

**canfield
connector**

7HL SERIES

HAZARDOUS LOCATION MAGNETIC PROXIMITY SENSORS FOR TIE ROD CYLINDERS

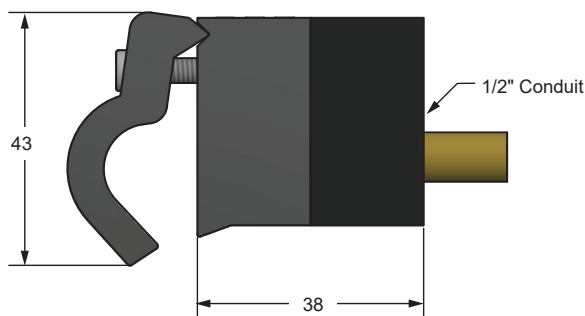
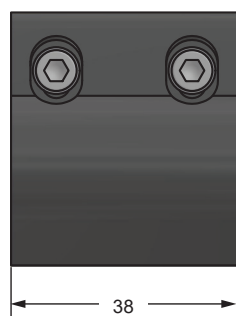
GENERAL DESCRIPTION

The Canfield Connector 7HL is a rugged magnetic proximity sensor designed to sense actuator position in stringent, hazardous location applications. The switch features a robust, epoxy-filled, aircraft aluminum body, and has a vibration and shock resistant, electronic circuit. The 7HL is an expansion of the popular Series 7000 "floating" clamp design and will clamp on 2 to 8 inch bore NFPA tie rod linear actuators. This product is designed to operate in hazardous locations, this switch is CSA approved for Class I, Division 2, Groups A, B, C, and D; Class II, Division 2, Groups F and G; and Class III.



DIMENSIONAL DATA

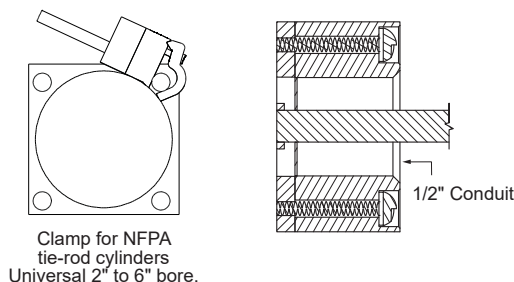
All dimensions are in millimeters unless otherwise noted.



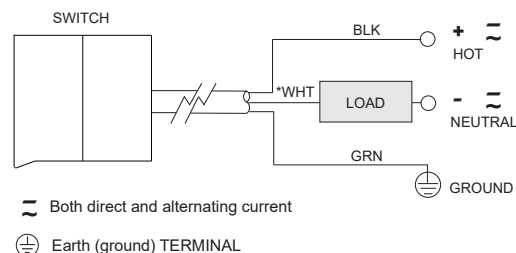
TECHNICAL DATA

Switch Type	S.P.S.T., Normally Open, Reed
Operating Voltage	0-120 V AC/DC 50/60 Hz
Load Max.	10W, Resistive only
Current Max.	0.5A
Response Time	On: 0.5ms Off: 0.1ms
Sensitivity / Orientation	85 Gauss Parallel (measured from sensor surface)
Shock	Up to 30G (11ms)
Vibration	Up to 20G (10-55 Hz)
Materials	Cable: PVC House: Anodized 6061-T6 Aluminum, Epoxy encapsulated printed circuit board
Temperature	Code: T6 Range: -20° to +80°C
Environmental Protection	Designed for NEMA 1, 4 and 13
Hazardous Location Rating	CSA: Class I, Division 2, Groups A, B, C and D; Class II, Division 2, Groups F and G; and Class III
Cable Diameter	.310mm
Wire Gauge	SJTOW type, 18 AWG standard
Wire Length	9 Ft. standard

MOUNTING INSTALLATION



ELECTRICAL INSTALLATION



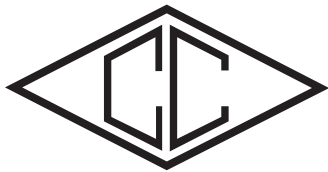
*White wire must be permanently reidentified to indicate its use as an ungrounded conductor, by painting or other effective means at its termination, and each location where the conductor is visible and accessible. Per NEC Article (200.7)

ORDERING INFORMATION

7HL10-000-001



Consult factory for available versions listed
by Canadian Standards Association for use
with certified electrical equipment.



canfield connector

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SERIES 7HL

HAZARDOUS LOCATION MAGNETIC PROXIMITY SENSORS FOR TIE ROD CYLINDERS INSTALLATION GUIDE

Application Recommendations and Precautions

This switch has been carefully engineered and tested, but since it may be installed in virtually an unlimited number of applications under a great variety of plant conditions, it should be installed as outlined below to provide maximum reliability.

1. Always stay within the specifications and power rating limitations of the unit installed.
2. Primary and control circuit wiring should not be mixed in the same conduit. Motors will produce high impulses that will be introduced into the control wiring if the wiring is carried in the same conduit.
3. Never connect the switch without a load present. The switch will be destroyed.
4. Some electrical loads may be capacitive. Capacitive loading may also occur due to distributed capacity in cable runs over 25 feet. In order to obtain optimum performance and long life, magnetically operated limit switches should not be subjected to (1) strong magnetic fields, (2) extreme temperature ranges, and (3) excessive ferrous filling or chip buildup.
5. Conduit must be used on switch to meet Hazardous Location Standards

 Improper wiring will damage or destroy the switch. Therefore, the wiring diagram, along with the listed power ratings, should be carefully observed before connecting power to the switch.

WARNING – EXPLOSION HAZARD – Substitution of components may impair suitability for Class I, Division 2.

EXPLOSION – la Substitution de composants peut altérer les qualités pour la classe I, Division 2.

WARNING – EXPLOSION HAZZARD – Do not connect while circuit is live unless area is known to be nonhazardous.

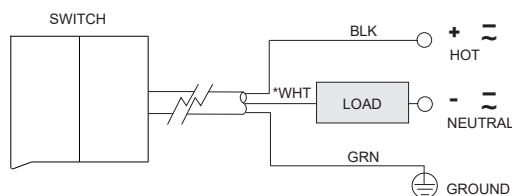
EXPLOSION – ne pas connecter alors que le circuit est sous tension, sauf si l'environnement est classé non dangereux.

Technical Data

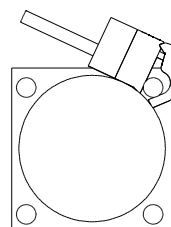
- Temperature Range: Operational from -20° to +80°C
- Shock: Operational up to 30 G (11ms)
- Vibration: Operational up to 20 G (10 - 55 Hz)
- Sensitivity: 85 Gauss parallel minimum, as measured on the surface of actuator
- Pollution Degree: 3
- Environmental protection: NEMA 1, 4 and 13
- Hazardous location ratings:
 - CSA: Class I, Division 2, Groups A, B, C and D;
 - Class II, Division 2, Groups F and G; and Class III
- Body Material: Anodized 6061-T6 Aluminum, Epoxy encapsulated printed circuit board
- Wire: SJE00W 18/3 Leads
- Circuit: S.P.S.T., Normally Open
- Operating Voltage: 0 - 120 V AC/DC 50/60 Hz
- Maximum Load (Power Rating): 10W, Resistive Only
- Maximum Current: 0.5A Max.
- Response Time ON: 0.5ms
- Response Time OFF: 0.1ms

Do not use on relay loads or with incandescent bulbs.

Electrical, Mounting Installation



*White wire must be permanently reidentified to indicate its use as an ungrounded conductor, by painting or other effective means at its termination, and each location where the conductor is visible and accessible. Per NEC Article (200.7)



MOUNTING