

General Description

he STARCYL Series 762 Reed and Electronic switches are designed to fit 2" to 8" bore NFPA tie rod. With a voltage range of 1 to 240V AC/DC, either normally open or normally closed and an array of electrical connections, the Series 762 will sense most magnetic sensing applications with one switch type. Available in either Electronic or Reed in the same size package, the 762 also handles higher current (up to 4 Amps) applications eliminating the need for a relay.



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. For DC voltages, always observe polarity.

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 the switch to actuate a solenoid, always use a surge suppression version and/or Canfield MPC solenoid valve surge suppression connector. Without surge suppression, 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 Reed Switch to the cylinder as shown below, according to proper clamp style. Hand tighten clamp only, allowing adjustment of 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.

Clamp Styles



6 - 10 in lbs

25 in lbs torque

screw as damage could result to the switch.



Universal Clamp for Round Cylinders

Hose clamp must be invisible to magnetism. Use marine grade 300 series stainless clamps only.



Do not over tighten hose clamp. Max. torque 3 ft lbs.

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

Test the switches on your cylinder first as the switch has designed to be used well within the magnetic gauss ratings of most cylinder manufacturers. Note also that Electronic magnets and Reed magnets differ. The magnetic poles are perpendicular to each other. This could double actuate should a reed magnet be used on a Electronic switch and vise versa.

Type 01 & 05

SUPPLY AC/DC B B

Туре 04 & 09



Type 06



Туре 15 & 16



Wiring Diagram





Gauss Rating: 85 - Minimum Gauss rating required for proper operation as measured on sensor surface

& 16 sensing offset toward f enclosure.)

200

*Wired Style

	9' Wired Style	1/2" Conduit Hub 9' Wired Style	12mm Male Quick Connector Style	Automotive Connector Style	
				3 Pin	5 Pin
А	RED	RED	Pin 1 (BRN)	Pin 2	Pin 4
В	BLK	BLK	Pin 3 (BLU)	Pin 3	Pin 2
С	WHT	WHT	Pin 4 (BLK)	Pin 1	Pin 1

Туре Switching Switching Switching Switching Voltage Description Function Code Voltage Current Power Speed Drop 0 - 240V AC/DC 50/60 Hz Normally Open SPST 01 0.6 ms operate Reed Switch, 2 Wire 0 Volts 1 Amp max 30 watts max 0.05 ms release Reed Switch, MOV, LED, 2 Wire 5 - 240V AC/DC 50/60 Hz Normally Open SPST 1 Amp max 0.6 ms operate 0.05 ms release 04 30 watts max 3 Volts .005 Amps min Reed Switch, 2 Wire Normally Closed SPST 0 - 120V AC/DC 50/60 Hz 1.0 ms operate 0.02 ms release 05 0 Volts 1 Amp max. 20 watts max Reed Switch, LED Single Pole, Double Throw 1 Amp max. .005 Amps min. 1.0 ms operate 0.02 ms release 5 - 120V AC/DC 3Volts/load1 06 20 watts max 3 Wire 50/60 Hz 0Volts/load2 Reed Switch, MOV, LED, 2 Wire 1 Amp max. .005 Amps min. 09 Normally Closed SPST 5 - 120V AC/DC 50/60 Hz 1.0 ms operate 0.02 ms release 20 watts max 3 Volts AC Electronic Sensor for Reed Magnets, Normally Open TRIAC output 600 mA max. 5 Amps Inrush 1.5 μs operate 0.5 μs release 15 12-24 VAC 1 Volt 15 watts max LED, 3 Wire AC Electronic Senso for Reed Magnets, LED,3 Wire Normally Oper TRIAC output 600 mA max. 5 Amps Inrush 1.5 μs operate 0.5 μs release 16 120 VAC 1 Volt 72 watts max Reed Switch, MOV, 2 Wire Normally Open TRIAC output 10 - 240 VAC 50/60 Hz 4 Amps max. 50 Amps Inrush 0.6 ms operate 0.05 ms release 21 100 watts max 1 Volt 4 Amps max. 50 Amps Inrush .005 Amps min. Reed Switch, MOV. 10 - 50 VAC 0.6 ms operate Normally Open 23 100 watts may 1 Volt LED, 3 Wire TRIAC output 50/60 Hz 0.05 ms release 4 Amps max. 50 Amps Inrush .005 Amps min. Reed Switch, MOV, LED, 3 Wire Normally Open TRIAC output 24 - 240 VAC 50/60 Hz 0.6 ms operate 24 100 watts max 1 Volt 0.05 ms release Reed Switch, MOV, 2 Wire Normally Closed TRIAC output 10-120 VAC 50/60 Hz 4 Amps max. 50 Amps Inrush 0.6 ms operate 0.05 ms release 25 100 watts ma: 1 Volt 4 Amps max Reed Switch, MOV, Normally Closed 10-120 VAC 0.6 ms operate 29 50 Amps Inrush .005 Amps min. 100 watts may 1 Volt TRIAC output LED, 3 Wire 50/60 Hz 0.05 ms release Electronic Sensor for Reed Magnets, LED, Sourcing, 3 Wire Normally Open PNP output 1.5 µs operate 0.5 µs release 31 6 - 24 VDC 1 Amp max. 24 watts max 0.5 Volts Electronic Sensor fo Normally Open NPN output 1.5 μs operate 0.5 μs release Reed Magnets, LED, Sinking, 3 Wire 32 6 - 24 VDC 24 watts max 0.5 Volts 1 Amp max

WARNING! -

Do not exceed maximum rating or incorrect wiring hook-up which will result in damage to switch.





Туре 23, 24 & 29











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.	 Check current draw, power/VA and voltage of load and compare with specs of the appropriate model sensor. These can not be exceeded.
	 Voltage/Current spikes may be excessive for your particular load. External transient suppression may be required.
	 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.	 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.	 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 always stays on.	1. Power supply exceeds 24 VDC. Regulate if possible.
	2. Switch is wired incorrectly. Check wiring diagram.
	 Switch was damaged possibly by transients, or excessive current draw. Consult factory.
Electronic switch will not turn on.	 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.	 Check polarity of the magnet. The 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 switches are warranted by STARCYL to be free of defects in material and workmanship for a period of one year from the purchase date. STARCYL 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 STARCYL and provided such defective product is returned to STARCYL freight prepaid and upon examination by STARCYL 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 STARCYL representatives or employees.