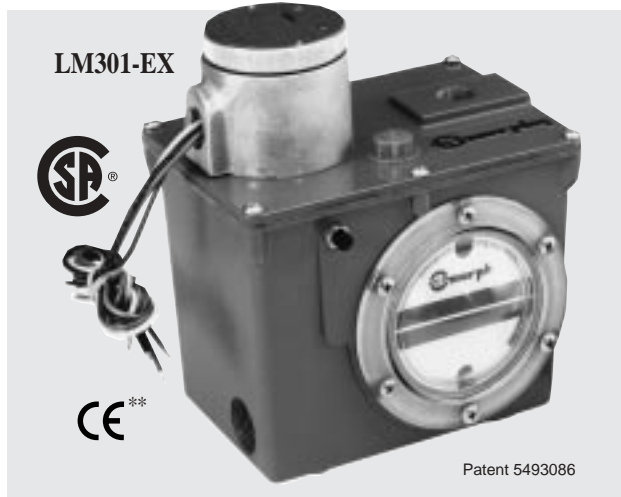


# Level Maintainer

LM-92149B  
Revised 03-02  
Catalog Section 15  
(00-02-0061)

**FWMurphy**



## LM300 Series

- Maintains proper lube level
- Shutdown on low level, or high and low level
- Low level alarm before shutdown
- Manual float switch test
- High visibility "Frog Eye" lens
- Optional pipe or universal mounting brackets
- Optional inlet orifices for low to high pressure applications
- Explosion-proof models available

### Description

The LM300 Series Level Maintainer automatically adds oil to the crankcase as needed to keep the lube level normal. Most models have built-in switches that will alarm and/or shutdown the equipment if the makeup supply is depleted and engine oil level falls or if overfill conditions exist. LM300 series explosion-proof models are CSA certified<sup>††</sup> for Class I, Division 1 Hazardous areas.

### Applications

- Engines
- Pumps
- Compressors
- Coolers

### Specifications

**Case/Cover:** Die cast aluminum.

**Switch Housing:** Aluminum.

**Approval Rating:** LM301 thru LM305 : CSA

certified<sup>††</sup> for non hazardous locations.

Enclosure Type 4 certified.

LM301-EX thru LM305-EX: CSA certified<sup>††</sup> for Class I, Groups C and D; Class II, Groups F and G hazardous locations. Enclosure Type 4 certified.

**Float:** Rigid polyurethane foam. Polyurethane coated.

**Max. Ambient Temperature:** 250°F (121°C)

**Oil Inlet Connection:** Top entry 1/2-14 NPT with built-in filter screen (removable for cleaning).

**Inlet Orifices:** 1/4 in. (6 mm) standard.  
1/8 in. (3 mm) available.

**Wire (switch models):** 18 AWG x 13 in.  
(1.0 mm<sup>2</sup> x 330 mm).

**Max. Inlet Pressure (MIP):**  
30 psi (207 kPa) [2.07 bar].  
with 1/8 in. (3 mm) orifice.  
15 ft oil (4.6 m oil)  
with 1/4 in. (6 mm) orifice.

**Max. Differential:** 2 in. (51 mm) between running and stationary oil level.

**Max. Case Pressure (MCP):**  
15 psi (103 kPa) [1.03 bar].

**Orifice Seal<sup>†</sup>:** Buna-N Thumb-Valve™

**Switch Contact:** Silver, SPDT snap acting, rated at 10 A @ 125, 250 VAC; 10 A @ 30 VDC.  
(1 only for low level; 2 only for high and low; or 2 only for low level with alarm before shutdown)

**Flow Rate Test:** Using SAE 30 @ 32°F (0°C).

Orifice Diameter	Pressure	Flow Rates
1/4 in.* (6 mm)	4 ft. oil – 15 ft. oil (1.2 m oil – 4.6 m oil)	4.7 GPH - 31.0 GPH (17.8 LPH - 117.3 LPH)
1/8 in. (3 mm)	10 psig – 30 psig (68.9 kPa – 207 kPa) [.69 – 2.07 bar]	16.9 GPH - 32.1 GPH (63.7 LPH - 121.5 LPH)

\*Standard

**NOTE:** Friction losses due to piping **NOT** considered.

**Outlet Connection:** 3/4-14 NPT left side, right side, and bottom.

**Crankcase Balance Vent Fitting:** 1/2-14 NPT.

**Mounting:** Accepts Murphy pipe mounting bracket or universal mounting bracket.

**Lens:** Clear "Frog Eye" non-staining, high impact, high temperature nylon; UV and heat stabilized.

**Dial:** High visibility white background with green and white "index" lines for normal level indication.

**Test Knob:** Rotate to test switch operation. Turn clockwise for low level test and turn counterclockwise for high level test.

### Optional Hose Kit: 15000355

Quantity	Description
1	1/2 in. (13 mm) I.D. x 3 ft. (914 mm) long hose
1	1 in. (25 mm) I.D. x 3 ft. (914 mm) long hose
2	1/2 in. (13 mm) worm gear clamp
2	1 in. (25 mm) worm gear clamp
2	1/2 NPT x 1/2 in. (13 mm) barbed fitting
2	3/4 NPT x 1 in. (25 mm) barbed fitting

### Base Models\*

**LM300:** Level Maintainer only (no switches).

**LM301:** Low switch contacts for low level shutdown or alarm. Four wires, SPDT.

**LM302:** Two switches for low and high level shutdown or alarm. Four wires, DPST, wired N.O. in normal operating ranges.

**LM303:** Two switches for low and high level shutdown or alarm. Four wires, DPST, wired N.C. in normal operating ranges.

**LM304:** Two switches. Alarm before shutdown on low level and shutdown on low-low level. Four wires, DPST, wired N.O. in normal operating ranges.

**LM305:** Two switches. Alarm before shutdown on low level and shutdown on low-low level. Four wires, DPST, wired N.C. in normal operating ranges.

\*Specify "EX" for explosion-proof enclosure. All models **except LM300** are available in an explosion-proof enclosure.

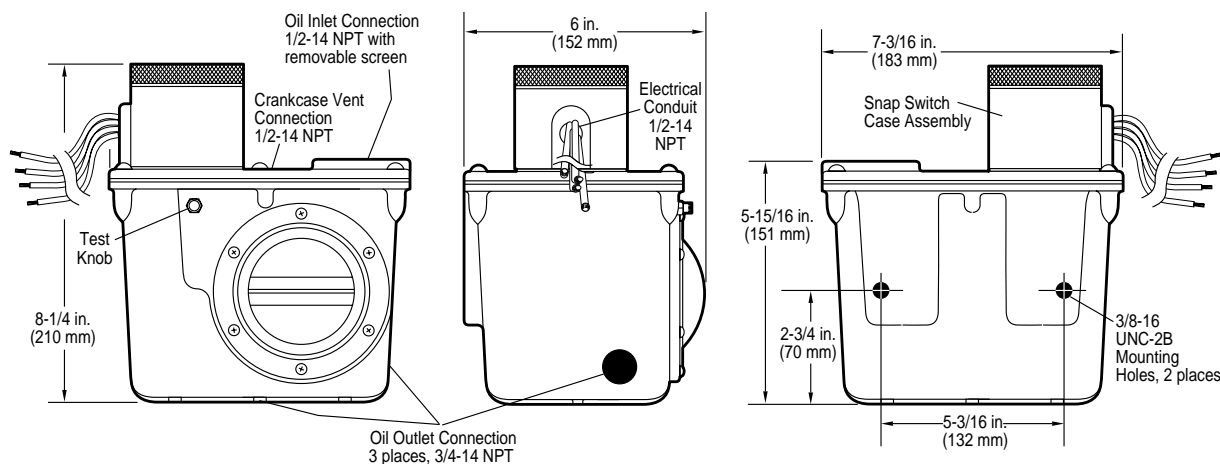
\*\*Products covered by this bulletin comply with EMC Council directive 89/336/EEC regarding electromagnetic compatibility except as noted.

††CSA certified with switch contacts rated at 10 A at 250 V AC (standard).

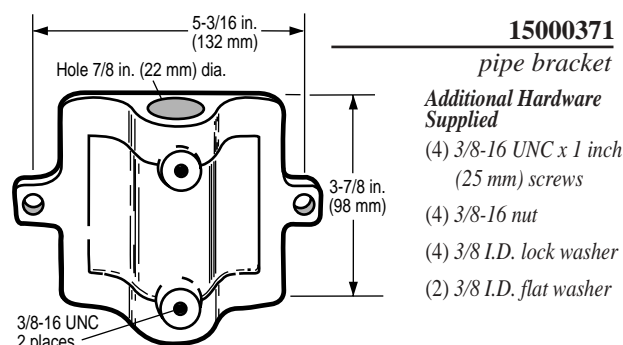


## Dimensions

The dimensions below are for the optional "EX" model enclosure. The standard model enclosure dimensions are the same except the height and width which are: 7 in. (178 mm) H, 7-7/8 in. (200 mm) W.



## Mounting Brackets with Hardware

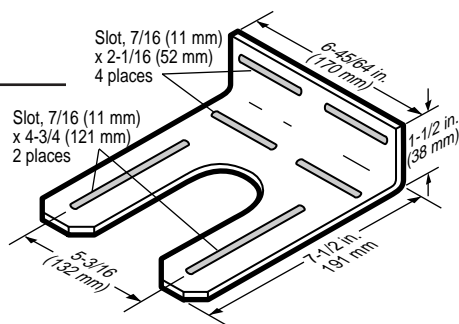


### 15000370

#### universal bracket

#### Additional Hardware Supplied

- (2) 3/8-16 UNC x 1 inch (25 mm) screws
- (4) 3/8 I.D. flat washer
- (2) 3/8 I.D. lock washer
- (2) 3/8-16 nut



## How to Order

Build a complete model number using the following chart. See example. See reverse page for standard and optional specifications.

### Example model number

**LM301 - EX - A**

**Enclosure**  
Blank: Non-Explosion-proof  
EX: Explosion-proof

**Orifices**  
Blank: 1/4 in. (6 mm)  
A: 1/8 in. (3 mm)

**Base Model: see reverse side for base model descriptions**

LM300 (NOT available in EX enclosure)  
LM301  
LM302  
LM303  
LM304  
LM305

### Hose Kit, Mounting Brackets and Lens assembly

Order as separate items:

15000371: pipe bracket kit  
15000370: universal bracket kit  
15000355: hose kit  
15000354: bubble lens assembly

## Shipping Information

### Shipping Weights:

- LM300 Series non-"EX" models: 6 lbs. 6 ozs. (2.89 kg)
- LM300 Series "EX" models: 6 lbs. 12 ozs. (3.06 kg)

### Shipping Dimensions (all LM300 Series models):

- 10-5/8 x 8-7/8 x 6-3/4 in. (270 x 225 x 171 mm)

## Warranty

A two-year limited warranty on materials and workmanship is given with this Murphy product. Details are available on request and are packed with each unit.



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