



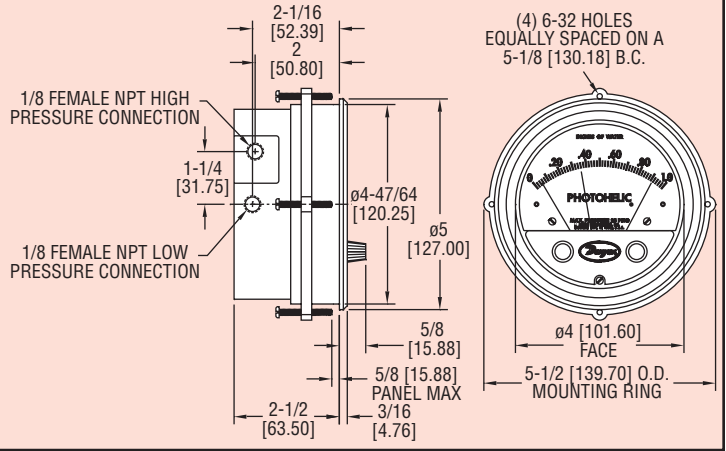
Series  
3000MR  
3000MRS

# Photohelic® Switch/Gages

Combines Differential Pressure Gage with Low/High Set-points



Differential Pressure  
Gages/Switches, Dial



Using solid state technology, the Series 3000MR and 3000MRS Photohelic® switch/gages combine the functions of a precise, highly repeatable differential pressure switch with a large easy-to-read analog pressure gage employing the durable, time-proven Magnehelic® gage design. Switch setting is easy to adjust with large external knobs on the gage face. Gage reading is unaffected by switch operation – will indicate accurately even if power is interrupted. Solid state design now results in greatly reduced size and weight. Units can be flush mounted in 4-13/16" (122 mm) hole or surface mounted with hardware supplied. 3000MR models employ versatile electromechanical relays with gold over silver contacts – ideal for dry circuits. For applications requiring high cycle rates, choose 3000MRS models with SPST (N.O.) solid state relays. All models provide both low and high limit control and include 18-inch (45 cm) cable assemblies for electrical connections. Gage accuracy is ±2% of full-scale and switch repeatability is ±1%. Switch deadband is one pointer width – less than 1% of full-scale. Compatible with air and other non-combustible, non-corrosive gases, they can be used in systems with pressures to 25 psig (1.725 bar). Optional construction is available for use to either 35 psig (2.42 bar) or 80 psig (5.51 bar).

**INCLUDED ACCESSORIES**

- Mounting ring, snap ring (4) 6-32 x 1-1/4" RH machine screws (panel mounting)
- 18" (45 cm) cable assembly (2) 3/16" tubing to 1/8" NPT adapters (3) 6-32 x 5/16" RH machine screws (surface mounting)
- (2) 1/8" NPT pipe plugs

**SPECIFICATIONS**

**GAGE SPECIFICATIONS**

- Service:** Air and non-combustible, compatible gases.
- Wetted Materials:** Consult factory.
- Accuracy:** ±2% of FS (3000-0 ±3% of FS). (3000-00 ±4% of FS).
- Pressure Limit:** -20" Hg. to 25 psig (-0.677 bar to 1.72 bar). MP option; 35 psig (2.41 bar), HP option; 80 psig (5.52 bar).
- Temperature Limits:** 20 to 120°F (-6.67 to 48.9°C).
- Process Connections:** 1/8" female NPT (duplicated side and back).
- Size:** 4" (101.6 mm) dial face, 5" (127 mm) OD x 3-1/8" (79.38 mm).
- Weight:** 1.8 lb (816 g).

**Power Requirements:** 24 VDC, regulated ±10%.

- Mounting Orientation:** Diaphragm in vertical position. Consult factory for other position orientations.
- Set Point Adjustment:** Adjustable knobs on face.
- Agency Approvals:** CE.

**SWITCH SPECIFICATIONS 3000MR**

- Switch Type:** Each setpoint has 1 form C relays (SPDT).
- Relay Contacts:** (Resistive load) 1 form C rated 1.0A @ 30 VDC, 0.3A @ 110 VDC or 0.5A @ 125 VAC. Gold over clad silver - suitable for dry circuits.
- Electrical Connections:** 18" (46 cm) cable assembly with 8 conductors. Optional lengths to 100' (30.5 m).

**SWITCH SPECIFICATIONS 3000MRS**

- Switch Type:** Each setpoint has a solid state relay.
- Switching Voltage:** 20-280 VAC (47-63 Hz).
- Switching Current:** 1.0 amp (AC) max., 0.01 mA (AC) min., (2) SPST NO.
- Electrical Connections:** 18" (46 cm) cable assembly with 6 conductors, optional lengths to 100' (30.5 m).
- Power Requirements:** 24 VDC, regulated ±10%.
- Mounting Orientation:** Diaphragm in vertical position. Consult factory for other position orientations.
- Set Point Adjustment:** Adjustable knobs on face.
- Agency Approvals:** CE.

**Series 3000MR, 3000MRS Photohelic®**

Model	Range, in w.c.	Minor Divs.	Model	Range, kPa	Minor Divs.
3000(MR)(MRS)**-00	0-0.25	.005	3000(MR)(MRS)-1KPA	0-1.0	.02
3000(MR)(MRS)*-0	0-0.5	.01	3000(MR)(MRS)-3KPA	0-3.0	.10
3001(MR)(MRS)	0-1.0	.02	3000(MR)(MRS)-4KPA	0-4.0	.10
3002(MR)(MRS)	0-2.0	.05			
3003(MR)(MRS)	0-3.0	.10	<b>Model</b>	<b>Range, mm w.c.</b>	<b>Minor Divs.</b>
3005(MR)(MRS)	0-5.0	.10	3000(MR)(MRS)-6MM*	0-6	.20
3010(MR)(MRS)	0-10	.20	3000(MR)(MRS)-10MM	0-10	.50
3015(MR)(MRS)	0-15	.50	3000(MR)(MRS)-25MM	0-25	.50
3020(MR)(MRS)	0-20	.50	3000(MR)(MRS)-50MM	0-50	1.0
3030(MR)(MRS)	0-30	1.0	3000(MR)(MRS)-100MM	0-100	2.0
3050(MR)(MRS)	0-50	1.0			
3100(MR)(MRS)	0-100	2.0	<b>Model</b>	<b>Range, cm w.c.</b>	<b>Minor Divs.</b>
			3000(MR)(MRS)-20CM	0-20	.50
<b>Model</b>	<b>Range, Pascals</b>	<b>Minor Divs.</b>	When ordering, select either MR or MRS suffix to Series 3000 number. Examples: 3001MR or 3001MRS		
3000(MR)(MRS)-60PA*	0-60	2.0			
3000(MR)(MRS)-125PA	0-125	5.0			
3000(MR)(MRS)-250PA	0-250	5.0			
3000(MR)(MRS)-500PA	0-500	10.0			

\* ±3% of full scale. \*\* ±4% of full scale.

**OPTIONS & ACCESSORIES**

- Tamper-proof Knobs,** require spanner type key (supplied) to change setpoints. Add suffix **-TAMP**
- Low Temperature Option** for use under 20°F (-6.7°C). Add suffix **-LT**
- Medium Pressure** increases maximum rated pressure to 35 psig (2.41 bar). Add suffix **-MP**
- High Pressure** increases maximum rated pressure to 80 psig (5.5 bar). Add suffix **-HP**
- Weatherproof Housing Option.** Add Suffix **-WP**
- A-298, Flat Aluminum Bracket** for flush mounting 3000MR/MRS
- A-370, Mounting Bracket** flush mount 3000MR/MRS bracket. Bracket is then surface mounted. Steel with gray hammertone epoxy finish
- A-600, R/C Snubber** recommended for inductive loads like a solenoid or contactor
- NIST traceable calibration certificate,** add suffix **-NIST** to model numbers. Example: 3001MR-NIST.

See page 567 for process tubing options.