

# Pressure Gage

## OPL Series 4-1/2 in. (114mm) Diameter Dial

The OPL Series pressure gage instruments are combination pressure indicating gages with adjustable low and high limit switches. Limit switches can be wired directly to electric pilot circuits to operate alarms, shutdown or the start/stop of engines and electric motors. Surface mount or panel mount enclosure is available for most versions. All versions feature a 4-1/2 in. (114 mm) dial for easy viewing. Adjustable limit switches are accessible from the front of the gage instrument. Limit contacts have self-cleaning motion to enhance electrical continuity.

Other versions available (details on next page):

- Gage only without contacts
- Gage instrument with built-in latching relay for start-stop operations.

### Specifications

**Case:** Die cast aluminum; Weatherproof

**Contact Ratings:**

OPLC & OPLFC - 1 SPDT; Center off; 2A, 30VDC / 1A, 125 VAC  
 OPLBP - SPDT dry relay contacts; 10A, 125 VAC

**Dial:** 4-1/2 in. (114 mm) white on black, dual scaled psi /kPa

**Gage Accuracy:** 2-1-2  $\pm 2\%$  for the first and last quarters of the scale, the middle half is  $\pm 1\%$

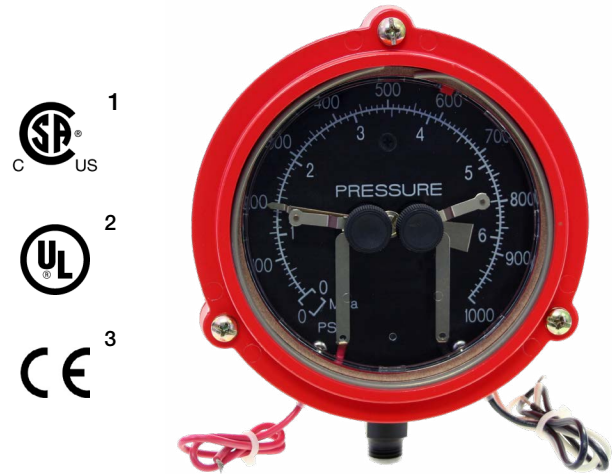
**Geared Movement:** 302 and 304 stainless steel

**Lens:** Optically clear polycarbonate

**Pointer:** High visibility with a pointer calibration hub

**Process Connection:** Available in 1/4 NPT and 1/2 NPT

**Sensing Element:** Select from bronze or 316 stainless steel bourdon tube.



- 1 Selected configurations are third-party listed. Consult factory for details.
- 2 Options not available on all models or configurations.
- 3 Products covered by this bulletin comply with EMC Council directive 89/336/EEC regarding electromagnetic compatibility as noted.



#### Product Selection Information

**WARNING:** Selection of the proper gage instrument should include consideration for the service application, the medium being measured, electrical ratings, hazardous area requirements and general operating conditions. Improper selection and/or application may be detrimental to the gage instrument and could cause failure in the operating system and possibly personal injury or property damage. If in doubt, consult our sales/engineering staff.

## Base Models

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### OPLC

The **OPLC** is a surface mount, indicating pressure gage and switch. Adjustable high and low limit, ungrounded contacts are used to operate alarm, shutdown or start-stop circuits. Pointer closure against either of the adjustable contacts completes the pilot-duty circuit. An SPST toggle switch is provided to override the low limit contact for equipment startup. Suitable for engines or electric motors with appropriate magnetic switch or transformer relay assembly.



### OPLFC and OPLFG

The **OPLFC** is a panel mounting version of the OPLC. It has all of the features of the OPLC except the low limit contact lockout. The lockout must be done externally through the control circuit. The OPLFC is typically used in control panels for compressors, pumps, etc. This version can be environmentally sealed with either the ES or OS options. Contact lead termination is by pigtail wires.

The **OPLFG** is an indicating only pressure gage instrument. Same as the OPLFC except without switch (limit) contacts.



### OPLBP

The **OPLBP** is a specialized version of the OPL series designed for start-stop operation of engines and electric motors. The pilot-duty limit switches are connected to an internal latching control relay for ON/OFF automation.



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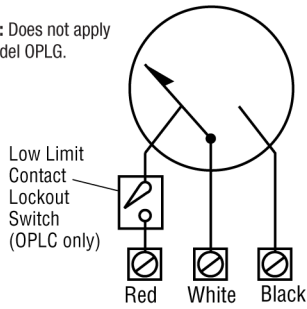
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# Electrical

## OPLC

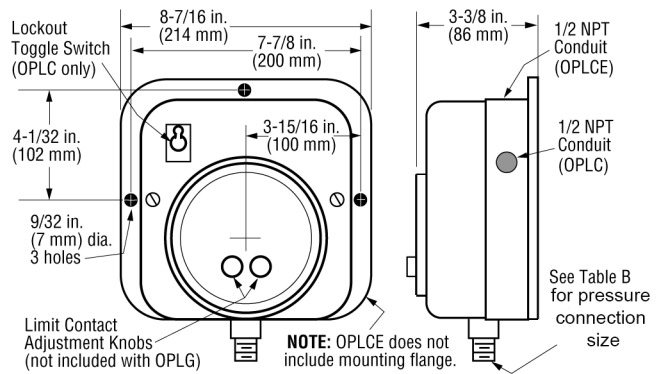
**NOTE:** Does not apply to model OPLG.



**Contact Rating:** 1 SPDT; Center off; 2 A, 30 VDC, 1 A, 125 VAC pilot duty

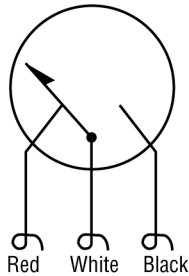
# Dimensions

## OPLC



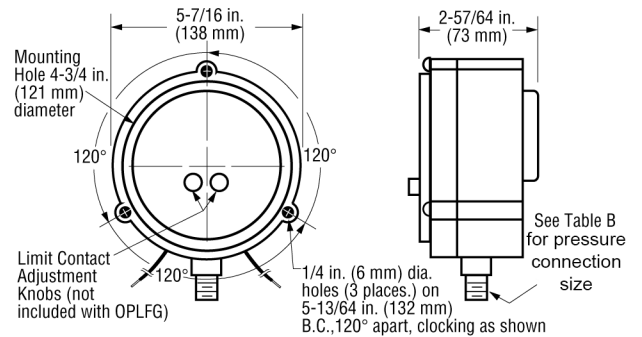
## OPLFC

**NOTE:** Does not apply to model OPLFG.

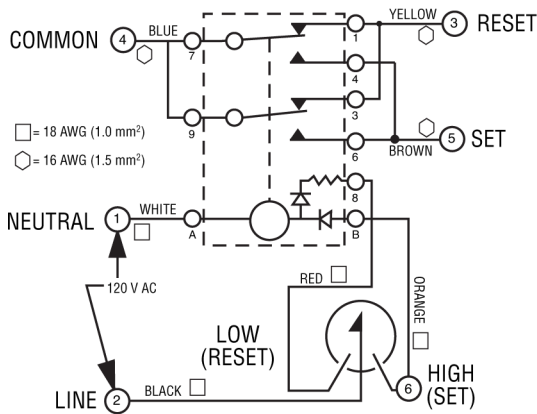


**Contact Rating:** 1 SPDT; Center off; 2 A, 30 VDC, 1 A, 125 VAC pilot duty

## OPLFC and OPLFG

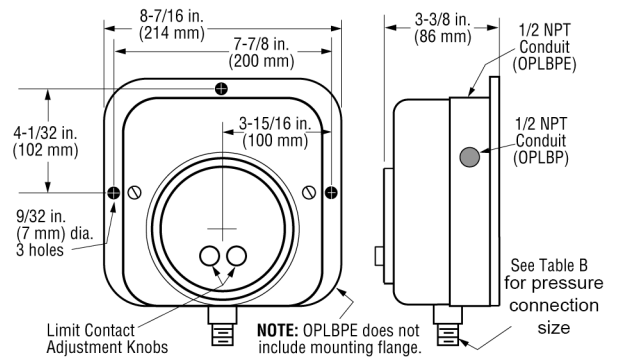


## OPLBP



**Contact Rating:** SPDT dry relay contacts; 10 A, 125 VAC.

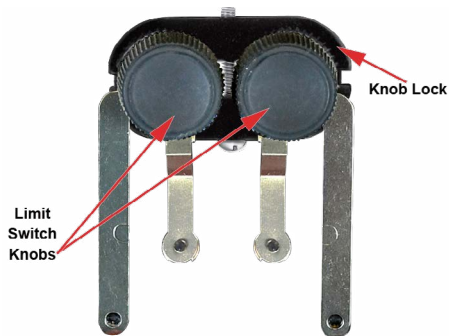
## OPLBP



# Options and Accessories

## Tamper-proof Contact Accessory

Part Number 05000610



## Pulsation Dampener

- Eliminate pointer contact flutter on pressure gage and instruments which are subject to pulsating pressure from reciprocating pumps or compressors.
- Allow close high-low contact settings for more accurate pressure indication and equipment control.
- Decrease wear on internal geared movement and increase the life of your instrument by eliminating excessive strain and unnecessary pointer movement.
- Available in brass, carbon steel and stainless steel.
- **Must be ordered separately.**



## How to Order

Options listed below. All configurations may not be available. Call your sales representative or FW Murphy for more information.

**OPLBP** - **S** - **1000** - **BC**

Base Models	
<b>OPLC</b>	= Gage, surface mount, with low limit lockout switch
<b>OPLFC</b>	= Gage, panel mount
<b>OPLBP*</b>	= Gage, surface mount, with latching control relay
<b>OPLFG</b>	= Gage, panel mount
*Model not covered by the CE mark	

Options	
Verify Option Availability, Not All Options Can Be Provided For Every Model.	
<b>BC</b>	= Back Connected Bourdon Tube
<b>ES</b>	= Environmentally Sealed
<b>EX</b>	= Explosion-Proof; gage enclosed with Explosion-Proof Case; Class I, Div.1, Groups C & D
<b>EL</b>	= (EXLC) Explosion-Proof Less Case
<b>OS</b>	= Oil-Sealed Case

Bourdon Tube and Socket Material/Size				
Code	Connection	Tube and Socket Material	Tube Type	Range Selection Limits
<b>A</b>	1/4 NPT	Grade A Phosphor Bronze Tube Brass Socket (Brass Tip, Silver Brazed)	C-Tube	Thru 1000 psi
<b>S</b>	1/4 NPT	316 Stainless Steel Tube and Socket	C-Tube	Thru 1000 psi
<b>S</b>	1/2 NPT	316 Stainless Steel Tube and Socket	Drawn Helical	1500-10000 psi

**NOTE: All Bourdon Tube and Tip Joints TIG Welded Except A**

Ranges	
Code	Vacuum/psi
<b>30V15</b>	= 30" vac-15 psi
<b>30V30</b>	= 30" vac-30 psi
<b>30V100</b>	= 30" vac-100 psi
<b>30</b>	= 0-30 psi
<b>60</b>	= 0-60 psi
<b>100</b>	= 0-100 psi
<b>160</b>	= 0-160 psi
<b>200</b>	= 0-200 psi
<b>300</b>	= 0-300 psi
<b>400</b>	= 0-400 psi
<b>600</b>	= 0-600 psi
<b>1,000</b>	= 0-1,000 psi
<b>1,500</b>	= 0-1,500 psi
<b>2,000</b>	= 0-2,000 psi
<b>3,000</b>	= 0-3,000 psi
<b>5,000</b>	= 0-5,000 psi
<b>10,000</b>	= 0-10,000 psi
<b>20,000</b>	= 0-20,000 psi (200 piece minimum)

BP Model: 120 VAC only

**Dials**  
All dials are dual scaled psi and kPa/MPa. Single scale dials and custom dials available. Additional charges may apply.

**Gages**  
All 4-1/2 inch (114 mm) gage instruments are available for Class I, Division 1, Groups C & D hazardous applications.

Division 2 locations can also be covered by our Non-Incendive or Intrinsically Safe systems. Contact FW Murphy representative for complete details.

Approximate Shipping Weight and Dimensions		
Model	Weight	Dimension
OPLC	5 lbs 9 oz (2.5 kg)	9-1/2 x 9-1/4 x 5-3/4 in. (241 x 235 x 146 mm)
OPLFC	3 lbs 4 oz (1.5 kg)	9-1/4 x 8-1/4 x 5-1/2 in. (235 x 210 x 140 mm)
OPLFG	3 lbs 4 oz (1.5 kg)	9-1/2 x 9-1/4 x 5-3/4 in. (241 x 235 x 146 mm)
OPLBP	5 LB 11 OZ (2.6 KG)	9-1/4 x 8-1/4 x 5-1/2 in. (235 x 210 x 140 mm)

Some options could alter shipping weights and dimensions. Consult factory.