

# Crankcase Level Switch



## L971 Series

- Durable Low Level Switch
- Replaces Non-Explosion-proof Switch on Ingersoll-Rand Compressors
- Adaptable to Other Compressors
- Installs with Minimal Downtime
- Two Year Limited Warranty

### Description

The Murphy L971 Series Level Switch detects low oil level in a compressor's crankcase. As oil level in the crankcase depletes, the float on the L971 switch falls, and if reaches the predetermined limit, will trip the internal snap-switch which in turn will initiate a shutdown and/or alarm.

The L971 is designed for Ingersoll-Rand Type 30, Type 40 and ESH compressors, yet can be adapted to fit other compressors that have an inspection plate extending below normal operating oil level.

The L971 has a 1/2 NPT process connection and features an explosionproof enclosure, durable SPDT snap-switch and rigid polyurethane foam float. A 304 stainless steel float is available on certain configurations (see Specifications).

### Specifications

#### Operating Temperature Range:

-15 to 275°F (-26 to 135°C).

#### Maximum Working Pressure:

30 psi (206 kPa) [2.06 bar].

**Switch Rating:** 4 A @ 250 VAC.

#### Material

Case: *Aluminum (explosion-proof).*

Mounting Adaptor: *Brass.*

Floats: *Rigid polyurethane. 304 stainless steel available on L971-C only.*

Other Wetted Parts: *303, 304, and 316 stainless steel.*

O-Ring Seals: *Viton and Buna.*

**Process Connection:** 1/2 NPT.

**Enclosure Rating:** UL and CSA listed for Class I, Groups C & D; Class II, Groups F & G, Hazardous Locations.

**Conduit Connection:** 1/2 NPT.

**Wire:** 18 AWG (0.75 mm<sup>2</sup>).

**Shipping Weight:** 1 lb. 10 oz. (0.7 kg).

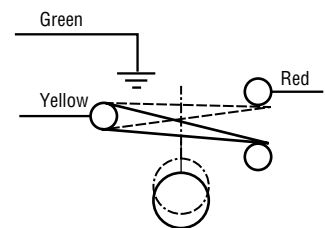
**Shipping Dimensions:** 8-1/4 x 4-1/4 x 4-1/2 in. (210 x 108 x 114 mm).

### Warranty

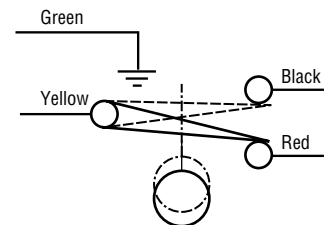
A limited warranty on materials and workmanship is given with this FW Murphy product. A copy of the warranty may be viewed or printed by going to [www.fwmurphy.com/support/warranty.htm](http://www.fwmurphy.com/support/warranty.htm).

### Wiring Diagrams\*

#### Model L971-A



#### All Other Models



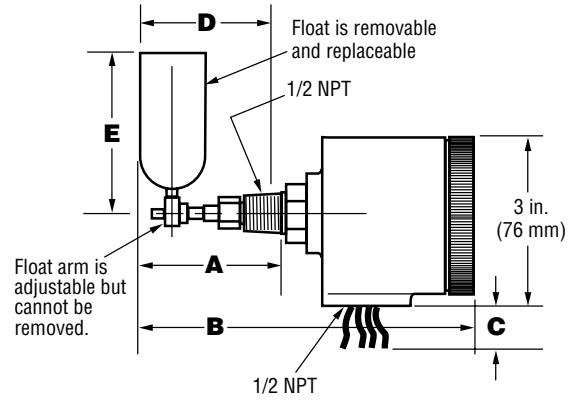
\*Shown in "shelf" position with no force acting upon float.

\*\*Products covered by this bulletin comply with EMC Council directive 89/336/EEC regarding electromagnetic compatibility except as noted.

# Dimensions

| Models | Dimensions in inches* (see drawing right) |              |           |             |              |
|--------|---|--------------|-----------|-------------|--------------|
|        | A   | B            | C         | D           | E            |
| L971   | 2-5/8 (67)                                | 5-7/8 (149)  | 30 (762)  | 2-1/2 (64)  | 2-27/32 (72) |
| L971-A | 2-5/8 (67)                                | 5-7/8 (149)  | 30 (762)  | 2-1/2 (64)  | 2-27/32 (72) |
| L971-B | 4-13/16 (122)                             | 8-1/16 (205) | 30 (762)  | 4-5/8 (117) | 2-27/32 (72) |
| L971-C | 2-13/16 (71)                              | 6-1/16 (154) | 30 (762)  | 2-7/8 (73)  | 3-1/8 (79)   |
| L971-D | 3-7/8 (98)                                | 7-1/8 (181)  | 30 (762)  | 3-3/4 (95)  | 2-27/32 (72) |
| L971-E | 4-13/16 (122)                             | 8-1/16 (205) | 30 (762)  | 5-1/8 (130) | 2-27/32 (72) |
| L971-F | 2-5/8 (67)                                | 5-7/8 (149)  | 40 (1016) | 2-1/2 (64)  | 2-27/32 (72) |
| L971-G | 2-5/8 (67)                                | 5-7/8 (149)  | 40 (1016) | 2-1/2 (64)  | 2-27/32 (72) |

\*Millimeter dimensions are shown in parenthesis ().



## How to Order

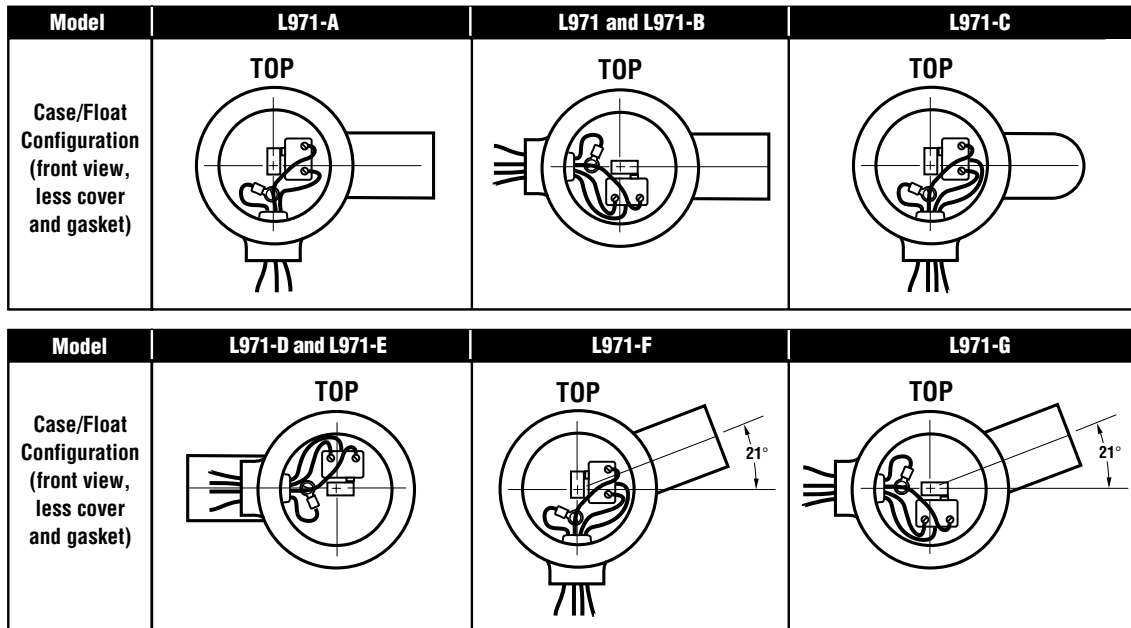
To order the L971 Series Level Switch to fit your application, use the diagram below.

Example model number: **L971-C**

L971 -

**Case/Float Configuration** (see chart below)

|                                |                     |
|--------------------------------|---------------------|
| Blank = Standard configuration | D = Configuration D |
| A = Configuration A            | E = Configuration E |
| B = Configuration B            | F = Configuration F |
| C = Configuration C            | G = Configuration G |



**NOTE:** Switches shown tripped on falling level.

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