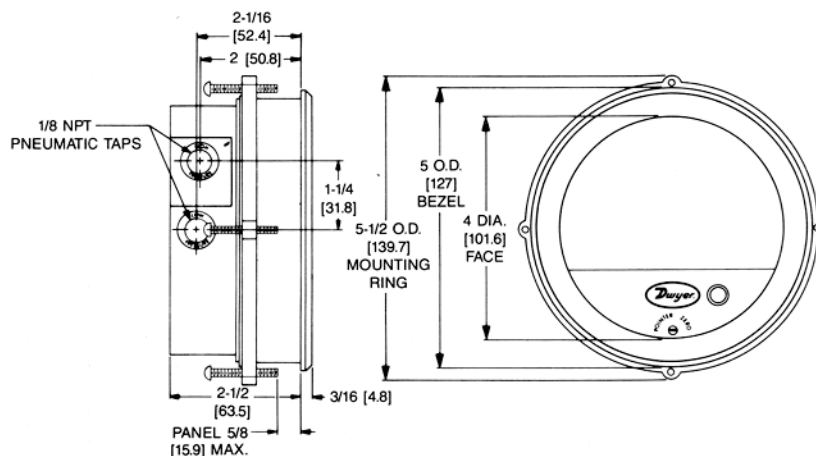




## SERIES 2000SP MAGNEHELIC® GAGE WITH LED SETPOINT INDICATOR

### Specifications - Installation and Operating Instructions



The Dwyer Series 2000SP Magnehelic® gage/setpoint indicator combines an analog differential pressure gage with a red LED to indicate when pressure reaches a field adjustable setting. The black pointer continually indicates applied pressure while the externally adjustable red pointer shows the pressure at which the indicating LED on the right side of the scale will illuminate.

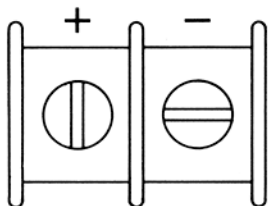
Switching action of the setpoint indicator occurs as a shield attached to the black indicating pointer either blocks or admits a stationary internal LED beam to a phototransistor fixed to the adjustable red pointer. Comparator circuitry then results in the final LED operation. Because of this photo-optical switching, gage operation is unaffected by setpoint indicator; wear and maintenance are practically eliminated.

### SPECIFICATIONS

<b>Maximum Pressure:</b>	25 PSIG (1.75kg/cm <sup>2</sup> ) Standard MP Option-35 PSIG (2.46kg/cm <sup>2</sup> ) HP Option-80 PSIG (5.62kg/cm <sup>2</sup> )
<b>Media Compatibility:</b>	Air and non-combustible, non-corrosive gases
<b>Accuracy:</b>	± 2% of full scale. 3% on -0, 4% on -00 ranges at 70°F (21.1°C)
<b>Operating Temperature:</b>	20-120°F (-6.7 to 49°C) with dry air
<b>Finish:</b>	Baked dark gray epoxy hammerloid
<b>Weight:</b>	1 lb., 10 oz. (0.74kg)
<b>Pressure Connections:</b>	1/8" NPT female high and low pressure taps, duplicated—one pair side and one pair back
<b>Power Supply:</b>	12-24 VDC, regulated
<b>Accessories:</b>	Mounting ring with snap ring (2) 1/8" NPT plugs (2) 3/16" tubing to 1/8" NPT adapters (3) 6-32 × 5/16" RH machine screws (surface mounting) (4) 6-32 × 1 1/4" RH machine screws (panel mounting)

**CAUTION:** DO NOT EXCEED SPECIFIED SUPPLY VOLTAGE RATINGS. PERMANENT DAMAGE NOT COVERED BY WARRANTY WILL RESULT. THIS UNIT IS NOT DESIGNED FOR AC LINE VOLTAGE OPERATION.

**Electrical Connections:** Connect an external regulated power supply delivering 12-24 VDC to the 2-screw terminal block on back of gage.



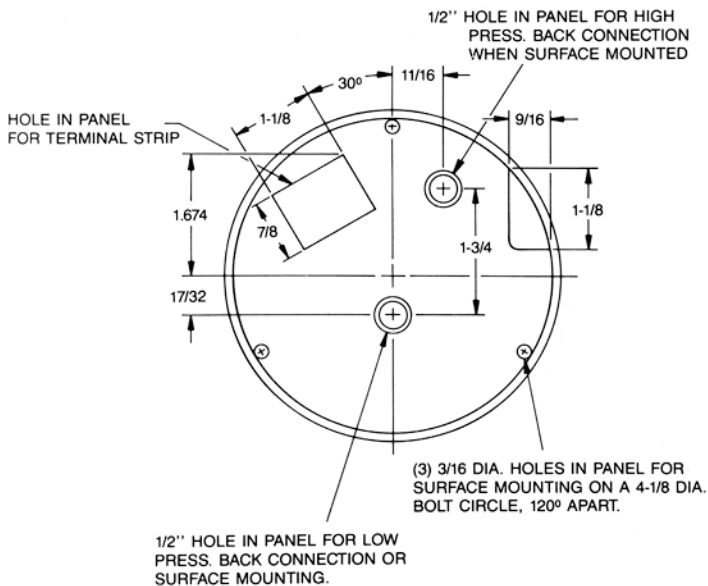
### INSTALLATION

**Location:** Select a clean, dry, vibration-free location where temperature will remain between 20 and 120°F (-6.7 and 49°C). Tubing supplying pressure can be practically any length required but long lengths will increase response time slightly.

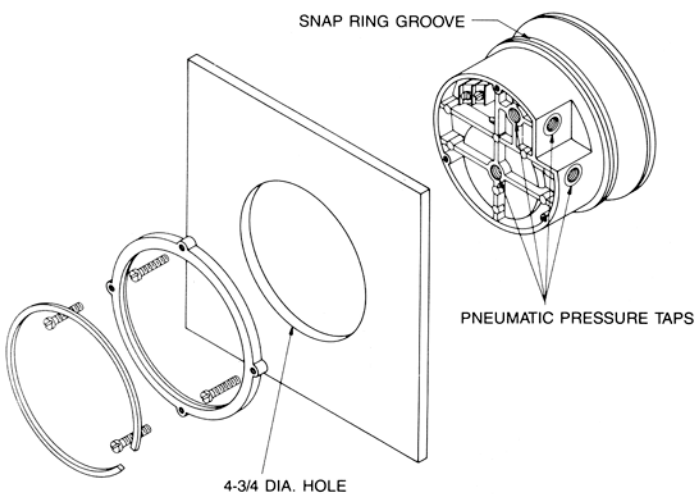
**Position:** All standard models are calibrated with the diaphragm, scale and front cover vertical and should be used in that position for best accuracy. If your application requires mounting in some other position, be sure to specify when ordering. Special calibration may be possible.

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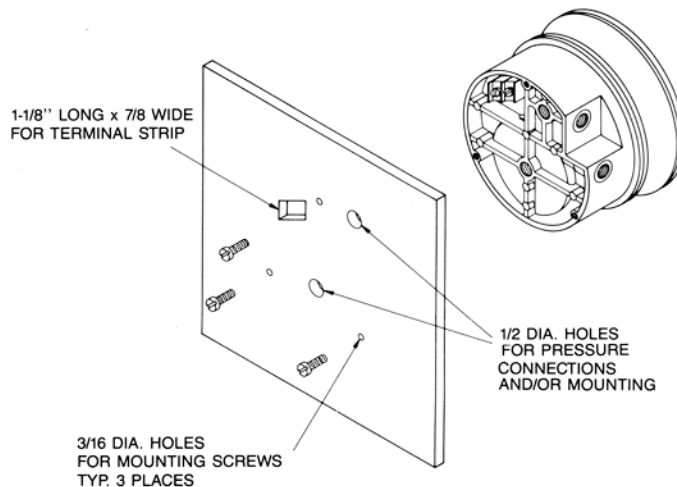
**Pressure Connections:** For installation flexibility, two sets of 1/8" NPT female ports are provided. The unused set must be sealed with the pipe plugs supplied. Attach tubing from positive pressure source to port marked HIGH PRESSURE or from negative (vacuum) source to port marked LOW PRESSURE. Remaining port must be left vented to atmosphere. In dusty environments install an optional A-331 Filter Vent Plug in the open port to keep interior of gage clean. For differential pressure connect higher pressure to HIGH PRESSURE port and lower pressure to LOW PRESSURE port.



**Panel Mounting:** Cut a 4-3/4" or 120mm diameter hole in panel and insert gage from front. Slip mounting ring on rear of unit with notched side facing backward. Seat snap ring in the groove on gage bezel. Thread four 6-32 x 1-1/4" machine screws into mounting ring. Slide mounting ring against snap ring and tighten screws against rear of panel.



**Surface Mounting:** Drill three 3/16" (4.76mm) diameter holes equally spaced on a 4-1/8" (104.8mm) diameter bolt circle. See hole location drawing. Cut a 7/8" x 1-1/8" (23 x 29mm) opening for terminal strip. If rear pressure connections will be used, also make two 1/2" (12.7mm) access holes. Insert screws from rear of panel and thread into tapped holes on back of Magnehelic gage.



**Zero Adjustment:** After the Magnehelic gage is in its final mounting position, check to be sure pointer exactly aligns with zero mark on scale. This should be done with no pressure applied and both ports vented to atmosphere. To adjust, turn small slotted screw near bottom of gage face.

**Setpoint Adjustment:** Use the black knob on front of gage to set the pressure at which the LED indicator will illuminate. Light will be ON when black pointer is to the right of red pointer.

**Maintenance:** No routine maintenance is required. The only adjustments are those for zero and setpoint as described above. If gage needs repair return it, freight prepaid, to the address below. Please include a brief explanation of the problem plus any application information available.

Dwyer Instruments, Inc.  
Attn: Repair Department  
55 Ward Street  
Wakarusa, IN 46573



**DWYER INSTRUMENTS, INC.**

P.O. Box 373, Michigan City, Indiana 46360, U.S.A.  
Phone: 219/879-8000 Fax: 219/872-9057