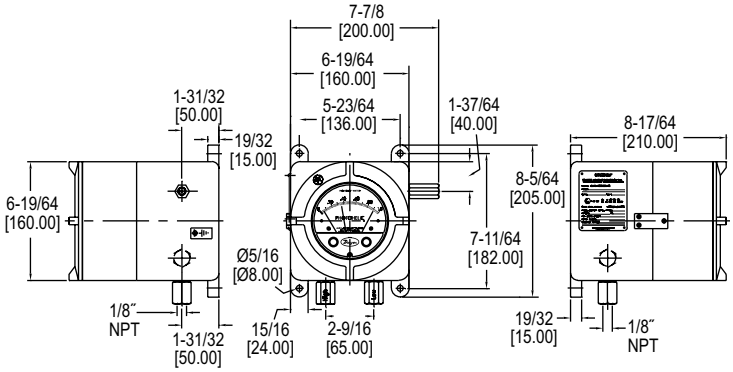
Dwyer

SERIES AT23000MR & AT23000MRS

ATEX APPROVED PHOTOHELIC® SWITCH/GAGES WITH 24 VDC POWER

3000MR or 3000MRS Series in Flame-Proof ATEX Enclosures



Using solid state technology, the **SERIES AT23000MR & AT23000MRS** ATEX Approved Photohelic® Switch/Gages combine the functions of a precise, highly repeatable differential pressure switch with a large easy-to-read analog pressure gage. Gage reading is unaffected by switch operation and will indicate accurately even if power is interrupted. AT23000MR series employ versatile electromechanical relays with low amperage ratings-ideal for dry circuits. For applications requiring high cycle rates, choose AT23000MRS models with SPST (NO) solid state relays. Easy to adjust set point indicators are controlled by knobs located on the gage face (accessible opening case after de-energizing instrument). All models provide both low and high limit control. 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). Flame-proof ATEX enclosures are available with glass window which allows for viewing of set point needles and process pressure. 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
- Flame-proof ATEX enclosure with optional glass window and aluminum housing protects the device in hazardous areas while giving local visibility to process pressure and set point status

APPLICATIONS

- Hazardous area pressure measurement and switching
- Pneumatic conveying
- Air conditioning systems
- Clean rooms
- Fume exhaust systems

Attention: Check local safety rules and warnings on unit and manual for a correct use of the instrument in hazardous area.

SPECIFICATIONS

Service: Air and non-combustible, compatible gases.
Wetted Materials: Consult factory.
Housing Material: Aluminum.
Finishing: Texture epoxy coat RAL7038.
Accuracy: ±2% of FS at 70°F (21.1°C). ±3% on -0, -60 Pa and ±4% on -00 models.
Pressure Limits: -20 in 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). Option LT low temperature to -20°F (28.8°C); Case: -76 to 140°F (-60 to 60°C). (**Note:** Product temperature limits differ from case).
Power Requirements: 24 VDC, regulated ±10%.
Electrical Wiring: Screw terminals.
Mounting Orientation: Diaphragm in vertical position.
Enclosure Rating: IP66. IP65 with option OPV, overpressure relief valve.
Process Connections: 1/8″ NPT female brass (SS optional). In presence of acetylene it is necessary to use SS.
Electrical Connections: Two 1/2″ NPT female. Cable gland not included.
Dial Size: 4″ (101.6 mm).
Set Point Adjustment: Adjustable knobs on face behind enclosure cover. Follow instructions and safety warnings to open cover.
Weight: 12.5 lb (5.7 kg).
ATEX Approved Products from Comhas with ECN: BVI 14ATEX0072.
Agency Approvals: CE 1370 Ex II2 GD Ex d IIC Gb T6; -60°C ≤ Ta ≤ +60°C Ex tb IIIC Db T 85°C.

SWITCH SPECIFICATIONS (3000MR)
Switch Type: Each setpoint has 1 Form C relay (SPDT).
Relay Contacts: (resistive load) 1 Form C rated 1.0 A @ 30 VDC, 0.3 A @ 110 VDC or 0.5 A @ 125 VAC. Gold over clad silver - suitable for dry circuits.

SWITCH SPECIFICATIONS (3000MRS)
Switch Type: Each setpoint has a solid state relay.
Switching Voltage: 20 to 280 VAC (47 to 63 Hz).
Switching Current: 1.0 amp (AC) max., 0.01 mA (AC) min., (2) SPST NO.

RANGE CHART

Model	Range in w.c.	Minor Divis.	Model	Range, Pa	Minor Divis.
3000-00	0 to 0.25	.005	**3000-60 Pa**	0 to 60	2.0
3000-0	0 to 0.5	.01	**3000-125 Pa**	0 to 125	5.0
3001	0 to 1.0	.02	**3000-250 Pa**	0 to 250	5.0
3002	0 to 2.0	.05	**3000-500 Pa**	0 to 500	10.0

MODEL CHART

Example	AT2	3001	MR	-X	X	X	-A	B	1	X	T2	AT23001MR-XXX-AB1XT2
Housing	AT2											ATEX Approved Series 3000 MR/MRS Photohelic® Switch/Gages
Range		3XXX										Specify range by using Photohelic® model number. See range cart.
Relay			MR MRS									Electromechanical relay Solid state relay
Pressure Rating				X MP HP								Standard -25 in Hg to 25 psig Medium pressure max. static 35 psig High pressure max. static 80 psig
Construction					X							Standard silicone construction
Temperature Rating						X LT						Standard temperature 20 to 120°F Low temperature to -20°F
Housing Material							A					Aluminum
Cover								B O				Blind Glass top cover
Process Connection									1 2			1/8″ NPT female brass ports 1/8″ NPT female SS ports
Overpressure Plug										X OPV		Standard without overpressure relief valve Overpressure relief valve Material same as ports
Tag											T2	SS information label

USA: California Proposition 65
⚠WARNING: Cancer and Reproductive Harm - www.P65Warnings.ca.gov