canfield connector
8510 Foxwood Court
Youngstown, Ohio 44514
(330) 758-8299 Fax: (330) 758-8912
www.canfieldconnector.com

SERIES 8000 INSTALLATION GUIDE

Installation Tips

1. Current & voltage demands of the load must NOT exceed the current & voltage ratings of the selected switch (shown on the enclosed wiring diagram). Failure to use proper load will ruin the switch.
2. Two wire versions can NOT be connected directly across the power supply without a series load. Failure to use a series load will damage the switch and possibly the power supply.
3. Never test switch with a filament light bulb as a load. Severe inrush currents will impair the switch or cause premature failure.
4. There are three types of loads: resistive (PC or PLC) • capacitive (long wire runs) • inductive (solenoids)
5. The shorter the wire runs, the lower the capacitive load and the longer the switch life.
6. Always keep the area around the switch clean and free from potentially magnetic field-carrying debris. The switches actuate on magnetic fields produced from the cylinder position. Stray magnetism can give unwanted switch actuation or change the switch point.
7. When using reed switches to actuate a solenoid, always use a surge suppression version and/or Canfield MPC solenoid valve surge suppression connectors. Without it, large inductive spikes can severely limit switch life expectancy.
8. Use the switch to indicate end of physical stroke. Do not rely on switch alone to stop cylinder travel.
9. Be sure the sensing area of the switch is installed completely against the cylinder wall.
10. Some Reed and Electronic switches are equipped with indicator lights. Their light always depicts the on state of the switch. On these versions, the two wire hook-up necessitates a minimum load current rating which must be enough to light the LED (@ 0.005 Amps). Three wire versions take no minimum load current rating to light the LED.

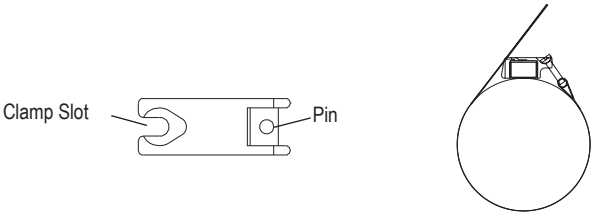
Installation Instructions

1. Connect Switch to the cylinder as shown below, according to proper clamp style. Lightly tighten clamp only, so as to be able to adjust sensor position on cylinder.
2. Connect Wiring as per enclosed Diagram.
3. While operating cylinder, adjust sensor to desired position. Firmly secure clamp assembly, once desired results are achieved.

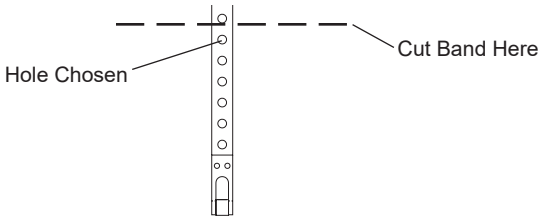
Round Cylinder Mechanical Installation

1. Start screw 2 - 3 turns into barrel nut on end of band assembly.

2. Place screw head into clamp slot and wrap band tightly around cylinder, inserting pin into nearest hole on band as shown below.

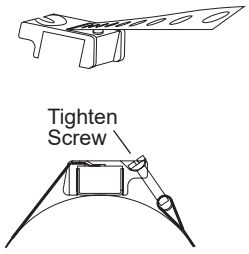


3. Choose hole in band assembly that fits to the cylinder size. Cut the band midway between the above adjacent hole.

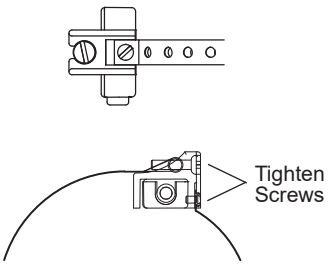


4. a) Remove screw head from clamp slot. Insert cut end of band into slot at rear of clamp. Place chosen hole over pin and bend band firmly down with thumb.

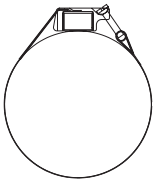
Clamp Style: 0



Clamp Style: A



b) Wrap band around cylinder barrel and re-insert screw head into clamp. Position switch on cylinder and tighten.
Do not over tighten. Over tightening can cause damage to the switch and/or cylinder.

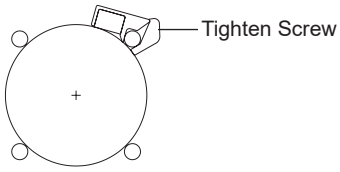


Tighten only enough to keep the switch/clamp assembly from sliding on the cylinder.

Tie-Rod Mechanical Installation

1. Position switch on cylinder with clamp over tie-rod as shown, and tighten screw.

Clamp Styles: 2, 3, B, C



WARNING: Do not use in life or limb threatening applications. Severe injury could result.

Test the switches on your cylinder first as Canfield Connector has designed the switch to be used well within the magnetic gauss ratings of most cylinder manufacturers. Canfield Connector takes no liability for improper cylinder design or assembly.

Technical Data

- Temperature Range: Operational from -20° to +80°C
- Shock: Operational up to 30G (11 ms.) reeds only. Not applicable for electronic
- Vibration: Operational up to 20G (10 - 55 Hz) reeds only. Not applicable for electronic
- Sensitivity and orientation: 85 gauss parallel (standard minimum required for proper operation, as measured on sensor surface. Size of sensing area depends on size and strength of magnet and thickness of cylinder wall
- Most versions designed to meet NEMA 6/IP67 specifications
- Note: Not compatible with alcohol based fluids. Contact factory for suitable replacement

Trouble Shooting Notes:

Problem	***Solution***
Reed Switch Models	
Reed Switch works but LED does not light	1. Check current draw of load. It must be > 5 mA for LED to light. 2. Check polarity: Refer to wiring diagram if using DC power supply.
Reed switch sticks in closed position.	1. Check current draw, power/VA and voltage of load and compare with specs of the appropriate model sensor. These can not be exceeded. 2. Voltage/Current spikes may be excessive for your particular load. External transient suppression may be required. 3. Long wire runs (greater than 25') can cause capacitance build-up and sticking will result. Consult factory for solution.
Current or voltage leakage when reed switch is off.	1. Check current, power/VA and voltage rating of load and compare with specs of appropriate model sensor. Those can not be exceeded. 2. Reed element was damaged. Consult factory.
Reed switch will not turn on.	1. Check magnet strength on surface of sensor. It must be >85 Gauss. 2. Switch is damaged. Consult factory. 3. Check for proper wiring.
Reed switch turns on more than once as magnet passes beneath it.	1. Check for proper magnet polarity. The poles must be parallel to the switch as shown in the wiring diagram. 2. Check for dead spots on the magnet if polarity is correct.
Electronic Models	
Electronic switch stays on always.	1. Power supply exceeds 24 VDC. Regulate if possible. 2. Switch is wired incorrectly. Check wiring diagram. 3. Switch was damaged possibly by transients, or excessive current draw. Consult factory.
Electronic switch will not turn on.	1. Check magnet strength on surface of sensor. Check chart for sensitivity. 2. Check for proper wiring. 3. Switch is damaged. Consult factory.
Electronic switch turns on more than once as magnet passes beneath it.	1. Check polarity of the magnet. Poles should be oriented as shown in the wiring diagram. 2. Check for dead spots on the magnet if polarity is correct.
Current or voltage leakage when Electronic switch is off.	1. Check current, and voltage rating of load and compare with specs of appropriate model sensor. Those can not be exceeded. 2. Check for proper wiring. 3. Electronic element was damaged. Consult factory.

1 year warranty

All products manufactured by Canfield Connector are warranted by Canfield Connector to be free of defects in material and workmanship for a period of one year from the purchase date. Canfield Connector's obligation under this warranty is limited to repair or replacement of the defective product or refund of the purchase price paid solely at the discretion of Canfield Connector and provided such defective product is returned to Canfield Connector freight prepaid and upon examination by Canfield Connector such product is found defective. This warranty shall be void in the event that product has been subject to misuse, misapplication, improper maintenance, or tampering. This warranty is expressed in lieu of all other warranties, expressed or implied from Canfield Connector representatives or employees.