EAD	R81EAD	XR081EAD	R161EAD	XR161EAD
<b>INPUT TECHNICAL DATA</b>						
Input rated voltage	24 Vac/dc ±10%		24 Vac/dc ±10%		24 Vac/dc ±10%	
Pull in drop out voltage type	16.8 V / 2.4 V		16.8 V / 2.4 V		16.8 V / 2.4 V	
Current consumption	22 mA ±10%		22 mA ±10%		22 mA ±10%	
Turn ON OFF time	10 ms / 5 ms		10 ms / 5 ms		10 ms / 5 ms	
Frequency	—		—		—	
Protection circuit	Free-wheel diode, Reverse polarity		Free-wheel diode, Reverse polarity		Free-wheel diode, Reverse polarity	
Connection type	2.5 mm <sup>2</sup> screw type		2.5 mm <sup>2</sup> screw type and 16 poles connector		2.5 mm <sup>2</sup> screw type and 20 poles connector	
Input channels	4 pluggable		8 pluggable		16 pluggable	
<b>OUTPUT TECHNICAL DATA</b>						
Contact type	SPDT, 1 form C, AgSnO <sub>2</sub>		SPDT, 1 form C, AgSnO <sub>2</sub>		SPDT, 1 form C, AgSnO <sub>2</sub>	
Output voltage	—		—		—	
Nominal current	16 A (250 Vac)		16 A (250 Vac)		16 A (250 Vac)	
Max current	16 A		16 A		16 A	
Leakage current with signal 0	—		—		—	
Min applicable load	—		—		—	
Max fuse current	—		—		—	
Connection type	2.5 mm <sup>2</sup> (AWG26-14), screw type		2.5 mm <sup>2</sup> (AWG26-14), screw type		2.5 mm <sup>2</sup> (AWG26-14), screw type	
Protection circuit device	—		—		—	
<b>GENERAL TECHNICAL DATA</b>						
Operating temperature range	-20...+70°C		-20...+70°C		-20...+70°C	
Input output isolation	2.5 kVac / 60 s		2.5 kVac / 60 s		2.5 kVac / 60 s	
Protection degree	IP 00		IP 00		IP 00	
Reference Standards	—		—		—	
Overvoltage category pollution degree	II / 2		II / 2		II / 2	
Status indication	LED "DC OK" / LED "Relay"		LED "DC OK" / LED "Relay"		LED "DC OK" / LED "Relay"	
Housing material	UL94V-0 plastic material		UL94V-0 plastic material		UL94V-0 plastic material	
Dimensions	70x93x75 mm		137x93x75 mm		250x93x75 mm	
Approximate weight	192 g		345 g		688 g	
Mounting information	on a rail, side by side		on a rail, side by side		on a rail, side by side	
APPROVALS	CE		CE		CE	
<b>ACCESSORIES</b>						
Mounting rail IEC60715 TH35 75	PR/3/AC, PR/3/AC/ZB, PR/3/AS, PR/3/AS/ZB		PR/3/AC, PR/3/AC/ZB, PR/3/AS, PR/3/AS/ZB		PR/3/AC, PR/3/AC/ZB, PR/3/AS, PR/3/AS/ZB	
Mounting rail IEC60715 TH35 15	PR/3/PP, PR/3/PP/ZB, PR/3/PA, PR/3/PA/ZB		PR/3/PP, PR/3/PP/ZB, PR/3/PA, PR/3/PA/ZB		PR/3/PP, PR/3/PP/ZB, PR/3/PA, PR/3/PA/ZB	
Marking tag	—		—		—	
Spare part relay	8904073		8904073		8904073	
End section	—		—		—	
Plugin jumper	—		—		—	

# ELECTROMECHANICAL RELAY MODULES MULTI-CHANNEL MODULES WITH FUSES



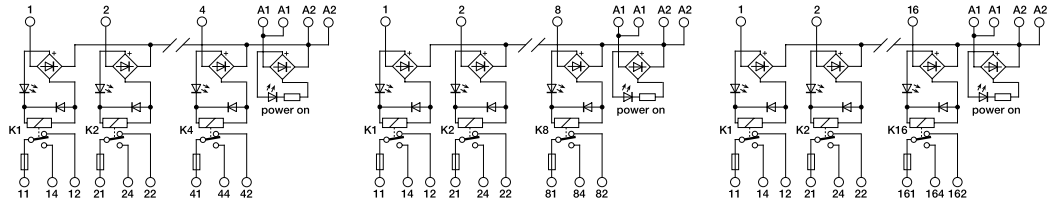
- Pluggable relay
- AC/DC input voltage
- SPDT contact
- Allow PNP and NPN command
- Contact protected by replaceable fuse



## NOTE

Manufacturer and model of the relay is not binding, technical data are to be considered typical

[2] Fuses are not provided, they must be selected according to the load current. The max. value of 6.3 A is referred to the fuses holder capability according to EN 60127.



CODE TYPE	XR041U24F	XR81U24F	XR161U24F
<b>INPUT TECHNICAL DATA</b>			
Input rated voltage	24 Vac/dc ±10%	24 Vac/dc ±10%	24 Vac/dc ±10%
Pull in drop out voltage type	16.8 V / 2.4 V	16.8 V / 2.4 V	16.8 V / 2.4 V
Current consumption	22 mA ±10%	22 mA ±10%	22 mA ±10%
Turn ON OFF time	10 ms / 5 ms	10 ms / 5 ms	10 ms / 5 ms
Frequency	—	—	—
Protection circuit	Free-wheel diode, Reverse polarity	Free-wheel diode, Reverse polarity	Free-wheel diode, Reverse polarity
Connection type	2.5 mm <sup>2</sup> screw type	2.5 mm <sup>2</sup> screw type and 16 poles connector	2.5 mm <sup>2</sup> screw type and 20 poles connector
Input channels	4 pluggable	8 pluggable	16 pluggable
<b>OUTPUT TECHNICAL DATA</b>			
Contact type	SPDT, 1 form C, AgSnO <sub>2</sub>	SPDT, 1 form C, AgSnO <sub>2</sub>	SPDT, 1 form C, AgSnO <sub>2</sub>
Output voltage	—	—	—
Nominal current	16 A (250 Vac)	16 A (250 Vac)	16 A (250 Vac)
Max current	16 A	16 A	16 A
Leakage current with signal 0	—	—	—
Min applicable load	—	—	—
Max fuse current	6.3 A (250 Vac) [2]	6.3 A (250 Vac) [2]	6.3 A (250 Vac) [2]
Connection type	2.5 mm <sup>2</sup> (AWG26-14), screw type	2.5 mm <sup>2</sup> (AWG26-14), screw type	2.5 mm <sup>2</sup> (AWG26-14), screw type
Protection circuit device	—	—	—
<b>GENERAL TECHNICAL DATA</b>			
Operating temperature range	-20...+70°C	-20...+70°C	-20...+70°C
Input output isolation	2.5 kVac / 60 s	2.5 kVac / 60 s	2.5 kVac / 60 s
Protection degree	IP 00	IP 00	IP 00
Reference Standards	—	—	—
Overvoltage category pollution degree	II / 2	II / 2	II / 2
Status indication	LED "DC OK" / LED "Relay"	LED "DC OK" / LED "Relay"	LED "DC OK" / LED "Relay"
Housing material	UL94V-0 plastic material	UL94V-0 plastic material	UL94V-0 plastic material
Dimensions	70x93x75 mm	137x93x75 mm	250x93x75 mm
Approximate weight	210 g	326 g	770 g
Mounting information	on a rail, side by side	on a rail, side by side	on a rail, side by side
<b>APPROVALS</b>	<b>CE</b>	<b>CE</b>	<b>CE</b>
<b>ACCESSORIES</b>			
Mounting rail IEC60715 TH35 75	PR/3/AC, PR/3/AC/ZB, PR/3/AS, PR/3/AS/ZB	PR/3/AC, PR/3/AC/ZB, PR/3/AS, PR/3/AS/ZB	PR/3/AC, PR/3/AC/ZB, PR/3/AS, PR/3/AS/ZB
Mounting rail IEC60715 TH35 15	PR/3/PP, PR/3/PP/ZB, PR/3/PA, PR/3/PA/ZB	PR/3/PP, PR/3/PP/ZB, PR/3/PA, PR/3/PA/ZB	PR/3/PP, PR/3/PP/ZB, PR/3/PA, PR/3/PA/ZB
Marking tag	—	—	—
Spare part relay	8904073	8904073	8904073
End section	—	—	—
Plugin jumper	—	—	—



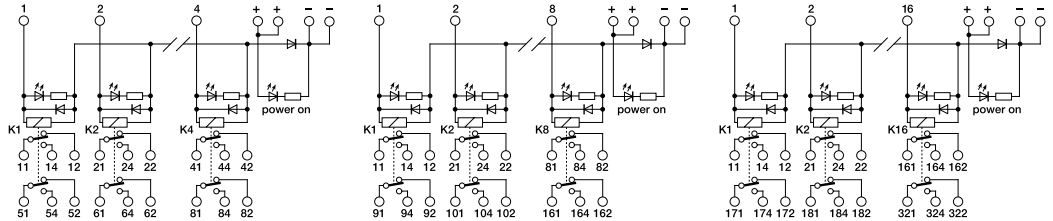
# ELECTROMECHANICAL RELAY MODULES MULTI-CHANNEL MODULES



- Pluggable relay
- DC input voltage
- DPDT contact
- Coils with negative common and positive command (PNP)



**NOTE**  
Manufacturer and model of the relay is not binding, technical data are to be considered typical



CODE TYPE	XR042E24	XR082E24	XR162E24
<b>INPUT TECHNICAL DATA</b>	<b>R42E24</b>	<b>R82E24</b>	<b>R162E24</b>
Input rated voltage	24 Vdc ±10%	24 Vdc ±10%	24 Vdc ±10%
Pull in drop out voltage type	16.8 V / 2.4 V	16.8 V / 2.4 V	16.8 V / 2.4 V
Current consumption	22 mA ±10%	22 mA ±10%	22 mA ±10%
Turn ON OFF time	10 ms / 5 ms	10 ms / 5 ms	10 ms / 5 ms
Frequency	—	—	—
Protection circuit	Free-wheel diode, Reverse polarity	Free-wheel diode, Reverse polarity	Free-wheel diode, Reverse polarity
Connection type	2.5 mm <sup>2</sup> screw type	2.5 mm <sup>2</sup> screw type and 16 poles connector	2.5 mm <sup>2</sup> screw type and 20 poles connector
Input channels	4 pluggable	8 pluggable	16 pluggable
<b>OUTPUT TECHNICAL DATA</b>			
Contact type	DPDT, 2 form C, AgSnO <sub>2</sub>	DPDT, 2 form C, AgSnO <sub>2</sub>	DPDT, 2 form C, AgSnO <sub>2</sub>
Output voltage	—	—	—
Nominal current	10 A (250 Vac)	10 A (250 Vac)	10 A (250 Vac)
Max current	10 A	10 A	10 A
Leakage current with signal 0	—	—	—
Min applicable load	—	—	—
Max fuse current	—	—	—
Connection type	2.5 mm <sup>2</sup> (AWG26-14), screw type	2.5 mm <sup>2</sup> (AWG26-14), screw type	2.5 mm <sup>2</sup> (AWG26-14), screw type
Protection circuit device	—	—	—
<b>GENERAL TECHNICAL DATA</b>			
Operating temperature range	-20...+70°C	-20...+70°C	-20...+70°C
Input output isolation	2.5 kVac / 60 s	2.5 kVac / 60 s	2.5 kVac / 60 s
Protection degree	IP 00	IP 00	IP 00
Reference Standards	—	—	—
Overvoltage category pollution degree	II / 2	II / 2	II / 2
Status indication	LED "DC OK" / LED "Relay"	LED "DC OK" / LED "Relay"	LED "DC OK" / LED "Relay"
Housing material	UL94V-0 plastic material	UL94V-0 plastic material	UL94V-0 plastic material
Dimensions	70x93x75 mm	137x93x75 mm	250x93x75 mm
Approximate weight	225 g	419 g	811 g
Mounting information	on a rail, side by side	on a rail, side by side	on a rail, side by side
<b>APPROVALS</b>	<b>CE</b>	<b>CE</b>	<b>CE</b>
<b>ACCESSORIES</b>			
Mounting rail IEC60715 TH35 75	PR/3/AC, PR/3/AC/ZB, PR/3/AS, PR/3/AS/ZB	PR/3/AC, PR/3/AC/ZB, PR/3/AS, PR/3/AS/ZB	PR/3/AC, PR/3/AC/ZB, PR/3/AS, PR/3/AS/ZB
Mounting rail IEC60715 TH35 15	PR/3/PP, PR/3/PP/ZB, PR/3/PA, PR/3/PA/ZB	PR/3/PP, PR/3/PP/ZB, PR/3/PA, PR/3/PA/ZB	PR/3/PP, PR/3/PP/ZB, PR/3/PA, PR/3/PA/ZB
Marking tag	—	—	—
Spare part relay	8904074	8904074	8904074
End section	—	—	—
Plugin jumper	—	—	—

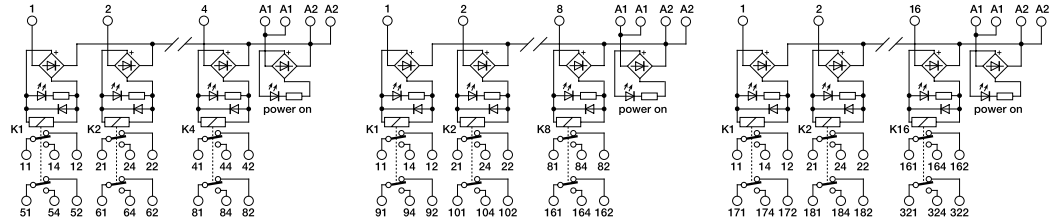
# ELECTROMECHANICAL RELAY MODULES MULTI-CHANNEL MODULES



- Pluggable relay
- AC/DC input voltage
- DPDT contact
- Allow PNP and NPN command



**NOTE**  
Manufacturer and model of the relay is not binding, technical data are to be considered typical



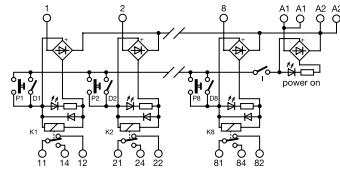
CODE TYPE	R42EAD	XR042EAD	R82EAD	XR082EAD	R162EAD	XR162EAD
<b>INPUT TECHNICAL DATA</b>						
Input rated voltage	24 Vac/dc ±10%		24 Vac/dc ±10%		24 Vac/dc ±10%	
Pull in drop out voltage type	16.8 V / 2.4 V		16.8 V / 2.4 V		16.8 V / 2.4 V	
Current consumption	22 mA ±10%		22 mA ±10%		22 mA ±10%	
Turn ON OFF time	10 ms / 5 ms		10 ms / 5 ms		10 ms / 5 ms	
Frequency	—		—		—	
Protection circuit	Free-wheel diode, Reverse polarity		Free-wheel diode, Reverse polarity		Free-wheel diode, Reverse polarity	
Connection type	2.5 mm <sup>2</sup> screw type		2.5 mm <sup>2</sup> screw type and 16 poles connector		2.5 mm <sup>2</sup> screw type and 20 poles connector	
Input channels	4 pluggable		8 pluggable		16 pluggable	
<b>OUTPUT TECHNICAL DATA</b>						
Contact type	DPDT, 2 form C, AgSnO <sub>2</sub>		DPDT, 2 form C, AgSnO <sub>2</sub>		DPDT, 2 form C, AgSnO <sub>2</sub>	
Output voltage	—		—		—	
Nominal current	10 A (250 Vac)		10 A (250 Vac)		10 A (250 Vac)	
Max current	10 A		10 A		10 A	
Leakage current with signal 0	—		—		—	
Min applicable load	—		—		—	
Max fuse current	—		—		—	
Connection type	2.5 mm <sup>2</sup> (AWG26-14), screw type		2.5 mm <sup>2</sup> (AWG26-14), screw type		2.5 mm <sup>2</sup> (AWG26-14), screw type	
Protection circuit device	—		—		—	
<b>GENERAL TECHNICAL DATA</b>						
Operating temperature range	-20...+70°C		-20...+70°C		-20...+70°C	
Input output isolation	2.5 kVac / 60 s		2.5 kVac / 60 s		2.5 kVac / 60 s	
Protection degree	IP 00		IP 00		IP 00	
Reference Standards	—		—		—	
Overvoltage category pollution degree	II / 2		II / 2		II / 2	
Status indication	LED "DC OK" / LED "Relay"		LED "DC OK" / LED "Relay"		LED "DC OK" / LED "Relay"	
Housing material	UL94V-0 plastic material		UL94V-0 plastic material		UL94V-0 plastic material	
Dimensions	70x93x75 mm		137x93x75 mm		250x93x75 mm	
Approximate weight	227 g		427 g		835 g	
Mounting information	on a rail, side by side		on a rail, side by side		on a rail, side by side	
<b>APPROVALS</b>	<b>CE</b>		<b>CE</b>		<b>CE</b>	
<b>ACCESSORIES</b>						
Mounting rail IEC60715 TH35 75	PR/3/AC, PR/3/AC/ZB, PR/3/AS, PR/3/AS/ZB		PR/3/AC, PR/3/AC/ZB, PR/3/AS, PR/3/AS/ZB		PR/3/AC, PR/3/AC/ZB, PR/3/AS, PR/3/AS/ZB	
Mounting rail IEC60715 TH35 15	PR/3/PP, PR/3/PP/ZB, PR/3/PA, PR/3/PA/ZB		PR/3/PP, PR/3/PP/ZB, PR/3/PA, PR/3/PA/ZB		PR/3/PP, PR/3/PP/ZB, PR/3/PA, PR/3/PA/ZB	
Marking tag	—		—		—	
Spare part relay	8904074		8904074		8904074	
End section	—		—		—	
Plugin jumper	—		—		—	

- Pluggable relay
- AC/DC input voltage
- SPDT contact
- Allow PNP and NPN command
- Test with buttons and switches



**NOTE**

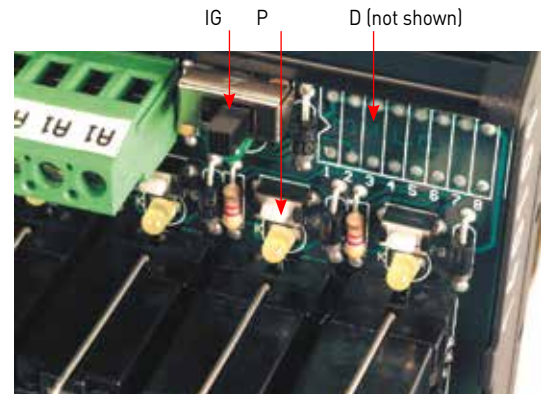
Manufacturer and model of the relay is not binding, technical data are to be considered typical



CODE TYPE	RMP081CM	XRMP081CM
<b>INPUT TECHNICAL DATA</b>		
Input rated voltage	24 Vac/dc ±10%	
Pull in/drop out voltage type	16.8 V / 2.4 V	
Current consumption	22 mA ±10%	
Turn ON/OFF time	10 ms / 5 ms	
Frequency	—	
Protection circuit	Free-wheel diode, Reverse polarity	
Connection type	2.5 mm <sup>2</sup> screw type	
Input channels	8 pluggable	
<b>OUTPUT TECHNICAL DATA</b>		
Contact type	SPDT, 1 form C, AgSnO <sub>2</sub>	
Output voltage	—	
Nominal current	16 A (250 Vac)	
Max current	16 A	
Leakage current with signal 0	—	
Min applicable load	—	
Max fuse current	—	
Connection type	2.5 mm <sup>2</sup> (AWG26-14), screw type	
Protection circuit device	—	
<b>GENERAL TECHNICAL DATA</b>		
Operating temperature range	-20...+70°C	
Input/output isolation	2.5 kVac / 60 s	
Protection degree	IP 00	
Reference Standards	—	
Overvoltage category/pollution degree	II / 2	
Status indication	LED "DC OK" / LED "Relay"	
Housing material	UL94V-0 plastic material	
Dimensions	136x93x75 mm	
Approximate weight	350 g	
Mounting information	on a rail, side by side	
<b>APPROVALS</b>		
<b>ACCESSORIES</b>		
Mounting rail IEC60715 TH35 75	PR/3/AC, PR/3/AC/ZB, PR/3/AS, PR/3/AS/ZB	
Mounting rail IEC60715 TH35 15	PR/3/PP, PR/3/PP/ZB, PR/3/PA, PR/3/PA/ZB	
Marking tag	—	
Spare part relay	8904073	
End section	—	
Plugin jumper	—	
	—	
	—	
	—	
	—	

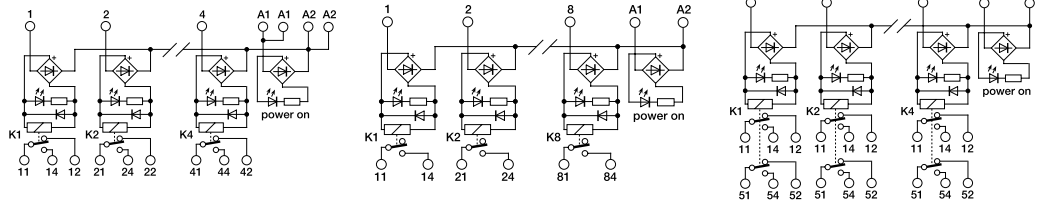
- P = test button
- D = DIP-switch
- IG = general switch for isolating buttons and the DIP-switch

This product can be operated in alternate current (AC) and also in direct current (DC). Relay activation can be forced temporarily using the relevant button, or permanently using a DIP-switch.



- Not-pluggable relay
- AC/DC input voltage
- Fast cabling with pluggable terminal blocks
- Allow PNP and NPN command
- Extremely compact dimensions

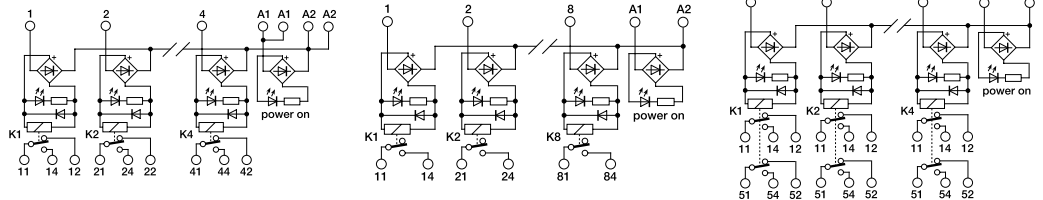
**NOTE**  
Manufacturer and model of the relay is not binding, technical data are to be considered typical



CODE TYPE	XCR41	XCR81	XCR425C
<b>INPUT TECHNICAL DATA</b>	<b>CR4-1</b>	<b>CR8-1</b>	<b>CR4-2SC</b>
Input rated voltage	24 Vac/dc ±10%	24 Vac/dc ±10%	24 Vac/dc ±10%
Pull in/out voltage type	16.8 V / 2.4 V	16.8 V / 2.4 V	33.6 V / 4.8 V
Current consumption	16 mA ±10%	16 mA ±10%	20 mA ±10%
Turn ON/OFF time	7 ms / 3 ms	7 ms / 3 ms	10 ms / 15 ms
Frequency	—	—	—
Protection circuit	Free-wheel diode, Reverse polarity	Free-wheel diode, Reverse polarity	Free-wheel diode, Reverse polarity
Connection type	2.5 mm <sup>2</sup> screw type pluggable	2.5 mm <sup>2</sup> screw type pluggable	2.5 mm <sup>2</sup> screw type pluggable
Input channels	4 not pluggable	8 not pluggable	4 not pluggable
<b>OUTPUT TECHNICAL DATA</b>			
Contact type	SPDT, 1 form C, AgNi	SPST(NO), 1 Form A (NO), AgSnO <sub>2</sub>	DPDT, 2 form C, AgNi
Output voltage	—	—	—
Nominal current	8 A (240 Vac)	8 A (240 Vac)	8 A (250 Vac)
Max current	8 A	8 A	8 A
Leakage current with signal 0	—	—	—
Min applicable load	—	—	—
Max fuse current	—	—	—
Connection type	2.5 mm <sup>2</sup> (AWG26-14), screw type pluggable	2.5 mm <sup>2</sup> (AWG26-14), screw type pluggable	2.5 mm <sup>2</sup> (AWG26-14), screw type pluggable
Protection circuit device	—	—	—
<b>GENERAL TECHNICAL DATA</b>			
Operating temperature range	-20...+70°C	-20...+70°C	-20...+60°C
Input/output isolation	2.5 kVac / 60 s	2.5 kVac / 60 s	2.5 kVac / 60 s
Protection degree	IP 20	IP 20	IP 20
Reference Standards	—	—	—
Overvoltage category/pollution degree	II / 2	II / 2	II / 2
Status indication	LED "DC OK" / LED "Relay"	LED "DC OK" / LED "Relay"	LED "DC OK" / LED "Relay"
Housing material	UL94V-0 plastic material	UL94V-0 plastic material	UL94V-0 plastic material
Dimensions	119x108x22.5 mm	119x108x22.5 mm	119x108x22.5 mm
Approximate weight	143 g	199 g	137 g
Mounting information	on a rail, side by side	on a rail, side by side	on a rail, side by side
<b>APPROVALS</b>	<b>CE</b>	<b>CE</b>	<b>CE</b>
<b>ACCESSORIES</b>			
Mounting rail IEC60715 TH35 75	PR/3/AC, PR/3/AC/ZB, PR/3/AS, PR/3/AS/ZB	PR/3/AC, PR/3/AC/ZB, PR/3/AS, PR/3/AS/ZB	PR/3/AC, PR/3/AC/ZB, PR/3/AS, PR/3/AS/ZB
Mounting rail IEC60715 TH35 15	—	—	—
Marking tag	—	—	—
Spare part relay	8904042	8904042	8904052
End section	—	—	—
Plugin jumper	—	—	—

- Pluggable relay
- AC/DC input voltage
- Fast cabling with pluggable terminal blocks
- Allow PNP and NPN command
- Extremely compact dimensions

**NOTE**  
Manufacturer and model of the relay is not binding, technical data are to be considered typical

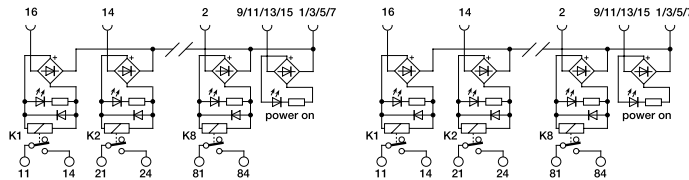


CODE TYPE	XCRE41	XCRE81	XCRE425C
<b>INPUT TECHNICAL DATA</b>	<b>CRE4-1</b>	<b>CRE8-1</b>	<b>CRE4-2SC</b>
Input rated voltage	24 Vac/dc ±10%	24 Vac/dc ±10%	24 Vac/dc ±10%
Pull in drop out voltage type	16.8 V / 2.4 V	16.8 V / 2.4 V	33.6 V / 4.8 V
Current consumption	16 mA ±10%	16 mA ±10%	20 mA ±10%
Turn ON OFF time	7 ms / 3 ms	7 ms / 3 ms	10 ms / 15 ms
Frequency	—	—	—
Protection circuit	Free-wheel diode, Reverse polarity	Free-wheel diode, Reverse polarity	Free-wheel diode, Reverse polarity
Connection type	2.5 mm <sup>2</sup> screw type pluggable	2.5 mm <sup>2</sup> screw type pluggable	2.5 mm <sup>2</sup> screw type pluggable
Input channels	4 pluggable	8 pluggable	4 pluggable
<b>OUTPUT TECHNICAL DATA</b>			
Contact type	SPDT, 1 form C, AgNi	SPST(NO), 1 Form A (NO), AgSnO2	DPDT, 2 form C, AgNi
Output voltage	—	—	—
Nominal current	8 A (240 Vac)	8 A (240 Vac)	8 A (250 Vac)
Max current	8 A	8 A	8 A
Leakage current with signal 0	—	—	—
Min applicable load	—	—	—
Max fuse current	—	—	—
Connection type	2.5 mm <sup>2</sup> (AWG26-14), screw type	2.5 mm <sup>2</sup> (AWG26-14), screw type pluggable	2.5 mm <sup>2</sup> (AWG26-14), screw type pluggable
Protection circuit device	—	—	—
<b>GENERAL TECHNICAL DATA</b>			
Operating temperature range	-20...+70°C	-20...+70°C	-20...+60°C
Input output isolation	2.5 kVac / 60 s	2.5 kVac / 60 s	2.5 kVac / 60 s
Protection degree	IP 20	IP 20	IP 20
Reference Standards	—	—	—
Overvoltage category pollution degree	II / 2	II / 2	II / 2
Status indication	LED "DC OK" / LED "Relay"	LED "DC OK" / LED "Relay"	LED "DC OK" / LED "Relay"
Housing material	UL94V-0 plastic material	UL94V-0 plastic material	UL94V-0 plastic material
Dimensions	119x108x35 mm	119x108x35 mm	119x108x35 mm
Approximate weight	180 g	250 g	180 g
Mounting information	on a rail, side by side	on a rail, side by side	on a rail, side by side
<b>APPROVALS</b>	<b>CE</b>	<b>CE</b>	<b>CE</b>
<b>ACCESSORIES</b>			
Mounting rail IEC60715 TH35 75	PR/3/AC, PR/3/AC/ZB, PR/3/AS, PR/3/AS/ZB	PR/3/AC, PR/3/AC/ZB, PR/3/AS, PR/3/AS/ZB	PR/3/AC, PR/3/AC/ZB, PR/3/AS, PR/3/AS/ZB
Mounting rail IEC60715 TH35 15	—	—	—
Marking tag	—	—	—
Spare part relay	8904042	8904042	8904052
End section	—	—	—
Plugin jumper	—	—	—

- Pluggable relay (CRE) and not pluggable (CR)
- AC/DC input voltage
- Fast cabling with pluggable terminal blocks
- Allow PNP and NPN command
- Extremely compact dimensions



**NOTE**  
Manufacturer and model of the relay is not binding, technical data are to be considered typical



CODE TYPE	CRE8-3	XCRE83	CR8-3	XCR83
<b>INPUT TECHNICAL DATA</b>				
Input rated voltage	24 Vac/dc ±10%		24 Vac/dc ±10%	
Pull in drop out voltage type	16.8 V / 2.4 V		16.8 V / 2.4 V	
Current consumption	16 mA ±10%		16 mA ±10%	
Turn ON OFF time	15 ms / 5 ms		15 ms / 5 ms	
Frequency	—		—	
Protection circuit	Free-wheel diode, Reverse polarity		Free-wheel diode, Reverse polarity	
Connection type	2.5 mm <sup>2</sup> screw type pluggable		2.5 mm <sup>2</sup> screw type pluggable	
Input channels	8 pluggable		8 not pluggable	
<b>OUTPUT TECHNICAL DATA</b>				
Contact type	SPST(NO), 1 Form A (NO), AgSnO <sub>2</sub>		SPST(NO), 1 Form A (NO), AgSnO <sub>2</sub>	
Output voltage	—		—	
Nominal current	8 A (240 Vac)		8 A (240 Vac)	
Max current	8 A		8 A	
Leakage current with signal 0	—		—	
Min applicable load	—		—	
Max fuse current	—		—	
Connection type	2.5 mm <sup>2</sup> (AWG26-14), screw type pluggable		2.5 mm <sup>2</sup> (AWG26-14), screw type pluggable	
Protection circuit device	—		—	
<b>GENERAL TECHNICAL DATA</b>				
Operating temperature range	-20...+70°C		-20...+70°C	
Input output isolation	2.5 kVac / 60 s		2.5 kVac / 60 s	
Protection degree	IP 20		IP 20	
Reference Standards	—		—	
Overvoltage category pollution degree	II / 2		II / 2	
Status indication	LED "DC OK" / LED "Relay"		LED "DC OK" / LED "Relay"	
Housing material	UL94V-0 plastic material		UL94V-0 plastic material	
Dimensions	119x108x35 mm		119x108x22.5 mm	
Approximate weight	199 g		199 g	
Mounting information	on a rail, side by side		on a rail, side by side	
<b>APPROVALS</b>	<b>CE</b>		<b>CE</b>	
<b>ACCESSORIES</b>				
Mounting rail IEC60715 TH35 75	PR/3/AC, PR/3/AC/ZB, PR/3/AS, PR/3/AS/ZB		PR/3/AC, PR/3/AC/ZB, PR/3/AS, PR/3/AS/ZB	
Mounting rail IEC60715 TH35 15	—		—	
Marking tag	—		—	
Spare part relay	8904042		8904042	
End section	—		—	
Plugin jumper	—		—	

# SOLID STATE RELAY QUICK SELECTION TABLE



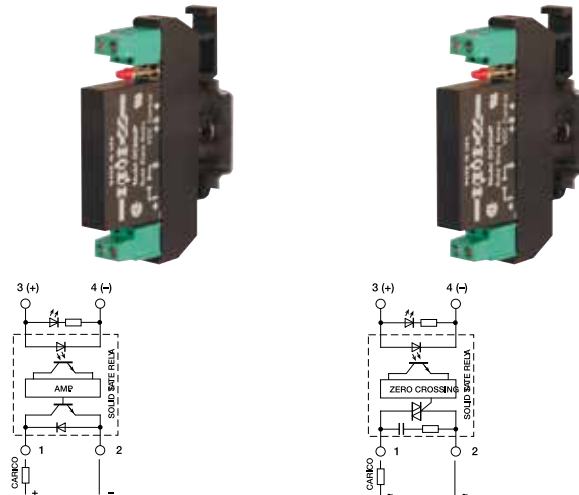
INPUT CHANNELS	INPUT RATED VOLTAGE	CONTACT TYPE	NOMINAL CURRENT (RESISTIVE LOAD)	PLUGGABLE RELAY	NOT PLUGGABLE RELAY	POSITIVE CONTROL (PNP)	NEGATIVE CONTROL (NPN)	PROTECTION CIRCUIT	CODE	TYPE	PAGE
1	5-12-24 Vdc	transistor	3 A	-	•	-	-	•	X0332060	O332060	134
1	5-12-24 Vdc	zero crossing triac	50 A	-	•	-	-	—	X0332240	O332240	134
1	24 Vdc	transistor	2 A	•	-	-	-	—	XCM1S024	CM1S024	135
1	12-24 Vdc	mosfet	5 A	•	-	-	-	•	XCM1S024E	CM1S024E	135
1	24 Vdc	zero crossing triac	3 A	•	-	-	-	—	XCM1T024	CM1T024	136
1	12-24 Vdc	zero crossing triac	3 A	•	-	-	-	•	XCM1T024E	CM1T024E	136
1	24 Vdc	transistor	10...500 mA	-	•	-	-	•	X766083	CWOT 6-2083	139
1	5-12-24 Vdc	transistor	80 mA	-	•	-	-	—	XCKS1S	CKS1S	139
1	5-12-24 Vdc	mosfet	10...500 mA	-	•	-	-	—	X766082	CWOT 6-6082	139
1	5-12-24 Vdc	mosfet	3 A / 5 A	-	•			•	XCKS024DC024DC03	CKS-024DC/024DC/03	137
1	5-12-24 Vdc	mosfet	8 A / 5 A	-	•			•	XCKS024DC024DC05	CKS-024DC/024DC/05	137
1	5-12-24 Vdc	mosfet	10 A / 15 A	-	•			•	XCKS024DC024DC10	CKS-024DC/024DC/10	137
1	12-24 Vac/dc	zero crossing triac	5 A	-	•			•	XCKS024DC230AC05	CKS-024DC/230AC/05	138
4	24 Vdc	transistor	2 A	•	-	•	•	—	XR042S24	R42S24	140
4	24 Vdc	zero crossing triac	3 A	•	-	•	•	—	XR042T24	R42T24	141
4	24 Vdc	transistor	2 A	•	-	•	•	—	XR041S24F	R41S24F	142
8	24 Vdc	transistor	2 A	•	-	•	•	—	XR082S24	R82S24	140
8	24 Vdc	zero crossing triac	3 A	•	-	•	•	—	XR082T24	R82T24	141
8	24 Vdc	transistor	2 A	•	-	•	•	—	XR081S24F	R81S24F	142
16	24 Vdc	zero crossing triac	3 A	•	-	•	•	—	XR162T24	R162T24	141
16	24 Vdc	transistor	2 A	•	-	•	•	—	XR161S24F	R161S24F	142
16	24 Vdc	transistor	2 A	•	-	•	•	—	XR162S24	R162S24	140

# SOLID STATE RELAY MODULES SINGLE CHANNEL MODULES



- Not-pluggable relay
- Compact dimension

**NOTE**  
Manufacturer and model of the relay is not binding, technical data are to be considered typical



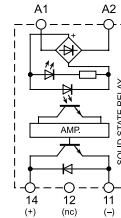
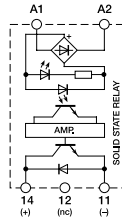
CODE TYPE	X0332060	X0332240
<b>INPUT TECHNICAL DATA</b>		
Input rated voltage	5-12-24 Vdc (range 4...30 Vdc)	5-12-24 Vdc (range 4...30 Vdc)
Pull in drop out voltage type	3 V / 1 V	4 V / 0.8 V
Current consumption	35 mA ±10%	35 mA ±10%
Turn ON OFF time	200 µs / 800 µs	10 ms / 10 ms max.
Frequency	0...500 Hz	10...440 Hz
Protection circuit	Free-wheel diode	—
Connection type	2.5 mm <sup>2</sup> screw type	2.5 mm <sup>2</sup> screw type
Input channels	1 not pluggable	1 not pluggable
<b>OUTPUT TECHNICAL DATA</b>		
Contact type	transistor	zero crossing triac
Output voltage	5...60 Vdc	12...240 Vac
Nominal current	3 A (24 Vdc) at 20°C	50 A (24 Vdc) at 20°C
Max current	10 A for 10 ms	100 A for 10 ms
Leakage current with signal 0	1 mA	2 mA
Min applicable load	—	—
Max fuse current	—	—
Connection type	2.5 mm <sup>2</sup> (AWG26-14), screw type	2.5 mm <sup>2</sup> (AWG26-14), screw type
Protection circuit device	free-wheel diode	varistor
<b>GENERAL TECHNICAL DATA</b>		
Operating temperature range	-20...+70°C (derating -0.5 W/°C over 20°C)	-20...+70°C (derating -1.2 W/°C over 30°C)
Input output isolation	2.5 kVac / 60 s	4 kVac / 60 s
Protection degree	IP 00	IP 00
Reference Standards	—	—
Overvoltage category pollution degree	II / 2	II / 2
Status indication	LED "Input"	LED "Input"
Housing material	UL94V-0 plastic material	UL94V-0 plastic material
Dimensions	12x77x54 mm	12x77x54 mm
Approximate weight	36 g	36 g
Mounting information	vertical on a rail, 5 mm from adjacent components	vertical on a rail, 5 mm from adjacent components
<b>APPROVALS</b>	<b>CE</b>	<b>CE</b>
<b>ACCESSORIES</b>		
Mounting rail IEC60715 TH35 75	PR/3/AC, PR/3/AC/ZB, PR/3/AS, PR/3/AS/ZB	PR/3/AC, PR/3/AC/ZB, PR/3/AS, PR/3/AS/ZB
Mounting rail IEC60715 TH35 15	PR/3/PP, PR/3/PP/ZB, PR/3/PA, PR/3/PA/ZB	PR/3/PP, PR/3/PP/ZB, PR/3/PA, PR/3/PA/ZB
Marking tag	—	—
Spare part relay	—	—
End section	—	—
Plugin jumper	—	—



• Pluggable relay

NOTE

Manufacturer and model of the relay is not binding, technical data are to be considered typical

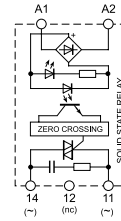
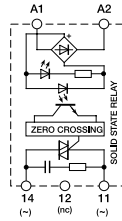


CODE TYPE	CM1S024	XCM1S024	CM1S024E (1)	XCM1S024E
<b>INPUT TECHNICAL DATA</b>				
Input rated voltage	24 Vdc (range 19.5...28.5 Vdc)		12-24 Vdc (range 10...32 Vdc)	
Pull in drop out voltage type	19.2 V / 1 V		10 V / 10 V	
Current consumption	25 mA ±10% at 24 Vdc		16 mA ±10% at 24 Vdc	
Turn ON OFF time	1 ms / 1 ms		50 μs / 250 μs	
Frequency	100 Hz max		100 Hz max	
Protection circuit	—		Free-wheel diode	
Connection type	2.5 mm <sup>2</sup> screw type		2.5 mm <sup>2</sup> screw type	
Input channels	1 pluggable		1 pluggable	
<b>OUTPUT TECHNICAL DATA</b>				
Contact type	transistor		mosfet	
Output voltage	3...50 Vdc		5...32 Vdc	
Nominal current	2 A (24 Vdc) at 30°C		5 A (24 Vdc) at 60°C	
Max current	8 A for 10 ms		120 A for 20 ms (peak)	
Leakage current with signal 0	0.1 mA		10 μA	
Min applicable load	10 mA		—	
Max fuse current	—		—	
Connection type	2.5 mm <sup>2</sup> (AWG26-14), screw type		2.5 mm <sup>2</sup> (AWG26-14), screw type	
Protection circuit device	—		suppressor diode	
<b>GENERAL TECHNICAL DATA</b>				
Operating temperature range	-20...+70°C (derating -0.75 W/°C over 30°C)		-20...+70°C (derating -0.1 A/°C over 60°C)	
Input output isolation	2.5 kVac / 60 s		2.5 kVac / 60 s	
Protection degree	IP 20		IP 20	
Reference Standards	—		—	
Overvoltage category pollution degree	II / 2		II / 2	
Status indication	LED "Input"		LED "Input"	
Housing material	UL94V-0 plastic material		UL94V-0 plastic material	
Dimensions	16x75x68 mm		16x75x68 mm	
Approximate weight	54 g		54 g	
Mounting information	vertical on a rail, syde by side		vertical on a rail, syde by side	
<b>APPROVALS</b>	<b>CE</b>		<b>CE</b>	
<b>ACCESSORIES</b>				
Mounting rail IEC60715 TH35 75	PR/3/AC, PR/3/AC/ZB, PR/3/AS, PR/3/AS/ZB		PR/3/AC, PR/3/AC/ZB, PR/3/AS, PR/3/AS/ZB	
Mounting rail IEC60715 TH35 15	—		—	
Marking tag	already mounted		already mounted	
Spare part relay	8904404		8904402	
End section	—		—	
Plugin jumper	CMB16B (8poles) — — — — —		CMB16B (8poles) — — — — —	

- Pluggable relay

**NOTE**

Manufacturer and model of the relay is not binding, technical data are to be considered typical



CODE TYPE	CM1T024	XCM1T024	CM1T024E (1)	XCM1T024E
<b>INPUT TECHNICAL DATA</b>				
Input rated voltage	24 Vdc (range 19.5...28.5 Vdc)		12-24 Vdc (range 10...32 Vdc)	
Pull in drop out voltage type	19.2 V / 1 V		10 V / 10 V	
Current consumption	25 mA ±10% at 24 Vdc		17 mA ±10% at 24 Vdc	
Turn ON OFF time	11 ms / 11 ms (at 50 Hz)		1/2 cycle / 1/2 cycle	
Frequency	30...100 Hz max		100 Hz max	
Protection circuit	—		Free-wheel diode	
Connection type	2.5 mm <sup>2</sup> screw type		2.5 mm <sup>2</sup> screw type	
Input channels	1 pluggable		1 pluggable	
<b>OUTPUT TECHNICAL DATA</b>				
Contact type	zero crossing triac		zero crossing triac	
Output voltage	48...280 Vac		12...275 Vac	
Nominal current	3 A (24 Vdc) at 30°C		3 A (24 Vdc) at 60°C	
Max current	120 A for 10 ms		120 A for 20 ms (peak)	
Leakage current with signal 0	5 mA		1 mA	
Min applicable load	—		—	
Max fuse current	—		—	
Connection type	2.5 mm <sup>2</sup> (AWG26-14), screw type		2.5 mm <sup>2</sup> (AWG26-14), screw type	
Protection circuit device	—		—	
<b>GENERAL TECHNICAL DATA</b>				
Operating temperature range	-20...+80°C (derating -0.05 A/°C over 30°C)		-20...+70°C (derating -0.03 A/°C over 40°C)	
Input output isolation	2.5 kVac / 60 s		2.5 kVac / 60 s	
Protection degree	IP 20		IP 20	
Reference Standards	—		—	
Overvoltage category pollution degree	II / 2		II / 2	
Status indication	LED "Input"		LED "Input"	
Housing material	UL94V-0 plastic material		UL94V-0 plastic material	
Dimensions	16x75x68 mm		16x75x68 mm	
Approximate weight	54 g		54 g	
Mounting information	vertical on a rail, syde by side		vertical on a rail, syde by side	
<b>APPROVALS</b>	<b>CE</b>		<b>CE</b>	
<b>ACCESSORIES</b>				
Mounting rail IEC60715 TH35 75	PR/3/AC, PR/3/AC/ZB, PR/3/AS, PR/3/AS/ZB		PR/3/AC, PR/3/AC/ZB, PR/3/AS, PR/3/AS/ZB	
Mounting rail IEC60715 TH35 15	—		—	
Marking tag	already mounted		already mounted	
Spare part relay	8904405		8904403	
End section	—		—	
<b>Plugin jumper</b>	CMB16B (8poles)		CMB16B (8poles)	
	—		—	
	—		—	
	—		—	
	—		—	
	—		—	

- Not-pluggable relay
- Protection against short circuit, overload, overtemperature
- Suitable for DC loads
- Compact dimension



NOTE

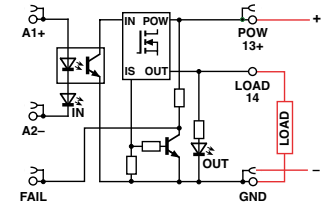
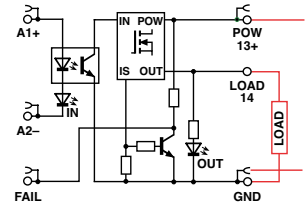
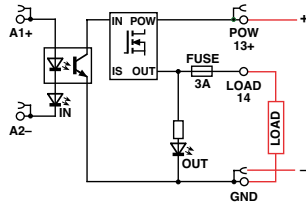
Manufacturer and model of the components is not binding, technical data are to be considered typical

(1) The maximum current depend on the number of actived output and the ambient temperature

(2) Protection switch off the output current, yellow LED turns off or reduces its light, the output restart automaticly when the overload is removed.

The current limiting depending also by the operating temperature, for more accuracy or to protect cables with small section or rated current lower than the maximum current, an external fuse must be provided.

(3) the final module must always be protected with the CK/PT end plate to ensure an IP20 protection degree



CODE	XCKS024DC024DC03	XCKS024DC024DC05	XCKS024DC024DC10
TYPE	CKS-024DC/024DC/03	CKS-024DC/024DC/05	CKS-024DC/024DC/10
<b>INPUT TECHNICAL DATA</b>			
Input rated voltage	5-12-24 Vdc (range 4.7...32 Vdc)	5-12-24 Vdc (range 4.7...32 Vdc)	5-12-24 Vdc (range 4.7...32 Vdc)
Pull indrop out voltage type	4.5 V / 4.2 V	4.5 V / 4.2 V	4.5 V / 4.2 V
Current consumption	10 mA ±10% at 24 Vdc	10 mA ±10% at 24 Vdc	10 mA ±10% at 24 Vdc
Turn ON OFF time	—	—	—
Frequency	200 Hz max.	200 Hz max.	200 Hz max.
Protection circuit	Free-wheel diode, Reverse polarity	Free-wheel diode, Reverse polarity	Free-wheel diode, Reverse polarity
Connection type	2.5 mm <sup>2</sup> spring type	2.5 mm <sup>2</sup> spring type	2.5 mm <sup>2</sup> spring type
Input channels	1 not pluggable	1 not pluggable	1 not pluggable
<b>OUTPUT TECHNICAL DATA</b>			
Contact type	mosfet	mosfet	mosfet
Output voltage	5...32 Vdc	5...32 Vdc	5...32 Vdc
Nominal current	3 A (24 Vdc) at 45°C / 5 A (24 Vdc) at 20°C	8 A (24 Vdc) at 45°C / 5 A (24 Vdc) at 55°C	10 A (24 Vdc) at 45°C / 15 A (24 Vdc) at 20°C
Max current	5 A for 2 s ±10% at 25°C (1)(2)	21 A for 100 ms at 25°C (1)	21 A for 100 ms at 25°C (1)
Leakage current with signal 0	< 25 µA at 24 Vdc	< 25 µA at 24 Vdc	< 25 µA at 24 Vdc
Min applicable load	10 mA / 5 V	10 mA / 5 V	10 mA / 5 V
Max fuse current	—	—	—
Connection type	2.5 mm <sup>2</sup> (AWG26-14), spring type	2.5 mm <sup>2</sup> (AWG26-14), spring type	2.5 mm <sup>2</sup> (AWG26-14), spring type
Protection circuit device	suppressor diode / resettable fuse (2)	suppressor diode / short circuit, overload, overtemperature (2)	suppressor diode / short circuit, overload, overtemperature (2)
<b>GENERAL TECHNICAL DATA</b>			
Operating temperature range	-20...+60°C	-20...+60°C	-20...+60°C
Input output isolation	2.5 kVac / 60 s	2.5 kVac / 60 s	2.5 kVac / 60 s
Protection degree	IP 00 / IP20 (3)	IP 00 / IP20 (3)	IP 00 / IP20 (3)
Reference Standards	—	—	—
Overvoltage category pollution degree	II / 2	II / 2	II / 2
Status indication	LED "Input" / LED "Output-Fail"	LED "Input" / LED "Output-Fail"	LED "Input" / LED "Output-Fail"
Housing material	UL94V-0 plastic material	UL94V-0 plastic material	UL94V-0 plastic material
Dimensions	6x91x100 mm	6x91x100 mm	6x91x100 mm
Approximate weight	30 g	30 g	30 g
Mounting information	on a rail, side by side	on a rail, side by side	on a rail, side by side
<b>APPROVALS</b>			
	CE	CE	CE
<b>ACCESSORIES</b>			
Mounting rail IEC60715 TH35 75	PR/3/AC, PR/3/AC/ZB, PR/3/AS, PR/3/AS/ZB	PR/3/AC, PR/3/AC/ZB, PR/3/AS, PR/3/AS/ZB	PR/3/AC, PR/3/AC/ZB, PR/3/AS, PR/3/AS/ZB
Mounting rail IEC60715 TH35 15	—	—	—
Marking tag	NU0851	NU0851	NU0851
Spare part relay	—	—	—
End section	XCKPT	XCKPT	XCKPT
Plugin jumper	PTC/4/02 (2 poles) PTC/4/03 (3 poles) PTC/4/04 (4 poles) PTC/4/05 (5 poles) PTC/4/10 (10 poles) PTC/4/00 (42 poles)	PTC/4/02 (2 poles) PTC/4/03 (3 poles) PTC/4/04 (4 poles) PTC/4/05 (5 poles) PTC/4/10 (10 poles) PTC/4/00 (42 poles)	PTC/4/02 (2 poles) PTC/4/03 (3 poles) PTC/4/04 (4 poles) PTC/4/05 (5 poles) PTC/4/10 (10 poles) PTC/4/00 (42 poles)

- Not-pluggable relay
- Output overvoltage protection
- Suitable for AC loads
- Compact dimension



**NOTE**

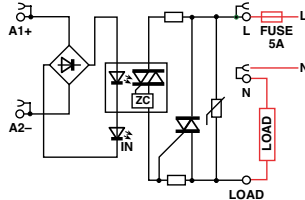
Manufacturer and model of the components is not binding, technical data are to be considered typical

(1) The maximum current depend on the number of actived output and the ambient temperature

(2) Protection switch off the output current, yellow LED turns off or reduces its light, the output restart automatically when the overload is removed.

The current limiting depending also by the operating temperature, for more accuracy or to protect cables with small section or rated current lower than the maximum current, an external fuse must be provided.

(3) the final module must always be protected with the CK/PT end plate to ensure an IP20 protection degree



CODE TYPE	XCKS024DC230AC05 <b>CKS-024DC/230AC/05</b>
<b>INPUT TECHNICAL DATA</b>	
Input rated voltage	12-24 Vac/dc (range 9...30 Vac/dc)
Pull in/out voltage type	8.5 V / 8 V
Current consumption	10 mA ±10% at 24 Vdc
Turn ON OFF time	1/2 cycle / 1/2 cycle
Frequency	100 Hz max
Protection circuit	Free-wheel diode, Reverse polarity
Connection type	2.5 mm <sup>2</sup> spring type
Input channels	1 not pluggable
<b>OUTPUT TECHNICAL DATA</b>	
Contact type	zero crossing triac
Output voltage	20...265 Vac
Nominal current	5 A (230 Vac) at 45°C
Max current	6 A (1)
Leakage current with signal 0	< 25 µA at 24 Vdc
Min applicable load	10 mA / 24 Vac
Max fuse current	—
Connection type	2.5 mm <sup>2</sup> (AWG26-14), spring type
Protection circuit device	varistor / not replaceable fuse 10 A (2)
<b>GENERAL TECHNICAL DATA</b>	
Operating temperature range	-20 ...+45°C
Input output isolation	2.5 kVac / 60 s
Protection degree	IP 00 / IP20 (3)
Reference Standards	—
Overvoltage category pollution degree	II / 2
Status indication	LED "Input"
Housing material	UL94V-0 plastic material
Dimensions	6x91x100 mm
Approximate weight	30 g
Mounting information	on a rail, side by side
<b>APPROVALS</b>	
<b>ACCESSORIES</b>	
Mounting rail IEC60715 TH35 75	PR/3/AC, PR/3/AC/ZB, PR/3/AS, PR/3/AS/ZB
Mounting rail IEC60715 TH35 15	—
Marking tag	NU0851
Spare part relay	—
End section	XCKPT
<b>Plugin jumper</b>	PTC/4/02 (2 poles)
	PTC/4/03 (3 poles)
	PTC/4/04 (4 poles)
	PTC/4/05 (5 poles)
	PTC/4/10 (10 poles)
	PTC/4/00 (42 poles)

# SOLID STATE RELAY MODULES SINGLE CHANNEL MODULES



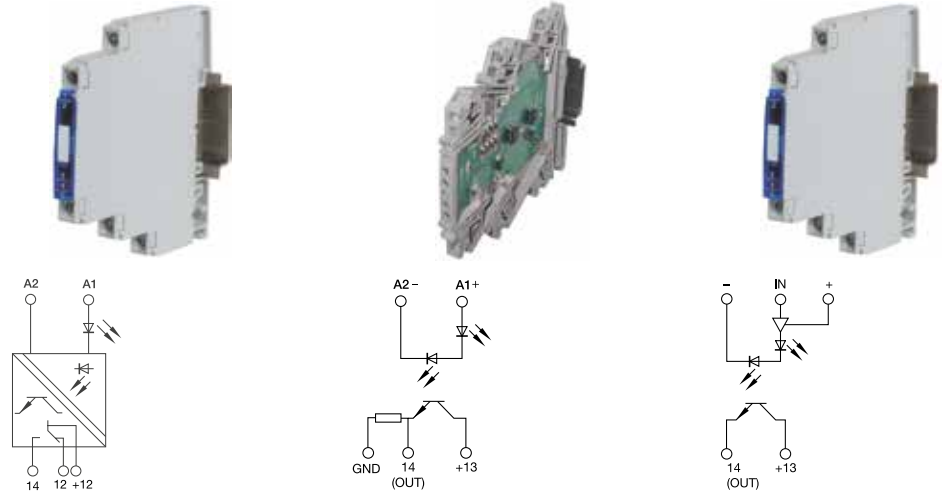
- Not-pluggable relay
- Simulated SPD output contact

## NOTE

Manufacturer and model of the components is not binding, technical data are to be considered typical

(2) simulated SPDT contact

(3) the final module must be closed with CK/PT end plate to ensure an IP20 protection degree



CODE TYPE	CWOT 6-2083	X766083	CKS1S (1)	XCKS1S	CWOT 6-6082 (1)	X766082
<b>INPUT TECHNICAL DATA</b>						
Input rated voltage	24 Vdc (range 10...40 Vdc)		5-12-24 Vdc (range 4...30 Vdc)		5-12-24 Vdc (range 4.5...28 Vdc)	
Pull in drop out voltage type	5 V / 5 V		3 V / 3 V		4.2 V / 2.7 V	
Current consumption	6 mA ±10% at 24 Vdc		10 mA ±10% at 24 Vdc		0.1 mA ±10%	
Turn ON OFF time	12 μs / 12 μs		—		12 μs / 12 μs	
Frequency	1 KHz		20 kHz max duty cycle 50/50, 70/30 max		20 KHz	
Protection circuit	Free-wheel diode		—		—	
Connection type	2.5 mm <sup>2</sup> screw type		2.5 mm <sup>2</sup> spring type		2.5 mm <sup>2</sup> screw type	
Input channels	1 not pluggable		1 not pluggable		1 not pluggable	
<b>OUTPUT TECHNICAL DATA</b>						
Contact type	transistor [2]		transistor		mosfet	
Output voltage	5...48 Vdc		3...30 Vdc		5...48 Vdc	
Nominal current	10...500 mA (24 Vdc)		80 mA (30 Vdc) at 25°C		10...500 mA (24 Vdc)	
Max current	—		—		—	
Leakage current with signal 0	—		—		—	
Min applicable load	—		2 mA / 10 mV		—	
Max fuse current	—		—		—	
Connection type	2.5 mm <sup>2</sup> (AWG26-14), screw type		2.5 mm <sup>2</sup> (AWG26-14), spring type		2.5 mm <sup>2</sup> (AWG26-14), screw type	
Protection circuit device	suppressor diode		—		—	
<b>GENERAL TECHNICAL DATA</b>						
Operating temperature range	-25...+60°C		-20...+60°C		-25...+60°C	
Input output isolation	3.5 kVac / 60 s		3 kVac / 60 s		3.5 kVac / 60 s	
Protection degree	IP 20		IP 00 / IP20 [3]		IP 20	
Reference Standards	—		—		—	
Overvoltage category pollution degree	II / 2		II / 2		II / 2	
Status indication	LED "Input"		LED "Input"		LED "Input"	
Housing material	UL94V-0 plastic material		UL94V-0 plastic material		UL94V-0 plastic material	
Dimensions	84x79x6.2 mm		6x91x100 mm		6.2x79x84 mm	
Approximate weight	29 g		32 g		29 g	
Mounting information	on a rail, side by side		on a rail, side by side		on a rail, side by side	
<b>APPROVALS</b>	<b>CE</b>		<b>CE</b>		<b>CE</b>	
<b>ACCESSORIES</b>						
Mounting rail IEC60715 TH35 75	PR/3/AC, PR/3/AC/ZB, PR/3/AS, PR/3/AS/ZB		PR/3/AC, PR/3/AC/ZB, PR/3/AS, PR/3/AS/ZB		PR/3/AC, PR/3/AC/ZB, PR/3/AS, PR/3/AS/ZB	
Mounting rail IEC60715 TH35 15	—		—		—	
Marking tag	—		NU0851		—	
Spare part relay	—		—		—	
End section	—		XCKPT		—	
Plugin jumper	—		PTC/4/02 (2 poles) PTC/4/03 (3 poles) PTC/4/04 (4 poles) PTC/4/05 (5 poles) PTC/4/10 (10 poles) PTC/4/00 (42 poles)		—	

# SOLID STATE RELAY MODULES MULTI-CHANNEL MODULES



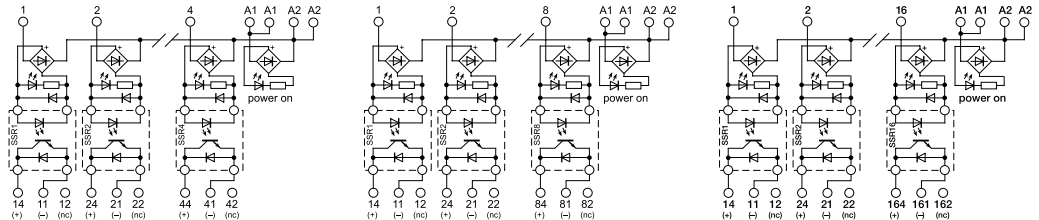
- Pluggable relay
- Allow PNP and NPN command
- Suitable for DC loads



## NOTE

Manufacturer and model of the relay is not binding, technical data are to be considered typical

(1) Version produced upon request; contact our sales office for availability.



CODE TYPE	R42S24 (1)	XR042S24	R82S24 (1)	XR082S24	R162S24 (1)	XR162S24
<b>INPUT TECHNICAL DATA</b>						
Input rated voltage	24 Vdc (range 19.5...28.5 Vdc)		24 Vdc (range 19.5...28.5 Vdc)		24 Vdc (range 19.5...28.5 Vdc)	
Pull in drop out voltage type	19.2 V / 1 V		19.2 V / 1 V		19.2 V / 1 V	
Current consumption	25 mA ±10% at 24 Vdc		25 mA ±10% at 24 Vdc		25 mA ±10% at 24 Vdc	
Turn ON OFF time	1 ms / 1 ms		1 ms / 1 ms		1 ms / 1 ms	
Frequency	100 Hz max		100 Hz max		100 Hz max	
Protection circuit	—		—		—	
Connection type	2.5 mm <sup>2</sup> screw type		2.5 mm <sup>2</sup> screw type		2.5 mm <sup>2</sup> screw type	
Input channels	4 pluggable		8 pluggable		16 pluggable	
<b>OUTPUT TECHNICAL DATA</b>						
Contact type	transistor		transistor		transistor	
Output voltage	3...50 Vdc		3...50 Vdc		3...50 Vdc	
Nominal current	2 A (24 Vdc) at 30°C		2 A (24 Vdc) at 30°C		2 A (24 Vdc) at 30°C	
Max current	8 A for 10 ms		8 A for 10 ms		8 A for 10 ms	
Leakage current with signal 0	0.1 mA		0.1 mA		0.1 mA	
Min applicable load	10 mA		10 mA		10 mA	
Max fuse current	—		—		—	
Connection type	2.5 mm <sup>2</sup> (AWG26-14), screw type		2.5 mm <sup>2</sup> (AWG26-14), screw type		2.5 mm <sup>2</sup> (AWG26-14), screw type	
Protection circuit device	—		—		—	
<b>GENERAL TECHNICAL DATA</b>						
Operating temperature range	-20...+70°C (derating -0.75 W/°C over 30°C)		-20...+70°C (derating -0.75 W/°C over 30°C)		-20...+70°C (derating -0.75 W/°C over 30°C)	
Input output isolation	2.5 kVac / 60 s		2.5 kVac / 60 s		2.5 kVac / 60 s	
Protection degree	IP 00		IP 00		IP 00	
Reference Standards	—		—		—	
Overvoltage category pollution degree	II / 2		II / 2		II / 2	
Status indication	LED "Input"		LED "Input"		LED "Input"	
Housing material	UL94V-0 plastic material		UL94V-0 plastic material		UL94V-0 plastic material	
Dimensions	70x93x75 mm		137x93x75 mm		250x93x75 mm	
Approximate weight	207 g		379 g		756 g	
Mounting information	vertical on a rail, side by side		vertical on a rail, side by side		vertical on a rail, side by side	
<b>APPROVALS</b>	<b>CE</b>		<b>CE</b>		<b>CE</b>	
<b>ACCESSORIES</b>						
Mounting rail IEC60715 TH35 75	PR/3/AC, PR/3/AC/ZB, PR/3/AS, PR/3/AS/ZB		PR/3/AC, PR/3/AC/ZB, PR/3/AS, PR/3/AS/ZB		PR/3/AC, PR/3/AC/ZB, PR/3/AS, PR/3/AS/ZB	
Mounting rail IEC60715 TH35 15	PR/3/PP, PR/3/PP/ZB, PR/3/PA, PR/3/PA/ZB		PR/3/PP, PR/3/PP/ZB, PR/3/PA, PR/3/PA/ZB		PR/3/PP, PR/3/PP/ZB, PR/3/PA, PR/3/PA/ZB	
Marking tag	—		—		—	
Spare part relay	8904404		8904404		8904404	
End section	—		—		—	
Plugin jumper	—		—		—	

# SOLID STATE RELAY MODULES MULTI-CHANNEL MODULES



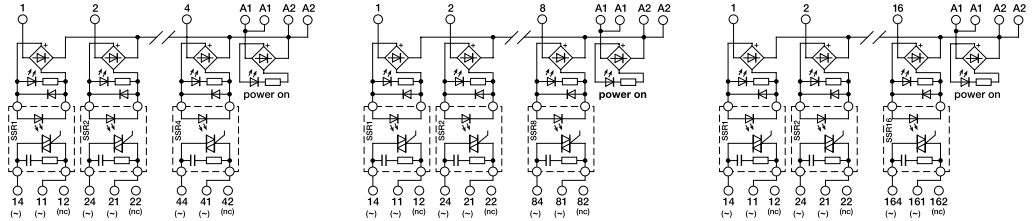
- Pluggable relay
- Allow PNP and NPN command
- Suitable for AC loads



**NOTE**

Manufacturer and model of the relay is not binding, technical data are to be considered typical

[1] Version produced upon request; contact our sales office for availability.

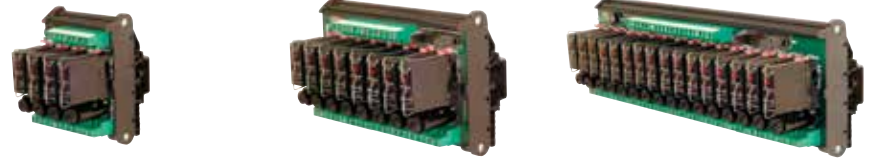


CODE TYPE	R42T24 (1)	XR042T24	R82T24 (1)	XR082T24	R162T24 (1)	XR162T24
<b>INPUT TECHNICAL DATA</b>						
Input rated voltage	24 Vdc (range 19.5...28.5 Vdc)		24 Vdc (range 19.5...28.5 Vdc)		24 Vdc (range 19.5...28.5 Vdc)	
Pull in drop out voltage type	19.2 V / 1 V		19.2 V / 1 V		19.2 V / 1 V	
Current consumption	25 mA ±10% at 24 Vdc		25 mA ±10% at 24 Vdc		25 mA ±10% at 24 Vdc	
Turn ON OFF time	11 ms / 11 ms (at 50 Hz)		11 ms / 11 ms (at 50 Hz)		11 ms / 11 ms (at 50 Hz)	
Frequency	30...100 Hz max		30...100 Hz max		30...100 Hz max	
Protection circuit	—		—		—	
Connection type	2.5 mm <sup>2</sup> screw type		2.5 mm <sup>2</sup> screw type		2.5 mm <sup>2</sup> screw type	
Input channels	4 pluggable		8 pluggable		16 pluggable	
<b>OUTPUT TECHNICAL DATA</b>						
Contact type	zero crossing triac		zero crossing triac		zero crossing triac	
Output voltage	48...280 Vac		48...280 Vac		48...280 Vac	
Nominal current	3 A (24 Vdc) at 30°C		3 A (24 Vdc) at 30°C		3 A (24 Vdc) at 30°C	
Max current	120 A for 10 ms		120 A for 10 ms		120 A for 10 ms	
Leakage current with signal 0	5 mA		5 mA		5 mA	
Min applicable load	—		—		—	
Max fuse current	—		—		—	
Connection type	2.5 mm <sup>2</sup> (AWG26-14), screw type		2.5 mm <sup>2</sup> (AWG26-14), screw type		2.5 mm <sup>2</sup> (AWG26-14), screw type	
Protection circuit device	—		—		—	
<b>GENERAL TECHNICAL DATA</b>						
Operating temperature range	-20...+80°C (derating -0.05 A/°C over 30°C)		-20...+80°C (derating -0.05 A/°C over 30°C)		-20...+80°C (derating -0.05 A/°C over 30°C)	
Input output isolation	2.5 kVac / 60 s		2.5 kVac / 60 s		2.5 kVac / 60 s	
Protection degree	IP 00		IP 00		IP 00	
Reference Standards	—		—		—	
Overvoltage category pollution degree	II / 2		II / 2		II / 2	
Status indication	LED "Input"		LED "Input"		LED "Input"	
Housing material	UL94V-0 plastic material		UL94V-0 plastic material		UL94V-0 plastic material	
Dimensions	70x93x75 mm		137x93x75 mm		250x93x75 mm	
Approximate weight	207 g		379 g		756 g	
Mounting information	vertical on a rail, side by side		vertical on a rail, side by side		vertical on a rail, side by side	
<b>APPROVALS</b>	<b>CE</b>		<b>CE</b>		<b>CE</b>	
<b>ACCESSORIES</b>						
Mounting rail IEC60715 TH35 75	PR/3/AC, PR/3/AC/ZB, PR/3/AS, PR/3/AS/ZB		PR/3/AC, PR/3/AC/ZB, PR/3/AS, PR/3/AS/ZB		PR/3/AC, PR/3/AC/ZB, PR/3/AS, PR/3/AS/ZB	
Mounting rail IEC60715 TH35 15	PR/3/PP, PR/3/PP/ZB, PR/3/PA, PR/3/PA/ZB		PR/3/PP, PR/3/PP/ZB, PR/3/PA, PR/3/PA/ZB		PR/3/PP, PR/3/PP/ZB, PR/3/PA, PR/3/PA/ZB	
Marking tag	—		—		—	
Spare part relay	8904405		8904405		8904405	
End section	—		—		—	
Plugin jumper	—		—		—	

# SOLID STATE RELAY MODULES MULTI-CHANNEL MODULES WITH FUSES



- Pluggable relay
- Allow PNP and NPN command
- Suitable for DC loads
- Contact protected by replaceable fuse

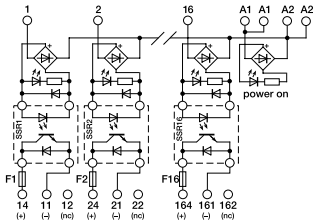
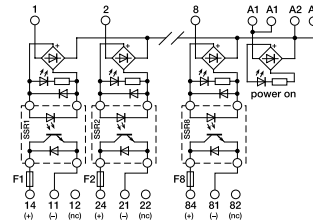
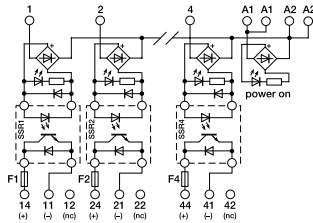


## NOTE

Manufacturer and model of the relay is not binding, technical data are to be considered typical

(1) Version produced upon request; contact our sales office for availability.

(2) Fuses are not provided, they must be selected according to the load current. The max. value of 6.3 A is referred to the fuses holder capability according to EN 60127.



CODE TYPE	XR041S24F	XR081S24F	XR161S24F
<b>INPUT TECHNICAL DATA</b>	<b>R41S24F (1)</b>	<b>R81S24F (1)</b>	<b>R161S24F (1)</b>
Input rated voltage	24 Vdc (range 19.5...28.5 Vdc)	24 Vdc (range 19.5...28.5 Vdc)	24 Vdc (range 19.5...28.5 Vdc)
Pull in drop out voltage type	19.2 V / 1 V	19.2 V / 1 V	19.2 V / 1 V
Current consumption	25 mA ±10% at 24 Vdc	25 mA ±10% at 24 Vdc	25 mA ±10% at 24 Vdc
Turn ON OFF time	1 ms / 1 ms	1 ms / 1 ms	1 ms / 1 ms
Frequency	100 Hz max	100 Hz max	100 Hz max
Protection circuit	—	—	—
Connection type	2.5 mm <sup>2</sup> screw type	2.5 mm <sup>2</sup> screw type	2.5 mm <sup>2</sup> screw type
Input channels	4 pluggable	8 pluggable	16 pluggable
<b>OUTPUT TECHNICAL DATA</b>			
Contact type	transistor	transistor	transistor
Output voltage	3...50 Vdc	3...50 Vdc	3...50 Vdc
Nominal current	2 A (24 Vdc) at 30°C	2 A (24 Vdc) at 30°C	2 A (24 Vdc) at 30°C
Max current	8 A for 10 ms	8 A for 10 ms	8 A for 10 ms
Leakage current with signal 0	0.1 mA	0.1 mA	0.1 mA
Min applicable load	10 mA	10 mA	10 mA
Max fuse current	6.3 A (250 Vac) [2]	6.3 A (250 Vac) [2]	6.3 A (250 Vac) [2]
Connection type	2.5 mm <sup>2</sup> (AWG26-14), screw type	2.5 mm <sup>2</sup> (AWG26-14), screw type	2.5 mm <sup>2</sup> (AWG26-14), screw type
Protection circuit device	—	—	—
<b>GENERAL TECHNICAL DATA</b>			
Operating temperature range	-20...+70°C (derating -0.75 W/°C over 30°C)	-20...+70°C (derating -0.75 W/°C over 30°C)	-20...+70°C (derating -0.75 W/°C over 30°C)
Input output isolation	2.5 kVac / 60 s	2.5 kVac / 60 s	2.5 kVac / 60 s
Protection degree	IP 00	IP 00	IP 00
Reference Standards	—	—	—
Overvoltage category pollution degree	II / 2	II / 2	II / 2
Status indication	LED "Input"	LED "Input"	LED "Input"
Housing material	UL94V-0 plastic material	UL94V-0 plastic material	UL94V-0 plastic material
Dimensions	67x93x75 mm	137x93x75 mm	250x93x75 mm
Approximate weight	207 g	379 g	756 g
Mounting information	vertical on a rail, side by side	vertical on a rail, side by side	vertical on a rail, side by side
<b>APPROVALS</b>	<b>CE</b>	<b>CE</b>	<b>CE</b>
<b>ACCESSORIES</b>			
Mounting rail IEC60715 TH35 75	PR/3/AC, PR/3/AC/ZB, PR/3/AS, PR/3/AS/ZB	PR/3/AC, PR/3/AC/ZB, PR/3/AS, PR/3/AS/ZB	PR/3/AC, PR/3/AC/ZB, PR/3/AS, PR/3/AS/ZB
Mounting rail IEC60715 TH35 15	PR/3/PP, PR/3/PP/ZB, PR/3/PA, PR/3/PA/ZB	PR/3/PP, PR/3/PP/ZB, PR/3/PA, PR/3/PA/ZB	PR/3/PP, PR/3/PP/ZB, PR/3/PA, PR/3/PA/ZB
Marking tag	—	—	—
Spare part relay	8904404	8904404	8904404
End section	—	—	—
Plugin jumper	—	—	—



# QUICK PASSIVE INTERFACE SELECTION TABLE



INPUT CHANNELS	INPUT RATED VOLTAGE	CONTACT TYPE	NOMINAL CURRENT (RESISTIVE LOAD)	PLUGGABLE RELAY	NOT PLUGGABLE RELAY	POSITIVE CONTROL (PNP)
Interface module	9	D-sub male	37x66x93 mm	XISD09PM	ISD09PM	144
Interface module	15	D-sub male	47x66x93 mm	XISD15PM	ISD15PM	145
Interface module	25	D-sub male	70x66x93 mm	XISD25PM	ISD25PM	146
Interface module	37	D-sub male	107x66x93 mm	XISD37PM	ISD37PM	147
Interface module	9	D-sub female	37x66x93 mm	XISD09PF	ISD09PF	144
Interface module	15	D-sub female	47x66x93 mm	XISD15PF	ISD15PF	145
Interface module	25	D-sub female	70x66x93 mm	XISD25PF	ISD25PF	146
Interface module	37	D-sub female	107x66x93 mm	XISD37PF	ISD37PF	147
Interface module	9	D-sub male + female	37x66x93 mm	XISD09FM	ISD09FM	144
Interface module	15	D-sub male + female	47x66x93 mm	XISD15FM	ISD15FM	145
Interface module	25	D-sub male + female	70x66x93 mm	XISD25FM	ISD25FM	146
Interface module	37	D-sub male + female	107x66x93 mm	XISD37FM	ISD37FM	147
Interface module	25	D-sub male	57x80x93 mm	XCPD25M	CPD25M	148
Interface module	37	D-sub male	77x80x93 mm	XCPD37M	CPD37M	149
Interface module	50	D-sub male	92x80x93 mm	XCPD50M	CPD50M	150
Interface module	25	D-sub female	57x80x93 mm	XCPD25F	CPD25F	148
Interface module	37	D-sub female	77x80x93 mm	XCPD37F	CPD37F	149
Interface module	50	D-sub female	92x80x93 mm	XCPD50F	CPD50F	150
Interface module	10	IDC male	42x66x93 mm	XIF10PML	IF10PML	151
Interface module	14	IDC male	48x66x93 mm	XIF14PML	IF14PML	152
Interface module	16	IDC male	58x66x93 mm	XIF16PML	IF16PML	153
Interface module	20	IDC male	70x66x93 mm	XIF20PML	IF20PML	154
Interface module	26	IDC male	86x66x93 mm	XIF26PML	IF26PML	155
Interface module	34	IDC male	107x66x93 mm	XIF34PML	IF34PML	156
Interface module	40	IDC male	122x66x93 mm	XIF40PML	IF40PML	157
Interface module	10	IDC male	42x66x93 mm	XIF10PMS	IF10PMS	151
Interface module	14	IDC male	48x66x93 mm	XIF14PMS	IF14PMS	152
Interface module	16	IDC male	58x66x93 mm	XIF16PMS	IF16PMS	153
Interface module	20	IDC male	70x66x93 mm	XIF20PMS	IF20PMS	154
Interface module	26	IDC male	86x66x93 mm	XIF26PMS	IF26PMS	155
Interface module	34	IDC male	107x66x93 mm	XIF34PMS	IF34PMS	156
Interface module	40	IDC male	122x66x93 mm	XIF40PMS	IF40PMS	157
Interface module	20	IDC male	47x80x93 mm	XCPC20M	CPC20M	158
Interface module	26	IDC male	57x80x93 mm	XCPC26M	CPC26M	158
Interface module	34	IDC male	70x80x93 mm	XCPC34M	CPC34M	158
Interface module	40	IDC male	77x80x93 mm	XCPC40M	CPC40M	159
Interface module	50	IDC male	92x80x93 mm	XCPC50M	CPC50M	159
Interface module	60	IDC male	107x80x93 mm	XCPC60M	CPC60M	159
Interface module	64	IDC male	117x80x93 mm	XCPC64M	CPC64M	160
Component-holder modules	8	with common connection	25x55x93 mm	XCCM08CV	CCM08CV	161
Component-holder modules	16	with common connection	47x66x93 mm	XCCM16CV	CCM16CV	161
Component-holder modules	8	single feed-through	25x66x93 mm	XCCM08SV	CCM08SV	162
Component-holder modules	16	single feed-through	47x66x93 mm	XCCM16SV	CCM16SV	162
Component-holder modules	24	single feed-through	70x66x93 mm	XCCM24SV	CCM24SV	162
Diode modules	8	feed-through	25x60x76 mm	XCDM08CS	CDM08CS	163
Diode modules	16	feed-through	50x65x93 mm	XCDM16CS	CDM16CS	163
Diode modules	24	feed-through	71x65x93 mm	XCDM24CS	CDM24CS	163
Diode modules	8	common anode	45x65x93 mm	XCDM08AC	CDM08AC	164
Diode modules	16	common anode	92x65x93 mm	XCDM16AC	CDM16AC	164
Diode modules	24	common anode	137x65x93 mm	XCDM24AC	CDM24AC	164
Diode modules	8	common cathode	45x65x93 mm	XCDM08CC	CDM08CC	165
Diode modules	16	common cathode	92x65x93 mm	XCDM16CC	CDM16CC	165
Diode modules	24	common cathode	137x65x93 mm	XCDM24CC	CDM24CC	165
LED testing modules	8	common negative	45x65x93 mm	XCLT08AC	CLT08AC	166
LED testing modules	16	common negative	92x65x93 mm	XCLT16AC	CLT16AC	166
LED testing modules	8	common positive	45x65x93 mm	XCLT08CC	CLT08CC	167
LED testing modules	16	common positive	92x65x93 mm	XCLT16CC	CLT16CC	167
Lamp testing modules	8	common positive	45x65x93 mm	XCLP08CC	CLP08CC	168
Lamp testing modules	16	common positive	92x65x93 mm	XCLP16CC	CLP16CC	168

- Universal module

**NOTE**

The terminal number corresponds to the connector number



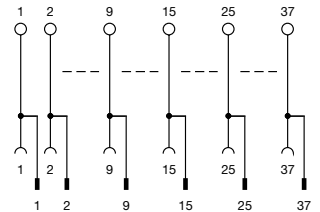
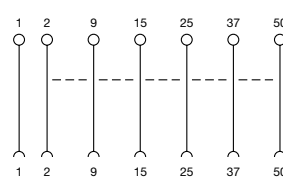
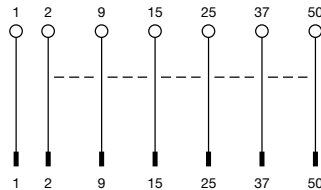
PRESENTATION PURPOSE ONLY



PRESENTATION PURPOSE ONLY



PRESENTATION PURPOSE ONLY



CODE TYPE	ISD09PM	XISD09PM	ISD09PF	XISD09PF	ISD09FM	XISD09FM
<b>GENERAL TECHNICAL DATA</b>						
Number of poles	9		9		9	
Version	D-sub male		D-sub female		D-sub male + female	
Input rated voltage	0...25 Vac / 0...60 Vdc		0...25 Vac / 0...60 Vdc		0...25 Vac / 0...60 Vdc	
Input rated current	2 A max		2 A max		2 A max	
Operating temperature	-20...+60°C		-20...+60°C		-20...+60°C	
Standards approvals	—		—		—	
Overvoltage category /pollution degree	II / 2		II / 2		II / 2	
Protection degree	IP 00		IP 00		IP 00	
Connection terminal	2.5 mm <sup>2</sup> screw		2.5 mm <sup>2</sup> screw		2.5 mm <sup>2</sup> screw	
Status indication	—		—		—	
Dimensions	37x66x93 mm		37x66x93 mm		37x66x93 mm	
Approximate weight	—		—		—	
Housing material	UL94V-0 plastic material		UL94V-0 plastic material		UL94V-0 plastic material	
Mounting informations	vertical on rails, side by side		vertical on rails, side by side		vertical on rails, side by side	
APPROVALS	CE		CE		CE	
<b>ACCESSORIES</b>						
Mounting rail IEC60715 TH35 75	PR003, PR903, PR005, PR905		PR003, PR903, PR005, PR909		PR003, PR903, PR005, PR913	
Mounting rail IEC60715 TH35 15	PR007, PR907, PR006, PR906		PR007, PR907, PR006, PR910		PR007, PR907, PR006, PR914	
Marking tag	—		—		—	

- Universal module

**NOTE**

The terminal number corresponds to the connector number



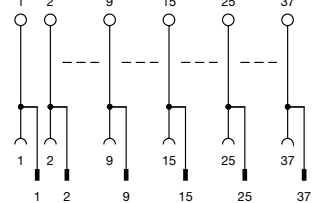
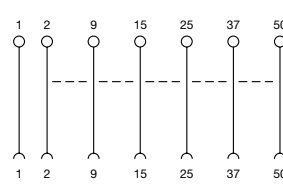
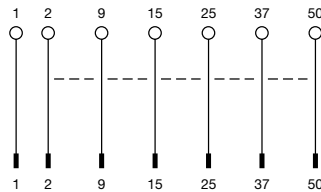
PRESENTATION PURPOSE ONLY



PRESENTATION PURPOSE ONLY



PRESENTATION PURPOSE ONLY

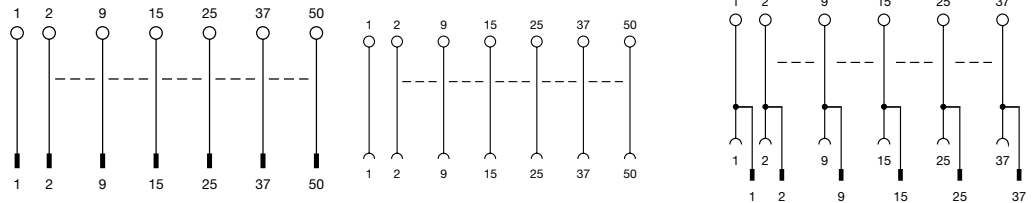


CODE TYPE	ISD15PM	XISD15PM	ISD15PF	XISD15PF	ISD15FM	XISD15FM
<b>GENERAL TECHNICAL DATA</b>						
Number of poles	15		15		15	
Version	D-sub male		D-sub female		D-sub male + female	
Input rated voltage	0...25 Vac / 0...60 Vdc		0...25 Vac / 0...60 Vdc		0...25 Vac / 0...60 Vdc	
Input rated current	2 A max		2 A max		2 A max	
Operating temperature	-20...+60°C		-20...+60°C		-20...+60°C	
Standards approvals	—		—		—	
Overvoltage category /pollution degree	II / 2		II / 2		II / 2	
Protection degree	IP 00		IP 00		IP 00	
Connection terminal	2.5 mm <sup>2</sup> screw		2.5 mm <sup>2</sup> screw		2.5 mm <sup>2</sup> screw	
Status indication	—		—		—	
Dimensions	47x66x93 mm		47x66x93 mm		47x66x93 mm	
Approximate weight	—		—		—	
Housing material	UL94V-0 plastic material		UL94V-0 plastic material		UL94V-0 plastic material	
Mounting informations	vertical on rails, side by side		vertical on rails, side by side		vertical on rails, side by side	
APPROVALS	CE		CE		CE	
<b>ACCESSORIES</b>						
Mounting rail IEC60715 TH35 75	PR003, PR903, PR005, PR906		PR003, PR903, PR005, PR910		PR003, PR903, PR005, PR914	
Mounting rail IEC60715 TH35 15	PR007, PR907, PR006, PR907		PR007, PR907, PR006, PR911		PR007, PR907, PR006, PR915	
Marking tag	—		—		—	

• Universal module

NOTE

The terminal number corresponds to the connector number



CODE TYPE	ISD25PM	XISD25PM	ISD25PF	XISD25PF	ISD25FM	XISD25FM
<b>GENERAL TECHNICAL DATA</b>						
Number of poles	25		25		25	
Version	D-sub male		D-sub female		D-sub male + female	
Input rated voltage	0...25 Vac / 0...60 Vdc		0...25 Vac / 0...60 Vdc		0...25 Vac / 0...60 Vdc	
Input rated current	2 A max		2 A max		2 A max	
Operating temperature	-20...+60°C		-20...+60°C		-20...+60°C	
Standards approvals	—		—		—	
Overvoltage category / pollution degree	II / 2		II / 2		II / 2	
Protection degree	IP 00		IP 00		IP 00	
Connection terminal	2.5 mm <sup>2</sup> screw		2.5 mm <sup>2</sup> screw		2.5 mm <sup>2</sup> screw	
Status indication	—		—		—	
Dimensions	70x66x93 mm		70x66x93 mm		70x66x93 mm	
Approximate weight	—		—		—	
Housing material	UL94V-0 plastic material		UL94V-0 plastic material		UL94V-0 plastic material	
Mounting informations	vertical on rails, side by side		vertical on rails, side by side		vertical on rails, side by side	
APPROVALS	CE		CE		CE	
<b>ACCESSORIES</b>						
Mounting rail IEC60715 TH35 75	PR003, PR903, PR005, PR907		PR003, PR903, PR005, PR911		PR003, PR903, PR005, PR915	
Mounting rail IEC60715 TH35 15	PR007, PR907, PR006, PR908		PR007, PR907, PR006, PR912		PR007, PR907, PR006, PR916	
Marking tag	—		—		—	

• Universal module

NOTE

The terminal number corresponds to the connector number



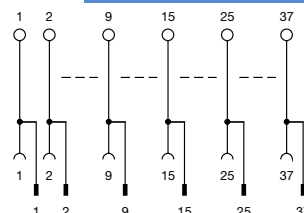
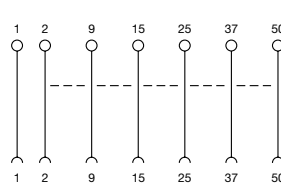
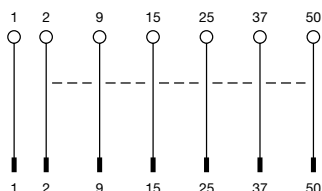
ILLUSTRATIVE PURPOSE ONLY



ILLUSTRATIVE PURPOSE ONLY

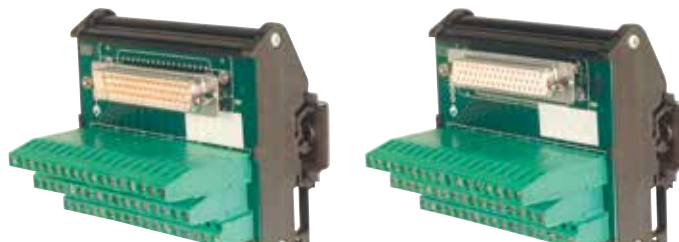


ILLUSTRATIVE PURPOSE ONLY



CODE TYPE	ISD37PM	XISD37PM	ISD37PF	XISD37PF	ISD37FM	XISD37FM
<b>GENERAL TECHNICAL DATA</b>						
Number of poles	37		37		37	
Version	D-sub male		D-sub female		D-sub male + female	
Input rated voltage	0...25 Vac / 0...60 Vdc		0...25 Vac / 0...60 Vdc		0...25 Vac / 0...60 Vdc	
Input rated current	2 A max		2 A max		2 A max	
Operating temperature	-20...+60°C		-20...+60°C		-20...+60°C	
Standards approvals	—		—		—	
Overvoltage category / pollution degree	II / 2		II / 2		II / 2	
Protection degree	IP 00		IP 00		IP 00	
Connection terminal	2.5 mm <sup>2</sup> screw		2.5 mm <sup>2</sup> screw		2.5 mm <sup>2</sup> screw	
Status indication	—		—		—	
Dimensions	107x66x93 mm		107x66x93 mm		107x66x93 mm	
Approximate weight	—		—		—	
Housing material	UL94V-0 plastic material		UL94V-0 plastic material		UL94V-0 plastic material	
Mounting informations	vertical on rails, side by side		vertical on rails, side by side		vertical on rails, side by side	
APPROVALS	CE		CE		CE	
<b>ACCESSORIES</b>						
Mounting rail IEC60715 TH35 75	PR003, PR903, PR005, PR908		PR003, PR903, PR005, PR912		PR003, PR903, PR005, PR916	
Mounting rail IEC60715 TH35 15	PR007, PR907, PR006, PR909		PR007, PR907, PR006, PR913		PR007, PR907, PR006, PR917	
Marking tag	—		—		—	

- Universal module
- Compact dimensions

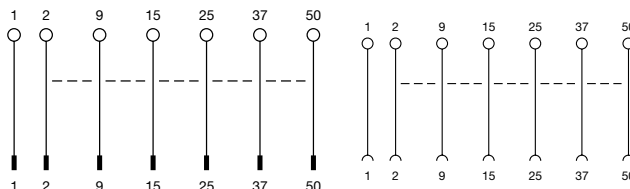


PRESENTATION PURPOSE ONLY

PRESENTATION PURPOSE ONLY

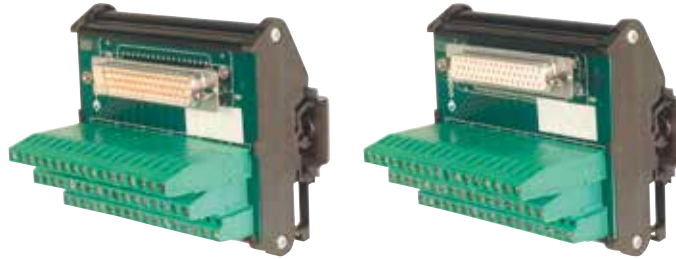
**NOTE**

The terminal number corresponds to the connector number



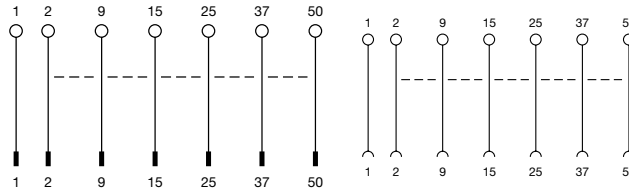
CODE TYPE	CPD25M	XCPD25M	CPD25F	XCPD25F
<b>GENERAL TECHNICAL DATA</b>				
Number of poles	25		25	
Version	D-sub male		D-sub female	
Input rated voltage	0...25 Vac / 0...60 Vdc		0...25 Vac / 0...60 Vdc	
Input rated current	2 A max		2 A max	
Operating temperature	-20...+60°C		-20...+60°C	
Standards approvals	—		—	
Overvoltage category / pollution degree	II / 2		II / 2	
Protection degree	IP 00		IP 00	
Connection terminal	2.5 mm <sup>2</sup> screw		2.5 mm <sup>2</sup> screw	
Status indication	—		—	
Dimensions	57x80x93 mm		57x80x93 mm	
Approximate weight	—		—	
Housing material	UL94V-0 plastic material		UL94V-0 plastic material	
Mounting informations	vertical on rails, side by side		vertical on rails, side by side	
APPROVALS	CE		CE	
<b>ACCESSORIES</b>				
Mounting rail IEC60715 TH35 75	PR003, PR903, PR005, PR917		PR003, PR903, PR005, PR920	
Mounting rail IEC60715 TH35 15	PR007, PR907, PR006, PR918		PR007, PR907, PR006, PR921	
Marking tag	—		—	

- Universal module
- Compact dimensions



**NOTE**

The terminal number corresponds to the connector number



CODE TYPE	XCPD37M	XCPD37F
<b>GENERAL TECHNICAL DATA</b>	<b>CPD37M</b>	<b>CPD37F</b>
Number of poles	37	37
Version	D-sub male	D-sub female
Input rated voltage	0...25 Vac / 0...60 Vdc	0...25 Vac / 0...60 Vdc
Input rated current	2 A max	2 A max
Operating temperature	-20...+60°C	-20...+60°C
Standards approvals	—	—
Overvoltage category /pollution degree	II / 2	II / 2
Protection degree	IP 00	IP 00
Connection terminal	2.5 mm <sup>2</sup> screw	2.5 mm <sup>2</sup> screw
Status indication	—	—
Dimensions	77x80x93 mm	77x80x93 mm
Approximate weight	—	—
Housing material	UL94V-0 plastic material	UL94V-0 plastic material
Mounting informations	vertical on rails, side by side	vertical on rails, side by side
APPROVALS	CE	CE
<b>ACCESSORIES</b>		
Mounting rail IEC60715 TH35 75	PR003, PR903, PR005, PR918	PR003, PR903, PR005, PR921
Mounting rail IEC60715 TH35 15	PR007, PR907, PR006, PR919	PR007, PR907, PR006, PR922
Marking tag	—	—

- Universal module
- Compact dimensions

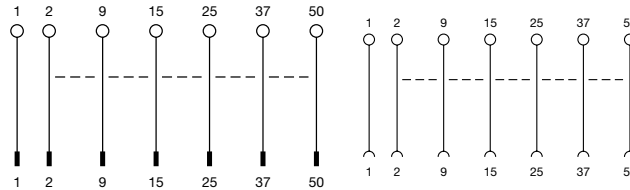


PRESENTATION PURPOSE ONLY

PRESENTATION PURPOSE ONLY

**NOTE**

The terminal number corresponds to the connector number



CODE TYPE	CPD50M	XCPD50M	CPD50F	XCPD50F
<b>GENERAL TECHNICAL DATA</b>				
Number of poles	50		50	
Version	D-sub male		D-sub female	
Input rated voltage	0...25 Vac / 0...60 Vdc		0...25 Vac / 0...60 Vdc	
Input rated current	2 A max		2 A max	
Operating temperature	-20...+60°C		-20...+60°C	
Standards approvals	—		—	
Overvoltage category / pollution degree	II / 2		II / 2	
Protection degree	IP 00		IP 00	
Connection terminal	2.5 mm <sup>2</sup> screw		2.5 mm <sup>2</sup> screw	
Status indication	—		—	
Dimensions	92x80x93 mm		92x80x93 mm	
Approximate weight	—		—	
Housing material	UL94V-0 plastic material		UL94V-0 plastic material	
Mounting informations	vertical on rails, side by side		vertical on rails, side by side	
APPROVALS	CE		CE	
<b>ACCESSORIES</b>				
Mounting rail IEC60715 TH35 75	PR003, PR903, PR005, PR919		PR003, PR903, PR005, PR922	
Mounting rail IEC60715 TH35 15	PR007, PR907, PR006, PR920		PR007, PR907, PR006, PR923	
Marking tag	—		—	



- Universal module

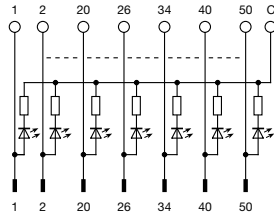


PRESENTATION PURPOSE ONLY

**NOTE**

The terminal number corresponds to the connector number

(1) Status LEDs are configured for a nominal voltage of 24 Vdc and negative common



CODE TYPE	IF10PML	XIF10PML	IF10PMS	XIF10PMS
<b>GENERAL TECHNICAL DATA</b>				
Number of poles	10		10	
Version	IDC male		IDC male	
Input rated voltage	0...50 Vac/dc		0...50 Vac/dc	
Input rated current	750 mA max		750 mA max	
Operating temperature	-20...+60°C		-20...+60°C	
Standards approvals	—		—	
Overvoltage category /pollution degree	II / 2		II / 2	
Protection degree	IP 00		IP 00	
Connection terminal	2.5 mm <sup>2</sup> screw		2.5 mm <sup>2</sup> screw	
Status indication	LED (1)		—	
Dimensions	42x66x93 mm		42x66x93 mm	
Approximate weight	—		—	
Housing material	UL94V-0 plastic material		UL94V-0 plastic material	
Mounting informations	vertical on rails, side by side		vertical on rails, side by side	
APPROVALS	CE		CE	
<b>ACCESSORIES</b>				
Mounting rail IEC60715 TH35 75	PR003, PR903, PR005, PR923		PR003, PR903, PR005, PR923	
Mounting rail IEC60715 TH35 15	PR007, PR907, PR006, PR924		PR007, PR907, PR006, PR924	
Marking tag	—		—	

- Universal module

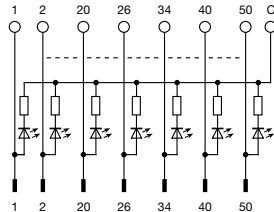


PRESENTATION PURPOSE ONLY

**NOTE**

The terminal number corresponds to the connector number

(1) Status LEDs are configured for a nominal voltage of 24 Vdc and negative common



CODE TYPE	IF14PML	XIF14PML	IF14PMS	XIF14PMS
<b>GENERAL TECHNICAL DATA</b>				
Number of poles	14		14	
Version	IDC male		IDC male	
Input rated voltage	0...50 Vac/dc		0...50 Vac/dc	
Input rated current	750 mA max		750 mA max	
Operating temperature	-20...+60°C		-20...+60°C	
Standards approvals	—		—	
Overvoltage category /pollution degree	II / 2		II / 2	
Protection degree	IP 00		IP 00	
Connection terminal	2.5 mm <sup>2</sup> screw		2.5 mm <sup>2</sup> screw	
Status indication	LED (1)		—	
Dimensions	48x66x93 mm		48x66x93 mm	
Approximate weight	—		—	
Housing material	UL94V-0 plastic material		UL94V-0 plastic material	
Mounting informations	vertical on rails, side by side		vertical on rails, side by side	
APPROVALS	CE		CE	
<b>ACCESSORIES</b>				
Mounting rail IEC60715 TH35 75	PR003, PR903, PR005, PR924		PR003, PR903, PR005, PR924	
Mounting rail IEC60715 TH35 15	PR007, PR907, PR006, PR925		PR007, PR907, PR006, PR925	
Marking tag	—		—	

- Universal module

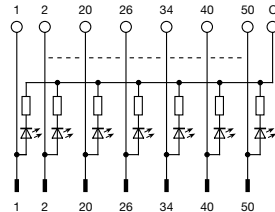
**NOTE**

The terminal number corresponds to the connector number

(1) Status LEDs are configured for a nominal voltage of 24 Vdc and negative common



PRESENTATION PURPOSE ONLY



CODE TYPE	IF16PML	XIF16PML	IF16PMS	XIF16PMS
<b>GENERAL TECHNICAL DATA</b>				
Number of poles	16		16	
Version	IDC male		IDC male	
Input rated voltage	0...50 Vac/dc		0...50 Vac/dc	
Input rated current	750 mA max		750 mA max	
Operating temperature	-20...+60°C		-20...+60°C	
Standards approvals	—		—	
Overvoltage category /pollution degree	II / 2		II / 2	
Protection degree	IP 00		IP 00	
Connection terminal	2.5 mm <sup>2</sup> screw		2.5 mm <sup>2</sup> screw	
Status indication	LED (1)		—	
Dimensions	58x66x93 mm		58x66x93 mm	
Approximate weight	—		—	
Housing material	UL94V-0 plastic material		UL94V-0 plastic material	
Mounting informations	vertical on rails, side by side		vertical on rails, side by side	
APPROVALS	CE		CE	
<b>ACCESSORIES</b>				
Mounting rail IEC60715 TH35 75	PR003, PR903, PR005, PR925		PR003, PR903, PR005, PR925	
Mounting rail IEC60715 TH35 15	PR007, PR907, PR006, PR926		PR007, PR907, PR006, PR926	
Marking tag	—		—	

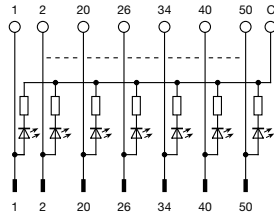
- Universal module



**NOTE**

The terminal number corresponds to the connector number

(1) Status LEDs are configured for a nominal voltage of 24 Vdc and negative common



CODE TYPE	IF20PML	XIF20PML	IF20PMS	XIF20PMS
<b>GENERAL TECHNICAL DATA</b>				
Number of poles	20		20	
Version	IDC male		IDC male	
Input rated voltage	0...50 Vac/dc		0...50 Vac/dc	
Input rated current	750 mA max		750 mA max	
Operating temperature	-20...+60°C		-20...+60°C	
Standards approvals	—		—	
Overvoltage category /pollution degree	II / 2		II / 2	
Protection degree	IP 00		IP 00	
Connection terminal	2.5 mm <sup>2</sup> screw		2.5 mm <sup>2</sup> screw	
Status indication	LED (1)		—	
Dimensions	70x66x93 mm		70x66x93 mm	
Approximate weight	—		—	
Housing material	UL94V-0 plastic material		UL94V-0 plastic material	
Mounting informations	vertical on rails, side by side		vertical on rails, side by side	
APPROVALS	CE		CE	
<b>ACCESSORIES</b>				
Mounting rail IEC60715 TH35 75	PR003, PR903, PR005, PR926		PR003, PR903, PR005, PR926	
Mounting rail IEC60715 TH35 15	PR007, PR907, PR006, PR927		PR007, PR907, PR006, PR927	
Marking tag	—		—	

- Universal module

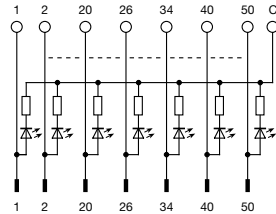


PRESENTATION PURPOSE ONLY

**NOTE**

The terminal number corresponds to the connector number

(1) Status LEDs are configured for a nominal voltage of 24 Vdc and negative common



CODE TYPE	IF26PML	XIF26PML	IF26PMS	XIF26PMS
<b>GENERAL TECHNICAL DATA</b>				
Number of poles	26		26	
Version	IDC male		IDC male	
Input rated voltage	0...50 Vac/dc		0...50 Vac/dc	
Input rated current	750 mA max		750 mA max	
Operating temperature	-20...+60°C		-20...+60°C	
Standards approvals	—		—	
Overvoltage category /pollution degree	II / 2		II / 2	
Protection degree	IP 00		IP 00	
Connection terminal	2.5 mm <sup>2</sup> screw		2.5 mm <sup>2</sup> screw	
Status indication	LED (1)		—	
Dimensions	86x66x93 mm		86x66x93 mm	
Approximate weight	—		—	
Housing material	UL94V-0 plastic material		UL94V-0 plastic material	
Mounting informations	vertical on rails, side by side		vertical on rails, side by side	
APPROVALS	CE		CE	
<b>ACCESSORIES</b>				
Mounting rail IEC60715 TH35 75	PR003, PR903, PR005, PR927		PR003, PR903, PR005, PR927	
Mounting rail IEC60715 TH35 15	PR007, PR907, PR006, PR928		PR007, PR907, PR006, PR928	
Marking tag	—		—	

- Universal module

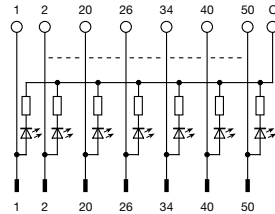
**NOTE**

The terminal number corresponds to the connector number

(1) Status LEDs are configured for a nominal voltage of 24 Vdc and negative common



PRESENTATION PURPOSE ONLY



CODE TYPE	IF34PML	XIF34PML	IF34PMS	XIF34PMS
<b>GENERAL TECHNICAL DATA</b>				
Number of poles	34		34	
Version	IDC male		IDC male	
Input rated voltage	0...50 Vac/dc		0...50 Vac/dc	
Input rated current	750 mA max		750 mA max	
Operating temperature	-20...+60°C		-20...+60°C	
Standards approvals	—		—	
Overvoltage category /pollution degree	II / 2		II / 2	
Protection degree	IP 00		IP 00	
Connection terminal	2.5 mm <sup>2</sup> screw		2.5 mm <sup>2</sup> screw	
Status indication	LED (1)		—	
Dimensions	107x66x93 mm		107x66x93 mm	
Approximate weight	—		—	
Housing material	UL94V-0 plastic material		UL94V-0 plastic material	
Mounting informations	vertical on rails, side by side		vertical on rails, side by side	
APPROVALS	CE		CE	
<b>ACCESSORIES</b>				
Mounting rail IEC60715 TH35 75	PR003, PR903, PR005, PR928		PR003, PR903, PR005, PR928	
Mounting rail IEC60715 TH35 15	PR007, PR907, PR006, PR929		PR007, PR907, PR006, PR929	
Marking tag	—		—	

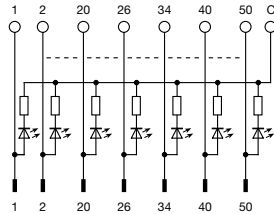
- Universal module



**NOTE**

The terminal number corresponds to the connector number

PRESENTATION PURPOSE ONLY

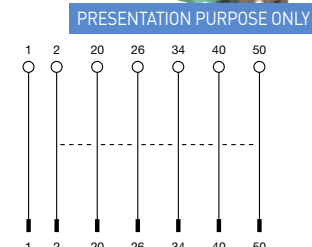
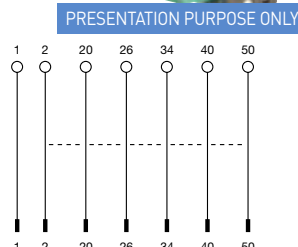
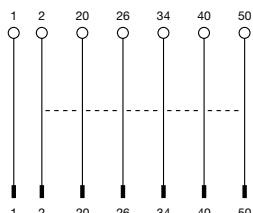


CODE TYPE	IF40PML	XIF40PML	IF40PMS	XIF40PMS
<b>GENERAL TECHNICAL DATA</b>				
Number of poles	40		40	
Version	IDC male		IDC male	
Input rated voltage	0...50 Vac/dc		0...50 Vac/dc	
Input rated current	750 mA max		750 mA max	
Operating temperature	-20...+60°C		-20...+60°C	
Standards approvals	—		—	
Overvoltage category /pollution degree	II / 2		II / 2	
Protection degree	IP 00		IP 00	
Connection terminal	2.5 mm <sup>2</sup> screw		2.5 mm <sup>2</sup> screw	
Status indication	—		—	
Dimensions	122x66x93 mm		122x66x93 mm	
Approximate weight	—		—	
Housing material	UL94V-0 plastic material		UL94V-0 plastic material	
Mounting informations	vertical on rails, side by side		vertical on rails, side by side	
APPROVALS	CE		CE	
<b>ACCESSORIES</b>				
Mounting rail IEC60715 TH35 75	PR003, PR903, PR005, PR929		PR003, PR903, PR005, PR929	
Mounting rail IEC60715 TH35 15	PR007, PR907, PR006, PR930		PR007, PR907, PR006, PR930	
Marking tag	—		—	

- Universal module
- Compact dimensions

**NOTE**

The terminal number corresponds to the connector number



CODE TYPE	XPCPC20M	XPCPC26M	XPCPC34M
<b>GENERAL TECHNICAL DATA</b>	<b>CPC20M</b>	<b>CPC26M</b>	<b>CPC34M</b>
<b>Number of poles</b>	20	26	34
<b>Version</b>	IDC male	IDC male	IDC male
<b>Input rated voltage</b>	0...50 Vac/dc	0...50 Vac/dc	0...50 Vac/dc
<b>Input rated current</b>	750 mA max	750 mA max	750 mA max
<b>Operating temperature</b>	-20...+60°C	-20...+60°C	-20...+60°C
<b>Standards approvals</b>	—	—	—
<b>Overvoltage category /pollution degree</b>	II / 2	II / 2	II / 2
<b>Protection degree</b>	IP 00	IP 00	IP 00
<b>Connection terminal</b>	2.5 mm <sup>2</sup> screw	2.5 mm <sup>2</sup> screw	2.5 mm <sup>2</sup> screw
<b>Status indication</b>	—	—	—
<b>Dimensions</b>	47x80x93 mm	57x80x93 mm	70x80x93 mm
<b>Approximate weight</b>	—	—	—
<b>Housing material</b>	UL94V-0 plastic material	UL94V-0 plastic material	UL94V-0 plastic material
<b>Mounting informations</b>	vertical on rails, side by side	vertical on rails, side by side	vertical on rails, side by side
<b>APPROVALS</b>	<b>CE</b>	<b>CE</b>	<b>CE</b>
<b>ACCESSORIES</b>			
<b>Mounting rail IEC60715 TH35 75</b>	PR003, PR903, PR005, PR930	PR003, PR903, PR005, PR931	PR003, PR903, PR005, PR932
<b>Mounting rail IEC60715 TH35 15</b>	PR007, PR907, PR006, PR931	PR007, PR907, PR006, PR932	PR007, PR907, PR006, PR933
<b>Marking tag</b>	—	—	—



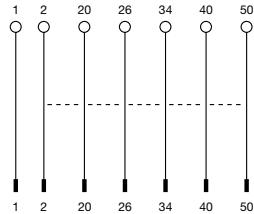
- Universal module
- Compact dimensions

**NOTE**

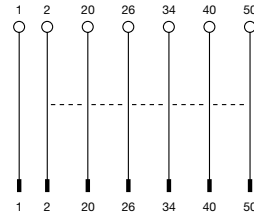
The terminal number corresponds to the connector number



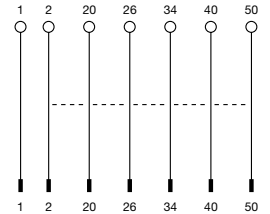
PRESENTATION PURPOSE ONLY



PRESENTATION PURPOSE ONLY



PRESENTATION PURPOSE ONLY

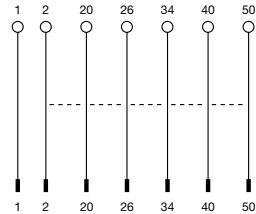


CODE TYPE	XPC40M	XPC50M	XPC60M
<b>GENERAL TECHNICAL DATA</b>			
Number of poles	40	50	60
Version	IDC male	IDC male	IDC male
Input rated voltage	0...50 Vac/dc	0...50 Vac/dc	0...50 Vac/dc
Input rated current	750 mA max	750 mA max	750 mA max
Operating temperature	-20...+60°C	-20...+60°C	-20...+60°C
Standards approvals	—	—	—
Overvoltage category /pollution degree	II / 2	II / 2	II / 2
Protection degree	IP 00	IP 00	IP 00
Connection terminal	2.5 mm <sup>2</sup> screw	2.5 mm <sup>2</sup> screw	2.5 mm <sup>2</sup> screw
Status indication	—	—	—
Dimensions	77x80x93 mm	92x80x93 mm	107x80x93 mm
Approximate weight	—	—	—
Housing material	UL94V-0 plastic material	UL94V-0 plastic material	UL94V-0 plastic material
Mounting informations	vertical on rails, side by side	vertical on rails, side by side	vertical on rails, side by side
APPROVALS	CE	CE	CE
<b>ACCESSORIES</b>			
Mounting rail IEC60715 TH35 75	PR003, PR903, PR005, PR933	PR003, PR903, PR005, PR934	PR003, PR903, PR005, PR935
Mounting rail IEC60715 TH35 15	PR007, PR907, PR006, PR934	PR007, PR907, PR006, PR935	PR007, PR907, PR006, PR936
Marking tag	—	—	—

- Universal module
- Compact dimensions



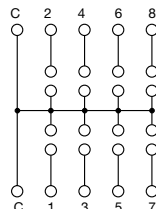
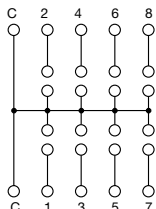
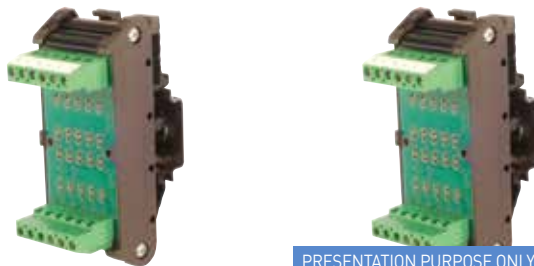
PRESENTATION PURPOSE ONLY



**NOTE**  
The terminal number corresponds to the connector number

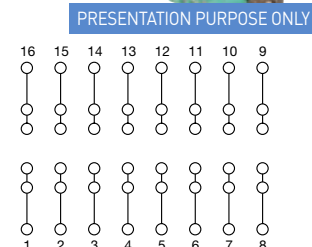
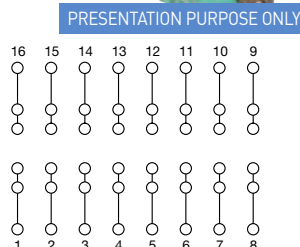
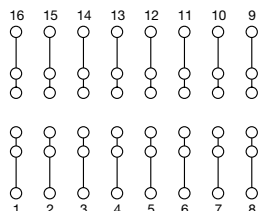
CODE TYPE	XPCPC64M
<b>GENERAL TECHNICAL DATA</b>	
Number of poles	64
Version	IDC male
Input rated voltage	0...50 Vac/dc
Input rated current	750 mA max
Operating temperature	-20...+60°C
Standards approvals	—
Overvoltage category /pollution degree	II / 2
Protection degree	IP 00
Connection terminal	2.5 mm <sup>2</sup> screw
Status indication	—
Dimensions	117x80x93 mm
Approximate weight	—
Housing material	UL94V-0 plastic material
Mounting informations	vertical on rails, side by side
APPROVALS	CE
<b>ACCESSORIES</b>	
Mounting rail IEC60715 TH35 75	PR003, PR903, PR005, PR936
Mounting rail IEC60715 TH35 15	PR007, PR907, PR006, PR937
Marking tag	—

- Suitable for diodes and resistors
- Small size



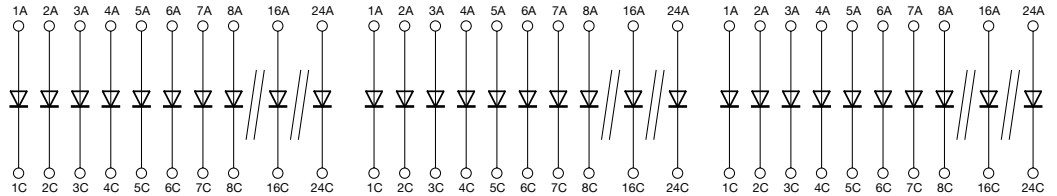
CODE TYPE	CCM08CV	XCCM08CV	CCM16CV	XCCM16CV
<b>GENERAL TECHNICAL DATA</b>				
Number of poles	8		16	
Version	with common connection		with common connection	
Input rated voltage	0...220 V ±10%		0...220 V ±10%	
Input rated current	5 A channel / 15 A on common		5 A channel / 15 A on common	
Operating temperature	-20...+60°C		-20...+60°C	
Standards approvals	—		—	
Overvoltage category /pollution degree	II / 2		II / 2	
Protection degree	IP 00		IP 00	
Connection terminal	2.5 mm <sup>2</sup> screw		2.5 mm <sup>2</sup> screw	
Status indication	—		—	
Dimensions	25x55x93 mm		47x66x93 mm	
Approximate weight	—		—	
Housing material	UL94V-0 plastic material		UL94V-0 plastic material	
Mounting informations	vertical on rails, side by side		vertical on rails, side by side	
APPROVALS	CE		CE	
<b>ACCESSORIES</b>				
Mounting rail IEC60715 TH35 75	PR003, PR903, PR005, PR937		PR003, PR903, PR005, PR938	
Mounting rail IEC60715 TH35 15	PR007, PR907, PR006, PR938		PR007, PR907, PR006, PR939	
Marking tag	—		—	

- Suitable for diodes and resistors
- Small size



CODE TYPE	CCM08SV	XCCM08SV	CCM16SV	XCCM16SV	CCM24SV	XCCM24SV
<b>GENERAL TECHNICAL DATA</b>						
Number of poles	8		16		24	
Version	single feed-through		single feed-through		single feed-through	
Input rated voltage	0...100 V ±10%		0...100 V ±10%		0...100 V ±10%	
Input rated current	4 A max. (on common)		4 A max. (on common)		4 A max. (on common)	
Operating temperature	-20...+60°C		-20...+60°C		-20...+60°C	
Standards approvals	—		—		—	
Overvoltage category /pollution degree	II / 2		II / 2		II / 2	
Protection degree	IP 00		IP 00		IP 00	
Connection terminal	2.5 mm <sup>2</sup> screw		2.5 mm <sup>2</sup> screw		2.5 mm <sup>2</sup> screw	
Status indication	—		—		—	
Dimensions	25x66x93 mm		47x66x93 mm		70x66x93 mm	
Approximate weight	—		—		—	
Housing material	UL94V-0 plastic material		UL94V-0 plastic material		UL94V-0 plastic material	
Mounting informations	vertical on rails, side by side		vertical on rails, side by side		vertical on rails, side by side	
APPROVALS	CE		CE		CE	
<b>ACCESSORIES</b>						
Mounting rail IEC60715 TH35 75	PR003, PR903, PR005, PR939		PR003, PR903, PR005, PR940		PR003, PR903, PR005, PR941	
Mounting rail IEC60715 TH35 15	PR007, PR907, PR006, PR940		PR007, PR907, PR006, PR941		PR007, PR907, PR006, PR942	
Marking tag	—		—		—	

**NOTE**  
The module is equipped with 1N4007 diodes



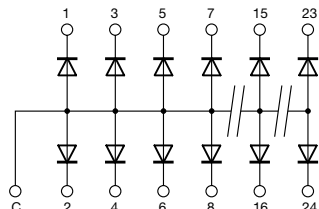
CODE TYPE	CDM08CS	XCDM08CS	CDM16CS	XCDM16CS	CDM24CS	XCDM24CS
<b>GENERAL TECHNICAL DATA</b>						
Number of poles	8		16		24	
Version	feed-through		feed-through		feed-through	
Input rated voltage	0...100 V ±10%		0...100 V ±10%		0...100 V ±10%	
Input rated current	Applicable current 1 A max		Applicable current 1 A max		Applicable current 1 A max	
Operating temperature	-20...+60°C		-20...+60°C		-20...+60°C	
Standards approvals	—		—		—	
Overvoltage category /pollution degree	II / 2		II / 2		II / 2	
Protection degree	IP 00		IP 00		IP 00	
Connection terminal	2.5 mm <sup>2</sup> screw		2.5 mm <sup>2</sup> screw		2.5 mm <sup>2</sup> screw	
Status indication	—		—		—	
Dimensions	25x60x76 mm		50x65x93 mm		71x65x93 mm	
Approximate weight	—		—		—	
Housing material	UL94V-0 plastic material		UL94V-0 plastic material		UL94V-0 plastic material	
Mounting informations	vertical on rails, side by side		vertical on rails, side by side		vertical on rails, side by side	
APPROVALS	CE		CE		CE	
<b>ACCESSORIES</b>						
Mounting rail IEC60715 TH35 75	PR003, PR903, PR005, PR942		PR003, PR903, PR005, PR943		PR003, PR903, PR005, PR944	
Mounting rail IEC60715 TH35 15	PR007, PR907, PR006, PR943		PR007, PR907, PR006, PR944		PR007, PR907, PR006, PR945	
Marking tag	—		—		—	

NOTE

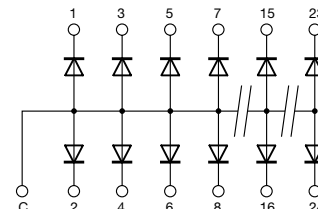
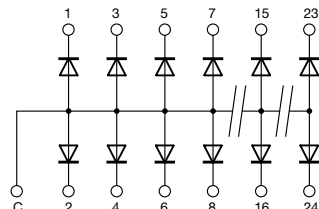
The module is equipped with 1N4007 diodes



PRESENTATION PURPOSE ONLY



PRESENTATION PURPOSE ONLY

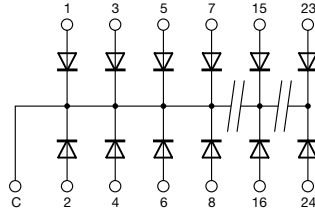


CODE TYPE	CDM08AC	XCDM08AC	CDM16AC	XCDM16AC	CDM24AC	XCDM24AC
<b>GENERAL TECHNICAL DATA</b>						
Number of poles	8		16		24	
Version	common anode		common anode		common anode	
Input rated voltage	0...220 V ±10%		0...220 V ±10%		0...220 V ±10%	
Input rated current	1 A channel / 15 A on common		1 A channel / 15 A on common		1 A channel / 15 A on common	
Operating temperature	-20...+60°C		-20...+60°C		-20...+60°C	
Standards approvals	—		—		—	
Overvoltage category /pollution degree	II / 2		II / 2		II / 2	
Protection degree	IP 00		IP 00		IP 00	
Connection terminal	2.5 mm <sup>2</sup> screw		2.5 mm <sup>2</sup> screw		2.5 mm <sup>2</sup> screw	
Status indication	—		—		—	
Dimensions	45x65x93 mm		92x65x93 mm		137x65x93 mm	
Approximate weight	—		—		—	
Housing material	UL94V-0 plastic material		UL94V-0 plastic material		UL94V-0 plastic material	
Mounting informations	vertical on rails, side by side		vertical on rails, side by side		vertical on rails, side by side	
APPROVALS	CE		CE		CE	
<b>ACCESSORIES</b>						
Mounting rail IEC60715 TH35 75	PR003, PR903, PR005, PR945		PR003, PR903, PR005, PR946		PR003, PR903, PR005, PR947	
Mounting rail IEC60715 TH35 15	PR007, PR907, PR006, PR946		PR007, PR907, PR006, PR947		PR007, PR907, PR006, PR948	
Marking tag	—		—		—	

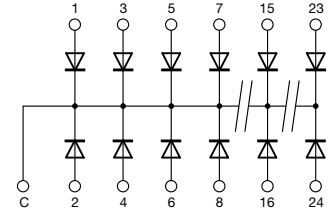
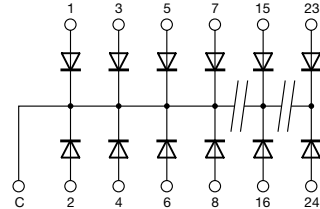
**NOTE**  
The module is equipped with 1N4007 diodes



PRESENTATION PURPOSE ONLY



PRESENTATION PURPOSE ONLY



CODE TYPE	CDM08CC	XCDM08CC	CDM16CC	XCDM16CC	CDM24CC	XCDM24CC
<b>GENERAL TECHNICAL DATA</b>						
Number of poles	8		16		24	
Version	common cathode		common cathode		common cathode	
Input rated voltage	0...220 V ±10%		0...220 V ±10%		0...220 V ±10%	
Input rated current	1 A channel / 15 A on common		1 A channel / 15 A on common		1 A channel / 15 A on common	
Operating temperature	-20...+60°C		-20...+60°C		-20...+60°C	
Standards approvals	—		—		—	
Overvoltage category /pollution degree	II / 2		II / 2		II / 2	
Protection degree	IP 00		IP 00		IP 00	
Connection terminal	2.5 mm <sup>2</sup> screw		2.5 mm <sup>2</sup> screw		2.5 mm <sup>2</sup> screw	
Status indication	—		—		—	
Dimensions	45x65x93 mm		92x65x93 mm		137x65x93 mm	
Approximate weight	—		—		—	
Housing material	UL94V-0 plastic material		UL94V-0 plastic material		UL94V-0 plastic material	
Mounting informations	vertical on rails, side by side		vertical on rails, side by side		vertical on rails, side by side	
APPROVALS	CE		CE		CE	
<b>ACCESSORIES</b>						
Mounting rail IEC60715 TH35 75	PR003, PR903, PR005, PR948		PR003, PR903, PR005, PR949		PR003, PR903, PR005, PR950	
Mounting rail IEC60715 TH35 15	PR007, PR907, PR006, PR949		PR007, PR907, PR006, PR950		PR007, PR907, PR006, PR951	
Marking tag	—		—		—	

- Integrated limit resistors
- Suitable only for LEDs without limitation resistors or internal adapter circuit
- Compact dimensions

**NOTE**

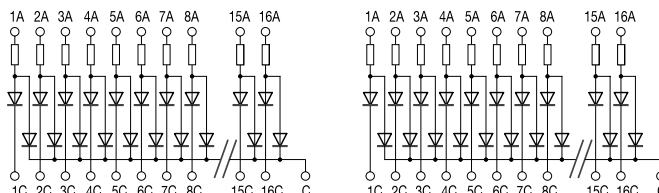
[1] LEDs light up, with a negative command on the common terminal

The module is suitable only for simple LEDs, not for LED lamps, which are equipped with its own internal electronic circuit to adjust the nominal voltage.

The module is equipped with 1N4007 diodes and 4.7 kΩ 1/4 W resistors



PRESENTATION PURPOSE ONLY



CODE TYPE	XCLT08AC	XCLT16AC
<b>GENERAL TECHNICAL DATA</b>		
<b>Number of poles</b>	8	16
<b>Version</b>	common negative [1]	common negative [1]
<b>Input rated voltage</b>	24 Vdc max 30 Vdc	24 Vdc max 30 Vdc
<b>Input rated current</b>	5 mA [24 Vdc]	5 mA [24 Vdc]
<b>Operating temperature</b>	-20...+45°C	-20...+45°C
<b>Standards approvals</b>	—	—
<b>Overvoltage category /pollution degree</b>	II / 2	II / 2
<b>Protection degree</b>	IP 00	IP 00
<b>Connection terminal</b>	2.5 mm <sup>2</sup> screw	2.5 mm <sup>2</sup> screw
<b>Status indication</b>	—	—
<b>Dimensions</b>	45x65x93 mm	92x65x93 mm
<b>Approximate weight</b>	—	—
<b>Housing material</b>	UL94V-0 plastic material	UL94V-0 plastic material
<b>Mounting informations</b>	vertical on rails, side by side	vertical on rails, side by side
<b>APPROVALS</b>	CE	CE
<b>ACCESSORIES</b>		
<b>Mounting rail IEC60715 TH35 75</b>	PR003, PR903, PR005, PR951	PR003, PR903, PR005, PR952
<b>Mounting rail IEC60715 TH35 15</b>	PR007, PR907, PR006, PR952	PR007, PR907, PR006, PR953
<b>Marking tag</b>	—	—



- Integrated limit resistors
- Suitable only for LEDs without limitation resistors or internal adapter circuit
- Compact dimensions

**NOTE**

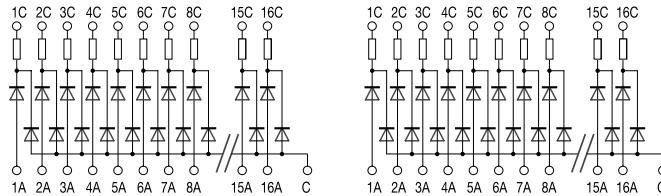
[2] LEDs light up, with a positive command on the common terminal

The module is suitable only for simple LEDs, not for LED lamps, which are equipped with its own internal electronic circuit to adjust the nominal voltage.

The module is equipped with 1N4007 diodes and 4.7 kΩ 1/4 W resistors



PRESENTATION PURPOSE ONLY



CODE TYPE	XCLT08CC	XCLT16CC
<b>GENERAL TECHNICAL DATA</b>	<b>CLT08CC</b>	<b>CLT16CC</b>
Number of poles	8	16
Version	common positive [2]	common positive [2]
Input rated voltage	24 Vdc max 30 Vdc	24 Vdc max 30 Vdc
Input rated current	5 mA [24 Vdc]	5 mA [24 Vdc]
Operating temperature	-20...+45°C	-20...+45°C
Standards approvals	—	—
Overvoltage category /pollution degree	II / 2	II / 2
Protection degree	IP 00	IP 00
Connection terminal	2.5 mm <sup>2</sup> screw	2.5 mm <sup>2</sup> screw
Status indication	—	—
Dimensions	45x65x93 mm	92x65x93 mm
Approximate weight	—	—
Housing material	UL94V-0 plastic material	UL94V-0 plastic material
Mounting informations	vertical on rails, side by side	vertical on rails, side by side
APPROVALS	CE	CE
ACCESSORIES		
Mounting rail IEC60715 TH35 75	PR003, PR903, PR005, PR953	PR003, PR903, PR005, PR954
Mounting rail IEC60715 TH35 15	PR007, PR907, PR006, PR954	PR007, PR907, PR006, PR955
Marking tag	—	—

- Suitable for LED lamps with limit resistors
- Not suitable for LED lamps fitted with an integrated limitation circuit
- Compact dimensions



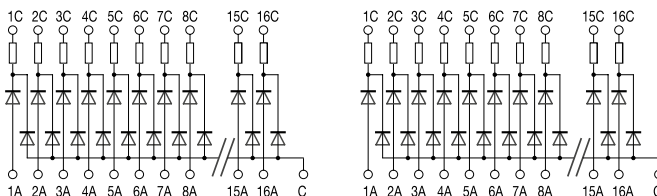
PRESENTATION PURPOSE ONLY

**NOTE**

(1) LEDs light up, with a positive command on the common terminal

The module is suitable only for filament lamps. Some LED lamps are equipped with its own internal electronic circuit, that do not allow to function with the lamp tester.

The lamps powered by alternating current, will have a brightness reduced by the presence of the rectifier diode.

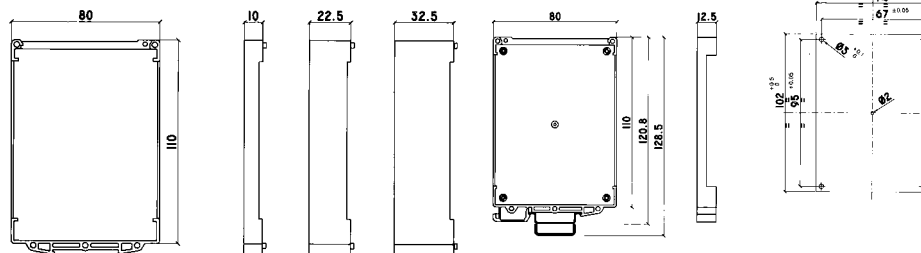
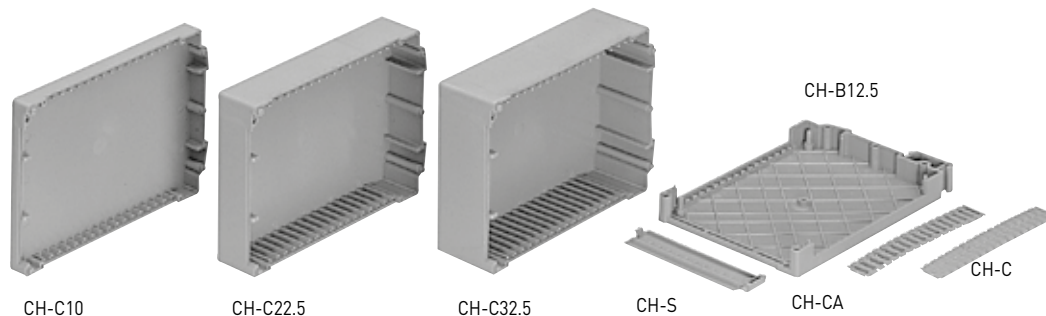


CODE TYPE	CLP08CC	XCLP08CC	CLP16CC	XCLP16CC
<b>GENERAL TECHNICAL DATA</b>				
Number of poles	8		16	
Version	common positive (1)		common positive (1)	
Input rated voltage	12...230 Vac/dc		12...230 Vac/dc	
Input rated current	100 mA (120 V) / 50 mA (230 V)		100 mA (120 V) / 50 mA (230 V)	
Operating temperature	-20...+45°C		-20...+45°C	
Standards approvals	—		—	
Overvoltage category /pollution degree	II / 2		II / 2	
Protection degree	IP 00		IP 00	
Connection terminal	2.5 mm <sup>2</sup> screw		2.5 mm <sup>2</sup> screw	
Status indication	—		—	
Dimensions	45x65x93 mm		92x65x93 mm	
Approximate weight	—		—	
Housing material	UL94V-0 plastic material		UL94V-0 plastic material	
Mounting informations	vertical on rails, side by side		vertical on rails, side by side	
<b>APPROVALS</b>	<b>CE</b>		<b>CE</b>	
<b>ACCESSORIES</b>				
Mounting rail IEC60715 TH35 75	PR003, PR903, PR005, PR955		PR003, PR903, PR005, PR956	
Mounting rail IEC60715 TH35 15	PR007, PR907, PR006, PR956		PR007, PR907, PR006, PR957	
Marking tag	—		—	

- 3 different dimension available
- ventilated and not ventilated covers

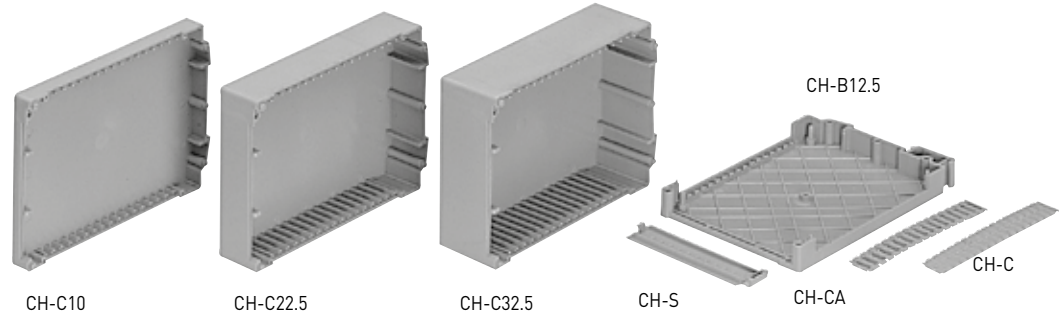
**NOTE**

(1) see drawing  
 (2) The base module CH-B12.5 must be closed with a cover to ensure IP 20 protection degree

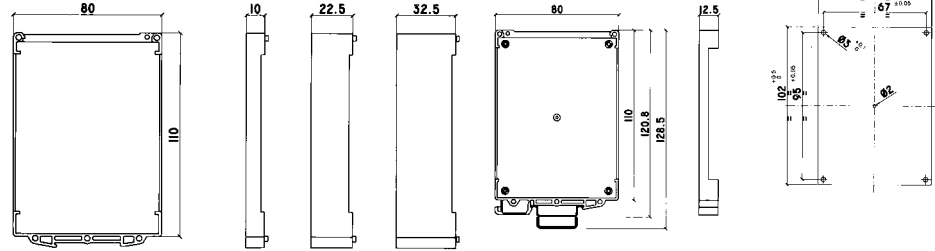


CODE TYPE	XBB125 CH-B12.5	XBC010 CH-C10	XBC225 CH-C22.5	XBC325 CH-C32.5
<b>GENERAL TECHNICAL DATA</b>				
Version	12.5 mm DIN-rail mounting base	10 mm cover for CH-B12.5	22.5 mm cover for CH-B12.5	32.5 mm cover for CH-B12.5
Operating temperature range	max 80 °C	max 80 °C	max 80 °C	max 80 °C
Dissipation capability	7 W max.	7 W max.	7 W max.	7 W max.
Protection degree	IP 20 (2)	—	—	—
Connection terminal	—	—	—	—
Dimensions	(1)	(1)	(1)	(1)
Approximate weight	—	—	—	—
Material	UL94V-0 plastic material	UL94V-0 plastic material	UL94V-0 plastic material	UL94V-0 plastic material
Mounting informations	on a rail, syde by side	on a rail, syde by side	on a rail, syde by side	on a rail, syde by side
<b>APPROVALS</b>				
<b>ACCESSORIES</b>				
Mounting rail IEC60715 TH35 75	PR/3/AC, PR/3/AC/ZB, PR/3/AS, PR/3/AS/ZB	—	—	—
Mounting rail IEC60715 TH35 15	—	—	—	—
Marking tag	—	—	—	—
Plugin jumper	—	—	—	—
End plate	—	—	—	—

- 3 different dimension available
- ventilated and not ventilated covers



**NOTE**  
 (1) see drawing  
 (2) The base module CH-B12.5 must be closed with a cover to ensure IP 20 protection degree



CODE TYPE	XBS000	XBCA00	XBC000
<b>GENERAL TECHNICAL DATA</b>			
Version	openable front cover	ventilated lateral cover	not ventilated lateral cover
Operating temperature range	max 80 °C	max 80 °C	max 80 °C
Dissipation capability	7 W max.	7 W max.	7 W max.
Protection degree	—	—	—
Connection terminal	—	—	—
Dimensions	(1)	(1)	(1)
Approximate weight	—	—	—
Material	UL94V-0 plastic material	UL94V-0 plastic material	UL94V-0 plastic material
Mounting informations	—	—	—
<b>APPROVALS</b>			
<b>ACCESSORIES</b>			
Mounting rail IEC60715 TH35 75	—	—	—
Mounting rail IEC60715 TH35 15	—	—	—
Marking tag	—	—	—
Plugin jumper	—	—	—
End plate	—	—	—

**APPLICATIONS**

Electronic circuit for housing CH Series

With its CH (Cabur Housing) series containers, Cabur offers a modular system for creating three different sized boxes (22.5 mm, 35 mm and 45 mm) made up of eight easily assemble parts. The circuit can measure up to 102 x 74 mm and can be inserted onto four columns in the base which hold it in place. The circuit can be additionally secured with a 2.2 x 4.5 mm self-tapping screw, to be screwed into the central column, which also enables the circuit to be smaller in size. Conductor connections are applied using 2.5 mm removable terminal blocks, which are easily available. 16 connection poles are used, with a clearance of 5.08 mm on each side and 10 mm on the front.

The CH-S front closure has an openable inspection window for access to inside the circuit for procedures on potentiometers, jumpers and microswitches. The side closures have a number of incisions which enable them to be cut off with scissors, at a clearance of 5.08 mm, avoiding the expensive grinding typical of other models on the market.

- Expandable module with 6 mm pitch
- 6 spring clamp terminal blocks
- Jumper can be connected on all 4 levels
- Openable front inspection cover

**NOTE**

- (1) see drawing
- (2) The final module must be closed with the CK/PT end plate, to ensure IP 20 protection degree
- (3) Includes 6 spring clamp terminal blocks
- (4) PTC/4 series, see paragraph accessories for more details

Ground contact on CKBG



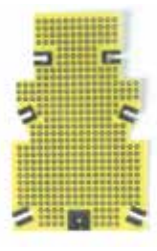
CKBX2



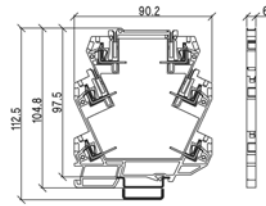
CKB



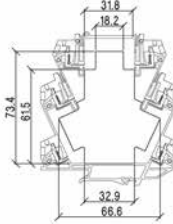
CK/PCB



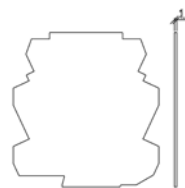
CKB and CKBG



CKBX2



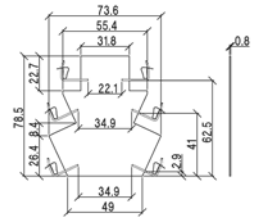
CKPT



CKS



CKPCB



CODE TYPE	CKB (1)	XCKB	CKBG (1)	XCKBG	CKBX2 (1)	XCKX2
<b>GENERAL TECHNICAL DATA</b>						
Version	base housing		base housing with ground contact		expansion module	
Operating temperature range	-40...+ 100°C		-40...+ 100°C		-40...+ 100°C	
Dissipation capability	—		—		—	
Protection degree	IP 20 (2)		IP 20 (2)		IP 20 (2)	
Connection terminal	2.5 mm <sup>2</sup> (clamp) (3)		2.5 mm <sup>2</sup> (clamp) (3)		2.5 mm <sup>2</sup> (clamp) (3)	
Dimensions	(1)		(1)		(1)	
Approximate weight	20 g		20 g		15 g	
Material	UL94V-0 plastic material		UL94V-0 plastic material		UL94V-0 plastic material	
Mounting informations	on a rail, syde by side		on a rail, syde by side		on a rail, syde by side	
<b>APPROVALS</b>						
<b>ACCESSORIES</b>						
Mounting rail IEC60715 TH35 75	PR/3/AC, PR/3/AC/ZB, PR/3/AS, PR/3/AS/ZB		PR/3/AC, PR/3/AC/ZB, PR/3/AS, PR/3/AS/ZB		PR/3/AC, PR/3/AC/ZB, PR/3/AS, PR/3/AS/ZB	
Mounting rail IEC60715 TH35 15	—		—		—	
Marking tag	CNU/8/030		CNU/8/031		CNU/8/032	
Plugin jumper	PTC/4/.. (4)		PTC/4/.. (4)		PTC/4/.. (4)	
End plate	CK/PT		CK/PT		CK/PT	

- Expandable module with 6 mm pitch
- 6 spring clamp terminal blocks
- Jumper can be connected on all 4 levels
- Openable front inspection cover

**NOTE**

- (1) see drawing
- (2) The final module must be closed with the CK/PT end plate, to ensure IP 20 protection degree
- (3) Includes 6 spring clamp terminal blocks
- (4) PTC/4 series, see paragraph accessories for more details

Ground contact on CKBG



CKBX2



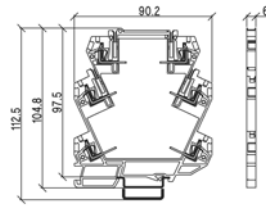
CKB



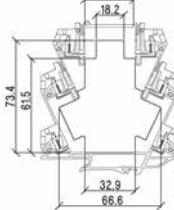
CK/PCB



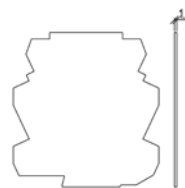
CKB and CKBG



CKBX2



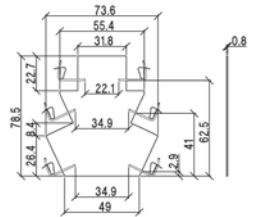
CKPT



CKS



CKPCB



CODE TYPE	CK/PT	XCKPT	CK/S	XCKS
<b>GENERAL TECHNICAL DATA</b>				
Version	end section		openable inspection window	
Operating temperature range	-40...+ 100°C		-40...+ 100°C	
Dissipation capability	—		—	
Protection degree	—		—	
Connection terminal	—		—	
Dimensions	(1)		(1)	
Approximate weight	15 g		1 g	
Material	UL94V-0 plastic material		UL94V-0 plastic material	
Mounting informations	on rails		on rails	
<b>APPROVALS</b>				
<b>ACCESSORIES</b>				
Mounting rail IEC60715 TH35 75	—		—	
Mounting rail IEC60715 TH35 15	—		—	
Marking tag	—		—	
Plugin jumper	—		—	
End plate	—		—	

## APPLICATIONS

With its CK series housing, Cabur offers a modular system for creating terminal blocks of gradually increasing widths for housing simple components such as diodes and resistors or more complex circuits with or without the support of a printed circuit board.

Housing requires the following components:

- one base housing available in two versions: CKB and CKBG, the latter supplied with an electrical contact to the metal rail for connecting the internal circuit to ground. The rail ground contact can carry an impulse current of 5 KA (impulse 8/20). Both models have an external width of 6 mm and an internal width of 5 mm and have 6 spring connections, 4 of which are connectable to a jumper;
- one or more CKBX2 expansion cards similar to the standard model, i.e. with an external width of 6 mm and a central cavity that allows bulky components to overlap the base outline, can also be supplied with a 6-connection expansion, 4 of which connectable to a jumper;
- available with the CK/S openable inspection window for frontal closure; the opening is in any case sized to ensure protection degree IP20 even without using the inspection window;
- the final module must be provided with the CK/PT end section, which ensures protection degree IP20;
- also available with the CK/PCB printed strip board, useful for custom applications in which low volumes make it infeasible to produce a dedicated printed circuit board or for creating affordable prototypes.

• Suitable for "CK" series

**NOTE**

Example of a jumper bridge cut into nine poles  
Current capability is referred to the metal jumper, number of poles and terminals can reduce this value.



CODE TYPE	PTC/CK/42	PTCCK42
<b>GENERAL TECHNICAL DATA</b>		
Version	—	
Number of poles	42	
Pitch	6 mm	
Current capability	32 A	
Approximate weight	27 g (42 poles)	
Material	copper-tin alloy	

**APPROVALS**

• Suitable for "CW...7" series

**NOTE**

Current capability is referred to the metal jumper, number of poles and terminals can reduce this value.



CODE TYPE	CWBK 7-0802	X766802	CWBK 7-0803	X766803	CWBK 7-0804	X766804
<b>GENERAL TECHNICAL DATA</b>						
Version	red		white		blue	
Number of poles	16		16		16	
Pitch	6.2 mm		6.2 mm		6.2 mm	
Current capability	16 A		16 A		16 A	
Approximate weight	4 g		4 g		4 g	
Material	—		—		—	

**APPROVALS**

- Suitable for "CWRE" series

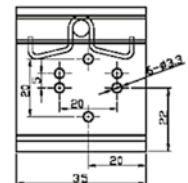
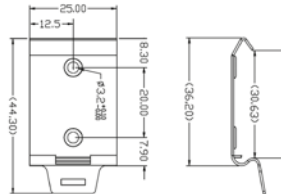
**NOTE**

Current capability is referred to the metal jumper, number of poles and terminals can reduce this value.

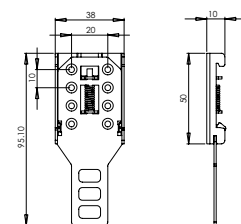
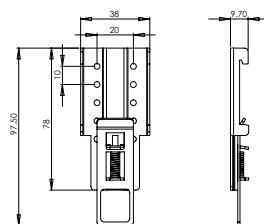


CODE TYPE	X766813 <b>CWBK 7-0813</b>	XCMB16B <b>CMB16B</b>	XCMB27B <b>CMB27B</b>
<b>GENERAL TECHNICAL DATA</b>			
Version	blue	black	black
Number of poles	20	8	8
Pitch	6.2 mm	16 mm	27 mm
Current capability	16 A	16 A	16 A
Approximate weight	6 g	3 g	3 g
Material	—	—	—
<b>APPROVALS</b>			

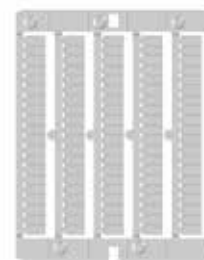
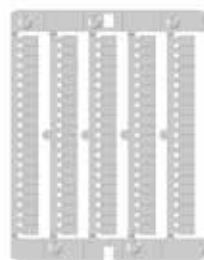




CODE TYPE	CDIN-2	XCDIN2	CDIN-4	XCDIN4
GENERAL TECHNICAL DATA				
Material	P13-FE00		aluminium	
Mounting information	screws or rivets		screws or rivets	
Mounting rail (IEC60715/TH35-7.5)	PR/3/AC, PR/3/AC/ZB, PR/3/AS, PR/3/AS/ZB		PR/3/AC, PR/3/AC/ZB, PR/3/AS, PR/3/AS/ZB	
Mounting rail (IEC60715/TH35-15)	—		—	



CODE TYPE	CDIN-6	XCDIN6	CDINM45	XCDINM45
GENERAL TECHNICAL DATA				
Material	P13-FE00		P13-FE00	
Mounting information	screws or rivets		screws or rivets	
Mounting rail (IEC60715/TH35-7.5)	PR/3/AC, PR/3/AC/ZB, PR/3/AS, PR/3/AS/ZB		PR/3/AC, PR/3/AC/ZB, PR/3/AS, PR/3/AS/ZB	
Mounting rail (IEC60715/TH35-15)	—		—	

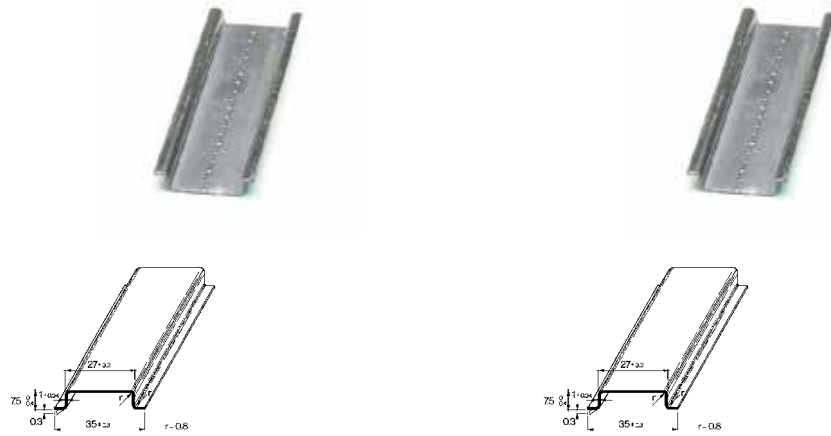


**NOTE**

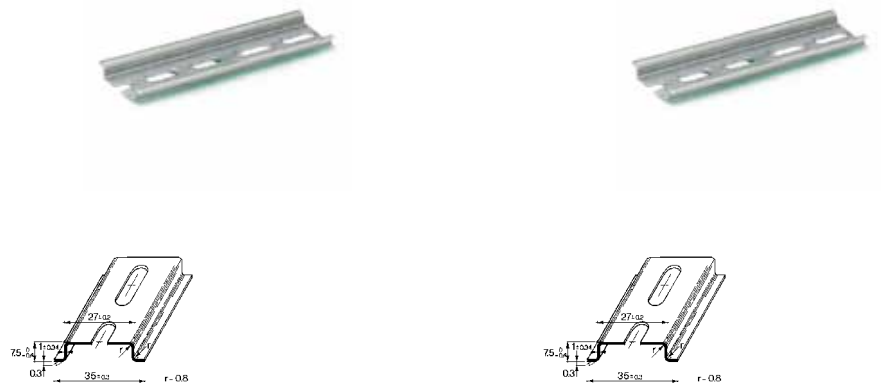
White marking tags for the identification to be inserted into dedicated slot. It can be written manually or printed using an industrial marking system. In addition to blank marking tags, are available tags with alpha-numeric characters and with the most common electrical symbols. For more information, see the Industrial Marking Systems catalogue.

CODE TYPE	CNU/8/51	NU0851	NUPUTUK50	NUPUTUK50
GENERAL TECHNICAL DATA				
Version	white, neutral		white, neutral	
Material	polycarbonate		polycarbonate	

# MOUNTING RAILS COMPLIANT WITH IEC 60715/TH35 - 7.5

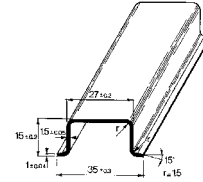
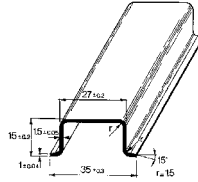


CODE TYPE	PR/3/AC	PR003	PR/3/AC/ZB	PR903
GENERAL TECHNICAL DATA				
Version	passivated		white zinc-plated "SENDZMIR" system	
Material	steel		steel	

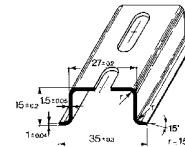
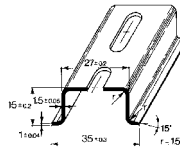


CODE TYPE	PR/3/AS	PR005	PR/3/AS/ZB	PR905
GENERAL TECHNICAL DATA				
Version	passivated with holes		white zinc-plated "SENDZMIR" system with holes	
Material	steel		steel	

# MOUNTING RAILS COMPLIANT WITH IEC 60715/TH35 - 7.5



CODE TYPE	PR/3/PP	PR007	PR/3/PP/ZB	PR007
GENERAL TECHNICAL DATA				
Version	passivated		white zinc-plated "SENDZMIR" system	
Material	steel		steel	



CODE TYPE	PR/3/PA	PR006	PR/3/PA/ZB	PR006
GENERAL TECHNICAL DATA				
Version	passivated with holes		white zinc-plated	
Material	steel		"SENDZMIR" system with holes	

XCSD1015W024VAA	11	XCSA120DC	54	X756360	99	XCRE81	131	XCCM08CV	161
XCSD1015W012VAA	11	XCSA240FC	55	X756370	100	XCRE42SC	131	XCCM16CV	161
XCSD1030W024AA	12	XCL1R	56	XCCI52	101	XCRE83	132	XCCM08SV	162
XCSD1030W012AA	12	XCL5R	56	X766184	102	XCR83	132	XCCM16SV	162
XCS030F	13	XAR6	57	XNPNPNP	103	X0332060	134	XCCM24SV	162
XCSD1072W024AA	14	XCSBC	58	XCIO4IMB	105	X0332240	134	XCDM08CS	163
XCSD1072W012AA	14	XCSUPS1	59	XCIO4VMB	105	XCM1S024	135	XCDM16CS	163
XCSF30C	16	XCSUPS2	59	XCIO4RMB	105	XCM1S024E	135	XCDM24CS	163
XCSF85C	17	XCSU120S	60	XCIO4TMB	106	XCM1T024	136	XCDM08AC	164
XCSF85CP	17	XCSU240S	61	XCIO4RLYMB	106	XCM1T024E	136	XCDM16AC	164
XCSF85B	18	XCSC120B	62	XBRIRS485ET	107	XCKS024DC024DC03	137	XCDM24AC	164
XCSF120C	19	XCSC120C	62	XBRIRS485WI	107	XCKS024DC024DC05	137	XCDM08CC	165
XCSF120CP	19	XCSBD	63	XBRIRS485CP	107	XCKS024DC024DC10	137	XCDM16CC	165
XCSF120DP	20	XCSR2M20AA	64	XSWET5PU	108	XCKS024DC230AC05	138	XCDM24CC	165
XCSF240C	21	XCSR2M40AA	64	XSWET8PU	108	X766083	139	XCLT08AC	166
XCSF240CP	21	XCSR50U	65	XRFA024D	110	XCKS1S	139	XCLT16AC	166
XCSF240DP	22	XMBC2K	68	XRF1824D	110	X766082	139	XCLT08CC	167
XCSF500C	23	XCEPD1	70	XRF1024D	110	XR042S24	140	XCLT16CC	167
XCSF500D	23	XF07TDVST2	72	XRE1824D	111	XR082S24	140	XCLP08CC	168
XCSL1072W024VAA	25	XF16TDVST2	72	XRE1024D	111	XR162S24	140	XCLP16CC	168
XCSL1120W024VAA	25	XF30TDVST2	72	XRE2024D	111	XR042T24	141	XBB125	169
XCSL85C	26	XF42TDVST2	73	XCM1C012	112	XR082T24	141	XBC010	169
XCSL120C	26	XF55TDVST2	73	XCM1C024	112	XR162T24	141	XBC225	169
XCSL240C	27	XF75TDVST2	73	XCM1C048	112	XR041S24F	142	XBC325	169
XCSL1480W024VAA	28	XF100TDVST2	74	XCM1C110	113	XR081S24F	142	XBS000	170
XCSL1480W048VAA	28	XF150TDS84C	75	XCM2C012	114	XR161S24F	142	XBCA00	170
XCSL1480W072VAA	29	XF180TDS84C	75	XCM2C024	114	XISD09PM	144	XBC000	170
XCSL3480W024VAA	30	XF10TYG9	76	XCM2C048	114	XISD09PF	144	XCKB	171
XCSL3480W048VAA	30	XF20TYG9	76	XCM2C110	115	XISD09FM	144	XCKBG	171
XCSL3480W072VAA	31	XF36TYT8	77	XCM4C024	116	XISD15PM	145	XCKX2	171
XCSL1480W024VGA	32	XF50TYT8	77	XCM1A012	117	XISD15PF	145	XCKPT	172
XCSL1480W048VGA	32	XF100TYT8	77	XCM1A024	117	XISD15FM	145	XCKS	172
XCSL1480W072VGA	33	XF03DKBG5B	78	XCM1A120	117	XISD25PM	146	PTCKK42	173
XCSL3480W024VGA	34	XF06DKBG5B	78	XCM1A230	118	XISD25PF	146	X766802	173
XCSL3480W048VGA	34	XF12DKBG5B	78	XCM2A012	119	XISD25FM	146	X766803	173
XCSL3480W072VGA	35	XF16DKCG5B	79	XCM2A024	119	XISD37PM	147	X766804	173
XCSL1480W024VAB	36	XF20DKCG5B	79	XCM2A120	119	XISD37PF	147	X766813	174
XCSL1480W048VAB	36	XF30DKCS5B	79	XCM2A230	120	XISD37FM	147	XCMB16B	174
XCSL1480W072VAB	37	XF03DPCG5C	80	XCKR16	121	XCPD25M	148	XCMB27B	174
XCSL3480W024VAB	38	XF06DPCG5C	80	XCKR25	121	XCPD25F	148	XCDIN2	175
XCSL3480W048VAB	38	XF12DPCG5C	80	X766848	122	XCPD37M	149	XCDIN4	175
XCSL3480W072VAB	39	XF16DPCG5C	81	X766842	122	XCPD37F	149	XCDIN6	175
XCSL481C	40	XF20DPCG5C	81	X766845	122	XCPD50M	150	XCDINM45	175
XCSW121C	42	XF30DPCG5C	81	X766846	123	XCPD50F	150	NU0851	176
XCSW121B	42	XCAPI03	86	X766847	123	XIF10PML	151	NUPUTUK50	176
XCSW241C	43	X756516	87	XR041E24	124	XIF10PMS	151	PR003	177
XCSW241B	43	X756539	88	XR081E24	124	XIF14PML	152	PR903	177
XCSW241DP	44	X756530	89	XR161E24	124	XIF14PMS	152	PR005	177
XCSW481C	45	X756531	89	XR041EAD	125	XIF16PML	153	PR905	177
XCSW481D	45	X756532	89	XR081EAD	125	XIF16PMS	153	PR007	178
XCSW481G	46	X756533	90	XR161EAD	125	XIF20PML	154	PR007	178
XCSW960CP	46	X756534	90	XR041U24F	126	XIF20PMS	154	PR006	178
XCSG481C	48	X756535	90	XR081U24F	126	XIF26PML	155	PR906	178
XCSG500C	48	X756536	91	XR161U24F	126	XIF26PMS	155		
XCSG720C	49	X756537	91	XR042E24	127	XIF34PML	156		
XCSG960C	49	X756538	91	XR082E24	127	XIF34PMS	156		
XCSG960D	50	X756526	92	XR162E24	127	XIF40PML	157		
XCSG960G	50	X756321	93	XR042EAD	128	XIF40PMS	157		
XCSG2401C	51	X756340	94	XR082EAD	128	XCPC20M	158		
XCSG2401D	51	X756816	95	XR162EAD	128	XCPC26M	158		
XCSG2401G	52	X756844	96	XRMP081CM	129	XCPC34M	158		
XCSG2401R	52	X756540	97	XCR41	130	XCPC40M	159		
XCSA120BC	53	X756541	97	XCR81	130	XCPC50M	159		
XCSA120CB	53	X756542	97	XCR42SC	130	XCPC60M	159		
XCSA120CC	54	X756524	98	XCRE41	131	XCPC64M	160		

CSD1-015W/024V/AA	11	CSA120DC	54	LCONALS	99	CRE8-1	131	CCM08CV	161
CSD1-015W/012V/AA	11	CSA240FC	55	LCONTLS	100	CRE4-2SC	131	CCM16CV	161
CSD1-030W/024/AA	12	CL1R	56	CCIS-2	101	CRE8-3	132	CCM08SV	162
CSD1-030W/012/AA	12	CL5R	56	CWCV 7-6184	102	CR8-3	132	CCM16SV	162
CSD30F	13	AR6	57	CI-NPN/PNP	103	Q332060	134	CCM24SV	162
CSD1-072W/024/AA	14	CSBC	58	CIO4IMB	105	O332240	134	CCM08CS	163
CSD1-072W/012/AA	14	CS-UPS1	59	CIO4VMB	105	CM1S024	135	CDM16CS	163
CSF30C	16	CS-UPS2	59	CIO4RMB	105	CM1S024E	135	CDM24CS	163
CSF85C	17	CSU120S	60	CIO4TMB	106	CM1T024	136	CDM08AC	164
CSF85CP	17	CSU240S	61	CIO4RLYMB	106	CM1T024E	136	CDM16AC	164
CSF85B	18	CSC120B	62	BRI-RS485-ET	107	CKS-024DC/024DC/03	137	CDM24AC	164
CSF120C	19	CSC120C	62	BRI-RS485-WI	107	CKS-024DC/024DC/05	137	CDM08CC	165
CSF120CP	19	CSBD	63	BRI-RS485-CP	107	CKS-024DC/024DC/10	137	CDM16CC	165
CSF120DP	20	CSR-2M/20/AA	64	SWET-5PU	108	CKS-024DC/230AC/05	138	CDM24CC	165
CSF240C	21	CSR-2M/40/AA	64	SWET-8PU	108	CWOT 6-2083	139	CLT08AC	166
CSF240CP	21	CSR50U	65	RFA024D	110	CKS1S	139	CLT16AC	166
CSF240DP	22	MBC2K	68	RF1824D	110	CWOT 6-6082	139	CLT08CC	167
CSF500C	23	CEP-D1	70	RF1024D	110	R42S24	140	CLT16CC	167
CSF500D	23	F07TDVST2	72	RE1824D	111	R82S24	140	CLP08CC	168
CSL1-072W/024V/AA	25	F16TDVST2	72	RE1024D	111	R162S24	140	CLP16CC	168
CSL1-120W/024V/AA	25	F30TDVST2	72	RE2024D	111	R42T24	141	CH-B12.5	169
CSL85C	26	F42TDVST2	73	CM1C012	112	R82T24	141	CH-C10	169
CSL120C	26	F55TDVST2	73	CM1C024	112	R162T24	141	CH-C22.5	169
CSL240C	27	F75TDVST2	73	CM1C048	112	R41S24F	142	CH-C32.5	169
CSL1-480W/024V/AA	28	F100TDVST2	74	CM1C0110	113	R81S24F	142	CH-S	170
CSL1-480W/048V/AA	28	F150TDS84C	75	CM2C012	114	R161S24F	142	CH-CA	170
CSL1-480W/072V/AA	29	F180TDS84C	75	CM2C024	114	ISD09PM	144	CH-C	170
CSL3-480W/024V/AA	30	F10TYG9	76	CM2C048	114	ISD09PF	144	CKB	171
CSL3-480W/048V/AA	30	F20TYS9	76	CM2C0110	115	ISD09FM	144	CKBG	171
CSL3-480W/072V/AA	31	F36TYT8	77	CM4C024	116	ISD15PM	145	CKBX2	171
CSL1-480W/024V/GA	32	F50TYT8	77	CM1A012	117	ISD15PF	145	CK/PT	172
CSL1-480W/048V/GA	32	F100TYT8	77	CM1A024	117	ISD15FM	145	CK/S	172
CSL1-480W/072V/GA	33	F03DKBG5B	78	CM1A120	117	ISD25PM	146	PTC/CK/42	173
CSL3-480W/024V/GA	34	F06DKBG5B	78	CM1A230	118	ISD25PF	146	CWBK 7-0802	173
CSL3-480W/048V/GA	34	F12DKBG5B	78	CM2A012	119	ISD25FM	146	CWBK 7-0803	173
CSL3-480W/072V/GA	35	F16DKCG5B	79	CM2A024	119	ISD37PM	147	CWBK 7-0804	173
CSL1-480W/024V/AB	36	F20DKCG5B	79	CM2A120	119	ISD37PF	147	CWBK 7-0813	174
CSL1-480W/048V/AB	36	F30DKC55B	79	CM2A230	120	ISD37FM	147	CMB16B	174
CSL1-480W/072V/AB	37	F03DPCG5C	80	CKR16	121	CPD25M	148	CMB27B	174
CSL3-480W/024V/AB	38	F06DPCG5C	80	CKR25	121	CPD25F	148	CDIN-2	175
CSL3-480W/048V/AB	38	F12DPCG5C	80	CWRE7-0848	122	CPD37M	149	CDIN-4	175
CSL3-480W/072V/AB	39	F16DPCG5C	81	CWRE7-0842	122	CPD37F	149	CDIN-6	175
CSL481C	40	F20DPCG5C	81	CWRE7-0845	122	CPD50M	150	CDINM45	175
CSW121C	42	F30DPCG5C	81	CWRE7-0846	123	CPD50F	150	CNU/8/51	176
CSW121B	42	CAPIPO3	86	CWRE7-0847	123	IF10PML	151	NUPUTUK50	176
CSW241C	43	CWUAA 6-0516	87	R41E24	124	IF10PMS	151	PR/3/AC	177
CSW241B	43	CWNAA-7-0539	88	R81E24	124	IF14PML	152	PR/3/AC/ZB	177
CSW241DP	44	CWAA 7-0530	89	R161E24	124	IF14PMS	152	PR/3/AS	177
CSW481C	45	CWAA 7-0531	89	R41EAD	125	IF16PML	153	PR/3/AS/ZB	177
CSW481D	45	CWAA 7-0532	89	R81EAD	125	IF16PMS	153	PR/3/PP	178
CSW481G	46	CWAA 7-0533	89	R161EAD	125	IF20PML	154	PR/3/PP/ZB	178
CSW960CP	46	CWAA 7-0534	90	R41U24F	126	IF20PMS	154	PR/3/PA	178
CSG481C	48	CWAA 7-0535	90	R81U24F	126	IF26PML	155	PR/3/PA/ZB	178
CSG500C	48	CWAA 7-0536	91	R161U24F	126	IF26PMS	155		
CSG720C	49	CWAA 7-0537	91	R42E24	127	IF34PML	156		
CSG960C	49	CWAA 7-0538	91	R82E24	127	IF34PMS	156		
CSG960D	50	CWPAA 7-0526	92	R162E24	127	IF40PML	157		
CSG960G	50	LCON AASP	93	R42EAD	128	IF40PMS	157		
CSG2401C	51	LCONTAD	94	R82EAD	128	CPC20M	158		
CSG2401D	51	CWPT 6-0816	95	R162EAD	128	CPC26M	158		
CSG2401G	52	CWTH 6-0844	96	RMP081CM	129	CPC34M	158		
CSG2401R	52	WAA 7-0540	97	CR4-1	130	CPC40M	159		
CSA120BC	53	WAA 7-0541	97	CR8-1	130	CPC50M	159		
CSA120CB	53	WAA 7-0542	97	CR4-2SC	130	CPC60M	159		
CSA120CC	54	CWNFA 6-0524	98	CRE4-1	131	CPC64M	160		





AUTOMATION  
AND CONTROL  
SOLUTIONS



INDUSTRIAL  
CONNECTIVITY  
SOLUTIONS



SOLUTIONS  
FOR RENEWABLE  
ENERGY



INDUSTRIAL  
MARKING  
SOLUTIONS



D021G19A - 0319

## **Cabur Srl**

### **Headquarters (Italia)**

17041 - Altare (SV)

Località Isola Grande, 45

T. +39 019 58999.1

F. +39 019 58999233

[www.cabur.it](http://www.cabur.it)

[info@cabur.it](mailto:info@cabur.it)

## **Cabur Romania Srl**

### **Romanian Branch**

Strada Calea Plevnei nr. 139

Corp B camera 25,26 sector 6

Bucaresti

T. +40 (21)31.17.140

F. +40 (21)31.17.140

[www.cabur.eu](http://www.cabur.eu)

[alexandru.cazacu@cabur.eu](mailto:alexandru.cazacu@cabur.eu)