

Installation Instructions

Original Instructions



Allen-Bradley
by ROCKWELL AUTOMATION



Lifeline 3 Cable-pull Safety Switch

Catalog Numbers 440E-Dx



ATTENTION: Read this document and the documents that are listed in [Additional Resources on page 4](#) about installation, configuration, and operation of this equipment before you install, configure, operate, or maintain this product. Users are required to familiarize themselves with installation and wire instructions and requirements of all applicable codes, laws, and standards. Suitably trained personnel are required to install, adjust, put into service, use, assemble, disassemble, and maintain this equipment in accordance with the applicable code of practice. The protection that is provided by the equipment can be impaired if the equipment is used in a manner that the manufacturer has not specified.

Installation must be in accordance with the following steps and stated specifications and implemented by suitably competent personnel. This device is intended to be part of the safety-related control system.

Before installation, perform a risk assessment to determine whether the specifications of this device are suitable for all foreseeable operational and environmental characteristics of the machine to which it is to be fitted.

At regular intervals during the life of the unit, check whether these characteristics foreseen remain valid. Inspect this device for evidence of accelerated wear, material degradation, or tampering. If necessary, replace the device. The manufacturer cannot accept responsibility for a failure of this device if the procedures are not implemented or if it is used outside the recommended specifications.

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



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

Specifications

Attribute	Value
Standards	IEC 60947-5-5, ISO 13850, IEC 60947-5-1 Emergency stop device in accordance with ISO 13850
Functional safety data	See publication SAFETY-SR001 in Additional Resources on page 4 .
Certifications	CE Marked for all applicable directives, UKCA Marked for all applicable regulations, cULus Listed, CCC Marked, and TUV Certified rok.auto/certifications
Designation/ Utilization cat.	<ul style="list-style-type: none">A600 / AC-15 (Ue/Ie) 600V / 1.2 A, 480V / 1.5 A, 240V / 3 A, 120V / 6 ADC-13 (Ue/Ie) 24V / 2 A
Safety contacts ⁽¹⁾	2 N.C., 3 N.C., or 4 N.C. direct-opening action
Auxiliary contacts	1 N.O. or 2 N.O.
Thermal current	10 A
Current, min	5V, 5 mA
Operation force	<125 N (28.1 lb) (300 mm [11.8 in.] cable deflection)
Tension force to run position	103 N (23.17 lb) typical
Tension force to lock out	188 N (42.3 lb) typical
Cable (rope) span, max	30 m (98.4 ft)
Actuator material	Cable (rope): Steel cable with polypropylene sheath
Ingress protection rating	IP67
Operating temperature	-25...+80 °C (-13...+176 °F)
Ambient temperature	80 °C (176 °F) When an M12 or the M23 connector is used, the device can be used in ambients ≤50 °C (122 °F).
Mechanical life	2,000,000 operations
Torque settings, max	<ul style="list-style-type: none">Mounting bolts: 5.0 N•m (44 lb•in)Lid screws: 2.0 N•m (18 lb•in)Terminal screws: 1.0 N•m (9 lb•in)

(1) The safety contacts are described as normally closed (N.C.) that is, with the guard closed, the actuator in place (where relevant), and the machine able to be started.

Mounting

IMPORTANT The use of one or two switches in your application is a matter of a risk assessment while considering the probability of a trapped rope along the span.

Figure 1 - Typical Mounting – Single Switch

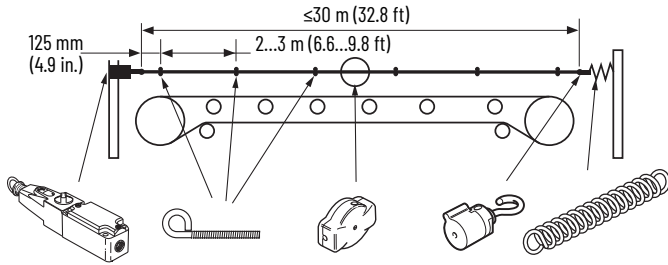
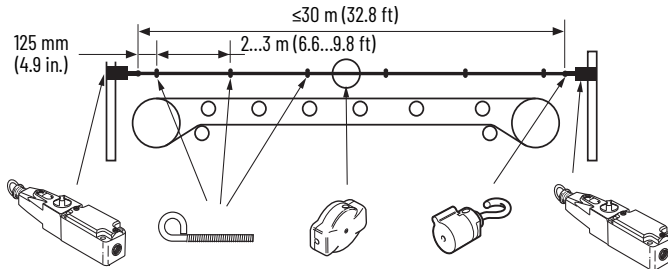


Figure 2 - Typical Mounting – Two Switches



Installation

IMPORTANT The temporary end plugs installed in the switch as shipped must be removed when the unit is installed. Fill any unused openings with an accessory blanking plug or listed/recognized hole seal or plug.

If the application is in an area with large daily or seasonal temperature variations, care must be taken to configure the installation kit, and reset it as required, under median temperature conditions.

Figure 3 - Switch Installation [mm (in.)]

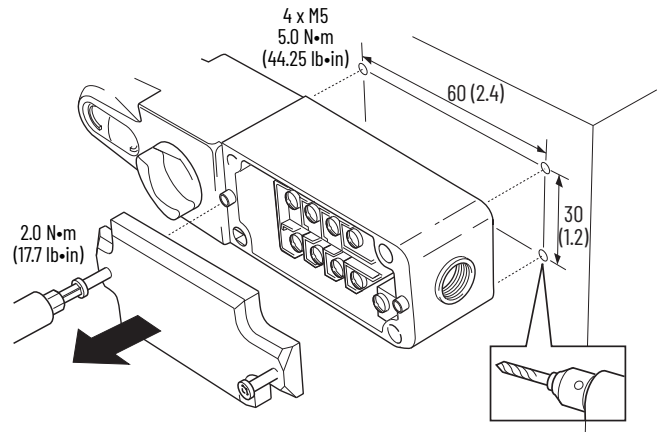
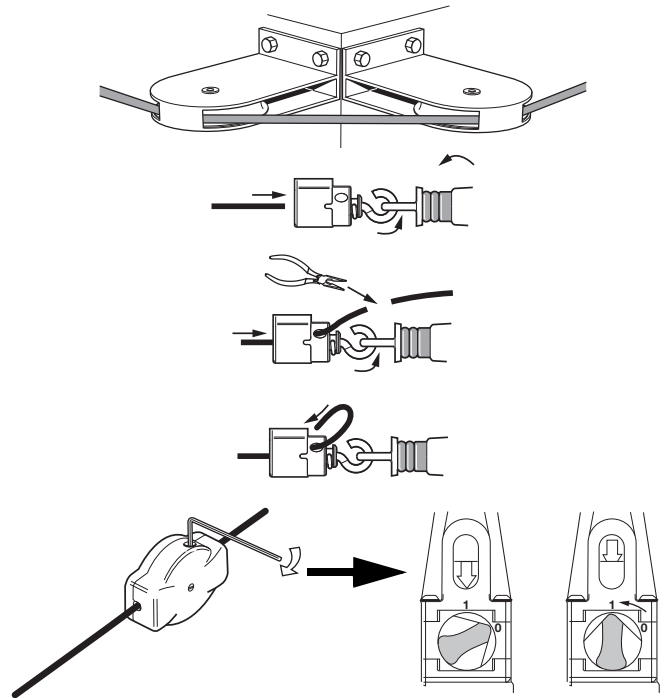
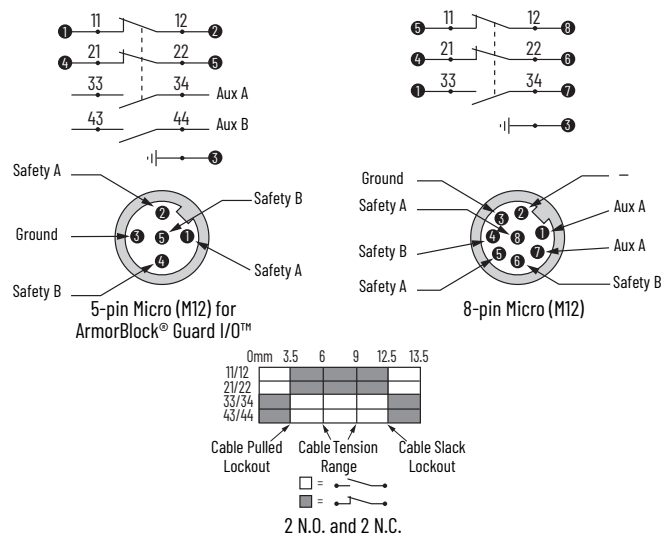
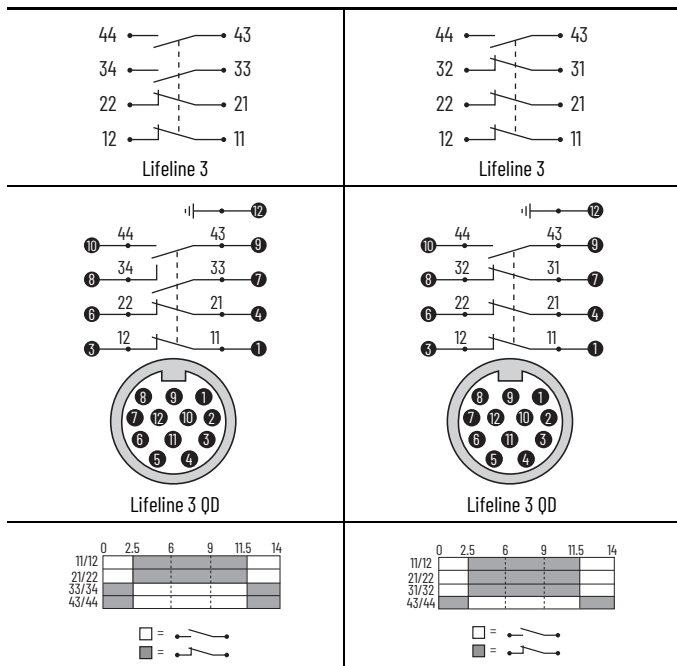


Figure 4 - Cable Installation



Wiring



Connector Ratings, Max

	AC	DC	Applicable Standards
5-pin Micro (M12)	60V, 4 A	60V, 4 A	IEC 61076-2-101:2003
8-pin Micro (M12)	30V, 2 A	30V, 2 A	IEC 61076-2-101:2003
12-pin M23	63V, 6 A	63V, 6 A	IEC 61984:2001

When used in elevated ambient temperature, the temperature rating of field wiring must not be less than ambient.

IMPORTANT Use copper conductors only.

Maintenance

Frequency	Description
Every week	<ul style="list-style-type: none"> Check the correct operation of the switching circuit. Check for signs of abuse or tampering. Inspect the unit for damage. Of particular importance is damage that causes loss of sealing at the lid or conduit entry. Replace the unit if damage is apparent.
At least every 6 months	<ol style="list-style-type: none"> Isolate all power. Remove the lid. Inspect all terminals for tightness. Check for any sign of wear or damage, for example, cam assembly wear, contact oxidization and replace if apparent. Replace covers and tighten screws to specified settings. Reinstate the power and check for correct operation. Reapply tamper-evident varnish or similar compound to screws.

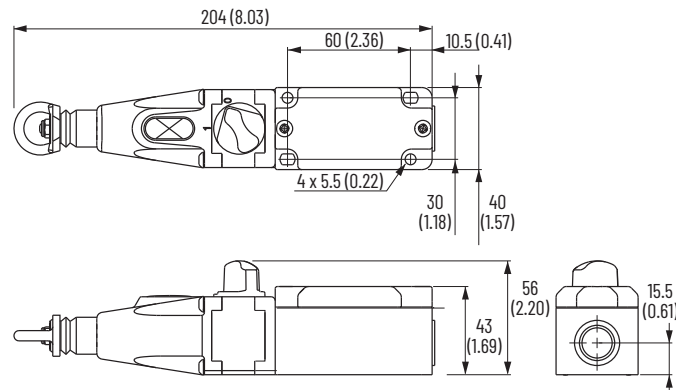
Repair

If there is any malfunction or damage, no attempts at repair should be made. The unit should be replaced before machine operation is allowed.

IMPORTANT Do not dismantle the unit.

Approximate Dimensions

Figure 5 - Lifeline™ 3 [mm (in.)]



Declaration of Conformity

CE Conformity

Rockwell Automation declares that the products that are shown in this document conform with the Essential Health and Safety Requirements (EHSRs) of the European Machinery Directive (2006/42/EC). These products also conform to EN 60947-5-5 (E-stop units only), EN ISO 13850, EN ISO 13849-1, and have third-party approval.

For a comprehensive CE certificate visit: rok.auto/certifications.

UKCA Conformity

Rockwell Automation declares that the products that are shown in this document are in compliance with Supply of Machinery (Safety) Regulations (2008 No. 1597). These products also conform to EN 60947-5-5 (E-stop units only), EN ISO 13850, EN ISO 13849-1, and have third-party approval.

For a comprehensive UKCA certificate visit: rok.auto/certifications.

Additional Resources

To download publications, visit rok.auto/literature and search for the following publication numbers.

Resource	Description
Cable (Rope) Pull Switches Technical Data, publication 440E-TD001	Provides specification and selection information for cable (rope) pull switches.
Functional Safety Data Sheet, publication SAFETY-SR001	Provides functional safety data for Rockwell Automation products.
Industrial Automation Wiring and Grounding Guidelines, publication 1770-4.1	Provides general guidelines for installing a Rockwell Automation industrial system.
Product Certifications website, rok.auto/certifications	Provides declarations of conformity, certificates, and other certification details.

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 compliance information on its website at rok.auto/pec.

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Rockwell Otomasyon Ticaret A.Ş. Kar Plaza İş Merkezi E Blok Kat:6 34752, İçerenköy, İstanbul, Tel: +90 (216) 5698400 EEE Yönetmeliğine Uygundur

Connect with us.    

rockwellautomation.com — expanding human possibility®

AMERICAS: Rockwell Automation, 1201 South Second Street, Milwaukee, WI 53204-2496 USA, Tel: (1) 414.382.2000, Fax: (1) 414.382.4444

EUROPE/MIDDLE EAST/AFRICA: Rockwell Automation NV, Pegasus Park, De Kleetlaan 12a, 1831 Diegem, Belgium, Tel: (32) 2 663 0600, Fax: (32) 2 663 0640

ASIA PACIFIC: Rockwell Automation, Level 14, Core F, Cyberport 3, 100 Cyberport Road, Hong Kong, Tel: (852) 2887 4788, Fax: (852) 2508 1846

UNITED KINGDOM: Rockwell Automation Ltd. Pitfield, Kiln Farm Milton Keynes, MK11 3DR, United Kingdom, Tel: (44)(1908) 838-800, Fax: (44)(1908) 261-917

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