

Elf & Cadet 3 Tongue Interlock Switches

Catalog Numbers 440K-C21048, 440K-C21050, 440K-C21052, 440K-C21054, 440K-C21055, 440K-C21057, 440K-C21058, 440K-C21060, 440K-C21061, 440K-C21062, 440K-C21065, 440K-C21067, 440K-C21068, 440K-C21070, 440K-C21074, 440K-C21080, 440K-C21088, 440K-C21089, 440K-C21090, 440K-C21091, 440K-C21092, 440K-C21093, 440K-C21094, 440K-C21095, 440K-C21096, 440K-C21097, 440K-C21098, 440K-E2NNAPS, 440K-E2NNFPS, 440K-E33014, 440K-E33024, 440K-E33025, 440K-E33029, 440K-E33030, 440K-E33031, 440K-E33034, 440K-E33036, 440K-E33037, 440K-E33040, 440K-E33041, 440K-E33045, 440K-E33046, 440K-E33047, 440K-E33053, 440K-E33074, 440K-E33075, 440K-E33077, 440K-E33078, 440K-E33079, 440K-E33080

Summary of Changes

Torque settings adjusted from 0.8 N•m (7.08 lb•in) to 0.57 N•m (5.04 lb•in).

Installation

Installation the Elf™ and Cadet™ 3 Tongue Interlock Switches must be in accordance with the following steps and stated specifications and should be carried out by suitably competent personnel. The unit is not to be used as a mechanical stop. Guard stops and guides must be mounted.

Adherence to the recommended maintenance instructions forms part of the warranty.



ATTENTION: The presence of spare actuators can compromise the integrity of the safety systems. Personal injury or death, property damage or economic loss can result. Appropriate management controls, working procedures, and alternative protective measures should be introduced to control their use and availability.



WARNING: Do not defeat, tamper, remove, or bypass this unit. Severe injury to personnel could result.

Table 1 - Specifications

Attribute	Value
Safety contacts (Elf™)	1 N.C. or 2 N.C. direct opening action
Safety contacts (Sprite™)	2 N.C. or 3 N.C. direct opening action
Thermal current	10 A
Auxiliary contacts	1 N.O.
Switching current/voltage	3 mA/18V, min ²
Contact rating	A600/AC-15 240V/3 A, 120V/6 A, N150/DC13 24V/2 A M12 QD (4-pin): 250V/4 A M12 QD (5-pin): 60V/4 A M12 QD (6-pin): 30V/2 A M12 QD (8-pin): 30V/2 A
Input	240V, 24V, 250V, 60V, 30V, 30V
Ingress protection rating	IP67

Attribute	Value
Operating temperature	-20...+80 °C (-4...+176 °F)
Mechanical life	1,000,000 operations
Torque settings, max	1.4 N•m (12.39 lb•in) mounting bolts 1.2 N•m (10.62 lb•in) mounting bolts 1.0 N•m (8.85 lb•in) mounting bolts 0.57 N•m (5.04 lb•in) mounting bolts

Maintenance

Every week, check the alignment of the actuator to the switch and the correct operation of the switching circuit. Also check for signs of abuse or interference. Inspect the switch casing and actuator for damage. Replace if needed.

At least every six months, isolate all power. Remove the lid and end cover. Inspect all terminals for tightness. Clean out any accumulation of fine dirt. Check for any sign of wear of damage, for instance, actuator wear, cam assembly wear, contact oxidation and replace if needed. Replace cover and tighten screws to specified settings. Reinstate the power and check for correct operation. Reapply tamper evident varnish or similar compound for mountings.

Repair

If there is any malfunction or damage, no attempts at repair should be made. The unit should be replaced before machine operation is allowed. **DO NOT DISMANTLE THE UNIT.**

IMPORTANT After installation and commissioning, the actuator, switch, and switch lid mounting screws should be coated with tamper evident varnish or similar compound.



The products shown in this document, conform with the Essential Health and Safety Requirements (EHSRs) of the European Machinery Directive. These products are third-party certified to EN 60947-5-1 and EN ISO 14119.

Declaration of Conformity and certification: rok.auto/certifications.

ISO 14119 defines types of interlocking devices and coding.

Product	Type	Coding
440K	2	Low



ATTENTION: Discard the plastic transit plugs (shipped with select conduit models only) at installation and replace with UL Listed outlet box plugs or the equivalent.

Figure 1 - Mounting

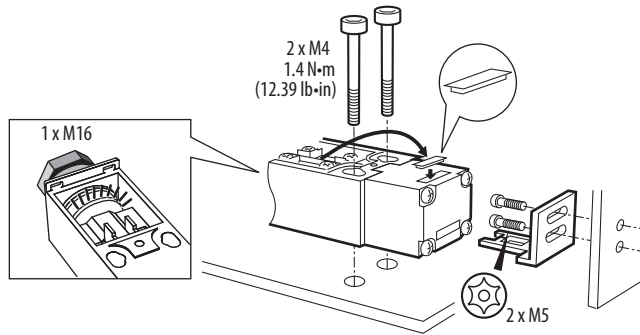


Figure 2 - Key Placement

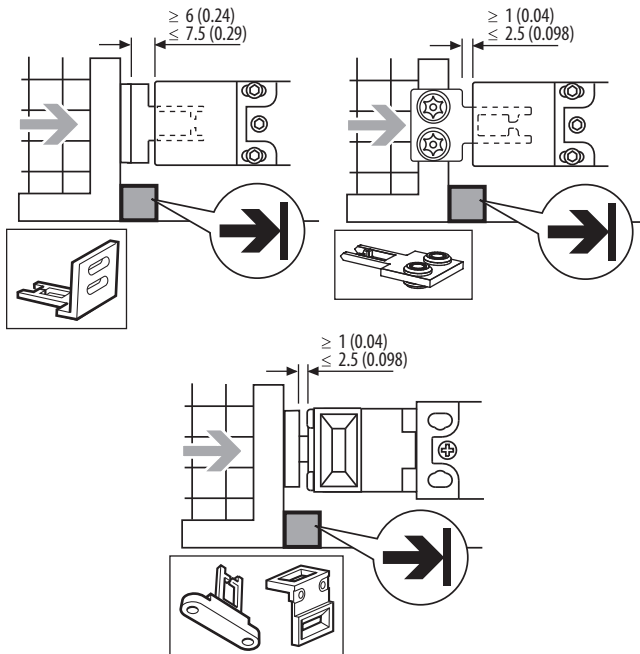


Figure 3 - Elf Approximate Dimensions [mm (in.)]

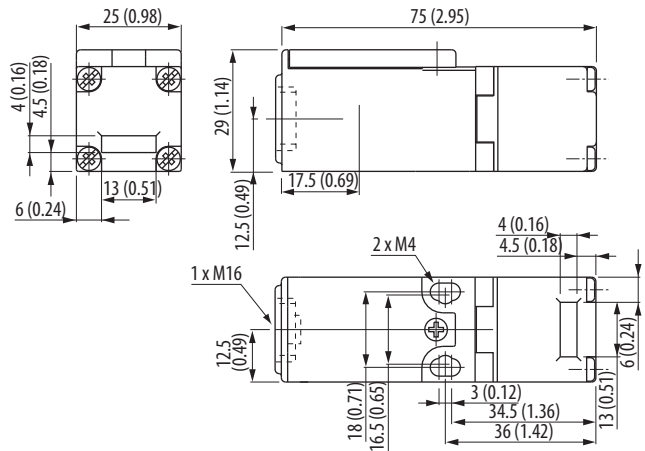


Figure 4 - Cadet™ 3 Approximate Dimensions [mm (in.)]

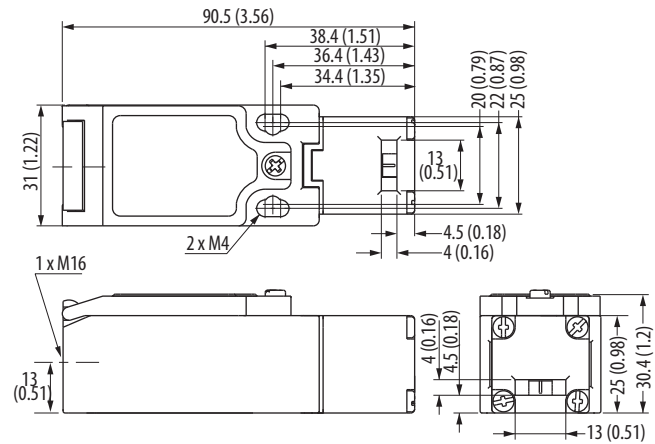


Figure 5 - Key Approximate Dimensions [mm (in.)]

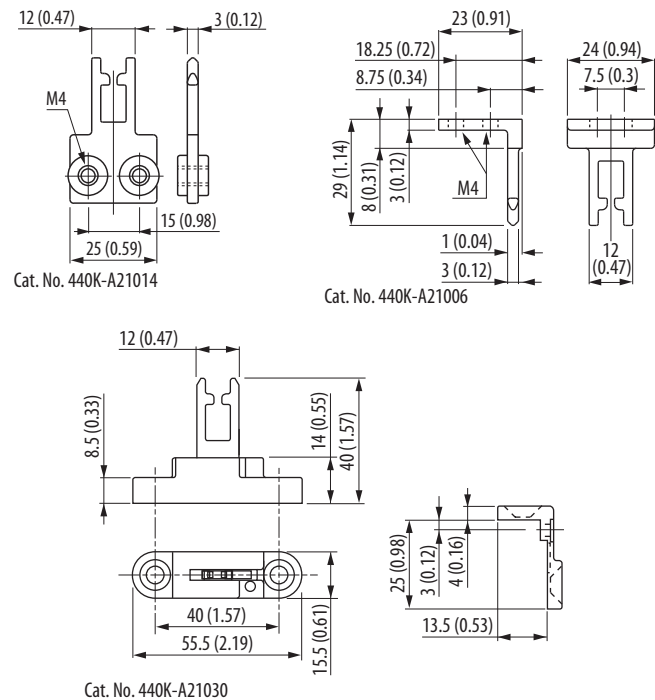


Figure 6 - Head Rotation

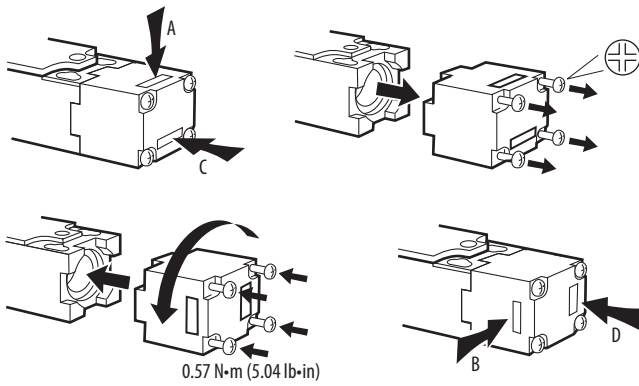


Figure 7 - Pinouts

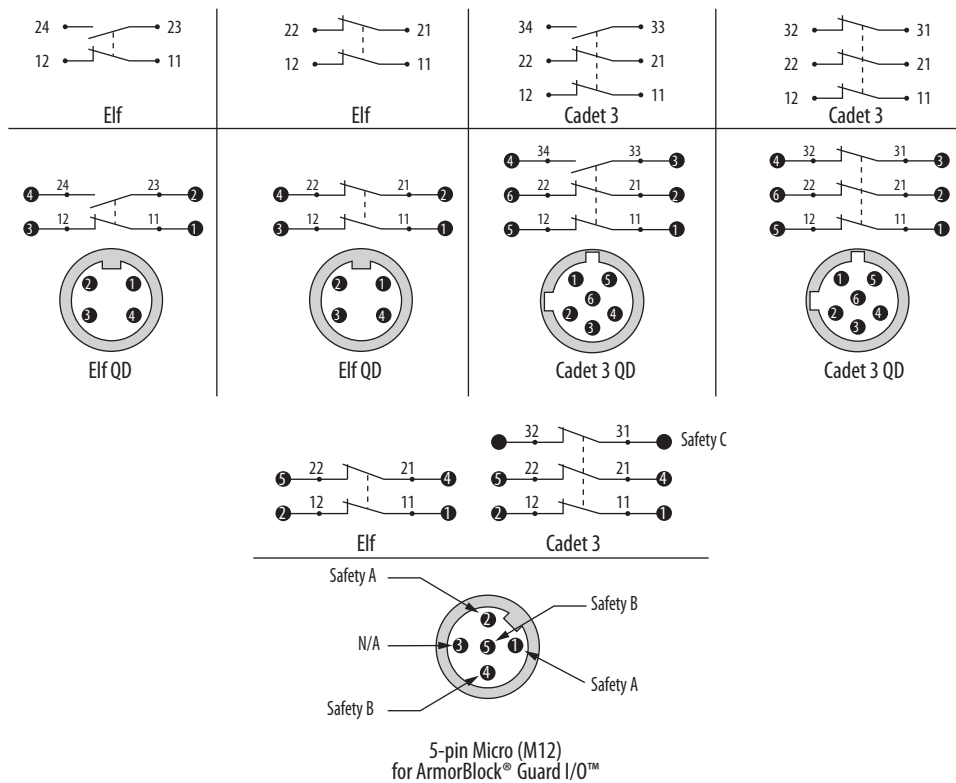
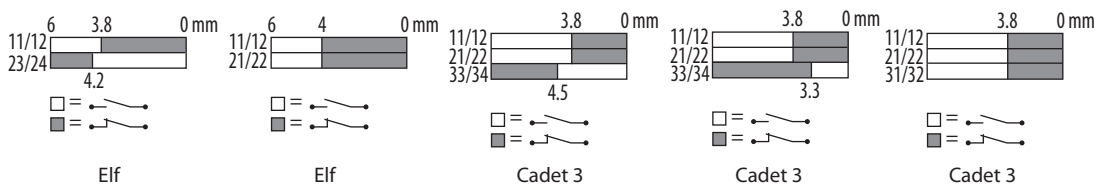


Figure 8 - Wiring



Rockwell Automation Support

Use the following resources to access support information.

Technical Support Center	Knowledgebase Articles, How-to Videos, FAQs, Chat, User Forums, and Product Notification Updates.	https://rockwellautomation.custhelp.com/
Local Technical Support Phone Numbers	Locate the phone number for your country.	http://www.rockwellautomation.com/global/support/get-support-now.page
Direct Dial Codes	Find the Direct Dial Code for your product. Use the code to route your call directly to a technical support engineer.	http://www.rockwellautomation.com/global/support/direct-dial.page
Literature Library	Installation Instructions, Manuals, Brochures, and Technical Data.	http://www.rockwellautomation.com/global/literature-library/overview.page
Product Compatibility and Download Center (PCDC)	Get help determining how products interact, check features and capabilities, and find associated firmware.	http://www.rockwellautomation.com/global/support/pcdc.page

Documentation Feedback

Your comments will help us serve your documentation needs better. If you have any suggestions on how to improve this document, complete the How Are We Doing? form at http://literature.rockwellautomation.com/idc/groups/literature/documents/du/ra-du002_-en-e.pdf.

Waste Electrical and Electronic Equipment (WEEE)



At the end of life, this equipment should be collected separately from any unsorted municipal waste.

Rockwell Automation maintains current product environmental information on its website at <http://www.rockwellautomation.com/rockwellautomation/about-us/sustainability-ethics/product-environmental-compliance.page>.

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