

## EA120 SPDT Series

### Features

- Non-contact magnetically actuated limit switch – no torque on actuator or valve needed
- Qualified to Westinghouse AP1000 Environmental Parameters
- Manufacturing business system complies with 10CFR50, Appendix B, 10CFR Part 21, and ANSI N45.2
- Proprietary SNAP-LOCK® technology that enables internal latching mechanism to eliminate chatter under seismic or high vibration conditions
- Available with QDC milled onto the Stainless steel housing
- Available with pre-wired flying leads
- Gold-plated, fine silver contacts
- High temperature components



### Technical Data

- Single Pole Double Throw (SPDT) Form C contacts, quick make - quick break
- Housing: Stainless steel
- Size: Length: 4" (101.6mm)  
Weight: 0.45lbs / 0.2kg (free lead version, excluding pig tails);  
0.55lbs / 0.25kg (QDC connector, excluding cable assy)
- PEEK insulated leads

#### Contact Rating

AC	Volts	120V	240V
	Amps	4A	2A
DC	Volts	24V	48V
	Amps	2A	1A

#### EA120 SPDT in Harsh Environment With Accident Conditions (LOCA/HELB)

- Operating Temperature:  
-4° to 212°F (-20° to 100°C)
- Environmental qualifications:  
Qualified for 100 years 112°F (44°C)  
60 years 131°F (55°C)  
Radiation: 363 MRad gamma  
Seismic: 8.8G  
Pressure: 104psig (717 KPa) LOCA  
Max Temperature: 540°F / 282°C (HELB)  
480°F / 249°C (LOCA)

Product (LOCA)	Product (HELB)	Description
EA120-11XXX*	EA120-71XXX*	SPDT w/ Flying Leads
EA120-12000	EA120-72XXX*	SPDT w/ QDC
EC390-44XXX*		Plug In Cable Assy w/ QDC ( <a href="#">see pg. 34</a> )
EA120-10001		Target Magnet
EA120-10002		Target Magnet (0.25" Actuation)

\*XXX - Designates Lead Length

#### EA120 SPDT in Harsh Environment Without Accident Conditions

- Operating Temperature: -4° to 212°F (-20° to 100°C)
- Environmental qualifications:  
Qualified for 100 years 112°F (44°C)  
60 years 131°F (55°C)  
Radiation: 363 MRad gamma  
Seismic: 8.8G

Product	Description
EA120-51XXX*	SPDT w/ Flying Leads
EA120-52000	SPDT w/ QDC
EC590-44XXX*	Plug In Cable Assy w/ QDC ( <a href="#">see pg. 38</a> )
EA120-10001	Target Magnet
EA120-10002	Target Magnet (0.25" Actuation)

\*XXX - Designates Lead Length

#### EA120 SPDT in Mild Environment

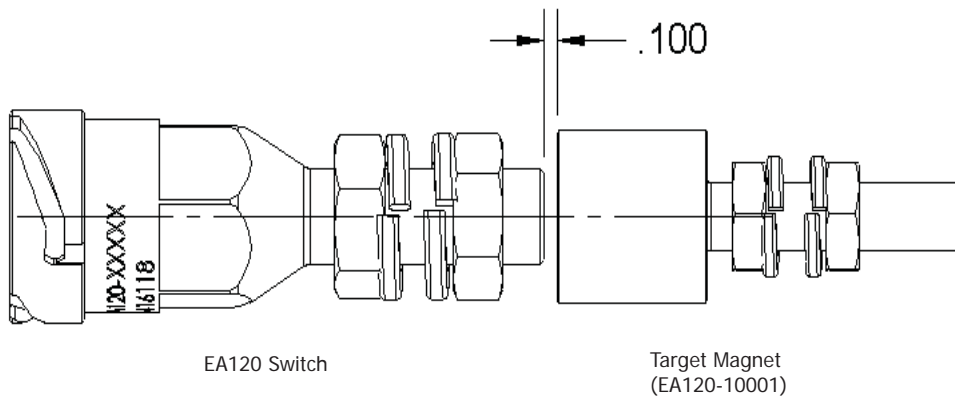
- Operating Temperature: -4° to 212°F (-20° to 100°C)
- Environmental qualifications:  
Qualified for 60 years 105°F (40.5°C)  
Radiation: < 1 Mrad  
Seismic: 8.8G

Product	Description
EA120-31XXX*	SPDT w/ Flying Leads
EA120-32000	SPDT w/ QDC
EC490-44XXX*	Plug In Cable Assy w/ QDC ( <a href="#">see pg. 36</a> )
EA120-10001	Target Magnet
EA120-10002	Target Magnet (0.25" Actuation)

\*XXX - Designates Lead Length

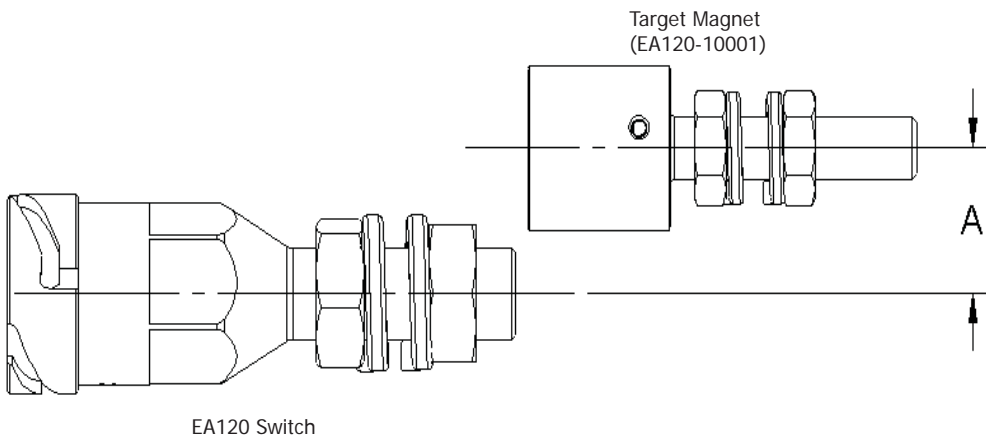
## Actuation/Sensing

Target magnet installed within 0.10" (2.54mm) of switch.



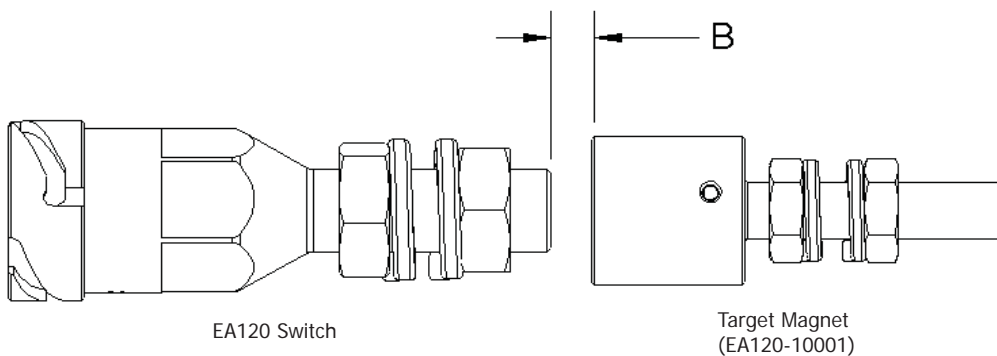
### Radial Actuation

Switch trips within 0.20" (5.08mm) from centerline. Switch releases outside 0.60" (15.24mm) from centerline.



### Axial Actuation

Switch trips within 0.10" (2.54mm). Switch releases outside of 0.50" (12.7mm)



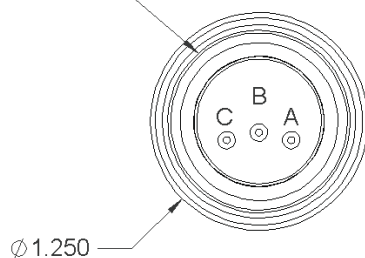
All dimensions given in Inches (mm)

# EA120 SPDT Series

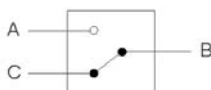
## Electrical Contact Information

### Free-leads option

3/4 NPT  
INTERNAL  
THREAD



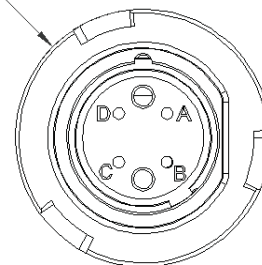
CONTACT  
CONFIGURATION



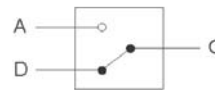
A	Normally Open
B	Common
C	Normally Closed

### Quick disconnect option

Ø 1.372



CONTACT  
CONFIGURATION



A	Normally Open
B	Reserved
C	Common
D	Normally Closed

## Mounting

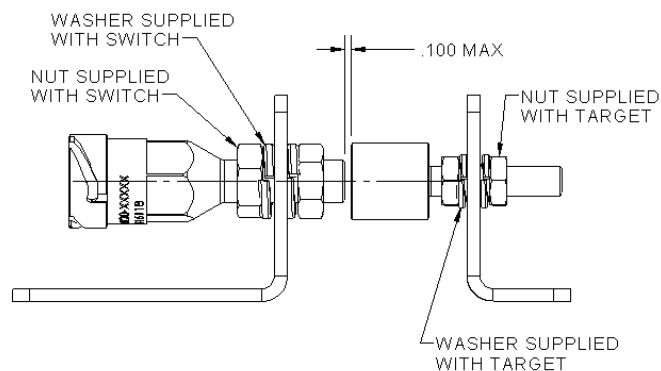
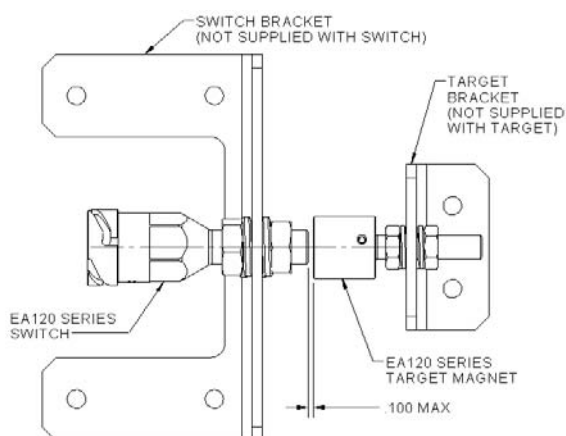
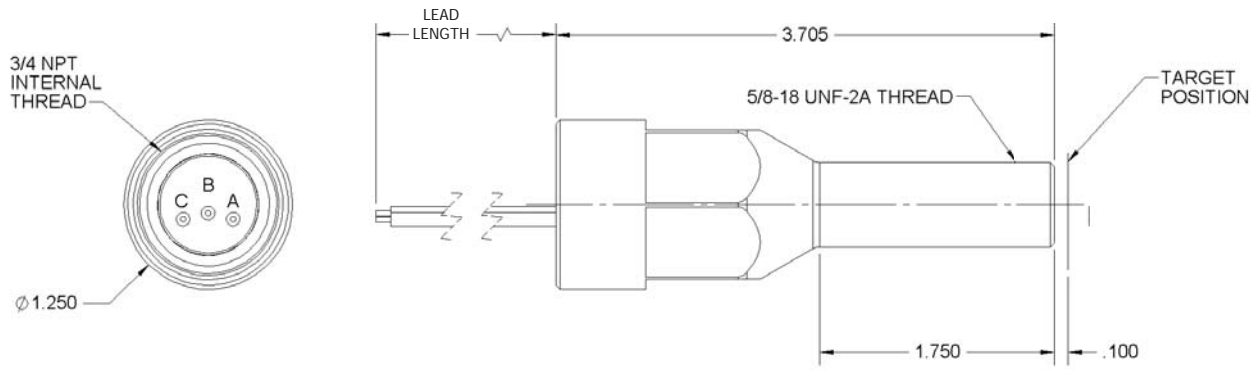


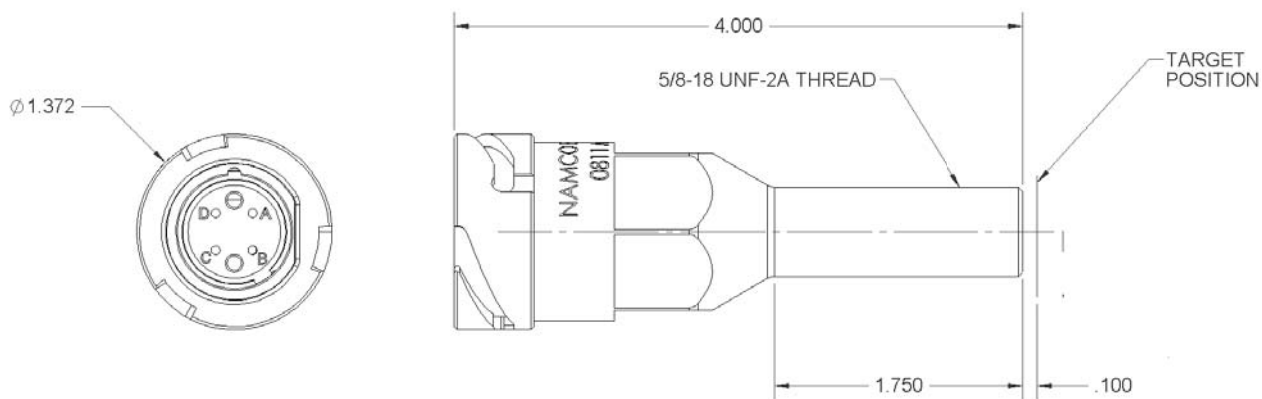
Figure reflects switch in "actuated" position.  
Two 5/8-18 jam nuts and two 5/8" lock washers supplied with switch.  
Target magnet EA120-10001 required for operation (sold separately).  
Average hysteresis: 0.20" (5mm) to 0.40" (10mm)

## Outline Drawings

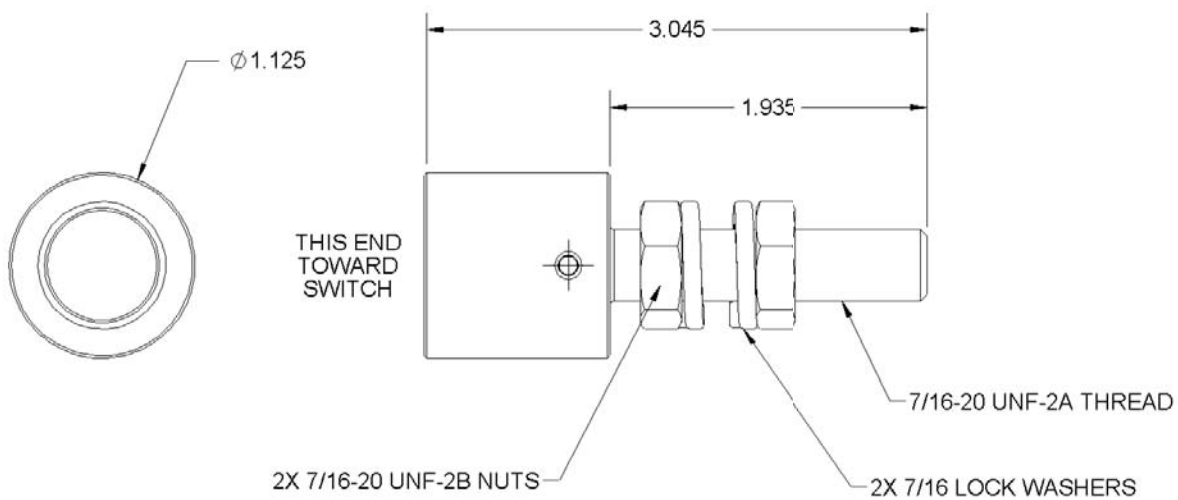
SPDT Flying Leads Model



SPDT Quick Disconnect Model



Target Magnet (EA120-10001)



All dimensions given in Inches (mm)