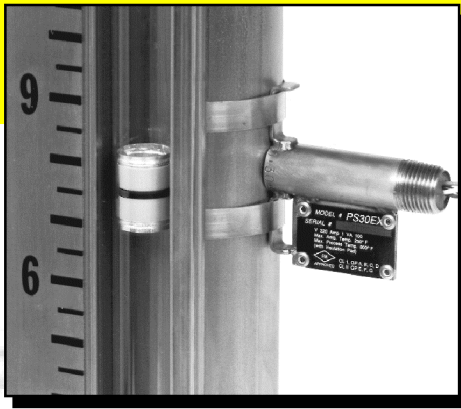


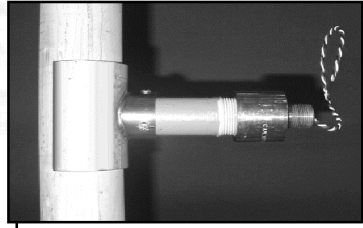
ES30EX ELECTRIC PROXIMITY SWITCH



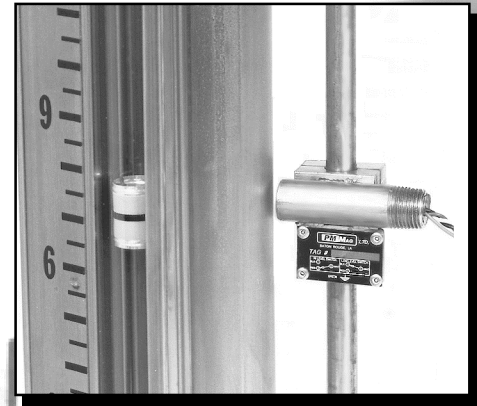
APPROVED



Clamp Mounted
(ES-30EX)



Cryogenic Service
(ES-30EXC)



Rod Mounted
(ES-30EX)

DESCRIPTION

The ES-30EX is a magnetically activated single pole double throw switch. When it is mounted on a PM26 or other chamber that has a PM26 magnetic float, it will accurately sense high or low levels within a vessel. The Switch is available in both Rod and Clamp mount standard units as well as a special Cryogenic unit. Amplifying relays are available for higher current switching capability.

FEATURES

- * Unique Magnetic coupling concept
- * Ease of Mounting and adjustment - no special tools required
- * SPDT Switch (NC & NO Contacts)
- * Compact Design
- * Unique Magnetic Latching
- * Totally Encapsulated in a stainless steel housing

BENEFITS

- No contact with process fluids
- No valves or process piping required
- No seals, diaphragms, springs, or torque tubes required
- No cleaning required
- Easily adjustable trip point
- Vibration resistant
- Non-corrosive parts

MOUNTING



STANDARD SWITCHES - The switch is held to the chamber with two stainless steel clamps that pass over the switch mounting lugs, then around the PM-26 chamber. The switch can be easily positioned by loosening the clamps then sliding the switch along the chamber to the required trip position. Two switches may be mounted to trip at the same point by placing them on opposite sides of the chamber. Two clamp mounted switches may be placed to trip at differentials of as small as 1/2". See Figure 5

Rod mounting provides the best flexibility of switch positioning, and is also a requirement when a chamber is outfitted with an insulation blanket. Rod Mount switches can be positioned at a minimum distance of 1" apart on the same rod.

CRYOGENIC SWITCHES - These switches are mounted by threading into a special thermal insulating nipple. This Nipple mounting is installed on the PM-26 Gauge at a predetermined position. Once the chamber is insulated, the repositioning of the switch is not possible without removal of the insulation. See figure 3.

APPLICATIONS

Systems requiring proximity sensing.
Example: Activating alarms and solenoids, motor starters (with optional amplifying relay)

OPERATION

The ES-30EX consists of a form C Reed switch and a bias magnet. The reed switch uses precious metal contacts in an inert gas atmosphere sealed by a glass to metal bond. The bias magnet allows the switch to maintain contact after the activating magnetic field is removed. A magnetic PM26 float passing by the ES-30EX in either the upward or downward direction will cause the reed switch to change states. The reed switch will maintain that state until the float reverses direction and passes the switch going in the opposite direction. The action is break before make. See figure 6

ProMag LTD

BULLETIN 1002

ES30EX ELECTRIC PROXIMITY SWITCH

ES 30EX PART NUMBER EXAMPLE

SWITCH BASE MODEL NO.

ES-30EX - Standard Switch
 ES-30EXC- Cryogenic Switch

MOUNTING

C Clamp Mounted
 R Rod Mounted
 T Cryogenic (Threaded Mount)

ELECTRICAL HOOKUP

F Flying Leads
 T Terminal Strip
 A Amplifying Relay

HIGH TEMPERATURE PAD

X No Pad <200 °F
 P Hi Temp Pad >200 °F

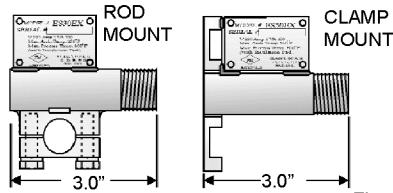
ES-30EX C F X

ES 30EX SPECIFICATIONS

SWITCH TYPE	Magnetically Activated Hermetically Sealed Magnetically Biased, Bistable Reed Switch
SWITCH ACTION	Break before Make
CONTACT MATERIAL	Rhodium
MAX SWITCHING VOLTAGE	250 VAC
MAX SWITCHING CURRENT	1 AMP
MAX SWITCHING VA	100 VA
MAX SWITCHING WATTS	30 Watts
MAX CURRENT	2 Amps - 10 Amps at 120 VAC with Amplifying Relay
MIN TEMPERATURE	-65°F (-53 °C) - (Cryogenic ES-30EXC)
MAX TEMPERATURE	300 °F (149°C) Consult Factory for Higher Temperature Applications.
HOUSING	Stainless Steel
	Explosion-Proof Class I, Div 1, Groups B, C, & D Class II, Div 1, Groups E, F, & G

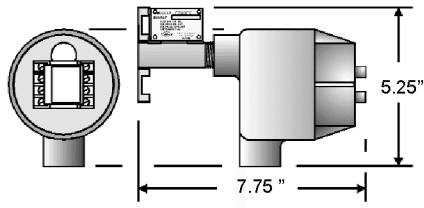


ES-30EX SWITCH MOUNTING

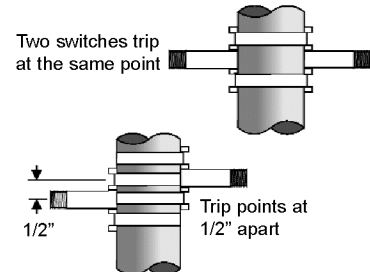


ES-30EX AMPLIFYING RELAY

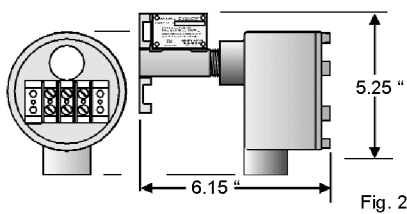
DPDT Contacts switch currents up to 10 Amps at 120 VAC.
 Relay coil are available in 12, 24, & 48 VDC, 24, 120 & 240 VAC
 Relay Housing suitable for CL I, Div 1, Groups B, C, D



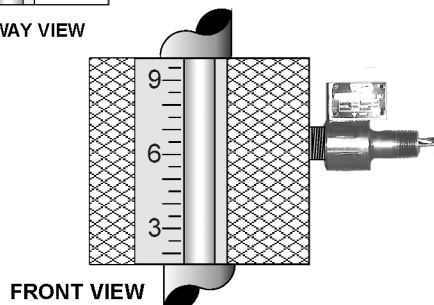
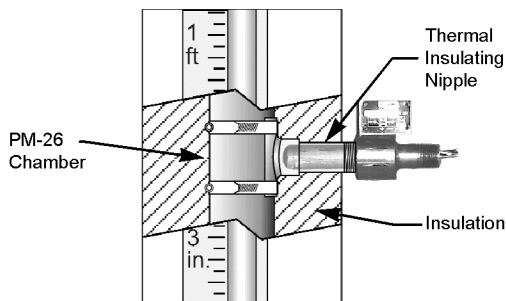
The ES-30EX switch can be placed at any angle around the circumference of the PM-26 Chamber. Using clamps as shown below, two switches may be mounted to trip at the same point, or to trip at different points separated by a minimum distance of 1/2"



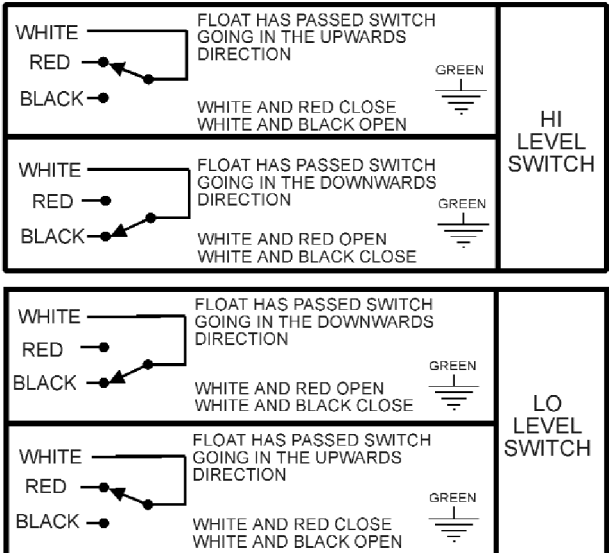
ES-30EX Terminal ("T" OPTION)



ES-30EXC CRYOGENIC MOUNTING



ES-30EX SWITCH SCHEMATIC DIAGRAM



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Fig. 3

Fig. 6