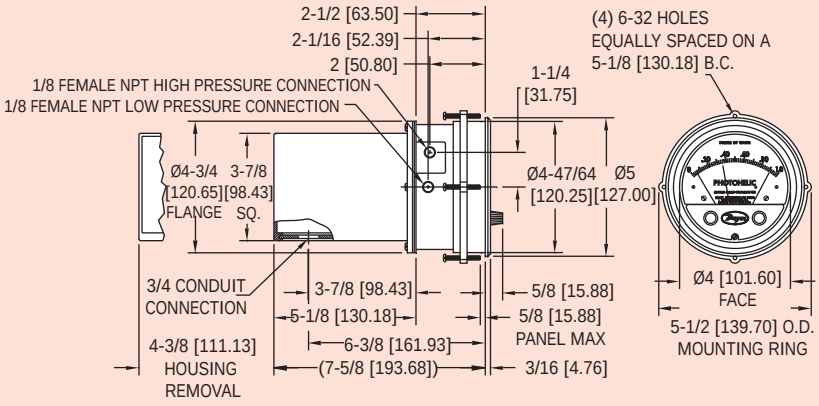
Series 3000SGT

Photohelic® Pressure Switch/Gage with Integral Transmitter

Indicating Gage, Low and High Limit Control, 4-20 mA Transmitter



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 ±2% of full scale accuracy. This time-proven component provides highly reliable 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 @ 28 VDC or 120/240 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 10.0 - 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.

OPTIONS & ACCESSORIES

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

Low Temperature Option — 0°F (-18°C). Add suffix **-LT**

A-700 Power Supply — AC input: 100/120/220/230-240 VAC ±10%, 47-63 Hz. DC output: 24-28 VDC regulated

A-298 Flat Aluminum Bracket, for flush mounting 3000SGT

SPECIFICATIONS

GAGE SPECIFICATIONS

Service: Air and non-combustible, compatible gases.
Wetted Materials: Consult factory.
Accuracy: See model chart below.
Pressure Limits: See model chart below.
Temperature Limits: 20 to 120°F (-6.67 to 48.9°C).
Process Connections: 1/8″ female NPT.
Size: 4″ (101.6 mm) dial face, 5″ (127 mm) O.D. x 8-1/4″ (209.55 mm).
Weight: 3 lb, 14.5 oz (1.77 kg).

SWITCH SPECIFICATIONS

Switch Type: Each set point has 2 Form C relays (DPDT).
Repeatability: ±1% of full scale.
Electrical Rating: 10A @ 24 VDC or 120 VAC, 6A @ 240 VAC.
Electrical Connections: Screw terminals.
Power Requirements: 120 VAC, ±10%.
Mounting Orientation: Diaphragm in vertical position. Consult factory for other position orientations.
Set Point Adjustment: Adjustable knobs on face.

TRANSMITTER SPECIFICATIONS

Accuracy: See model chart below.
Temperature Limits: 20 to 120°F. (-6.67 to 48.9°C).
Pressure Limits: See model chart below.
Thermal Effects: ±0.025% F.S./°F (0.045% F.S./°C).
Power Requirements: 10.0 to 35 VDC (2-wire).
Output Signal: 4-20 mA DC.
Zero & Span Adjustments: Multi-turn potentiometers, internally accessible.
Response Time: 250 mSec.
Loop Resistance: 0 - 1250 ohms.
Current Consumption: 38 mA DC, maximum.
Electrical Connections: Terminal block.
Warm-up Time: 10 minutes.

Model	Range, In. w.c.	Maximum Pressure	Electrical Accuracy +/-%	Mechanical Accuracy +/-%
3000SGT-0	0-0.5	25 psi (1.7 bar)	2	3
3001SGT	0-1.0	25 psi (1.7 bar)	2	2
3002SGT	0-2.0	5 psi (34.5 kPa)	0.5	2
3003SGT	0-3.0	5 psi (34.5 kPa)	0.5	2
3006SGT	0-6.0	5 psi (34.5 kPa)	0.5	2
3010SGT	0-10	5 psi (34.5 kPa)	0.5	2
3020SGT	0-20	10 psi (69 kPa)	0.5	2
3030SGT	0-30	10 psi (69 kPa)	0.5	2

Model	Range, Pascals	Maximum Pressure	Electrical Accuracy +/-%	Mechanical Accuracy +/-%
3000SGT-250PA	0-250	25 psi (1.7 bar)	2	2
3000SGT-500PA	0-500	5 psi (34.5 kPa)	0.5	2
Model	**Range, Kilopascal**			
3000SGT-1.5KPA	0-1.5	5 psi (34.5 kPa)	0.5	2