OPTIONAL SENSING SWITCHES

All cylinders ordered with the MFC (Option No. 4) can be used in conjunction with Reed or Solid State switches for position sensing. Clamping bands are included with each switch ordered and are pre-sized for easy installation. Switches must be ordered separate from cylinders as an accessory item.

Reed Switches (AC or DC)

American’s Reed Switches can be used on either AC or DC applications and are available with or without an LED indicator. In order to avoid premature contact deterioration, always operate within switch specifications listed below. Switch life can be maximized by implementing protection circuits as indicated.

SPECIFICATIONS

Non-LED Reed Switch

Switching Logic…………….Normally Open
Contact Type………………..Single Pole
Single Throw

Contact Rating:
- Power…………………….5 Watts
- Voltage………………..1 to 125V (AC or DC)
- Switching Current.......1mA to 100mA
- Breakdown Voltage.....250 Volts
- Ambient Temperature ………14°F to 140°F
- Indicator…………………None
- Plain End Lead Wire……..39 in.
- Enclosure Rating……….IEC Standard IP67
- DC Polarity……………..Pos. (brown)
- Neg. (blue)

LED Reed Switch

Switching Logic…………….Normally Open
Contact Type………………..Single Pole
Single Throw

Contact Rating:
- Power…………………….5 Watts
- Voltage………………..3 to 125V (AC or DC)
- Switching Current.......10mA to 40mA
- Breakdown Voltage.....250 Volts
- Ambient Temperature ………14°F to 140°F
- Indicator…………………Red LED
- Plain End Lead Wire……..39 in.
- M8 Pigtail Connector……..6 in.
- Enclosure Rating……….IEC Standard IP67
- DC Polarity……………..Pos. (brown)
- Neg. (blue)

Special Notes:

- All switches are pretested at the manufacturer.
- The use of an ohmmeter is recommended whenever field testing is required. Do not use an incandescent light bulb or any other testing device which may subject the switches to inrush loads beyond their ratings.
- Do not exceed 2.5 in.-lbs. tightening torque on lock nut.
- Use integral circuits as described to maximize Reed Switch life.
- The LED Switches require a minimum current flow of 10mA for LED illumination.
- Polarity must be observed in DC applications.
- Solid State Switches have DC capability only.
OPTIONAL SENSING SWITCHES (Continued)

Solid State Switches (DC only)

American’s Solid State Switches are designed for DC applications only. With no mechanical parts to wear out or arc, the solid state circuitry provides a compact, reliable positioning switch for extended service life when used within the specified parameters.

SPECIFICATIONS

Solid State Switch

**Sinking (NPN)**

- **Switching Logic** ................. Normally Open
- **Switching Voltage**................. 5 VDC to 30 VDC
- **Switching Current**.................. 100mA Max. @ 5 VDC

- **Switching Voltage**.................. 200mA Max. @ 12 VDC
- **Current Consumption**............. 10mA Max. @ 12 VDC
- **Ambient Temperature** .......... 14°F to 140°F
- **Indicator**.......................... Red LED
- **Plain End Lead Wire**............... 39 in.
- **M8 Pigtail Connector**............. 6 in.
- **Enclosure Rating**.................. IEC Standard IP66

**Sourcing (PNP)**

- **Switching Logic** ................. Normally Open
- **Switching Voltage**................. 5 VDC to 30 VDC
- **Switching Current**.................. 100mA Max. @ 12 VDC

- **Switching Voltage**.................. 200mA Max. @ 24 VDC
- **Current Consumption**............. 7mA Max. @ 12 VDC
- **Ambient Temperature** .......... 14°F to 140°F
- **Indicator**.......................... Green LED
- **Plain End Lead Wire**............... 39 in.
- **M8 Pigtail Connector**............. 6 in.
- **Enclosure Rating**.................. IEC Standard IP66

Wiring Diagram:

**SINKING CIRCUIT**

5 - 30 VDC ( + )

SOLID STATE SWITCH (NPN)

( - )

BROWN

BLACK

LOAD

**SOURCING CIRCUIT**

5 - 30 VDC ( + )

SOLID STATE SWITCH (PNP)

( - )

BROWN

BLACK

LOAD

**SWITCH DIMENSIONAL DATA**

Std. Lead Wires w/Bands

Pigtail Connection Type w/Bands