

Installation Instructions

Original Instructions



Allen-Bradley
by ROCKWELL AUTOMATION



440G-MT Guard Locking Solenoid Switches

Catalog Numbers 440G-MTx

Installation of the 440G-MT Guard Locking Solenoid Switches must be in accordance with the following steps and stated specifications and implemented by suitably competent personnel. The unit is not to be used as a mechanical stop. Guard stops and guides must be fitted.

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



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



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

Specifications

Attribute	440G-MTx
Functional safety	See publication SAFETY-SR001
Safety contacts ⁽¹⁾	3 N.C. or 2 N.C. direct opening action
Thermal current/ I_{th}	10 A
Auxiliary contacts	1 N.O. or 2 N.O.
Actuator holding force, max	1600 N (360 lb)
Actuation speed, max	160 mm (6.29 in.) per second
Actuation speed, min	100 mm (3.94 in.) per minute
Break contact force, min	6 N (1.35 lb)
Actuator travel for positive opening	20 mm (0.59 in.)
Actuator material	Stainless steel
Ingress protection rating	IP67
Operating temperature	-25...+60 °C (-13...+140 °F)
Mechanical life	1,000,000 operations
Torque settings, max	<ul style="list-style-type: none"> Lid screws: 1.6 N•m (14.2 lb•in) Terminal screws: 1.02 N•m (9 lb•in) Head bolts: 1.6 N•m (14.2 lb•in)
Power supply	24V AC/DC or 110V AC or 230V AC (85...110%)

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

Installation

Figure 1 - Actuator Placement

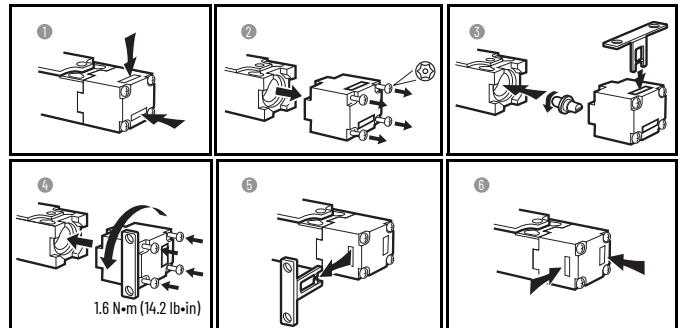
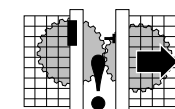
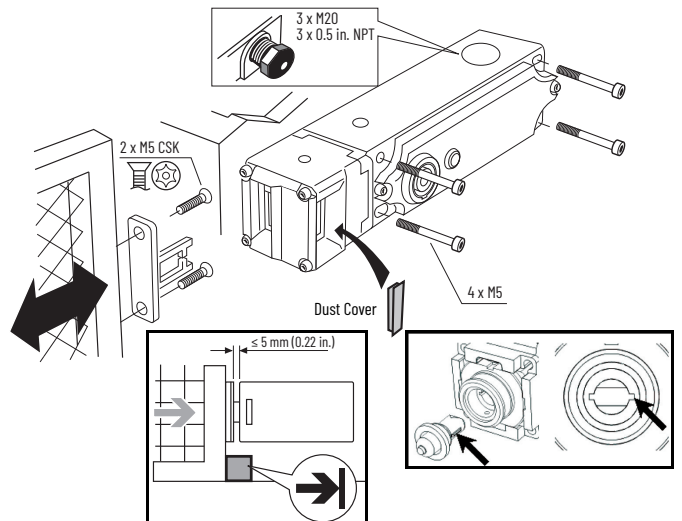


Figure 2 - Typical Mounting



Verify that the machine is isolated and stopped whenever the interlocked guard door is open.

Figure 3 - Fit the Override Covers

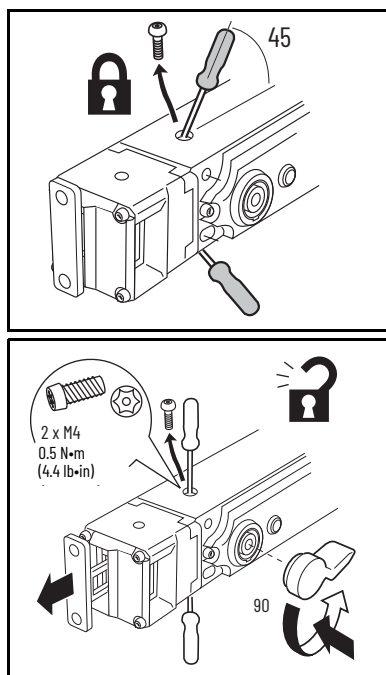
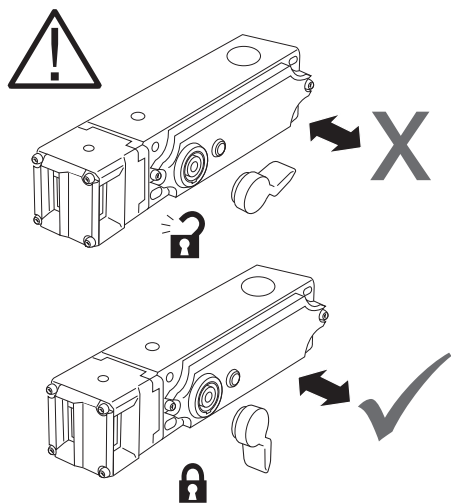


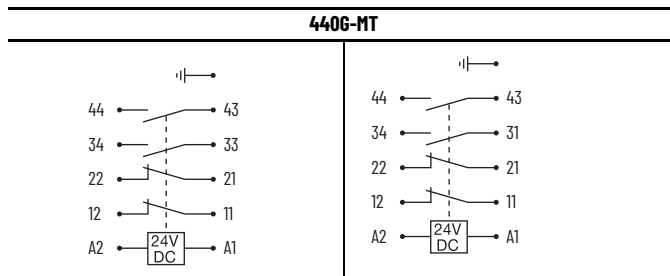
Table 1 - Actuator Minimum Radius

Actuator	Radius, Min [mm (in.)]			
440G-A27011	175 (6.89)	175 (6.89)	175 (6.89)	175 (6.89)
440K-A11112	175 (6.89)	175 (6.89)	175 (6.89)	175 (6.89)
440G-A27143	60 (2.36)	60 (2.36)	60 (2.36)	60 (2.36)
440K-A17116	175 (6.89)	175 (6.89)	175 (6.89)	175 (6.89)

Figure 4 - Actuator Lock



Wiring



440G-MT QD 12-pin Micro M2		Pin	Color	Function
<p>Recommended cable: Cat. No. 889M-F12AH-x⁽¹⁾ Gray/pink not connected</p>	1	Brown/Gray	Solenoid Power	
	2	Blue/Red	Auxiliary A	
	3	Brown/Gray	Solenoid Power	
	4	Pink/Yellow	Safety A	
	5	Blue/Red	Auxiliary A	
	6	Pink/Yellow	Safety A	
	7	White/Red/Blue	Safety B	
	8	White/Red/Blue	Safety B	
	9	Black/Violet	Solenoid A	
	10	Black/Violet	Solenoid A	
	11	-	Not Connected	
	12	Green	Ground	

440G-MT QD 8-Pin Micro M12		Pin	Color	Function
<p>Recommended cable: Cat. No. 889M-F12AH-x⁽¹⁾ Gray/pink not connected</p>	1	White/Green	Solenoid A	
	2	Brown/Blue	Power	
	3	White/Green	Solenoid A	
	4	Yellow/Pink	Safety B	
	5	Gray/Red	Safety A	
	6	Yellow/Pink	Safety B	
	7	Brown/Blue	Power	
	8	Gray/Red	Safety A	

(1) x = 2 (2 m [6.6 ft]), 5 (5 m [16.4 ft]), or 10 (10 m [32.8 ft]) for standard cable lengths. For other cable lengths, contact your local Allen-Bradley distributor or Rockwell Automation sales office.
 (2) Unit must be externally grounded (use the dedicate ground point that is provided).

Maintenance

Frequency	Description
Weekly	<ul style="list-style-type: none"> • Check the correct operation of the switching circuit. • Check for signs of abuse or tampering. • Inspect the switch casing for damage. • Replace the unit if damage is apparent.
At least every 6 months	<ol style="list-style-type: none"> 1. Isolate all power. 2. Remove the lid. 3. Inspect all terminals for tightness. 4. Clean out any accumulation of fine dirt and so on. 5. Check for any sign of wear or damage, for example, actuator wear, cam assembly wear, contact oxidization and replace if apparent. 6. Replace covers and tighten screws to specified settings. 7. Reinstall the power and check for correct operation. 8. Reapply tamper-evident varnish or similar compound to screws.

Repair

If there is any malfunction or damage, do not attempt to repair. The unit must be replaced before machine operation is allowed.

IMPORTANT Do not dismantle the unit.

UL508 Information

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

Use copper conductors only. Use only one conduit entrance for field connections.

The equipment is acceptable for use with a non-metal enclosed wiring system only and electrical specifications of contact rating code.

Approximate Dimensions

Figure 5 - Guard Locking Switch Body [mm (in.)]

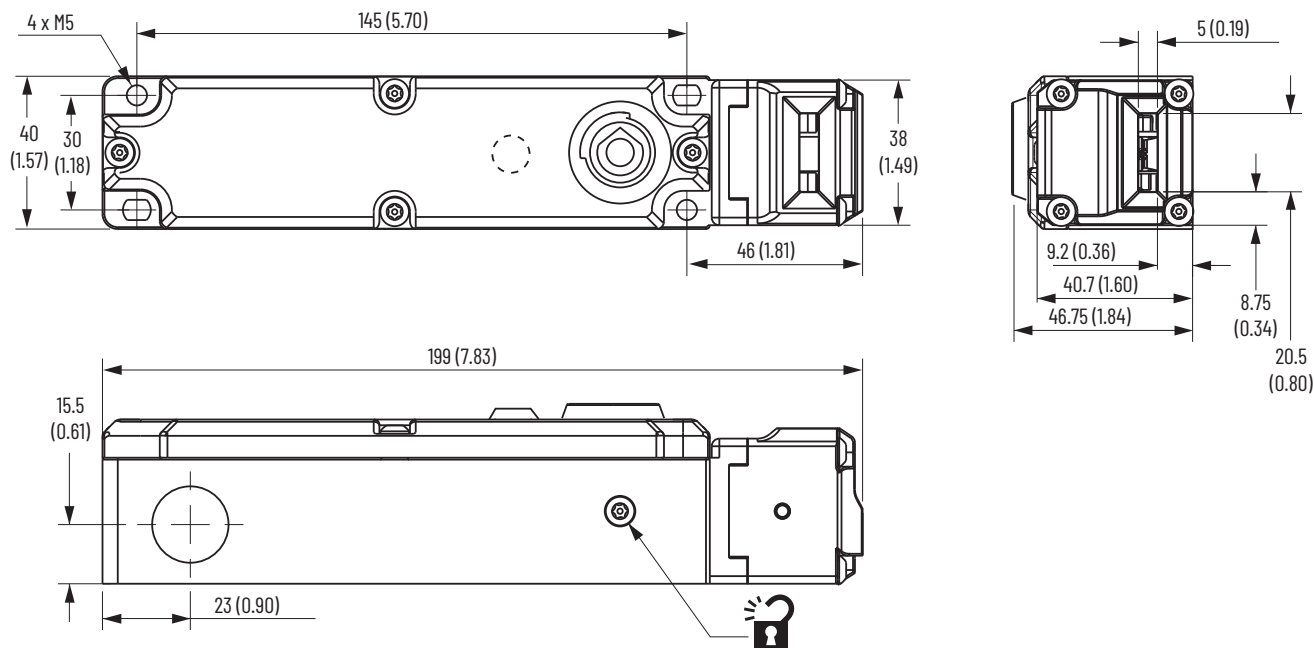
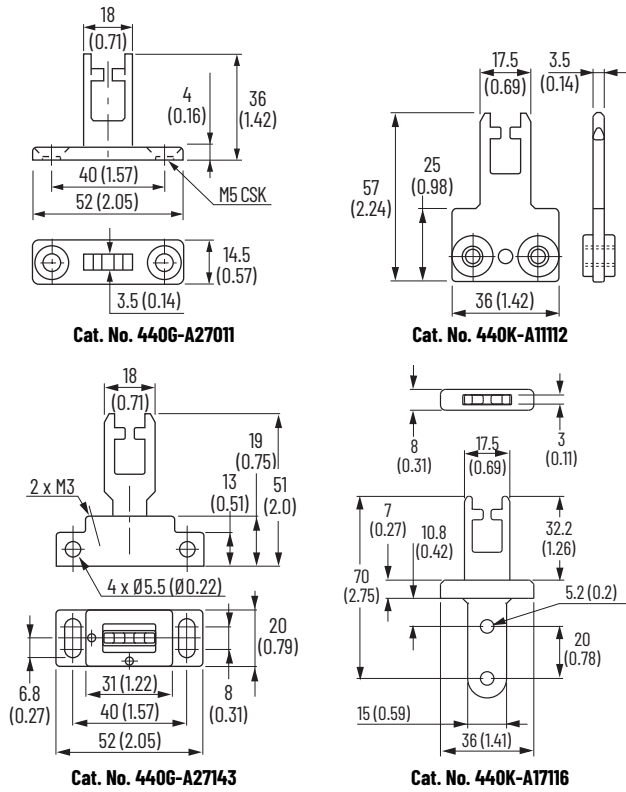


Figure 6 - Actuators [mm (in.)]



Additional Resources

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

Resource	Description
Safety Switches Specifications Technical Data, publication SWITCH-TD001	Provides specification information for safety switch devices.
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.

Your comments help us serve your documentation needs better. If you have any suggestions on how to improve our content, complete the form at rok.auto/docfeedback.

For technical support, visit rok.auto/support.

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

Allen-Bradley, expanding human possibility, Guardmaster, and Rockwell Automation are trademarks of Rockwell Automation, Inc. Trademarks not belonging to Rockwell Automation are property of their respective companies.

Publication 440G-IN001C-EN-P - January 2022 | Supersedes Publication 440G-IN001B-EN-P- April 2015

Copyright © 2022 Rockwell Automation, Inc. All rights reserved. Printed in the U.S.A.



47550

47550 Ver 19