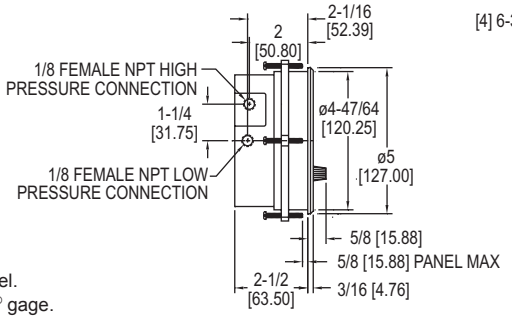
Dwyer

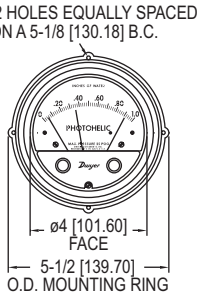
SERIES 3000MR & 3000MRS

PHOTOHELIC® SWITCH/GAGES

Combines Differential Pressure Gage with Low/High Set-Points, Compact Size

Note: Shown with optional -SS bezel.
Backward compatible+ with Magnehelic® gage.





Using solid state technology, the **Series 3000MR & 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 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.
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).

FEATURES/BENEFITS

- Gage reading unaffected by switch operation and will continue to read pressure even during power loss
- Zero and range adjustments outside of gage means no disassembly in normal service
- Solid-state design allows for switching in high cycle rate applications without degradation
- Optional stainless steel bezel is the same installation diameter as Magnehelic® gage and simplifies field upgrade to Photohelic® switch/gage

APPLICATIONS

- Pneumatic conveying
- Air conditioning systems
- Clean rooms

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); -SS bezel: 4-3/4″ (120.7 mm) OD x 2-21/32 (67.5 mm).
Weight: 1.8 lb (816 g).

SWITCH SPECIFICATIONS 3000MR
Switch Type: Each set point 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).
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 3000MRS
Switch Type: Each set point 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.

MODEL CHART

Model	Range, in w.c.	Minor Divs.	Model	Range, in w.c.	Minor Divs.
3000MR-00	0-0.25	.005	3000MRS-00**	0-0.25	.005
3000MR-0	0-0.5	.01	3000MRS-0*	0-0.5	.01
3001MR	0-1.0	.02	3001MRS	0-1.0	.02
3002MR	0-2.0	.05	3002MRS	0-2.0	.05
3003MR	0-3.0	.10	3003MRS	0-3.0	.10
3005MR	0-5.0	.10	3005MRS	0-5.0	.10
3010MR	0-10	.20	3010MRS	0-10	.20
3015MR	0-15	.50	3015MRS	0-15	.50
3020MR	0-20	.50	3020MRS	0-20	.50
3030MR	0-30	1.0	3030MRS	0-30	1.0
3050MR	0-50	1.0	3050MRS	0-50	1.0
3100MR	0-100	2.0	3100MRS	0-100	2.0
Model	**Range, Pascals**	**Minor Divs.**	**Model**	**Range, Pascals**	**Minor Divs.**
3000MR-60PA**	0-60	2.0	3000MRS-60PA**	0-60	2.0
3000MR-125PA*	0-125	5.0	3000MRS-125PA*	0-125	5.0
3000MR-250PA	0-250	5.0	3000MRS-250PA	0-250	5.0
3000MR-500PA	0-500	10.0	3000MRS-500PA	0-500	10.0
Model	**Range, kPa**	**Minor Divs.**	**Model**	**Range, kPa**	**Minor Divs.**
3000MR-1KPA	0-1.0	.02	3000MRS-1KPA	0-1.0	.02
3000MR-3KPA	0-3.0	.10	3000MRS-3KPA	0-3.0	.10
3000MR-4KPA	0-4.0	.10	3000MRS-4KPA	0-4.0	.10
Model	**Range, mm w.c.**	**Minor Divs.**	**Model**	**Range, mm w.c.**	**Minor Divs.**
3000MR-6MM**	0-6	.20	3000MRS-6MM**	0-6	.20
3000MR-10MM*	0-10	.50	3000MRS-10MM*	0-10	.50
3000MR-25MM	0-25	.50	3000MRS-25MM	0-25	.50
3000MR-50MM	0-50	1.0	3000MRS-50MM	0-50	1.0
3000MR-100MM	0-100	2.0	3000MRS-100MM	0-100	2.0
Model	**Range, cm w.c.**	**Minor Divs.**	**Model**	**Range, cm w.c.**	**Minor Divs.**
3000MR-20CM	0-20	.50	3000MRS-20CM	0-20	.50

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

Note: To order, select either MR or MRS suffix to Series 3000 number.
Examples: 3001MR or 3001MRS

ACCESSORIES

Model	Description
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

ACCESSORIES - STANDARD

Description

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

OPTIONS

To order add suffix:	Description
-SS	304 brushed stainless steel bezel. +Backward compatible with standard Magnehelic® gage installation diameter
Example: 3001MR-SS	
-TAMP	Tamper-proof knobs; require spanner key (supplied) to change set points
-LT	Low temperature option; for use under 20°F (-6.7°C)
-MP	Medium pressure; increases maximum rated pressure to 35 psig (2.41 bar)
-HP	High pressure; increases maximum rated pressure to 80 psig (5.5 bar)
-WP	Weatherproof housing option
-NIST	NIST traceable calibration certificate
Example: 3001MR-NIST	

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