

Introduction

The 70 Micro Junction integrates 70 series GO Switch with junction box allowing termination to the switch directly. Additionally, this product provides the full range of GO Switch performances in the junction box and the reliability of the GO Switch for use in increased safety applications. The junction box is available with an M20 or 1/2 NPT conduit entry and has terminal blocks for ease of end user push-in installation.

The integrated GO switches in the micro junction use permanent magnets which, when actuated by the presence of a ferrous or magnetic target, change the state of electrical contacts.

Specifications

Target Material:
Ferrous metal; optional target magnets

Sensing Distance:
Ferrous target: 0.100" (2,54mm)

Increased sensing distance possible with TopWorx supplied target magnets

Differential:
Ferrous target: 0.020" (0,51mm)

Contact resistance:
<0.5 ohm

Response time:
15 milliseconds

Enclosure Material:
Body tube and lid: 303 or 316 SST

Thread Options:
5/8-18 UNF; M18 x 1

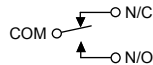
Temperature Rating:
Hazardous Location: -40°C to +75°C
Ordinary Location: -40°C to +105°C

Contact Material:
Palladium silver

Contacts:
Single Pole, Double Throw, Form C

Electrical Ratings: Resistive
4A @ 120VAC / 3A @ 24VDC

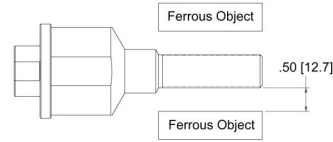
Connection Head Conduit Outlet:
1/2" -14NPT or M20.



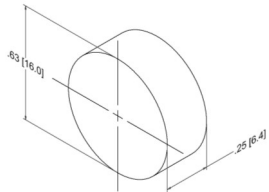
Mounting and Operation Best Practices

- Torque specs:
Mounting nuts: 3 lbf-ft [4.1 N·m]
Lid: 14 lbf-ft [19 N·m]
- Recommended mounting bracket material: 300 series stainless steel

- For the maximum rated sensing distance, ensure a 0.500" gap between threaded portion of switch and ferrous objects.



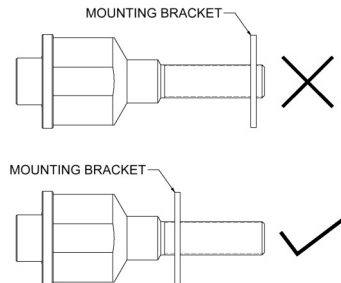
- Minimum recommended ferrous target dimensions:
0.63" diameter, 0.25" thick
Approximate weight, steel target: 0.32 oz (9g)



- In order to achieve maximum contact pressure, ensure that the ferrous target distance from the switch is 5 times the rated sensing distance in the normally closed states and 1/2 the rated sensing distance in the normally open state.

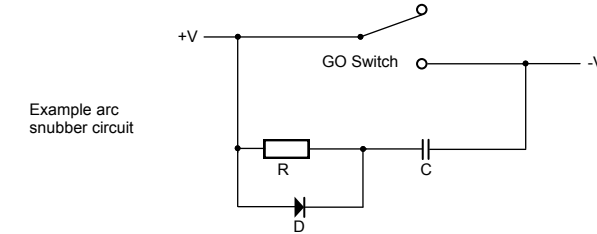
	Axial Sensing	Lateral Sensing
Normally open state	1/2 x Sensing distance	Target completely covering face of switch
Normally closed state	5 x Sensing Distance	Target completely removed from face of switch

- To minimize undue stress caused by conduit or cables, ensure that the switch is mounted such that the mounting bracket is near the center of the switch.



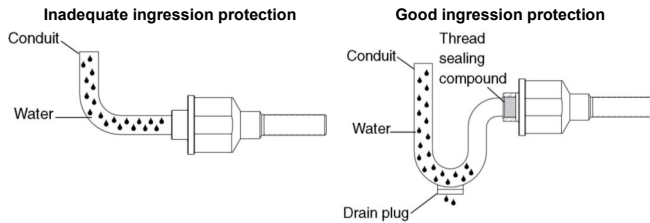
Installation

- For heavy or inductive loads, arc suppression devices or interposing relays are recommended for contact longevity.

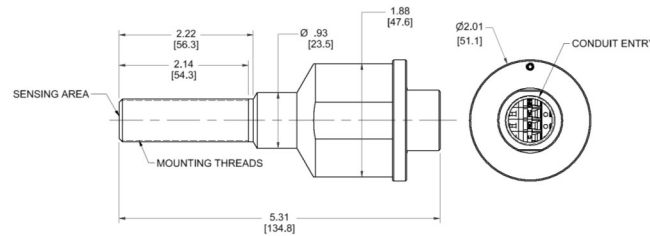


- When using long runs of conduit or cable, place supports close to the switch assembly to avoid pulling the assembly out of position.
- If switch assembly is mounted on a moving part, ensure that flexible conduit is long enough to allow for movement, and positioned to eliminate binding or pulling.
- Avoid contact between target and switch.
- For ease of installation in C11 Div 1 environments, Topworx recommends either an Appleton UNY50 or UNY50NR conduit union.

- To prevent water ingress through the conduit entry, ensure that a drip loop and drain plug are installed within 6 inches of the switch.



Basic Dimensions



Technical Assistance

- TopWorx engineers are available to provide technical assistance on GO™ Switch products. However, it is the customer's responsibility to determine the safety and suitability of the product in their application. It is also the customer's responsibility to install the switch using the current electrical codes in their region.

Special Conditions for Safe Use

General

- For installation in hazardous locations, check local electrical codes.
- The maximum voltage and current shown in the rating label must not be exceeded.
- The switch / terminal assembly is bonded together by the internal cement/potting. Any attempt to separate the parts (except the threaded cover) will void the warranty and certification.
- A minimum of 5 threads engagement of the lid to the body tube must be maintained when in service.

NEC

- When installed in C11 Div 1 or Div 2 environment, lead seal fittings are required within 18" of switch assembly.

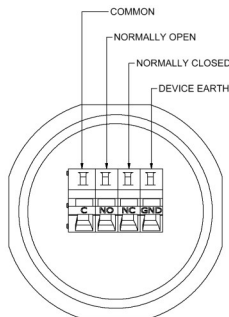
ATEX/IECEX

- The 70 Series GO Switch assembly shall be suitably earthed by its installation via the male thread of the GO Switch body.
- Do not allow dust layers to build up on the surface of the switch.
- No more than one single multi-stranded lead shall be connected to the terminal unless multiple conductors have been joined in a suitable manner, e.g. two conductors into a single insulated bootlace ferrule, or any method indicated on the terminal certificate.
- Suitably certified cable entry devices shall be installed in accordance with IEC60079-14 and must maintain the ingress protection (IP) rating of the enclosure. The cable entry device thread shall not protrude within the enclosure body (i.e. shall maintain the clearance to the terminals).
- Any unit marked Ex d must be fitted with an Ex d certified gland only.
- Any unit marked Ex de may be fitted with either an Ex d or Ex e certified gland as per the installation requirements.



For Topworx terms and conditions of sale, visit Topworx.com

Wiring Diagram



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