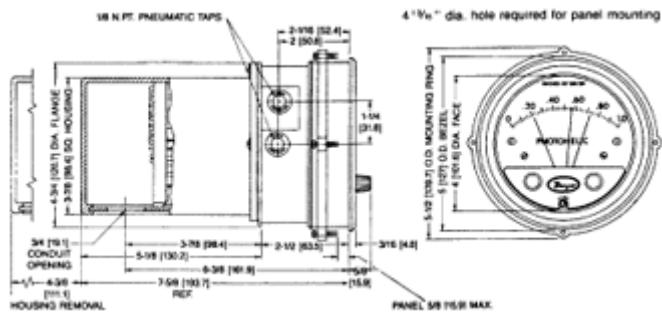


## Manômetros

**Series  
3000SGT**

# Photohelic® Pressure Switch/Gage with Integral Transmitter

**They're 4-in-one: 1. Indicating gage. 2. Low limit control.  
3. High limit control. 4. 4-20 mA transmitter. Indication  
accuracy 2%, switch repeatability 1%.**



The Series 3000SGT Photohelic® Switch/Gage/Transmitter combines several critical control functions into a single, easy-to-install package. This versatile instrument starts with the universally accepted standard for reliable low air pressure measurement, the Dwyer Magnehelic® Gage. It measures positive, negative or differential pressures within  $\pm 2\%$  of full scale accuracy. This time-proven component provides highly legible analog indication of air or compatible gas pressure on a 4", 80° scale. Gage operation is completely independent - functions normally even if power is interrupted to electrical elements of the control.

Next, two DPDT relays are added which serve as Low/High limit controls (or pressure switches) capable of handling up to 10 amps @ 24 VDC or 120 VAC directly. Individual setpoint deadband is one pointer width - less than 1% of full scale; just enough to assure positive, chatter-free operation. Integral holding coils enable user to connect the two so they work like a single control with variable deadband - ideal for applications such as clean room and building pressurization, HVAC systems, automatic air filter or level control and much more. Actuation points are fully adjustable over the entire pressure range with convenient front mounted knobs linked to bright red setpoint indicators.

Finally, the Photohelic® SGT includes a separate 4-20 mA, 2-wire transmitter operating from an external 12.3 - 35 VDC power supply. Separate adjustments are included for zero and span inside the rear electronics enclosure. Optional A-700 Power Supply is a perfect companion rated for AC inputs from 100-240V; DC outputs from 24 - 28V. The transmitter component is an ideal driver for variable speed blowers and fans, damper positioners and for continuous data logging on computerized VAV systems or strip chart recorders. Besides the obvious cost and space saving advantages of combining all these control functions in a single unit, think of the additional savings in time and material with just one set of pneumatic lines to connect instead of three or four.

### PHYSICAL DATA

**Ambient Temperature Range:** 20 to 120°F (6.7 to 49°C)

**Maximum Pressure:** 25 PSIG (1.7 bar); MP option - 35 psig (2.4 bar); HP option - 80 psig (5.5 bar)

**Accuracy:**  $\pm 2\%$  of full scale at 70°F (21.1°C)

**Pressure Connections:** 1/8" NPT female

**Case Finish:** Baked dark gray epoxy enamel

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Para honra e glória de IΧΩΣ



<b>Conduit Opening:</b>	3/4"
<b>Standard Accessories:</b>	(2) 3/16" tubing to 1/8" NPT brass adapters for rubber or vinyl tubing, (1) mounting ring, (1) snap ring, (4) 6 - 32 x 2" mounting screws, instructions
<b>Compatibility:</b>	Use only with air or other non-combustible, non-corrosive gases
<b>Weight:</b>	4 lbs., 12 oz. (2.15 KG)

### **ELECTRICAL SPECIFICATIONS (Switches)**

<b>Power Supply:</b>	117 VAC
<b>Current Consumption:</b>	5 watts average
<b>Contact Rating:</b>	10A @ 24 VDC or 120 VAC, 6A @ 240 VAC

### **ELECTRICAL SPECIFICATIONS (Transmitter)**

<b>Power Supply:</b>	12.3 to 35 VDC
<b>Output Signal:</b>	4-20 mA DC, 2-wire (limited at 38 mA)
<b>Loop Resistance:</b>	0 - 1135 ohms
<b>Current Consumption:</b>	38 mA DC, maximum
<b>Span and Zero Adjustment:</b>	Multi-turn potentiometers, internally accessible
<b>Thermal Errors:</b>	±1% per 50°F typical
<b>Warm-up Time:</b>	10 minutes

### **OPTIONS AND ACCESSORIES**

**Tamper-Proof Knobs:** Require special spanner-type key (included) to adjust set points. Add suffix **-TAMP**

**Low Temperature Option:** Special construction allows operations down to -20° (-28.9°C). Add suffix **-LT**

**MP and HP Options:** Increase rated pressure limit to 35 psig (MP) or 80 psig (HP): 2.4 or 5.5 bar. Add suffix **-MP** or **-HP**

**A-7000 Power Supply:** AC input: 100/120/230-240 VAC, 47-63Hz. DC output: 24-28 VDC regulated

### **SUGGESTED SPECIFICATIONS**

Differential pressure switches shall incorporate gages and switch setpoint indicators for continuous indication of applied pressure and switch settings. An integral 4-20 mA pressure transmitter shall be included, calibrated for the range of the pressure gage. Separate zero and span potentiometers shall be provided. Units shall be diaphragm operated with switching accomplished by phototransistor controlled DPDT relays. Setpoint adjustment shall be controlled by knobs on front of unit.

Switch/Gage/Transmitter shall be Dwyer Instruments, Inc., Photohelic® Catalog Number. \_\_\_\_ reading to \_\_\_\_ (in. w.c.)(Pa)(kPa) in \_\_\_\_ minor divisions.

Model Number	Range, In. W.C.
3000SGT-0	0 - 0.5
3001SGT	0 - 1.0
3002SGT	0 - 2.0
3003SGT	0 - 3.0
3006SGT	0 - 6.0
3010SGT	0 - 10
3020SGT	0 - 20
3030SGT	0 - 30

Model Number	Range, Pascals
3000SGT - 250Pa	0 - 250
3000SGT - 500Pa	0 - 500

Model Number	Range, Kilopascals
3000SGT - 1.5kPa	0 - 1.5