

GO™ -C7 Nuclear Qualified Dry Contact Proximity Switch w/ Mirion Connector

Qualified for RCC-E Severe Accident K1+



Summary

The TopWorx C7 Nuclear Certified GO Proximity Sensor with Mirion connector is designed for EPR Severe Accident Conditions. The C7 switch is environmentally and seismically robust and is qualified according to RCC-E Severe Accident Specifications.

Technical Data

- Leverless Limit Switch™ with only one, inside moving part; No springs or complex mechanisms
- Single Pole Double Throw contacts (SPDT Form CC)
- Cycle speed over 200 per minute
- Repeatable to 0.002 inch
- PEEK insulated leads
- Environmental:
 - RCC-E LOCA with chemical spray and two accident peaks: 156°C and 165°C
 - 850 kGy Total Gamma Dose
 - 250 kGy ageing irradiation
 - 600 kGy accident irradiation
- Seismic:
 - RCC-E Earthquake and Airplane Crash
 - RCC-E Biaxial Seismic Testing with Earthquake and Airplane Crash (APC) Spectra at 5% damping
- 316L Stainless Steel Housing
- Weights:
 - Switch – 210 grams
 - Target Magnet – C-AMS7A 70 grams
C-AMS12 130 grams
- Nordlock Washers and Nuts provided

Operating Principle

Switch has only one internal moving part utilizing permanent magnets to maintain the normally closed contact. Target magnet attracts switch's primary magnet, closing the normally open contact with a "snap action".

Contacts

AC	Volts	120	240	DC	Volts	24	48	120	250
	Amps	5.0	2.0		Amps	4.0	1.0	0.5	0.5

*Please consult factory for voltages/amperages not listed.

Brackets

Custom-fit, stainless steel brackets available for most valves. Consult Factory.

Maintenance

None required during qualified life; Sealed switch/no user serviceable parts.

Mounting

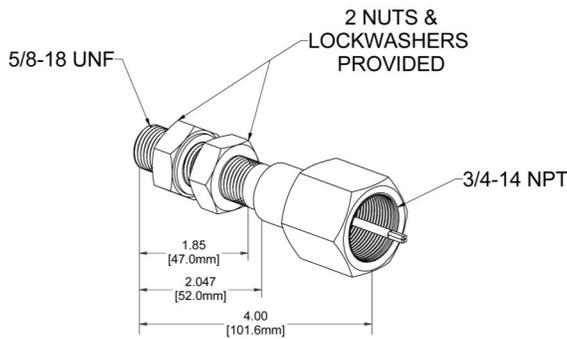
Mounting assemblies must be stainless steel. **TopWorx VIP brackets** are recommended and preferred for accurate, reliable mounting of Nuclear Qualified GO Switch position sensors. Over 2,000 pre-engineered bracket packages currently available. Consult factory for more details.



GO-C7 Nuclear Qualified Leverless Limit Switch



C7 Switch



3/4" -14NPT not available Mirion K1+ Qualified connector only

Sensing:

Sensing occurs when Target Magnet and switch are on axis as shown below.

Operating Distance With C-AMS7A Target

Average Sensing 0.100" ± 0.020"
Average Reset 0.023" ± 0.010"
Repeatable to 0.002"

Operating Distance With C-AMS12 Target

Average Sensing 0.250" ± 0.025"
Average Reset 0.031" ± 0.015"
Repeatable to 0.002"



Seismic Qualification

RCC-E Earthquake and Airplane Crash
RCC-E Biaxial Seismic Testing with Earthquake and Airplane Crash (APC) Spectra at 5% damping

Environmental Qualification

RCC-E Severe Accident
850 kGy Total Gamma Dose
• 250 kGy aging irradiation
• 600 kGy accident irradiation

Temperature:

RCC-E LOCA with chemical spray and two accident peaks 156°C and 165°C

Qualification Test Report:

Contact TopWorx

Certificate of Compliance:

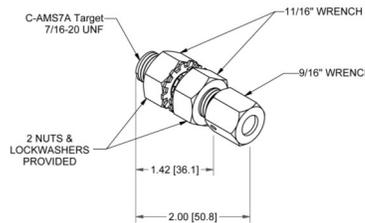
Available for each part number

Outside Containment and BOP Applications:

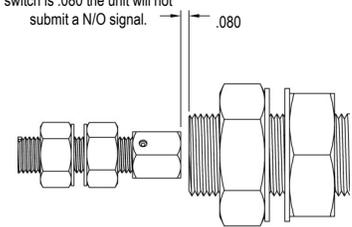
Contact TopWorx

Target Magnets

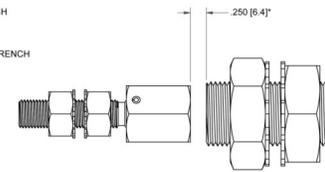
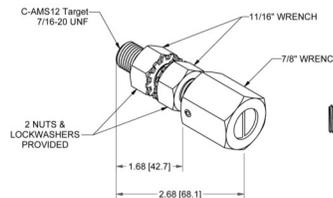
C-AMS7A Target



If the gap is set @ .100 and actual measurements of switch is .080 the unit will not submit a N/O signal.



C-AMS12 Target



* Average sensing distance before testing.

Order #:

C7-135236147 TopWorx EPR K1+ Severe Accident Nuclear Switch, C-AMS7A Std. Sensing Magnet, C-AMS12A Ext. Sensing Magnet Mirion 39777 Quick Disconnect Connector with 5m of mineral cable

**Consult factory for longer lengths of Mirion mineral cable, Nuclear Grade Flex w/ PEEK or Nuclear Grade Quick Disconnects w/ Mating Cable.



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Visit www.topworx.com for comprehensive information on our company, capabilities, and products – including model numbers, data sheets, specifications, dimensions, and certifications.



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