

Installation Instructions

Original Instructions



Allen-Bradley
by ROCKWELL AUTOMATION



Ferrogard GD2 Ex

Catalog Numbers 440N-G02117, 440N-G02123, 440N-G02143, 440N-G02137, 440N-G02149

Suitably competent personnel must install in accordance with the following steps and stated specifications. The device 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 should be introduced to control their use and availability.



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

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) and ATEX Directive (2014/34/EU).

UKCA Conformity

Rockwell Automation declares that the products that are shown in this document are in compliance with the Supply of Machinery (Safety) Regulations (2008 No. 1597) and Equipment and Protective Systems Intended for Use in Potentially Explosive Atmospheres Regulations (2016 No. 1107).

For a comprehensive CE or UKCA certificate visit rok.auto/certifications

Certifications

Ferrogard™ GD2 Ex pre-wired cables:

- Ex II 2D
- Ex tb III C T144°C Db
- Ta = -25...+100 °C (-13...+212 °F)
- Certificate number IECEx UL 21.0034X, UL 21 ATEX 2472X, and UL22UKEX2599X
- Conforms to standards 2014/34/EU ATEX Directive
- EN 60079-31: 2014
- EN 60079-0: 2018
- IEC 60079-0, 7th Ed. and IEC 60079-31, 2nd Ed.
- China CCC(Ex) certificate 2022122304115256

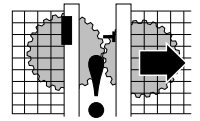
Specific Conditions of Use ^(a)

- The cable is to be ended within a suitably certified enclosure.
- Protection from impact, UV, and electrostatic charging is to be provided to the non-metallic part of the switch by installing the switch with the metallic part facing outwards.

(a) Denoted by X after the certificate number.

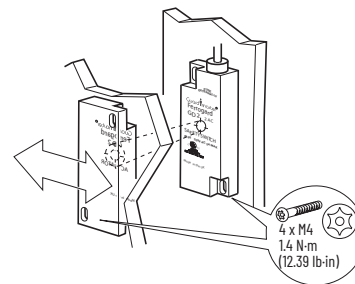
Installation

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



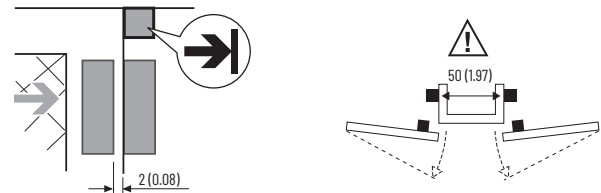
IMPORTANT After installation and commissioning, coat the actuator, switch, and switch lid mounting screws with tamper-evident varnish or similar compound.

Figure 1 - Mount the Switch



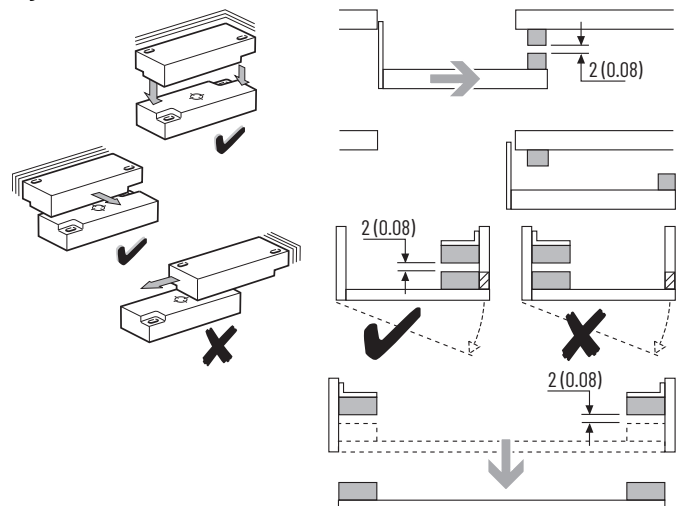
IMPORTANT Note the correct orientation of the actuator to the switch (text in the same direction).

Figure 2 - Switch Clearance [mm (in.)]



IMPORTANT Maintain 5 mm (0.2 in.) clearance from Ferrous surroundings.

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



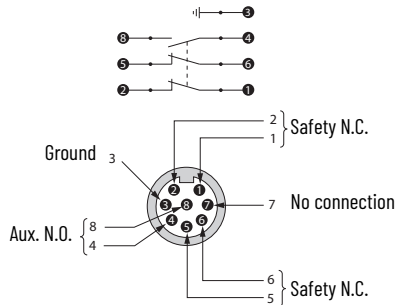
Wiring

Table 1 - FRS 20/21 GD2

	<ul style="list-style-type: none"> 11 = Red (N.C.) 12 = Blue (N.C.) 21 = Black (N.C.) 22 = White (N.C.) 	<ul style="list-style-type: none"> 33 = Green (Aux N.O.) 34 = Yellow (Aux N.O.) ⏏ = Green-Yellow
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Pinout

Figure 4 - Ferrogard GD2 Quick-disconnect



Fuses



ATTENTION: All safety contacts fitted with an internal non-resettable fuse and must be fused externally as detailed.

	FRS 20 GD2 FRS 21 GD2	$AC \leq 1.6 A^{(1)}$
	FRS 20 GD2 FRS 21 GD2	$DC \leq 0.4 A^{(2)}$

(1) Recommended fuse: Bussmann BK/GDA-1.6 A
(2) Recommended fuse: Bussmann BK/GDA-400 mA

Maintenance

Every week, check the correct operation of the switching circuit. Also, check for signs of abuse or tampering. Inspect the switch casing and shaft for damage. Of particular importance is damage that causes loss of sealing at the lid or conduit entry.

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.

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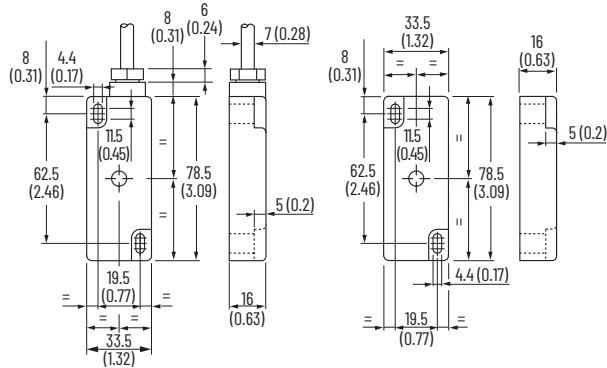
Repair

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

IMPORTANT Do not dismantle the device.

Approximate Dimensions

Figure 5 - Ferrogard GD2 [mm (in.)]



Specifications

Attribute	Value
Safety contact	2 N.C. safety reed 250V AC/2 A or 24V DC/1 A Externally fuse 1.6 A quick-blow fuse
Auxiliary contact	1 N.O. 250V AC/300 V DC 0.5 A Externally fuse 400 mA quick-blow fuse
Ingress protection rating	IP68
Operating temperature	-25...+100 °C (-13...+212 °F)
Mechanical life	10 x 10 ⁶ hr
Electrical life	1 x 10 ⁶ hr

IMPORTANT The safety contacts of these products 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.



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