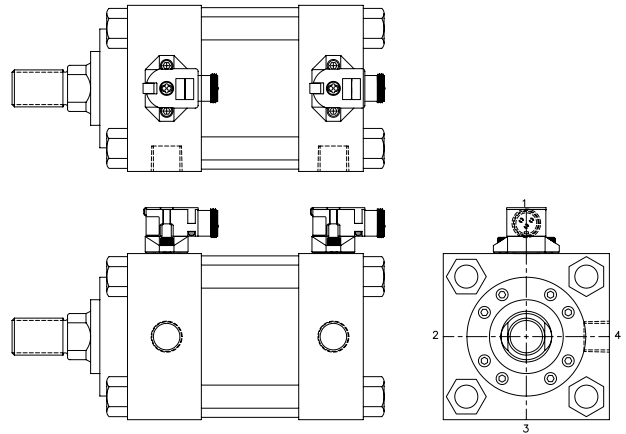


PROXIMITY SWITCH AND OPTIONS

Available for A4, L4, H4 and H6 series cylinders

Factory installed. No adjustment needed.	
Shock and Vibration Resistant	
360° rotatable switch for easy cable routing	
Operation pressure	1,500 PSI (Max. 3000 PSI)
Output Function	Normally Open (2 wire)
Operation Temperature	-13°F to +158°F (-25°C to +70°C)
LED Function	Green: Power On
	On Red: Out Put Energized
Short	Circuit Protection
Power-On Protection	Incorporated
Sensing range	2mm (.079" Normal)
Operation Voltage	20 - 140 VAC/DC
Line Frequency	40 - 60 Hz
Switching Frequency	30Hz
Response time	15ms Max.
Minimum load current	≥ 3.0mA
Continuous Load Current	≤ 400mA
Leakage (off-state) Current	≥ 1.7mA
Normally Closed available upon special request.	



Optional Features

- Intrinsically Safe
- Hi-Temp up to 400°F (204°C)
- Underwater service up to 2,000 foot depths
- Solid state operation
- Heavy duty operation up to 5,000 PSI
- Explosion proof

Please consult factory for switch specifications

REED & HALL EFFECT SWITCH DATA

AVAILABLE FOR STANDARD A2/H2 CYLINDERS AND MODIFIED A4, L4 AND H4 CYLINDERS WITH ALUMINUM TUBE.

Yates Cylinders' Reed and Hall effect switches are designed for use on all types of cylinders with aluminum and non-ferrous barrels. A magnetic band is installed on the cylinder's piston which the Reed and Hall effect switches read through the non-ferrous cylinder barrel. The switches then send a signal to programmable controllers and other various electrical circuits.

YATES CYLINDERS' REED SWITCH FEATURES:

- Available for 1 1/2" bore through 8" bores.
- Easy to adjust switch bracket mounts to tie rod of cylinder and can be adjusted anywhere along entire stroke.
- Multiple switches may be used on one cylinder to control or sequence several functions.
- LED indicator light for trouble shooting and easy installation.
- Voltage range of 5 to 240 VAC/VDC. (Normally Open)
- 9' Wire Lead is standard.
- Economical sensing solution.
- Zero maintenance.

Part Number	(1 1/2" Bore Only) YRS-015	(2"-8" Bores) YRS-028
Switch Type	Reed Switch MOV & LED	Reed Switch MOV & LED
Function	Normally Open	Normally Open
Working Temp.	-30C - +80C	-30C - +80C
Magnetic Sensitivity	85 GA.	85 GA.
Switching Voltage	5-120 VAC/VDC 50/60 Hz	5-240 VDC/VAC
Switching Current	.5 Amps Max. .005 Amp Min.	1 Amp Max. .005 Amp Min.
Switching Power	10 Watts Max.	30 Watts Max.
Voltage Drop	3.5 Volts	3 Volts

YATES CYLINDERS' HALL EFFECT SWITCH FEATURES:

- Available for 1 1/2" to 8" bores.
- Easy to adjust switch bracket mounts to tie rod of cylinder and may be adjusted anywhere along the entire stroke.
- LED indicator light for trouble shooting and easy installation.
- Solid state construction; no moving parts to wear out which provides longer switch life.
- Voltage range of 6-24 VDC
- Available normally open, sinking or sourcing
- 9' wire lead is standard.
- Voltage range of 5 to 240 VAC/VDC. (Normally Open)
- 9' Wire Lead is standard.
- Economical sensing solution.
- Zero maintenance.

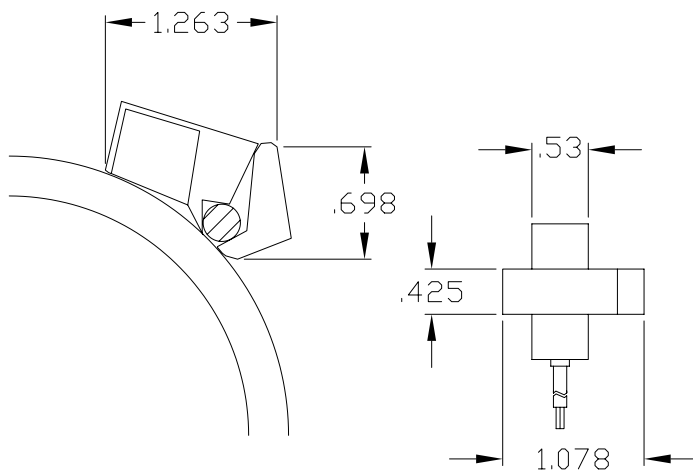
Part Number	1 1/2" Bore Only YHS-015-1	1 1/2" Bore Only YHS-015-2	2"-8" Bores YHS-028-1	2"-8" Bores YHS-028-2
Switch Type	Hall Effect LED Sourcing	Hall Effect LED Sinking	Hall Effect LED Sourcing	Hall Effect LED Sinking
Function	Normally Open	Normally Open	Normally Open	Normally Open
Working Temp.	-30°C - +80°C	-30°C - +80°C	-30°C - +80°C	-30°C - +80°C
Magnetic Sensitivity	85 GA.	85 GA.	85 GA.	85 GA.
Switching Voltage	6-24 VDC	6-24 VDC	6-24 VDC	6-24 VDC
Switching Current	.5 Amp Max.	.5 Amp Max.	1 Amp Max.	1 Amp Max.
Switching Power	12 Watts Max.	12 Watts Max.	24 Watts Max.	24 Watts Max.
Voltage Drop	.5 Volts	.5 Volts	.5 Volts	.5 Volts

REED & HALL EFFECT SWITCH DATA

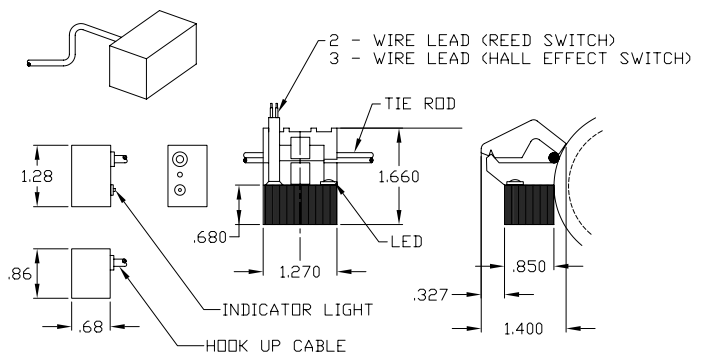
YATES' SWITCH INSTALLATION TIPS:

1. Never exceed the current and voltage of the load with the selected switch. Failure to use proper load will ruin the switch. For DC voltages always observe polarity.
2. On two-wire versions, do not connect 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 use a filament light bulb as a load test to the switch. Severe in-rush currents will damage the switch or cause premature failure.
4. Keep wire runs to a minimum. Longer wire runs will increase capacitive loading which may effect the life of the switch.
5. When actuating a solenoid with a switch, always use an external surge suppression.
6. At all times keep the area around the switch clean and free of potentially magnetic debris.
7. Be sure the sensing area of the switch is installed against the cylinder tube.
8. Consult factory if you have any additional questions regarding Reed and Hall effect switches.

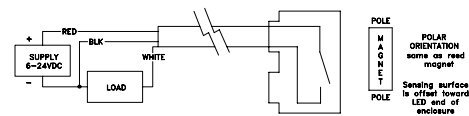
SWITCH & BRACKET FOR 1 1/2" BORE



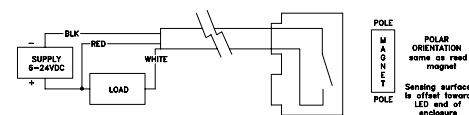
SWITCH & BRACKET FOR 2-8" BORE



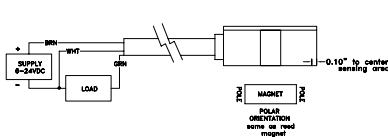
YHS-028-1



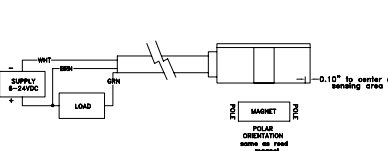
YHS-028-2



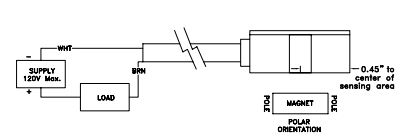
YHS-015-1



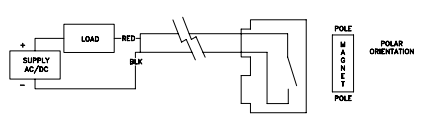
YHS-015-2



YHS-015



YHS-0028



Specials / Engineering

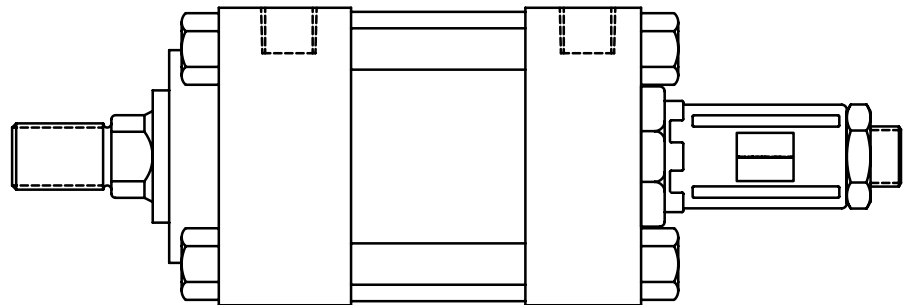
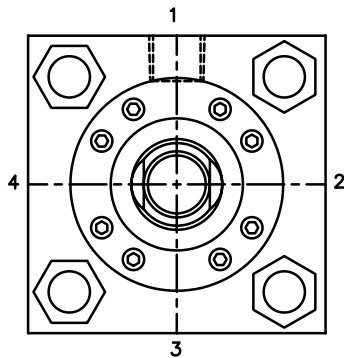
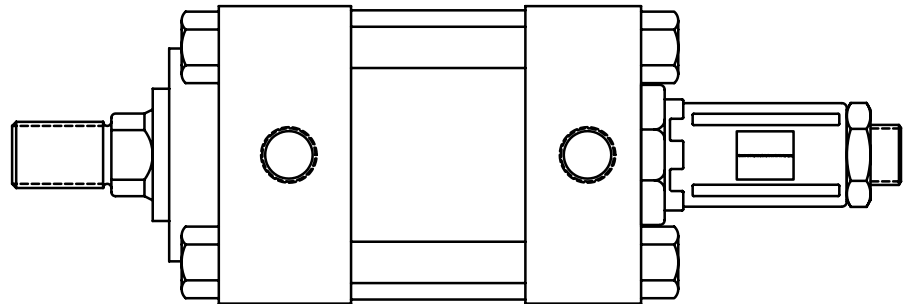


LDT

MAGNETOSTRICTIVE LINEAR DISPLACEMENT TRANSDUCER FOR HIGH SHOCK AND VIBRATION APPLICATIONS.

Standard LDT is lab tested and field proven to survive high shock and vibration. With tested results of 2,000 G's of shock and 30 G's of random vibration with no false signals or mechanical damage, it can survive in the most rugged and demanding applications.

Sensing tube construction is welded stainless steel, suitable for 5000 PSI hydraulic cylinders. The electronics are enclosed inside an aluminum housing with o-ring seals for IP68 indoor applications. Type NEMA 6 rating and stainless steel housings and connectors are available as a special option.



LDT ELECTRICAL INFORMATION

INPUT VOLTAGE	7 VDC to 30 VDC
CURRENT DRAW	40mA at 24 VDC
Displacement	1" to 300"
OUTPUT	
ANALOG	Absolute analog position via digital-to-analog converter 0 to 10 VDC 10 to 0 VDC -10 to 10 VDC 10 to -10 VDC 0 to 5 VDC 5 to 0 VDC -5 to 5 VDC 5 to -5 VDC 4 to 20mA 20 to 4mA
DIGITAL	DIGITAL Digital available upon request
RESOLUTION	
INTERNAL	0.00006
ANALOG OUTPUT	16-Bit
NON-LINEARITY/ ACCURACY	<0.01% or +/- 0.005", whichever is greater (+/- 0.002 typical)
REPEATABILITY	
953D REPEATABILITY	Equal to resolution of controller
953A REPEATABILITY	Equal to resolution
953SSI REPEATABILITY	Equal to output resolution
HYSTERESIS	.001" (.025 mm) maximum
Storage Temperature	-40° to 221°F (-40° to 105° C)
OPERATING TEMPERATURE	
HEAD ELECTRONICS	-40° to 185°F (-40° to 70° C)
GUIDE TUBE	-40° to 221°F (-40° to 105° C)
953A Current Output	Max Load Resistance: 500 Ohms
953A Voltage Output	Minimum Load Resistance 2K Ohms Output Current: Gauranteed 5mA minimum Analog Ripple: ≤ mV maximum
OPERATING PRESSURE	5,000 psi operational, (10,000 psi spike)
SPAN LENGTH	1" - 300"
NULL ZONE	2" Standard (1.5" Minumum)
DEAD ZONE	2.50" Standard (2.25" Minumum)
CONNECTORS	5 pin 12mm Euro micro 8 Pin DIN or 10 Pin MS -Optional
UPDATE TIME	2 mS typically
Enclosure Rating	IP68, IEC 600529
Diagnostics	Tri-Color LED beside connector/cable exit

**SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE.
OTHER OPTIONS AVAILABLE. CONSULT FACTORY.**

