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# Level Maintainer – LM300 Series



LM301-EX

Patent 5493086



## Features

- 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

\*

†

\* Pending

† Products covered by this bulletin comply with Directive: 2004/108/EC (European Electromagnetic Compatibility). European Harmonised standard: EN 61000-6-3:2007 (Emissions). EN 61000-6-1:2005 (Immunity).

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† for Class I, Division 1 Hazardous areas.

## Applications

- Engines
- Compressors
- Pumps
- Coolers

## 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.

## Specifications

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

**Switch Housing:** Aluminum.

**Approval Rating:** LM301 thru LM305: CSA certified† for non hazardous locations. Enclosure Type 4 certified.  
LM301-EX thru LM305-EX: CSA certified† 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†:** 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)

**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.

**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.

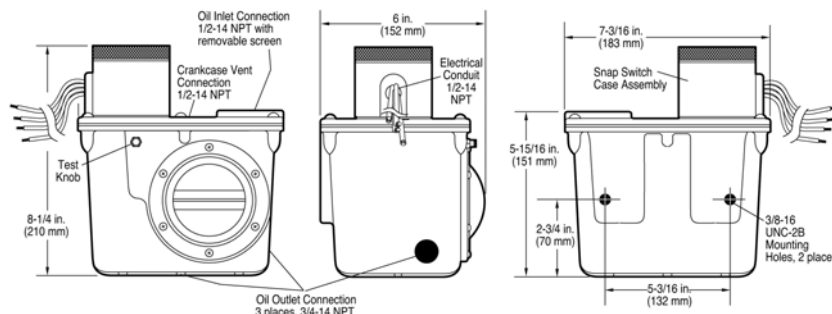
**Test Knob:** Rotate to test switch operation. Turn clockwise for low level test and turn counterclockwise for high level test.

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

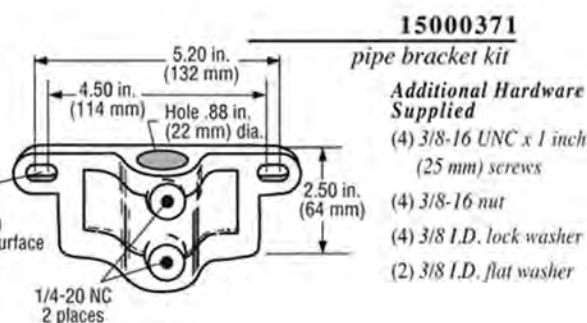
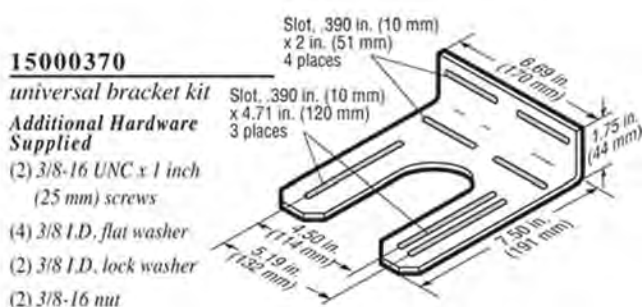
† Specify “EX” for explosion-proof enclosure. All models **except LM300** are available in an explosion-proof enclosure.

## 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.

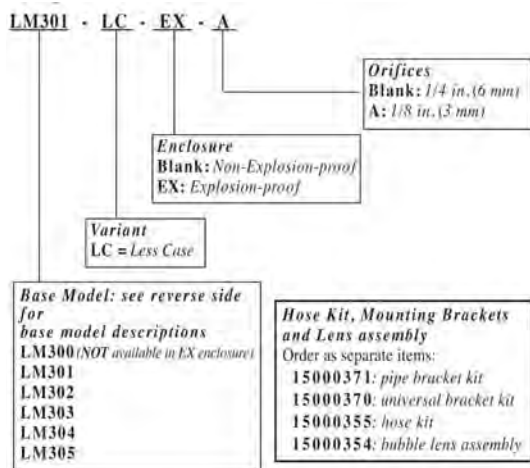


## Mounting Brackets with Hardware



## How to Order

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



## 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)

## 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

### FW MURPHY

5311 South 122nd East Avenue  
 Tulsa, Oklahoma 74146 USA  
 Phone: +1 918 317 4100 Fax: +1 918 317 4266  
 E-mail: sales@fwmurphy.com  
 Web: www.fwmurphy.com

### ECONROLS, INC

5757 Farinon Drive  
 San Antonio, Texas 78249 USA  
 Phone: +1 210 495 9772 Fax: +1 210 495 9791  
 E-mail: info@econcontrols.com  
 Web: www.econcontrols.com

### FWM INDUSTRIAL PANEL DIVISION

5311 South 122nd East Avenue  
 Tulsa, Oklahoma 74146 USA  
 Phone: +1 918 317 4100 Fax: +1 918 317 4124  
 E-mail: ipsales@fwmurphy.com  
 Web: www.fwmurphy.com

### FRANK W. MURPHY, LTD

Church Road, Laverstock  
 Salisbury SP1 1QZ UK  
 Phone: +44 1722 410055 Fax: +44 1722 410088  
 E-mail: sales@fwmurphy.co.uk  
 Web: www.fwmurphy.co.uk

### FW MURPHY INSTRUMENTS (HANGZHOU) CO. LTD

77 23rd Street  
 Hangzhou Economic & Technological Development Area  
 Hangzhou, Zhejiang 310018 China  
 Phone: +86 571 8788 6060 Fax: +86 571 8684 8878  
 E-mail: aps@fwmurphy.com  
 Web: www.fwmurphy.com/company\_ch

### FW MURPHY (LATIN AMERICA & CARIBBEAN)

Apdo. Postal 2-06, Admon. "Lomas" Cord. Arakan 606-16  
 Lomas 4th Sección 78211, San Luis Potosí, S.L.P., México  
 Phone: +1 918 317-2500  
 E-mail: lasales@fwmurphy.com  
 Web: www.fwmurphy.com

### FW MURPHY INDIA

301, 3rd Floor, Krsna Chambers  
 11, Galaxy Garden, North Main Road,  
 Koregaon Park, Pune - 411001, Maharashtra, India  
 Phone: +91 91581 37633  
 E-mail: indiasales@fwmurphy.com  
 Web: www.fwmurphy.com

### COMPUTRONIC CONTROLS

Phone: +44 1722 410055 Fax: +44 1722 410088  
 E-mail: sales@computroniccontrols.com  
 Web: www.computroniccontrols.com



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