# Class 6

## Intermediate Pressure Square-Head Cylinders







## **REED PROXIMITY SWITCH**

AIR CYLINDER APPLICATIONS



#### LONG LIFE/HIGH PERFORMANCE

#### **FEATURES AND ADVANTAGES**

- Adjustable mounting allows switches to be located anywhere within range of piston travel.
- Several switches may be mounted to control or initiate any sequence function.
- No externally moving parts to wear or maintain.
- Suited for use in plant environments where dirt and contamination create difficulties for electromechanical and other types of controls.
- Neon Indicator Light provides convenient means for positioning and troubleshooting switch and circuits.
- · Suitable for AC service only.

#### **WORKING PRINCIPLE**

Basically the Reed Switch consists of two overlapping ferro magnetic blades (reeds). The reeds are hermetically sealed inside a glass tube leaving a small air gap between them.

Since the reeds are magnetic, they will assume opposite polarity and be attracted to each other when influenced by a magnetic field. Sufficient magnetic flux density will cause the reeds to flex and contact each other. When the magnetic field is removed, they will again spring apart to their normal positions.

The cylinder/Reed Switch combination operates by using a magnetic band on the cylinder piston, which closes the externally mounted reed switch, as it approaches. When the piston moves away again the switch opens.

Proper application of this versatile Reed Switch can offer millions of cycles of trouble-free operation.

#### **3 AMP REED SWITCH SPECIFICATIONS**

Circuit - Normally open - SPST (Form A)

VA (Max) - 360

Switching voltage - 65-120 VAC (50/60 Hz)

Current (Break) - 3.0 Amp

Leakage - 1.7 mA

Response Time - 15 ms On, 0.83 ms Off

Switch Burden Current - 5 mA

**Note:** All incandescent loads derate switch capacity to 10% due to inrush current

Moisture and dust proof (no NEMA rating)

#### **SHOCK RATING**

The basic switch can withstand up to 60 G maximum in the direction of contact closure without misfire or malfunction.

## **VIBRATION SENSITIVITY**

Switch will withstand amplitude of 30 G at frequencies up to 6000 Hz without misfire. False operation can occur at vibration frequency levels higher than 6000 Hz.

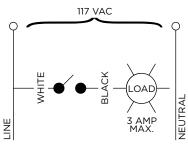
#### **OPERATING TEMPERATURE**

-40°F to +170°F for standard cable.

#### **CABLE SPECIFICATION**

The conductors are tinned copper with polyethylene insulation, conductors are cabled with a rayon braid, a tinned copper braided shield and a chrome vinyl jacket that is resistant to hydraulic fluids.

### **SWITCH WIRING SCHEMATIC**



#### **CAUTION**

Do not connect switch without a load. Permanent damage to switch will result.

NOTE: Switch is internally protected against failure due to normal electrical transient levels.

However, it may be necessary to use additional transient protection if high levels exist.