FEATURED PRODUCTS

DIFFERENTIAL PRESSURE TRANSMITTER

SERIES 629HLP | page 77

- Rugged, versatile, high accuracy device
- Compact, lightweight, capable to be installed in any arrangement making installation very simple

INDUSTRIAL PRESSURE TRANSMITTER

SERIES 626 & 628 | pages 102-103

- High precision transmitter ensures stability and control to meet the needs of the most demanding applications
- Wide selection of models, ranges, accuracy, connections, and outputs to meet exacting pressure measurement specifications

Dwyer

DIFFERENTIAL PRESSURE
Pressure Gages

			
SERIES	**2000** - pages 20-21	**DM-1000** - page 25	**2-5000** - pages 26-27
Ranges	-0.05 to 0.2 in w.c.(-10 to 50 Pa) up to 0 to 30 psi (0 to 30 kPa)	0.25 to 100 in w.c. (60 Pa to 24.88 kPa) (Bi-directional ranges available)	0.5 in w.c. to 5 psi (125 Pa to 3 kPa)
Service	Air and non-combustible, compatible gases	Air and non-combustible, compatible gases	Air and compatible gases
Wetted Materials	Consult factory	Consult factory	Consult factory
Housing	Die cast aluminum case and bezel	Glass filled plastic	Glass filled nylon
Lens	Clear acrylic	N/A	Clear acrylic
Accuracy	±2 to 4% FS for most models. ±1 to 2% FS with HA option	±1% FS (2% FS for ranges 1 in w.c. and below)	±5% FS
Pressure Limits	-20″ Hg to 15 psig (-0.677 bar to 1.034 bar); MP option: 35 psig (2.41 bar); HP option: 80 psig (5.52 bar).	2 psi (14 kPa) for ≤5 in w.c. 11 psi (75 kPa) for ≥10 in w.c.	30 psig (2.067 bar)
Temperature Limits	20 to 140°F (-6.67 to 60°C)	0 to 140°F (-18 to 60°C)	20 to 120°F (-6.67 to 48.9°C)
Process Connection	1/8″ female NPT duplicate high and low pressure taps	1/8″ (3 mm) ID tubing	Barbed for 3/16″ ID tubing or 1/8″ male NPT
Enclosure Rating	N/A	NEMA 4X (IP66)	N/A

DIFFERENTIAL PRESSURE
Bezels

				
SERIES	**2000-SS** - page 22	**2000-SB** - page 22	**2000-CB** - page 22	**DH3-SS/3000MR(S)-SS/ 605-SS** - pages 36, 42 & 64
Accessory	Bezel	Bezel	Bezel	Bezel
Material	304 brushed stainless steel	304 stainless steel	Chrome plated aluminum	304 brushed stainless steel
Dimensions	4-3/4″ (120.7 mm) OD	4-3/4″ (120.7 mm) OD	4-3/4″ (120.7 mm) OD	4-3/4″ (120.7 mm) OD
Aesthetics/Function	Tapered brushed/matte SS finish	Electro polished Ra 16	Chrome finish	Tapered brushed/matte SS finish
Part Sold Separately	Yes	Yes	Yes	Yes
Part Number	420141-40	420141-10	420141-00	815999-10

These Selection Guides are for quick comparison of similar products. Please refer to the catalog page number referenced for complete product information and specifications.

DIFFERENTIAL PRESSURE
Pressure Gages

			
SERIES	**4000** - page 31	**PTGD** - page 32	**PFG2** - page 33
Ranges	0 to 5 in w.c. up to 0 to 20 psid	5 to 150 psid (0.25 to 10 bar)	5 to 25 psid
Service	Air and compatible gases and oil based liquids	Compatible gases and liquids	Liquids/gases compatible with SS, GFN, and fluoropolymer
Wetted Materials	Consult factory	Aluminum or 316 SS piston; Buna-N, PTFE, or ceramic magnet seals	Aluminum mounting block
Housing	Die cast aluminum with impregnated hard coating	Aluminum or 316 SS	Glass filled nylon
Lens	N/A	Acrylic	Polyester
Accuracy	±3% FS (±2% or 4% for certain ranges)	±2% FS	±5% FS
Pressure Limits	-20″ Hg to 500 psig (-0.68 to 34.4 bar)	Aluminum: 3000 psi (206 bar); SS: 6000 psi (413 bar)	300 psig (20.7 bar)
Temperature Limits	20 to 200°F (-6.7 to 93.3°C)	N/A	200°F (93°C)
Process Connection	1/4″ female NPT duplicate high and low pressure taps	1/4″ female NPT	1/8″ female NPT
Enclosure Rating	N/A	N/A	N/A

DIFFERENTIAL PRESSURE
Accessories

				
SERIES	**AHU1/2** - page 22	**A-464** - page 23	**A-320-A** - page 23	**Scale Customization** - Consult Factory
Accessory	Surface mounting kit	Flush mounting kit	Enclosure	Customized logos/company name
Material	ABS plastic	White ABS plastic	ABS	Printed on aluminum scale
Dimensions	4-1/2″ x 4-1/2″	6-1/2″ x 6-1/2″	4-23/32″ x 3-37/64″ x 6-19/64″	As per customer requirement
Enclosure Rating	N/A	N/A	NEMA 1 (IP10)	N/A
Mounting Orientation	Surface	Flush	Wall	N/A
Aesthetics/Function	Quick Install accessory	Cleanroom mount	Quick install kit	Customize your application
Part Sold Separately	Yes	Yes	Yes	N/A
Part Number	A-607/A-607 with A-481	A-464	A-320-A	N/A

These Selection Guides are for quick comparison of similar products. Please refer to the catalog page number referenced for complete product information and specifications.

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DIFFERENTIAL PRESSURE
Pressure Gages/Switches

				
SERIES	**DHII** - page 34	**DH** - page 35	**DH3** - page 36	**A3000** - pages 38-39
Ranges	0.25 to 100 in w.c. (60 Pa to 24.88 kPa) (Bi-directional ranges available)	0.25 to 100 in w.c. (60 Pa to 24.88 kPa) (Bi-directional ranges available)	0.25 to 100 in w.c. (60 Pa to 24.88 kPa) (Bi-directional ranges available)	0 to 0.25 in w.c. (0 to 60 Pa) up to 0 to 150 in w.c. (0 to 30 kPa)
Service	Air and non-combustible, compatible gases	Air and non-combustible, compatible gases	Air and non-combustible, compatible gases	Air and non-combustible, compatible gases
Wetted Materials	Consult factory	Consult factory	Consult factory	Consult factory
Housing	Aluminum, glass	ABS plastic, UL approved 94 V-0	Die cast aluminum case and bezel	N/A
Switch Type	(2) SPDT	(2) SPDT	(2) SPDT	(2) DPDT
Accuracy	±0.5% FS	±0.5% FS	±0.5% FS (±1% or ±1.5 for certain ranges)	±2% FS (±3% or 4% for certain ranges)
Pressure Limits	2 psi (≤2.5 in w.c.); 5 psi (5 to 50 in w.c.); 9 psi (100 in w.c.)	2 psi (≤2.5 in w.c.); 5 psi (5 to 50 in w.c.); 9 psi (100 in w.c.)	2 psi (≤2.5 in w.c.); 5 psi (5 to 50 in w.c.); 9 psi (100 in w.c.)	-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	32 to 140°F (0 to 60°C)	32 to 140°F (0 to 60°C)	32 to 140°F (0 to 60°C)	20 to 120°F (-6.67 to 48.9°C)
Process Connection	1/8″ female NPT	Compression fitting for 1/8″ ID tubing or barbed fitting for 3/16″ ID tubing	1/8″ female NPT	1/8″ female NPT
Enclosure Rating	NEMA 4 (IP66)	NEMA 4X (IP66)	N/A	N/A

LOW DIFFERENTIAL PRESSURE
Pressure Switches

				
SERIES	**ADPS** - page 45	**EDPS** - page 45	**1800** - page 47	**1900** - page 49
Set Point Range	.08 to 20 in w.c. (20 to 5000 Pa)	.08 to 20 in w.c. (20 to 5000 Pa)	.07 to 85 in w.c. (.017 to 21 kPa)	.07 to 20 in w.c. (.017 to 5 kPa)
Service	Compatible gases	Compatible gases	Compatible gases	Compatible gases
Wetted Materials	Silicone, PA 6.6, and Polystyrene	Silicone, PA 6.6, and materials UL 94 V-0 rated	Consult factory	Consult factory
Temperature Limits	-4 to 185°F (-20 to 85°C)	-4 to 185°F (-20 to 85°C)	-30 to 180°F (-34 to 82°C)	-30 to 180°F (-34 to 82°C)
Pressure Limits	40 in w.c. (10 kPa)	40 in w.c. (10 kPa)	10 psig (69 kPa)	45 in w.c. (11.2 kPa)
Power Requirement	None	None	None	None
Repeatability	1%	1%	2%	3%
Adjustable Deadband	No	No	No	No
Set Point Indication	Yes	Yes	No	No
Enclosure Rating	GP	UL 94 V-0 rated	GP, WP, or EXP	GP, WP, or EXP
Switch Type	SPDT	SPDT	SPDT	SPDT
Multiple Stages	No	No	No	No
Process Connection	Hose connection for 5/16″ OD and 1/4″ ID tubing	Hose connection for 5/16″ OD and 1/4″ ID tubing	1/8″ female NPT	1/8″ female NPT

These Selection Guides are for quick comparison of similar products. Please refer to the catalog page number referenced for complete product information and specifications.

DIFFERENTIAL PRESSURE
Pressure Gages/Switches

				
SERIES	**43000** - page 41	**3000MR** - page 42	**3000MRS** - page 42	**MP** - page 44
Ranges	0 to 0.5 in w.c. up to 0 to 500 in w.c.	0 to 0.25 in w.c. (0 to 60 Pa) up to 0 to 100 in w.c. (0 to 4 kPa)	0 to 0.25 in w.c. (0 to 60 Pa) up to 0 to 100 in w.c. (0 to 4 kPa)	0 to 0.5 in w.c. (0 to 125 kPa) up to 0 to 20 in w.c. (0 to 3 kPa)
Service	Compatible gases and liquids	Air and non-combustible compatible gases	Air and non-combustible compatible gases	Air and non-combustible, compatible gases
Wetted Materials	Consult factory	Consult factory	Consult factory	Consult factory
Housing	N/A	N/A	N/A	N/A
Switch Type	(2) DPDT	SPDT	Solid state relay	(2) SPDT
Accuracy	±3% FS (±4% for certain ranges)	±2% FS (±3% or 4% for certain ranges)	±2% FS (±3% or 4% for certain ranges)	±5% FS
Pressure Limits	-20″ Hg to 500 psig (-0.677 bar to 34.5 bar)	-20″ Hg to 25 psig (-0.677 bar to 1.72 bar)	-20″ Hg to 25 psig (-0.677 bar to 1.72 bar)	30 psig (2.067 bar)
Temperature Limits	20 to 120°F (-6.67 to 48.9°C)	20 to 120°F (-6.67 to 48.9°C)	20 to 120°F (-6.67 to 48.9°C)	20 to 120°F (-6.67 to 49°C)
Process Connection	1/4″ female NPT	1/8″ female NPT	1/8″ female NPT	Barbed for 3/16″ ID tubing or 1/8″ male NPT
Enclosure Rating	N/A	N/A	N/A	N/A

LOW DIFFERENTIAL PRESSURE
Pressure Switches

				
SERIES	**MDS** - page 51	**MDA** - page 51	**1831** - page 52	**1640** - page 52
Set Point Range	.5 to 50 in w.c. (.12 to 12.5 kPa)	.1 to 100 in w.c. (.25 to 249.1 mbar)	2.5 to 23 in w.c. (.62 to 5.7 kPa)	.01 to 12 in w.c. (.003 to 3 kPa)
Service	Air or compatible fluids on “high side”	Air or compatible fluids on “high side”	Compatible gases	Compatible gases
Wetted Materials	Polycarbonate and polyurethane	Polycarbonate and polyurethane	Consult factory	Consult factory
Temperature Limits	40 to 150°F (4 to 66°C)	40 to 150°F (4 to 66°C)	-30 to 180°F (-34 to 82°C)	-30 to 110°F (-34 to 43°C)
Pressure Limits	15 psig (1 bar)	15 psig (1 bar)	10 psig (69 kPa)	10 psig (69 kPa)
Power Requirement	None	None	None	None
Repeatability	Consult factory	Consult factory	4%	Consult factory
Adjustable Deadband	No	No	No	No
Set Point Indication	No	No	No	Yes
Enclosure Rating	GP	GP	GP	GP, WP, or EXP
Switch Type	SPST NO	SPST NO	DPDT	SPDT
Multiple Stages	No	No	No	Yes
Process Connection	Hose barb for 1/8″-3/16″ ID tubing	Smooth port for 1/8″ ID tubing	1/8″ female NPT	1/8″ female NPT

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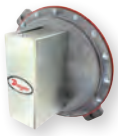
LOW DIFFERENTIAL PRESSURE
Pressure Switches

				
SERIES	**1620** - page 53	**1630** - page 53	**PG** - page 54	**1950** - page 55
Set Point Range	.15 to 24 in w.c. (.04 to 6 kPa)	.05 to 12 in w.c. (.012 to 3 kPa)	1 in w.c. to 5 psig (.25 kPa to 3.4 bar)	.03 to 20 in w.c. (.007 to 5 kPa)
Service	Compatible gases	Compatible gases	Compatible gases	Compatible gases
Wetted Materials	Consult factory	Consult factory	Fairprene, brass, steel, and aluminum	Consult factory
Temperature Limits	-30 to 130°F (-34 to 54°C)	-30 to 110°F (-34 to 43°C)	-10 to 180°F (-23 to 82°C)	-40 to 140°F (-40 to 60°C)
Pressure Limits	50 in w.c. (12.41 kPa)	10 psig (69 kPa)	Consult factory	45 in w.c. (11.2 kPa)
Power Requirement	None	None	None	None
Repeatability	1%	1%	1%	Consult factory
Adjustable Deadband	No	No	No	No
Set Point Indication	No	Yes	Yes	No
Enclosure Rating	GP and WP	GP and WP	GP, WP, or EXP	WP and EXP
Switch Type	(2) SPDT	SPDT	SPDT or DPDT	SPDT
Multiple Stages	Yes	No	No	No
Process Connection	1/8″ female NPT	1/8″ female NPT	1/8″ female and 1/2″ male NPT	1/8″ female NPT

LOW DIFFERENTIAL PRESSURE - NON-INDICATING
Pressure Transmitters and Transducers

			
SERIES	**616KD** - page 58	**668B/D** - page 60	**608** - page 74
Ranges	1 to 20 in w.c. (250 to 5000 Pa) to 5000 Pa (Bi-directional available)	.1 to 100 in w.c. (25 to 25000 Pa) (Bi-directional available)	0.1 to 25 in w.c. (25 to 6200 Pa) (Bi-directional available)
Accuracy	616KD-A: ±0.25% FS; 616KD-B: ±1% FS; 616KD-C: ±2% FS	±0.8% FS	±0.5% or ±0.25% FS
Wetted Materials	Consult factory	Consult factory	Consult factory
Comp. Temp. Limits	20 to 122°F (-6.67 to 50°C)	40 to 170°F (4.4 to 77°C)	0 to 160°F (-18 to 71°C)
Oper. Temp. Limits	0 to 140°F (-17.8 to 60°C)	0 to 170°F (-18 to 77°C)	-20 to 185°F (-28 to 85°C)
Output Signal	4 to 20 mA or field selectable 0 to 10/0 to 5/2 to 10/1 to 5 V	4 to 20 mA, 0 to 10 VDC, or 0 to 5 VDC	4 to 20 mA
Elec. Connection	Screw-type terminal block	Screw-type terminal block	Screw-type terminal block, Two 1/2″ female NPT conduit
Process Connection	Barbed for 1/8″ and 3/16″ ID rubber or vinyl tubing	3/16″ OD barbed brass for 1/8″ ID push-on tubing	1/4″ female NPT
Enclosure Rating	NEMA 1 (IP20)	UL 94 V-0 rated	NEMA 4X (IP66)

These Selection Guides are for quick comparison of similar products. Please refer to the catalog page number referenced for complete product information and specifications.

LOW DIFFERENTIAL PRESSURE
Pressure Switches

			
SERIES	**1950G** - page 55	**H3** - page 56	**DX** - page 57
Set Point Range	.07 to 20 in w.c. (.017 to 5 kPa)	180 in w.c. to 200 psid (0.5 to 13.5 bar)	2.5 to 75 psi (.17 to 5.2 bar)
Service	Compatible gases	Compatible liquids or gases	Compatible liquids or gases
Wetted Materials	Consult factory	Aluminum/Nitrile or SS/ Fluoroelastomer	Brass and fluoroelastomer
Temperature Limits	0 to 140°F (-18 to 60°C)	-4 to 220°F (-20 to 104°F)	30 to 140°F (-1 to 60°C)
Pressure Limits	45 in w.c. (11.2 kPa)	1500 psig (103 bar)	200 psig (13.8 bar)
Power Requirement	24 VDC, 120 or 240 VAC	None	None
Repeatability	Consult factory	Consult factory	2%
Adjustable Deadband	No	No	Yes
Set Point Indication	No	No	No
Enclosure Rating	WP and EXP	EP	WP
Switch Type	SPDT	SPDT or DPDT	SPDT
Multiple Stages	No	No	No
Process Connection	1/8″ female NPT	1/8″ female NPT	1/4″ female NPT

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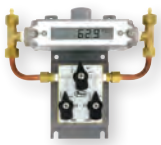
LOW DIFFERENTIAL PRESSURE – INDICATING

Pressure Transmitters and Transducers

			
SERIES	**616W** - page 62	**DM-2000** - page 63	**605** - page 64
Ranges	6 in w.c. to 2.5 kPa	.1 to 5 in w.c. (Bi-directional available)	Vacuum, .5 to 50 in w.c. (60 to 1500 Pa)
Accuracy	±0.25% FS, display accuracy ±0.5%	±1% FS	±0.5% or ±2% FS
Wetted Materials	Consult factory	Consult factory	Consult factory
Comp. Temp. Limits	N/A	N/A	32 to 120°F (0 to 48.9°C)
Oper. Temp. Limits	0 to 150°F (-17.8 to 66°C)	20 to 120°F (-7 to 49°C)	20 to 120°F (-6.67 to 48.9°C)
Output Signal	4-20 mA (2-wire), 0-5 VDC, or 0-10 VDC (3-wire)	4-20 mA	4-20 mA
Elec. Connection	3-wire terminal block for 16 to 26 AWG	Screw-type terminal block	Screw-type terminal block
Process Connection	Barbed for 1/8″ and 3/16″ ID rubber or vinyl tubing	1/8″ ID tubing	1/8″ female NPT
Enclosure Rating	NEMA 4X (IP66)	N/A	N/A

WET-WET DIFFERENTIAL PRESSURE

Pressure Transmitters and Transducers

				
SERIES	**3100** - pages 70-71	**636D** - page 75	**629C** - page 76	**629C-3V** - page 76
Ranges	6 in w.c. to 0-1000 psig	15 to 300 psi	5 to 500 psid (0.5 to 30 bar)	5 to 500 psid (0.5 to 30 bar)
Accuracy	±0.075% FS	±0.5% FS	±0.50% FS	±0.50% FS
Wetted Materials	316L SS	316L SS	316, 316L SS	316, 316L SS, Brass 360, Copper, Reinforced acetal copolymer
Comp. Temp. Limits	N/A	-20 to 180°F (-29 to 82°C)	0 to 175°F (-18 to 79°C)	0 to 175°F (-18 to 79°C)
Oper. Temp. Limits	-40 to 185°F (-40 to 85°C)	-40 to 212°F (-40 to 100°C)	0 to 200°F (-18 to 93°C)	0 to 200°F (-18 to 93°C)
Output Signal	4-20 mA or HART® Communication	4-20 mA or 1 to 5 VDC	2-wire: 4-20 mA; 3-wire: Selectable 0-5, 1-5, 0-10, or 2-10 VDC	2-wire: 4-20 mA; 3-wire: Selectable 0-5, 1-5, 0-10, or 2-10 VDC
Elec. Connection	(2) 1/2″ female NPT conduit, screw terminal	2′ (61 cm) cable, 3/4″ female NPT conduit	Screw-type removable terminal block; 1/2″ female NPT conduit	Screw-type removable terminal block; 1/2″ female NPT conduit
Process Connection	1/4″ female NPT	1/2″ female NPT	1/4″ female NPT	1/4″ female NPT
Enclosure Rating	NEMA 4X (IP66)	NEMA 4 (IP66)	NEMA 4X (IP66)	Non-LCD designed to meet NEMA 4X (IP66)

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These Selection Guides are for quick comparison of similar products. Please refer to the catalog page number referenced for complete product information and specifications.

LOW DIFFERENTIAL PRESSURE - INDICATING

Pressure Transmitters and Transducers

SERIES	MS2 - page 66	ISDP - page 69
Ranges	0.1 in w.c. to 28 in w.c. (25 Pa to 6975 Pa) (Bi-directional available)	0.1 to 100 in w.c. (Bi-directional available)
Accuracy	±1% or ±2% FS	±0.5% FS
Wetted Materials	Consult factory	Consult factory
Comp. Temp. Limits	N/A	32 to 140°F (0 to 60°C)
Oper. Temp. Limits	0 to 150°F (-18 to 66°C)	32 to 140°F (0 to 60°C)
Output Signal	4-20 mA (2-wire), 0-5 VDC, 0-10 VDC (3-wire)	4-20 mA DC
Elec. Connection	3-wire terminal block for 16 to 22 AWG	M-12 4-pin connector
Process Connection	3/16″ I.D. tubing (5 mm ID); Max OD 9 mm	1/8″ female NPT
Enclosure Rating	NEMA 4X (IP66)	NEMA 4X (IP66)

WET-WET DIFFERENTIAL PRESSURE

Pressure Transmitters and Transducers

SERIES	629HLP - page 77	647 - page 78	645 - page 79	WWDP - page 80
Ranges	15 to 90 psi (1 to 6 bar)	1 in w.c. to 0-30 psid (245 Pa to 0-2.0 bar)	1 to 100 psid (0.07 to 6.5 bar) (Bi-directional ranges available)	5 to 250 psi
Accuracy	±1% FS	±1% FS	±0.25% FS	±1% FS
Wetted Materials	304 SS	Brass, vinyl, glass-filled polyester, silicon, florosilicone	17-4 PH SS, Fluoroelastomer, Silicone	Consult factory
Comp. Temp. Limits	-5 to 60°C (23 to 140°F)	N/A	30 to 150°F (-1 to 65°C)	32 to 130°F (0 to 54°C)
Oper. Temp. Limits	-10 to 80°C (14 to 176°F)	32 to 122°F (0 to 50°C)	0 to 175°F (-18 to 80°C)	-4 to 185°F (-20 to 85°C)
Output Signal	4-20 mA, 0-10 VDC	4-20 mA	4-20 mA	Selectable 0-5, 0-10, and 0-5 VDC; 4-20 mA
Elec. Connection	Form A DIN 43650	Screw-type terminal block	Screw-type terminal block	1/2″ conduit
Process Connection	1/4″ female NPT, 1/4″ female BSPT	1/8″ female NPT	1/4″ female NPT	1/8″ female NPT internal
Enclosure Rating	IP65	N/A	NEMA 4X (IP66)	NEMA 4 (IP66)

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Dwyer

SINGLE PRESSURE
Pressure Gages

SERIES	LPG4/LPG5 - pages 81-82	SGY & SGZ - pages 83	765 - page 83
			
Ranges	-235 to 160 in w.c. (-60 to 40 kPa)	-30″ Hg to 1000 psi (-1 to 70 bar)	30″ Hg to 20,000 psi (-100 to 135,000 kPa)
Service	Compatible gases/liquids	Compatible gases/liquids	Compatible gases/liquids
Wetted Materials	Brass, bronze or SS	Brass, bronze or SS	316L SS, Bourdon tube
Housing	LPG4: Drawn Steel; LPG5: Chrome plated	304 SS	Phenolic plastic with safety blow-out back
Accuracy	LPG4 ±1.5% FS; LPG5 ±3%-2%-3% FS	±1.5 to ±2.5% FS	±0.5% FS ANSI/ASME (Grade 2A)
Pressure Limits	100% FS	100% FS	110 to 125% FS
Temperature Limits	Ambient: -40 to 140°F (-40 to 60°C); LPG5 -4 to 140°F (-20 to 60°C)	-4 to 140°F (-20 to 60°C)	-40 to 200°F (-40 to 93°C)
Process Connection	1/4″ male NPT	1/4″ male NPT	1/4″ or 1/2″ male NPT
Enclosure Rating	N/A	NEMA 3 (IP54)	IP65 (NEMA 4)

HIGH SINGLE PRESSURE - INDICATING
Pressure Transmitters and Transducers

SERIES	DSGT - page 87	EDA - page 89	626/628-CB - pages 102-103	IWP - page 105	3200G - pages 106-107
					
Ranges	30 to 20,000 psig and compound ranges	20 to 3000 psig	Up to 300 psia, 8000 psig, 16 bar abs, 550 bar	30 to 1000 psig	-14.5 psig to 8500 psig
Accuracy	±0.25% FS	±1% FS	626: ±0.25% FS; 628: ±1% FS	±0.5% FS	±0.075% FS
Wetted Materials	17-4 SS, 316 SS	316L SS	316, 316L SS	304 and 316 SS	316L SS
Comp. Temp. Limits	N/A	32 to 122°F (0 to 50°C)	0 to 175°F (0 to 79°C)	-22 to 203°F (-30 to 95°C)	N/A
Oper. Temp. Limits	14 to 140°F (-10 to 60°C)	20 to 140°F (-6.6 to 60°C)	0 to 200°F (0 to 94°C)	32 to 158°F (0 to 70°C)	-40 to 185°F (-40 to 85°C)
Output Signal	4-20 mA	4-20 mA, 1-6 VDC, 1-5 VDC, 0-5 VDC, or 0-10 VDC	4-20 mA	4-20 mA	4-20 mA or HART® Communication
Elec. Connection	3′ flying leads	Screw-type removable terminal blocks with (2) 1/2″ female NPT conduit connections	Terminal block, 1/2″ female NPT conduit	1/2″ female NPT	(2) 1/2″ female NPT conduit, screw terminal
Process Connection	1/2″ male NPT	1/4″ male NPT, 1/4″ male BSPT, or 7/16″ SAE	1/4″ male or female NPT or BSPT	1/2″ female NPT	1/2″ female NPT
Enclosure Rating	NEMA 4X	NEMA 4X (IP66)	NEMA 4X (IP66)	IP65	NEMA 4X (IP66)

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These Selection Guides are for quick comparison of similar products. Please refer to the catalog page number referenced for complete product information and specifications.

DIGITAL SINGLE PRESSURE
Pressure Gages

					
SERIES	**DPGA** - page 84	**DPGW** - page 84	**DPG-000** - page 85	**DPG-100** - page 85	**DPG-200** - page 87
Ranges	-30″ Hg to 500 psig (-1.013 to 34.47 bar)	-30″ Hg to 500 psig (-1.013 to 34.47 bar)	-14.7 to 8000 psig (-1.0 to 550 bar)	-14.7 to 8000 psig (-1.0 to 550 bar)	5 to 8000 psig (0.3 to 550 bar)
Service	Air and compatible gases	Compatible gases/liquids	Compatible liquids and combustible gases	Compatible liquids and combustible gases	Liquids and non-combustible compatible gases
Wetted Materials	316L SS, silicone sensor	316L SS	Type 316L SS	Type 316L SS	Type 316L SS
Housing	ABS plastic	ABS plastic	Polycarbonate front and back cover, anodized aluminum housing, polycarbonate overlay, Buna-N O-rings, 316L SS sensor construction	Polycarbonate front and back cover, anodized aluminum housing, polycarbonate overlay, Buna-N O-rings, 316L SS sensor construction	Polycarbonate front and back cover, anodized aluminum housing, polycarbonate overlay, Buna-N O-rings, 316L SS sensor construction
Accuracy	±1% FS	±1% FS	±0.5% FS	±0.25% FS	±0.25% FS
Pressure Limits	200% FS; 30 psig for vacuum models	200% FS; 30 psig for vacuum models	200% FS (≤1000 psi); 5000 psi (3000 psi); 7500 psi (5000 psi)	200% FS (≤1000 psi); 5000 psi (3000 psi); 7500 psi (5000 psi)	200% FS (≤1000 psi); 5000 psi (3000 psi); 7500 psi (5000 psi)
Temperature Limits	30 to 120°F (-1 to 49°C)	30 to 120°F (-1 to 49°C)	0 to 130°F (-18 to 55°C)	0 to 130°F (-18 to 55°C)	0 to 158°F (-18 to 70°C)
Process Connection	1/4″ male NPT	1/4″ male NPT	1/4″ male NPT	1/4″ male NPT	1/4″ male NPT
Enclosure Rating	N/A	N/A	NEMA 4/4X (IP66)	NEMA 4/4X (IP66)	NEMA 4X (IP66)

These Selection Guides are for quick comparison of similar products. Please refer to the catalog page number referenced for complete product information and specifications.

Dwyer

SINGLE PRESSURE
Pressure Switches

						
SERIES	**EDA** - page 89	**DA/DS** - pages 90	**SA1100** - page 92	**1000W/E** - page 93	**A1F** - page 94	**A1PS/A1VS** - page 95
Set Point Range	20 to 3000 psig (1.38 to 206 bar)	30″ Hg VAC to 8000 psig (762 mm Hg VAC to 551 bar)	10 to 500 psig (.7 to 34 bar)	5 to 1400 psig (.48 to 96.5 bar)	2 to 450 psig (.14 to 10.3 bar)	28″ Hg VAC to 500 psig (711 mm Hg VAC to 34.5 bar)
Service	Compatible liquids or gases	Compatible liquids or gases	Compatible liquids or gases	Compatible liquids or gases	Compatible liquids or gases	Compatible liquids or gases
Wetted Materials	316 SS	Brass, 403 SS, or 316 SS	Aluminum, brass, or 316 SS with Buna-N or fluorocarbon	Aluminum or 316 SS with polyamide, 316 SS, or Teflon®	Fluorocarbon and 316 SS	Zinc and Buna-N
Temperature Limits	20 to 140°F (-6.6 to 60°C)	-10 to 180°F (-23 to 82°C)	-30 to 180°F (-35 to 77°C)	-30 to 170°F (-35 to 77°C)	-40 to 175°F (-40 to 80°C)	-31 to 185°F (-35 to 85°C)
Pressure Limits	4500 psig (310 bar)	8000 psig (551 bar)	3000 psig (207 bar)	3000 psig (207 bar)	750 psig (51 bar)	600 psig (41 bar)
Power Requirement	12-30 VDC/AC	None	None	None	None	None
Repeatability	0.5%	1%	Consult factory	Consult factory	Consult factory	Consult factory
Adjustable Deadband	Yes	Yes	Yes	No	No	No
Set Point Indication	Yes	Yes	Yes	Yes	Yes	Yes
Enclosure Rating	WP	GP, WP, or EXP	WP and EXP	WP or EXP	GP or WP	GP
Switch Type	(2) SPDT	SPDT or DPDT	SPDT or DPDT	SPDT or DPDT	SPDT	SPDT
Multiple Stages	No	Yes	No	No	No	No
Process Connection	1/4″ male NPT	GP/WP: 1/4″ male NPT or 1/2″ male NPT; EXP: 1/2″ male NPT and 1/4″ female NPT	1/4″ or 1/2″ female NPT	1/4″ female NPT	1/4″ female and 1/2″ male NPT	1/4″ male NPT

Teflon® is a registered trademark of E.I. Dupont De Nemours and Company

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SINGLE PRESSURE
Pressure Switches

						
SERIES	**APS/AVS** - page 95	**A6** - page 96	**AP** - page 96	**A2** - page 97	**MVS** - page 97	**CXA** - page 98
Set Point Range	28″ Hg VAC to 500 psig (711 mm Hg VAC to 34.5 bar)	.5 to 150 psig (.03 to 10.3 bar)	10 in w.c. VAC to 125 psig (2.5 kPa VAC to 8.6 bar)	5 to 150 psig (.34 to 10 bar)	3 to 330 in w.c. VAC (8 to 822 mbar VAC)	15 to 150 psig (1.0 to 10.3 bar)
Service	Compatible liquids or gases	Compatible liquids or gases	Compatible liquids or gases	Compatible liquids or gases	Compatible liquids or gases	Compatible liquids or gases
Wetted Materials	17-4 PH SS and 303 SS	Polyimide with brass or 304 SS	Steel and Buna-N 04 316 SS and Teflon®	Kapton® and brass	Polycarbonate and polyurethane	Silicone, steel, and SS
Temperature Limits	-65 to 225°F (-54 to 107°C)	-40 to 248°F (-40 to 120°C)	-30 to 150°F (-35 to 66°C)	-40 to 250°F (-40 to 121°C)	40 to 150°F (4 to 66°C)	140°F (60°C)
Pressure Limits	750 psig (51 bar)	500 psig (34 bar)	160 psig (11 bar)	500 psig (34 bar)	330 in w.c. (822 mbar)	204 psig (14.1 bar)
Power Requirement	None	None	None	None	None	None
Repeatability	Consult factory	±10%	Consult factory	5%	20%	±5 psig (.3 bar)
Adjustable Deadband	No	No	No	No	No	Yes
Set Point Indication	Yes	No	Yes	No	No	No
Enclosure Rating	GP	GP or WP	GP, WP, or EXP	GP or submersible	GP	GP
Switch Type	SPDT	(1) SPST NO and (1) SPST NC	SPDT or DPDT	SPST	SPDT	SPST NO or NC
Multiple Stages	No	No	No	No	No	No
Process Connection	1/8″ mail NPT	1/4″ male NPT	1/4″ female NPT	1/8″ male NPT	Consult factory	1/4″ female NPT

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Dwyer

HIGH SINGLE PRESSURE - NON-INDICATING

Pressure Transmitters and Transducers

					
SERIES	**681** - page 98	**644** - page 99	**682** - page 100	**672** - page 100	**673** - page 101
Ranges	1 to 100 psi	Vacuum, 15 to 1000 psig	25 to 10,000 psi	10 to 400 in w.c.	Compound, 1 to 1000 psi
Accuracy	±0.20% FS	±0.05% FS	±0.13% FS	±0.25% FS	±0.25% FS
Wetted Materials	316L SS	17-4 PH SS	17-4 PH SS	318 Duplex SS, Ceramic, fluoroelastomer	17-4 PH SS
Comp. Temp. Limits	20 to 180°F (-7 to 80°C)	-4 to 140°F (-20 to 60°C)	-4 to 176°F (-20 to 80°C)	-5 to 140°F (-20 to 60°C)	4 to 212°F (-20 to 100°C)
Oper. Temp. Limits	-40 to 260°F (-40 to 125°C)	-40 to 185°F (-40 to 85°C)	-40 to 260°F (-40 to 125°C)	-40 to 212°F (-40 to 100°C)	-40 to 260°F (-40 to 125°C)
Output Signal	4-20 mA	0-10 VDC (4-wire) or 4-20 mA (2-wire)	4-20 mA	4-20 mA or 0-5 VDC	4-20 mA
Elec. Connection	15 ft (4.5 m) multi-conduit cable	3´ cable or 6-pin male bayonet connector	2 ft (61 cm) multi-conductor cable	Large DIN 43650 connector with mating plug	2 ft (61 cm) multi-conductor cable
Process Connection	1-1/2˝ or 2˝ sanitary clamp	1/4˝ male NPT	1/4˝ male or female NPT or BSPT	1/4˝-18 male NPT	1/4˝ male NPT
Enclosure Rating	NEMA 4X (IP66)	NEMA 4X (IP66)	NEMA 4X (IP66)	NEMA 4X (IP66)	NEMA 4X (IP66)

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HIGH SINGLE PRESSURE - NON-INDICATING

Pressure Transmitters and Transducers

					
SERIES	**638R** - page 99	**FDT** - page 101	**626/628-GH** - pages 102-103	**636** - page 104	**IS626** - page 110
Ranges	75 to 667 psia (5.2 to 46 bar(a))	100 to 10,000 psi (7 to 690 bar)	Up to 300 psia, 8000 psig, 16 bar abs, 550 bar	15 to 300 psi (1 to 20 bar)	15 to 8000 psig (1 to 550 bar); 15 to 30 psia (1 to 3 bara)
Accuracy	±1.2% FS	±0.5% FS	626: ±0.25% FS; 628: ±1% FS	±0.30% FS	±0.25% FS; 0.5% FS for absolute ranges
Wetted Materials	Brass, aluminum, or 316 SS	316 and 15-5 SS	316, 316L SS	316L SS	316 and 316L SS
Comp. Temp. Limits	-40 to 275°F (-40 to 135°C)	0 to 170°F (-18 to 77°C)	0 to 175°F (0 to 79°C)	-20 to 180°F (-29 to 82°C)	0 to 176°F (-18 to 80°C)
Oper. Temp. Limits	-40 to 275°F (-40 to 135°C)	-40 to 200°F (-40 to 93°C)	0 to 200°F (0 to 94°C)	-40 to 212°F (-40 to 100°C)	0 to 176°F (-18 to 80°C)
Output Signal	0.5-4.5 VDC ratiometric	4-20 mA or 0-5 VDC	4-20 mA	4-20 mA or 1-5 VDC	4-20 mA
Elec. Connection	Packard connection	4-pin	Cable, DIN connector, or 4-pin M12	2 ft (61 cm) cable, 3/4″ female NPT conduit	3´ cable or 4-pin M-12 connector
Process Connection	7/16″ 20 UNF (female) or 1/4″ NPT (female)	7/16-20 UNF male flush diaphragm; 1/4″ male NPT	1/4″ male or female NPT or BSPT	1/2″ female NPT	1/4″ male or female NPT or BSPT
Enclosure Rating	IP67	NEMA 4X (IP66)	NEMA 4X (IP66)	NEMA 4X (IP66)	NEMA 4X (IP66)

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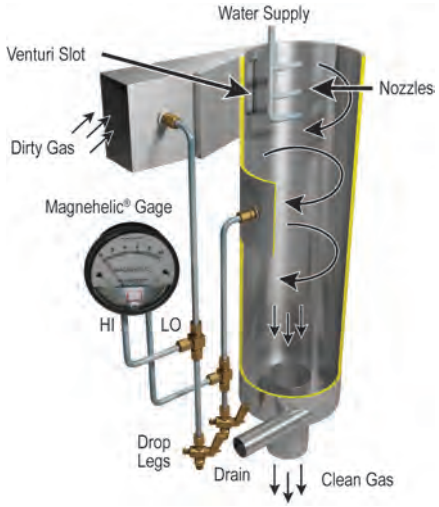
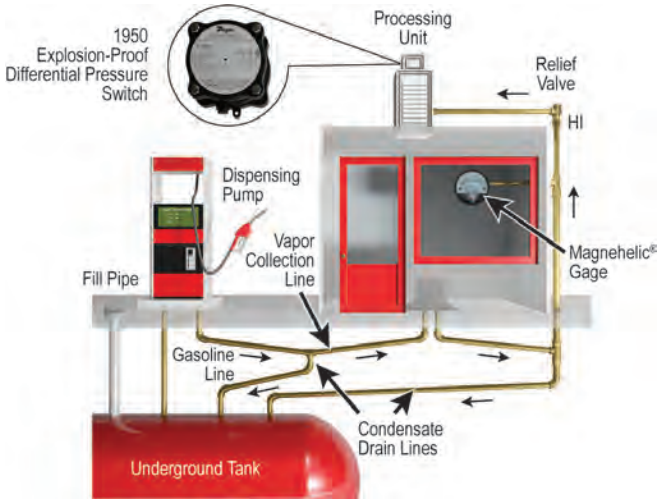


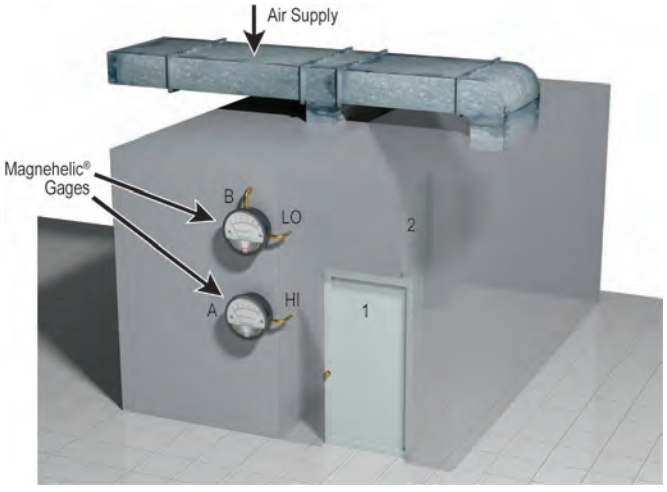
Differential pressure gage assists operator in adjusting venturi pressure drop in dust scrubber.

This scrubber design removes unwanted dust or particulate matter from air or gas using an adjustable throat venturi. To adjust the pressure drop across the venturi, a jack-screw-actuated sliding vane varies the slot width. A permanently mounted Dwyer® Magnehelic® differential pressure gage indicates the venturi pressure drop while the operator adjusts to the desired or design setting. Where water may possibly enter the gage sensing lines, as in this application, drop legs with drain valves are needed to permit draining the lines at their lowest point. Good engineering practice dictates that the Magnehelic® gage always be mounted above the sensing tap when possible to prevent moisture accumulation in the lines and gage. At minimum, mount the gage above the lowest point in the sensing lines.



Gasoline vapor recovery system.

Some area pollution control agencies require that 90% or more of gasoline vapor vented at service stations when fuel is dispensed must be prevented from venting to atmosphere. Using a dual hose dispenser, this vapor recovery system is a vacuum assist, vapor burnoff type. The blower creates a low vacuum at the nozzle, routing vapor from the automobile tank to underground storage tanks. As uncondensed vapor pressure reaches 2 in to 3 in w.c. pressure, a Dwyer® 1950 Series explosion-proof differential pressure switch activates a rooftop burnoff unit, which ignites excess vapor. The Magnehelic® differential pressure gage mounted on the station wall monitors tank pressure to verify system operation. The gage is calibrated in inches of gasoline, from +6 to -2. This allows the operator to determine the necessary level correction due to tank pressure prior to dipsticking the tanks through the fill pipe.

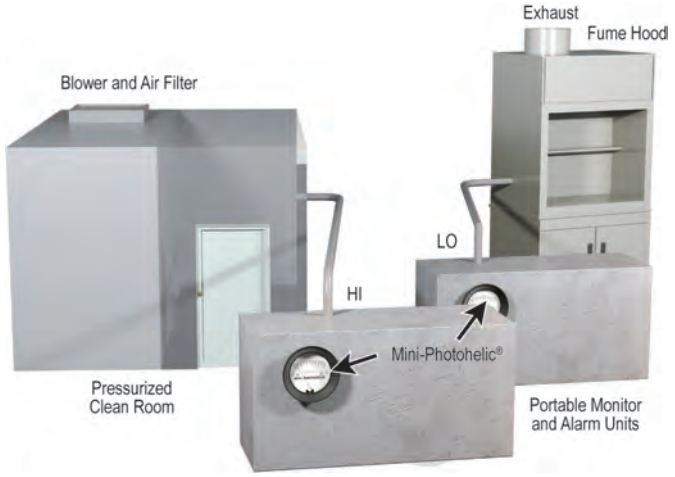


Dwyer® gages indicate pressurization of special rooms.

A zero-center Dwyer® Magnehelic® differential pressure gage with an 0.25 in w.c. range either side of zero makes an effective monitor for proper operation of room pressurization systems. In the example, differential gage B has its high pressure port open to room 2 and its low pressure port to room 1; gage A has its high pressure port open to room 1 and its low pressure port open to the atmosphere. With the makeup air supply damper adjusted properly, room 2 will be a higher pressure than room 1 which is at higher than atmospheric pressure; both gages will read positive. Should the air supply to room 2 be obstructed, gage B will read negative. If the air supply fails entirely, both gages will read zero. For even better security, a Photohelic® switch/gage will provide automatic alarm or start-up of a backup system.

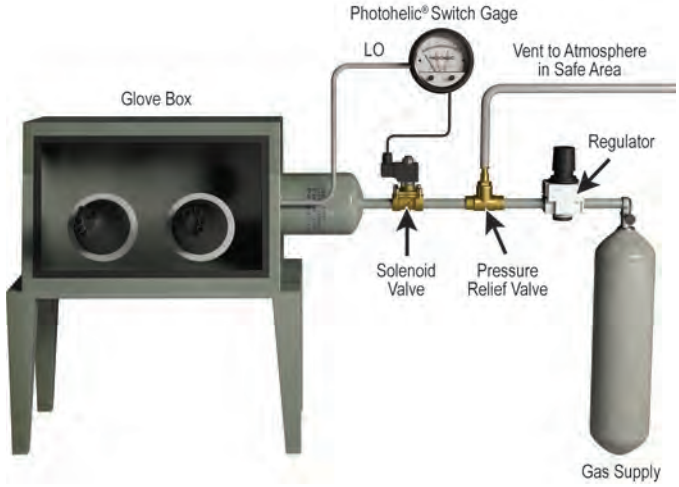
Filling scuba diver air tanks.

The Dwyer® Series DPG with oxygen cleaning and 5000 psi range is used in gas blending applications for filling scuba diver's air tanks. The DPG is the master mixing gage in this manifold apparatus. Two or three gases may be blended with the manifold to produce the appropriate blend of breathable gas depending on the diver and the depths they will reach. With the flow adjustment knobs and the 0.25% full-scale accuracy DPG, precise tank charging rates are maintained.



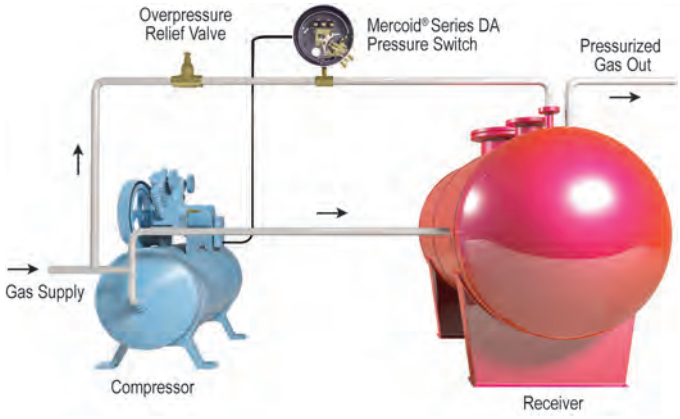
Compact switch/gage monitors pressure, actuates alarm.

This portable pressure monitor alarm utilizes a Dwyer® Mini-Photohelic® differential pressure switch/gage to monitor either positive pressure, as in a clean room, or negative pressure, as in a fume or paint spray hood. It sounds an alarm, both audible and visual, when pressure exceeds either a preset high or low limit. The unit can be used temporarily to verify proper operation after initial installation. Or it can be mounted permanently for continuous monitoring. In applications where a single fixed alarm pressure level is sufficient, a differential pressure switch can be used instead.



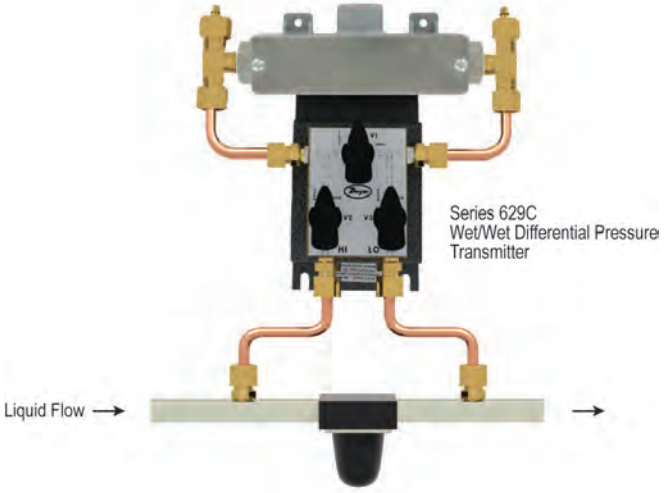
Zero-center switch/gage controls the inert atmosphere in glove box.

A controlled inert atmosphere “glove-box” is used in the fields of physical chemistry and metallurgy for handling and welding special or hazardous materials. A Dwyer® Photohelic® differential pressure switch/gage serves as an automatic and readily adjustable pressure control for the helium, argon or nitrogen gas used in the system. The box is first evacuated, then pressurized with the required gas. Therefore, a zero-center Photohelic® switch/gage is used, permitting both pressure and vacuum to be read and controlled by a single gage. Use of the low pressure gage connection (rear chamber of gage) and a Buna-N diaphragm is suggested to minimize leaks from or to the atmosphere.



Mercoid® Series DA pressure switch maintains desired gas pressure in tank.

Demand for compressed gas varies in this gas line. So a Mercoid® Series DA adjustable deadband pressure switch is included to turn the compressor on at low pressure and off when the maximum pressure is reached.



Three-valve manifold simplifies installation of wet/wet differential pressure transmitter.

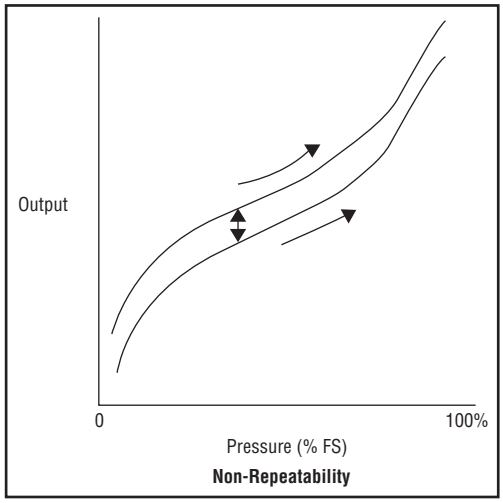
When using differential pressure transmitters in fluid applications, it is essential to periodically make sure that there is no air in the system, as this can cause erroneous readings. Unfortunately, the necessary three-valve bleed system is often expensive and large, making installation difficult and bulky. For this reason, Dwyer Instruments, Inc. offers the 3V option on all 629C Wet/Wet Differential Pressure Transmitters. This compact, lightweight, and economical bleed manifold is shipped factory-installed on the 629C, eliminating the hassle of constructing a custom apparatus. The 629C, when combined with the three-valve option, makes for an ideal setup to monitor hydraulic filter clogging or other fluid pressure sensing applications.

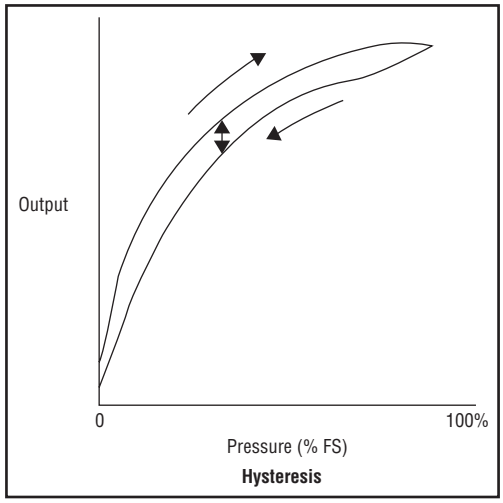
Dwyer

PRESSURE SENSOR ACCURACY

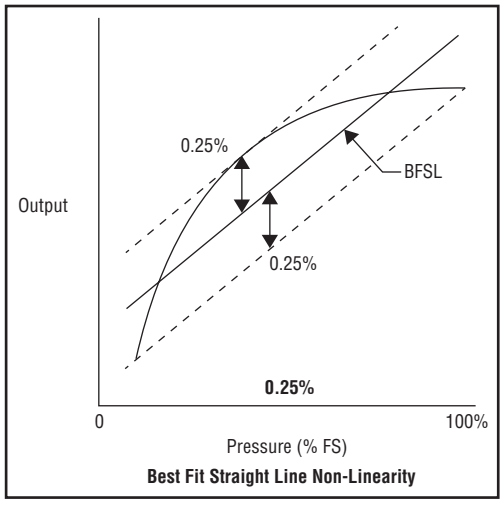
What is accuracy? The International Electrotechnical Commission (IEC) definition of accuracy is maximum positive and negative deviation from the specified characteristic curve observed in testing a device under specified conditions and by a specified procedure. Unfortunately when it comes to defining accuracy for a pressure sensor it's more complicated. Accuracy has a large effect on the cost of a pressure sensor or even more importantly, the quality or efficiency of the process it is measuring. It is important to understand what factors determine accuracy and what questions to ask when selecting a sensor so that an apples-to-apples comparison can be made instead of apples-to-oranges.

Even though there isn't a defined standard for pressure sensor accuracy there is an IEC standard that defines factors that make-up accuracy. IEC 61298-2 states that accuracy must include Hysteresis, Non-Repeatability and Non-Linearity. Non-Repeatability and Hysteresis are well defined. Hysteresis is the maximum difference in sensor output at a pressure when that pressure is first approached with pressure increasing and then approached with pressure decreasing during a full span pressure cycle. Non-Repeatability is the maximum difference in output when the same pressure is applied, consecutively, under the same conditions and approaching from the same direction.





Where manufactures start to differentiate is with Non-Linearity. IEC 61298-2 lists three methods of Non-Linearity, the two most popular methods used by sensor manufactures are the Best Fit Straight Line Non-Linearity and Terminal Point Non-Linearity. Usually the method of non-linearity used will be specified with the sensors accuracy as BFSL or Terminal Point Method. Why is it important to understand the difference between these two methods? Based on the Non-Linearity characteristics of a sensor, it could have two vastly different Non-Linearity percentages. The following diagram shows how the same sensor can have two Non-Linearity percentages.



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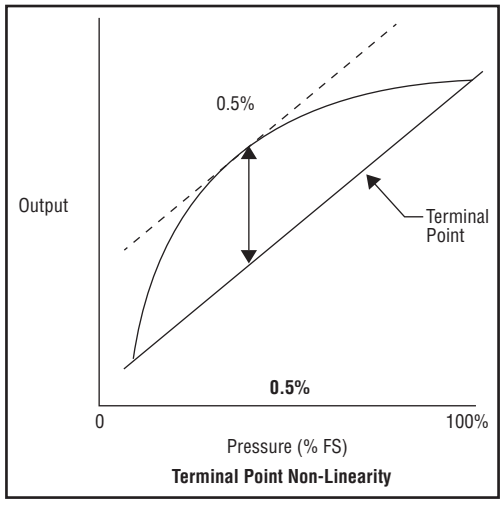


PRESSURE SENSOR ACCURACY

IEC 61298-2 identifies which factors make up accuracy (Non-Linearity, Non-Repeatability, Hysteresis) but the IEC standard does not specify how these factors are combined into a single accuracy. The methods in which the values are combined have a substantial impact on the total accuracy. Some manufactures simply sum the three factors while others use mathematical equations such as Root of the Sum Squared or Root of the Mean Squared to combine Non-Linearity, Non-Repeatability, and Hysteresis into a total accuracy percentage. The following examples show how the same transmitter can have three accuracy percentages depending on which equation is used.

Non-Linearity – 0.5% BFSL
Non-Repeatability – 0.05% FS.
Hysteresis – 0.1% FS.

$$RSS = \sqrt{(\text{Non-Linearity})^2 + (\text{Hysteresis})^2 + (\text{Non-Repeatability})^2}$$

$$RSS = \sqrt{(0.50)^2 + (0.10)^2 + (0.05\%)^2}$$

$$RSS = 0.51\%$$

Root of the Sum Squared

$$RMS = \sqrt{\frac{(\text{Non-Linearity})^2 + (\text{Hysteresis})^2 + (\text{Non-Repeatability})^2}{3}}$$

$$RMS = \sqrt{\frac{(0.50)^2 + (0.10)^2 + (0.05\%)^2}{3}}$$

$$RMS = 0.30\%$$

Root of the Mean Squared

Sum = Non-Linearity + Hysteresis + Non-Repeatability
Sum = 0.5 + 0. + 0.05
Sum = 0.65%
Summed Factors

So why is this important? Accuracy has a price. The cost of a pressure sensor is a function of its accuracy, the more accurate the sensor the more expensive it will be. From a manufacturing point of view, the wrong sensors can cause expensive quality or efficiency problems. That is why it is important to understand how manufacturers calculate accuracy and recognize what parameters to look at when comparing pressure sensors. By understanding how manufacturers calculate accuracy, you will be able to make a more informed decision when evaluating pressure sensors, ensuring the next sensor you select will have the required accuracy at the right price for the application.

Dwyer

SERIES 2000

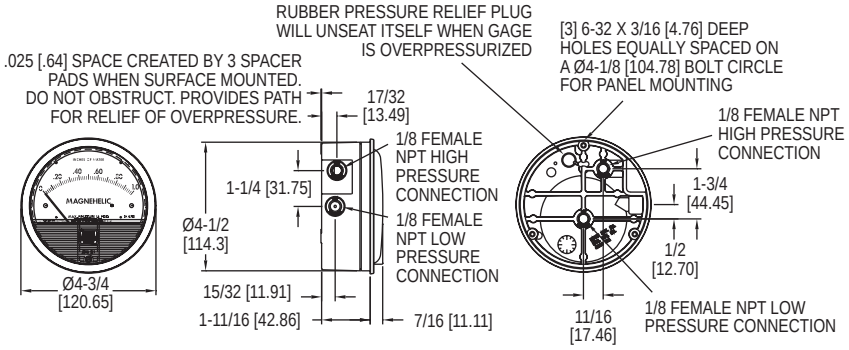
MAGNEHELIC® DIFFERENTIAL PRESSURE GAGES

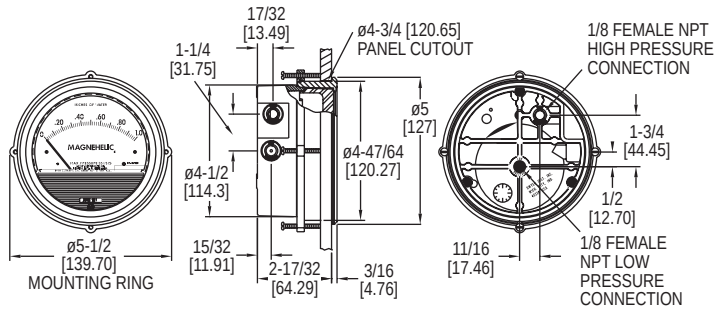
Indicate Positive, Negative or Differential, Accurate within 1%

5 YEAR LIMITED WARRANTY

Standard Magnehelic® gage

High Accuracy Magnehelic® gage
Note: Shown with optional -SS bezel





Select the **Series 2000 Magnehelic® Differential Pressure Gages** for a versatile low differential pressure gage with a wide choice of 81 models and 27 options to choose from. Using Dwyer's simple, frictionless Magnehelic® gage movement, it quickly indicates air or non-corrosive gas pressures--either positive, negative (vacuum) or differential. The design resists shock, vibration, over-pressures and is weatherproof to IP67.

Select the –HA High Accuracy Magnehelic® gage option for an accuracy within 1% of full-scale. Also included with the –HA option at no extra cost are a mirrored scale overlay and a 6 point calibration certificate.

FEATURES/BENEFITS

- Easy to read gage through undistorted plastic face permits viewing from far away
- Patented design provides quick response to pressure changes means no delay in assessing critical situations
- Durable and rugged housing and high-quality components combine to provide long-service life and minimized down-time
- High accuracy option is twice as accurate as the standard Magnehelic® gage

APPLICATIONS

- Filter monitoring
- Air velocity with Dwyer pitot tube
- Blower vacuum monitoring
- Fan pressure indication
- Duct, room or building pressures
- Clean room positive pressure indication

ACCESSORIES

Model	Description
A-432	Portable kit; combine carrying case with any Magnehelic® gage of standard range, except high pressure connection. Includes 9 ft (2.7 m) of 3/16″ ID rubber tubing, standhang bracket and terminal tube with holder
A-605	Air filter gage accessory kit; adapts any standard Magnehelic® gage for use as an air filter gage. Includes aluminum surface mounting bracket with screws, two 5 ft (1.5 m) lengths of 1/4″ aluminum tubing, two static pressure tips and two molded plastic vent valves, integral compression fittings on both tips and valves
A-605B	Air filter gage accessory kit; air filter kit with two plastic open/close valves, two 4″ steel static tips, plastic tubing and mounting flange
A-605C	Air filter gage accessory kit; air filter kit with two plastic open/close valves, two plastic static tips, plastic tubing and mounting flange

SPECIFICATIONS

Service: Air and non-combustible, compatible gases (natural gas option available).
Note: May be used with hydrogen. Order a Buna-N diaphragm. Pressures must be less than 35 psi.
Wetted Materials: Consult factory.
Housing: Die cast aluminum case and bezel, with acrylic cover. Exterior finish is coated gray to withstand 168 hour salt spray corrosion test.
Accuracy: ±2% (-HA model ±1) of FS (±3% (-HA ±1.5%) on -0, -100PA, -125PA, -10MM and ±4% (-HA ±2%) on -00, -60PA, -6MM ranges), throughout range at 70°F (21.1°C).
Pressure Limits: -20 in Hg to 15 psig (-0.677 to 1.034 bar); MP option: 35 psig (2.41 bar); HP option: 80 psig (5.52 bar).
Enclosure Rating: IP67.
Overpressure: Relief plug opens at approximately 25 psig (1.72 bar), standard gages only.❶
Temperature Limits: 20 to 140°F*
(-6.67 to 60°C). -20°F (-28°C) with low temperature option.
Size: 4″ (101.6 mm) diameter dial face.
Mounting Orientation: Diaphragm in vertical position. Consult factory for other position orientations.
Process Connections: 1/8″ female NPT duplicate high and low pressure taps - one pair side and one pair back.
Weight: 1 lb 2 oz (510 g), MP & HP 2 lb 2 oz (963 g).
Standard Accessories: Two 1/8″ NPT plugs for duplicate pressure taps, two 1/8″ pipe thread to rubber tubing adapter, and three flush mounting adapters with screws. (Mounting and snap ring retainer substituted for three adapters in MP & HP gage accessories.)
Agency Approvals: Meets the technical requirements of EU Directive 2011/65/EU (RoHS II). **Note:** -SP models not RoHS approved.

Note: For applications with high cycle rate within gage total pressure rating, next higher rating is recommended. See Medium and High pressure options.

*Low temperature models available as special options.

A-432

A-605

❶**Over Protection Note: See page 21 (Series 2000)**

Dwyer

SERIES 2000

MAGNEHELIC® DIFFERENTIAL PRESSURE GAGES

Indicate Positive, Negative or Differential, Accurate within 1%

Bezel provides flange for flush mounting in panel.

Clear plastic face is highly resistant to breakage. Provides undistorted viewing of pointer and scale.

Precision litho-printed scale is accurate and easy to read.

Calibrated range spring is flat spring steel. Small amplitude of motion assures consistency and long life. It reacts to pressure on diaphragm. Live length adjustable for calibration.

Red tipped pointer of heat treated aluminum tubing is easy to see. It is rigidly mounted on the helix shaft.

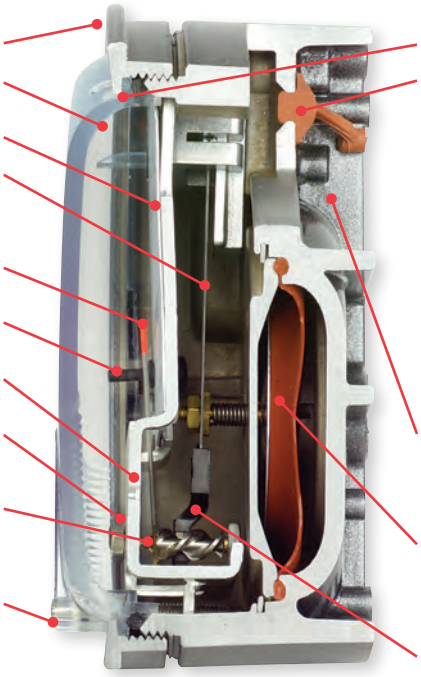
Pointer stops of molded rubber prevent pointer over-travel without damage.

"Wishbone" assembly provides mounting for helix, helix bearings and pointer shaft.

Jeweled bearings are shock-resistant mounted; provide virtually friction-free motion for helix. Motion damped with high viscosity silicone fluid.

Helix is precision made from an alloy of high magnetic permeability. Mounted in jeweled bearings, it turns freely, following the magnetic field to move the pointer across the scale.

Zero adjustment screw is conveniently located in the plastic cover, and is accessible without removing cover. O-ring seal provides pressure tightness.



O-ring seal for cover assures pressure integrity of case.

OVERPRESSURE PROTECTION
Blowout plug is comprised of a rubber plug on the rear which functions as a relief valve by unseating and venting the gage interior when over pressure reaches approximately 25 psig (1.7 bar). To provide a free path for pressure relief, there are four spacer pads which maintain 0.023″ clearance when gage is surface mounted. Do not obstruct the gap created by these pads.
The blowout plug is not used on models above 180″ of water pressure, medium or high pressure models, or on gages which require an elastomer other than silicone for the diaphragm.
The blowout plug should not be used as a system overpressure control. High supply pressures may still cause the gage to fail due to over pressurization, resulting in property damage or serious injury. Good engineering practices should be utilized to prevent your system from exceeding the ratings of any component.

Die cast aluminum case is precision made and iridite-dipped to withstand 168 hour salt spray corrosion test. Exterior finished in baked dark gray hammerloid. One case size is used for all standard pressure options, and for both surface and flush mounting.

Silicone rubber diaphragm with integrally molded O-ring is supported by front and rear plates. It is locked and sealed in position with a sealing plate and retaining ring. Diaphragm motion is restricted to prevent damage due to overpressures.

Samarium Cobalt magnet mounted at one end of range spring rotates helix without mechanical linkages.

MODEL CHART

Model	Range, Inches of Water
2000-00N†••	.05-0-.2
2000-00†••	0-.25
2000-0†•	0-.50
2001	0-1.0
2002	0-2.0
2003	0-3.0
2004	0-4.0
2005	0-5.0
2006	0-6.0
2008	0-8.0
2010	0-10
2012	0-12
2015	0-15
2020	0-20
2025	0-25
2030	0-30
2040	0-40
2050	0-50
2060	0-60
2080	0-80
2100	0-100
2120	0-120
2150	0-150
2160	0-160
2180*	0-180
2250*	0-250
Zero Center Ranges	
2300-00†••	0.125-0-0.125
2300-0†•	.25-0-.25
2301	.5-0-.5
2302	1-0-1
2304	2-0-2
2310	5-0-5
2320	10-0-10
2330	15-0-15

Model	Range, PSI
2201	0-1
2202	0-2
2203	0-3
2204	0-4
2205	0-5
2210*	0-10
2215*	0-15
2220*	0-20
2230**	0-30

Model	Range, CM of Water
2000-15CM	0-15
2000-20CM	0-20
2000-25CM	0-25
2000-50CM	0-50
2000-80CM	0-80
2000-100CM	0-100
2000-150CM	0-150
2000-200CM	0-200
2000-250CM	0-250
2000-300CM	0-300
Zero Center Ranges	
2300-4CM	2-0-2
2300-10CM	5-0-5
2300-30CM	15-0-15

Model	Range, MM of Water
2000-6MM†••	0-6
2000-10MM†•	0-10
2000-15MM	0-15
2000-25MM	0-25
2000-30MM	0-30
2000-50MM	0-50
2000-80MM	0-80
2000-100MM	0-100
2000-125MM	0-125
2000-150MM	0-150
2000-200MM	0-200
2000-250MM	0-250
2000-300MM	0-300
Zero Center Ranges	
2300-6MM†••	3-0-3
2300-10MM†•	5-0-5
2300-20MM†•	10-0-10

Model	Range, Pa
2000-60NPA†••	10-0-50
2000-60PA†••	0-60
2000-100PA†•	0-100
2000-125PA†•	0-125
2000-250PA	0-250
2000-300PA	0-300
2000-500PA	0-500
2000-750PA	0-750
2000-1000PA	0-1000
Zero Center Ranges	
Model	**Range, Pa**
2300-60PA†••	30-0-30
2300-100PA†•	50-0-50
2300-120PA	60-0-60
2300-200PA	100-0-100
2300-250PA	125-0-125
2300-300PA	150-0-150
2300-500PA	250-0-250
2300-1000PA	500-0-500

Model	Range, kPa
2000-0.5KPA	0-0.5
2000-1KPA	0-1
2000-1.5KPA	0-1.5
2000-2KPA	0-2
2000-2.5KPA	0-2.5
2000-3KPA	0-3
2000-4KPA	0-4
2000-5KPA	0-5
2000-8KPA	0-8
2000-10KPA	0-10
2000-15KPA	0-15
2000-20KPA	0-20
2000-25KPA	0-25
2000-30KPA	0-30
Zero Center Ranges	
2300-1KPA	.5-0-.5
2300-2KPA	1-0-1
2300-2.5KPA	1.25-0-1.25
2300-3KPA	1.5-0-1.5

Dual Scale Air Velocity Units
For use with pitot tube

Model	Range, in w.c./ Velocity F.P.M.
2000-00AV†••	0-.25/ 300-2000
2000-0AV†•	0-.50/ 500-2800
2001AV	0-1.0/ 500-4000
2002AV	0-2.0/ 1000-5600
2005AV	0-5.0/ 2000-8800
2010AV	0-10/ 2000-12500

Dual Scale English/Metric Models

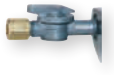
Model	Range, in w.c.	Range, Pa or kPa
2000-00D†••	0-.25	0-62 Pa
2000-0D†•	0-0.5	0-125 Pa
2001D	0-1.0	0-250 Pa
2002D	0-2.0	0-500 Pa
2003D	0-3.0	0-750 Pa
2004D	0-4.0	0-1.0 kPa
2005D	0-5.0	0-1.25 kPa
2006D	0-6.0	0-1.5 kPa
2008D	0-8.0	0-2.0 kPa
2010D	0-10	0-2.5 kPa
2015D	0-15	0-3.7 kPa
2020D	0-20	0-5 kPa
2025D	0-25	0-6.2 kPa
2050D	0-50	0-12.4 kPa
2060D	0-60	0-15 kPa

†These ranges calibrated for vertical scale position • Accuracy ±3% •• Accuracy ±4% *MP option standard **HP option standard

VELOCITY AND VOLUMETRIC FLOW UNITS
Scales are available on the Magnehelic® gage that read in velocity units (FPM, m/s) or volumetric flow units (SCFM, m^3/s, m^3/h). Stocked velocity units with dual range scales in inches w.c. and feet per minute are shown above. For other ranges contact the factory.
When ordering volumetric flow scales please specify the maximum flow rate and its corresponding pressure.
Example: 0.5 in w.c. = 16,000 CFM.

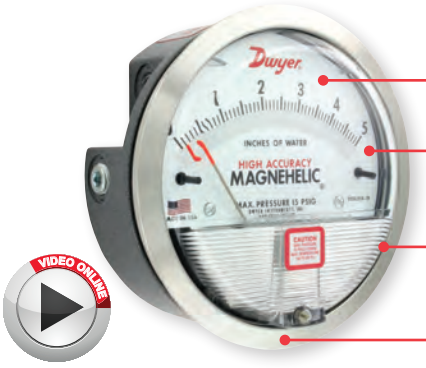
ACCESSORIES

Model	Description
A-321	Safety relief valve
A-448	3-piece magnet kit for mounting Magnehelic® gage directly to magnetic surface
A-135	Rubber gasket for panel mounting
A-401	Plastic carry case
A-310A	3-way vent valves. In applications where pressure is continuous and the Magnehelic® gage is connected by metal or plastic tubing which cannot be easily removed, we suggest using Dwyer A-310A vent valves to connect gage. Pressure can then be removed to check or re-zero the gage



A-310A

HIGH ACCURACY MAGNEHELIC® DIFFERENTIAL PRESSURE GAGE



- Twice as accurate as the standard Magnehelic® gage
- Mirrored scale overlay eliminates parallax error
- IP67 weatherproof housing
- Optional brushed SS bezel

6-point calibration certificate included

OPTIONS - HIGH ACCURACY MAGNEHELIC® GAGE	
To order add suffix:	**Description**
-HA	High Accuracy Magnehelic® Gage. Accuracy within 1% and weatherproof. Also includes mirrored scale overlay and a six point calibration certificate
-SS	Corrosion resistant brushed 304 stainless steel bezel

Accuracy Specifications: See page 20 (Series 2000)

ADDITIONAL GAGE OPTIONS

OPTIONS - OTHER OPTIONAL BEZELS	
To order add suffix:	**Description**
-CB	Chrome bezel option: A chrome plated aluminum bezel for an aesthetically pleasing finish when mounting on metal surfaces such as control panels.
-SB	Stainless steel bezel option: 304 stainless steel electro polished Ra 16 finished bezel.
-SS	Corrosion resistant brushed 304 stainless steel bezel

LED set point indicator

Adjustable signal flag

Transparent overlay

Mirrored scale overlay

Integrated mounting plate

OPTIONS - LED SET POINT INDICATOR	
To order add suffix:	**Description**
-SP	Bright red LED on right scale shows when set point is reached. Field adjustable from gage face, unit operates on 12-24 VDC. Set point indicator option comes with medium pressure (MP) bezel.
Note: 4-13/16″ hole for flush mounting.	
OPTIONS - ADJUSTABLE SIGNAL FLAG	
To order add suffix:	**Description**
-ASF	Integral with plastic gage cover. Available for most models except those with medium or high pressure construction. Can be ordered with gage or separate.
OPTIONS - TRANSPARENT OVERLAYS	
To order add suffix:	**Description**
-G	Green (to highlight and emphasize critical pressures)
-R	Red (to highlight and emphasize critical pressures)
-Y	Yellow (to highlight and emphasize critical pressures)
OPTIONS - MIRRORED SCALE OVERLAY	
To order add suffix:	**Description**
-M	A mirrored scale overlay is also available to assist in reducing parallax error.
OPTIONS - INTEGRATED MOUNTING PLATE	
To order add suffix:	**Description**
-AHU1	Furnished with attached surface mounting plate
-AHU2	Furnished with attached surface mounting plate and including A-481 installer kit (2 plastic static pressure tips and 7´of PVC tubing)

OPTIONS - FOR HIGH STATE PRESSURE APPLICATIONS	
To order add suffix:	**Description**
-HP	High pressure option: for pressures to 80 psig
-MP	Medium pressure option: for pressures to 35 psig

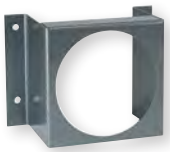
OPTIONS	
To order add suffix:	**Description**
-FC	Factory calibration certificate
-LT	Low temperatures to -20°F (-28°C)
-NIST	NIST traceable calibration certificate

MAGNEHELIC® GAGE MOUNTING ACCESSORIES

A-610

A-369

A-464



A-299

A-286

A-300

A-368

A-371

A single case size is used for most models of Magnehelic® gages. They can be flush or surface mounted with standard hardware supplied. Complete mounting and connection fittings plus instructions are furnished with each instrument. A 4-9/16″ hole is required for flush panel mounting.

Flush mounting is easily accomplished with the new A-300 Flush Mounting bracket. This bracket provides a solution to quickly and conveniently flush mount the Magnehelic® gage. The A-300 is ideal for mounting the Magnehelic® gage on control panel doors.

The A-368 is a simple bracket for quickly surface mounting the Magnehelic® gage. After securing the Magnehelic® gage to the A-368 bracket, mount the bracket on any flat surface.

The A-369 allows the Magnehelic® gage to be easily carried to locations where pressure readings need to be taken. The A-369 can stand on its own or hang on a nail or hook.

ACCESSORIES	
Model	**Description**
A-610	Pipe mounting kit for installing on 1-1/4″ to 2″ horizontal or vertical pipe
A-286	Magnehelic® gage panel mounting flange
A-369	Stand-hang bracket, aluminum, for Magnehelic® gage
A-300	Flush mounting bracket
A-464	Flush mount kit for Magnehelic® gage
A-368	Surface mounting plate, aluminum, for Magnehelic® gage
A-299	Mounting bracket, flush mount for Magnehelic® gage, bracket is then surface mounted, steel with gray hammerloid epoxy finish
A-371	Surface mounting bracket, use with medium pressure (-MP) or high pressure (-HP) models only

SERIES A-320

INSTRUMENT ENCLOSURES

Protects Various Instruments

A-320-A1

A-320-B1

A-320-BC

A-320-A-SS

A-320-B-SS

The **Series A-320 Instrument Enclosures** protect instruments in all applications. The enclosures, available in plastic and stainless steel, fit a variety of gages including the Series 605 transmitter, DM-2000, 3000MR/MRS and DH3. All models include silicone tubing, Banjo fittings, and threaded pressure connections pre-installed. The threaded pressure connections allow the user to easily change the connection type through the use of fittings or adapters. This modification can be implemented to allow connection to a wide variety of plastic or metal tubing.

SPECIFICATIONS
Housing Material: ABS plastic or 304 SS.
Process Connection: 1/8″ female NPT (-SS models: 1/8″ BSPT).
Enclosure Rating: Plastic models: IP66.
Weight: A-320-A1: 1.1 lb (0.5 kg); A-320-B1: 1.4 lb (0.65 kg); A-320-BC: 1.4 lb (0.65 kg); A-320-A-SS: 2.3 lb (1.05kg); A-320-B-SS: 3.0 lb (1.35 kg).

MODEL CHART	
Model	**Description**
A-320-A1*	2000 Magnehelic® gage, DM-2000 differential pressure transmitter
A-320-B1**	3000MR/MRS Photohelic® switch/gage, Series 605 Magnehelic® differential pressure transmitter, DH3 Digihelic® pressure controller, 2000 Magnehelic® gage with medium and high pressure options
A-320-BC	2000 Magnehelic® gage, DM-1000 DigiMag® digital differential pressure gage, DM-2000 differential pressure transmitter, instruments with backwards compatible bezel option
A-320-A-SS	2000 Magnehelic® gage
A-320-B-SS	2000 Magnehelic® gage, DM-2000 differential pressure transmitter
*DM-2000 must be mounted horizontally in A-320-A1 enclosure.	
**For DH3 to fit on A-320-B1 the casing on the electrical plug must be removed.	

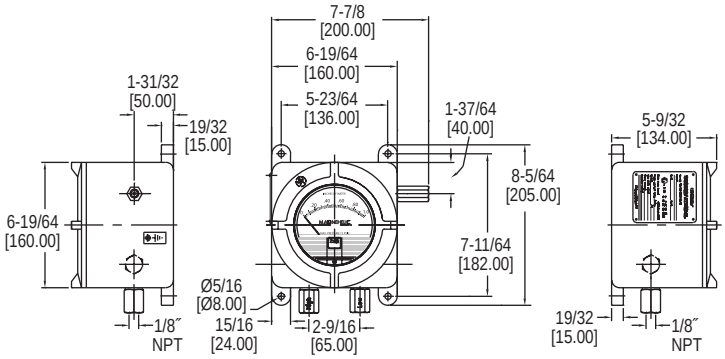
ACCESSORIES	
Model	**Description**
A-339-SS	1/8″ male BSPT to 3/16″ hose barb

Dwyer

SERIES AT22000

ATEX/IECEX APPROVED SERIES 2000 MAGNEHELIC® DIFFERENTIAL PRESSURE GAGE

Magnehelic® Gage in Flame-Proof ATEX/IECEx Enclosure



The **Series AT22000 ATEX/IECEx Approved Series 2000 Magnehelic® Differential Pressure Gage** combines the popular Magnehelic® line with a flameproof enclosure to extend usage to hazardous locations. This gage can indicate positive, negative or differential pressures and is accurate within 2%.

FEATURES/BENEFITS

- ATEX/IECEx housing provides all the capabilities and value of the Magnehelic® in a flame & explosion proof enclosure
- Quick response to pressure changes means no delay in assessing critical situations
- Durable and rugged housing and high-quality components combined provides long-service life and minimized down-time
- High impact strength and high temperature rated for applications where hazardous environments exist

APPLICATIONS

- Fan and blower pressures
- Filter resistance
- Air velocity
- Furnace draft
- Liquid levels with bubbler systems
- Pressure in fluid amplifier or fluidic 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.
Magnehelic® Housing: Die cast aluminum case & bezel with acrylic cover; Exterior finish is coated gray to withstand 168 hour salt spray corrosion test.
Housing Material: Aluminum.
Finishing: Texture epoxy coat RAL7038.
Accuracy: ±2% of FS (±3% on -0, -100PA, -125PA, -10MM and ±4% on -00, -60PA, -6MM ranges), throughout range at 70°F (21.1°C).
Pressure Limits: -20 in Hg to 15 psig (-0.677 bar to 1.034 bar); MP option; 35 psig (2.41 bar), HP option; 80 psig (5.52 bar).
Overpressure: Relief plug opens at approximately 25 psig (1.72 bar), standard gages only.❶
Temperature Limits: 20 to 140°F (-6.67 to 60°C); Low temperature option: -20°F (-28.8°C) (**Note:** Product temperature limits are less than case limits).
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.
Weight: 8.6 lb (3.9 kg).
ATEX Certificate: BVI 14ATEX0072.
Agency Approvals: ATEX Compliant CE 1370 Ex II 2G Ex d IIC T6 Gb / II 2D Ex tb IIIC T85°C Db, -60°C≤Tamb≤+60°C IECEx Compliant: Ex d IIC T6 Gb / Ex tb IIIC T85°C Db.

RANGE CHART

Model	Range in w.c.	Model	Range in w.c.	Model	Range in w.c.
2000-00N	.05 to 0 to .2	**2006**	0 to 6.0	**2040**	0 to 40
2000-00	0 to .25	**2008**	0 to 8.0	**2050**	0 to 50
2000-0	0 to .50	**2010**	0 to 10	**2060**	0 to 60
2001	0 to 1.0	**2012**	0 to 12	**2080**	0 to 80
2002	0 to 2.0	**2015**	0 to 15	**2100**	0 to 100
2003	0 to 3.0	**2020**	0 to 20	**2120**	0 to 120
2004	0 to 4.0	**2025**	0 to 25	**2150**	0 to 150
2005	0 to 5.0	**2030**	0 to 30	**2160**	0 to 160

MODEL CHART

Example	AT2	2001	-X	X	-A	O	1	X	T2	AT22001-XX-AO1XT2
Housing	AT2									ATEX/IECEx approved Series 2000 Magnehelic® differential pressure gage
Range		2XXX								Specify range by using Magnehelic® model number. See range chart.
Pressure Rating			X MP HP							Standard from -20 in Hg to 15 psig static pressure Medium pressure-max. static 35 psig High pressure-max. static 80 psig
Temperature Rating				X LT						Standard temperature limits -6.67 to 60°C Low temperature limit to -28.8°C
Housing Material					A					Aluminum
Cover						O				Glass 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
For other engineering unit ranges contact the factory.										

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

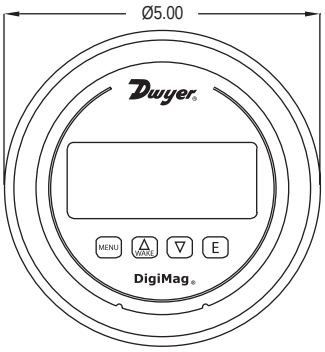
❶**Over Protection Note: See page 21 (Series 2000)**

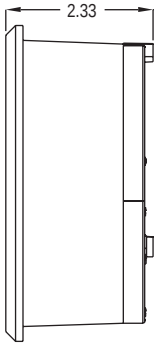
Dwyer

SERIES DM-1000

DIGIMAG® DIGITAL DIFFERENTIAL PRESSURE AND FLOW GAGE

24 Volt or Battery Powered, Fits in Magnehelic® Gage Cut-Out





The **Series DM-1000 DigiMag® Digital Differential Pressure and Flow Gage** monitors the pressure of air and compatible gases just as its famous analog predecessor the Magnehelic® differential pressure gage. All models are factory calibrated to specific ranges. The 4-digit LCD can display readings in common English and metric units so conversions are not necessary. The simplified four button operation reduces set up time and simplifies calibration with its digital push-button zero and span.

FEATURES/BENEFITS

- Field programmed reduces installation time
- User selectable parameters for pressure, air velocity or flow permits same device for multiple applications
- Specialized filter set point for alerts when maintenance is due
- Security levels permit matches the correct access to right skill
- Power versatility works with 9-24 VDC or 9 V battery allows deployment in a variety of spaces wired or not

APPLICATIONS

- Filter monitoring
- Air velocity or flow
- Blower vacuum monitoring
- Fan pressure indication
- Duct, room or building pressures
- Clean room positive pressure indication

SPECIFICATIONS

Service: Air and non-combustible, compatible gases.
Wetted Materials: Consult factory.
Housing Materials: Glass filled plastic.
Accuracy: ±1% FS including linearity, hysteresis and repeatability; ±2% FS for ranges 1 in w.c. and below.
Temperature Limits: 0 to 140°F (-18 to 60°C).
Compensated Temperature Limits: 32 to 122°F (0 to 50°C).
Long Term Stability: ±1% FS per year.
Thermal Effect: ±0.05% FS/°F typ.; ±0.10% FS/°F for ranges 1 in w.c. and below.
Display: 4-digit LCD (digits: 0.60H x 0.33W).
Display Update: Selectable for 1 second to 10 minutes or update only from button push.
Pressure Limits: Normal and bi-directional ranges 5 in w.c. and lower = 2 psi (13.7 kPa); Normal and bi-directional ranges 10 in w.c. and higher = 11 psi (75 KPa).
Selectable Engineering Units: in w.c., psi, kPa, Pa, mm w.c., mBar, in Hg, mm Hg, FS (0-100%).
Power Requirements: 9 V alkaline battery, included, user replaceable or external power supply 9-24 VDC.
Battery Service Life: Battery life depending on the display update setting: 150 hours (typical) if display update = 1 second; 9 month (typical) if display update = 10 minutes; 1.5 years (typical) if display update is disabled. Battery may last up to four times longer when using lithium-based battery ULTRALIFE U9VL-J.
Current Consumption: 5 mA max.
Electrical Connections: Removable terminal block for 16 to 26 AWG.
Electrical Entry: Cable gland for 0.114 to 0.250″ (2.9 to 6.4 mm) diameter cable.
Process Connections: 1/8″ (3 mm) ID tubing.
Enclosure Rating: NEMA 4X (IP66).
Weight: 1.18 lb (535 g).
Size: 5″ (127 mm) OD front face.
Agency Approvals: CE.

ACCESSORIES

Model	Description
A-300	Flat flush mounting bracket
A-286	4-1/2″ gage panel mounting flange
A-489	4″ straight static pressure tip with flange
A-480	Plastic static pressure tip

MODEL CHART

Model	Range									Resolution
	in w.c.	psi	kPa	Pa	mbar	mm w.c.	in Hg	mm Hg	% of FS	in w.c.
DM-1102	0.250	–	0.062	62.20	0.622	6.35	–	0.467	100.0	0.001
DM-1103	0.500	–	0.124	124.5	1.245	12.70	–	0.934	100.0	0.001
DM-1104	1.000	–	0.249	249.1	2.492	25.40	–	1.868	100.0	0.001
DM-1105	2.000	–	0.498	498.2	4.982	50.80	–	3.736	100.0	0.001
DM-1107	5.000	0.181	1.245	1245	12.45	127.0	0.368	9.34	100.0	0.002
DM-1108	10.00	0.361	2.491	2491	24.91	254.0	0.736	18.68	100.0	0.010
DM-1109	15.00	0.543	3.738	3738	37.38	381.0	1.104	28.02	100.0	0.010
DM-1110	25.00	0.903	6.227	6227	62.27	635.0	1.839	46.71	100.0	0.010
DM-1111	50.00	1.806	12.45	–	124.5	1270	3.678	93.42	100.0	0.020
DM-1112	100.0	3.613	24.91	–	249.1	2540	7.355	186.8	100.0	0.100

Contact the factory for available bi-directional ranges from ±0.25 to ±10 in w.c.
Note: For air flow models change -11XX to -12XX.

OPTIONS

To order add suffix:	Description
-NIST	NIST traceable calibration certificate
Example: DM-1103-NIST	

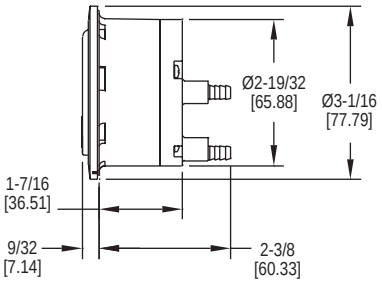
Process Tubing Options: See page 455 (Gage Tubing Accessories)

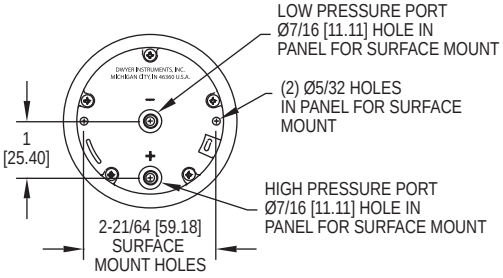
Dwyer

SERIES 2-5000

MINIHELIC® II DIFFERENTIAL PRESSURE GAGE

Combining High Accuracy, Compactness, Dependability, and Low Cost





Combining clean design, small size and low cost with enough accuracy for all but the most demanding applications our **Series 2-5000 Minihelic® II Differential Pressure Gage** offers the latest in design features for a dial type differential pressure gage. It is our most compact gage but is easy to read and can safely operate at total pressures up to 30 psig.

FEATURES/BENEFITS

- Removable lens and rear-housing provides easy, cost-effective servicing
- Accuracy and value provides an excellent solution for OEM and user applications
- Durable housing materials make it well-suited for rough environments and total high pressure

APPLICATIONS

- Room positive pressure sensing
- Cabinet air-purging
- Medical respiratory equipment
- Air samplers
- Electronic air cooling systems
- Laminar flow hoods
- Local indication on filter status
- Face velocity on fume hood
- Duct pressures

SPECIFICATIONS
Service: Air and compatible gases.
Wetted Materials: Consult factory.
Housing: Glass filled nylon; polycarbonate lens.
Accuracy: ±5% of FS at 70°F (21.1°C).
Pressure Limits: 30 psig (2.067 bar) continuous to either pressure connection.
Temperature Limits: 20 to 120°F (-6.67 to 48.9°C).
Size: 2-1/16″ (52.39 mm) diameter dial face.
Mounting Orientation: Diaphragm in vertical position. Consult factory for other position orientations.
Process Connections: Barbed, for 3/16″ ID tubing (standard); 1/8″ male NPT (optional).
Weight: 6 oz (170.1 g).
Agency Approvals: Meets the technical requirements of EU Directive 2011/65/EU (RoHS II).
Caution: For use only with air or compatible non-corrosive gases.

Dwyer

SERIES 2-5000

MINIHELIC® II DIFFERENTIAL PRESSURE GAGE

Combining High Accuracy, Compactness, Dependability, and Low Cost

Housing is molded from strong mineral and glass filled nylon.

Pointer stops of molded rubber prevent pointer over-travel without damage.

Full view lens is removable and molded of acrylic.

Aluminum scale litho-printed black on white, enhances readability.

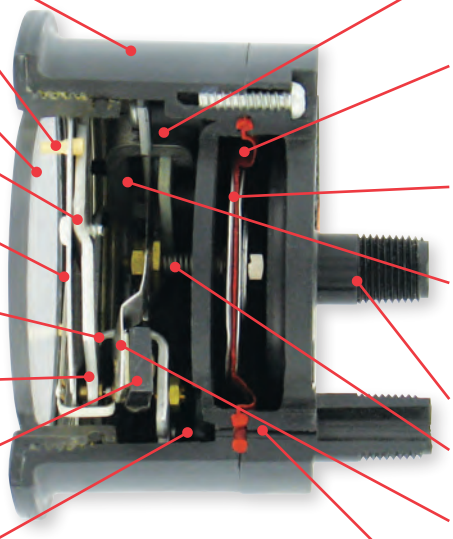
Red tipped aluminum pointer, rigidly mounted to helix is easy to see.

Wishbone assembly provides mounting for helix, helix bearings, and pointer shaft.

Jewel bearings provide virtually friction-free helix motion.

Helix is free to rotate in jewel bearings. It aligns with magnetic field of magnet to transmit pressure indications to pointer.

Zero adjustment screw, located behind the removable lens, eliminates tampering.



Range spring calibration clamp fixes live length of spring for proper gage calibration and is factory set and sealed.

Silicone rubber diaphragm allows accurate response to a broad range of temperatures and at extremely low pressure. Incorporates blow out area for overpressure protection.

Diaphragm support plates of lightweight aluminum on each side of the diaphragm minimize position or attitude sensitivity and help define pressure area.

Flat leaf range spring reacts to pressure on the diaphragm. Live length is adjustable for calibration. Small amplitude of motion minimizes inaccuracies and assures long life.

Low pressure tap connects to rear chamber.

Coil spring link provides a resilient connection between the diaphragm and the range spring.

Ceramic magnet mounted on a molded bracket at the end of the range spring rotates the helix without direct mechanical linkage.

High pressure tap connects with the front chamber through passageway in the plastic case and a sealing ring molded into the edge of the diaphragm.

MODEL CHART

Model	Range, Inches of Water	Model	Range, MM of Water
2-5000-0	0-0.5	**2-5000-25MM**	0-25
2-5001	0-1.0	**2-5000-50MM**	0-50
2-5002	0-2.0	**2-5000-100MM**	0-100
2-5003	0-3.0	**Model**	**Range, Pascals**
2-5005	0-5.0	**2-5000-125PA**	0-125
2-5010	0-10	**2-5000-250PA**	0-250
2-5020	0-20	**2-5000-500PA**	0-500
2-5040	0-40	**Model**	**Range, kPa**
2-5060	0-60	**2-5000-1KPA**	0-1
2-5100	0-100	**2-5000-3KPA**	0-3
Model	**Range, PSI**		
2-5205	0-5		

OPTIONS

To order add suffix:	Description
-NPT	1/8″ male NPT connections
Example: 2-5001-NPT	
-BB	Bottom barbed surface mount
Example: 2-5001-BB	
-NIST	NIST traceable calibration certificate
Example: 2-5001-NIST	
-FC	Factory calibration certificate
Example: 2-5001-FC	

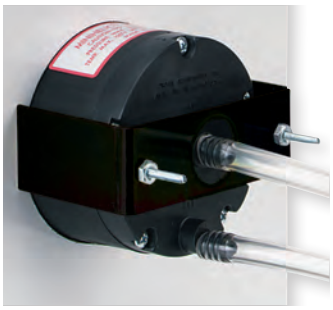
ACCESSORIES

Model	Description
A-302F-A	303 SS static pressure tip with mounting flange; for 3/16″ ID rubber or plastic tubing; 4″ insertion depth; includes mounting screws
A-434	Portable kit
A-489	4″ straight static pressure tip with flange
A-497	Surface mounting bracket
A-609	Air filter kit
A-480	Plastic static pressure tip

SURFACE MOUNTING

Optional surface mounting with back mounting plate allows for quick installation to any surface. Process connections are barbed and point downwards. Add -BB for bottom barbed surface mount option.

PANEL MOUNTING



Mounting hardware is supplied with the Minihelic® II gage for panel mounting through a single hole, 2-5/8″ (67 mm) in diameter. Panel thickness up to 1/2″ (13 mm) can be accommodated with the hardware supplied. If necessary, surface mounting of the gage can be accomplished by means of two 4-40 screws into the tapped mounting bracket stud holes in the rear of the gage. Surface mounting requires clearance holes in the panel for the two pressure taps.

Process Tubing Options: See page 455 (Gage Tubing Accessories)

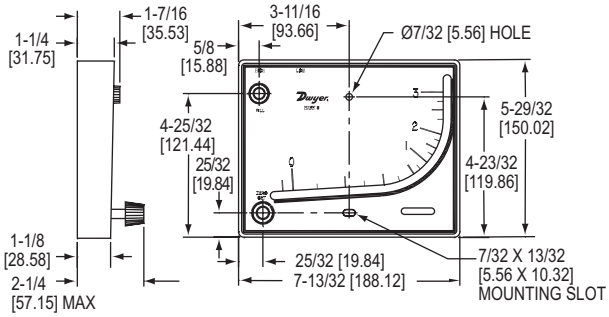
Dwyer

SERIES MARK II

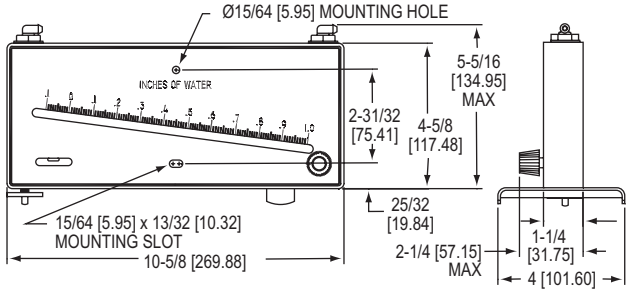
MARK II MOLDED PLASTIC MANOMETERS

3% Accuracy For Stationary And Portable Applications

Mark II Model No. 25 inclined-vertical manometer. (shown with optional A-612 portable stand)



Mark II Model No. 40-1 inclined manometer



Series Mark II Molded Plastic Manometers are of the inclined and inclined-vertical types. The curved inclined-vertical tube of the Model 25 gage provides higher ranges with more easily read increments at low readings. The Model 25 is excellent for general purpose work. The Model 40 inclined gage provides linear calibration and excellent resolution throughout its range. The Model 40 is ideally suited for air velocity and air filter gage applications. Both gage types are capable of pressure measurements above and below atmospheric as well as differential pressure measurements.

Included with each Mark II manometer are two tubing connectors for 1/8″ pipe or sheet metal ducts, two mounting screws, 1 ounce bottle of indicating fluid, red and green pointer flags and complete instructions.

The Model 25 also includes 8′ of flexible double column plastic tubing. Portable operation of the Model 25 is made possible by the use of the optional A-612 portable stand. A short piece of tubing can be slipped over the Model 25 pressure connections to contain the gage fluid in transit.

The Model 40 contains two 4-1/2′ lengths of clear plastic tubing, a plastic swing-out stand and leveling screw for portable operation. It also features convenient rapid shutoff pressure connections and integral overpressure safety traps.

FEATURES/BENEFITS

- Broad ranging in easy to read calibrated increments
- Gages ideally suited for general measurements and specific air applications
- Compact, stationary or portable device, make it a simple to use tool for pressure measurement in OEM or user applications

APPLICATIONS

- Paint booths
- Air velocity measurement
- Air filter gage

OEM SPECIALS

All Dwyer® Mark II molded plastic manometers can be supplied in OEM quantities with your name or special graphics and scales.

SPECIFICATIONS
INCLINED/VERTICAL
Accuracy: ±3% FS.
Temperature Limits: 140°F (60°C).
Pressure Limits: 10 psi (70 kPa).
Weight: 1.04 lb (472 g).
Agency Approvals: Meets the technical requirements of EU Directive 2011/65/EU (RoHS II).
INCLINED
Accuracy: ±3% FS.
Temperature Limits: 150°F (65°C).
Pressure Limits: 15 psi (100 kPa).
Scale Length: Approx. 8-1/4″ (21 cm).
Weight: 1.23 lb (558 g).
Agency Approvals: Meets the technical requirements of EU Directive 2011/65/EU (RoHS II).

MODEL CHART		
Model	**Range**	**Fluid Used**
Mark II 25	0-3 in w.c	Red fluid, .826 s.g.
Mark II 26	0-7 in w.c.	Blue oil, 1.91 s.g.
Mark II 27*	0-7000 fpm	Red fluid, .826 s.g.
Mark II MM-80	0-80 mm w.c.	Red fluid, .826 s.g.
Mark II M-700PA	10-0-700 Pa	Red fluid, .826 s.g.
Mark II 40-1	.1-0-1.0 in w.c.	Red fluid, .826 s.g.
Mark II 40-25MM	0-26 mm w.c.	Red fluid, .826 s.g.
Mark II 40-250PA	10-0-250 Pa	Red fluid, .826 s.g.
Mark II 41-60MM	0-60 mm w.c.	Blue oil, 1.91 s.g.
Mark II 41-600PA	20-0-600 Pa	Blue oil, 1.91 s.g.
*Require Pitot tube at additional cost.❶		

ACCESSORIES	
Model	**Description**
A-612	Portable stand
A-606	Air filter kit
A-480	Plastic static pressure tip
A-489	4″ straight static pressure tip with flange

❶Pitot tube: See pages 186-188 (Test & Data section)

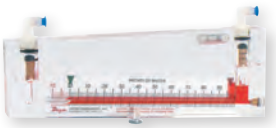
Process Tubing Options: See page 455 (Gage Tubing Accessories)

Dwyer

SERIES 250-AF

INCLINED MANOMETER AIR FILTER GAGES

Precision Machined, Solid Acrylic Plastic Gages, Accurate To ±1% Of Full-Scale



Model 250.5-AF

Model 452-AF

Dwyer® Durablock® **Series 250-AF Inclined Manometer Air Filter Gages** are precision machined 1″ thick solid acrylic plastic, virtually unbreakable and free of distortion. The fluid bore is precision drilled to ±.0002″ to assure life-long accuracy. A glass spirit level is built into the body and encapsulated to prevent damage or tampering. The scale is mirror polished chrome plated brass to assure parallax free reading by alignment of the meniscus with its reflection. Safety traps are incorporated in the body to prevent loss of fluid due to pressure surges. Red and green signal flags indicate clearly when a filter change is necessary. Gages are suitable for use in ambient temperatures of -20 to 150°F. Connection fittings are positively sealed but easily removed for zeroing or addition of fluid.

FEATURES/BENEFITS
- High-accuracy and easy to use make it a dependable device for many years of service
- Easy to read polished inclined scale allows pressure minute pressure differences to be read
- No moving parts mean no calibration or nothing to wear out

APPLICATIONS
- Air filter gage

ACCESSORIES	
Model	**Description**
A-310B	3-way vent valve, 1/8″ NPT to 1/4″ metal tubing, 10 psi rating
A-317	Gage connecter, 1/8″ pipe thread opening, less OD thread, for slip fit in 3/4″ diameter opening in Series 250-AF gages

▲ Economy Model 452-AF is similar to the 250 Series except they are not equipped with over pressure traps. Two A-324 1/4″ compression fittings are included with each gage but not shown. Bodies are of 5/8″ thick acrylic and scales are mirror polished, epoxy coated aluminum.

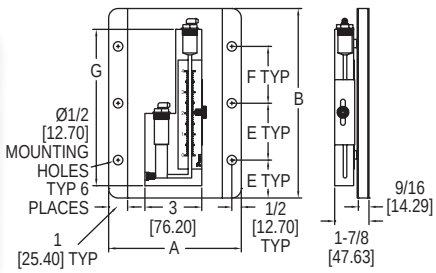
MODEL CHART				
Model	**Range: Water Column**	**Minor Divisions**	**Scale Length Inclined (Inches)**	**Overall Size (Inches)**
250-AF	.10-0-1.0″	.02″	5-1/2	8-1/2 x 4-1/8 x 1
250.5-AF	.10-0-1.0″	.01″	8	11-3/8 x 4 x 1
251-AF	.05-0-.50″	.01″	5-1/2	8-1/4 x 3-3/8 x 1
252-AF	.20-0-2.0″	.02″	8	11-1/8 x 6-1/2 x 1
452-AF▲	0-2″	.02″	8	11 x 4 x 5/8
▲ 2 PSI maximum working pressure				

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

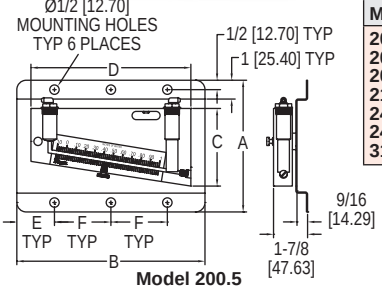
SERIES 200 & 300

DURABLOCK® SOLID PLASTIC STATIONARY GAGES

Suitable for Total Pressures Up to 100 psig, Temperatures Up to 150°F, Accuracy ±2% of Full-Scale (1% on Models 215, 244, 246 Only)



Model 310



Model 200.5

	Dimensions, Inches						
Model	**A**	**B**	**C**	**D**	**E**	**F**	**G**
200.5	7	13	3-15/16	11-3/8	2	4-1/2	-
202.5	9	13	5-5/8	12	2	4-1/2	-
209	9	13	7	11-1/4	2	4-1/2	-
215	7	10	3-1/16	9-1/2	2	3	-
244	11	16-1/2	3-1/8	15-5/8	4	8-1/2	-
246	13-1/2	23	11	22	4	15	-
310	7	16	-	-	4	4	15-1/4

Dwyer® **Series 200 & 300 Durablock® Solid Plastic Stationary Gages**, or draft gages, are offered in inclined and vertical (well-type) styles for highly accurate laboratory or general industrial service, for measurement of low range gas and air pressures, positive, negative or differential. To assure the accuracy required in instruments of this type, all machining of bores and wells is to the highest standards of precision backed by Dwyer's years of experience in the fabrications of acrylic instruments.

FEATURES/BENEFITS
- High-accuracy measurement of low range gas and air pressure suitable for laboratory or general industry
- Precision built assures device meets the highest standards
- No moving parts mean no calibration or nothing to wear out
- Over-pressure trap prevents liquid from being expelled from gage, preventing disruption of operation

APPLICATIONS
- Low pressure laboratory and industrial service applications

Exclusive Dwyer® over-pressure safety traps assure that over range pressures whether gradual or a sudden surge will not force the liquid out of the gage. Over-pressures simply raise the float, force the O-ring over the opening and seal the fluid in the gage. When pressure is reduced, the float drops down releasing the O-ring safety trap which allows the gage to continue operation.

MODEL CHART				
Incline Type Model	**Range Inches of Water**	**Minor Scale Divisions**	**Scale Length**	**Weight lb-oz**
200.5	.10-0-1.0	.01	8-1/4	3-11
202.5	.20-0-2.0	.01	8-3/4	4-7
209	.20-0-3.0	.02	8-3/4	4-11
215	.05-0-.25	.005	6	2-14
244	0-4	.02	13-1/4	9-11
246	0-6	.02	20	13-14
Vertical or Well-Type Model	**Range Inches of Water**	**Minor Scale Divisions**	**Scale Length**	**Weight lb-oz**
310	0-10	.10	11-1/8	3-10
Note: Model 200.5 replaces Model 200. Model 202.5 replaces Model 202.				

OPTIONS	
To order add suffix:	**Description**
-NIST	NIST traceable calibration certificate
Example: 244-NIST	

Dwyer

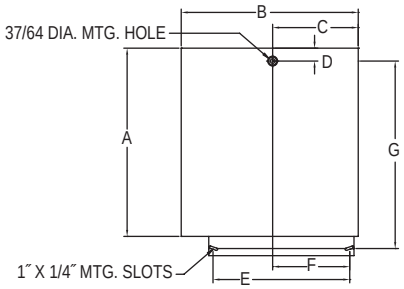
SERIES 420

DURABLOCK® INCLINED-VERTICAL MANOMETERS

Accuracy To ±0.25%

Inclined-vertical manometer single column

Inclined-vertical manometer double column



RANGES AND DIMENSIONS - SUITABLE FOR TOTAL PRESSURE UP TO 100 PSIG, TEMPERATURES UP TO 150°F

Model	Description	Inclined Range Inches of Water	Inclined Minor Div.	Length of Inclined Scale	Vertical Range Inches of Water	Vertical Minor Div.	Length of Vertical Scale	Dimensions A	B	C	D	E	F	G	Weight lb-oz
424-10	Single column	0-2.0	.01	20″	2.1-10	.10	9″	16-1/2″	25-1/4″	12-5/8″	1″	10-1/2″	5-3/8″	16″	22-12
421-5	Single column	0-1.0	.01	6-1/2″	1.1- 5	.10	4-5/8″	9-7/8″	9-5/8″	4-7/8″	5/8″	6-1/2″	3-1/4″	9-7/8″	4-12
421-10	Single column	0-1.0	.01	6-1/2″	1.1-10	.10	10-1/8″	15-1/2″	9-5/8″	4-7/8″	5/8″	6-1/2″	3-1/4″	15-1/2″	6-10
422-5	Double column	0-1.0	.01	6-1/2″	1.1-5	.10	4-5/8″	10-1/2″	11-1/2″	5-1/8″	5/8″	6-1/2″	3-1/4″	10-1/2″	6-10
422-10	Double column	0-1.0	.01	6-1/2″	1.1-10	.10	10-1/8″	16-1/8″	11-1/2″	5-1/8″	5/8″	6-1/2″	3-1/4″	16-1/8″	10-13

*Single column metric-ranges and divisions in millimeters.

Dwyer® **Series 420 Durablock® Inclined-Vertical Manometers** are extremely accurate instruments designed and made especially for precision measurement of low differential pressures in laboratory and test applications. The inclined range bore has a length of 20″ to provide ample multiplication of indicating fluid movement in this critical lower part of the range.

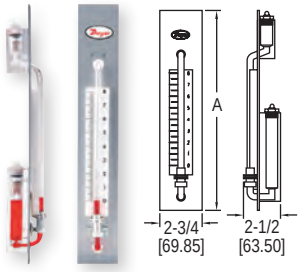
FEATURES/BENEFITS
- High-accuracy measurement of low range gas and air pressure suitable for laboratory and test applications
- Long bore length provides ample room for fluid movement for low range sensing
- Precision built to assure device meets the highest standards

APPLICATIONS
- Low pressure laboratory and test applications

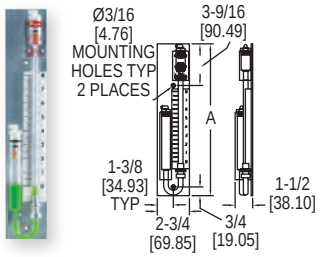
ACCESSORIES - STANDARD
Description
Include two 1 oz bottles of .826 red gage fluid (1.91 blue gage oil for models 421-23 and 422-23), rapid shut-off type “a” connections, two 3 ft lengths of clear plastic tubing and two 1/8″ NPT tubing adapters — two sets for double column models.

SERIES 1230 & 1235

FLEX-TUBE® WELL-TYPE MANOMETERS



Series 1235 panel mounting



Series 1230 wall mounting

Model	Scale in Inches of Water or Mercury	Dimensions A W/M	Dimensions A D	Mercury Required to Fill (Wt.)
1230-8	0-8	15-13/16	16-3/4	12 oz
1230-12	0-12	19-3/8	21-7/8	14 oz
1230-16	0-16	23-1/2	27	16 oz
1230-20	0-20	27-9/16	32-1/8	18 oz
1230-36	0-36	43-1/8	51-1/4	26 oz

Model	Scale in Inches of Water or Mercury	Dimensions A W/M	Dimensions A D	Mercury Required to Fill (Wt.)
1235-20	0-20	29-5/16	33-9/16	18 oz

Dwyer® **Series 1230 & 1235 Flex-Tube® Well Type Manometers** are designed to meet the need for a direct reading single column instrument providing highly accurate pressure readings; positive, negative or differential. Unlike other makes, Dwyer manometers have no hidden wells or packing glands. These instruments are constructed of shatter-proof clear plastic tubing permanently bonded to well assemblies with leak-proof glued joints. Well assemblies are precisely machined from solid acrylic plastic. Over-pressure safety traps assure protection against loss of fluid. Scales are adjusted with quick-acting positive mechanism. These manometers are rated to 100 psig (6.89 bar). Not recommended for vacuum service beyond 5″ Hg (68 in w.c.).

FEATURES/BENEFITS
- High-accuracy pressure measurement suitable for laboratory or general industry
- Precision built assures device meets the highest standards
- No moving parts mean no calibration or nothing to wear out
- Over-pressure trap prevents liquid from being expelled from gage, preventing disruption of operation

APPLICATIONS
- Laboratory and industrial service applications

MODEL CHART
Model
1230-8-W/M
1230-12-W/M
1230-16-W/M
1230-20-W/M
1230-36-W/M
1235-20-W/M
Note: Water/mercury models. For 0.826 S.P. gage fluid models change -W/M to a -D.

OPTIONS	
To order add suffix:	**Description**
-NIST	NIST traceable calibration certificate
Example: 1222-8-W/M-NIST	

ACCESSORIES - STANDARD
Description
Include one set of type “a” connections, .826 sp. gr. red gage fluid for “D” style or fluorescein green dye concentrate with wetting agent for “W/M” styles, two 3 ft lengths of clear vinyl tubing and two 1/8″ NPT tubing adapters.

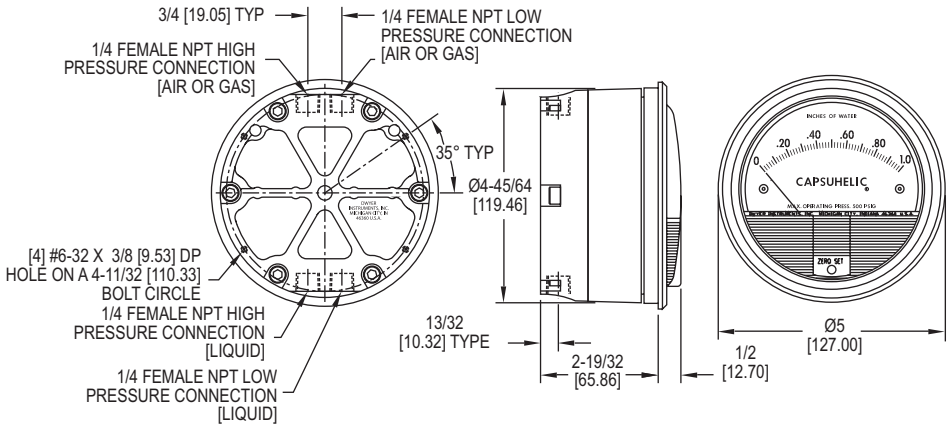
Dwyer

SERIES 4000

CAPSUHELIC® DIFFERENTIAL PRESSURE GAGE

Measures Pressure, Vacuum or Differential, Suitable for Internal Pressures to 500 psig

Capsuhelic® pressure gage has a large, easy-to-read 4″ (102 mm) dial.



The **Series 4000 Capsuhelic® Differential Pressure Gage** is designed to give fast, accurate indication of differential pressures. The gage may be used as a readout device when measuring flowing fluids, pressure drop across filters, liquid levels in storage tanks and many other applications involving pressure, vacuum or differential pressure.

The pressure being measured is held within a capsule which is an integral part of the gage. This containment of the pressure permits the use of the gage on system pressures of up to 500 psig, even when differentials to be read are less than 0.1 in w.c.

FEATURES/BENEFITS

- Gage capsule permits high-pressure usage with small differentials
- Zero and range adjustments outside of gage means no disassembly in normal service
- Time-proven, simple, frictionless movement that permits full-scale readings as low as 0.5 in w.c.
- Diaphragm-actuated versus liquid filled gage supports outdoor use

APPLICATIONS

- Fluid flow
- Liquid storage tanks
- Filter pressure drops
- Vacuum or differential pressure

Note: May be used with hydrogen where pressures are less than 35 psi. Order with a Buna-N diaphragm.

MODEL CHART			
Model	**Range**	**Model**	**Range**
4005*	0-5.0 in w.c.	**4310**	5-0-5 in w.c.
4006*	0-6.0 in w.c.	**4330**	15-0-15 in w.c.
4010*	0-10 in w.c.	**4205**	0-5 psid
4015*	0-15 in w.c.	**4210**	0-10 psid
4020*	0-20 in w.c.	**4215**	0-15 psid
4025*	0-25 in w.c.	**4220**	0-20 psid
4030*	0-30 in w.c.	**4616B****	0-16 ft w.c.
4040*	0-40 in w.c.	**4635**	0-35 ft w.c.
4050*	0-50 in w.c.		
4060*	0-60 in w.c.		
4080*	0-80 in w.c.		
4100*	0-100 in w.c.		
4200*	0-200 in w.c.		

*These ranges available for vertical scale position only.
**Available only with the brass case for water service.
Note: Scales reading directly in flow, heights, etc., are also available.

SPECIFICATIONS

Service: Aluminum case: Air and compatible gases and oil based liquids; Brass case: Air and compatible gases and water based liquids.
Wetted Materials: Consult factory.
Housing: Die cast aluminum with impregnated hard coating, standard. Optional forged brass housing is required for water or water based fluids. Special material diaphragms available, contact factory.
Accuracy: ±3% of FS at 70°F (21.1°C). (±4% on 4200, 4210, 4215, 4220, 4300, 4400, and 4500).
Pressure Limits: -20″ Hg to 500 psig (-0.677 bar to 34.4 bar).
Temperature Limits: 20 to 200°F (-6.67 to 93.3°C).
Size: 4″ (101.6 mm) diameter dial face.
Mounting Orientation: Diaphragm in vertical position. Consult factory for other position orientations.
Process Connections: 1/4″ female NPT high and low pressure taps, duplicated - one pair top for air and gas, and one pair bottom for liquids.
Weight: 3 lb, 3 oz (1.45 kg) aluminum case; 7 lb, 13 oz (3.54 kg) brass case.

OPTIONS	
To order add suffix:	**Description**
-ASF	Adjustable signal flag
B	Brass case
Scale Overlays	Red, green, mirrored or combination; specify locations
-NIST	NIST traceable calibration certificate

ACCESSORIES - STANDARD
Description
Two 1/4″ NPT plugs for duplicate pressure taps, four flush mounting adapters with screws and four surface mounting screws.

ACCESSORIES	
Model	**Description**
A-298	Flat flush mounting bracket
A-309	3-way manifold valve
A-314	Bleed fitting
A-370	Mounting bracket
A-471	Portable kit
A-496	Flush mount bracket
A-610	Pipe mount kit

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

Process Tubing Options: See page 455 (Gage Tubing Accessories)

Dwyer

SERIES PTGD

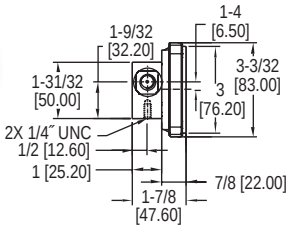
DIFFERENTIAL PRESSURE PISTON-TYPE GAGES

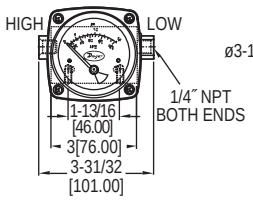
Excellent Accuracy and Over-Pressure Ratings

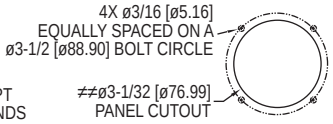
Shown with optional pointer follower

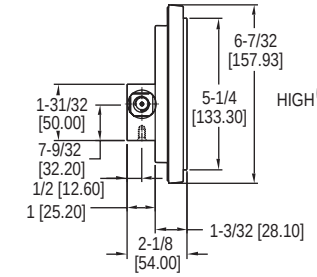
2.5″

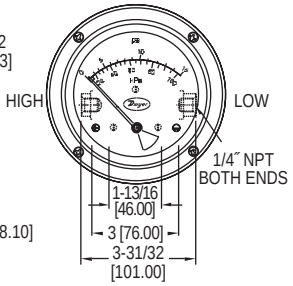
4.5″

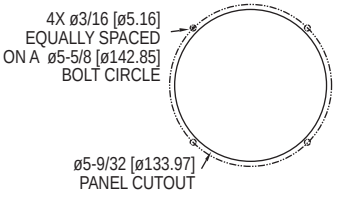












The **Series PTGD Differential Pressure Piston-Type Gages** can be used to measure the pressure drop across filters, strainers, pump performance testing, and heat exchanger pressure drop monitoring. Its simple, rugged design possesses weather and corrosion resistant gage front with a shatter resistant lens. The Series PTGD contains a piston-sensing element which provides different differential pressure ranges with full-scale accuracies of ±2%. Constructed with aluminum or 316 SS and available with two 1/4″ female NPT end connections, the Series PTGD provides over-range protection rated to 3000 psig (200 bar) or 6000 psig (400 bar) depending on model. Standard models come with in-line connections. Back or bottom connections are also available.

FEATURES/BENEFITS

- Rugged, weather and corrosion proof design supports use in harsh environments
- Over-protection range depending on model, up to 6000 psig (400 bar) allows high-pressure applications
- Flexibility of connection selection fits the most sophisticated designs

APPLICATIONS

- Filter pressure drop
- Strainers
- Pump performance testing
- Heat exchanger pressure drop

OPTIONS	
To order add suffix:	**Description**
-V	FKM fluoroelastomer seals
-N	EPDM seals
-PY	Glycerine fill
-PF	Pointer follower
-RP	Reverse port
-SP1	1 0.5A SPDT DIN plug
-SP2	2 0.25A SPDT DIN plugs
Use order code:	**Description**
NISTCAL-PG1	NIST traceable calibration certificate

SPECIFICATIONS

Service: Compatible gases and liquids.
Wetted Materials: Gage body: Aluminum or 316 SS; Piston: Aluminum or 316 SS; Spring: 302 SS; Seals: Buna-N (standard); PTFE, Ceramic magnet; Dial case: Nylon 6 30% glass filled gage case.
Window: Acrylic.
Accuracy: ±2% FS.
Temperature Limit: 176°F (80°C).
Pressure Limits: 3000 psi (206 bar) for aluminum body; 6000 psi (413 bar) for SS body.
Size: 2.5″ (63 mm) or 4.5″ (115 mm).
Mounting Orientation: Mount in any position.
Process Connections: 1/4″ female NPT end connections standard; 1/4″ female NPT back or bottom connections available. All styles available with 1/4″ BSP.
Weight: Aluminum: 2.5″ 0.88 lb (399 g); 4.5″ 1.35 lb (612 g); Stainless steel: 2.5″ 1.75 lb (794 g); 4.5″ 2.3 lb (1.04 kg).

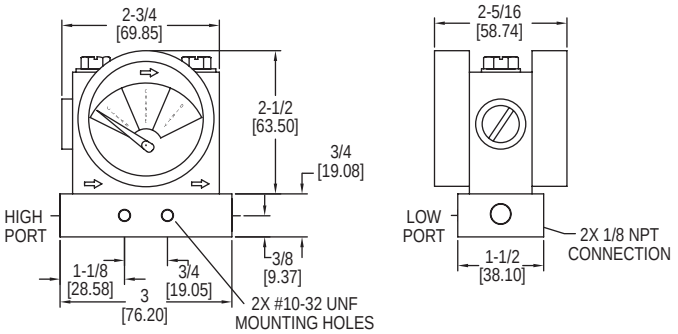
MODEL CHART		
Model	**Description**	**Range**
PTGD-AA01A	2.5″ aluminum	0-5 psid (0.25 bar)
PTGD-AA02A	2.5″ aluminum	0-10 psid (0.75 bar)
PTGD-AA03A	2.5″ aluminum	0-15 psid (1 bar)
PTGD-AA04A	2.5″ aluminum	0-20 psid (1.6 bar)
PTGD-AA05A	2.5″ aluminum	0-25 psid (1.6 bar)
PTGD-AA06A	2.5″ aluminum	0-30 psid (2 bar)
PTGD-AA07A	2.5″ aluminum	0-40 psid (3 bar)
PTGD-AA08A	2.5″ aluminum	0-50 psid (3.5 bar)
PTGD-AA09A	2.5″ aluminum	0-60 psid (4 bar)
PTGD-AA10A	2.5″ aluminum	0-80 psid (5.5 bar)
PTGD-AA11A	2.5″ aluminum	0-100 psid (7 bar)
PTGD-AA12A	2.5″ aluminum	0-150 psid (10 bar)
PTGD-SA01A	2.5″ stainless steel	0-5 psid (0.25 bar)
PTGD-SA02A	2.5″ stainless steel	0-10 psid (0.75 bar)
PTGD-SA03A	2.5″ stainless steel	0-15 psid (1 bar)
PTGD-SA04A	2.5″ stainless steel	0-20 psid (1.6 bar)
PTGD-SA05A	2.5″ stainless steel	0-25 psid (1.6 bar)
PTGD-SA06A	2.5″ stainless steel	0-30 psid (2 bar)
PTGD-SA07A	2.5″ stainless steel	0-40 psid (3 bar)
PTGD-SA08A	2.5″ stainless steel	0-50 psid (3.5 bar)
PTGD-SA09A	2.5″ stainless steel	0-60 psid (4 bar)
PTGD-SA10A	2.5″ stainless steel	0-80 psid (5.5 bar)
PTGD-SA11A	2.5″ stainless steel	0-100 psid (7 bar)
PTGD-SA12A	2.5″ stainless steel	0-150 psid (10 bar)
Note: For 4.5″ dial face, change -AA to -AC for aluminum and -SA to -SC for stainless steel.		
For back or bottom connections as well as female BSP threads, contact the factory.		

Dwyer

SERIES PFG2

PROCESS FILTER GAGE

Indicates Process Filter Status, In-Line or Bottom Connect Mounting



The **Series PFG2 Process Filter Gage** is designed for determining the state of an inline filter. The differential pressure indicator determines the pressure drop on either side of a filter and relates the value to one of three zones: clean (green), change (yellow), or dirty (red). The Series PFG2 is perfectly suited for filter applications, line loss, valve drop, and many other differential pressure applications where a simple indicator is needed. The direction of process flow is indicated on the dial, with the arrow pointing to the low pressure port. The PFG2 can be connected in-line through the side process connections, or can also be directly mounted through the outlet/inlet.

FEATURES/BENEFITS
- Simple easy to understand indicator means no guessing filter status
- Removable mounting block provides direct mounting options especially in difficult filter access locations
- Quick installation reduces time to operation

APPLICATIONS
- Filter pressure drop
- Filter status
- Valve drop
- Line loss

SPECIFICATIONS
Service: Liquids/gases compatible with SS, GFN, and fluoropolymer.
Wetted Materials: Aluminum, SS, glass filled nylon, and fluoropolymer.
Accuracy: ±5% FS.
Temperature Limit: 200°F (93°C).
Pressure Limit: 300 psig (20.7 bar).
Materials: Body: Glass filled nylon; Mounting Block: Aluminum; Lens: Polyester; Elastomers: Fluoroelastomer.
Process Connection: 1/8″ female NPT.
Mounting Orientation: Any orientation with 10-32 threaded holes 3/4″ apart.
Weight: 9.6 oz (272.2 g).

MODEL CHART				
Model	**Full Range**	**Green Zone**	**Yellow Zone**	**Red Zone**
PFG2-02	0 to 5 psid	0 to 2.5 psid	2.5 to 3.75 psid	3.75 to 5 psid
PFG2-03	0 to 10 psid	0 to 5 psid	5 to 7.5 psid	7.5 to 10 psid
PFG2-06	0 to 25 psid	0 to 11 psid	11 to 18.5 psid	18.5 to 25 psid

MODEL DIGIHELIC LINKS™

DATA ACQUISITION AND LOGGING SOFTWARE

Designed for Communication with Series DH & DHII Digihelic® Differential Pressure Controllers

The **Model Digihelic Links™ Data Acquisition and Logging Software** is an easy to use Windows® based program. Data logging and graphing can be set up by the individual control with varying logging periods. Event logging, live instrument status, remote calibration as well as uploading pre-saved configuration files are some of the higher end capabilities the Digihelic Links™ Communications Software provides. The Digihelic Links™ Communications Software is compatible with all Series DH and DHII Digihelic® Differential Pressure Controllers.

FEATURES/BENEFITS
- Log and graph data up to 10 units simultaneously; view up to 40 units
- Easy to use Windows® based operator interface
- Data logging at individually adjustable rates
- On-screen graphing of process values
- Upload and download saved control configuration profiles
- Remote calibration of controls

MODEL CHART	
Model	**Description**
Digihelic Links™	Communications software CD

ACCESSORIES	
Model	**Description**
MN-1	Mini-Node™ USB/RS-485 converter

REQUIRED EQUIPMENT COMPUTER REQUIREMENTS
The Digihelic Links™ Communications Software application will run on Windows® 95/98 and Windows® NT Workstation 4.0 (Service Pack 3 recommended), Windows® 2000 and Windows® XP software. The hardware requirements for each of these operating systems can be found in the documentation provided with that operating system. One available RS-485 port is needed to communicate with the control(s). A minimum of 4 MB of hard disk space is needed for the Digihelic Links™ Communications Software application files, and additional hard disk space is needed to store data log files. Log file size will vary depending on the duration and rate selected for the controls and the number of controls on line.

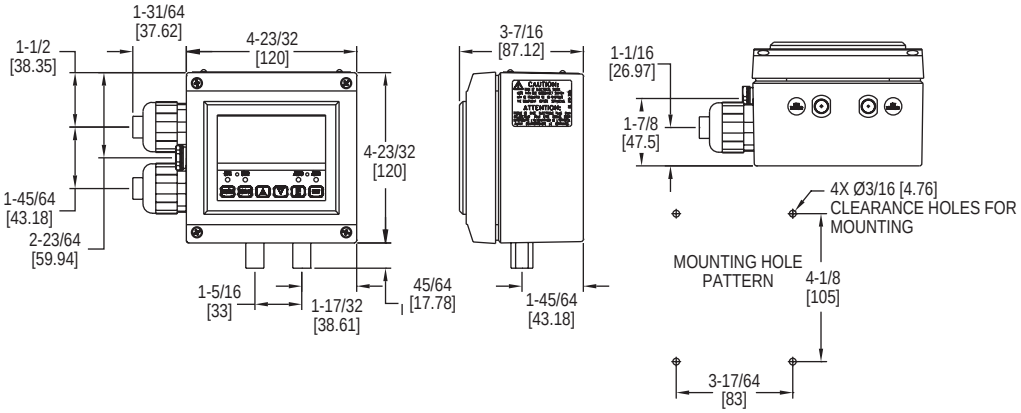
COMMUNICATION REQUIREMENTS
To communicate with the Digihelic® Differential Pressure Controller from a PC with an RS-232 Serial Communications Port, an RS-485 to RS-232 converter is required to convert the signal from the Digihelic® controller RS-485 format to the RS-232 input of the PC. Recommended converters are the Models 351-9 RS-485 to RS-232 converter or Model MN-21 RS-485 to USB converter. For RS-485 systems a 120 Ω resistor is also needed to terminate the last control on the control network. Shielded twisted pair cable is recommended for wiring the controls together.

Dwyer

SERIES DHII

DIGIHELIC® II DIFFERENTIAL PRESSURE CONTROLLER

NEMA 4 (IP66) Housing With Large, Bright LCD, Square Root Output for Flow



The **Series DHII Digihelic® II Differential Pressure Controller** takes all the features of the standard Digihelic® Pressure Controller and packages them in a robust NEMA 4 (IP66) housing.

The Digihelic® II Pressure Controller combines the 2 SPDT control relays, 4 to 20 mA process output and Modbus® communications with a large, brightly backlit 4 digit LCD display that can easily be seen from long distances. The electrical wiring has also been enhanced in the DHII with its detachable terminal blocks. The removable terminals allow the install to easily wire the terminal block outside the housing and then attach to the circuit board, reducing wiring difficulties and installation time on the process.

The Digihelic® II Differential Pressure Control in the NEMA 4 (IP66) enclosure enables this product to be the perfect choice when mounting pressure controls outdoors in such applications as rooftop air handlers. This housing also makes it the ideal solution for surface mounting in clean rooms or facilities where water or a cleaning solution is utilized in maintaining plant cleanliness.

FEATURES/BENEFITS

- NEMA 4 housing enables a range of uses both outdoors or indoors where water is present
- Large backlight LCD display provides local reading from a distance
- Detachable terminal blocks reduce wiring difficulties saving installation time

APPLICATIONS

- Air handlers
- Clean rooms

ACCESSORIES	
Model	**Description**
MN-1	Mini-Node™ USB/RS-485 converter
A-301	Static pressure tip for 1/4″ metal tubing connection
A-302	Static pressure tip for 3/16″ and 1/8″ I.D. plastic or rubber tubing
A-438	Surface mounting brackets
A-489	4″ straight static pressure tip with flange
A-302F-A	303 SS static pressure tip with mounting flange; for 3/16″ ID rubber or plastic tubing; 4″ insertion depth; includes mounting screws
Digihelic Links™	Communications software

SPECIFICATIONS

Service: Air and non-combustible, compatible gases.
Wetted Materials: Consult factory.
Housing Material: Aluminum, glass.
Accuracy: ±0.5% at 77°F (25°C) including hysteresis and repeatability (after 1 hour warm-up).
Stability: < ±1% per year.
Pressure Limits: Ranges ≤ 2.5 in w.c. = 2 psi; 5″: 5 psi; 10″: 5 psi; 25″: 5 psi; 50″: 5 psi, 100″: 9 psi.
Temperature Limits: 32 to 140°F (0 to 60°C).
Compensated Temperature Limits: 32 to 140°F (0 to 60°C).
Thermal Effects: 0.020%/°F (0.036/°C) from 77°F (25°C).
Power Requirements: High voltage power = 100 to 240 VAC, 50 to 400 Hz or 132 to 240 VDC; Low voltage power = 24 VDC ±20%.
Power Consumption: Low voltage power = 24 VDC - 130 mA max; High voltage power = 100 to 240 VAC, 132 to 240 VDC - 7 VA max.
Output Signal: 4 to 20 mA DC into 900 Ω max.
Zero & Span Adjustments: Accessible via menus.
Response Time: 250 ms (dampening set to 1).
Display: 4 digit backlit LCD 0.6″ height. LED indicators for set point and alarm status.
Electrical Connections: Euro type removable terminal blocks with watertight conduit fittings for 1/2″ watertight conduit.
Process Connections: 1/8″ female NPT.
Enclosure Rating: Designed to meet NEMA 4 (IP66).
Mounting Orientation: Mount unit in horizontal plane.
Weight: 2 lb 10 oz (1.19 kg).
Serial Communications: Modbus® RTU, RS485, 9600 baud.
Agency Approvals: CE, UL.

SWITCH SPECIFICATIONS
Switch Type: 2 SPDT relays.
Electrical Rating: 8 amps at 240 VAC resistive.
Set Point Adjustment: Adjustable via keypad on face.

MODEL CHART - AVAILABLE PRESSURE ENGINEERING UNITS													
Model	**in w.c.**	**ft w.c.**	**mm w.c.**	**cm w.c.**	**psi**	**in Hg**	**mm Hg**	**mbar**	**Pa**	**kPa**	**hPa**	**oz/in²**
DHII-002	.2500	-	6.350	0.635	-	-	0.467	0.623	62.28	-	0.623	0.144
DHII-004	1.000	-	25.40	2.540	-	-	1.868	2.491	249.1	0.249	2.491	0.578
DHII-006	5.000	.4167	127.0	12.70	.1806	.3678	9.342	12.45	1245	1.245	12.45	2.890
DHII-007	10.00	.8333	254.0	25.40	.3613	.7356	18.68	24.91	2491	2.491	24.91	5.780
DHII-008	25.00	2.083	635.0	63.50	.9032	1.839	46.71	62.27	6227	6.227	62.27	14.45
DHII-009*	50.00	4.167	1270	127.0	1.806	3.678	93.42	124.5	-	12.45	124.5	28.90
DHII-010*	100.0	8.333	2540	254.0	3.613	7.356	186.8	249.1	-	24.91	249.1	57.80

*Velocity and volumetric flow not available on bi-directional range units and models DHII-009 & DHII-010.

MODEL CHART - BI-DIRECTIONAL* RANGES	
Model	**Range**
DHII-012	0.25 to 0 to 0.25 in w.c.
DHII-014	1.0 to 0 to 1.0 in w.c.
DHII-015	2.5 to 0 to 2.5 in w.c.
DHII-016	5 to 0 to 5 in w.c.
DHII-017	10 to 0 to 10 in w.c.
*Velocity and volumetric flow not available on bi-directional range units and models DHII-009 & DHII-010.	

OPTIONS	
Use order code:	**Description**
-NIST	NIST calibration certificate

Modbus® is a registered trademark of Schneider Automation, Inc.

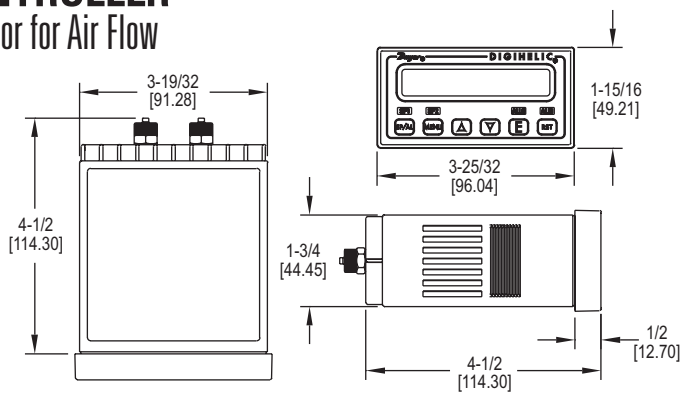
Process Tubing Options: See page 455 (Gage Tubing Accessories)

Dwyer

SERIES DH

DIGIHELIC® DIFFERENTIAL PRESSURE CONTROLLER

3-in-1 Instrument: Gage, Switch and Transmitter, Square Root Extractor for Air Flow



The **Series DH Digihelic® Differential Pressure Controller** is a 3-in-1 instrument possessing a digital display gage, control relay switches, and a transmitter with current output. The Digihelic® controller is the ideal instrument for pressure, velocity and flow applications, achieving a 0.5% full-scale accuracy on ranges from 0.25 to 100 in w.c. The Digihelic® controller allows the selection of pressure, velocity or volumetric flow operation in several commonly used engineering units. Two SPDT control relays with adjustable dead bands are provided along with a scalable 4 to 20 mA process output. The Series DH provides extreme flexibility in power usage by allowing 120/220 VAC and also 24 VDC power which is often used in control panels.
Programming is easy using the menu key to access 5 simplified menus which provide access to: security level; selection of pressure, velocity or flow operation; selection of engineering units; K-factor for use with flow sensors; rectangular or circular duct for inputting area in flow applications; set point control or set point and alarm operation; alarm operation as a high, low or high/low alarm; automatic or manual alarm reset; alarm delay; view peak and valley process readings; digital damping for smoothing erratic process applications; scaling the 4 to 20 mA process output to fit your application's range; Modbus® communications; and field calibration.

FEATURES/BENEFITS

- 3-in-1 instrument allows the reduction of several instruments with one product, saving inventory, installation time and money
- Velocity of flow modes, a square root output coincides with the actual flow curve for greater precision
- Power usage of 120/220 VAC or 24 VDC provides flexibility to incorporate device in control panel
- Secure menu program provides access to device operation only for the right skill level
- Modbus® communications supports Process and HVAC system integration and control

APPLICATIONS

- SCFM duct flow
- Industrial ovens air flow
- Filter status
- Clean room pressurization
- Fume hood air flow
- Surgical and medical room pressurization
- Damper and fan control

SPECIFICATIONS

Service: Air and non-combustible, compatible gases.
Wetted Materials: Consult factory.
Housing Material: ABS plastic, UL approved 94 V-0.
Accuracy: ±0.5% at 77°F (25°C) including hysteresis and repeatability.
Stability: < ±1% per year.
Pressure Limits: Ranges ≤ 2.5 in w.c. = 2 psi; 5″: 5 psi; 10″: 5 psi; 25″: 5 psi; 50″: 5 psi, 100″: 9 psi.
Temperature Limits: 32 to 140°F (0 to 60°C).
Compensated Temperature Limits: 32 to 140°F (0 to 60°C).
Thermal Effects: 0.020%/°F (0.036/°C) from 77°F (25°C).
Power Requirements: High voltage power = 100 to 240 VAC, 50 to 400 Hz or 132 to 240 VDC. Low voltage power = 24 VDC ±20%.
Power Consumption: Low voltage power = 24 VDC - 130 mA max; High voltage power = 100 to 240 VAC, 132 to 240 VDC - 7VA max.
Output Signal: 4 to 20 mA DC into 900 Ω max.
Zero & Span Adjustments: Accessible via menus.
Response Time: 250 ms.
Display: 4 digit LCD 0.4″ height. LED indicators for set point and alarm status.
Electrical Connections: Screw terminals.
Process Connections: Compression fitting for use with 1/8″ ID X 1/4″ OD tubing (3.175 mm ID x 6.35 mm OD). Optional barbed fitting for 3/16″ ID tubing.
Enclosure Rating: Face designed to meet NEMA 4X (IP66).
Mounting Orientation: Mount unit in horizontal plane.
Size: 1/8 DIN.
Panel Cutout: 1.772 x 3.620 in (45 x 92 mm).
Weight: 14.4 oz (408 g).
Serial Communications: Modbus® RTU, RS485, 9600 baud.
Agency Approvals: CE, UL.

SWITCH SPECIFICATIONS

Switch Type: 2 SPDT relays.
Electrical Rating: 8 amps at 240 VAC resistive.
Set Point Adjustment: Adjustable via keypad on face.

OPTIONS	
To order add suffix:	**Description**
-B	Barbed fitting for 3/16″ ID tubing
-NIST	NIST traceable calibration certificate
Example: DH-004-NIST	
-FC	Factory calibration certificate
Example: DH-004-FC	

ACCESSORIES	
Model	**Description**
MN-1	Mini-Node™ USB/RS-485 converter; the Mini-Node™ converters are an easy solution for utilizing the Digihelic® controller's RS-485 serial communication and connecting to virtually any PC.
A-266	Digihelic® surface mounting bracket
A-203	1/8″ ID x 1/4″ OD PVC tubing
Digihelic Links™	Communications Software

MODEL CHART - AVAILABLE PRESSURE ENGINEERING UNITS

Model	in w.c.	ft w.c.	mm w.c.	cm w.c.	psi	in Hg	mm Hg	mbar	Pa	kPa	hPa	oz/in²
DH-002	.2500	-	6.350	0.635	-	-	0.467	0.623	62.28	-	0.623	0.144
DH-004	1.000	-	25.40	2.540	-	-	1.868	2.491	249.1	0.249	2.491	0.578
DH-006	5.000	.4167	127.0	12.70	.1806	.3678	9.342	12.45	1245	1.245	12.45	2.890
DH-007	10.00	.8333	254.0	25.40	.3613	.7356	18.68	24.91	2491	2.491	24.91	5.780
DH-008	25.00	2.083	635.0	63.50	.9032	1.839	46.71	62.27	6227	6.227	62.27	14.45
DH-009*	50.00	4.167	1270	127.0	1.806	3.678	93.42	124.5	-	12.45	124.5	28.90
DH-010*	100.0	8.333	2540	254.0	3.613	7.356	186.8	249.1	-	24.91	249.1	57.80

*Velocity and volumetric flow not available on bi-directional range units and models DH-009 & DH-010.

MODEL CHART - BI-DIRECTIONAL* RANGES	
Model	**Range**
DH-012	0.25 to 0 to 0.25 in w.c.
DH-014	1.0 to 0 to 1.0 in w.c.
DH-015	2.5 to 0 to 2.5 in w.c.
DH-016	5 to 0 to 5 in w.c.
DH-017	10 to 0 to 10 in w.c.
*Velocity and volumetric flow not available on bi-directional range units and models DH-009 & DH-010.	

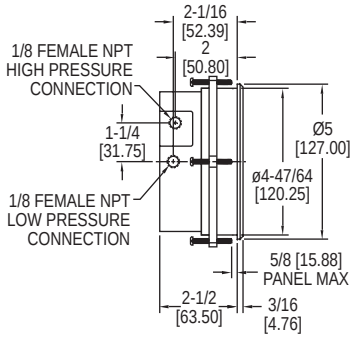
Process Tubing Options: See page 455 (Gage Tubing Accessories)

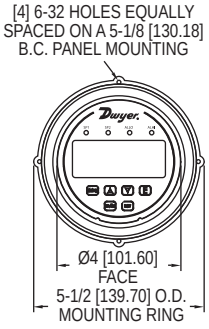
Dwyer

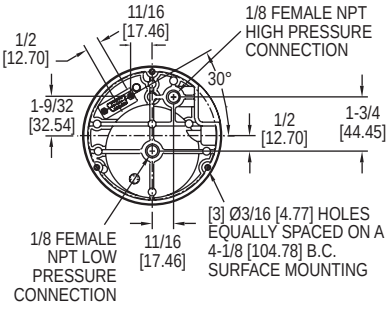
SERIES DH3

DIGIHELIC® 3 DIFFERENTIAL PRESSURE CONTROLLERS

Digihelic® Controller in Photohelic® Gage, Square Root Output for Flow







VIDEO ONLINE

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

The **Series DH3 Digihelic® 3 Differential Pressure Controllers** are 3-in-1 instruments possessing a digital display gage, control relay switches, and a transmitter with current output all packed in the popular Photohelic® gage style housing. Combining these 3 features allows the reduction of several instruments with one product, saving inventory, installation time and money. The Digihelic® controller is the ideal instrument for pressure, velocity and flow applications, achieving a 1% full-scale accuracy on ranges down to the extremely low 0.25 in w.c. to 2.5 in w.c. full-scale. Ranges of 5 in w.c. and greater maintain 0.5% FS accuracy. Bi-directional ranges are also available. The Series DH3 Digihelic® controller allows the selection of pressure, velocity or volumetric flow operation in several commonly used engineering units. 2 SPDT control relays with adjustable deadbands are provided along with a scalable 4 to 20 mA process output.

Programming is easy using the menu key to access 5 simplified menus which provide access to: security level; selection of pressure, velocity or flow operation; selection of engineering units; K-factor for use with flow sensors; rectangular or circular duct for inputting area in flow applications; set point control or set point and alarm operation; alarm operation as a high, low or high/low alarm; automatic or manual alarm reset; alarm delay; view peak and valley process reading; digital damping for smoothing erratic process applications; scaling the 4 to 20 mA process output to fit your applications range and field calibration.

FEATURES/BENEFITS

- 3-in-1 instrument allows the reduction of several instruments with one product, saving inventory, installation time and money
- Full-scale accuracy of 1% even on extremely low ranges, and 0.5% for ranges above 5 in w.c. provide for greater measurement precision
- Secure menu program provides access to device operation only for the right skill level
- Optional stainless steel bezel is the same installation diameter as Magnehelic® gage and simplifies field upgrade to DH3 pressure controller

APPLICATIONS

- SCFM duct flow
- Filter status
- Duct or building static pressure
- Damper and fan control

MODEL CHART			
Model	**Ranges**	**Model**	**Ranges**
DH3-002	0 to 0.25 in w.c.	***DH3-010**	0 to 50 in w.c.
DH3-003	0 to 0.5 in w.c.	***DH3-011**	0 to 100 in w.c.
DH3-004	0 to 1 in w.c.	***DH3-013**	0 to ±0.25 in w.c.
DH3-005	0 to 2.5 in w.c.	***DH3-014**	0 to ±0.5 in w.c.
DH3-006	0 to 5 in w.c.	***DH3-015**	0 to ±1 in w.c.
DH3-007	0 to 10 in w.c.	***DH3-016**	0 to ±2.5 in w.c.
DH3-009	0 to 25 in w.c.	***DH3-017**	0 to ±5 in w.c.
		***DH3-018**	0 to ±10 in w.c.
*Velocity and volumetric flow not available on bi-directional range units and models DH3-010 and DH3-011.			

SPECIFICATIONS	
Service: Air and non-combustible, compatible gases. **Wetted Materials:** Consult factory. **Housing Material:** Die cast aluminum case and bezel. **Accuracy:** ±1.5% for 0.25 in and ±0.25 in w.c. ranges. Ranges 0.5 in to 5 in w.c. and corresponding bi-directional (except ±2.5 in w.c.) ±1%; All other ranges: ±0.5% @ 77°F (25°C) including hysteresis and repeatability (after 1 hour warm-up). **Stability:** < ±1% per year. **Pressure Limits:** Ranges ≤ 2.5 in w.c.: 25 psi; ±2.5″, 5 in w.c.: 5 psi; 10 in w.c.: 5 psi; 25 in w.c.: 5 psi; 50 in w.c.: 5 psi; 100 in w.c.: 9 psi. **Temperature Limits:** 32 to 140°F (0 to 60°C). **Compensated Temperature Limits:** 32 to 140°F (0 to 60°C). **Thermal Effects:** 0.020%/°F (0.036/°C) from 77°F (25°C). For 0.25 in and ±0.25 in w.c. ranges: ±0.03%/°F (±0.054%/°C). **Power Requirements:** 12-28 VDC, 12-28 VAC 50 to 400 Hz. **Power Consumption:** 3 VA max.	**Output Signal:** 4 to 20 mA DC into 900 Ω max. **Zero & Span Adjustments:** Accessible via menus. **Response Time:** 250 ms (damping set to 1). **Display:** Backlit 4 digit LCD 0.4″ height LED indicators for set point and alarm status. **Electrical Connections:** 15 pin male high density D-sub connection. 18″ (46 cm) cable with 10 conductors included. **Process Connections:** 1/8″ female NPT. Side or back connections. **Mounting Orientation:** Mount unit in vertical plane. **Size:** 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:** 1.75 lb (794 g). **Agency Approvals:** CE. **SWITCH SPECIFICATIONS** **Switch Type:** 2 SPDT relays. **Electrical Rating:** 1 A @ 30 VAC/VDC. **Set Point Adjustment:** Adjustable via keypad on face.

ACCESSORIES	
Model	**Description**
A-298	Flat aluminum bracket for flush mounting
A-301	Static pressure tip for 1/4″ metal tubing connection
A-302	Static pressure tip for 3/16″ and 1/8″ I.D. plastic or rubber tubing
A-302F-A	303 SS static pressure tip with mounting flange; for 3/16″ ID rubber or plastic tubing; 4″ insertion depth; includes mounting screws
A-370	Mounting bracket flush mount bracket; bracket is then surface mounted; steel with gray hammertone epoxy finish
A-489	4″ straight static pressure tip with flange

OPTIONS	
To order add suffix:	**Description**
-SS	304 brushed stainless steel bezel. ⁺Backward compatible with standard Magnehelic® gage installation diameter
Example: DH3-004-SS	
-NIST	NIST traceable calibration certificate
Example: DH3-004-NIST	
-FC	Factory calibration certificate
Example: DH3-004-FC	

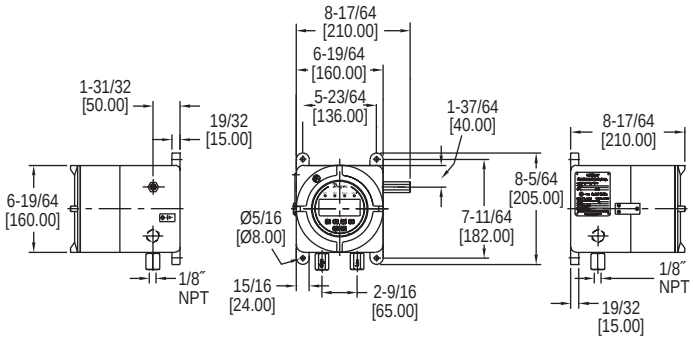
Process Tubing Options: See page 455 (Gage Tubing Accessories)

Dwyer

SERIES AT2DH3

ATEX/IECEX APPROVED DH3 DIFFERENTIAL PRESSURE CONTROLLER

Digihelic® Pressure Control in Flame-Proof ATEX/IECEx Enclosure



The **Series AT2DH3 ATEX/IECEx Approved DH3 Differential Pressure Controller** is a 3-in-1 instrument possessing a digital display gage, control relay switches, and a transmitter with current output. Combining these three features allows the reduction of several instruments with one product, saving inventory, installation time and money. The Digihelic® controller is the ideal instrument for hazardous area pressure, velocity and flow applications by allowing for the selection of pressure, velocity or volumetric flow operation in several commonly used engineering units. Two SPDT control relays with adjustable dead bands are provided along with a scalable 4-20 mA process output. In velocity or flow modes, a square root output is provided on the 4-20 mA signal to coincide with the actual flow curve. Flame-proof enclosures are available in aluminum and can include a glass window for viewing process information and set point status on digital display.

FEATURES/BENEFITS

- 3-in-1 instrument allows the reduction of several instruments with one product, saving inventory, installation time and money
- Flame-proof 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

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.
DH3 Housing Material: Die cast aluminum case and bezel.
Housing Material: Aluminum.
Finishing: Texture epoxy coat RAL7038.
Accuracy: < 5 in w.c. (except ±2.5 in w.c.): ±1%; All other ranges: ±0.5% at 77°F (25°C) including hysteresis and repeatability (after 1 hour warm-up).
Stability: < ±1% per year.
Pressure Limits: Ranges ≤ 2.5 in w.c.: 25 psi; ±2.5″, 5 in w.c.: 5 psi; 10 in w.c.: 5 psi; 25 in w.c.: 5 psi; 50 in w.c.: 5 psi; 100 in w.c.: 9 psi.
Temperature Limits: 32 to 140°F (0 to 60°C) (**Note:** Product temperature limits differ from case).
Compensated Temperature Limits: 32 to 140°F (0 to 60°C).
Thermal Effects: 0.020%/°F (0.036/°C) from 77°F (25°C).
Power Requirements: 12-28 VDC, 12-28 VAC 50 to 400 Hz.
Power Consumption: 3 VA max.
Output Signal: 4-20 mA DC into 900 Ω max.
Zero & Span Adjustments: Accessible via menus in safe zone only.
Response Time: 250 ms (damping set to 1).
Display: Backlit 4 digit LCD 0.4″ height LED indicators for set point and alarm status.
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.
Weight: 12.3 lb (5.6 kg).
Electrical Wiring: Screw terminal.
Mounting Orientation: Mount unit in vertical plane.
Enclosure Rating: (IP66). IP65 with option OPV, overpressure relief valve.
Dial Size: 5″ (127 mm) OD x 3-1/8″ (79.38 mm).
ATEX Certificate: BVI 14ATEX0072.
Agency Approvals: ATEX Compliant CE 1370 Ex II 2G Ex d IIC T6 Gb / II 2D Ex tb IIIC T85°C Db, -60°C≤Tamb≤+60°C IECEx Compliant: Ex d IIC T6 Gb / Ex tb IIIC T85°C Db.

SWITCH SPECIFICATIONS
Switch Type: 2 SPDT relays.
Electrical Rating: 1 A @ 30 VAC/VDC.
Set Point Adjustment: Adjustable via keypad on face in safe zone only.

MODEL CHART

Example	AT2DH3	-002	-A	O	1	X	T2	AT2DH3-002-AO1XT2
Series	AT2DH3							ATEX/IECEx approved DH3 differential pressure controller
Range		002 003 004 005 006 007 009 010 011 013 014 015 016 017 018						0 to 0.25 in w.c. (0 to 62.2 Pa) 0 to 0.5 in w.c. (0 to 124.4 Pa) 0 to 1 in w.c. (0 to 248.8 Pa) 0 to 2.5 in w.c. (0 to 622.1 Pa) 0 to 5 in w.c. (0 to 1244.2 Pa) 0 to 10 in w.c. (0 to 2488.4 Pa) 0 to 25 in w.c. (0 to 6221 Pa) 0 to 50 in w.c. (0 to 12442 Pa) 0 to 100 in w.c. (0 to 24884 Pa) 0.25 to 0 to 0.25 in w.c. (62.2 to 0 to 62.2 Pa) 0.5 to 0 to 0.5 in w.c. (124.4 to 0 to 124.4 Pa) 1 to 0 to 1 in w.c. (248.8 to 0 to 248.8 Pa) 2.5 to 0 to 2.5 in w.c. (622.1 to 0 to 622.1 Pa) 5 to 0 to 5 in w.c. (1244.2 to 0 to 1244.2 Pa) 10 to 0 to 10 in w.c. (2488.4 to 0 to 2488.4 Pa)
Housing Material			A					Aluminum
Cover				B O				Blind Glass top cover
Process Connection					1 2			1/8″ NPT F brass ports 1/8″ NPT F SS ports
Overpressure Plug						X OPV		Standard without overpressure relief valve Overpressure relief valve Material same as port
Tag							T2	SS information label

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

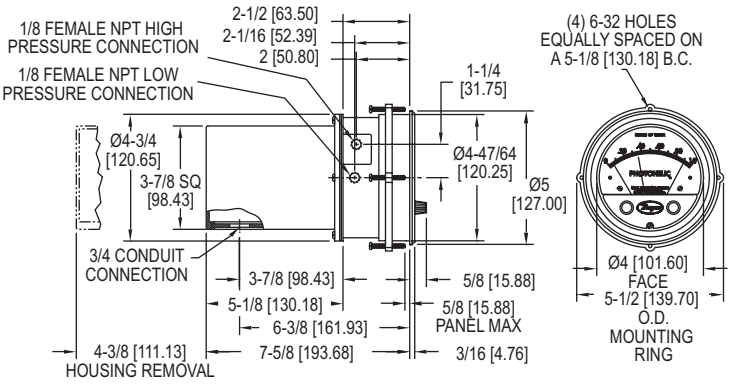
Dwyer

SERIES A3000

PHOTOHELIC® PRESSURE SWITCH/GAGE

3-in-1 Indicating Gage, Lo-Limit and Hi-Limit Control

Set points are instantly adjusted with front knobs



The **Series A3000 Photohelic® Pressure Switch/Gage** functions as versatile, highly repeatable pressure switches combined with a precise pressure gage employing the time-proven Magnehelic® gage design. The Photohelic® switch/gage measures and controls positive, negative or differential pressures of air and compatible gases. Standard models are rated to 25 psig (1.7 bar) with options to 35 (2.4) or 80 (5.5 bar) psig. Two phototransistor actuated, DPDT relays are included for low/high limit control. Easy to adjust set point indicators are controlled by knobs located on the gage face. Individual set point deadband is one pointer width - less than 1% of full-scale. Set points can be interlocked to provide variable deadband - ideal for control of fans, dampers, etc. Gage reading is continuous and unaffected by switch operation, even during loss of electrical power. Choose from full-scale pressure ranges from a low 0-.25 in (0-6 mm) w.c. up to 30 psi (21 bar).

FEATURES/BENEFITS

- 3-in-1 instrument allows the reduction of several instruments with one product, saving inventory, installation time and money
- Patented design and 1% full-scale dead band provides quick response to pressure changes means no delay in switching and chatter-free operation
- A wide range of models that can meet pressure measurement specifications from low to very high

APPLICATIONS

- Air conditioning systems
- Clean rooms
- Fume exhaust systems

SPECIFICATIONS

GAGE SPECIFICATIONS

Service: Air and non-combustible, compatible gases.
Wetted Materials: Consult factory.
Accuracy: ±2% of FS at 70°F (21.1°C). ±3% on -0 and ±4% on -00 models.
Pressure Limits: -20″ Hg to 25 psig (-0.677 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). Low temperature option available.
Process Connections: 1/8″ female NPT.
Size: 4″ (101.6 mm) dial face, 5″ (127 mm) OD x 8-1/4″ (209.55 mm).
Weight: 4 lb (1.81 kg).

SWITCH SPECIFICATIONS

Switch Type: Each set point has 2 form C relays (DPDT).
Repeatability: ±1% of FS.
Electrical Rating: 10 A @ 28 VDC, 10 A @ 120, 240 VAC.
Electrical Connections: Screw terminals. Use 167°F (75°C) copper conductors only.
Power Requirements: 120 VAC, 50/60 Hz; 240 VAC and 24 VAC power optional.
Mounting Orientation: Diaphragm in vertical position. Consult factory for other position orientations.
Set Point Adjustment: Adjustable knobs on face.
Agency Approvals: CE, CSA, UL.

Dwyer

SERIES A3000

PHOTOHELIC® PRESSURE SWITCH/GAGE

3-in-1 Indicating Gage, Lo-Limit and Hi-Limit Control

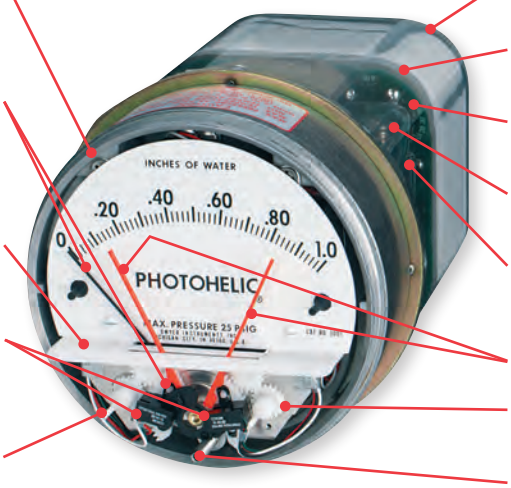
Bezel and front cover (with set point knobs and zero adjustment screw) removed to expose Photohelic® gage set point mechanism. Cover is clear polycarbonate plastic.

Gage pointer and light shutter are mounted on helix and balancing counterweight. Shutter passes through slot in optical limit switch to expose phototransistors to integral infrared light source or mask them depending on applied pressure.

Light shield effectively protects phototransistors from strong outside light sources yet allows free pointer movement. It also gives interior a clean "finished" look.

Optical limit switches are used for reliability and long service life. Attached directly to set pointers, they are individually aligned to assure precise switching accuracy.

Semi-Flexible drive shaft connects to set point knobs.



Plastic enclosure protects electronic components and electrical connections.

Polycarbonate connection or terminal board is self-extinguishing.

Glass-epoxy printed circuit boards for durability and performance.

Load relays are DPDT with latching feature for maximum application versatility.

Electronics are designed to operate on 50/60 Hz, 120 volt current with 10% over or under voltage. Special units for other voltages are available.

Switch set pointers show switch settings at all times.

Spring loaded friction clutch prevents operator damage of set point mechanism.

Zero adjustment screw connects to screw in cover to adjust zero pressure reading.

MODEL CHART

Model	Range, in w.c.
A3000-00	0-.25
A3000-0	0-.50
A3001	0-1.0
A3002	0-2.0
A3003	0-3.0
A3004	0-4.0
A3005	0-5.0
A3006	0-6.0
A3008	0-8.0
A3010	0-10
A3015	0-15
A3020	0-20
A3025	0-25
A3030	0-30
A3040	0-40
A3050	0-50
A3060	0-60
A3080	0-80
A3100	0-100
A3150	0-150
Bi-Directional Range	
A3000-00N	.05-.20

Zero Center Ranges	
Model	Range in w.c.
A3300-0	.25-0-.25
A3301	.5-0-.5
A3302	1-0-1
A3304	2-0-2
A3310	5-0-5
A3320	10-0-10
A3330	15-0-15
Model	Range in w.c. /Air Velocity, F.P.M.
A3000-00AV	0-.25/300-2000
A3000-0AV	0-.50/500-2800
A3001AV	0-1.0/500-4000
A3002AV	0-2.0/1000-5600
A3010AV	0-10/2000-12500
Pitot tube required	

Model	Range, mm w.c.
A3000-6MM	0-6
A3000-10MM	0-10
A3000-25MM	0-25
A3000-50MM	0-50
A3000-80MM	0-80
A3000-100MM	0-100
Zero Center	
A3300-20MM	10-0-10
A3300-30MM	15-0-15
Model	Range, Pascals
A3000-60PA	0-60
A3000-125PA	0-125
A3000-250PA	0-250
A3000-500PA	0-500
A3000-750PA	0-750

Zero Center Ranges	
Model	Range, Pa
A3300-250PA	125-0-125
A3300-500PA	250-0-250
Model	Range, kPa
A3000-1KPA	0-1
A3000-1.5KPA	0-1.5
A3000-2KPA	0-2
A3000-3KPA	0-3
A3000-4KPA	0-4
A3000-5KPA	0-5
A3000-8KPA	0-8
A3000-10KPA	0-10
A3000-15KPA	0-15
A3000-20KPA	0-20
A3000-25KPA	0-25
A3000-30KPA	0-30
Zero Center Ranges	
Model	Range, kPa
A3300-1KPA	.5-0- .5
A3300-3KPA	1.5-0-1.5

OPTIONS

To order add suffix:	Description
-SRH	Single relay activates on increase
-SRL	Single relay activates on decrease
-OLS	OEM model
-RMR	Remote mounted relay
-TAMP	Tamper proof knobs
-MP	Medium pressure
-HP	High pressure
-LT	Low temperature (-20°F)
-NIST	NIST traceable calibration certificate

ACCESSORIES

Model	Description
A-298	Flat flush mounting bracket
A-601	Manual reset switch net

Note: Special models can be built to OEM customers' specifications with scales reading in special pressure units like ounces per square inch, inches of mercury, etc. Square Root Scales reading in FPM or SCFM are also available. Custom logos and special graduations can also be included. Contact factory for minimum quantities and pricing.

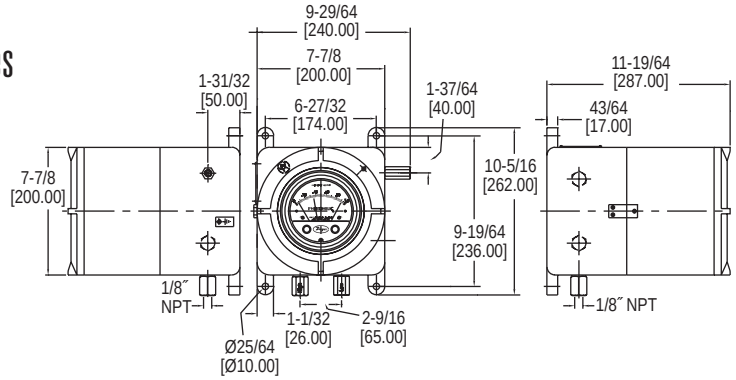
Process Tubing Options: See page 455 (Gage Tubing Accessories)

Dwyer

SERIES AT3A3000

ATEX/IECEX APPROVED PHOTOHELIC® SWITCH/GAGE WITH 120, 240 OR 24 VAC POWER

Photohelic® Switch/Gages in Flame-Proof ATEX/IECEx Enclosures



Flame-proof approved **Series AT3A3000 ATEX/IECEx Approved Photohelic® Switch/Gage with 120, 240 or 24 VAC Power** functions as versatile, highly repeatable pressure switches combined with a precise pressure gage employing the time-proven Magnehelic® gage design. The Photohelic® switch/gage measures and controls positive, negative or differential pressures of air and compatible gases. Standard models are rated to 25 psig (1.7 bar) with options to 35 psig (2.4 bar) or 80 psig (5.5 bar). Two phototransistor actuated, DPDT relays are included for low/high limit control. Easy to adjust set point indicators are controlled by knobs located on the gage face (accessible opening case after de-energizing instrument). Set points can be interlocked to provide variable dead band– ideal for control of fans, dampers, etc. Gage reading is continuous and unaffected by switch operation, even during loss of electrical power. Flame-proof enclosures are available in aluminum with glass window which allows for viewing of set point needles and process pressure.

FEATURES/BENEFITS

- 3-in-1 ATEX/IECEx approved instrument allows the reduction of several instruments with one product, saving inventory, installation time and money
- Flame-proof 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
- 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 and ±4% on -00 models.
Pressure Limits: -20 in Hg to 25 psig (-0.677 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) LT low temperature option to -20°F available (**Note:** Product temperature limits differ from case).
Dial Size: 4″ (101.6 mm).
Mounting Orientation: Diaphragm in vertical position.
Set Point Adjustment: Adjustable knobs on Photohelic® gage face behind enclosure cover. Follow instructions and safety warnings to open cover.

SWITCH SPECIFICATIONS

Switch Type: Each set point has 2 Form C relays (DPDT).
Repeatability: ±1% of FS.
Electrical Rating: 10 A @ 28 VDC, 10 A @ 120, 240 VAC.
Electrical Wiring: Screw terminals.
Power Requirements: 120 VAC, 50/60 Hz; 240 VAC & 24 VAC power optional.
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: Three 1/2″ NPT female. Cable gland not included.
Weight: 28.4 lb (12.9 kg).
ATEX Certificate: BVI 14ATEX0072.
Agency Approvals: ATEX Compliant CE 1370 Ex II 2G Ex d IIC T6 Gb / II 2D Ex tb IIIC T85°C Db, -60°C≤Tamb≤+60°C IECEx Compliant: Ex d IIC T6 Gb / Ex tb IIIC T85°C Db.

RANGE CHART

Model	Range in w.c.	Model	Range in w.c.	Model	Range in w.c.
A3000-00	0 to .25	**A3006**	0 to 6.0	**A3040**	0 to 40
A3000-0	0 to .50	**A3008**	0 to 8.0	**A3050**	0 to 50
A3001	0 to 1.0	**A3010**	0 to 10	**A3060**	0 to 60
A3002	0 to 2.0	**A3015**	0 to 15	**A3080**	0 to 80
A3003	0 to 3.0	**A3020**	0 to 20	**A3100**	0 to 100
A3004	0 to 4.0	**A3025**	0 to 25	**A3150**	0 to 150
A3005	0 to 5.0	**A3030**	0 to 30		

MODEL CHART

Example	AT3	A3001	-120VAC	-X	X	X	-A	B	1	X	T2	AT3A3001-120VAC-XXX-AB1XT2
Housing	AT3											ATEX/IECEx approved Photohelic® switch/gages
Range		A3XXX										Specify range by wiring Photohelic® model number. See range chart.
Power			120VAC 240VAC 24VAC									Power requirement 120 VAC Power requirement 240 VAC Power requirement 24 VAC
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 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

Dwyer

SERIES 43000

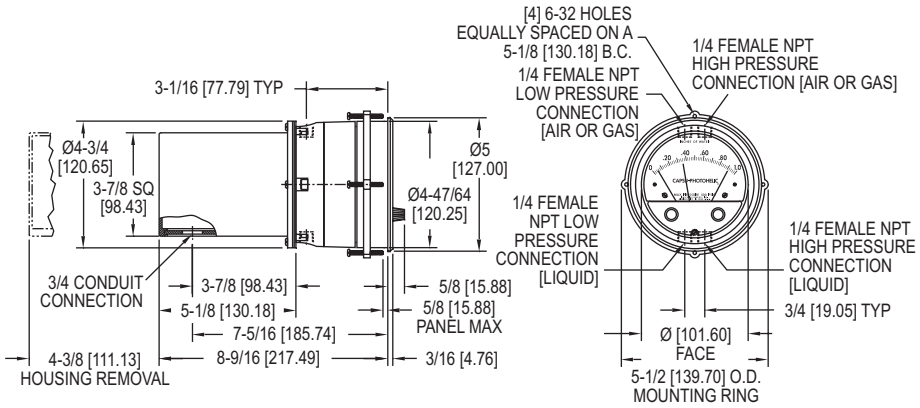
CAPSU-PHOTOHELIC® PRESSURE SWITCH/GAGES

Lo-Limit and Hi-Limit Control, Aluminum or Brass Case Available

Set points are instantly adjusted with front knobs.

Series 43000
Capsu-Photohelic® switch/gage

Series 43000
Capsu-Photohelic® switch/gage with brass body



Series 43000 Capsu-Photohelic® Pressure Switch/Gages function as versatile, highly repeatable pressure switches combined with a precise pressure gage employing the time-proven Magnehelic® gage design. The Capsu-Photohelic® switch/gage employs an encapsulated sensing element for use with both liquids and gases at pressures to 500 psig (34 bar). Optional cast brass case is available for water or water based liquids. Two phototransistors actuated, DPDT relays are included for low/high limit control. Easy to adjust set point indicators are controlled by knobs located on the gage face. Individual set point deadband is one pointer width — less than 1% of full-scale. Set points can be interlocked to provide variable deadband — ideal for control of pumps.

FEATURES/BENEFITS

- Gage capsule permits high-pressure usage with small differentials
- Zero and range adjustments outside of gage means no disassembly in normal service
- Time-proven, simple, frictionless movement that permits full-scale readings as low as 0.5 in w.c.
- Photo-electronic relays provide fast-acting switching with variable deadband control for chatter-free operation

APPLICATIONS

- Pump control
- Pumping systems
- Waste water
- Compatible liquid or gas applications

MODEL CHART			
Model	**Range in w.c.**	**Model**	**Range in w.c.**
43000-0	0-.5	**43050**	0-50
43001	0-1.0	**43060**	0-60
43002	0-2.0	**43080**	0-80
43003	0-3.0	**43100**	0-100
43004	0-4.0	**43150**	0-150
43005	0-5.0	**43200**	0-200
43006	0-6.0	**43300**	0-300
43008	0-8.0	**43400**	0-400
43010	0-10	**43500**	0-500
43015	0-15	**43302**	1-0-1
43020	0-20	**43304**	2-0-2
43025	0-25	**43310**	5-0-5
43030	0-30	**43320**	10-0-10
43040	0-40	**43330**	15-0-15

ACCESSORIES	
Model	**Description**
A-298	Flat aluminum bracket for flush mounting

SPECIFICATIONS

GAGE SPECIFICATIONS
Service: Compatible gases and liquids. Brass case option required for water based liquids.
Wetted Materials: Consult factory.
Accuracy: ±3% of FS at 70°F (21.1°C). ±4% on 43215, 43220 and 43500.
Pressure Limits: -20 Hg to 500 psig (-0.677 to 34.5 bar).
Temperature Limits: 20 to 120°F (-6.67 to 48.9°C). Low temperature option available.
Process Connections: 1/4˝ female NPT.
Size: 4˝ (101.6 mm) dial face, 5˝ (127 mm) OD x 9-3/16˝ (233.36 mm).
Weight: 5 lb, 8 oz (2.49 kg). Brass 11 lb, 2 oz (5.05 kg).

SWITCH SPECIFICATIONS
Switch Type: Each set point has 2 form C relays (DPDT).
Repeatability: ±1% of FS.
Electrical Rating: 10 A @ 120 VAC, 6 A @ 240 VAC, 60 Hz res. 10 A @ 28 VDC.
Electrical Connections: Screw terminals.
Power Requirements: 120 VAC, 50/60 Hz; 240 VAC and 24 VAC power optional.
Mounting Orientation: Diaphragm in vertical position. Consult factory for other position orientations.
Set Point Adjustment: Adjustable knobs on face.

OPTIONS	
To order add suffix:	**Description**
-SRH	Single relay activates on increase
-SRL	Single relay activates on decrease
-24VAC	24 VAC relay pack
-240VAC	240 VAC relay pack
-RMR	Remote mounted relay
-TAMP	Tamper proof knobs
-WP	Weatherproof (NEMA 4)
-EXPL	Explosion-proof (NEMA 7 C, D, 9 E, F, G; NEC Class I, Div. 1 & 2, Groups C, D, Class II, Div. 1 & 2, Groups E, F, G, Class III
-NIST	NIST traceable calibration certificate
Example: 43001-NIST	
B	Brass body; For water based liquids order optional brass case
Example: 43001B	
Contact Customer Service for detailed dimension drawings.	

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

Process Tubing Options: See page 455 (Gage Tubing Accessories)

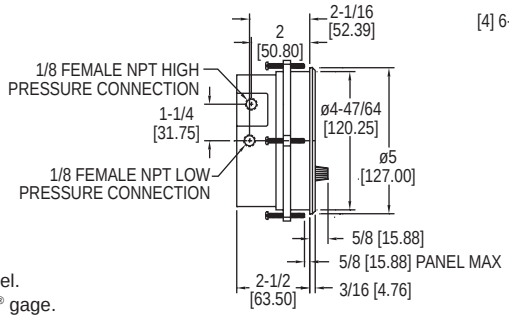
Dwyer

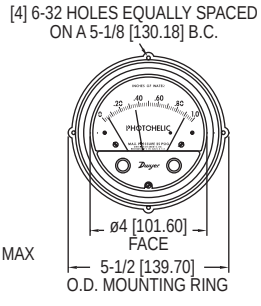
SERIES 3000MR & 3000MRS

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	

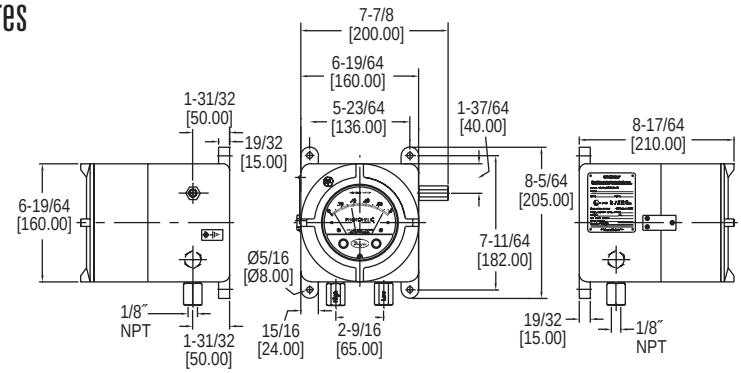
Process Tubing Options: See page 455 (Gage Tubing Accessories)

Dwyer

SERIES AT23000MR & AT23000MRS

ATEX/IECEX APPROVED PHOTOHELIC® SWITCH/GAGES WITH 24 VDC POWER

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



Using solid state technology, the **Series AT23000MR & AT23000MRS ATEX/IECEx Approved Photohelic® Switch/Gage with 24 VDC Power** combines 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 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 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) (**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 Certificate: BVI 14ATEX0072.
Agency Approvals: ATEX Compliant CE 1370 Ex II 2G Ex d IIC T6 Gb / II 2D Ex tb IIIC T85°C Db, -60°C≤Tamb≤+60°C IECEx Compliant: Ex d IIC T6 Gb / Ex tb IIIC T85°C Db.

SWITCH SPECIFICATIONS (3000MR)
Switch Type: Each set point 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 set point 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	**3000-60PA**	0 to 60	2.0
3000-0	0 to 0.5	.01	**3000-125PA**	0 to 125	5.0
3001	0 to 1.0	.02	**3000-250PA**	0 to 250	5.0
3002	0 to 2.0	.05	**3000-500PA**	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/IECEx approved Photohelic® switch/gages
Range		3XXX										Specify range by using Photohelic® model number. See range chart.
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

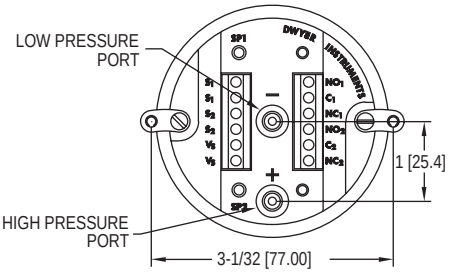
USA: California Proposition 65
⚠WARNING: Cancer and Reproductive Harm - www.P65Warnings.ca.gov

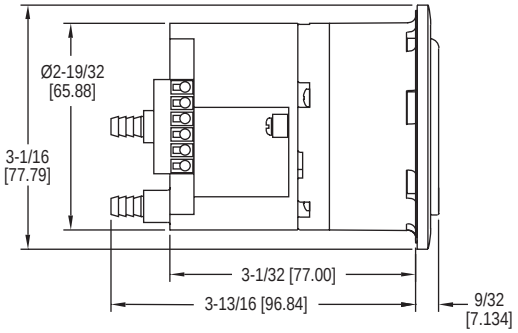
Dwyer

SERIES MP

MINI-PHOTOHELIC® DIFFERENTIAL PRESSURE SWITCH/GAGE

Compact, Low Cost Switch Gage





The **Series MP Mini-Photohelic® Differential Pressure Switch/Gage** combines the time proven Minihelic® II differential pressure gage with two SPDT switching set points. The Mini-Photohelic® switch/gage is designed to measure and control positive, negative, or differential pressures consisting of non-combustible and non-corrosive gases. Gage reading is independent of switch operation. Switching status is visible by LED indicators located on the front and rear of the gage. Set points are adjusted with push-buttons on the back of the unit.

FEATURES/BENEFITS

- Gage reading unaffected by switch operation and will continue to read pressure even during power loss
- Visible switch status LED provides indication of set point switching state
- Compact design but with the power of larger devices can meet the same application specifications

APPLICATIONS

- Fume hoods
- Dust collection
- Pneumatic conveying
- Clean room

SPECIFICATIONS

GAGE SPECIFICATIONS

Service: Air and non-combustible, compatible gases.
Wetted Materials: Consult factory.
Accuracy: ±5% of FS @ 70ºF (21.1ºC). Gage face mounted in vertical position.
Pressure Limits: 30 psig (2.067 bar).
Temperature Limits: 20 to 120ºF (-6.7 to 49ºC).
Process Connections: Barbed for 3/16″ ID tubing (STD); 1/8″ male NPT (optional).
Size: 4-1/8″ (104.78 mm) depth x 3-1/16″ (77.79 mm) diameter.
Weight: 23 oz (652 g).

SWITCH SPECIFICATIONS

Switch Type: (2) SPDT relays.
Electrical Rating: 5 A @ 120/240 VAC resistive; 5 A @ 30 VDC.
Electrical Connections: Screw type terminal block. Accepts 22-12 AWG wire.
Power Requirements: 24 VDC / 24 VAC 50/60 Hz 4 watts.
Mounting Orientation: Gage face in vertical position.
Set Point Adjustment: Push-buttons.
Standard Accessories: (2) mounting screws, (1) .050″ hex allen wrench.
Agency Approvals: CE, cULus.

MODEL CHART

Model	Range, Inches of Water	Model	Range, Pa
MP-000	0-0.5	**MP-125PA**	0-125
MP-001	0-1.0	**MP-250PA**	0-250
MP-002	0-2.0	**MP-500PA**	0-500
MP-003	0-3.0		
MP-005	0-5.0	**Model**	**Range, kPa**
MP-010	0-10	**MP-1KPA**	0-1
MP-020	0-20	**MP-3KPA**	0-3

OPTIONS

To order add suffix:	Description
-NPT	1/8″ male NPT connections
Example: MP-000-NPT; **Note:** Allow additional lead time	
-NIST	NIST traceable calibration certificate
Example: MP-005-NIST	

ACCESSORIES

Model	Description
A-301	Static pressure tip for 1/4″ metal tubing connection
A-302	Static pressure tip for 3/16″ and 1/8″ I.D. plastic or rubber tubing
A-302F-A	303 SS static pressure tip with mounting flange; for 3/16″ ID rubber or plastic tubing; 4″ insertion depth; includes mounting screws
A-489	4″ straight static pressure tip with flange

Process Tubing Options: See page 455 (Gage Tubing Accessories)

Dwyer

SERIES ADPS/EDPS/BDPA

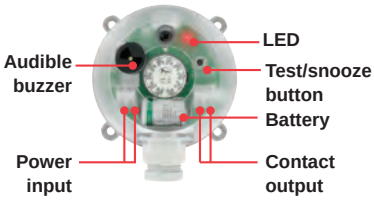
HVAC DIFFERENTIAL PRESSURE SWITCHES

With Dual Scale Field Adjustable Set Point Knob

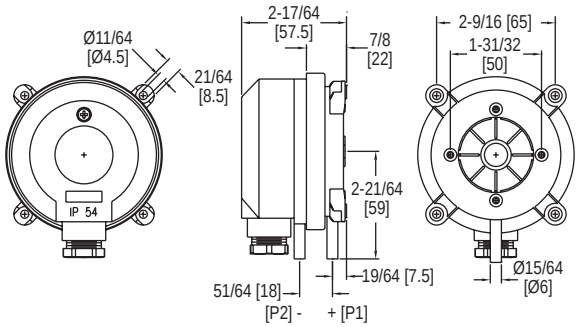
5 YEAR LIMITED WARRANTY

ADPS

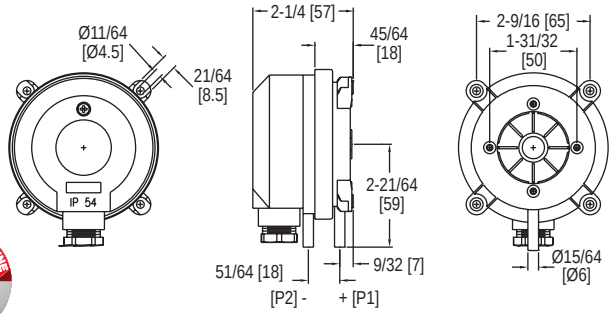
EDPS



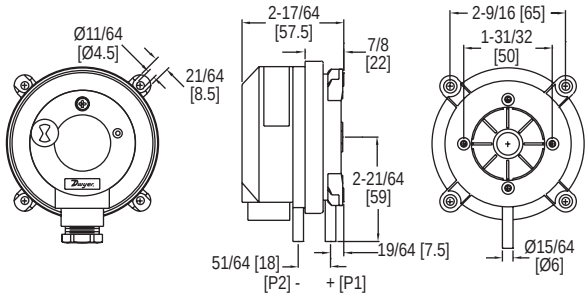
BDPA



ADPS



EDPS



BDPA

VIDEO ONLINE

The **Series ADPS/EDPS/BDPA HVAC Differential Pressure Switches** are designed for pressure, vacuum, and differential pressures. The dual scaled adjustment knob in inches water column and pascals allows changes to the switching pressure to be made without a pressure gage. The ADPS/EDPS/BDPA are available with settings from 0.08 in w.c. (20 Pa) up to 20 in w.c. (5000 Pa). The silicone diaphragm and PA 6.6 body make the series ADPS ideal for use with air and other noncombustible gases. Series EDPS models meet UL508 and are constructed of plenum rated plastics. The series BDPA Adjustable Differential Pressure Alarms offer a versatile range of configurations allowing utilization of their many features including buzzer and LED notification, and battery or line powered. The compact size, adjustment knob and low cost make the ADPS/EDPS/BDPA the perfect choice for HVAC applications.

FEATURES/BENEFITS

- Adjustment knob changes switching pressure easily with a pressure gage reducing components for application
- Low cost device makes it an excellent solution in BAS and HVAC applications requiring duct control and monitoring
- Relay contact allows simple integration with DDC or building systems

APPLICATIONS

- Air filter and ventilator monitoring
- Industrial cooling circuits
- Fire-protection damper control
- Ventilation duct monitoring
- Fan heater overheating protection
- Heat exchanger frost protection

SPECIFICATIONS

Service: Air and non-combustible, compatible gases.
Wetted Materials: ADPS: Diaphragm material: Silicone; Housing material: POM; Switch body: PA 6.6; Cover: Polystyrene; EDPS: Diaphragm material: Silicone; Housing material: Switch body: PA 6.6; Cover: Polystyrene; Materials UL 94 V-0 rated.
Temperature Limits: Process and ambient temperature from -4 to 185°F (-20 to 85°C).
Pressure Limits: Max. operating pressure: 40 in w.c. (10 kPa) for all pressure ranges.
Switch Type: Single-pole double-throw (SPDT).
Electrical Rating: Max. 1.5 A res./0.4 A ind./250 VAC, 50/60 Hz; Max. switching rate: 6 cycles/min.
Electrical Connections: Push-on screw terminals. M20x1.5 with cable strain relief or optional 1/2″ NPT.
Process Connections: 5/16″ (7.94 mm) outside diameter tubing, 1/4″ (6.0 mm) inside diameter tubing.
Enclosure Rating: NEMA 13 (IP54).
Mounting Orientation: Vertically, with pressure connections pointing downwards.
Mechanical Working Life: Over 10^6 switching operations.
Weight: 5.6 oz (160 g).
Agency Approvals: ETL approved to UL508 and CSA C22.2#14 (EDPS only).

MODEL CHART - ADPS

Model	Set Point Range in w.c. (Pa)	Approx. Dead Band @ Min Set Point in w.c. (Pa)	Approx. Deadband @ Max Set Point in w.c. (Pa)
ADPS-08-2-N	0.08 to 1.20 (20-300)	0.04 (10)	0.05 (12)
ADPS-04-2-N	0.12 to 1.60 (30-400)	0.06 (15)	0.09 (23)
ADPS-03-2-N	0.20 to 2.00 (50-500)	0.08 (20)	0.09 (23)
ADPS-05-2-N	0.80 to 4.00 (200-1000)	0.4 (100)	0.5 (130)
ADPS-06-2-N	2.00 to 10.00 (500-2500)	0.6 (150)	0.8 (200)
ADPS-07-2-N	4.00 to 20.00 (1000-5000)	1.0 (250)	1.4 (350)

Note: For optional 1/2″ NPT conduit connection, change -2-N to-1-N. Models that include installer kit add -C to the end of the model number (-2-N cable gland models only). Installer kit includes two static tips and 7 ft of PVC tubing. Order installer kit separately with 1/2″ NPT conduit connection models. See A-481 in the accessories list. Consult factory for bulk packaging option.

MODEL CHART - EDPS

Model	Set Point Range in w.c. (Pa)	Approx. Dead Band @ Min Set Point in w.c. (Pa)	Approx. Dead Band @ Max Set Point in w.c. (Pa)
EDPS-08-1-N	0.08 to 1.20 (20-300)	0.04 (10)	0.05 (12)
EDPS-04-1-N	0.12 to 1.60 (30-400)	0.06 (15)	0.09 (23)
EDPS-03-1-N	0.20 to 2.00 (50-500)	0.08 (20)	0.09 (23)
EDPS-05-1-N	0.80 to 4.00 (200-1000)	0.4 (100)	0.5 (130)
EDPS-06-1-N	2.00 to 10.00 (500-2500)	0.6 (150)	0.8 (200)
EDPS-07-1-N	4.00 to 20.00 (1000-5000)	1.0 (250)	1.4 (350)

Note: For optional M20 cable gland connection, change -1-N to-2-N.

MODEL CHART - BDPA

Model	Set Point Range in w.c. (Pa)	Approx. Dead Band @ Min Set Point in w.c. (Pa)	Approx. Dead Band @ Max Set Point in w.c. (Pa)
BDPA-08-2-N	0.08 to 1.20 (20 to 300)	0.04 (10)	0.05 (12)
BDPA-04-2-N	0.12 to 1.60 (30 to 400)	0.06 (15)	0.09 (23)
BDPA-03-2-N	0.20 to 2.00 (50 to 500)	0.08 (20)	0.09 (23)
BDPA-05-2-N	0.80 to 4.00 (200 to 1000)	0.4 (100)	0.5 (130)
BDPA-06-2-N	2.00 to 10.00 (500 to 2500)	0.6 (150)	0.8 (200)
BDPA-07-2-N	4.00 to 20.00 (1000 to 5000)	1.0 (250)	1.4 (350)

ACCESSORIES

Model	Description
A-288	"L" type metal mounting bracket with screws
A-289	"S" type metal mounting bracket with screws
A-480	Plastic static pressure tip
A-481	Installer kit, includes 2 plastic static pressure tips & 7′ (2.1 m) of PVC tubing
A-489	4″ straight static pressure tip with flange

A-480

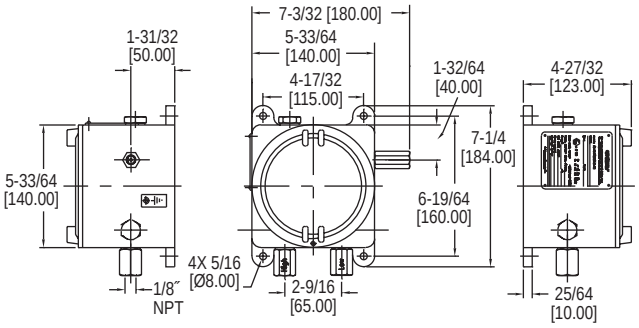
Process Tubing Options: See page 455 (Gage Tubing Accessories)

Dwyer

SERIES AT1ADPS

ATEX/IECEX APPROVED ADPS ADJUSTABLE DIFFERENTIAL PRESSURE SWITCH

The ADPS in Flame-Proof ATEX/IECEx Enclosure



The **Series AT1ADPS ATEX/IECEx Approved ADPS Adjustable Differential Pressure Switch** is designed for pressure, vacuum, and differential pressure applications in hazardous areas. The dual scaled adjustment knob in inches water column and Pascals allows changes to the switching pressure to be made without a pressure gage. The switch is available with settings from 0.08 in w.c. (20 Pa) up to 16 in w.c. (4000 Pa). The silicone diaphragm makes this series ideal for use with air and other noncombustible gases. Flame-proof enclosures are available in aluminum and can include a glass window for viewing set point status on the adjustment knob.

FEATURES/BENEFITS

- Flame-proof enclosure with optional glass window and aluminum housing protects the device in hazardous areas while giving local visibility to set point status

APPLICATIONS

- Hazardous area pressure switch
- Air filter and ventilator monitoring
- Ventilation duct monitoring
- Industrial cooling circuits
- Fan heater overheating protection
- Fire-protection damper control
- Heat exchanger frost protection

SPECIFICATIONS

Service: Air and non-combustible, compatible gases.
Wetted Materials: Diaphragm material: Silicone; Housing material: Switch body: PA 6.6 and POM; Cover: Polystyrene; Brass or SS depending on pressure connections chosen.
Temperature Limits: Process and ambient temperature from -4 to 185°F (-20 to 85°C) (**Note:** Product temperature limits differ from case).
Pressure Limits: 40 in w.c. (10 kPa).
Switch Type: SPDT.
Electrical Rating: Standard: Max. 1.5 A @ 250 VAC, max. switching rate: 6 cycles/min.
Set Point Adjustment: Hand knob on pressure switch inside case. (De-energize before opening case).
Mounting Orientation: Vertically, with pressure connections pointing downwards.
Mechanical Working Life: Over 10^6 switching operations.
Enclosure Rating: IP66. IP65 with option OPV, overpressure relief valve.
Housing Material: Aluminum.
Finishing: Texture epoxy coat RAL7038.
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.
Weight: 7 lb (3.2 kg).
ATEX Certificate: BVI 14ATEX0072.
Agency Approvals: ATEX Compliant CE 1370 Ex II 2G Ex d IIC T6 Gb / II 2D Ex tb IIIC T85°C Db, -60°C≤Tamb≤+60°C IECEx Compliant: Ex d IIC T6 Gb / Ex tb IIIC T85°C Db.

MODEL CHART

Example	AT1ADPS	-08	-2	-N	-A	O	1	X	T2	AT1ADPS-08-2-N-AO1XT2
Series	AT1ADPS									ATEX/IECEx approved ADPS adjustable differential pressure switch
Range		08 04 03 05 06 07								.08 to 1.2 in w.c. (20 to 300 Pa) .12 to 1.6 in w.c. (30 to 400 Pa) .2 to 2 in w.c. (50 to 500 Pa) .8 to 4 in w.c. (200 to 1000 Pa) 2 to 10 in w.c. (500 to 2500 Pa) 4 to 20 in w.c. (1000 to 5000 Pa)
Connection			2							Internal cable gland
Switch				N						1.5 A @ 250 VAC
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

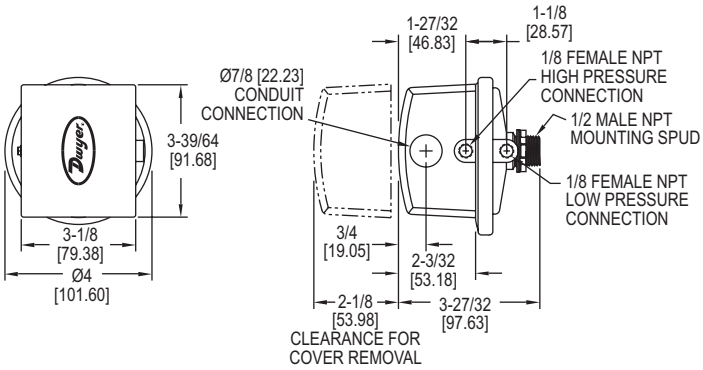
USA: California Proposition 65
⚠WARNING: Cancer and Reproductive Harm - www.P65Warnings.ca.gov

Dwyer

SERIES 1800

LOW DIFFERENTIAL PRESSURE SWITCH FOR GENERAL INDUSTRIAL SERVICE

Set Points from 0.07 in w.c. to 85 in w.c. Repetitive Accuracy within 2%



Essential for industrial environments, the **Series 1800 Low Differential Pressure Switch for General Industrial Service** combines small size and low price with 2% repeatability for all but the most demanding applications. Set point adjustment inside the mounting stud permits mounting the switch on one side of a wall or panel with adjustment easily accessible on the opposite side. UL and CSA listed, and FM approved.

FEATURES/BENEFITS

- Compact size and repeatability provide a high-value switch useful in many industrial applications
- Designed for panel and wall mounting to easily meet mounting requirements in most industrial settings
- Pressure ranges from 0.07 in w.c. to 85 in w.c. make this switch suitable for a wide range of applications

APPLICATIONS

- Process applications
- Mechanical equipment control

SPECIFICATIONS

Service: Air and non-combustible, compatible gases.
Wetted Materials: Consult factory.
Temperature Limits: -30 to 180°F (-34 to 82.2°C); 1823-00: -20 to 180°F (-28.9 to 82.2°C).
Pressure Limits: 10 psig (68.95 kPa) continuous, 25 psig (172.4 kPa) surge.
Switch Type: Single-pole double-throw (SPDT).
Repeatability: ±2%.
Electrical Rating: 15 A @ 120-480 VAC, 60 Hz. Resistive 1/8 HP @125 VAC, 1/4 HP @ 250 VAC, 60 Hz. De-rate to 10 A for operation at high cycle rates.
Electrical Connections: 3 screw type, common, normally open and normally closed.
Process Connections: 1/8″ female NPT.
Mounting Orientation: Diaphragm in vertical position. Consult factory for other position orientations.
Set Point Adjustment: Screw type inside mounting spud.
Weight: 1 lb 5 oz (595 g).
Agency Approvals: CE, CSA, FM, UL. Optional-EXPL explosion-proof enclosure does not possess any agency approvals.

OPTIONS

Weatherproof Housing

16 ga. steel enclosure with gasketed cover (NEMA 4, IP66) for wet or oily conditions. Withstands 200 hour salt spray test. Wt. 5-1/2 lb (2.5 kg). Switch must be factory installed.

Note: To order, change 1823 base number to 1824 and add -WP suffix. **Example:** 1824-1-WP

Explosion-Proof Housing

Cast iron base with aluminum cover. Rated Class I, Div. 1 & 2, Group D; Class II, Div. 1 & 2, Groups E, F, G; Class III and NEMA 7 CD, 9 EFG. Wt. 7-1/2 lb (3.4kg). Switch must be factory installed.

Note: To order, change 1823 base number to 1824 and add -EXPL suffix. **Example:** 1824-1-EXPL

MIL Environmental Construction

Unlisted Model 1820 can be furnished with a special sealed snap switch for protection against high humidity, fungus and/or military applications. Similar to Model 1823 except deadband is slightly greater and some lower setpoints may not be possible.

Note: To order, add -MIL suffix. **Example:** 1820-2-MIL

MODEL CHART

Model	Operating Range, in w.c.	Approximate Deadband At Min. Set Point	Approximate Deadband At Max. Set Point
1823-00	0.07 to 0.22	0.05	0.05
1823-0	0.15 to 0.5	0.06	0.06
1823-1	0.3 to 1.0	0.08	0.08
1823-2	0.5 to 2.0	0.10	0.12
1823-5	1.5 to 5.0	0.14	0.28
1823-10	2.0 to10	0.18	0.45
1823-20	3 to 22	0.35	0.70
1823-40	5 to 44	0.56	1.10
1823-80	9 to 85	1.30	3.0

ACCESSORIES

Model	Description
A-389	Mounting bracket; 16 ga. steel, zinc plated and dichromate dipped for corrosion resistance; provides rugged, permanent mounting and speeds installation
A-489	4″ straight static pressure tip with flange
A-491	6″ straight static pressure tip with flange
A-493	8″ straight static pressure tip with flange
A-302F-A	303 SS static pressure tip with mounting flange; for 3/16″ ID rubber or plastic tubing; 4″ insertion depth; includes mounting screws
A-302F-B	303 SS static pressure tip with mounting flange; for 3/16″ rubber or plastic tubing; 6″ insertion depth; includes mounting screws
A-302F-C	303 SS static pressure tip with mounting flange; for 3/16″ rubber or plastic tubing; 8″ insertion depth; includes mounting screws

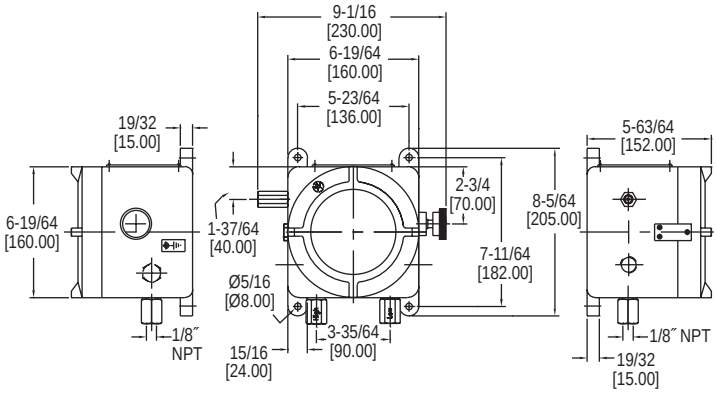
Process Tubing Options: See page 455 (Gage Tubing Accessories)

Dwyer

SERIES AT21823

ATEX/IECEX APPROVED 1823 DIFFERENTIAL PRESSURE SWITCH

The 1823 in Flame-Proof ATEX/IECEx Enclosure



Essential for industrial environments, the **Series AT21823 ATEX/IECEx Approved 1823 Differential Pressure Switch** combines small size with 2% repeatability. Set point adjustment inside the switch allows for set point settings across 9 ranges from the low of .07 in w.c. to a maximum 85 in w.c. differential pressure. Series AT21823 flame-proof enclosures are available in aluminum and are ideal for low pressure hazardous area applications. Various housing options such as an overpressure relief valve or external set point adjustment knob are available. External set point knob allows adjustment without opening the enclosure.

FEATURES/BENEFITS

- Compact size and repeatability, provides a high-value switch for many industrial applications
- External set point knob provides easy access that simplifies making adjustments without opening enclosure
- Flame-proof enclosure protects the device in hazardous areas

APPLICATIONS

- Hazardous area pressure switch
- Process applications
- Mechanical equipment control

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.
Temperature Limits: -30 to 180°F (-34 to 82.2°C); 1823-00, -20 to 180°F (-28.9 to 82.2°C) (**Note:** Product temperature limits differ from case).
Pressure Limits: 10 psig (68.95 kPa) continuous, 25 psig (172.4 kPa) surge.
Switch Type: SPDT.
Repeatability: ±2% FS.
Electrical Rating: 15 A @ 120-480 VAC, 60 Hz. Resistive 1/8 HP @ 125 VAC, 1/4 HP @ 250 VAC, 60 Hz. De-rate to 10 A for operation at high cycle rates.
Mounting Orientation: Diaphragm in vertical position.
Set Point Adjustment: Screw type inside mounting spud internal to switch. External set point adjustment knob optional.
Enclosure Rating: IP66. IP65 with option OPV, overpressure relief valve or external set point adjustment knob.
Housing Material: Aluminum.
Finishing: Texture epoxy coat RAL7038.
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.
Weight: 11.9 lb (5.4 kg).
ATEX Certificate: BVI 14ATEX0072.
Agency Approvals: ATEX Compliant CE 1370 Ex II 2G Ex d IIC T6 Gb / II 2D Ex tb IIIC T85°C Db, -60°C≤Tamb≤+60°C IECEx Compliant: Ex d IIC T6 Gb / Ex tb IIIC T85°C Db.

MODEL CHART

Example	AT21823	-00	-A	O	K1	1	X	T2	AT21823-00-AOK11XT2
Series	AT21823								ATEX/IECEx approved 1823 differential pressure switch
Range		00 0 1 2 5 10 20 40 80							.08 to .22 in w.c. (18 to 56 Pa) .15 to .5 in w.c. (38 to 127 Pa) .3 to 1 in w.c. (76 to 254 Pa) 0.5 to 2 in w.c. (127 to 508 Pa) 1.5 to 5 in w.c. (381 to 1270 Pa) 2 to 10 in w.c. (.5 to 2.5 kPa) 3 to 22 in w.c. (.76 to 5.6 kPa) 5 to 44 in w.c. (1.27 to 11.17 kPa) 9 to 85 in w.c. (2.28 to 21.6 kPa)
Housing Material			A						Aluminum
Cover				B O					Blind Glass top cover
Set point Adjustment					K1 K2				Without external set point adjustment knob With external set point adjustment knob
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

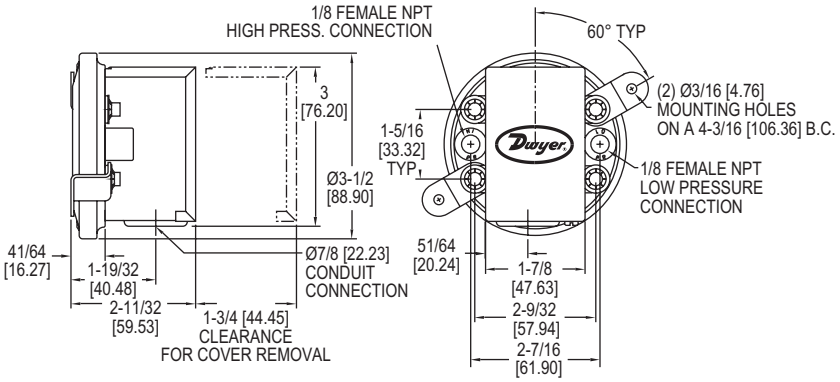
Dwyer

SERIES 1900

COMPACT LOW DIFFERENTIAL PRESSURE SWITCHES

Set Points from 0.07 to 20 in w.c. Repetitive Accuracy within 3%

Series 1910 switch with conduit enclosure off. Shows electric switch and set point adjustment screw located on same side for easy installation.



The Dwyer-engineered force-motion amplifier increases the leverage of diaphragm movement and results in a switch with excellent sensitivity and repeatability.

VIDEO ONLINE

Our most popular **Series 1900 Compact Low Differential Pressure Switches** combine advanced design and precision construction to make these switches able to perform many of the tasks of larger, costlier units. Designed for air conditioning service, they also serve many fluidics, refrigeration, oven and dryer applications. Series 1900 switches have set points from 0.07 to 20 in w.c. (1.8 to 508 mm). Set point adjustment is easy with range screw located inside conduit enclosure. Internal location helps prevent tampering. UL, CE and CSA listed, and FM approved. For use with air or compatible gages.

FEATURES/BENEFITS

- Compact size and repeatability, provides a high-value switch for many industrial and OEM applications
- Wide range of models from 0.07 in w.c. to 20 in w.c. can meet exacting OEM specifications for a low pressure switch
- Range screw protected inside enclosure provides simplifies making adjustments but prevents tampering

APPLICATIONS

- Air conditioning refrigeration coil icing detection; defrost cycle initiation
- Clogged filter detection
- Variable air volume controller

SPECIFICATIONS	
Service: Air and non-combustible, compatible gases. **Wetted Materials:** Consult factory. **Temperature Limits:** -30 to 180°F (-34 to 82.2°C). **Pressure Limits:** 45 in w.c. (11.2 kPa) continuous, 10 psig (68.95 kPa) surge. **Switch Type:** Single-pole double-throw (SPDT). **Repeatability:** ±3%. **Electrical Rating:** 15 A @ 120-480 VAC, 60 Hz. Resistive 1/8 HP @125 VAC, 1/4 HP @ 250 VAC, 60 Hz. Derate to 10 A for operation at high cycle rates.	**Electrical Connections:** 3 screw type, common, normally open and normally closed. **Process Connections:** 1/8″ female NPT. **Mounting Orientation:** Diaphragm in vertical position. Consult factory for other position orientations. **Set Point Adjustment:** Screw type inside conduit enclosure. **Weight:** 1 lb 4.5 oz (581 g). **Agency Approvals:** CE, CSA, FM, and UL. Optional-EXPL explosion-proof enclosure does not possess any agency approvals.

OPTIONS
Weatherproof Housing
16 ga. steel enclosure with gasketed cover (NEMA 4, IP66) for wet or oily conditions. Withstands 200 hour salt spray test. Wt. 5-1/2 lb (2.5 kg). Switch must be factory installed.
Note: To order, change 1910 base number to 1911, add -WP suffix. **Example:** 1911-1-WP
Explosion-Proof Housing
Cast iron base with brass cover. Rated Class I, Groups D; Class II, Div. 2, Groups E, F, G; Class III and NEMA 7, 9 NEMA 3. (7 lb). Switch must be factory installed.
Note: To order, change 1910 base number to 1911, add -EXPL suffix. **Example:** 1911-1-EXPL
Manual Reset Option (Model 1900 MR)
Includes special snap switch which latches on pressure increase above the setpoint. Switch must be manually reset after pressure drops below the setpoint. Available on -1, -5,-10 or -20 ranges only. Option is not UL, CSA or FM listed. For use only in single positive pressure applications.
Note: To order, change 1910 base number to 1900, add -MR suffix. **Example:** 1900-10-MR

MODEL CHART			
		Approximate Deadband	
Model	Operating Range in w.c.	At Min. Set Point	At Max. Set Point
1910-00	0.07 to 0.15	0.04	0.04
1910-0	0.15 to 0.5	0.10	0.10
1910-1	0.40 to 1.6	0.15	0.16
1910-5	1.40 to 5.5	0.30	0.30
1910-10	3.0 to 11.75	0.40	0.40
1910-20	4.0 to 20.0	0.40	0.50

ACCESSORIES	
Model	**Description**
A-399	Duct pressure monitor kit; for use with standard or manual reset model switches; includes mounting flange, tubing and adapters
A-329	Street ell; brass adapter for applications requiring right angle connections; two required for differential pressures
A-302F-A	303 SS static pressure tip with mounting flange; for 3/16″ ID rubber or plastic tubing; 4″ insertion depth; includes mounting screws
A-489	4″ straight static pressure tip with flange

Manual reset option

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

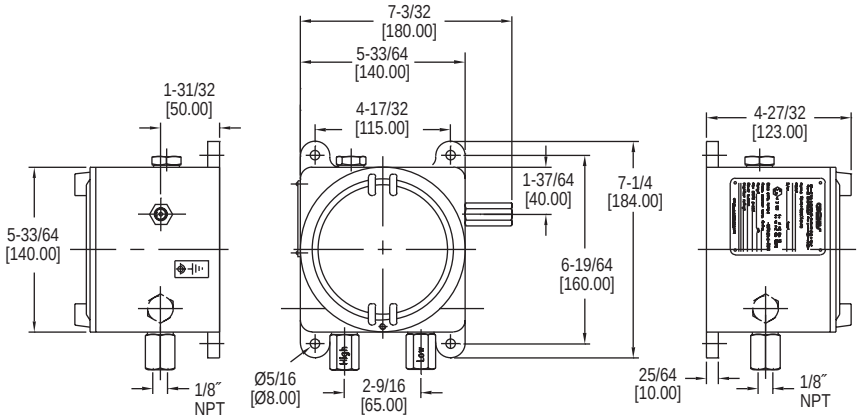
Process Tubing Options: See page 455 (Gage Tubing Accessories)

Dwyer

SERIES AT11910

ATEX/IECEX APPROVED 1910 DIFFERENTIAL PRESSURE SWITCH

The 1910 in Flame-Proof ATEX/IECEx Enclosure



Series AT11910 ATEX/IECEx Approved 1910 Differential Pressure Switch is our most popular switch and is now available in a flame-proof package. This pressure switch combines advanced design and precision construction to make these switches able to perform many of the tasks of larger, costlier units. For air and non-combustible compatible gases, the AT11910 Series switches have set points from 0.07 to 20 in w.c. (1.8 to 508 mm). Set point adjustment is easy with range screw located inside the switch enclosure. Series AT11910 enclosures are available in aluminum enclosures and ideal for low pressure, hazardous area applications.

FEATURES/BENEFITS

- Flame-proof enclosure protects the device in hazardous areas
- Compact size and repeatability, provides a high-value switch for many industrial and OEM applications
- Wide range of models from 0.07 in w.c. to 20 in w.c. can meet exacting OEM specifications for a low pressure switch
- Range screw protected inside switch enclosure prevents tampering

APPLICATIONS

- Hazardous area low pressure applications
- Air conditioning refrigeration coil icing detection; defrost cycle initiation
- Clogged filter detection
- Variable air volume controller

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.
Temperature Limits: -30 to 180°F (-34 to 82.2°C) (**Note:** Product temperature limits differ from case).
Pressure Limits: 45 in w.c. (11.2 kPa) continuous, 10 psig (68.95 kPa) surge.
Switch Type: SPDT.
Repeatability: ±3% FS.
Electrical Rating: 15 A @ 120 to 480 VAC, 60 Hz. Resistive 1/8 HP @ 125 VAC, 1/4 HP @ 250 VAC, 60 Hz. Derate to 10 A for operation at high cycle rates.
Mounting Orientation: Diaphragm in vertical position.
Set Point Adjustment: Screw type on pressure switch inside the enclosure accessible by hole with plug on housing. Set point regulation must be done with instrument de-energized. Follow instructions and safety warning to open cover.
Enclosure Rating: IP66. IP65 with option OPV, overpressure relief valve.
Housing Material: Aluminum.
Finishing: Texture epoxy coat RAL7038.
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.
Weight: 7.49 lb (3.4 kg).
ATEX Certificate: BVI 14ATEX007.
Agency Approvals: ATEX Compliant CE 1370 Ex II 2G Ex d IIC T6 Gb / II 2D Ex tb IIIC T85°C Db, -60°C≤Tamb≤+60°C IECEx Compliant: Ex d IIC T6 Gb / Ex tb IIIC T85°C Db.

MODEL CHART

Example	AT11910	-00	-A	B	1	X	T2	AT11910-00-AB1XT2
Series	AT11910							ATEX/IECEx approved 1910 differential pressure switch
Range		00 0 1 5 10 20						.07 to .15 in w.c. (17.5 to 37 Pa) .15 to .55 in w.c. (37.5 to 137 Pa) .4 to 1.6 in w.c. (100 to 398 Pa) 1.4 to 5.5 in w.c. (348.5 to 1368 Pa) 3 to 11.75 in w.c. (747 to 2924 Pa) 4 to 20 in w.c. (996 to 4977 Pa)
Housing Material			A					Aluminum
Cover				B				Blind
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

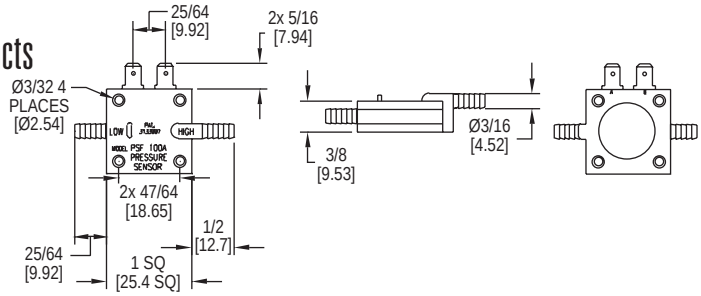
USA: California Proposition 65
⚠WARNING: Cancer and Reproductive Harm - www.P65Warnings.ca.gov

Dwyer

SERIES MDS

MINIATURE PRESSURE SWITCH

Shock and Vibration Resistant, Lightweight and Compact, Gold Contacts



The **Series MDS Miniature Pressure Switch** is designed with a double diaphragm to protect false actuation due to shock and vibration. This low cost pressure switch has a minimum 20 million cycle life expectancy, and an extremely fast response time, making this an ideal device for OEM orders.

FEATURES/BENEFITS
- Low cost, long service life and fast response time is suitable for a wide range of OEM uses
- Lightweight but shock and vibration resistant for tough applications
- Gold contacts help ensure a clean connection without dirt or oxidation

APPLICATIONS
- Air proving
- Cleaning and purification
- Ventilation flow
- Heavy equipment and machinery
- Pressure monitoring
- Exhaust ducts

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

SPECIFICATIONS

Switch Type: SPST normally open.
Switching Media: Air or compatible fluids on "high" side.
Pressure Limits: Set point <3.0 in w.c.: 8 psi; Set point >3.0 in w.c.: 15 psi.
Current Rating: Gold contact switch providing maximum 40 mA resistive load allowing for life in excess of 20 million cycles.
Temperature Limits: 40 to 150°F (4 to 66°C).
Electrical Connections: Brass tab-type for use with quick disconnections.
Pressure Connections: Two barbed ports for use with 1/8″-3/16″ ID tubing.
Housing: Polycarbonate.
Diaphragm Material: Polyurethane.
Operating Voltage: AC/DC - 30 V or less with resistive load.
Weight: Less than 0.353 oz (10 g).

MODEL CHART

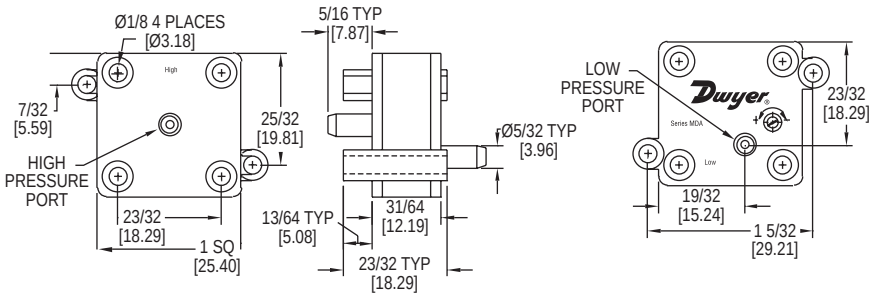
Model	Set Point in w.c.	Model	Set Point in w.c.
MDS-0	0.5	**MDS-6**	6.0
MDS-1	1.0	**MDS-8**	10.0
MDS-2	1.5	**MDS-10**	15.0
MDS-3	2.0	**MDS-12**	30.0
MDS-4	3.0	**MDS-14**	50.0

Process Tubing Options: See page 455 (Gage Tubing Accessories)

SERIES MDA

MINIATURE ADJUSTABLE PRESSURE SWITCH

Adjustable Set Points from 0.1 to 100 in w.c.



Series MDA Miniature Adjustable Pressure Switch is used to sense differential pressure. The switch features field adjustable set point and gold inlay contacts. Air or other compatible fluids can be used on the "high side". The lightweight and compact size make the MDA ideal for any application with space constraints. Applications include industrial, HVAC, pump and motor control, medical, automotive, pools and spas.

FEATURES/BENEFITS
- Air or fluid on high side permits multiple uses where both air and liquids exist
- Small and lightweight for applications where space is constrained
- Gold contacts help ensure a clean connection without dirt or oxidation

APPLICATIONS
- Industrial
- Medical
- HVAC
- Pump and motor control
- Automotive
- Pools and spas

SPECIFICATIONS

Switch Type: SPST normally open.
Switching Media: Air or compatible fluids on "high side".
Pressure Limits: MDA-011: 4 psi; MDA-111: 8 psi; MDA-211: 8 psi; MDA-311: 15 psi; MDA-411: 30 psi.
Current Rating: 40 mA resistive for life in excess of 20 million cycles.
Temperature Limits: 40 to 150°F (4 to 66°C).
Contacts: 18K gold inlay.
Electrical Connections: Terminals - 0.187″ x 0.20: spade (recessed) for use with quick disconnects.
Pressure Connections: Smooth port 5/32″ diameter for 1/8″ ID tubing.
Housing: Polycarbonate.
Diaphragm Material: Polyurethane.
Operating Voltage: AC/DC - 30 V or less with resistive load.
Mounting: Use #4 screws through mounting lugs or #2 screws through eyelets.
Weight: Less than 0.353 oz (10 g).

MODEL CHART

Model	Min. Set Point in w.c. (mbar)	Max. Set Point in w.c. (mbar)
MDA-011	0.1 (0.25)	0.5 (1.25)
MDA-111	0.5 (1.25)	2.0 (4.98)
MDA-211	2.0 (4.98)	15 (37.37)
MDA-311	15 (37.37)	60 (149.3)
MDA-411	60 (149.3)	100 (249.10)

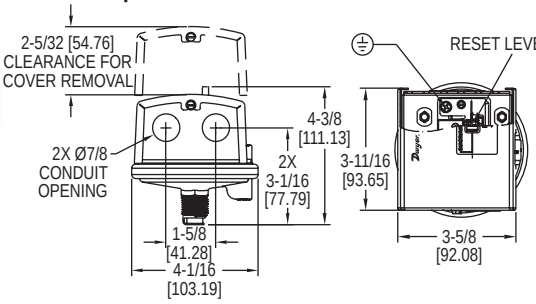
Process Tubing Options: See page 455 (Gage Tubing Accessories)

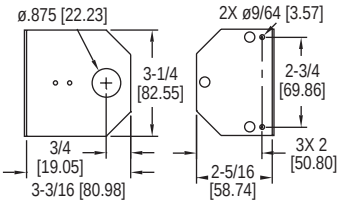
Dwyer

SERIES 1831

DPDT LOW DIFFERENTIAL PRESSURE SWITCHES

Manual Reset, No Power Required





A-389 mounting bracket

Note: Shown with included mounting bracket. Bracket can rotate and be tightened at any angle.

One of our most popular differential pressure switches is now available with a DPDT switch and manual reset. The **Series 1831 DPDT Low Differential Pressure Switches** combine small size with 4% set point repeatability. Absolutely no power is required to operate the DPDT switch. Set point adjustment on the switch is easily accessible for modifying the set point.

The Series 1831 DPDT Low Differential Pressure Switches with Manual Reset eliminate common problems associated with typical high duct static cutout installations. Since the 1831 requires absolutely no power to drive its outputs, a separate power loop and its associated additional wiring and conduit is alleviated, reducing material and labor installation costs. Both control contacts of the Series 1831 activate at the same time. The potential of the lead switch shutting down the fan preventing the lag switch from sending an alarming signal to the DDC is no longer a probable system liability. Potential costly maintenance calls are diminished. Unlike typical switches that possess only a single conduit entry for both control loops, the Series 1831 provides two conduit connections simplifying wiring while eliminating additional conduit tees.

FEATURES/BENEFITS

- No power to operate DPDT switch means no additional wiring or conduit reduces material and installation labor costs
- Easy access for modifying set point simplifies adjustment
- Both control contacts activate at the same time eliminating system issues where lead switch activities prevent the lagging switch from sending a signal

APPLICATIONS

- High duct static cutout applications
- HVAC

MODEL CHART		
Model	**Description**	**Range (in w.c.)**
1831-1-RA-S	Manual reset DPDT, activate on increase	2.5 to 9
1831-2-RA-S	Manual reset DPDT, activate on increase	7.5 to 23

SPECIFICATIONS	
Service: Air and non-combustible, compatible gases. **Wetted Materials:** Consult factory. **Temperature Limits:** -30 to 180°F (-34 to 82.2°C). **Pressure Limits:** 10 psig (68.95 kPa) continuous, 25 psig (172.4 kPa) surge. **Switch Type:** 2 SPDT. **Actuation Time Difference:** 1 millisecond maximum actuation delay between contacts. **Repeatability:** ±4% max.	**Electrical Rating:** 4 A @ 125/250 VAC. **Electrical Connections:** Screw type terminal block. **Process Connections:** 1/8″ female NPT. **Mounting Orientation:** Diaphragm in vertical position. Consult factory for other position orientations. **Set Point Adjustment:** Screw type inside mounting spud. **Weight:** 1 lb 2 oz (522 g).

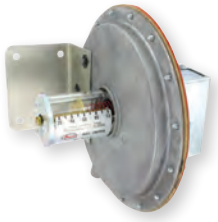
ACCESSORIES	
Model	**Description**
A-489	4″ straight static pressure tip with flange
A-491	6″ straight static pressure tip with flange
A-493	8″ straight static pressure tip with flange
A-302F-A	303 SS static pressure tip with mounting flange; for 3/16″ ID rubber or plastic tubing; 4″ insertion depth; includes mounting screws
A-302F-B	303 SS static pressure tip with mounting flange; for 3/16″ rubber or plastic tubing; 6″ insertion depth; includes mounting screws
A-302F-C	303 SS static pressure tip with mounting flange; for 3/16″ rubber or plastic tubing; 8″ insertion depth; includes mounting screws

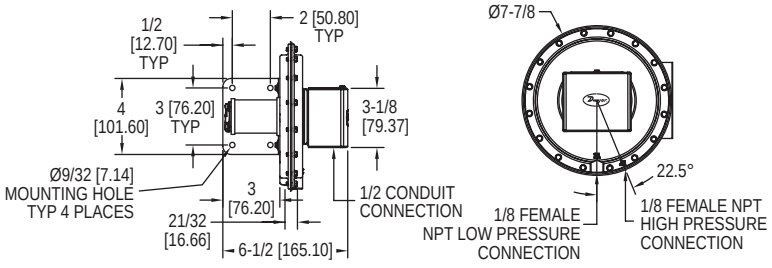
Process Tubing Options: See page 455 (Gage Tubing Accessories)

SERIES 1640

FLOATING CONTACT NULL SWITCH FOR HIGH AND LOW ACTUATION

Visual Set Point Adjustment, Adjustable Null Zone





The unique electric switch design in the **Series 1640 Floating Contact Null Switch for High and Low Actuation** is another Dwyer Instrument, Inc. innovation. The Dwyer® Model 1640 Differential Pressure Switch resembles the high precision large diaphragm Series 1630 switches. However, the Model 1640 is equipped with a single pole, double throw floating contact switch (not snap acting) so it functions as a null switch.

As the diaphragm moves in response to pressure changes, it moves the floating contact to cause switching action at two preset points with no switching action between these points. The “high” circuit will be closed when rising pressure differential reaches the preset level. The “low” circuit will be closed when falling pressure differential reaches the preset level.

FEATURES/BENEFITS

- Floating “null” switch supports applications requiring two set point actions such as open and close damper control
- Visible set point indicator simplifies operation and trouble shooting
- Large diaphragm provides low range accuracy providing precise control

APPLICATIONS

- Damper positioning
- Duct air control

SPECIFICATIONS	
Service: Air and non-combustible, compatible gases. **Wetted Materials:** Consult factory. **Temperature Limits:** -30 to 110°F (-34.4 to 43.3°C). **Pressure Limits:** 10 psig (68.95 kPa) continuous, 25 psig (172.4 kPa) surge. **Switch Type:** SPDT floating contact (not snap action). **Electrical Rating:** Non-inductive — 2.5 A @ 110 VAC; 1.5 A @ 220 VAC; 1 A @ 24 VDC; 0.5 A @ 110 VAC; Inductive —	1 A @ 110 VAC; 0.5 A @ 220 VAC; 0.5 A @ 24 VDC (de-rate 70-80% for very slow pressure changes). **Electrical Connections:** 3 screw type. **Process Connections:** 1/8″ female NPT. **Mounting Orientation:** Diaphragm in vertical position. Consult factory for other position orientations. **Set Point Adjustment:** Screw type. **Weight:** 4 lb 13 oz (2.18 kg). **Agency Approvals:** CE.

MODEL CHART			
	Ranges	**Adjustable Null Span**	
Model	**in w.c.**	**Min. Set Point**	**Max. Set Point**
1640-0	.01 to 0.2	.01	.03
1640-1	0.2 to 1.0	.02	.06
1640-2	1.0 to 4.0	.03	.12

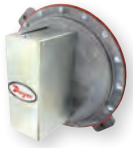
Process Tubing Options: See page 455 (Gage Tubing Accessories)

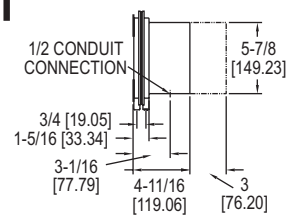
Dwyer

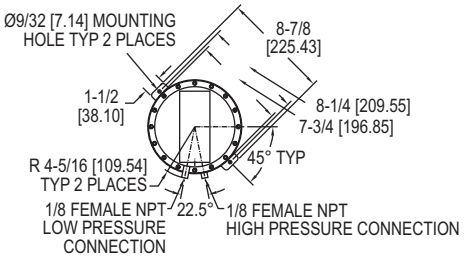
SERIES 1620

SINGLE AND DUAL PRESSURE SWITCH

High Reliability, Repetitive Accuracy within ±1%







On the **Series 1620 Single and Dual Pressure Switch** our old faithful switch design is still best where highest precision combined with diaphragm sealed leak proof construction and mounting simplicity are required. Model 1626 and 1627 differential pressure switches are identical in design and construction except that Model 1626 has a single electric switch and Model 1627 has dual electric switches. Model 1627 can therefore provide dual control when required. It can be set to open or close two independent electrical circuits, each preset for its own actuation pressure. Both units have diaphragm sealed motion take outs providing maximum protection against leakage.

FEATURES/BENEFITS
- Single or dual action switches support consistent designs with similar models, but with the ability to match specific application needs
- Sealed diaphragm provides leak-proof construction for high accuracy and precision control

APPLICATIONS
- Damper positioning
- Duct air control

MODEL CHART

Model	Operating Range in w.c.	Approximate Deadband		Adj. Diff. Between Set Points
		Min. Set Point	Max. Set Point	
1626-1	.15 to 1.5	.10	.20	-
1626-5	.5 to 6.0	.15	.35	-
1626-10	2.0 to 11	.25	.65	-
1626-20	8.0 to 24	.50	1.20	-
1627-1	.15 to 1.5	.10	.20	0.5
1627-5	.5 to 6.0	.15	.35	1.2
1627-10	2.0 to 11	.25	.65	2.3
1627-20	8.0 to 24	.50	1.20	5.0

SPECIFICATIONS

Service: Air and non-combustible, compatible gases.
Wetted Materials: Consult factory.
Temperature Limits: -30 to 130°F (-34.4 to 54.4°C).
Pressure Limits: Max. 50 in w.c. (12.44 kPa) continuous, 2 psig (13.79 kPa) surge.
Switch Type: 1626 SPDT; 1627, (2) SPDT.
Repeatability: ±1%.
Electrical Rating: 15 A @ 120-480 VAC, 60 Hz. Resistive, 1/8 HP @ 125 VAC,1/4 HP @ 250 VAC, 60 Hz.
Electrical Connections: 3 screw type, common, normally open and normally closed.
Process Connections: 1/8˝ female NPT.
Mounting Orientation: Diaphragm in vertical position. Consult factory for other position orientations.
Set Point Adjustment: Screw adjustment.
Weight: Model 1626, 3 lb, 9.8 oz (1.64 kg); Model 1627, 3 lb, 11.8 oz (1.69 kg).
Agency Approvals: CE.

ACCESSORIES

Model	Description
A-489	4˝ straight static pressure tip with flange
A-302F-A	303 SS static pressure tip with mounting flange; for 3/16˝ ID rubber or plastic tubing; 4˝ insertion depth; includes mounting screws

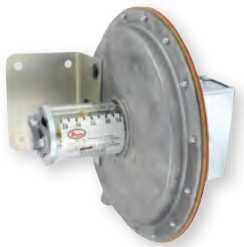
OPTIONS

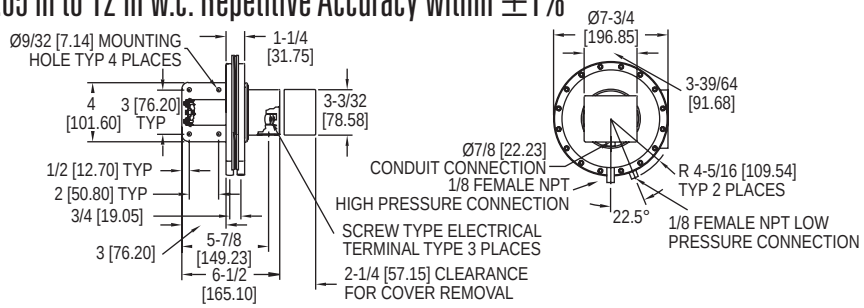
To order add suffix:	Description
-MIL	MIL environmental construction

SERIES 1630

LARGE DIAPHRAGM PRESSURE SWITCH

Visual Set Point Adjustment in 5 Standard Ranges, 0.05 in to 12 in w.c. Repetitive Accuracy within ±1%





On the **Series 1630 Large Diaphragm Pressure Switch** our highest precision conventional large diaphragm pressure switch provides maximum dependability. In addition, it incorporates a visible set point indicator for maximum convenience. UL and CSA listed, FM approved for general service. Electrical capability of 15 amps handles most small electrical loads. For use only with air or compatible gases.

FEATURES/BENEFITS
- Visible set point indicator simplifies operation and trouble shooting
- Large diaphragm provides low range accuracy providing precise control
- Current loads of up to 15 amps supports most small electrical loads supporting a broader range of HVAC and Process applications without the need for additional relays and components

APPLICATIONS
- Damper positioning
- Air conditioning
- Duct air control
- Industrial service

MODEL CHART

Model	Operating Range in w.c.	Approximate Deadband	
		Min. Set Point	Max. Set Point
1638-0	0.05 to 0.25	0.04	0.05
1638-1	0.20 to 1.0	0.04	0.06
1638-2	1.0 to 3.0	0.06	0.08
1638-5	2.0 to 6.0	0.07	0.25
1638-10	3.0 to 12	0.11	0.30

SPECIFICATIONS

Service: Air and non-combustible, compatible gases.
Wetted Materials: Consult factory.
Temperature Limits: -30 to 110°F (-34.4 to 43.3°C).
Pressure Limits: 10 psig (68.95 kPa) continuous, 25 psig (172.4 kPa) surge.
Switch Type: SPDT.
Repeatability: ±1%.
Electrical Rating: 15 A @ 120-480 VAC, 60 Hz. Resistive 1/8 HP @ 125 VAC, 1/4 HP @ 250 VAC, 60 Hz.
Electrical Connections: 3 screw type, common, normally open and normally closed.
Process Connections: 1/8˝ female NPT.
Mounting Orientation: Diaphragm in vertical position. Consult factory for other position orientations.
Set Point Adjustment: Screw type with enclosed scale.
Weight: 3 lb 3 oz (1.50 kg).
Agency Approvals: CSA, FM, UL.

ACCESSORIES

Model	Description
A-489	4˝ straight static pressure tip with flange
A-302F-A	303 SS static pressure tip with mounting flange; for 3/16˝ ID rubber or plastic tubing; 4˝ insertion depth; includes mounting screws

OPTIONS

MIL Environmental Construction

Unlisted Model 1635 can be furnished with a special sealed snap switch for protection against high humidity, fungus and/or military applications. Similar to Model 1638 except deadband is slightly greater and some lower setpoints may not be available.

Note: To order, specify Model 1635-(Range No.)-MIL and required set point.

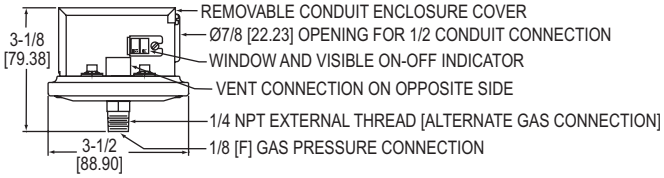
Process Tubing Options: See page 455 (Gage Tubing Accessories)

Dwyer

SERIES 1996

GAS PRESSURE SWITCH

Compact, Low Cost, 1.4 to 20 in w.c. Range



Reliable and convenient, the **Series 1996 Gas Pressure Switch** serves as a compact, low cost switch for gas fired furnaces and equipment. Pressure ranges for both models are ideal for high or low gas pressure interlock. Visible set point and on-off indicators add convenience in servicing. Use either NO or NC contacts on SPDT switch. Bottom connection has both 1/8″ female and 1/4″ male threads for pipe nipple or coupling. Top connection vents diaphragm chamber to outside or to furnace combustion chamber. Mount switch with diaphragm in a horizontal position and gas pressure connection at bottom. Used with natural, manufactured or LP gas.❶❷

FEATURES/BENEFITS
- Visible set point and on-off indicator simplifies operation and trouble shooting
- Compact size and low cost make it ideal for gas fired or gas equipment OEM applications

APPLICATIONS
- Gas furnaces
- Natural, manufactured or LP gas applications

MODEL CHART			
Model	**Range (in w.c.)**	**Model**	**Range (in w.c.)**
1996-5	1.4 to 5.5	**1996-20**	4-20

SPECIFICATIONS

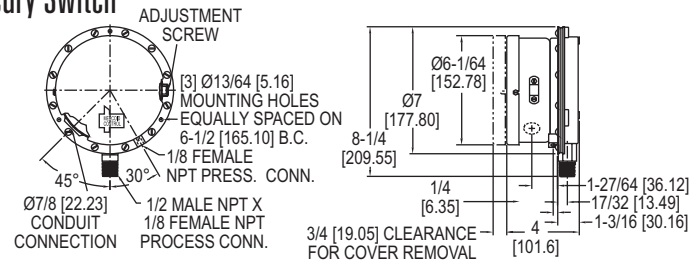
Service: Air, natural & manufactured gas, LP gas.
Wetted Materials: Consult factory.
Temperature Limits: 32 to 110°F (0 to 43.3°C). -30 to 110°F (-34.4 to 43.3°C) for dry gas or dry air.
Pressure Limits: 45 in w.c. (11.2 kPa) continuous; 10 psig (68.95 kPa) surge.
Switch Type: SPDT.
Electrical Rating: 15A @ 120-480 VAC, 60 Hz. Resistive 1/8 H.P. @ 125 VAC, 1/4 H.P. @ 250 VAC 60 Hz.
Electrical Connections: 3 screw type, common, normally open, normally closed.
Process Connections: 1/8″ female NPT or 1/4″ male NPT.
Vent Connection: 1/8″ female NPT.
Mounting Orientation: Diaphragm in horizontal position. Consult factory for other position orientations.
Set Point Adjustment: Screw type with visible indicator, inside conduit enclosure.
Weight: 1 lb 2.3 oz (349 g).
Agency Approvals: CE, CSA, FM, UL.

❶**Explosion-Proof Alternative: See page 55 (Series 1950)**
❷**Explosion-Proof Alternative: See page 55 (Series 1950G)**
Process Tubing Options: See page 455 (Gage Tubing Accessories)

SERIES PG | MERCOID® BY DWYER

GAS PRESSURE/DIFFERENTIAL PRESSURE SWITCHES

External Adjustment, Visible Dial, Hermetically Sealed Snap or Mercury Switch



The **Series PG Gas Pressure/Differential Pressure Switch** has a large sensitive diaphragm and a reliable time proven mechanical design. For use with air and other compatible gases, they feature excellent ±1% of full-scale repeatability, clear easy-to-read scale and convenient external set point adjustment.
Application flexibility is assured by a large variety of switching options including SPST, SPDT, DPST and DPDT; opening or closing on increasing pressure, vacuum or differential. PR and PRL models add manual reset operation on increasing or decreasing pressure. Mercury switches or hermetically sealed snap switches are available where high humidity would be a problem. If vibration or other factors preclude the use of mercury, snap switches can be provided. Standard housing is NEMA 1. Optional enclosures can be supplied for weather resistant and explosion-proof requirements.

FEATURES/BENEFITS
- Clear easy-to-read scale and external set point adjustment simplifies operation and trouble shooting
- Large diaphragm provides accuracy for precise control
- Multiple switching options meet the design of applications

APPLICATIONS
- Natural, manufactured or LP gas applications

SPECIFICATIONS

Wetted Materials: Fairprene, brass, steel, and aluminum.
Temperature Limits: -10 to 180°F (-23 to 82°C).
Pressure Limit: Single pressure use on high side: Sustained pressure: 15 psig (1.0 bar); Surge limit: 20 psig (1.4 bar). Differential pressure use: Sustained pressure, range P1: 2 psig (.14 bar); Sustained pressure, range P2: 10 psig (0.7 bar).
Enclosure Rating: General purpose. Weatherproof and explosion-proof optional.
Repeatability: ±1% of full range.
Switch Type: SPST mercury switch, SPDT mercury switch, SPDT snap switch, or SPDT hermetically sealed snap switch. Optional DPDT.
Electrical Rating: SPDT mercury: 4A @ 120 VAC/VDC, 2A @ 240 VAC/VDC. SPST mercury: 6A @ 120 VAC/VDC, 3A @ 240 VAC/VDC. SPDT Snap: 15A @ 120 VAC, 8A @ 240 VAC, 0.5A @ 120 VDC, 0.25A @ 240 VDC. SPDT H.S. Silver Snap: 5A @ 125/250 VAC, 30 VDC resistive. SPDT H.S. Gold Snap: 1A @ 125 VAC, 30 VDC resistive.
Electrical Connections: Screw type.
Conduit Connection: 7/8″ (22.23 mm) hole for 1/2″ (12.7 mm) conduit hub.
Process Connection: 1/2″ male NPT and 1/8″ female NPT used for single positive pressure or high differential pressure, 1/8″ female NPT used for single vacuum or low differential pressure.
Mounting Orientation: Vertical.
Set Point Adjustment: External screw.
Weight: 4.5 lb (2 kg).
Deadband: See model chart.
Agency Approvals: FM, UL for mercury switch models. UL only on snap switch models.

MODEL CHART							
Model	**Range**	**Max. Deadband**	**Switch Type**	**Model**	**Range**	**Max. Deadband**	**Switch Type**
PG-153-P1	1-30 in w.c. (.25-7.47 kPa)	1.9 in w.c. (0.47 kPa)	SPDT mercury	**PG-7000-153-P1**	1-30 in w.c. (.25-7.45 kPa)	4 in w.c. (1.0 kPa)	SPDT snap
PG-153-P2	0.5-5 psid (0.3-.345 bar)	0.4 psid (0.38 bar)	SPDT mercury	**PG-7000-153-P2**	0.5-5 psid (.03-.345 bar)	.5 psid (.035 bar)	SPDT snap
PG-3-P1	1-30 in w.c. (.25-7.47 kPa)	1.3 in w.c. (0.32 kPa)	SPST mercury*	**PG-7000-153HS-P1**	1-30 in w.c. (.25-7.47 kPa)	4 in w.c. (1.0 kPa)	SPDT hermetically sealed silver snap
PG-3-P2	0.5-5 psid (.03-.345 bar)	0.3 psid (0.21 kPa)	SPST mercury*	**PG-7000-153HG-P1**	1-30 in w.c. (.25-7.47 kPa)	4 in w.c. (1.0 kPa)	SPDT hermetically sealed gold snap

*SPST switches shown are close on increase of pressure.
For open on increase of pressure replace 3 in middle of model number with 2. **Example:** PG-2-P1.

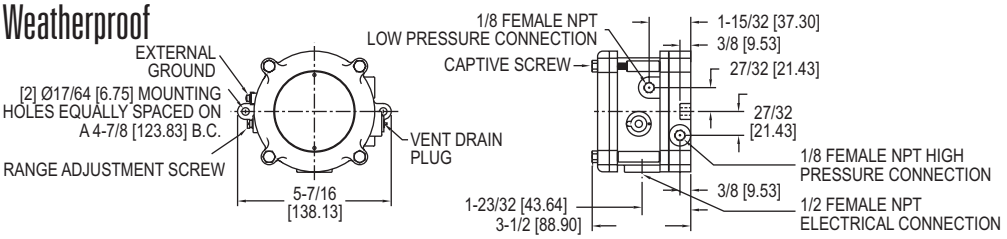
USA: California Proposition 65
⚠WARNING: Cancer and Reproductive Harm - www.P65Warnings.ca.gov

Dwyer

SERIES 1950

EXPLOSION-PROOF DIFFERENTIAL PRESSURE SWITCH

Compact, Low Cost, Explosion-proof and Weatherproof



Series 1950 Explosion-Proof Differential Pressure Switch combines the best features of the popular Dwyer® Series 1900 Pressure Switch with an integral explosion-proof and weatherproof housing, making it an exceptional value for either application. It is CE, UL and CSA listed, FM approved for use in Class I, Div 1, Groups C and D, Class II Groups E, F, and G and Class III hazardous atmospheres NEMA 7 & 9. Rain tight NEMA 3 (IP54), weatherproof features include a drain plug and O-ring seal in cover. Electrical connections are easily made by removing front cover. For convenience the set point adjustment screw is located on the outside of the housing. Twelve models offer set points from .03 to 20 in w.c. (0.0075 to 5 kPa) and from .5 to 60 psi (0.035 to 3.5 bar). The unit is very light and compact - about half the weight and bulk of other explosion-proof or weatherproof switches with separate enclosures. CAUTION: For use only with air or compatible gases. Applications with hazardous atmospheres and a single positive pressure may require special venting.

FEATURES/BENEFITS

- Explosion-proof and weatherproof housing provides device protection for outdoor use or harsh environment operation
- External set point screw provides easy access that simplifies making adjustments without opening or disassembling enclosure
- Easily accessible electrical connection simplifies the installation

APPLICATIONS

- HVAC applications
- Process applications
- All-weather applications

SPECIFICATIONS

Service: Air and non-combustible, compatible gases.
Wetted Materials: Consult factory.
Temperature Limits: -40 to 140°F (-40 to 60°C); 0 to 140°F (-17.8 to 60°C) for 1950P-8, 15, 25, and 50. -30 to 130°F (-34.4 to 54.4°C) for 1950-02.
Pressure Limits: Continuous: 1950's - 45 in w.c. (0.11 bar); 1950P's - 35 psi (2.41 bar); 1950P-50 only - 70 psi (4.83 bar). Surge: 1950's - 10 psi (0.69 bar), 1950P's - 50 psi (3.45 bar), 1950P-50 only - 90 psi (6.21 bar).
Enclosure Rating: NEMA 3 (IP54), NEMA 7 & 9.
Switch Type: Single-pole double-throw (SPDT).
Electrical Rating: 15 A @, 125, 250, 480 VAC, 60 Hz. Resistive 1/8 HP @ 125 VAC, 1/4 HP @ 250 VAC, 60 Hz.
Electrical Connections: 3 screw type, common, normally open and normally closed.
Process Connections: 1/8″ female NPT.
Mounting Orientation: Diaphragm in vertical position. Consult factory for other position orientations.
Set Point Adjustment: Screw type on top of housing.
Weight: 3.25 lb (1.5 kg); 1950-02 model, 4.4 lb (2 kg).
Agency Approvals: CE, CSA, FM, UL.

MODEL CHART

Model	Range, psid	Approximate Deadband: Min. Set Point	Approximate Deadband: Max. Set Point	Model*	Range*	Approximate Deadband: Min. Set Point	Approximate Deadband: Max. Set Point	Model	Range, in w.c.	Approximate Deadband: Min. Set Point	Approximate Deadband: Max. Set Point
1950P-2-2F	0.5 to 2	0.3	0.3	**1950P-50-2F**	15 to 50	1.0	1.5	**1950-1-2F**	.4 to 1.6	.15	.20
1950P-8-2F	1.5 to 8	1.0	1.0	**1950-02-2S**	.03 to .10	.025	.05	**1950-5-2F**	1.4 to 5.5	.30	.40
1950P-15-2F	3 to 15	0.9	0.9	**1950-00-2F**	.07 to .15	.04	.05	**1950-10-2F**	3 to 11	.40	.50
1950P-25-2F	4 to 25	0.7	0.7	**1950-0-2F**	.15 to .50	.10	.15	**1950-20-2F**	4 to 20	.40	.60

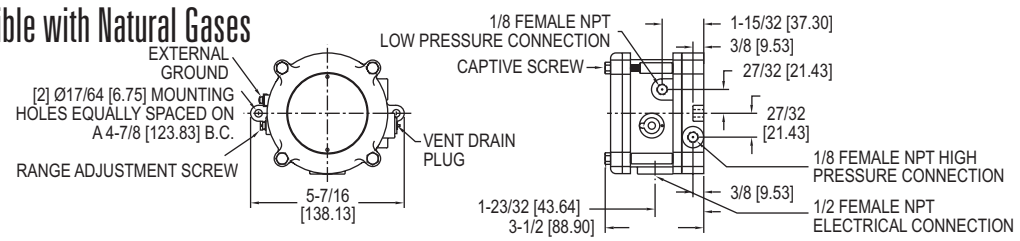
*P=PSID range models. Other ranges in w.c.

Caution: For use only with air or compatible gases. Applications with hazardous atmospheres and a single positive pressure may require special venting.

SERIES 1950G

EXPLOSION-PROOF DIFFERENTIAL PRESSURE SWITCH

Explosion-proof, Weatherproof, Compatible with Natural Gases



Series 1950G Explosion-Proof Differential Pressure Switch combines the best features of the popular Dwyer® Series 1950 Pressure Switch with the benefit of natural gas compatibility. Units are rain-tight for outdoor installations, and are UL listed for use in Class I, Groups A, B, C, & D; Class II, Groups E, F, & G and Class III atmospheres, Directive 2014/34/EU (ATEX) Compliant for CE Ex II 2G Exd IIB+H2 T6, CSA & FM approved for Class I, Div. 1, Groups B, C, D; Class II, Div. 1, Groups E, F, G and Class III atmospheres IECEx Ex d IIB+H2 T6 (-40°C < Ta < +60°C). The 1950G is very compact, about half the weight and bulk of equivalent conventional explosion-proof switches.
Easy access to the SPDT relay and power supply terminals is provided by removing the top plate of the aluminum housing. A supply voltage of 24 VDC, 120 or 240 VAC is required. A captive screw allows the cover to swing aside while remaining attached to the unit. Adjustment to the set point of the switch can be made without disassembly of the housing.

FEATURES/BENEFITS

- Compatible with natural gas making it suitable for use in those applications
- External set point screw provides easy access that simplifies making adjustments without opening or disassembling enclosure
- Easily accessible electrical connection simplifies the installation

APPLICATIONS

- Natural gas applications
- Process applications
- All-weather applications

SPECIFICATIONS

Service: Air and compatible combustible gases.
Wetted Materials: Contact factory.
Temperature Limits: 0 to 140°F (-17 to 60°C). **Note:** Set point drift may occur with ambient temperature changes.
Pressure Limits: 45 in w.c. (11.2 kPa) continuous; 10 psig (68.95 kPa) surge.
Enclosure Rating: NEMA 3 (IP54), NEMA 7 & 9.
Switch Type: 1 Form C relay (SPDT).
Electrical Rating: 10 A, 120/240 VAC, 28 VDC. Resistive 50 mA, 125 VDC.
Power Requirements: 24 VDC ±10%. 120 or 240 VAC ±10% optional.
Electrical Connections: Internal terminal block.
Process Connections: 1/8″ female NPT.
Mounting Orientation: Diaphragm in vertical position. Consult factory for other position orientations.
Set Point Adjustment: Screw type on top of housing.
Weight: 2 lb 15.7 oz (1.35 kg).
Agency Approvals: ATEX, CE, CSA, FM, IECEx, UL.

MODEL CHART

UL, CSA, FM Model	ATEX Model	Range in w.c.	Approximate Deadband: Min. Set Point	Approximate Deadband: Max. Set Point
1950G-00-B-24-NA	**1950G-00-B-24**	.07 to .15	.04	.06
1950G-0-B-24-NA	**1950G-0-B-24**	.15 to .50	.06	.11
1950G-1-B-24-NA	**1950G-1-B-24**	.4 to 1.6	.11	.29
1950G-5-B-24-NA	**1950G-5-B-24**	1.4 to 5.5	.4	.9
1950G-10-B-24-NA	**1950G-10-B-24**	3 to 11	.9	1.8
1950G-20-B-24-NA	**1950G-20-B-24**	4 to 20	1.2	3.0

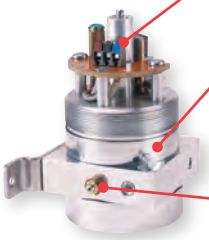
240 VAC Models: 1950G-XX-B-240-NA; 120 VAC Models: 1950G-XX-B-120-NA

Dwyer

SERIES H3 | W. E. ANDERSON™ BY DWYER

EXPLOSION-PROOF DIFFERENTIAL PRESSURE SWITCH

Set points from 10 in w.c. to 200 psid, Rated 1500 psig, Weatherproof

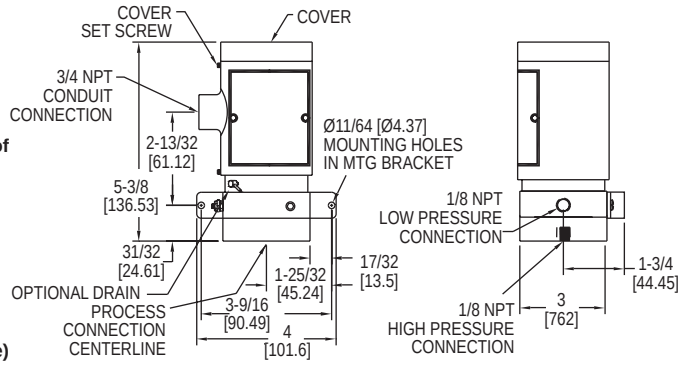


Shown without enclosure and cover

Internal terminal blocks for conductors up to 18 gage are optional

Optional NEMA 3 (IP54) enclosure includes explosion-proof drain; Standard NEMA 4X (IP56) version is without drain

External ground connection standard (internal ground connection also standard, use either one)



VIDEO ONLINE

The **Series H3 Explosion-Proof Differential Pressure Switch** is a heavy duty, industrial unit with a unique new design which provides sensitivity to differential pressures as low as 10 inches of water (254 mm w.c.), yet handles total pressure of 1500 psi (103 bar). Unlike common differential pressure switches that use a piston-type motion transfer, the Series H3 utilizes a rotary motion transfer shaft that prevents a change in total pressure from causing a set point shift. Unit yields deadbands approximately 5% of range, with zero set point shift due to variation in working pressures. Friction is minimized and repeatability increased by allowing range spring to act directly on diaphragm plate. Rolling diaphragm design maintains constant effective area to further reduce friction. Diaphragm is allowed to "seat", allowing application of full rated pressure, up to 1500 psi (103 bar), on either high or low pressure port, without damage. Special over-travel feature prevents overtightening of range adjust screw. Choose optional 316 SS chamber for water and water-based fluids or harsher applications.

FEATURES/BENEFITS

- Rotary motion design prevents set point shifts
- Explosion-proof housing for use in applications where protection of process and personnel is needed
- Option for use with water and water-based solution makes this a versatile switch

APPLICATIONS

- Water flow proving with an orifice plate
- Differential pressure across chiller
- Liquid filter status

SPECIFICATIONS

Wetted Materials: See pressure chamber and diaphragm material in model chart.
Temperature Limit: -4 to 220°F (-20 to 104°C), ATEX: -20 to 90°C (-4 to 194°F).
Pressure Limit: 1500 psig (103 bar).
Enclosure Rating: Standard meets NEMA 4X (IP56), drain option meets NEMA 3 (IP54). For hazardous use see the hazardous location ratings chart.
Switch Type: SPDT or DPDT snap switch.
Electrical Rating: 5 A @ 125/250 VAC, 30 VDC.
Electrical Connections: See model chart.
Conduit Connection: 3/4″ female NPT.
Process Connection: 1/8″ female NPT.
Mounting Orientation: Vertical.
Set Point Adjustment: Internal screw.
Weight: 4 lb 2 oz (2 kg).
Deadband: Approximately 5% of range.
Agency Approvals: ATEX, CE, CSA, UL see ratings chart.

MODEL CHART

Example	H3	S	-2	S	C	-MV	H3S-2SC-MV
Series	H3						Explosion-proof differential pressure switch
Pressure Chamber & Diaphragm Material (Wetted)		A S					Aluminum chamber with Nitrile diaphragm 316 SS chamber with Fluoroelastomer diaphragm
Adjustable Operating Range			1 2 3 4				10-180 in. w.c. (2.48-44.78 kPa) 0.5-15 psid (0.03-1 bar) 5-70 psid (.34-4.8 bar) 10-200 psid (.7-13.8 bar)
Circuit (Switch) Options				S D			SPDT snap action switch rated 5 A @ 125/250 VAC, 30 VDC DPDT snap action switch rated 5 A @ 125/250 VAC, 30 VDC
Electrical Connection					L T C		18 AWG x 18 inch lead wires UL, CSA approved internal terminal block ATEX approved internal terminal block
Options						Drain MV VIT	Enclosure with drain - allows condensate to be drained from inside (meets NEMA 3 instead of 4X) Gold contacts on snap switch for dry circuits rated 1 A @ 125 VAC, 1A resistive or 0.5 A inductive @ 30 VDC Fluoroelastomer diaphragm option where not standard

HAZARDOUS LOCATION RATINGS

Model	UL	CSA	Directive 2014/34/EU ATEX Compliant
H3 _ – _ _ C	-	-	CE 0344 Ex II 2 G EEx d IIB -20°C≤ T amb ≤ 75°C T6 EC-Type Certificate No. KEMA 03ATEX 2584
H3 _ – _ _ L	Cl. I, Gr.B, C & D Cl. II, Gr.E, F & G	Cl. I, Gr.B, C & D Cl. II, Gr.E, F & G	-
H3 _ – _ _ T	Cl. I, Gr.B, C & D Cl. II, Gr.E, F & G	Cl. I, Gr.B, C & D Cl. II, Gr.E, F & G	-
H3 _ – _ _ C-DRAIN	-	-	CE 0344 Ex II 2 G EEx d IIB -20°C≤ T amb ≤ 75°C T6 EC-Type Certificate No. KEMA 03ATEX 2584
H3 _ – _ _ L-DRAIN	Cl. I, Gr.B, C & D Cl. II, Gr.E, F & G	-	-

ACCESSORIES

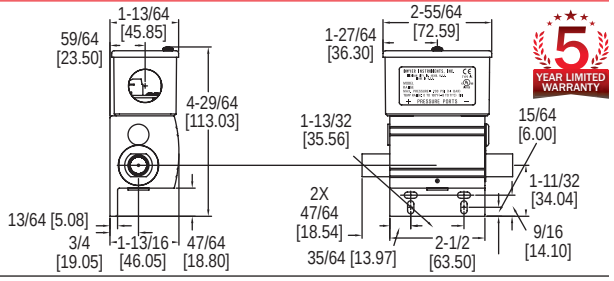
Model	Description
A-610	Pipe mounting kit for 1-1/4 to 2″ pipe

Dwyer

SERIES DX

WET/WET DIFFERENTIAL PRESSURE SWITCH

NEMA 4X Enclosure, Low Differential Set Points



5 YEAR LIMITED WARRANTY

The **Series DX Wet/Wet Differential Pressure Switch** makes a contact output based on the differential between two pressure sources. Wetted materials of brass and fluoroelastomer are suitable for use with most gases and water based solutions. The switch can be used for low differential pressure indication with set point on a decrease of pressure as low as 1 psid (0.07 bar). Differential set point ranges are available from 2.5 to 75 psid (0.17 to 5.17 bar) on increasing differential pressure and 1.0 to 67 psid (0.07 to 4.62 bar) on decreasing differential pressure. Unit features a high static pressure rating of 200 psig (13.8 bar). Weatherproof, UL type 4X, enclosure for dust laden, outdoor, or wash-down installation environments. Externally adjustable set point, integral mounting flange and a removable electrical terminal block for quick and easy installation.

FEATURES/BENEFITS

- Differential pressure switch that is suitable for most gas and water-based applications allows multiple uses in the most sophisticated designs
- Weatherproof housing provides protection in the harsh, wet or dirty environments ensuring switch's long-service life
- Removable terminal block reduces installation time

APPLICATIONS

- Indicating filter condition
- Proof of flow indicator monitoring
- Proving flow through a pump
- Proving flow through a chiller
- Proving flow through a heat pump or AC unit

OPTIONS	
To order add suffix:	**Description**
-PRESET	Preset unit
Example: DXW-11-153-1-PRESET	

USA: California Proposition 65

⚠WARNING: Cancer and Reproductive Harm - www.P65Warnings.ca.gov

SPECIFICATIONS

Service: Compatible gases and liquids.
Wetted Materials: Connection: Brass; Diaphragm: Fluoroelastomer.
Temperature Limits: 30 to 140°F (-1 to 60°C).
Pressure Limits: 200 psig (13.8 bar). Continuous single side only pressure should not exceed 1.25 x full differential range.
Enclosure Rating: Weatherproof UL type 4X (IP65).
Repeatability: ±2% of full range.
Switch Type: SPDT snap switch.
Electrical Rating: 5 A @ 125/250 VAC (~), 5 A res. @ 30 VDC (⎓).
Electrical Connection: Removable terminal block.
Conduit Connection: 0.871″ diameter hole for 1/2″ conduit fitting.
Process Connection: 1/4″ NPT female.
Mounting Orientation: Ports on horizontal plane, ±10°.
Set Point Adjustment: External screw.
Housing Materials: Body: Aluminum; Housing: Polycarbonate; Cover: 300 SS.
Vibration and Shock: Set point repeats after 2.5 Gs, 5 to 500 Hz. Set point repeats after a 15 Gs, 10 millisecond duration.
Humidity Limit: 80% (non-condensing).
Pollution Degree: 2.
Environment: Intended for indoor and outdoor use.
Weight: 1 lb 3 oz (0.54 kg).
Agency Approvals: CE, cULus.

MODEL CHART

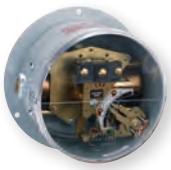
Model	Adjustable Differential Range (on increase) [psid (bar)]	Fixed Deadband [psid (bar)] Low Set Point	Fixed Deadband [psid (bar)] High Set Point
DXW-11-153-1	2.5 to 10 (0.17 to 0.69)	1.5 (0.10)	2.5 (0.17)
DXW-11-153-2	10 to 25 (0.69 to 1.72)	2.5 (0.17)	3.5 (0.24)
DXW-11-153-3	25 to 50 (1.72 to 3.45)	3.5 (0.24)	6.0 (0.41)
DXW-11-153-4	50 to 75 (3.46 to 5.17)	6.0 (0.41)	8.0 (0.55)

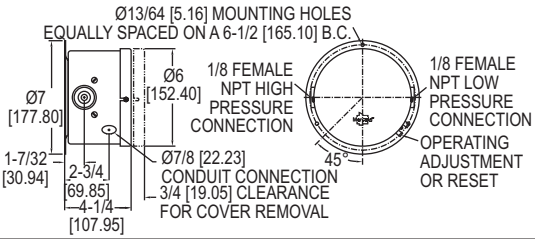
Note: Set points on decrease will be the range minus the deadband.

SERIES DP | MERCOID® BY DWYER

DOUBLE BELLOWS DIFFERENTIAL PRESSURE SWITCH

Visible Set Points, Adjustable or Fixed Deadband, High Pressure Ranges





Two opposing bellows combine maximum sensitivity and vibration resistance at a moderate cost in the **Series DP Double Bellows Differential Pressure Switch**. Both set and reset points are easily adjustable through non-interactive, externally accessible controls. Visible set point indicators simplify changes. SPDT snap action switch, 316 stainless steel or brass bellows, flanged steel housing. Rated pressures to 600 psig.

FEATURES/BENEFITS

- Bellows switch design provides sensitivity to pressure changes but resists vibration preventing out of range switching
- External access to set and rest controls makes for easy adjustments
- Visible set point indicators simplify changes

APPLICATIONS

- Accurate switch triggers in high pressure applications

SPECIFICATIONS

Wetted Materials: Brass on ranges 61, 62, 63 or 316 SS on ranges 62E, 64E, 65E.
Temperature Limits: -10 to 180°F (-23 to 82°C).
Pressure Limit: Maximum pressure of the operating range.
Enclosure Rating: General purpose. Weatherproof or explosion-proof optional.
Switch Type: Snap switch. (Contact factory for mercury switch).
Electrical Rating: See model chart.
Electrical Connection: Screw terminal.
Conduit Connection: General purpose: 1/2″ hole for conduit hub; Weatherproof: 1/2″ conduit hub; Explosion-proof: 3/4″ female NPT.
Process Connection: General purpose and weatherproof: 1/8″ female NPT, explosion-proof: 1/4″ male NPT.
Mounting Orientation: Vertical.
Set Point Adjustment: Thumbscrew.
Weight: General purpose: 5 lb (2.3 kg), weatherproof: 7 lb (3 kg), explosion-proof: 25 lb (11 kg).
Deadband: See model chart.
Agency Approvals: CE, cULus.

MODEL CHART

Bellows Material	Range, psid (bar)	Max. Press, psig (bar)	Adjustable Deadband: Snap Action Switch SPDT, 15A @ 120/240 VAC — Min. D.B. psid (bar)	Adjustable Deadband: Snap Action Switch SPDT, 15A @ 120/240 VAC — Model	Fixed Deadband: Snap Action Switch SPDT, 15A @ 120/240 VAC — Fixed D.B. psid (bar)	Fixed Deadband: Snap Action Switch SPDT, 15A @ 120/240 VAC — Model
Brass	0-10 (0-0.7)	50 (3.5)	1.5 (.10)	**DPA-7033-153-61**	0.5 (.03)	**DPS-7233-153-61**
Brass	0-20 (0-1.4)	100 (6.9)	2.5 (.17)	**DPA-7033-153-62**	1.0 (.07)	**DPS-7233-153-62**
Brass	0-30 (0-2.1)	300 (20.7)	6.0 (.41)	**DPA-7033-153-64**	1.5 (.10)	**DPS-7233-153-64**
316 SS	0-20 (0-1.4)	100 (6.9)	3.0 (.21)	**DPA-7043-153-62E**	1.5 (.10)	**DPS-7243-153-62E**
316 SS	0-30 (0-2.1)	300 (20.7)	6.0 (.41)	**DPA-7043-153-64E**	2.0 (.14)	**DPS-7243-153-64E**
316 SS	0-80 (0-5.5)	600 (41.4)	20(1.4)	**DPA-7043-153-65E**	6.0 (.41)	**DPS-7243-153-65E**

OPTIONS	
To order add suffix:	**Description**
W	Weatherproof enclosure
Example: DPAW-7033-153-61	
E	Explosion-proof enclosure
Example: DPAE-7033-153-61	

USA: California Proposition 65

⚠WARNING: Cancer and Reproductive Harm - www.P65Warnings.ca.gov

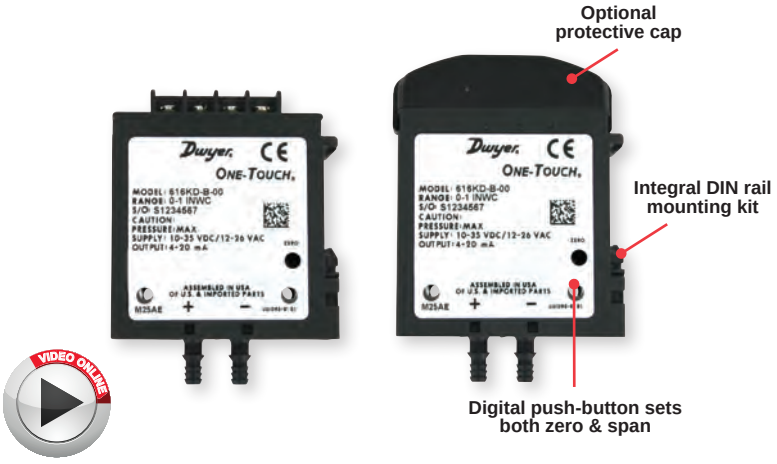
Dwyer

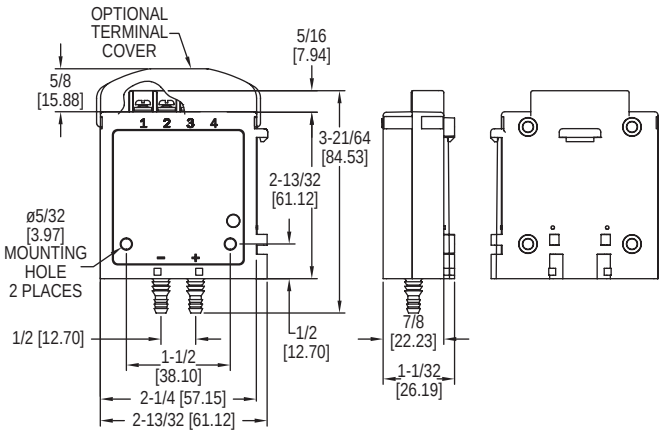
SERIES 616KD

DIFFERENTIAL PRESSURE TRANSMITTERS ±0.25, ±1, OR ±2% ACCURACY

One-Touch® Digital Push-Button Calibration Technology

5 YEAR LIMITED WARRANTY





The **Series 616KD Differential Pressure Transmitters ±0.25, ±1, or ±2% Accuracy** with One-Touch® Digital Push-Button Calibration Technology are designed for simplicity, making them the ideal choice for installers and maintenance professionals. These instruments not only alleviate cumbersome turn pots typically found in most transmitters, but eliminate entirely the need to span the instruments during calibration. With a single digital push-button, both ZERO AND SPAN are calibrated properly, nothing else is required. No additional reference pressure sources or separate calibration devices are necessary.

FEATURES AND BENEFITS

- Simple calibration push-button sets back zero and span, saving time installing and over the service life
- Cost effective and compact device suitable for OEM applications where space, simplicity, and value are key
- Ranges and accuracy selection cover a wide range of applications minimizing components and determining standardizing on design
- Optional 1/8″ NPT process connection allows for use with metal barbed fittings or compression fittings for use with metal tubing
- Optional plenum rated units meeting UL Standard 2043 are available

APPLICATIONS

- Air handlers
- Variable air volume
- Duct pressure
- Filter monitoring

SPECIFICATIONS

Service: Air and non-combustible, compatible gases.
Wetted Materials: Consult factory.
Accuracy: 616KD-A: ±0.25% FS; 616KD-B: ±1% FS, 616KD: ±2% FS.
Stability: ±1% FS/year.
Temperature Limits: 0 to 140°F (-17.8 to 60°C).
Compensated Temperature Range: 20 to 122°F (-6.67 to 50°C).
Pressure Limits: 2 psig (ranges 5 in w.c. or lower); 5 psig (ranges 10 to 40 in w.c.).
Thermal Effect: 616KD-A: ±0.02% FS/°F; 616KD-B: ±0.04% FS/°F; 616KD: ±0.06% FS/°F, includes zero and span.
Power Requirements: 4-20 mA output: 10-35 VDC (2 wire) or 12-26 VAC (4 wire); 5V output: 10-35 VDC (3 wire) or 12-26 VAC (4 wire); 10V output: 13-35 VDC (3 wire) or 12-26 VAC (4 wire) for 616KD A and B. 16-36 VDC (2 or 3 wire): 20-28 VAC (3 wire) for 616KD.
Output Signal: 4-20 mA or option with field selectable 0-10, 0-5, 2-10, 1-5 V.
Zero and Span Adjustments: Push button.
Loop Resistance: 4-20 mA output (DC): 0 to 1250 Ω max. Rmax = 50 (VpsDC -10) Ω; 4-20 mA output (AC): 0 to 1200 Ω max. Rmax = 50 (1.4 VpsAC -12) Ω; Voltage output: 5K Ω minimum.
Current Consumption: 24 mA max for 616KD A and B. 21 mA max for 616KD.
Electrical Connections: Screw-type terminal block.
Process Connections: Barbed, dual size to fit 1/8″ & 3/16″ (3 mm and 5 mm) ID rubber or vinyl tubing.
Enclosure Rating: NEMA 1 (IP20).
Mounting Orientation: Vertical with pressure connections pointing down.
Weight: 1.8 oz (51 g).
Agency Approvals: CE, optional plenum rated units meet UL Standard 2043.

MODEL CHART

Example	616KD	-A	-12	-AT	616KD-A-12-AT
Series	616KD				Differential pressure transmitter
Accuracy		A			0.25% full-scale accuracy
		B			1.0% full-scale accuracy
					2.0% full-scale accuracy
Range			00		0 to 1 in w.c.
			01		0 to 2 in w.c.
			02		0 to 3 in w.c.
			03		0 to 5 in w.c.
			04		0 to 10 in w.c.
			05		0 to 15 in w.c.
			06		0 to 20 in w.c.
			07		0 to 25 in w.c.
			08		0 to 40 in w.c.
			10		0 to 250 Pa
			11		0 to 500 Pa
			12		0 to 750 Pa
			13		0 to 1250 Pa
			14		0 to 2500 Pa
			15		0 to 5000 Pa
			50		0 to ±1 in w.c.
			51		0 to ±2 in w.c.
			57		0 to ±3 in w.c.
			52		0 to ±5 in w.c.
			53		0 to ±10 in w.c.
			54		0 to ±250 Pa
			55		0 to ±500 Pa
			56		0 to ±750 Pa
			58		0 to ±1250 Pa
Options				AT	Aluminum tag
				FC	Factory calibration
				NIST	NIST certification
				TC	Terminal cover
				V	Voltage output 0-5, 1-5, 0-10, 2-10 VDC (field selectable)
				N	1/8″ female NPT
				PR	Plenum rated

Note: 0.25% FS accuracy is not available in the following ranges 00, 01, 10, 11, 50, 51, 54, 55

ACCESSORIES

Model	Description
A-360	Aluminum DIN rail 1 m
A-618	Protective terminal cap

Optional NPT connection block

Dwyer

SERIES 616KD-LR

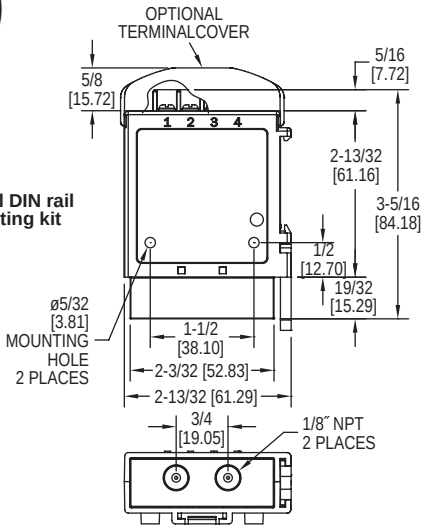
DIFFERENTIAL PRESSURE TRANSMITTERS - LOW RANGES

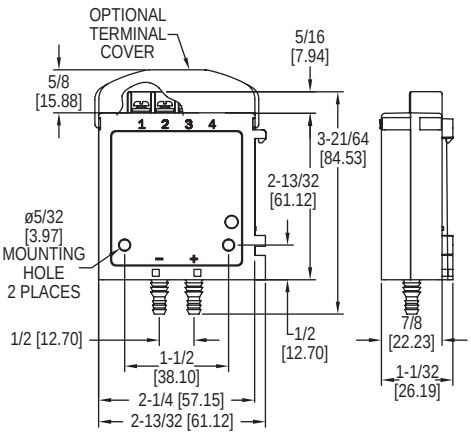
High Accuracy, Ranges Down to 0.1 in w.c. (25 Pa)

Integral DIN rail mounting kit

Optional NPT connection block

Digital push buttons set both zero and span





The **Series 616KD-LR Differential Pressure Transmitters - Low Ranges** are designed for simplicity, making it the ideal choice for installers and maintenance professionals. These low range instruments not only alleviate cumbersome turn pots typically found in most transmitters, but eliminate entirely the need to span the instruments during calibration. With single digital push-button, both ZERO AND SPAN are calibrated properly, nothing else is required. No additional reference pressure sources or separate calibration devices are necessary.

FEATURES/BENEFITS

- Wide selection of low ranges and accuracy cover numerous applications minimizing components and standardizing on design
- Simple calibration push-buttons to set zero and span, saving time installing and maintaining over the service life
- Cost effective and compact device suitable for OEM applications where space, simplicity, and value are key
- Simultaneous current and voltage outputs
- Optional 1/8″ NPT process connection allows for use with metal barbed fittings or compression fittings for use with metal tubing
- Optional plenum rated units meeting UL Standard 2043 are available

APPLICATIONS

- Air handlers
- Variable air volume
- Duct pressure
- Filter monitoring

SPECIFICATIONS

Service: Air and non-combustible, compatible gases.
Wetted Materials: Consult factory.
Accuracy: ±0.25% FS for ±0.4″ (100 Pa) and ±0.5″ (125 Pa), ±0.5% FS for ±0.25″ (60 Pa), and ±1% FS for ±0.1″ (25 Pa).
Stability: ±1% / year FSO.
Temperature Limits: 0 to 140°F (-17.8 to 60°C).
Pressure Limits: 1 psi max., operation; 10 psi burst.
Power Requirements: 10-35 VDC (2 wire), 17-36 VDC or isolated 21.6-33 VAC (3 wire).
Output Signal: 4-20 mA (2-wire), 0-5 VDC, 0-10 VDC (3-wire).
Response Time: 2.5 Hz sample rate.
Zero and Span Adjustments: Push buttons.
Loop Resistance: Current Output: 0 to 1250Ω max; Voltage Output: Min. load resistance 1kΩ.
Current Consumption: 40 mA max.
Electrical Connections: Screw-type terminal block.
Process Connections: Barbed, dual size to fit 1/8″ & 3/16″ (3 mm & 5 mm) ID rubber or vinyl tubing, or 1/8″ NPT.
Enclosure Rating: NEMA1 (IP20).
Mounting Orientation: Vertical with pressure connections pointing down.
Weight: 1.8 oz (51 g).
Agency Approvals: CE, optional plenum rated units meet UL Standard 2043.

MODEL CHART

Example	616KD-LR	-A	34	-B	D1	-FC	616KD-LR-A34-BD1-FC
Series	616KD-LR						Differential pressure transmitter
Accuracy		A B D					0.25% FS accuracy 1.0% FS accuracy 0.5% FS accuracy
Range			31 32 34 35 41 42 44 45 61 62 64 65 71 72 74 75				0 to 0.1 in w.c.① 0 to 0.25 in w.c.② 0 to 0.4 in w.c. 0 to 0.5 in w.c. 0 to ±0.1 in w.c.① 0 to ±0.25 in w.c.② 0 to ±0.4 in w.c. 0 to ±0.5 in w.c. 25 Pa① 60 Pa② 100 Pa 125 Pa 0 to ±25 Pa① 0 to ±60 Pa② 0 to ±100 Pa 0 to ±125 Pa
Process Connection				B N			Plastic barb 1/8″ female NPT with front push-button
Output					D1 D2 D3 D4		4-20 mA and 0-10 V 4-20 mA and 0-5 V 4-20 mA and 2-10 V 4-20 mA and 1-5 V
Options						AT COC FC NIST TC PR	Aluminum tag Certificate of Conformance Factory calibration certificate NIST traceable calibration certificate Terminal cover Plenum rated

①B accuracy only. ②B and D accuracies only.

ACCESSORIES

Model	Description
A-360	Aluminum DIN rail 1 m
A-618	Protective terminal cap

A-618 installed on unit

Dwyer

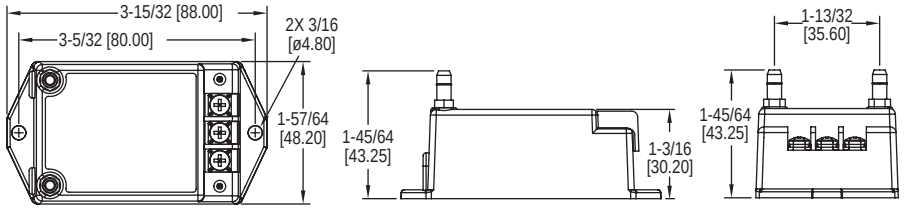
SERIES 668B/D

COMPACT DIFFERENTIAL PRESSURE TRANSMITTERS

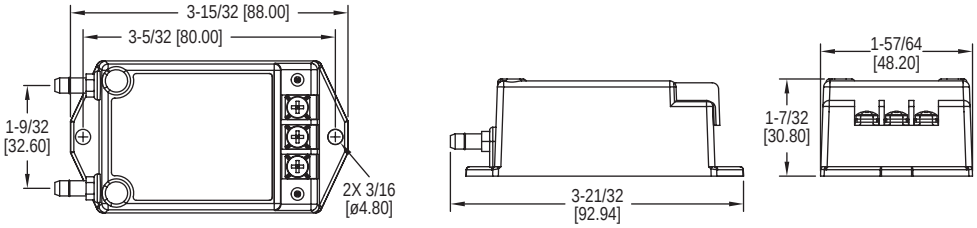
Ranges from 0.1 to 100 in w.c., Overpressure Protection to 15 psig, ±0.8% Accuracy

668B

668D



668B



668D

Our low cost **Series 668B/D Compact Differential Pressure Transmitters** are capable of sensing differential gage pressure with ±0.8% FS accuracy, and converts this pressure difference to a proportional high level analog output for both unidirectional and bi-directional pressure ranges. These transmitters can withstand up to 15 psig overpressure with no damage to the unit. The compact, lightweight design makes installation simple and easy. Units are protected against incorrect wiring, and include a protective terminal cover.

FEATURES/BENEFITS

- Protection from 15 psi overpressure & incorrect wiring
- High accuracy at low pressure ranges
- Two package selections allows easy device mounting to best fit application pressure connections

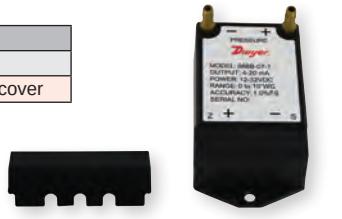
APPLICATIONS

- HVAC and VAV control
- Clean rooms and isolation rooms
- Duct static pressure measurement

SPECIFICATIONS
Service: Air and non-conductive gases.
Accuracy: ±0.8% FS.
Temperature Limits: Operating: 0 to 170°F (-18 to 77°C); Storage: -40 to 185°F (-40 to 85°C).
Pressure Limits: 15 psig (1.0 bar).
Thermal Effects: ±0.03% FS/°F (±0.054% FS/°C).
Compensated Range: From 40 to 170°F (4.4 to 77°C).
Power Requirements: 12-32 VDC.
Output Signals: 4-20 mA (2-wire), 0-10 VDC (3-wire), or 0-5 VDC (3-wire).
Zero Adjustment: Accessible under the small terminal cover.
Electrical Connection: Terminal strip.
Process Connection: 3/16″ OD barbed brass for 1/8″ ID push-on tubing.
Enclosure: Stainless steel and PC+ABS alloy, UL 94 V-0 rated.
Weight: 4.0 oz (113 g).

MODEL CHART					
Example	**668**	**B**	**-08**	**-1**	**668B-08-1**
Series	668				Compact differential pressure transmitter
Connection		B			Front
		D			Bottom
Unidirectional Pressure Ranges			01		0 to 0.1 in w.c.
			21		0 to 0.2 in w.c.
			02		0 to 0.25 in w.c.
			22		0 to 0.4 in w.c.
			03		0 to 0.5 in w.c.
			04		0 to 1 in w.c.
			05		0 to 2.5 in w.c.
			06		0 to 5 in w.c.
			07		0 to 10 in w.c.
			08		0 to 25 in w.c.
			09		0 to 50 in w.c.
			10		0 to 100 in w.c.
			12		0 to ±0.1 in w.c.
			13		0 to ±0.25 in w.c.
			14		0 to ±0.5 in w.c.
			15		0 to ±1 in w.c.
			16		0 to ±2.5 in w.c.
			17		0 to ±5 in w.c.
			18		0 to ±10 in w.c.
			19		0 to ±25 in w.c.
Output				1	4 to 20 mA
				2	0 to 10 VDC
				3	0 to 5 VDC

ACCESSORIES	
Model	**Description**
A-TC	Replacement protective terminal cover



A-TC shown attached

OPTIONS	
Use order code:	**Description**
NISTCAL-PT1	NIST traceable calibration certificate

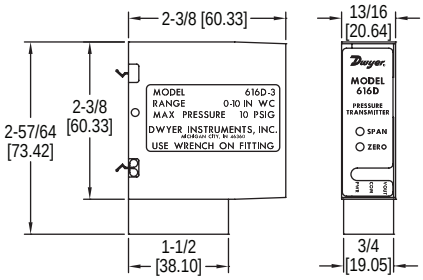
USA: California Proposition 65
⚠WARNING: Cancer and Reproductive Harm - www.P65Warnings.ca.gov

Dwyer

SERIES 616D

DIN RAIL DIFFERENTIAL PRESSURE TRANSMITTER

Mounts on 35 mm DIN Rail, ±0.25% Full-Scale Accuracy



The **Series 616D Din Rail Differential Pressure Transmitter** senses the pressure of air and compatible gases and sends a standard 4-20 mA or 0-10 VDC output signal. The 616D enclosure is specifically designed to mount on a 35 mm DIN rail in a panel. This mounting style allows for several units to be mounted closely together reducing required space. The span and zero controls are for use when checking calibration. They are not intended for re-ranging. Versatile circuit design enables operation in 2-wire current loops.

FEATURES/BENEFITS
- Simple calibration push-buttons to set zero and span
- Cost effective and compact device suitable for OEM applications where space, simplicity, and value are key

APPLICATIONS
- Air handlers
- Variable air volume
- Duct pressure
- Filter monitoring

MODEL CHART

Model	Range	Max. Pressure
616D-2	0 to 6 in w.c.	10 psig
616D-3	0 to 10 in w.c.	10 psig
616D-4	0 to 20 in w.c.	20 psig
616D-5	0 to 40 in w.c.	20 psig
616D-6	0 to 100 in w.c.	15 psig
616D-7	0 to 200 in w.c.	45 psig
616D-8	0 to 10 psid	45 psig

SPECIFICATIONS

Service: Air and non-combustible, compatible gases.
Wetted Materials: Consult factory.
Accuracy: ±0.25% FS @ 77°F (25°C).
Thermal Effect: ±0.02 FS/°F (±0.036% FS/°C).
Stability: ±1% FS/yr.
Temperature Limits: 14 to 185°F (-10 to 85°C).
Pressure Limits: See chart.
Power Requirements: 10-35 VDC (2-wire); 17-36 VDC, or isolated 21.6-33 VAC (3-wire).
Output Signal: 4-20 mA (2-wire); 0-10 VDC (3-wire).
Zero and Span Adjustments: Push-buttons.
Loop Resistance: Current output: 0 to 1250 Ω max; Voltage output: Load resistance 1 kΩ min.
Current Consumption: 40 mA max.
Electrical Connections: Screw-type terminal block.
Process Connections: 1/8″ female NPT. Accessories included are 2 barbed fittings for 1/8″ (3.12 mm) and 3/16″ (4.77 mm) ID rubber or vinyl tubing.
Mounting Orientation: Vertical, on a 1.378″ (35 mm) DIN rail.
Weight: 4.8 oz (136 g).
Agency Approvals: CE.

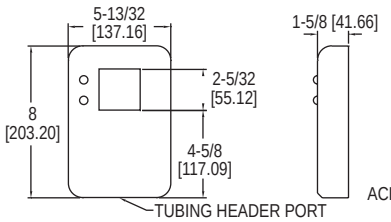
ACCESSORIES

Model	Description
A-360	Aluminum DIN Rail 1 m

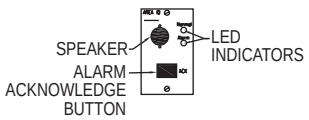
SERIES RSM

ROOM STATUS MONITOR

For Sensing Low Pressure Using High Accuracy



Room status monitor



Remote annunciator

Series RSM Room Status Monitor is designed for critical low differential pressure applications that require stringent pressure monitoring and alarming. The Series RSM can be configured to monitor positive or negative pressure in protected environments and hospital isolation rooms per CDC guidelines. The RSM is a complete system with a graphic user interface which enables access to pressure, security, calibration, and alarm setup. The RSM has a NEMA 1 (IP20) rated fire retardant plastic for indoor applications.

FEATURES/BENEFITS
- Accurately monitors protective environments for negative or positive pressure ensuring safety and reducing risk of catastrophic events
- Audible and visual alarm provides immediate local alerts allowing corrective action to be taken quicker to eliminate the problem from becoming widespread
- Password protected set up menu ensures no errors by untrained personnel
- Optional BACnet communication from devices provides integration into building control system for automated control and centralized monitoring and alarming

APPLICATIONS
- Hospital isolation wards
- Clean rooms
- Pharmaceutical
- Manufacturing
- Research labs
- Animal facilities

MODEL CHART

Model*	Operating Range	Model**	Operating Range
RSM-1-A	±0.05 in w.c.	**RSM-1-B**	±0.05 in w.c.
RSM-2-A	±0.1 in w.c.	**RSM-2-B**	±0.1 in w.c.
RSM-3-A	±0.25 in w.c.	**RSM-3-B**	±0.25 in w.c.
RSM-4-A	±0.5 in w.c.	**RSM-4-B**	±0.5 in w.c.
RSM-5-A	±1 in w.c.	**RSM-5-B**	±1 in w.c.
RSM-6-A	±2.5 in w.c.	**RSM-6-B**	±2.5 in w.c.
***Excitation/Output: 24 VAC/4-20 mA or 0-5 or 0-10 VDC. **Excitation/Output: 120 VAC/4-20 mA or 0-5 or 0-10 VDC.			
Note: For optional BACnet communication change end from -A to -C for 24 VAC power or from -B to -D for 120 VAC power models.			

SPECIFICATIONS

Service: Air or non-conductive, nonexplosive gases.
Accuracy: ±0.5% FS.
Temperature Limits: 32 to 120°F (0 to 50°C).
Humidity Limits: 5 to 95% relative humidity (non-condensing).
Thermal Effects: ±0.03% FS/°F (± 0.05% FS/°C).
Pressure Limits: ±15 in w.c. (±3.7 kPa).
Supply Voltage: Order code A (24 VAC): 18-32 VAC, 50 to 60 Hz; Order code B (120 VAC): 85-265 VAC, 50 to 60 Hz; Main supply voltage fluctuations up to 10%.
Power Requirements: 5 W.
Power Consumption (Voltage output): 5 W.
Output Signal: Selectable 4-20 mA (2-wire), 0-5 VDC (3-wire), or 0-10 VDC (3-wire).
Switch Type: SPST.
Loop Resistance (4-20 mA output): 0 to 510 Ω.
Electrical Connection: Removable terminal block.
Process Connections: Barbed fittings for 3/16″ ID tubing.
Enclosure Rating: NEMA 1 (IP20) rated for indoor applications.
Housing: Fire retardant plastic.
Mounting: Mount to standard double gang metal electrical box using 4x4″ plaster ring adapter.
Dimensions: 8″ H x 5.4″ W x 1.8″ D (20.3 H x 13.7 W x 4.1 D cm).
Weight: 1.5 lb (680 g).
Communications: BACnet MSTP ASC optional.
Agency Approvals: CE, CSA (RSM only).

ACCESSORIES

Model	Excitation/Output
A-285	Remote alarm annunciator with visible/audible alarm and acknowledge switch

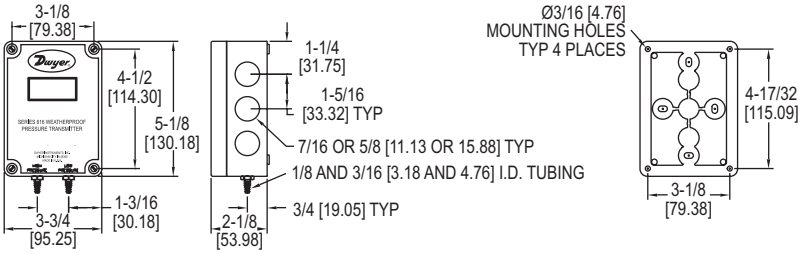
Process Tubing Options: See page 455 (Gage Tubing Accessories)

Dwyer

SERIES 616W

DIFFERENTIAL PRESSURE TRANSMITTER

NEMA 4X Enclosure, 0.25% FS Accuracy



Positive, negative and differential pressures can be measured within a full span accuracy of ±0.25 with the **Series 616W Differential Pressure Transmitter**. Units are enclosed in a polycarbonate case, rated NEMA 4X (IP66) and operate by sensing the pressure of air and compatible gases then sending a standard 4-20 mA output signal. Design enables operation in 2-wire current loops. A wide range of models are available factory calibrated to specific ranges. The span and zero controls are for use when checking calibration. They are not intended for re-ranging to a significantly different span. The LCD display allows local indication of pressure.

FEATURES/BENEFITS

- NEMA 4X rated enclosure provides protection in harsh environments permitting outdoor monitoring or in areas where dust and particulate matter exists
- Easy to read LCD display provides immediate local alerts allowing corrective action to be taken quicker to eliminate the problem from becoming widespread
- Zero and span controls provides easy calibration checks and shorter installation time to get device running and monitoring

APPLICATIONS

- Dust collection
- Outdoor HVAC
- Roof-top equipment

SPECIFICATIONS

Service: Air and non-combustible, compatible gases.
Wetted Materials: Consult factory.
Accuracy: ±0.25% FS @ 77°F (25°C), display accuracy ±0.5%.
Stability: ±1% FS/yr.
Temperature Limits: 14 to 185°F (-10 to 85°C).
Pressure Limits: See chart.
Power Requirements: 10-35 VDC (2-wire), 17-36 VDC, or isolated 21.6-33 VAC (3-wire).
Output Signal: 4-20 mA (2-wire), 0-5 VDC, or 0-10 VDC (3-wire).
Zero and Span Adjustments: Push-buttons.
Loop Resistance: Current output: 0 to 1250 Ω max; Voltage output: Load resistance 1 kΩ (min).
Current Consumption: 40 mA (max).
Electrical Connections: 3-wire removable European style terminal block for 16 to 26 AWG.
Process Connections: Barbed, dual size to fit 1/8″ and 3/16″ (3.12 and 4.76 mm) ID rubber or vinyl tubing.
Enclosure Rating: NEMA 4X (IP66).
Mounting Orientation: Any orientation.
Weight: Without LCD 8.8 oz. (249 g); with LCD 9.6 oz (272 g).
Agency Approvals: CE.

MODEL CHART

Model	Range	Max. Pressure
616W-2-LCD	0 to 6 in w.c.	10 psig
616W-3-LCD	0 to 10 in w.c.	10 psig
616W-4-LCD	0 to 20 in w.c.	20 psig
616W-5-LCD	0 to 40 in w.c.	20 psig
616W-6-LCD	0 to 100 in w.c.	15 psig
616W-7-LCD	0 to 200 in w.c.	45 psig
616W-20B-LCD	0 to ±10 in w.c.	10 psig
616W-3M-LCD	0 to 2.5 kPa	68.9 kPa

Note: Units with "M" in the model number are metric units.

OPTIONS

To order add suffix:	Description
-NIST	NIST traceable calibration certificate

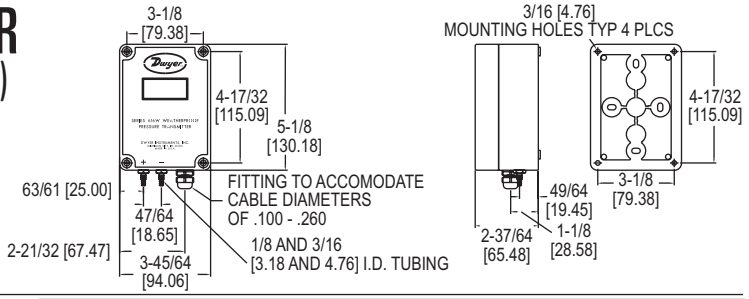
Example: 616W-3-LCD-NIST

Process Tubing Options: See page 455 (Gage Tubing Accessories)

SERIES 616WL

DIFFERENTIAL PRESSURE TRANSMITTER

Low Ranges Down to 0.25 in w.c. (60 Pa), NEMA 4X Housing (IP66)



The **Series 616WL Differential Pressure Transmitter** senses very low pressures of air and non-combustible, compatible gases and sends a standard 4-20 mA output signal. All models, including those featuring the 3 digit LCD digital read-out, are factory calibrated to specific ranges as listed in the chart below. Positive, negative and differential pressures can be measured within a full span accuracy of ±0.50%. This weatherproof unit is enclosed in a polycarbonate case, designed to meet (IP66/NEMA 4X). Internal digital push-button zero and span allow for quick and simple field calibration.

FEATURES/BENEFITS

- NEMA 4X rated enclosure provides protection in harsh environments permitting outdoor monitoring or in areas where dust and particulate matter exists
- Easy to read LCD display provides immediate local alerts allowing corrective action to be taken quicker to eliminate the problem from becoming widespread
- Zero and span controls provides easy calibration checks and shorter installation time to get device running and monitoring
- High precision accuracy at low pressure ranges provides exceptional accuracy for insuring tight-control and minimizing costly out of specification conditions

APPLICATIONS

- Low pressure applications
- Dust collection
- Outdoor HVAC
- Roof-top equipment

SPECIFICATIONS

Service: Air and non-combustible, compatible gases.
Wetted Materials: Consult factory.
Accuracy: ±0.50% FS, display accuracy ±0.5%.
Stability: ±1% FS/yr.
Temperature Limits: 0 to 140°F (-17.8 to 60°C).
Compensated Temperature Limits: 20 to 120°F (-6.67 to 48.9°C).
Pressure Limits: See chart.
Thermal Effect: ±0.02% FS/°F (0.036% FS/°C).
Power Requirements: 12-30 VDC (2-wire).
Output Signal: 4-20 mA.
Zero and Span Adjustments: Digital, push-button adj.
Loop Resistance: DC; 0 to 900 Ω max.
Current Consumption: DC; 38 mA max.
Electrical Connections: Screw-type terminal block.
Process Connections: Barbed, dual size to fit 1/8″ and 3/16″ (3.12 and 4.76 mm) ID rubber or vinyl tubing.
Enclosure Rating: NEMA 4X (IP66).
Mounting Orientation: Vertical, consult factory for other position orientations.
Weight: Without LCD 17 oz (482 g); with LCD 18 oz (510 g).
Agency Approvals: CE.

MODEL CHART

Model	Range	Max. Pressure
616WL-2-LCD	0 to 0.25 in w.c.	2 psig
616WL-4-LCD	0 to 1 in w.c.	4 psig
616WL-12-LCD	0 to ±0.25 in w.c.	2 psig
616WL-14-LCD	0 to ±1 in w.c.	4 psig
616WL-22-LCD	0 to 60 Pa	2 psig
616WL-32-LCD	0 to ±60 Pa	2 psig
616WL-25-LCD	0 to 250 Pa	4 psig
616WL-35-LCD	0 to ±250 Pa	4 psig

OPTIONS

To order add suffix:	Description
-NIST	NIST traceable calibration certificate

Example: 616WL-4-LCD-NIST

Process Tubing Options: See page 455 (Gage Tubing Accessories)

Dwyer

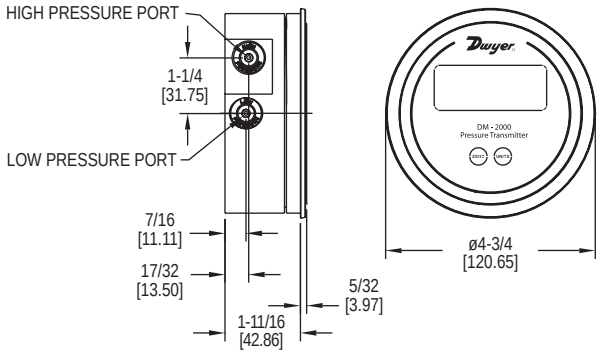
SERIES DM-2000

DIFFERENTIAL PRESSURE TRANSMITTERS

Same Size as Standard Magnehelic® Differential Pressure Gage

DM-2000-LCD

DM-2100-LCD



The Dwyer **Series DM-2000 Differential Pressure Transmitters** sense the pressure of air and compatible gases and sends a standard 4-20 mA output signal. The DM-2000 housing is specifically designed to mount in the same diameter cutout as a standard Magnehelic® gage. A wide range of models are available factory calibrated to specific ranges.

Pressure connections are inherent to the glass filled plastic molded housing making installation quick and easy. Digital push-button zero and span simplify calibration over typical turn-potentiometers. An optional 3.5 digit LCD shows process and engineering units. A single push-button allows field selection of 4 to 6 engineering units depending on range.

FEATURES/BENEFITS

- Zero and span controls provide easy calibration checks and shorter installation time to get device running and monitoring
- Quick response to pressure changes means no delay in signaling and alerting to critical situations
- Easy to read LCD display provides immediate local alerts allowing corrective action to be taken quicker to eliminate the problem from becoming widespread
- Same size as Magnehelic® simplifies field upgrade to digital pressure gage by reducing install steps
- Tamper proof button configuration to prevent accidental changes to the settings

APPLICATIONS

- Differential pressure across filters
- Fan control
- Static pressures in ducts or buildings

SPECIFICATIONS

Service: Air and non-combustible, compatible gases.
Wetted Materials: Consult factory.
Accuracy: ±1% FS at 70°F.
Stability: ±1% FS/yr.
Temperature Limits: 20 to 120°F (-6.67 to 48.9°C).
Pressure Limits: 10 psig (0.69 bar).
Thermal Effect: ±0.055% FS/°F (0.099% FS/°C).
Power Requirements: 10-35 VDC (2 wire).
Output Signal: 4-20 mA.
Zero and Span Adjustments: Digital push-button zero and span.
Loop Resistance: DC: 0 to 1250 Ω maximum.
Current Consumption: DC: 38 mA max.
Electrical Connections: Screw-type terminal block.
Display: 3.5 digit LCD, 0.7″ H.
Process Connections: 1/8″ ID tubing.
Mounting Orientation: Vertical.
Weight: 4.8 oz (136 g).

MODEL CHART

Model	Range (in w.c.)	Pa	mm w.c.	mBar	kPa	psi
DM-2001-LCD	0 to .100	24.9	2.54	.249	-	-
DM-2002-LCD	0 to .250	62.2	6.35	.622	-	-
DM-2003-LCD	0 to .500	124.3	12.70	1.243	.124	-
DM-2004-LCD	0 to 1.000	249	25.4	2.49	.249	-
DM-2005-LCD	0 to 2.00	497	50.8	4.97	.497	-
DM-2006-LCD	0 to 3.00	746	76.2	7.46	.746	.108
DM-2007-LCD	0 to 5.00	1243	127-0	12.43	1.243	.180
DM-2012-LCD	0 to ±.250	0 to ±62.2	0 to ±6.35	0 to ±.622	-	-
DM-2013-LCD	0 to ±.500	0 to ±124.3	0 to ±12.70	0 to ±1.243	-	-
DM-2019-LCD	0 to ±.200	49.8	5.08	.498	-	-

Note: For white overlay change -20 to -21. **Example:** DM-2102-LCD

ACCESSORIES

Model	Description
A-299	Surface mounting bracket
A-300	Flat flush mounting bracket
A-302F-A	303 SS static pressure tip with mounting flange; for 3/16″ ID rubber or plastic tubing; 4″ insertion depth; includes mounting screws
A-320-A	Instrument enclosure
A-489	4″ straight static pressure tip with flange
SCD-PS	100-240 VAC/VDC to 24 VDC power supply

OPTIONS

To order add suffix:	Description
-NIST	NIST traceable calibration certificate
Example: DM-2002-LCD-NIST	
-FC	Factory calibration certificate
Example: DM-2002-LCD-FC	

Process Tubing Options: See page 455 (Gage Tubing Accessories)

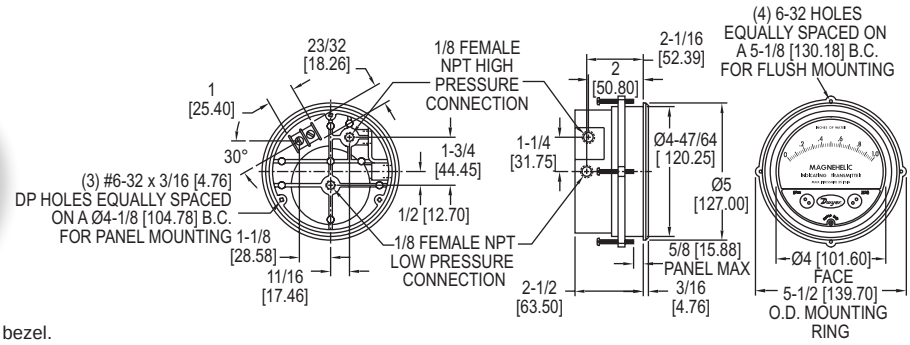
Dwyer

SERIES 605

MAGNEHELIC® DIFFERENTIAL PRESSURE INDICATING TRANSMITTER

Same Size as Standard Magnehelic® Differential Pressure Gage

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



The **Series 605 Magnehelic® Differential Pressure Indicating Transmitter** provides for both visual monitoring and electronic control of very low differential pressure. The Series 605 is ideal for control applications in building HVAC systems where local indication is desired during routine maintenance checks or necessary when trouble shooting the system. The easily read dial gage is complimented by the two-wire, 4-20 mA control signal utilizing the time-proven Dwyer® Magnehelic® gage mechanical design and Series 600 transmitter technology. The two-wire design with terminal strip on the rear simplifies connection in any 4-20 mA control loop powered by a 10-35 VDC supply.

FEATURES/BENEFITS

- Easy to read gage permits viewing from far away
- Patented design provides quick response to pressure changes means no delay in signaling and alerting to critical situations
- Durable and rugged housing and high-quality components combined provides long-service life and minimized down-time
- Optional stainless steel bezel is the same installation diameter as Magnehelic® gage and simplifies field upgrade to 605 indicating transmitter

APPLICATIONS

- Monitor pressures in ducts, rooms, or total building pressures
- Filter monitoring
- Local indication of clean room pressures with process signal sent to control room

SPECIFICATIONS

GAGE SPECIFICATIONS
Service: Air and non-combustible, compatible gases.
Wetted Materials: Consult factory.
Accuracy: See chart.
Stability: ±1% FS/yr.
Pressure Limits: See chart.
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) OD x 2-11/16″ (68.3 mm); -SS bezel: 4-3/4″ (120.7 mm) OD x 2-21/32 (67.5 mm).
Weight: 1 lb 12.6 oz (811 g).
Agency Approvals: CE.

TRANSMITTER SPECIFICATIONS
Accuracy: See chart (includes linearity, hysteresis, repeatability).
Temperature Limits: 20 to 120°F (-6.67 to 48.9°C).
Compensated Temperature Range: 32 to 120°F (0 to 48.9°C).
Thermal Effect: ±0.025% FS/°F (0.045% FS/°C).
Power Requirements: 10-35 VDC (2-wire).
Output Signal: 4-20 mA.
Zero and Span Adjustments: Protected potentiometers.
Loop Resistance: DC: 0 to 1250 Ω max.
Current Consumption: DC: 38 mA max.
Electrical Connections: Screw terminal block.
Mounting Orientation: Diaphragm in vertical position. Consult factory for other position orientations.

MODEL CHART

Model	Range in w.c.	Maximum Pressure	Electrical Accuracy ±%	Mechanical Accuracy ±%
605-00N	0.05-0-0.2	25 psi (1.7 bar)	4	4
605-11	0 to ±.25	25 psi (1.7 bar)	2	3
605-0	0 to .50	25 psi (1.7 bar)	2	3
605-1	0 to 1.0	25 psi (1.7 bar)	2	2
605-2	0 to 2.0	2 psi (13.79 kPa)	0.5	2
605-3	0 to 3.0	2 psi (13.79 kPa)	0.5	2
605-6	0 to 6.0	2 psi (13.79 kPa)	0.5	2
605-10	0 to 10	2 psi (13.79 kPa)	0.5	2
605-20	0 to 20.0	11 psi (75.8 kPa)	0.5	2
605-30	0 to 30	11 psi (75.8 kPa)	0.5	2
605-50	0 to 50	11 psi (75.8 kPa)	0.5	2
Model	**Range in Pa**	**Maximum Pressure**	**Electrical Accuracy ±%**	**Mechanical Accuracy ±%**
605-12	0 to ±60	25 psi (1.7 bar)	4	4
605-13	0 to ±100	25 psi (1.7 bar)	2	2
605-60PA	0 to 60	25 psi (1.7 bar)	2	4
605-125PA	0 to 125	25 psi (1.7 bar)	2	3
605-250PA	0 to 250	25 psi (1.7 bar)	2	2
605-500PA	0 to 500	2 psi (13.79 kPa)	0.5	2

OPTIONS

To order add suffix:	Description
-SS	304 brushed stainless steel bezel. +Backward compatible with standard Magnehelic® gage installation diameter
Example: 605-3-SS	
-NIST	NIST traceable calibration certificate
Example: 605-3-NIST	

ACCESSORIES

Model	Description
A-298	Flat aluminum bracket for flush mounting
A-370	Mounting bracket; flush mount Series 605 transmitter in bracket; bracket is then surface mounted; steel with gray hammertone epoxy finish

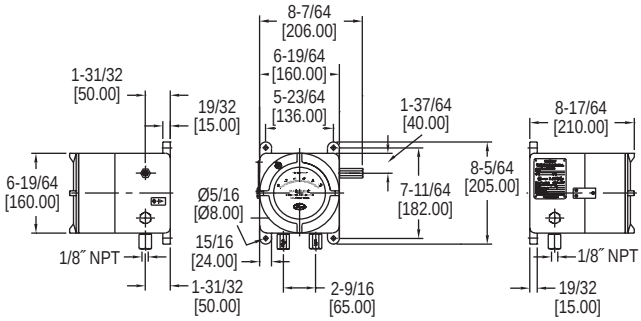
Static Fitting Options: See page 454 (Static Pressure Tips)
Process Tubing Options: See page 455 (Gage Tubing Accessories)

Dwyer

SERIES AT2605

ATEX/IECEX APPROVED 605 DIFFERENTIAL PRESSURE INDICATING TRANSMITTER

Series 605 in Flame-Proof ATEX/IECEx Enclosure



The **Series AT2605 ATEX/IECEx Approved 605 Differential Pressure Indicating Transmitter** provides for both visual monitoring and electronic control of very low differential pressure in hazardous locations. The easily read dial gage is complimented by the two-wire, 4-20 mA control signal utilizing the time-proven Dwyer® Magnehelic® gage mechanical design and Series 600 transmitter technology. The two-wire design simplifies any 4-20 mA control loop powered by a 10-35 VDC supply. Flame-proof enclosures are available in aluminum and can include a glass window for viewing process pressure on gage face.

FEATURES/BENEFITS

- ATEX/IECEx housing provides all the capabilities and value of the Magnehelic® 605 in a flame & explosion proof enclosure
- Quick response to pressure changes means no delay in assessing critical situations
- Durable and rugged housing and high-quality components combined provides long-service life and minimized down-time
- High impact strength and high temperature rated for applications where hazardous environments exist

APPLICATIONS

- Monitor pressures in ducts, rooms, or total building pressures
- Filter monitoring
- Local indication of clean room pressures with process signal sent to control room
- Hazardous area pressure measurement and transmitter

SPECIFICATIONS

GAGE SPECIFICATIONS
Service: Air and non-combustible, compatible gases.
Wetted Materials: Consult factory.
Accuracy: See page reference ❶ below.
Pressure Limits: See page reference ❶ below.
Temperature Limits: 20 to 120°F (-6.67 to 48.9°C) (**Note:** Product temperature limits differ from case).
Size: 4″ (101.6 mm) dial face.

TRANSMITTER SPECIFICATIONS
Accuracy: See page reference ❶ below. Includes linearity, hysteresis, repeatability.
Compensated Temperature Range: 32 to 120°F (0 to 48.9°C).
Thermal Effect: ±0.025% FS/°F (0.045% FS/°C).
Stability: ±1% FS/year.
Power Requirements: 10-35 VDC (2-wire).
Output Signal: 4-20 mA.
Zero and Span Adjustments: Protected potentiometers on 605 face. Can access those by opening case. Allowed only in safe zone.
Loop Resistance: DC: 0 to 1250 Ω max.
Current Consumption: DC: 38 mA max.
Electrical Connections: Screw terminal block.
Mounting Orientation: Diaphragm in vertical position.
Enclosure Rating: IP66. IP65 with option OPV, overpressure relief valve.
Housing Material: Aluminum.
Finishing: Texture epoxy coat RAL7038.
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.
Weight: 12.6 lb (5.7 kg).
ATEX Certificate: BVI 14ATEX0072.
Agency Approvals: ATEX Compliant CE 1370 Ex II 2G Ex d IIC T6 Gb / II 2D Ex tb IIIC T85°C Db, -60°C≤Tamb≤+60°C IECEx Compliant: Ex d IIC T6 Gb / Ex tb IIIC T85°C Db.

MODEL CHART

Example	AT2605	-00N	-X	-A	B	1	X	T2	AT2605-00N-X-AB1XT2
Series	AT2605								ATEX/IECEx approved 605 differential pressure indicating transmitter
Range		00N 11 0 1 2 3 6 10 20 30 50 60Pa 125Pa 250Pa 500Pa							.05 to 0 to .20 in w.c. .25 to 0 to .25 in w.c. 0 to .50 in w.c. 0 to 1.0 in w.c. 0 to 2.0 in w.c. 0 to 3.0 in w.c. 0 to 6.0 in w.c. 0 to 10.0 in w.c. 0 to 20.0 in w.c. 0 to 30 in w.c. 0 to 50 in w.c. 0 to 60 Pa 0 to 125 Pa 0 to 250 Pa 0 to 500 Pa
Construction			X						Standard construction
Housing				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

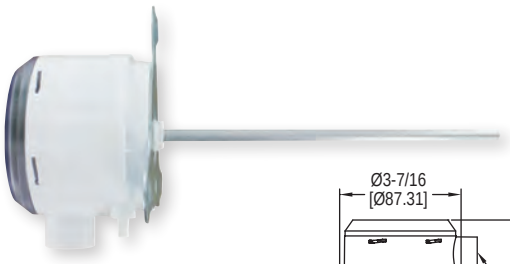
❶605 Ordering Page: See page 64 (Series 605)

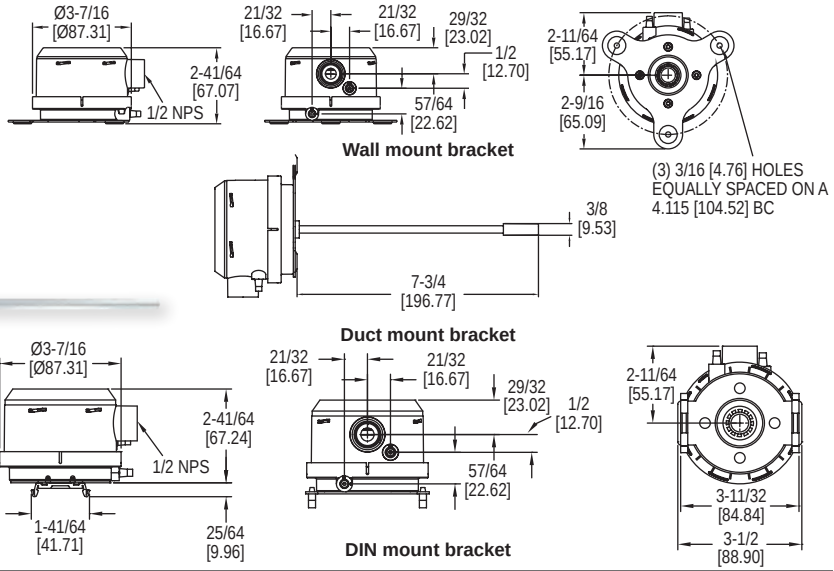
Dwyer

SERIES MS2

MAGNESENSE® II DIFFERENTIAL PRESSURE TRANSMITTER

Monitors Pressure, Air Velocity and Air Flow, BACnet or Modbus® Communications





The **Series MS2 Magnesense® II Differential Pressure Transmitter** combines the proven stable piezo technology and the versatility of our original Series MS with additional features to reduce installation time and simplify ordering. Like the original Series MS, the second generation transmitter can be used as a linear pressure output or a linear velocity output with the square root extraction done in the transmitter. Additional parameters have been included to expand the square root capability to include flow measurements.

FEATURES/BENEFITS

- Field selectable ranges and output signal reduce inventory and the chances of ordering an incorrect part
- BACnet or Modbus® serial communications reduce wiring cost by daisy-chaining the transmitters
- Our integral field-upgradeable display or plug-in remote display tool save upfront material cost and allow for local viewing of measurements

APPLICATIONS

- Filter monitoring in air handler units
- Building pressure in pharmaceutical-semi-conductor clean rooms
- Duct static pressure in commercial buildings
- Air velocity/flow in VAV systems

SPECIFICATIONS

Supported Baud Rates: 9600, 19200, 38400, 57600, 76800, 115200.
Data Size: 8.
Parity: None.
Stop Bits: 1.
Service: Air and non-combustible, compatible gases.
Wetted Materials: Consult factory.
Typical Accuracy: ±1% FS for 0.15 in w.c. (40 Pa), 0.25 in w.c. (50 Pa), 0.5 in w.c. (125 Pa), 2 in w.c. (500 Pa), 3 in w.c. (750 Pa), 5 in w.c. (1250 Pa), 10 in w.c. (2 kPa), 15 in w.c. (3 kPa), 25 in w.c. (5 kPa), 28 in w.c. (6.975 kPa); ±2% FS for 0.1 in w.c. (25 Pa), 1 in w.c. (250 Pa), and all bi-directional ranges.
Stability: ±1% / year FSO.
Temperature Limits: 0 to 150°F (-18 to 66°C).
Pressure Limits: 1 psi max., operation; 10 psi burst.
Power Requirements: 10-35 VDC (2-wire), 17-36 VDC or isolated 21.6-33 VAC (3-wire).
Output Signals: 4-20 mA (2-wire), 0-5 VDC, 0-10 VDC (3-wire).
Response Time: Adjustable: 0.5 to 15 sec. time constant. Provides a 95% response time of 1.5 to 45 seconds.
Zero & Span Adjustments: Digital push-buttons.
Loop Resistance: Current output: 0 to 1250 Ω max; Voltage output: Min. load resistance 1 kΩ.
Current Consumption: 40 mA max.
Display (Optional): 5 digit LCD.
Electrical Connections: 3-wire removable European style terminal block for 16 to 22 AWG.
Electrical Entry: 1/2″ NPS thread.
Process Connection: 3/16″ ID tubing (5 mm ID); Max. OD 9 mm.
Enclosure Rating: IP66.
Mounting Orientation: Not position sensitive.
Weight: 8.0 oz (230 g).
Agency Approvals: BTL, CE.

MODEL CHART

Model	in w.c.	Pa	mm w.c.	kPa
MS2-W101	0.10, 0.15, 0.25, 0.50	25, 40, 50, 125	2.5, 4, 6, 10	0.025, 0.04, 0.05, 0.125
MS2-W111	±0.10, ±0.15, ±0.25, ±0.50	±25, ±40, ±50, ±125	±2.5, ±4, ±6, ±10	±0.025, ±0.04, ±0.05, ±0.125
MS2-W102	1, 2, 3, 5	250, 500, 750, 1250	25, 50, 75, 125	0.25, 0.5, 0.75, 1.25
MS2-W112	±1, ±2, ±3, ±5	±250, ±500, ±750, ±1250	25, 50, 75, 125	0.25, 0.5, 0.75, 1.25
MS2-W103	10, 15, 25, 28	2500, 3500, 5000, 6975	250, 350, 500, 697.5	2.5, 3.5, 5.0, 6.975
	±10, ±15, ±25, ±28	±2500, ±3500, ±5000, ±6975	±250, ±350, ±500, ±697.5	±2.5, ±3.5, ±5.0, ±6.975

Note: For duct mount static probe change W to D. **Example:** MS2-D101
For DIN rail mounting change W to N. **Example:** MS2-N101

OPTIONS

To order add suffix:	Description
-LCD	Units with display
Example: MS2-W101-LCD	
-BC	BACnet Communications
Example: MS2-W101-BC	
-MC	Modbus® Communications
Example: MS2-W101-MC	
-NIST	NIST traceable calibration certificate
Example: MS2-W101-NIST	
-FC	Factory calibration certificate
Example: MS2-W101-FC	

ACCESSORIES

Model	Description
A-151	Cable gland for 5 to 10 mm diameter cable
A-MS2-LCD	Field upgradeable display
A-435-A	Remote display tool
A-480	Plastic static pressure tip
A-481	Installer kit; includes 2 plastic static pressure tips and 7 ft (2.1 m) of PVC tubing
A-489	4″ 303 SS straight static pressure tip with flange
A-302F-A	4″ 303 SS static pressure tip with mounting flange; for 3/16″ ID rubber or plastic tubing
SCD-PS	100 to 240 VAC/VDC to 24 VDC power supply

Modbus® is a registered trademark of Schneider Automation, Inc.

Process Tubing Options: See page 455 (Gage Tubing Accessories)

Dwyer

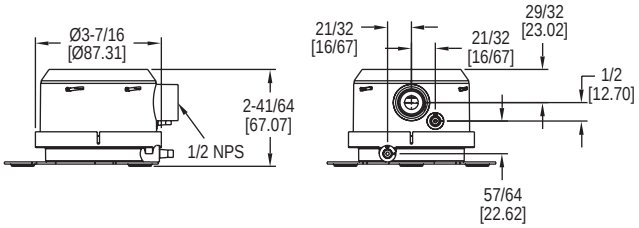
SERIES MS

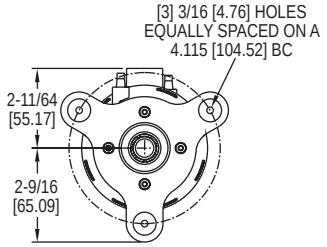
MAGNESENSE® DIFFERENTIAL PRESSURE TRANSMITTER

Monitors Pressure and Air Velocity

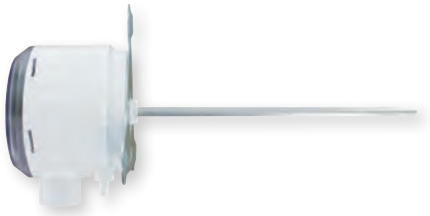
5 YEAR LIMITED WARRANTY

Standard MS with optional LCD

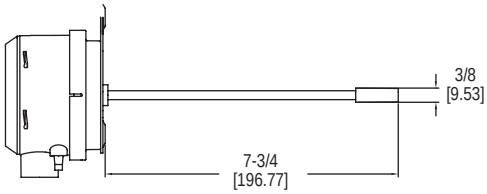




VIDEO ONLINE



MS with optional LCD and static probe



The **Series MS Magnesense® Differential Pressure Transmitter** is an extremely versatile transmitter for monitoring pressure and air velocity. This compact package is loaded with features such as:

FEATURES/BENEFITS

- Field selectable English or Metric ranges
- Field upgradeable LCD display
- Adjustable damping of output signal (with optional display)
- Ability to select a square root output for use with pitot tubes and other similar flow sensors

APPLICATIONS

- Building pressure monitoring
- Duct pressure monitoring
- Fan velocity measurement
- Zone differential pressure monitoring
- Filter condition monitoring

Along with these features, the patented magnetic sensing technology provides exceptional long term performance and enables the Magnesense® Differential Pressure Transmitter to be the single solution for your pressure and flow applications.

SPECIFICATIONS	
Service: Air and non-combustible, compatible gases. **Wetted Materials:** Consult factory. **Accuracy:** ±1% for 0.25″ (50 Pa), 0.5″ (100 Pa), 2″ (500 Pa), 5″ (1250 Pa), 10″ (2 kPa), 15″ (3 kPa), 25″ (5 kPa); ±2% for 0.1″ (25 Pa), 1″ (250 Pa) and all bi-directional ranges. **Stability:** ±1% FS/year. **Temperature Limits:** 0 to 150°F (-18 to 66°C). **Pressure Limits:** 1 psi maximum, operation; 10 psi, burst. **Power Requirements:** 10-35 VDC (2-wire); 17-36 VDC or isolated 21.6-33 VAC (3-wire). **Output Signals:** 4-20 mA (2-wire); 0-5 V, 0-10 V (3-wire). **Response Time:** Adjustable 0.5 to 15 s time constant. Provides a 95% response time of 1.5 to 45 seconds.	**Zero & Span Adjustments:** Digital push-button. **Loop Resistance:** Current output: 0-1250 Ω max; Voltage output: min. load resistance 1 kΩ. **Current Consumption:** 40 mA max. **Display (optional):** 4 digit LCD. **Electrical Connections:** 4-20 mA, 2-Wire: European style terminal block for 16 to 26 AWG; 0-10 V, 3-Wire: European style terminal block for 16 to 22 AWG. **Electrical Entry:** 1/2″ NPS thread; Accessory (A-151): Cable gland for 5 to 10 mm diameter cable. **Process Connections:** 3/16″ (5 mm) ID tubing. Maximum OD 9 mm. **Enclosure Rating:** NEMA 4X (IP66). **Mounting Orientation:** Diaphragm in vertical position. **Weight:** 8.0 oz (230 g). **Agency Approvals:** CE.

MODEL CHART		
Model	**Output**	**Selectable Ranges**
MS-121*	4-20 mA	0.1 in, 0.25 in, 0.5 in w.c. (25, 50, 100 Pa)
MS-321*	0-10 V	0.1 in, 0.25 in, 0.5 in w.c. (25, 50, 100 Pa)
MS-721*	0-5 V	0.1 in, 0.25 in, 0.5 in w.c. (25, 50, 100 Pa)
MS-111*	4-20 mA	1 in, 2 in, 5 in w.c. (250, 500, 1250 Pa)
MS-311*	0-10 V	1 in, 2 in, 5 in w.c. (250, 500, 1250 Pa)
MS-711*	0-5 V	1 in, 2 in, 5 in w.c. (250, 500, 1250 Pa)
MS-131	4-20 mA	10 in w.c. (2 kPa)
MS-141	4-20 mA	15 in w.c. (3 kPa)
MS-151	4-20 mA	25 in w.c. (5 kPa)
MS-331	0-10 V	10 in w.c. (2 kPa)
MS-341	0-10 V	15 in w.c. (3 kPa)
MS-351	0-10 V	25 in w.c. (5 kPa)
MS-021	4-20 mA	±0.1 in, 0.25 in, 0.5 in w.c. (±25, 50, 100 Pa)
MS-221	0-10 V	±0.1 in, 0.25 in, 0.5 in w.c. (±25, 50, 100 Pa)
MS-621	0-5 V	±0.1 in, 0.25 in, 0.5 in w.c. (±25, 50, 100 Pa)
***Note:** For duct mount static pressure probe, change last digit from 1 to 2. **Example:** MS-122		

ACCESSORIES	
Model	**Description**
A-435	Field upgradeable LCD
A-480	Plastic static pressure tip
A-481	Installer kit. Includes 2 plastic static pressure tips and 7 ft (2.1 m) of PVC tubing
A-489	4″ straight static pressure tip with flange
A-302F-A	303 SS Static Pressure Tip with mounting flange. For 3/16″ ID rubber or plastic tubing. 4″ insertion depth. Includes mounting screws
SCD-PS	100-240 VAC/VDC to 24 VDC Power supply

OPTIONS	
To order add suffix:	**Description**
-LCD	Units with display
Example: MS-121-LCD	
-NIST	NIST traceable calibration certificate
Example: MS-021-NIST	
-FC	Factory calibration certificate
Example: MS-021-FC	

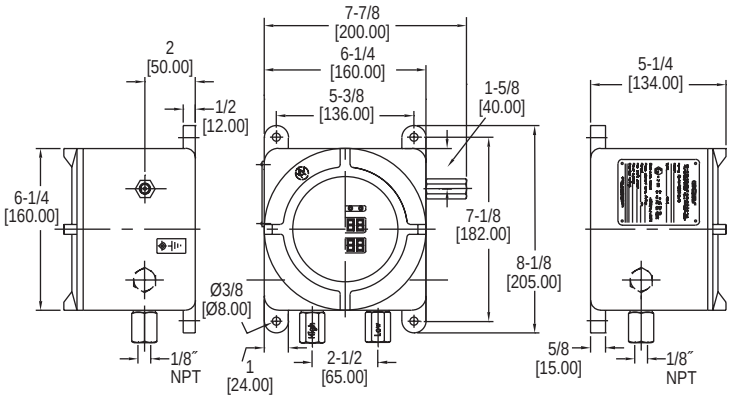
Process Tubing Options: See page 455 (Gage Tubing Accessories)

Dwyer

SERIES AT2MS

ATEX/IECEX APPROVED MAGNESENSE® DIFFERENTIAL PRESSURE TRANSMITTER

Series MS in Flame-Proof ATEX/IECEx Enclosure



The **Series AT2MS ATEX/IECEx Approved Magnesense® Differential Pressure Transmitter** is an extremely versatile transmitter for monitoring pressure and air velocity in hazardous areas. This transmitter is loaded with features such as: field selectable English or metric ranges, field upgradeable LCD display, adjustable dampening of output signal and the ability to select a square root output for use with pitot tubes and other similar flow sensors. Along with these features, the magnetic sensing technology provides exceptional long term performance and enables the Magnesense® transmitter to be the solution for a myriad of pressure and flow applications. Flame-proof enclosures are available in aluminum and can include a glass window for viewing process on the LCD.

FEATURES/BENEFITS

- ATEX/IECEx housing provides all the capabilities and value of the MS2 in a flame & explosion proof enclosure
- Durable and rugged housing and high-quality components combined provides long-service life and minimized down-time
- High impact strength and high temperature rated for applications where hazardous environments exist

APPLICATIONS

- Monitor pressures in ducts, rooms, or total building pressures
- Filter monitoring
- Local indication of clean room pressures with process signal sent to control room
- Hazardous area pressure measurement and transmitter

SPECIFICATIONS

Service: Air and non-combustible, compatible gases.
Wetted Materials: Consult factory.
Accuracy: MS-X21: 0.5 in w.c. & 0.25 in w.c.: ±1%; 0.1 in w.c.: ±2%; 100 Pa & 50 Pa: ±1%; 25 Pa: ±2%. MS-X11: 5 in w.c. & 2 in w.c.: ±1%; 1 in w.c.: ±2%; 1250 Pa & 500 Pa: ±1%; 250 Pa: ±2% (@ standard conditions).
Stability: ±1% FS/year.
Temperature Limits: 0 to 150°F (-18 to 66°C) (**Note:** Product temperature limits differ from case).
Pressure Limits: 1 psi max., operation; 10 psi, burst.
Power Requirements: 10-35 VDC (2-wire); 17-36 VDC or isolated 21.6-33 VAC (3-wire).
Output Signals: 4-20 mA (2-wire); 0-5 V, 0-10 V (3-wire).
Response Time: Field adjustable 0.5 to 15 s time constant. Provides a 95% response time of 1.5 to 45 seconds.
Zero & Span Adjustments: Digital push-button. In safe zone only.
Loop Resistance: Current output: 0 to 1250 Ω max.; Voltage output: min. load resistance 1 k Ω.
Current Consumption: 40 mA max.
Display: 4 digit LCD.
Electrical Wiring: 4-20 mA, 2-wire: European style terminal block for 16 to 26 AWG. 0 to 10 V, 3-wire: European style terminal block 16 to 22 AWG.
Mounting Orientation: Diaphragm in vertical position.
Enclosure Rating: 4X IP66, IP65 with option OPV overpressure relief valve.
Housing Material: Aluminum.
Finishing: Texture epoxy coat RAL7038.
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.
Weight: 11 lb (5 kg).
ATEX Certificate: BVI 14ATEX0072.
Agency Approvals: ATEX Compliant CE 1370 Ex II 2G Ex d IIC T6 Gb / II 2D Ex tb IIIC T85°C Db, -60°C≤Tamb≤+60°C IECEx Compliant: Ex d IIC T6 Gb / Ex tb IIIC T85°C Db.

MODEL CHART

Example	AT2MS	-0	-1	1	-LCD	-A	O	1	X	T2	AT2MS-0-11-LCD-AO1XT2
Series	AT2MS										ATEX/IECEx approved Magnesense® differential pressure transmitter
Output		0 1 2 3 6 7 8 9									Bidirectional, 4-20 mA Positive range, 4-20 mA Bidirectional, 0-10 VDC Positive range, 0-10 VDC Bidirectional, 0-5 VDC Positive range, 0-5 VDC Bidirectional, 0-5 VDC, 12 volt in Positive range, 0-5 VDC, 12 volt in
Range			1 2 3 4 5								1, 2, 5 in w.c. (200, 500, 1000 Pa) .1, .25, .5 in w.c. (25, 50, 100 Pa) 10 in w.c. (2 kPa) 15 in w.c. (3 kPa) 25 in w.c. (5 kPa)
Mounting				1							Wall
Display					LCD						With LCD
Housing						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

*Add on applies to range -2 only.

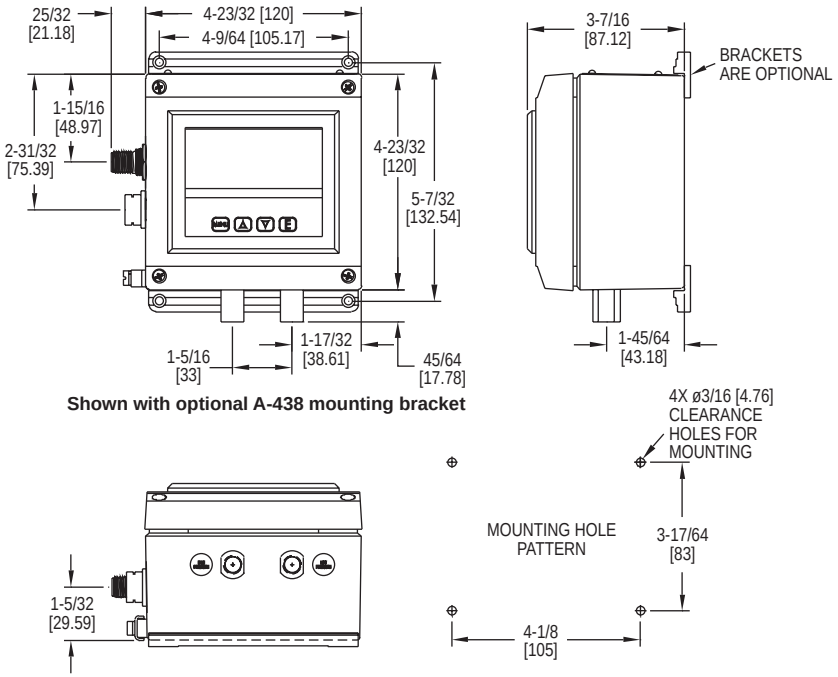
USA: California Proposition 65
⚠WARNING: Cancer and Reproductive Harm - www.P65Warnings.ca.gov

Dwyer

SERIES ISDP

INTRINSICALLY SAFE DIFFERENTIAL PRESSURE TRANSMITTER

For Hazardous Zone Pressure and Flow Applications



The **Series ISDP Intrinsically Safe Differential Pressure Transmitter** provides a 4-20 mA process output, a robust NEMA 4X enclosure, plus a large LCD display that can be programmed to read in pressure, velocity or flow. The ISDP offers simplified programming via a Menu key that enables the user to select: security level; English or Metric engineering units; pressure, velocity or flow operation, K-factor for use with various Pitot tubes and flow sensors, circular or rectangular duct size for volumetric flow operation plus many more. The Series ISDP Differential Pressure Transmitter is powered on its two wire loop with 10-35 VDC via its integral M-12 four pin male connector. The ISDP provides a 0.5% full-scale accuracy on ranges from 0.25 in w.c. to 100 in w.c. as well as bi-directional models up to 10 in w.c. These features make the Series ISDP Differential Pressure Transmitter the ideal instrument for monitoring pressures or air flows in hazardous zones having a Class I Div. I Groups A, B, C, D; Class II Div. I Groups E, F, G; Class III Div. I ratings.

FEATURES/BENEFITS

- NEMA 4X rated enclosure provides protection in harsh environments permitting outdoor monitoring or in areas where dust and particulate matter exists
- Easy to read LCD display provides immediate local alerts allowing corrective action to be taken quicker to eliminate the problem from becoming widespread
- Intrinsically safe for use in the specified hazardous locations meets specifications where pressure transmission and safety cannot be compromised
- Password protected set up menu helps to insure no errors by untrained personnel when accessing the powerful measurement capabilities of this device

APPLICATIONS

- Hazardous zone pressure control applications
- Hazardous flow and control applications

MODEL CHART			
Model	**Range (in w.c.)**	**Model**	**Range (in w.c.)**
ISDP-002	0 to 0.25	**ISDP-012**	0 to ±0.25
ISDP-004	0 to 1	**ISDP-014**	0 to ±1.0
ISDP-006	0 to 5	**ISDP-015**	0 to ±2.5
ISDP-007	0 to 10	**ISDP-016**	0 to ±5.0
ISDP-008	0 to 25	**ISDP-017**	0 to ±10
ISDP-009	0 to 50		
ISDP-010	0 to 100		

OPTIONS	
To order add suffix:	**Description**
-NIST	NIST traceable calibration certificate
Example: ISDP-004-NIST	
-FC	Factory calibration certificate
Example: ISDP-004-FC	

SPECIFICATIONS

Service: Air and non-combustible gases.
Wetted Materials: Ranges 5 in w.c. and greater: glass, PVC, silicon, alumina ceramic, epoxy, RTV, gold, aluminum, stainless steel and nickel; Ranges 1 in w.c. and lower: stainless steel, silicone, gold and ceramic.
Housing Materials: Aluminum, glass.
Accuracy: ±0.5% at 77°F (25°C) including hysteresis and repeatability (after 1 hour warm-up).
Stability: < ±1% per year.
Pressure Limits: Ranges ≤ 2.5 in w.c. = 2 psi; 5 in w.c.: 5 psi; 10 in w.c.: 5 psi; 25 in w.c.: 5 psi; 50 in w.c.: 5 psi; 100 in w.c.: 9 psi.
Temperature Limits: 32 to 140°F (0 to 60°C).
Compensated Temperature Limits: 32 to 140°F (0 to 60°C).
Thermal Effects: 0.020%/°F (0.036/°C) from 77°F (25°C).
Power Requirements: 10-35 VDC.
Output Signal: 4-20 mA DC.
Zero & Span Adjustments: Accessible via menus.
Response Time: 250 ms (damping set to 1).
Display: 4 digit LCD 0.6˝ H.
Electrical Connections: M-12 4 PIN Connector.
Process Connections: 1/8˝ female NPT.
Enclosure Rating: Designed to meet NEMA 4X (IP66).
Mounting Orientation: Mount unit in vertical plane.
Weight: 2 lb 10 oz (1.19 kg).
Agency Approvals: CE: CENELEC EN 61326/55024: 2003; IEC 61000-4-2/3/4/6: 2001/2006/2004/2005; CENELEC EN 55011: 2006; 2004/108/EC EMC Directive. FM Intrinsically Safe CLI Div I GR: A, B, C, D; CLII Div I GR: E, F, G; CLIII Div I.

ACCESSORIES	
Model	**Description**
A-231	16´ (5 m) shielded cable with 4 pin female M-12 connection
A-486	4.9´ (1 m) shielded cable with 4 pin female M-12 connection
A-487	9.8´ (3 m) shielded cable with 4 pin female M-12 connection
A-488	33´ (10 m) shielded cable with 4 pin female M-12 connection
A-295	Female 4 pin M-12 to cable gland connector
MTL5541	Intrinsically safe galvanic isolator
MTL7706	Intrinsically safe zener barrier
A-438	Surface mounting brackets

Process Tubing Options: See page 455 (Gage Tubing Accessories)

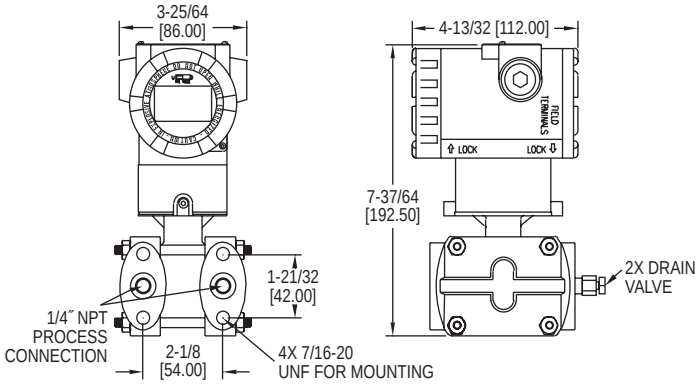
Dwyer

SERIES 3100 | MERCOID® BY DWYER

EXPLOSION-PROOF DIFFERENTIAL PRESSURE TRANSMITTER

HART®, Push-Button Configuration, Rangeability (100:1)

3100D



3100D

Mercoid® **Series 3100 Explosion-Proof Smart Pressure Transmitter** is a microprocessor-based high performance transmitter, which has flexible pressure calibration, push-button configuration, and programmable using HART® Communication. The Series 3100 is capable of being configured for differential pressure or level applications with the zero and span buttons. A field calibrator is not required for configuration. The transmitter software compensates for thermal effects, improving performance. EEPROM stores configuration settings and stores sensor correction coefficients in the event of shutdowns or power loss.
The Series 3100 is FM or ATEX approved for use in hazardous (classified) locations. The 100:1 rangeability allows the smart transmitter to be configured to fit any application.

FEATURES/BENEFITS

- Configurable using zero/span buttons means no calibrator required reducing time to install and running
- Range-ability and selectable engineering units, allows transmitter to fit many applications reducing the number of different transmitters to meet specifications
- High accuracy (±0.075%) provides exceptional measurement for ensuring tight-control and minimizing costly out of specification conditions
- Automatic sensor temperature compensation improves performance of device for accurate measurement under different operating environments
- Fail-mode process function stores configuration settings in the event of shutdown or power-loss provides for faster restart to getting application back on-line
- A HART® Communication programmable device provides a reliable, long-term solution for plant operators who seek the benefits of intelligent devices with digital communication

APPLICATIONS

- Flow measurement
- Level monitoring
- Filter or pump differential pressure
- Critical process monitoring

SPECIFICATIONS

Service: Compatible gases, steam, liquids or vapors.
Wetted Materials: 316L SS, fluoroelastomer.
Accuracy: ±0.075% FS (@ 20°C).
Rangeability: 100:1 turn down.
Stability: ±0.125% FSO/yr.
Temperature Limits: Process: -40 to 248°F (-40 to 120°C); Ambient: Without LCD: -40 to 185°F (-40 to 85°C); With LCD: -22 to 176°F (-30 to 80°C).
Pressure Limits: Max pressure: Range: -14.5 to 2000 psi; Burst pressure: 10000 psi.
Thermal Effect: ±0.125% span/32°C.
Power Requirements: 11.9-45 VDC.
Output Signal: 4-20 mA / HART® Communication.
Response Time: 0.12 s.
Damping Time: 0.25 to 60 s.
Loop Resistance: Operation: 0 to 1500 Ω; HART® Communication: 250 to 500 Ω.
Electrical Connection: Two 1/2" female NPT conduit, screw terminal.
Process Connection: 1/4" female NPT.
Display: Optional 5 digit LCD.
Enclosure Rating: NEMA 4X (IP66) and explosion-proof for Class I, Div I, Groups A, B, C and D.
Weight: 8.6 lb (3.9 kg).
Agency Approvals: CE, FM, ATEX option available (consult factory).

MODEL CHART

Model	Calibrated Span (Min. to Max.)		Lower Range Limit		Upper Range Limit		LCD Display
3100D-2-FM-1-1	0.6 to 30 in w.c.	0.15 to 7.5 kPa	-30 in w.c.	-7.5 kPa	30 in w.c.	7.5 kPa	No
3100D-3-FM-1-1	1.5 to 150 in w.c.	0.373 to 37.3 kPa	-150 in w.c.	-37.3 kPa	150 in w.c.	37.3 kPa	No
3100D-4-FM-1-1	7.5 to 750 in w.c.	1.865 to 186.5 kPa	-750 in w.c.	-186.5 kPa	750 in w.c.	186.5 kPa	No
3100D-5-FM-1-1	1 to 100 psi	6.9 to 690 kPa	-100 psi	-690 kPa	100 psi	690 kPa	No
3100D-6-FM-1-1	3 to 300 psi	20.68 to 2068 kPa	-300 psi	-2068 kPa	300 psi	2068 kPa	No
3100D-2-FM-1-1-LCD	0.6 to 30 in w.c.	0.15 to 7.5 kPa	-30 in w.c.	-7.5 kPa	30 in w.c.	7.5 kPa	Yes
3100D-3-FM-1-1-LCD	1.5 to 150 in w.c.	0.373 to 37.3 kPa	-150 in w.c.	-37.3 kPa	150 in w.c.	37.3 kPa	Yes
3100D-4-FM-1-1-LCD	7.5 to 750 in w.c.	1.865 to 186.5 kPa	-750 in w.c.	-186.5 kPa	750 in w.c.	186.5 kPa	Yes
3100D-5-FM-1-1-LCD	1 to 100 psi	6.9 to 690 kPa	-100 psi	-690 kPa	100 psi	690 kPa	Yes
3100D-6-FM-1-1-LCD	3 to 300 psi	20.68 to 2068 kPa	-300 psi	-2068 kPa	300 psi	2068 kPa	Yes

Note: Consult factory for custom calibration.

EXPLOSION-PROOF DIFFERENTIAL PRESSURE TRANSMITTER

HART®, Push-Button Configuration, Rangeability (100:1)

MODEL CHART															
Example	**3100D**	**-2**	**-FM**	**-3**	**-1**	**-LEC**	**S2**	**A1**	**05**	**S**	**2**	**-05**	**-10**	**-LCD**	**3100D-2-FM-3-1-LECS2A105S2-05-10-LCD**
Series	3100D														Explosion-proof differential pressure transmitter
Range		1 2 3 4 5 6 7													0 to 6 in w.c. 0 to 30 in w.c. 0 to 150 in w.c. 0 to 750 in w.c. 0 to 100 psi 0 to 300 psi 0 to 1000 psi
Approval			FM ATEX WP												FM approved ATEX approved Weatherproof only (only available with 316 SS housing)
Process Connection				1 3											1/4″ female NPT Diaphragm seal
Electrical Connection					1										1/2″ female NPT
Diaphragm Seal Type						LEC LED LEH LEL LFC LFD LFH LFL									2 extended diaphragm seals capillary type 1 extended diaphragm seal direct mount high side 1 extended diaphragm seal capillary type high side 1 extended diaphragm seal capillary type low side 2 flush diaphragm seals capillary type 1 flush diaphragm seal direct mount high side 1 flush diaphragm seal capillary type high side 1 flush diaphragm seal capillary type low side
Mounting Flange							S2 S3								2″ (50 mm) 316L SS 3″ (80 mm) 316L SS
Mounting Flange Rating								A1 A2 D1 D2 J1 J2							ANSI class 150# ANSI class 300# DIN PN 10/16 DIN PN 25/40 JIS 10 K JIS 20 K
Extension Length									00 05 10 15						No extension [standard for flush mount] 2″ extension 4″ extension 6″ extension
Diaphragm Material										S P H T					316L SS diaphragm PTFE and 316L SS diaphragm Hastelloy C-276 diaphragm Tantallum diaphragm
Fill Fluid											2				Silicon oil (-40 to 400°F)
Capillary Length High Side												XX			0 to 20 feet
Capillary Length Low Side													XX		0 to 20 feet
Options														LCD SSH NIST CC	5 digit LCD 316 SS housing (Only available with WP approval) NIST calibration Custom calibration

CUSTOM CALIBRATION VALUES	
Primary Units	in w.c., ft in w.c., mm in w.c., in Hg, psig, g/cm^2 , kg/cm^2, MPa, Pa, kPa, bar, mbar, Torr, Atm, mm Hg
Upper Range Limit	20 mA value
Lower Range Limit	4 mA value
Output	Linear or square root
Damping Time	0 to 60 seconds
Display Mode	Unit, %, mA, rotate
Display Units	Primary unit or Engineering unit
Engineering Units*	**Volumetric Flow Units** US gal/s, US gpm, US gal/hr, US gpd, imp gal/s, imp gpm, imp gal/hr, imp gpd, l/s, l/min, l/hour, ft/s, m/s, metric gal/day, metric l/day, ft^3/s, ft^3/min, ft^3/h, ft^3/day, m^3/s, m^3/min, m^3/hr, m^3/day, normal l/hr, normal m^3/hr, standard ft^3/min, barrels/s, barrels/min, barrels/hr, barrels/day **Mass Flow Units** g/s, g/min, g/hr, kg/s, kg/min, kg/hr, kg/day, metric ton/min, metric ton/hour, metric ton/day, lb/s, lb/min, lb/hr, lb/day, short ton/min, short ton/hr, short ton/day, long ton/hr, long ton/day **Volume Units** gallons, liters, imp gallons, m^3, barrels, bushels, yd^3, ft^3, in^3, bbl liq, normal cubic meter, normal liter, standard cubic feet, hectoliters
Engr. Upper Range Limit*	Engr. upper value
Engr. Lower Range Limit*	Engr. lower value
Engr Function*	Linear or square root
*Engineering Units, Engr. Upper Range Limit, Engr. Lower Range Limit and Engr. Function values are only required if engineering unit is selected.	

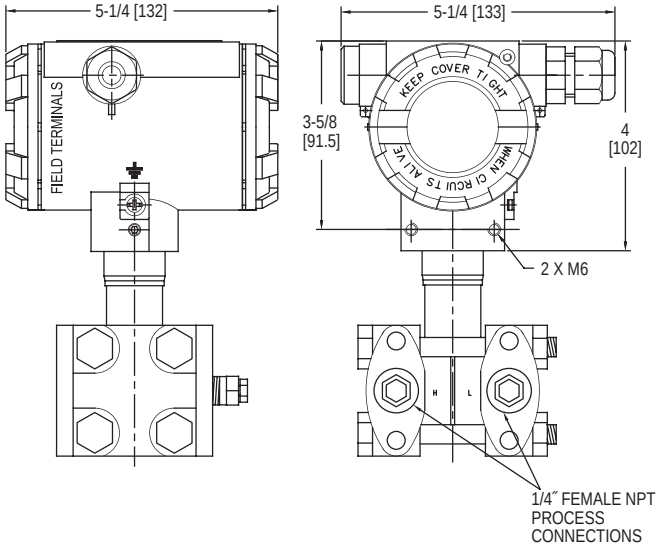
ACCESSORIES	
Model	**Description**
A-630	Stainless steel angle type bracket with SS bolts
A-631	Stainless steel flat type bracket with SS bolts
BBV-1F	Flanged 3-valve block manifold
BBV-22F	Flanged 5-valve block manifold
DevCom2000	HART® Communication Protocol Software

Dwyer

SERIES 3500

SMART DIFFERENTIAL PRESSURE TRANSMITTER

HART® Communication, Push Button Configuration, Rangeability (Up to 25:1)



VIDEO ONLINE

The **Series 3500 Smart Differential Pressure Transmitter** is a microprocessor-based high performance transmitter, which has flexible pressure calibration, push button configuration, and is programmable using HART® Communication. The Series 3500 is capable of being configured for differential pressure or level applications with the zero and span buttons. A field calibrator is not required for configuration. The transmitter software compensates for thermal effects, improving performance. EEPROM stores configuration settings and stores sensor correction coefficients in the event of shutdowns or power loss. The Series 3500 can be configured to be ATEX or IECEX approved for use in hazardous (classified) locations. The rangeability allows the smart transmitter to be configured to fit any application.

FEATURES/BENEFITS

- High accuracy (±0.075% FS)
- Rangeability (up to 25:1)
- Configurable using zero/span buttons (no calibrator required)
- Fail-mode process function
- Automatic ambient temperature compensation

APPLICATIONS

- Flow measurement
- Level monitoring
- Filter or pump differential pressure
- Critical process monitoring

MODEL CHART	
Model	**Range**
3500-AL-02-NF-2	-10 to 10 in w.c.
3500-AL-04-NF-2	0 to 30 in w.c.
3500-AL-08-NF-2	0 to 100 in w.c.
3500-AL-10-NF-2	-200 to 200 in w.c.
3500-AL-15-NF-2	0 to 1000 in w.c.
3500-AL-20-NF-2	0 to 15 psi
3500-AL-25-NF-2	0 to 100 psi
Note: Bar ranges are also available.	

SPECIFICATIONS

Service: Compatible gases, steam, liquids or vapors.
Wetted Materials: 316L SS and FPM; with diaphragm seal: 316L SS.
Accuracy: ±0.075% FS (@ 20°C).
Rangeability: Up to 25:1 turn down.
Stability: ≤0.075% FSO/3 years.
Temperature Limits: Ambient: -40 to 185°F (-40 to 85°C); Process with -DS: -40 to 400°F (-40 to 204°C).
Thermal Effect: < ±0.05% span/10°C.
Power Requirements: 10-55 VDC.
Output Signal: 4-20 mA.
Response Time: 16 to 480 ms (programmable).
Damping Time: 0 to 60 seconds.
Electrical Connection: Packing gland M20x1.5, two 1/2″ female NPT conduit, screw terminal.
Process Connections: 1/4″ female NPT.
Enclosure Rating: NEMA 4X IP66/IP67.
Agency Approvals: CE; -IS, -FP suffix: ATEX Compliant CE 0518 II 2G Ex ia/db IIC T6/T5 Gb Ta<80°C, T5 / II 2D Ex ia/tb IIIC T85°C/T100°C Db. Type Certificate No. KDB 17ATEX0056X. ATEX Standards: EN 60079-0:2012+A11:2013, EN 60079-1:2014, EN 60079-11:2012, EN 60079-26:2015, EN 60079-31:2014 IECEx Compliant: Ex ia/db IIC T6/T5 Gb / Ex ia/tb IIIC T85°C/T100° Db. Certificate of Conformity IECEx KDB 17.0008X. IECEx Standards: IEC 60079-0:2011, IEC 60079-1:2014-06, IEC 60079-11:2011, IEC 60079-26:2006, IEC 60079-31:2013.

Dwyer
SERIES 3500

SMART DIFFERENTIAL PRESSURE TRANSMITTER

HART® Communication, Push-Button Configuration, Rangeability (Up to 25:1)

MODEL CHART												
Example	**3500**	**-AL**	**-01**	**-DS**	**-1**	**-SPRB**	**A**	**0**	**-1**	**-1**	**-NIST**	**3500-AL-01-DS-1-SPRBA0-1-1-NIST**
Series	3500											Smart differential pressure smart transmitter
Housing		AL AS										Aluminum housing Stainless steel housing
Range			02 04 08 10 15 20 25 38 40 50 60									-10 to 10 in w.c. 0 to 30 in w.c. 0 to 100 in w.c. -200 to 200 in w.c. 0 to 1000 in w.c. 0 to 15 psi 0 to 100 psi 0 to 230 psi 0 to 1000 psi -2.5 to 2.5 in w.c. -1.5 to 1.5 psi
Process Connections				NF DS								1/4″ female NPT adapter Diaphragm seal selection
Electrical Connections					1 2							Packing gland M20x1.5 Thread 1/2″ female NPT
Diaphragm Seal Type						SPDH SPRB SPRH STDH STRB STRH						S-P flush diaphragm seal direct mount high side S-PK flush diaphragm seal capillary type both sides S-PK flush diaphragm seal capillary type high side S-T extended diaphragm seal direct mount high side S-TK extended diaphragm seal capillary type both sides S-TK extended diaphragm seal capillary type high side
Mounting Flange							A B C D					2″ ANSI 2″ DN50 3″ ANSI 3″ DN80
Extension Length								0 2 4 6				No extension, flush mount 2″ (50 mm) 4″ (100 mm) 6″ (150 mm)
Capillary Length High Side									#			High side capillary length, 1 to 20 ft (increments of 1)
Capillary Length Low Side										#		Low side capillary length, 1 to 20 ft (increments of 1)
Options											FP IS MT NIST GB SB ST	ATEX/IECEx flameproof ATEX/IECEx intrinsically safe Stainless steel tag plate mounted on wire NIST traceable calibration certificate 2″ galvanized steel mounting bracket 2″ SS mounting bracket Stainless steel plate riveted to the housing

ACCESSORIES	
Model	**Description**
A-630	Stainless steel angle type bracket with SS bolts
A-631	Stainless steel flat type bracket with SS bolts
BBV-0N	2-valve block manifold
DevCom2000	HART® communication protocol software

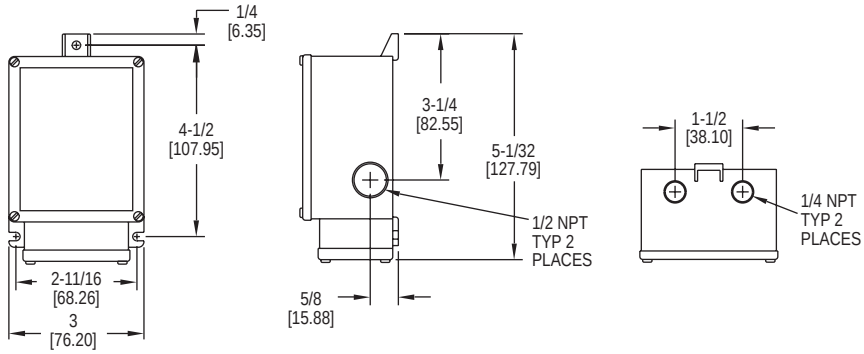
Dwyer

SERIES 608

FM APPROVED

INTRINSICALLY SAFE DIFFERENTIAL PRESSURE TRANSMITTER

Ranges Down to 0.1 in w.c., FM Approved, NEMA 4X



The Dwyer **Series 608 Intrinsically Safe Differential Pressure Transmitter** converts positive, negative (vacuum), or differential pressures of clean, dry air or other non-conductive, non-corrosive gases into a standard two wire, 4 to 20 mA output signal. The use of an ultra-thin silicon diaphragm enables precision measurement of differential pressures as low as 0.1 in w.c. while withstanding high static working pressures up to 100 psig (6.89 bar). The Series 608 transmitters are FM approved intrinsically safe for use in the specified hazardous locations when used with an approved intrinsic safety barrier. The rugged NEMA 4X, stainless steel housing makes this transmitter ideal for use in industrial and process plant environments.

FEATURES/BENEFITS

- High accuracy at low pressure ranges provides exceptional measurement for ensuring tight-control and minimizing costly out of specification conditions
- Intrinsically safe for use in the specified hazardous locations meets specifications where pressure transmission and safety cannot be compromised
- NEMA 4X rated enclosure provides protection in harsh environments permitting outdoor monitoring or in areas where dust and particulate matter exists

APPLICATIONS

- Lab fume hood control
- Clean room applications
- Flow measurements and control
- Filter monitoring
- Furnace draft measurement
- Process control

SPECIFICATIONS

Service: Clean/dry air and compatible, combustible gases. (see Agency Approvals for FM ratings).
Wetted Materials: Consult factory.
Accuracy: ±0.5% or ±0.25% full-scale.
Stability: ±0.5% FS/year.
Pressure Limits: 100 psig (6.89 bar); 15 psid (1.03 bar).
Temperature Limits: -20 to 185°F (-28 to 85°C).
Compensated Temperature Range: 0 to 160°F (-18 to 71°C).
Thermal Effect: 0.5% Accuracy: ±0.02% FS/°F; 0.25% Accuracy: ±0.01% FS/°F.
Power Requirements: 12 to 36 VDC (2-wire).
Output Signal: 4 to 20 mA DC.
Zero and Span Adjustments: Potentiometers for zero and span.
Response Time: 250 ms.
Loop Resistance: DC: 0 to 1045 Ω max.
Electrical Connections: Screw terminal: Two 1/2″ female NPT conduit.
Process Connections: Two 1/4″ female NPT.
Enclosure Rating: NEMA 4X (IP66).
Weight: 2 lb (0.9 kg).
Agency Approvals: FM approved intrinsically safe for use in Class I, Div. 1, Groups A, B, C, D; Class II, Div. 1, Groups E, F, G; Class III, Div. 1 when wired with approved intrinsically safe barrier. Entity parameters: V_{max}= 36 VDC; I_{max}= 250 mA; C_i=12 nF; L_i=0 mH.

MODEL CHART

Model	Range (in w.c.)
608-02	0 to 0.5
608-03	0 to 1.0
608-04	0 to 2.0
608-05	0 to 5.0
608-06	0 to 10.0
608-07	0 to 25.0
608-01B	0 to ±0.25
608-13B*	0 to ±1.0
608-04B	0 to ±2.0

*Models have a ±0.25% FS accuracy.

OPTIONS

Use order code:	Description
NISTCAL-PT1	NIST traceable calibration certificate

ACCESSORIES

Model	Description
MTL5541	Intrinsically safe galvanic isolator
MTL7706	Intrinsically safe zener barrier

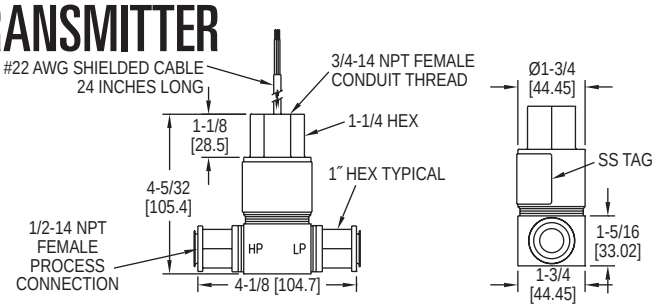
Static Fitting Options: See page 454 (Static Pressure Tips)
Process Tubing Options: See page 455 (Gage Tubing Accessories)

Dwyer

SERIES 636D

FIXED RANGE DIFFERENTIAL PRESSURE TRANSMITTER

Explosion-Proof, 0.5% Accuracy



Series 636D Fixed Range Differential Pressure Transmitter can be used for measuring pressures of liquids, gases & vapors. All available ranges have an excellent 0.5% FS accuracy with a 4-20 mA Output standard or optional 1-5 VDC output. The NEMA 4 housing is an all 316 welded construction that is designed to withstand the harshest environmental conditions. With all 316L wetted materials, this transmitter is compatible with most media. These units are CSA approved explosion-proof for use in the specified hazardous locations and meet NACE standards for off-shore applications.

FEATURES/BENEFITS
- NEMA 4X rated enclosure provides protection in harsh environments permitting outdoor monitoring or in areas where dust and particulate matter exists
- Explosion-proof device for use in hazardous areas
- Versatile, high-accuracy device for liquid or gas supports designs requiring more precise measurements in support of application

APPLICATIONS
- Pump differential pressure
- Critical process monitoring
- Off shore applications

MODEL CHART			
Model 4 to 20 mA Out	**Range**	**Model 1 to 5 VDC Out**	**Range**
636D-0	0 to 6 psid	**636D-0-LP**	0 to 6 psid
636D-1	0 to 15 psid	**636D-1-LP**	0 to 15 psid
636D-2	0 to 30 psid	**636D-2-LP**	0 to 30 psid
636D-3	0 to 60 psid	**636D-3-LP**	0 to 60 psid
636D-4	0 to 100 psid	**636D-4-LP**	0 to 100 psid
636D-5	0 to 150 psid	**636D-5-LP**	0 to 150 psid
636D-6	0 to 200 psid	**636D-6-LP**	0 to 200 psid
636D-7	0 to 300 psid	**636D-7-LP**	0 to 300 psid
636D-8	0 to 500 psid	**636D-8-LP**	0 to 500 psid

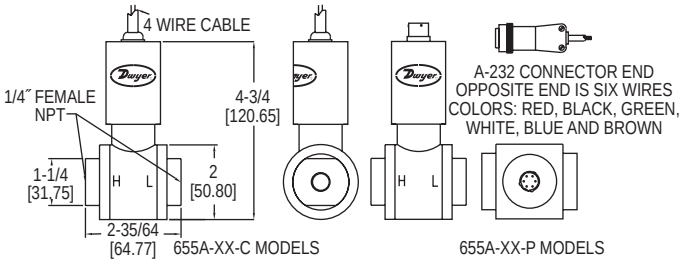
SPECIFICATIONS	
Service: Compatible gases, liquids, or vapors. **Wetted Materials:** Types 316L SS. **Accuracy:** BFSL: ±0.5% FS (includes linearity, hysteresis, and repeatability). **Stability:** ±1.0 FS/yr. **Pressure Limits:** 3 x full-scale differential pressure; Burst: 2500 psig. **Temperature Limits:** Ambient operating: -40 to 140°F (-40 to 60°C); Process interface: -40 to 212°F (-40 to 100°C); Storage: -40 to 212°F (-40 to 100°C). **Compensated Temperature Range:** -20 to 160°F (-29 to 71°C). **Thermal Effect:** ±2% FS/50°F (reference to 77°F). **Power Requirements:** 12-30 VDC for 4-20 mA outputs; 8-14 VDC for 1-5 VDC outputs, both with reverse polarity protection. **Output Signal:** 4-20 mA DC or 1-5 VDC.	**Zero and Span Adjustment:** Fixed. **Response Time:** 20 ms. **Loop Resistance:** 900 Ω max @ 30 VDC for current outputs. For voltage outputs, minimum lead resistance 50k ohms. **Current Consumption:** 4-20 mA for current output models; 3 mA for voltage output models. **Electrical Connections:** 2 ft, 22 AWG cable; 3/4˝ female NPT conduit. **Process Connections:** Two 1/2˝ female NPT. **Enclosure Rating:** NEMA 4 (IP56). **Mounting Orientation:** ±0.05 psi/90° rotation from horizontal. **Weight:** 1.8 lb (0.82 kg). **Agency Approvals:** CSA approved explosion-proof for Class I, Division 1, Groups B, C, and D; Class II, Groups E, F, and G; Class III.

OPTIONS	
Use order code:	**Description**
NISTCAL-PT1	NIST traceable calibration certificate

SERIES 655A

316 WET/WET DIFFERENTIAL PRESSURE TRANSMITTER

Ranges Down to 3 in w.c., 6-Point NIST Certificate Included



The **Series 655A 316 Wet/Wet Differential Pressure Transmitter** is designed for high static/low DP applications designed especially for the End Users and OEM's where extreme overpressure and high performance of 0.25% accuracy and stability are required at ranges down to 3 in w.c. Each unit includes a 6-point NIST certificate of calibration which demonstrates the unit's high level of performance.

FEATURES/BENEFITS
- Extreme overpressure and stability at low ranges provides durable device for OEM and end-user applications
- High-accuracy device for low differential pressure designs requiring more precise measurements in support of application
- NIST certificate available to demonstrate high-level of performance

APPLICATIONS
- Pump differential pressure
- Critical process monitoring
- High accuracy/low differential pressure OEM applications

MODEL CHART			
Model	**Range**	**Model**	**Range**
655A-00-C	0 to 3 in w.c.	**655A-00-P**	0 to 3 in w.c.
655A-01-C	0 to 5 in w.c.	**655A-01-P**	0 to 5 in w.c.
655A-02-C	0 to 8 in w.c.	**655A-02-P**	0 to 8 in w.c.
655A-03-C	0 to 10 in w.c.	**655A-03-P**	0 to 10 in w.c.
655A-04-C	0 to 15 in w.c.	**655A-04-P**	0 to 15 in w.c.
655A-05-C	0 to 20 in w.c.	**655A-05-P**	0 to 20 in w.c.
655A-06-C	0 to 1 psid	**655A-06-P**	0 to 1 psid
655A-07-C	0 to 2 psid	**655A-07-P**	0 to 2 psid
Note: Change 'C' to 'P' for optional 6 pin male connection.			

SPECIFICATIONS
Service: Compatible gases or liquids. **Wetted Materials:** 316L SS. **Accuracy:** ±0.25% BFSL, RSS (combined effect of non-linearity, hysteresis, and repeatability). **Stability:** ≤ ±0.25% FSO/yr. **Temperature Limits:** -20 to 200°F (-29 to 93°C). **Compensated Temperature Limits:** 0 to 170°F (-17.8 to 76.7°C). **Pressure Limits:** 1000 psi (68.95 bar) continuous; 3000 psi (206.8 bar) burst. **Thermal Effects:** ≤ ±1.5% FS oven comp. temperature range. **Power Requirements:** 8-38 VDC. **Output Signal:** 4-20 mA. **Static Pressure Effects:** On zero: ≤ ±0.25% FSO per 1000 psi; on span: ≤ ±0.5% of reading per 1000 psi. **Response Time:** < 10 ms. **Loop Resistance:** 1500 Ω. **Electrical Connections:** Cable exit with 24˝ cable; optional 6-pin connector. **Process Connections:** 1/4˝ NPT female. **Enclosure Rating:** Designed to meet NEMA 4X (IP66). **Mounting Orientation:** Mount in vertical position: zero shifts up to ±1 in w.c. depending on orientation. **Weight:** 18 oz (510 g).

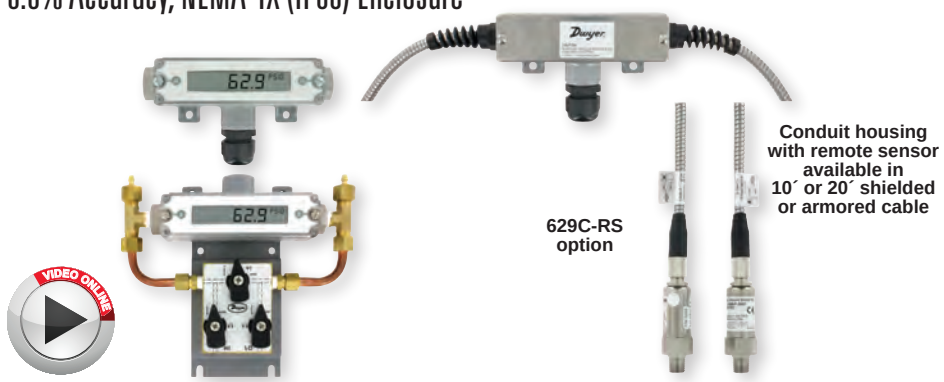
ACCESSORIES	
Model	**Description**
A-232	Connection with cable (3´); for 6 pin connection models

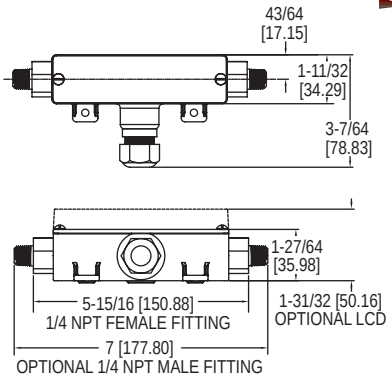
Dwyer

SERIES 629C

WET/WET DIFFERENTIAL PRESSURE TRANSMITTERS

0.5% Accuracy, NEMA 4X (IP66) Enclosure





The **Series 629C Wet/Wet Differential Pressure Transmitters** monitor differential pressure of air and compatible gases and liquids with 0.5% accuracy. The design employs dual pressure sensors converting pressure changes into a standard 4-20 mA output signal or field selectable voltage. Small internal volume and minimal moving parts result in exceptional response and reliability. The terminal block, as well as a zero adjustment button, are easily accessed under the top cover. The Series 629C Differential Pressure Transmitter is designed to meet NEMA 4X (IP66) construction.

FEATURES/BENEFITS

- Powered by either DC or AC - take advantage of most readily available power source reducing installation costs
- Optional LCD does not need a separate power supply - lowers installed cost
- Selectable voltage range - provides flexible choice for changing design or inputs for process/HVAC controllers being used to monitor and control
- Push-button zero (versus trim pot) - more simple zeroing provides easy install and calibration reducing installation time and possibility of operator error
- Optional LCD indicator provides local status to identify operational condition
- Remote sensor option reduces installation labor and material

APPLICATIONS

- Flow elements
- Heat exchangers
- Filters
- Coils
- Chiller
- Pumps

SPECIFICATIONS

Service: Compatible gases and liquids.
Wetted Materials: Without valve: 316, 316L SS. Additional wetted parts with valve option: Buna-N, silicone grease, PTFE, brass 360, copper, and reinforced copolymer.
Accuracy: ±0.5% FS (includes linearity, hysteresis & repeatability).
Stability: ±1% FS/year.
Temperature Limits: 0 to 200°F (-18 to 93°C).
Compensated Temperature Limits: 0 to 175°F (-18 to 79°C).
Pressure Limits: See Table 1.
Thermal Effects: Avg 0.04%/°F (0.072%/°C) (includes zero and span).
Power Requirements: 2-wire: 10-35 VDC; 3-wire: 13-35 VDC or isolated 16-33 VAC (reverse polarity protected).
Output Signal: 2-wire: 4-20 mA; 3-wire: Field selectable 0-5, 1-5, 0-10, or 2-10 VDC.
Zero and Units: Push-buttons inside conduit enclosure.
Response Time: 400 msec.
Loop Resistance: Current output: 0 to 1250 Ω (max), Rmax = 50(Vps-10); Voltage output: Minimum load resistance = 5 kΩ.
Current Consumption: 28 mA (max).
Electrical Connections: Removable terminal block; 1/2″ female NPT conduit.
Process Connections: 1/4″ female or male NPT.
Display: Optional 4-1/2 digit LCD field attachable display.
Enclosure Rating: Designed to meet NEMA 4X.
Mounting Orientation: Not position sensitive.
Weight: 629C-XX-CH: 10.1 oz (286 g); 629C-XX-R2-P1-E5-XX: 2.3 lbs (1.04 kg); 629C-XX-R6-P1-E5-XX: 4.55 lbs (2.06 kg).
Agency Approvals: CE.

MODEL CHART

Example	629C	-01	-CH	-P1	-E1	-S1	-3V	629C-01-CH-P1-E1-S1-3V
Series	629C							Wet/wet differential pressure transmitter
Range		01 02 03 04 05 06 07 08 09 11 12 13 14 15 16 17 18 19						0 to 5 psid 0 to 10 psid 0 to 25 psid 0 to 50 psid 0 to 100 psid 0 to 150 psid 0 to 200 psid 0 to 300 psid 0 to 500 psid 0 to 0.5 bar differential 0 to 1 bar differential 0 to 2 bar differential 0 to 4 bar differential 0 to 6 bar differential 0 to 10 bar differential 0 to 15 bar differential 0 to 20 bar differential 0 to 30 bar differential
Housing			CH R1 R2 R5 R6					Conduit housing, NEMA 4X (IP66) Conduit housing, NEMA 4X (IP66) with Remote Sensor and 10´ shielded cable Conduit housing, NEMA 4X (IP66) with Remote Sensor and 20´ shielded cable Conduit housing, NEMA 4X (IP66) with Remote Sensor and 10´ armored cable Conduit housing, NEMA 4X (IP66) with Remote Sensor and 20´ armored cable
Process Connection				P1 P2 P3 P4				1/4″ male NPT 1/4″ female NPT 1/4″ male BSPT 1/4″ female BSPT
Electrical Connection					E1 E2 E3 E5 E9			Cable gland with 3´ of prewired cable Cable gland with 6´ of prewired cable Cable gland with 9´ of prewired cable 1/2″ female NPT conduit M-12 4 pin connector
Signal Output						S1 S3		4-20 mA Field selectable 0-5, 1-5, 0-10, 2-10 VDC
Options							3V AT FC LCD NIST	3-way valve Aluminum tag Factory calibration certificate LCD indication NIST traceable certificate

RANGE

Range Number	Range	Working Pressure*	Over Pressure
01	0 to 5 psid	10 psi	50 psi
02	0 to 10 psid	20 psi	50 psi
03	0 to 25 psid	50 psi	120 psi
04	0 to 50 psid	100 psi	250 psi
05	0 to 100 psid	200 psi	500 psi
06	0 to 150 psid	300 psi	750 psi
07	0 to 200 psid	400 psi	1000 psi
08	0 to 300 psid	600 psi	1200 psi
09	0 to 500 psid	1000 psi	2000 psi
11	0 to 0.5 bar differential	1 bar	3 bar
12	0 to 1 bar differential	2 bar	8 bar
13	0 to 2 bar differential	4 bar	8 bar
14	0 to 4 bar differential	8 bar	18 bar
15	0 to 6 bar differential	12 bar	18 bar
16	0 to 10 bar differential	20 bar	50 bar
17	0 to 15 bar differential	30 bar	60 bar
18	0 to 20 bar differential	40 bar	80 bar
19	0 to 30 bar differential	60 bar	120 bar

*Pressures exceeding the working pressure limit may cause a calibration shift of up to ±3% of full-scale.

Note: Over pressure of all models with 3-way valve is 100 psi.

ACCESSORIES

Model	Description
A-155	Cable gland with 1/2″ NPT male
A-228	12″ SS flex hose
A-62X-LCD	Field-upgradeable LCD
BBV-1B	Mini SS 3-valve block manifold

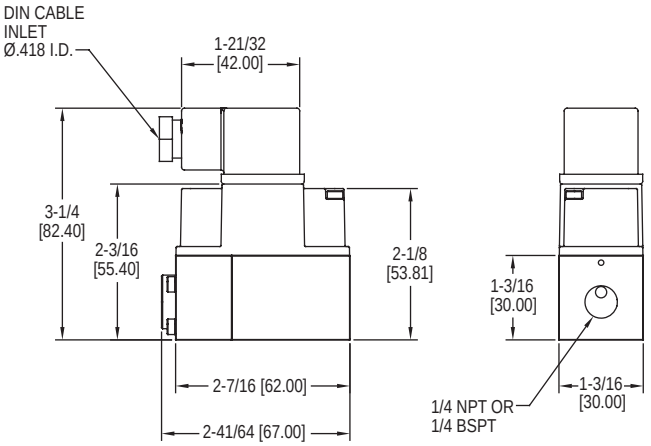
USA: California Proposition 65
⚠WARNING: Cancer and Reproductive Harm
www.P65Warnings.ca.gov

Dwyer

SERIES 629HLP

DIFFERENTIAL PRESSURE TRANSMITTERS

High Accuracy, IP65 Enclosure



The **Series 629HLP Differential Pressure Transmitters** are suitable for measuring over-pressure, under-pressure, and differential pressure in compatible gases and liquids with 1% accuracy. The 629HLP is suitable for all measuring tasks in commercial, industrial or sanitary applications. Its single sensor design, allows it to measure small increment pressure changes, and converts them to a linear analog output signal from 4-20 mA or 0-10 VDC.

FEATURES/BENEFITS

- Rugged, versatile, high accuracy device
- For liquid or gas systems requiring precise measurements
- Provide excellent response and reliability
- Suitable for static and dynamic measurements
- Converts pressure changes into 4-20 mA or 0-10 VDC output
- Compact, lightweight, capable to be installed in any arrangement making installation very simple

APPLICATIONS

- Heat exchangers
- Fan coils/air handlers
- Core testing applications
- Hydraulic systems
- High line pressures/low DP
- Pumps
- Commercial/industrial processes
- Sanitary process

SPECIFICATIONS

Service: Compatible gases or liquids.
Wetted Material: 304 SS.
Housing Material: ABS.
Enclosure Rating: IP65.
Accuracy: ±1% from -5 to 60°C (23 to 140°F).
Stability: ±1% FS/year.
Temperature Limits: Ambient: -10 to 60°C (14 to 122°F); Process: -10 to 80°C (14 to 176°F).
Relative Humidity: 10% to 90% non-condensing.
Installation Position: Not position sensitive.
Pressure Limits: See Pressure Range Limits chart.
Burst Pressure: See Pressure Range Limits chart.
Static Pressure Limits: See Pressure Range Limits chart.
Output Signal: 4-20 mA, 0-10 VDC.
Response Time: 50 ms.
Rated Supply Voltage: 0-10 VDC Output: 12-36 VDC or 12-32 VAC (@ Max load of 2k Ω) 4-20 mA output: 8-36 VDC.
Max Loop resistance: (Supply Voltage – 8 V) / 0.02 for 4-20mA output.
Power Consumption: V_{out} = 13 mA max, I_{out} = 24 mA max.
Electrical Connections: Form A DIN 43650.
Process Connections: 1/4″ female NPT, 1/4″ female BSPT.
Weight: 1 lb 4 oz (567 g).
Approvals: CE, RCM.

MODEL CHART

Example	629HLP	-01	-P2	-S1	-FC	629HLP-01-P2-S1-FC
Series	629HLP					Differential pressure transmitter
Range		01 02 04 06 15 30 60 90				0 to 1 bar 0 to 2.5 bar 0 to 4 bar 0 to 6 bar 0 to 15 psi 0 to 30 psi 0 to 60 psi 0 to 90 psi
Process Connections			P2 P4			1/4″ female NPT 1/4″ female BPST
Output Signal				S1 S5		4-20 mA 0-10 VDC
Options					FC NIST	Factory calibration NIST certificate

Note: Psi ranges available upon request. Contact factory for details.

PRESSURE RANGE LIMITS

Pressure Range	Maximum Static Pressure (bars)	*Maximum Differential Over Pressure	**Burst Differential Pressure
0 to 1 bar	25 bar	5 bar	8 bar
0 to 2.5 bar	25 bar	5 bar	8 bar
0 to 4 bar	25 bar	12 bar	18 bar
0 to 6 bar	25 bar	12 bar	18 bar
0 to 15 psi	360 psi	70 psi	115 psi
0 to 30 psi	360 psi	70 psi	115 psi
0 to 60 psi	360 psi	174 psi	260 psi
0 to 90 psi	360 psi	174 psi	260 psi

Note: *The differential pressure limit, between high and low ports, that the transmitter can withstand without affecting transmitter performance
**Differential pressures between high and low ports that exceed overpressure limits will result in permanent diaphragm deformation, and any pressure higher than the burst pressure limits will rupture the diaphragm.

ACCESSORIES

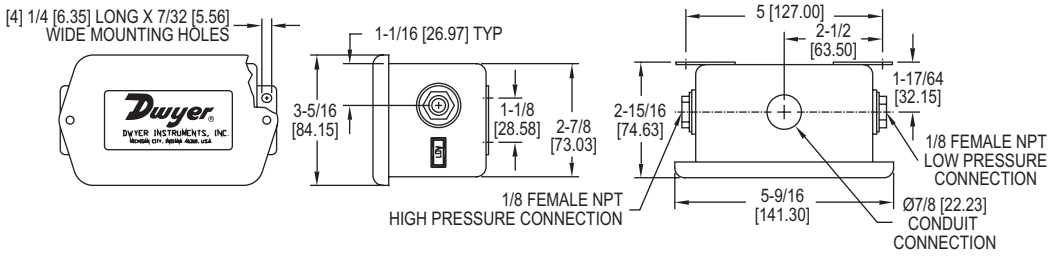
Model	Description
A-629HLP-BKT	Mounting bracket kit
BBV-1B	3-Valve block manifold
A-228	12″ SS flex hose

Dwyer

SERIES 647

WET/WET DIFFERENTIAL PRESSURE TRANSMITTER

±1.0% Accuracy, NEMA 4 (IP56) Enclosure, 2-Wire



Monitor differential pressure in air/liquid flow systems, HVAC automation, pneumatic systems and process control with the **Series 647 Wet/Wet Differential Pressure Transmitter**. Units are temperature compensated and provide a 4-20 mA output signal which can be interfaced with chart recorders, data loggers and computerized monitoring and control systems.

FEATURES/BENEFITS

- Versatile for liquid or gas supports designs requiring more precise measurements in support of application
- Temperature compensated improves performance of device for accurate measurement under different operating environments.
- Output signal provides capability to interface with automation systems to centralize monitoring

APPLICATIONS

- Flow
- HVAC automation
- Process control
- Pneumatic systems

MODEL CHART	
Model	**Range**
647-0	0 to 1 in w.c.
647-1	0 to 3 in w.c.
647-2	0 to 25 in w.c.
647-3	0 to 5 in w.c.
647-4	0 to 10 in w.c.

OPTIONS	
Use order code:	**Description**
NISTCAL-PT1	NIST traceable calibration certificate

SPECIFICATIONS

Service: Compatible gases or liquids on both pressure and reference sides.
Wetted Materials: Brass, vinyl, glass-filled polyester, silicon, and fluorosilicone.
Accuracy: ±1.0% FS.
Stability: ±1.5% FS output/year.
Temperature Limits: 32 to 122°F (0 to 50°C).
Pressure Limits: Ranges 1 in w.c. to 5 psi: 20 psi, 15 psi range: 45 psi, 30 psi range: 60 psi.
Thermal Effects: Zero: ±0.05% FS/°F, Span: ±0.05% rdg/°F.
Power Requirements: 18-30 VDC.
Output Signal: 4-20 mA, 2-wire.
Zero and Span Adjustments: Adjustable, ±10%.
Loop Resistance: 400Ω @ 18 VDC, 600Ω @ 24 VDC, 1000Ω @ 30 VDC.
Electrical Connection: Screw terminals, reverse polarity protected.
Process Connections: Two 1/8″ female NPT.
Housing: Gasketed steel epoxy painted, NEMA 4 (IP56).
Weight: 14 oz (397 g).

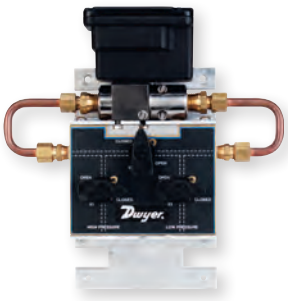
USA: California Proposition 65
⚠WARNING: Cancer and Reproductive Harm - www.P65Warnings.ca.gov

Dwyer

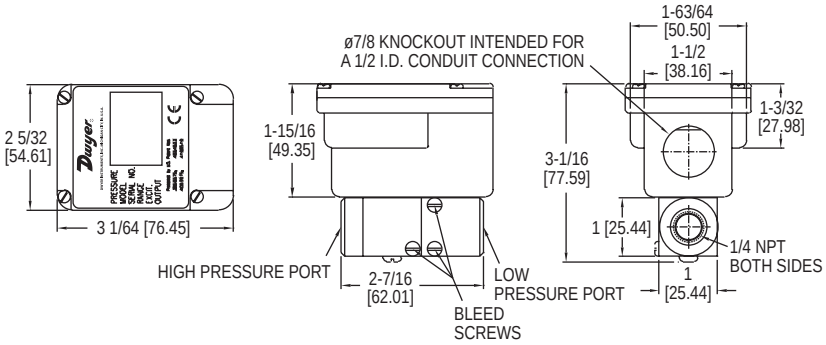
SERIES 645

WET/WET DIFFERENTIAL PRESSURE TRANSMITTERS

±0.25% Accuracy, Quick Response, 2-Wire Design



Optional 3-valve manifold assembly



Series 645 Wet/Wet Differential Pressure Transmitters are designed for use with compatible gases and liquids which can be applied to both the pressure and reference ports. Quick response capacitance sensor delivers a 4-20 mA output signal proportional to differential pressure with ±.25% accuracy. The Series 645 transmitters are ideal for process control, filter condition monitoring, refrigeration equipment, pump speed control, HVAC equipment, and liquid level measurement. For ease of installation and maintenance, order optional 3-valve manifold assembly. Bleed ports allow for total elimination of air in the line and pressure cavities.

FEATURES/BENEFITS

- Versatile, high-accuracy device for liquid or gas supports designs requiring more precise measurements in support of application
- Optional 3-way valve manifold supports simplifying installation or removal of transmitter without interrupting process

APPLICATIONS

- Process control
- Refrigeration equipment
- HVAC equipment
- Filter monitoring
- Pump speed control
- Liquid level measurement

MODEL CHART	
Model	**Range**
645-0	0 to 1 psid
645-1	0 to 2 psid
645-2	0 to 5 psid
645-3	0 to 10 psid
645-4	0 to 25 psid
645-5	0 to 50 psid
645-6	0 to 100 psid
Note: For optional 3-valve manifold assembly, add -3V to end of model number.	

OPTIONS	
Use order code:	**Description**
NISTCAL-PT1	NIST traceable calibration certificate

SPECIFICATIONS

Service: Compatible gases or liquids on both pressure and reference sides.
Wetted Materials: 17-4 PH stainless steel, 300 Series stainless steel, fluoroelastomer and silicone O-rings and bleed screw seals.
Accuracy: ±0.25% FS (RSS).
Temperature Limits: Operating: 0 to 175°F (-22 to 80°C); Storage: -65 to 260°F (-54 to 126°C).
Pressure Limits: (High side) 1 to 5 psi: 20 x FS, 10 to 25 psi: 10 x FS, 50 psi: 5 x FS, 100 psi: 2.5 x FS; (low side) 2.5 x FS.
Thermal Effects: (includes zero and span) ±0.02% FS/°F, 30 to 150°F (-1 to 65°C).
Power Requirements: 11-30 VDC.
Output Signal: 4-20 mA, 2-wire.
Zero and Span Adjustments: Adjustable, ±1 mA, non-interactive.
Response Time: 30 to 50 ms.
Loop Resistance: 0 to 1000Ω.
Electrical Connection: Barrier strip terminal block with conduit enclosure and .875″ (22 mm) diameter conduit opening.
Process Connection: 1/4″-18 female NPT.
Housing: Stainless steel/aluminum, NEMA 4X (IP56).
Weight: 14.4 oz (0.4 kg).
Agency Approvals: CE.

3-VALVE MANIFOLD ASSEMBLY
Manifold: Brass.
Valve Type: 90° on/off.
Process Connection: 1/4″-18 female NPT.

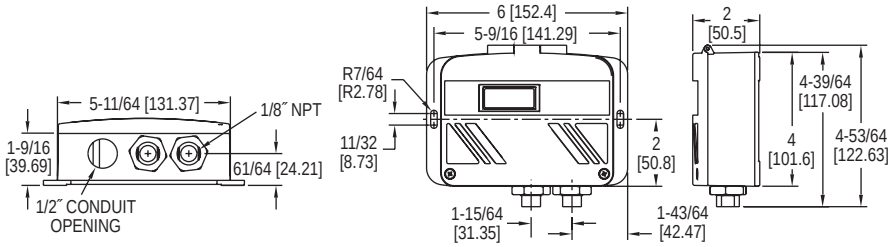
USA: California Proposition 65
⚠WARNING: Cancer and Reproductive Harm - www.P65Warnings.ca.gov

Dwyer

SERIES WWDP

DIFFERENTIAL PRESSURE TRANSMITTER

Selectable Ranges of Uni-Directional or Bi-Directional, Selectable Outputs



The **Series WWDP Differential Pressure Transmitter** offers everything in one package by having 30 field selectable variations in just 3 models. The WWDP provides field selectable unidirectional and bidirectional pressure ranges, configurable 0-5, 1-5, 0-10 VDC, and 4 to 20 mA output. It also provides an auto-zero capability. The field selectable port swap feature eliminates costly re-plumbing if the unit is improperly installed or if the transmitter is simply replaced. An optional LCD display is available for on-sight indication of line and differential pressure. The all cast aluminum housing is rated NEMA 4 (IP66). These features make the WWDP transmitter an ideal instrument for measuring the flow of various liquids and gases, pressure drop across filters, measurement of liquid level or pressurized vessels, and for use in energy management and process control systems.

FEATURES/BENEFITS

- Versatile device for liquid or gas supports designs requiring more precise measurements in support of application
- Field selectable port swap eliminates costly re-plumbing if unit is re-installed or replaced
- Uni-directional and bi-directional pressure selection with configurable output provides a single device that can meet broad application needs without having to specify multiple devices
- Optional LCD display provides local status to identify operational conditions
- NEMA 4 rated enclosure provides protection in harsh environments permitting outdoor monitoring or in areas where dust and particulate matter exists

APPLICATIONS

- Chiller monitoring
- Pressure vessels
- Filter monitoring
- Process control
- Energy management
- Liquid level

SPECIFICATIONS

Service: Gases or liquids compatible with 17-4 PH stainless steel.
Accuracy: All pressure ranges have ±1% full-scale accuracy except the lowest selectable range of each unit is ±2% full-scale.
Stability: ±0.5% per year.
Temperature Limits: Compensated temperature range: 32 to 130°F (0 to 54°C); Operating temperature range: -4 to 185°F (-20 to 85°C).
Pressure Limits: Max working pressure: WWDP-1: 50 psi; WWDP-2: 100 psi; WWDP-3: 250 psi; Proof pressure: 2.2X of full-scale; Burst pressure: 40X of full-scale.
Thermal Effect: 2% FS/100°F (50°C) includes zero and span.
Power Requirements: 12-30 VDC/18-28 VAC (reverse excitation protected). **Note:** 4-20 mA output cannot be powered with AC voltage.
Output Signal: Selectable 0-5, 0-10 and 1-5 VDC; 4-20 mA.
Zero & Span: Digital “re” zero button (should be used when changing ranges). Span can be adjusted by changing between field selectable ranges.
Response Time: 1 to 5 s (selectable).
Loop Resistance: 1000 Ω.
Current Consumption: VDC power: 0-5, 1-5 VDC output 4 mA (typ); 0-10 VDC output 5 mA (typ); 4-20 mA output 20 mA max. Current consumption will equal the transmitter output in current mode. VAC power: 0-5, 1-5, 0-10 VDC output 40 mA (typ).
Electrical Connections: 1/2″ conduit.
Process Connections: 1/8″ female NPT internal.
Enclosure Rating: Designed to meet NEMA 4 (IP56).
Mounting Orientation: Vertical; mount the pressure ports down (keeps debris from building up inside the pressure port).
Weight: 1.5 lb (680.4 g).
Agency Approvals: CE.

MODEL CHART

Model	Description (psid)	Max. Working Pressure (psi)
WWDP-1	Selectable 5, 10, 25, 50	50
WWDP-2	Selectable 10, 20, 50,100	100
WWDP-3	Selectable 25, 50,125, 250	250
WWDP-1-LCD	Selectable 5, 10, 25, 50	50
WWDP-2-LCD	Selectable 10, 20, 50,100	100
WWDP-3-LCD	Selectable 25, 50,125, 250	250

OPTIONS

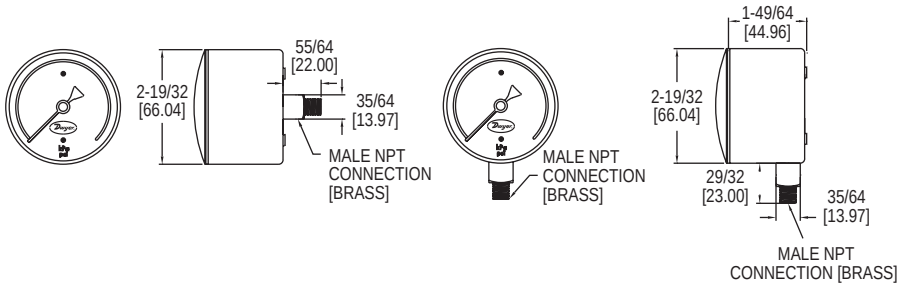
Use order code:	Description
NISTCAL-PT1	NIST traceable calibration certificate

Dwyer

SERIES LPG5

2.5″ LOW PRESSURE GAGE

3-2-3% Full-Scale Accuracy in a 2.5″ Gage



The **Series LPG5 2.5″ Low Pressure Gage** offers top of the line performance for pressure applications from 10 in w.c. to 10 psi. The LPG5 gages possess dual scales with 3-2-3% full-scale accuracy on a 2.5″ dial. Units are made with a chrome plated steel housing and brass wetted parts. Units can withstand temperatures of -4 to 140°F (-20 to 60°C). This series is meant for the measurement of low pressures of gases and liquids and is ideal for air flow indication, liquid level and draft measurement. Series LPG5 gages are available with either a bottom or back connection option.

FEATURES/BENEFITS

- Chrome plated steel housing and brass wetted parts resist ambient for longer service life in harsh environments
- Low pressure gage provides a selection to meet specific applications
- Specified with high ambient and process temperature ratings mean more robust uses and longer service-life
- Good accuracy gage for value-sensitive applications requiring more precise measurement and where vibration is a concern

APPLICATIONS

- Air flow indication
- Liquid level
- Draft measurement

SPECIFICATIONS

Service: Compatible gases and liquids.
Wetted Materials: Brass connection, bronze tube.
Housing: Chrome plated steel.
Lens: Polycarbonate.
Accuracy: ± 3-2-3% FS.
Pressure Limits: Full-scale range.
Temperature Limits: -4 to 140°F (-20 to 60°C).
Size: 2.5″ (63 mm).
Process Connections: 1/4″ male NPT.
Weight: 8 oz (227 g).

MODEL CHART

Model	Range in w.c. (kPa)	Model	Range psi (kPa)
LPG5-D8022N	0 to 10 (0 to 2.5)	**LPG5-D9922N**	0 to 5 (0 to 35)
LPG5-D8122N	0 to 15 (0 to 3.75)	**LPG5-D0022N**	0 to 10 (0 to 70)
LPG5-D8222N	0 to 35 (0 to 8.75)		
LPG5-D8422N	0 to 60 (0 to 15)		
LPG5-D8622N	0 to 100 (0 to 25)		
LPG5-D8822N	0 to 200 (0 to 50)		

Note: Change 22N to 42N for back connection option.

OPTIONS

Use order code:	Description
NISTCAL-PG1	NIST traceable calibration certificate

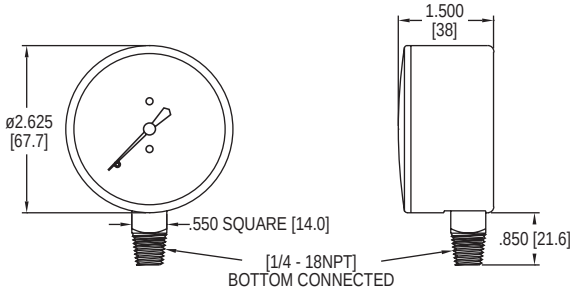
USA: California Proposition 65
⚠WARNING: Cancer and Reproductive Harm - www.P65Warnings.ca.gov

Dwyer

SERIES LPG4

2.5″ LOW PRESSURE GAGE

1.5% Full-Scale Accuracy in a 2.5″ Gage



Our **Series LPG4 2.5″ Low Pressure Gage** offers top of the line performance and accuracy for pressure and vacuum applications up to and including 160 in w.c. The LPG4 is constructed from a single beryllium-copper diaphragm affixed to a precision-machined brass plate. This innovative design, together with a high-precision, milled-teeth brass movement and nickel-silver pinion and bearing surface, provide the user with a top of the line low pressure instrument.

FEATURES/BENEFITS

- Low pressure gage provides a selection to meet specific applications
- Specified with high ambient and process temperature ratings mean more robust uses and longer service-life
- High accuracy gage for applications requiring more precise measurement is a concern

APPLICATIONS

- Air flow indication
- Liquid level
- Draft measurement

SPECIFICATIONS

Service: Compatible gases & liquids.
Wetted Materials: Brass and beryllium copper.
Housing: Drawn steel, black finish.
Lens: Polycarbonate (removable).
Accuracy: ±1.5% FS.
Pressure Limit: 100% of range scale.
Temperature Limits: Process: -40 to 160°F (-40 to 70°C); Ambient: -40 to 140°F (-40 to 60°C).
Size: 2.5″ (63 mm).
Process Connections: 1/4″ male NPT.
Enclosure Rating: NEMA 3 (IP54).
Weight: 7.3 oz (0.21 kg).

MODEL CHART

Model	Range	Model	Range
LPG4-D7122N	-10 to 0 in w.c. (-2.5 to 0 kPa)	**LPG4-D8322N**	0 to 40 in w.c. (0 to 10 kPa)
LPG4-D7222N	-15 to 0 in w.c. (-4 to 0 kPa)	**LPG4-D8422N**	0 to 60 in w.c. (0 to 15 kPa)
LPG4-D7322N	-25 to 0 in w.c. (-6 to 0 kPa)	**LPG4-D8522N**	0 to 80 in w.c. (0 to 20 kPa)
LPG4-D7422N	-40 to 0 in w.c. (-10 to 0 kPa)	**LPG4-D8622N**	0 to 100 in w.c. (0 to 25 kPa)
LPG4-D7522N	-60 to 0 in w.c. (-15 to 0 kPa)	**LPG4-D8722N**	0 to 160 in w.c. (0 to 40 kPa)
LPG4-D7622N	-80 to 0 in w.c. (-20 to 0 kPa)	**LPG4-D8922N**	-4 to 0 to 6 in w.c. (-1 to 0 to 1.5 kPa)
LPG4-D7722N	-100 to 0 in w.c. (-25 to 0 kPa)	**LPG4-D9022N**	-6 to 0 to 10 in w.c. (-1.5 to 0 to 2.5 kPa)
LPG4-D7822N	-160 to 0 in w.c. (-40 to 0 kPa)	**LPG4-D9122N**	-8 to 0 to 16 in w.c. (-2 to 0 to 4 kPa)
LPG4-D7922N	-235 to 0 in w.c. (-60 to 0 kPa)	**LPG4-D9222N**	-16 to 0 to 24 in w.c. (-4 to 0 to 6 kPa)
LPG4-D8022N	0 to 10 in w.c. (0 to 2.5 kPa)	**LPG4-D9322N**	-24 to 0 to 40 in w.c. (-6 to 0 to 10 kPa)
LPG4-D8122N	0 to 15 in w.c. (0 to 3.75 kPa)	**LPG4-D9422N**	-30 to 0 to 50 in w.c. (-7.5 to 0 to 12.5 kPa)
LPG4-D8222N	0 to 25 in w.c. (0 to 6 kPa)	**LPG4-D9522N**	-40 to 0 to 60 in w.c. (-10 to 0 to 15.0 kPa)

OPTIONS

Use order code:	Description
NISTCAL-PG1	NIST traceable calibration certificate

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

Dwyer

SERIES SGY & SGZ

2.5″ INDUSTRIAL PRESSURE GAGES

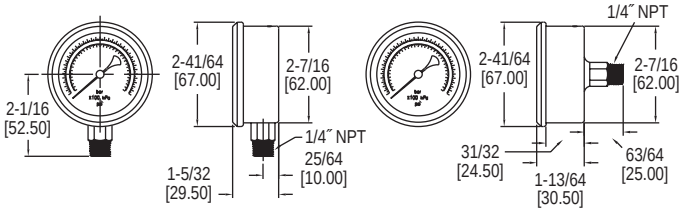
1.5% FS Accuracy, 316 SS or Brass Wetted Parts, Dual Psi/Bar x100 kPa Scales

SGZ bottom

SGZ back with accessory pointers

SGY bottom

SGY back with accessory pointers



The **Series SGY & SGZ 2″ Industrial Pressure Gages** have dual psi and bar (x100 kPa) scales with ±1.5% full-scale accuracy. The Series SGZ and SGY gages are designed with 304 SS housings and the SGZ is designed with 316 SS wetted parts for excellent chemical compatibility or SGY brass wetted parts for compatible gases. These gages cover a wide variety of ranges in either bottom or back connection configurations. Series SGZ gages employ an easy-open breather plug on top, which allows liquid filled units to breathe, relieving any built up internal pressures. Plug easily pops open and does not need to be entirely removed or cut like a typical gages' rubber plug grommet.

FEATURES/BENEFITS
- Stainless steel housing and wetted parts to resist ambient corrosion for longer service life in harsh environments
- Higher accuracy gage for value-sensitive applications requiring more precise measurement and where vibration is a concern
- Optional sliding pointer clearly mark to make visible critical ranges and high and low points
- Liquid fillable gage with easy open breather plug provides smoother damped movement of pointer
- Back or bottom mounting and compact size provides for mounting with dimensional limitations

APPLICATIONS
- Vacuums in pneumatic conveying lines
- Positive pressure in compressed air headers
- Corrosive ambient environments

ACCESSORIES	
Model	**Description**
A-445D	U-bracket mounting kit for 2.5″ gage
A-499R	Red sliding color pointer
A-499Y	Yellow sliding color pointer
A-499G	Green sliding color pointer

OPTIONS	
Use order code:	**Description**
NISTCAL-PG1	NIST traceable calibration certificate

SPECIFICATIONS	
Service: Compatible gases and liquids. **Wetted Materials:** SGZ: 316 L SS Tube, 316 SS connector; SGY: Brass connection, bronze tube. **Housing:** 304 SS. **Lens:** Polycarbonate. **Accuracy:** ±1.5% FS. **Pressure Limit:** FS range.	**Temperature Limits:** -4 to 140°F (-20 to 60°C). **Size:** 2.5″ (63 mm). **Process Connections:** 1/4″ male NPT. **Weight:** 4.9 oz (141 g) bottom, 5.8 oz (164 g) back. Add 3.7 oz (104 g) for glycerin fill.

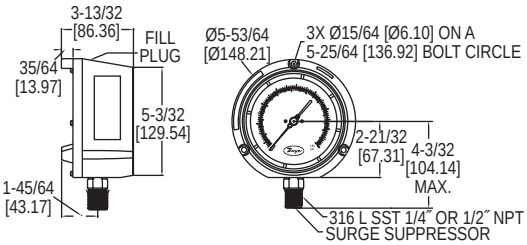
MODEL CHART			
Model	**Range**	**Model**	**Range**
SGZ-D10122N	30″ Hg to 0	**SGY-D10122N**	30″ Hg to 0
SGZ-D10322N	0 to 30 psi	**SGY-D10322N**	0 to 30 psi
SGZ-D10422N	0 to 60 psi	**SGY-D10422N**	0 to 60 psi
SGZ-D10522N	0 to 100 psi	**SGY-D10522N**	0 to 100 psi
SGZ-D10622N	0 to 160 psi	**SGY-D10622N**	0 to 160 psi
SGZ-D10722N	0 to 200 psi	**SGY-D10722N**	0 to 200 psi
SGZ-D11022N	0 to 300 psi	**SGY-D11022N**	0 to 300 psi
SGZ-D11122N	0 to 500 psi	**SGY-D11122N**	0 to 500 psi
SGZ-D11222N	0 to 1000 psi	**SGY-D11222N**	0 to 1000 psi
Note: To order with glycerin fill, add -GF to the end of the model. For back connect, change 22N to 42N.			

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

SERIES 765

PROCESS GAGE WITH DAMPENED MOVEMENT

±0.5% Accuracy, Safety Blow-Out Back



The **Series 765 Process Gage with Dampened Movement** minimizes effects of vibration without liquid filling. With this dampened movement the 765 gages are ideal for use in any application where high pulsation or vibration exists. The 765 gages offer dual scale range (psi/kPa) with ±0.5% full-scale accuracy. They are designed with a Phenolic safety-case and have a solid front with a blow-out back. Excellent chemical compatibility is insured with the 316L SS socket and Bourdon tube. A wide offering of ranges are available from full vacuum to 20,000 psi. The 765 process gage comes standard with bottom 1/4″ or 1/2″ male NPT connections.

FEATURES/BENEFITS
- Liquid-free dampened movement minimizes effect of vibration and cost to maintain
- Stainless steel socket and Bourdon tube permit use in chemical applications
- High accuracy gage for applications requiring more precise measurement
- Models that support vacuum to high pressure ranges provide a selection to meet specific applications
- Specified with high ambient and process temperature ratings mean more robust uses and longer service-life

APPLICATIONS
- Process applications
- Chemical
- Refinery
- Fertilizer
- Petrochemical
- Power
- Pharmaceutical
- Pulp and paper
- Cement

OPTIONS	
Use order code:	**Description**
NISTCAL-PG1	NIST traceable calibration certificate

SPECIFICATIONS	
Service: Compatible gases & liquids. **Wetted Materials:** 316L SS socket and Bourdon tube. **Housing:** Phenolic plastic with safety blow-out back. **Lens:** Polycarbonate. **Accuracy:** ±0.5% ANSI/ASME Grade 2A. **Pressure Limit:** 125% FS < 1500 psi, 115% FS for 2000 to 5000 psi, 110% FS > 10,000 psi.	**Temperature Limits:** -40 to 200°F (-40 to 93°C). **Size:** 4-1/2″ (114.3 mm) dial face. **Process Connections:** 1/4″ or 1/2″ NPT male. **Enclosure Rating:** IP65 (NEMA 4). **Weight:** 37 oz (1040 g). **Agency Approval:** Meets the technical requirements of EU Directive 2011/65/EU (RoHS II).

MODEL CHART					
Example	**765**	**-01**	**2N**	**-FMR**	**765-012N-FMR**
Series	765				4.5″ process gage
Range		01 02 03 04 05 06 07 08 09 10 11			30″ Hg-0 VAC (-100 to 0 kPa) 0 to 30 psi (0 to 206 kPa) 0 to 60 psi (0 to 410 kPa) 0 to 100 psi (0 to 680 kPa) 0 to 160 psi (0 to 1100 kPa) 0 to 200 psi (0 to 1370 kPa) 0 to 300 psi (0 to 2060 kPa) 0 to 400 psi (0 to 2770 kPa) 0 to 500 psi (0 to 3400 kPa) 0 to 600 psi (0 to 4100 kPa) 0 to 1000 psi (0 to 6800 kPa)
Process Connection			2N 4N		1/4″ male NPT 1/2″ male NPT
Additional Options				FMR SG45	Flush mounted ring Safety glass lens
For additional ranges contact factory.					

Dwyer

SERIES DPGA/DPGW/DPGWB/DPGAB

0.5% & 1% DIGITAL PRESSURE GAGES

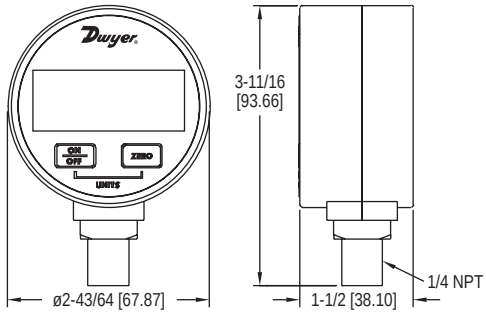
Economic Gage With Selectable Engineering Units, Rubber Boot

DPGA

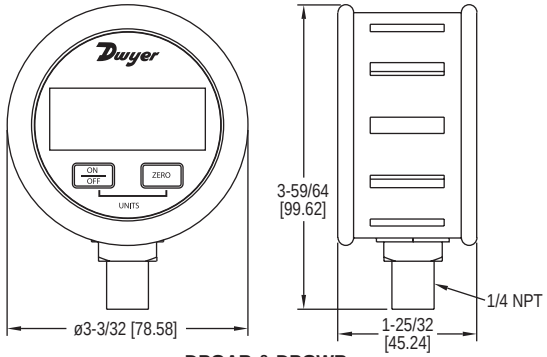
DPGW

DPGAB

DPGWB



DPGA & DPGW



DPGAB & DPGWB

The **Series DPGA 1% Digital Pressure Gage** is the only economic digital pressure gage with selectable engineering units on the market. With its 1% accuracy and digital push-button zero, the DPGA is the perfect choice for digitally monitoring the pressures of air and compatible gases.

The **Series DPGW 1% Digital Pressure Gage** is the only economic digital pressure gage for liquids with the ability to select engineering units on the market. With its 1% accuracy and digital push-button zero, the DPGW is the perfect choice for digitally monitoring the pressures of air and compatible liquids and gases.

The **Series DPGWB/DPGAB 0.5% Digital Pressure Gage** offers full-scale accuracy in a rugged, easy-to-use unit at prices comparable to mechanical gages. The DPGWB stainless steel wetted material makes it suitable for a wide variety of liquids or gases. The gages feature user-selectable units of measure allowing one gage to be used for a variety of pressure scales. The DPGWB/DPGAB come with a protective rubber boot to protect against short drops and rough handling.

FEATURES/BENEFITS
- Push-button zero reduce installation and service time
- High accuracy provides exceptional measurement for minimizing costly out of specification conditions
- Selectable unit button provides reading in easily recognizable units
- Well-suited gage for compatible gas (DPGA) or liquid (DPGW) applications specifying simple operation and accuracy

APPLICATIONS
- Process applications
- Process start-up
- OEM applications

SPECIFICATIONS	
Service: DPGA & DPGAB: Air and compatible gases; DPGW & DPGWB: Liquids and compatible gases. **Wetted Materials:** DPGA & DPGAB: 316L SS, silicone sensor; DPGW & DPGWB: 316L SS. **Housing Materials:** ABS plastic. **Accuracy:** DPGA & DPGW: ±1.0% FS (includes linearity, hysteresis, repeatability); DPGAB & DPGWB: ±0.5% FS (includes linearity, hysteresis, repeatability).	**Pressure Limits:** 2X pressure range. Vacuum range max. pressure is 30 psig. **Temperature Limits:** 30 to 120°F (-1 to 49°C). **Thermal Effect:** 0.05% FS/°F. **Size:** 2.62″ OD x 1.52″ deep. **Process Connections:** 1/4″ male NPT. **Display:** 4-digit LCD (.425″ H x .234″ W digits). **Power Requirements:** 9 V alkaline battery, included, user replaceable. **Auto Shut-off:** 20 minute auto shut-off. **Weight:** 5.6 oz (160 g).

ACCESSORIES	
Model	**Description**
A-293	Protective rubber boot

OPTIONS	
To order add suffix:	**Description**
-NIST	NIST traceable calibration certificate
Example: DPGA-04-NIST, DPGAB-04-NIST	

MODEL CHART

Model	Model	Range	Pressure Ranges											Resolution
			psig	kg/cm²	bar	in Hg	ft w.c.	kPa	oz/in²	in w.c.	mbar	cm w.c.	mm Hg	psi
DPGA-00	**DPGW-00**	30″ Hg to 0 (psi)	-14.70	-1.033	-1.013	-29.93	-33.94	-101.4	-235.2	-407.3	-1013	-1034	-761	0.01
DPGA-04	**DPGW-04**	0 to 5 psi	5.000	.3515	.3447	10.18	11.53	34.47	80.0	138.4	344.7	351.5	258.6	0.002
DPGA-05	**DPGW-05**	0 to 15 psi	15.00	1.055	1.034	30.54	34.60	103.4	240.0	415.2	1034	1055	776	0.01
DPGA-06	**DPGW-06**	0 to 30 psi	30.00	2.109	2.068	61.1	69.2	206.8	480.0	830	2068	2109	1551	0.01
DPGA-07	**DPGW-07**	0 to 50 psi	50.00	3.515	3.447	101.8	115.3	344.7	800	1384	3447	3515	2586	0.02
DPGA-08	**DPGW-08**	0 to 100 psi	100.0	7.03	6.89	203.6	230.7	689	1600	2768	-	-	-	0.1
DPGA-09	**DPGW-09**	0 to 200 psi	200.0	14.06	13.79	407.2	461.3	1379	3200	-	-	-	-	0.1
DPGA-10	**DPGW-10**	0 to 300 psi	300.0	21.09	20.68	611	692	2068	4800	-	-	-	-	0.1
DPGA-11	**DPGW-11**	0 to 500 psi	500.0	35.15	34.47	1018	1153	3447	-	-	-	-	-	0.2
Compound range available: DPGW-12: 30″ Hg-0-100 psi.														

MODEL CHART

Model	Model	Range	Pressure Ranges											Resolution
			psig	kg/cm²	bar	in Hg	ft w.c.	kPa	oz/in²	in w.c.	mbar	cm w.c.	mm Hg	psi
DPGAB-00	**DPGWB-00**	30″ Hg to 0 (psi)	-14.70	-1.033	-1.013	-29.93	-33.94	-101.4	-235.2	-407.3	-1013	-1034	-761	0.01
DPGAB-04	**DPGWB-04**	0 to 5 psi	5.000	.3515	.3447	10.18	11.53	34.47	80.0	138.4	344.7	351.5	258.6	0.002
DPGAB-05	**DPGWB-05**	0 to 15 psi	15.00	1.055	1.034	30.54	34.60	103.4	240.0	415.2	1034	1055	776	0.01
DPGAB-06	**DPGWB-06**	0 to 30 psi	30.00	2.109	2.068	61.1	69.2	206.8	480.0	830	2068	2109	1551	0.01
DPGAB-07	**DPGWB-07**	0 to 50 psi	50.00	3.515	3.447	101.8	115.3	344.7	800	1384	3447	3515	2586	0.02
DPGAB-08	**DPGWB-08**	0 to 100 psi	100.0	7.03	6.89	203.6	230.7	689	1600	2768	-	-	-	0.1
DPGAB-09	**DPGWB-09**	0 to 200 psi	200.0	14.06	13.79	407.2	461.3	1379	3200	-	-	-	-	0.1
DPGAB-10	**DPGWB-10**	0 to 300 psi	300.0	21.09	20.68	611	692	2068	4800	-	-	-	-	0.1
DPGAB-11	**DPGWB-11**	0 to 500 psi	500.0	35.15	34.47	1018	1153	3447	-	-	-	-	-	0.2
Compound range available: DPGWB-12: 30″ Hg-0-100 psi														

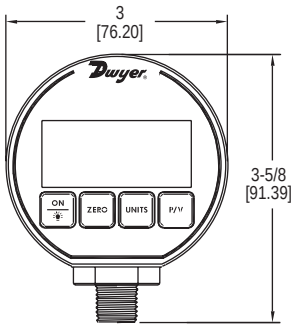
Dwyer
SERIES DPG

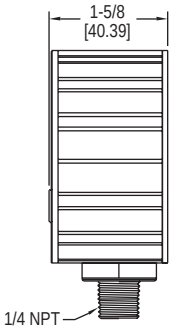
DIGITAL PRESSURE GAGES

±0.25% or ±0.5% FS Accuracy, NEMA 4X (IP66) Aluminum Housing

DPG-000

DPG-100





Replace your outdated analog gages with the new **Series DPG Digital Pressure Gages**. The Series DPG has a high ±0.25% or ±0.5% full-scale accuracy. The 4 digit digital display will reduce the potential for errors in readings by eliminating parallax error commonly produced with analog gages. Series DPG is battery powered and has an auto-shut off to conserve battery life. Battery life, on average, will last 2000 hours. A 4 button key pad allows easy access to features without the need to work through complex menus or difficult key combinations. These features include backlight, peak and valley, tare or auto zero and conversion of the pressure units.

FEATURES/BENEFITS

- High accuracy provides exceptional measurement minimizing costly out of specification conditions
- Backlit 4-digit display provides clear parallax-free reading reducing potential for errors
- Battery-powered gage with auto-shutoff eliminates wiring and prolongs battery life reducing service calls
- Push-button zero reduce installation and service time

APPLICATIONS

- Process applications
- Replacement for legacy analog gages
- OEM applications

ACCESSORIES	
Model	**Description**
A-183	Protective rubber boot
A-184	Carrying case

SPECIFICATIONS

Service: Compatible liquids and combustible gases (for FM listing see Agency Approvals below).
Wetted Materials: Type 316L SS.
Housing Materials: Polycarbonate front & back cover, anodized aluminum extruded housing with recessed grooves, polycarbonate overlay, Buna-N O-rings, 316L SS sensor construction.
Accuracy: DPG-000: ±0.5% FS; DPG-100: 0.25% FS; ±1 least significant digit @ 70°F (21°C) (includes linearity, hysteresis, repeatability).
Pressure Limit: 2x pressure range for models ≤1000 psi; 5000 psi for 3000 psi range; 7500 psi for 5000 psi range.
Enclosure Rating: Designed to meet NEMA 4/4X (IP66).
Temperature Limits: 0 to 130°F (-18 to 55°C).
Thermal Effect: Between 70 to 130°F is 0.016%/F; Between 32 to 70°F is 0.026%/F; Between 10 to 32°F is 0.09%/F.
Size: 3.00″ OD x 1.90″ deep (max).
Process Connection: 1/4″ male NPT.
Weight: 8.84 oz (275 g).
Display: 4 digit (.425″ H x .234″ W digits).
Power Requirements: (2) AAA alkaline batteries, included, user replaceable.
Battery Life: 2000 hours typical; Low battery indicator (60 hours in continuous use).
Auto Shut-Off: Gage: 60 minute auto shut off. Auto shut-off may be disengaged; Backlight: 2 minute auto shut-off.
Agency Approvals: DPG-000: CE; DPG-100: CE, FM approved to be intrinsically safe for Class I, Division I, Groups A, B, C and D, for ranges 0-15 to 0-3000 psi.

OPTIONS	
To order add suffix:	**Description**
-NIST	NIST traceable calibration certificate
Example: DPG-002-NIST	

DPG-100 with protective rubber boot

Protective carrying case

MODEL CHART

Model ±0.5%	Model ±0.25%	Range psi	Pressure Ranges										
			kg/cm²	bar	in Hg	ft w.c.	kPa	oz/in²	in w.c.	mbar	cm w.c.	mm Hg
DPG-000*	-	-14.70 to 0	-1.033	-1.013	-29.93	-33.94	-101.4	-235.2	-407.3	-1013	-1034	-760.7
DPG-002*	**DPG-102**	15.00	1.055	1.034	30.54	34.61	103.4	240	415.2	1034	1055	775.7
DPG-003*	**DPG-103**	30.00	2.109	2.069	61.08	69.21	206.9	480	830.4	2069	2109	1551
DPG-004*	**DPG-104**	50.00	3.515	3.448	101.8	115.4	344.8	800	1384	3448	3515	2586
DPG-005*	**DPG-105**	100.0	7.03	6.895	203.6	230.7	689.5	1600	2768	6895	7031	5172
DPG-006*	**DPG-106**	200.0	14.06	13.79	407.2	461.4	1379	3200	5536	-	-	-
DPG-007*	**DPG-107**	300.0	21.09	20.69	610.8	692.1	2069	4800	8304	-	-	-
DPG-008*	**DPG-108**	500.0	35.15	34.48	1018	1154	3448	8000	-	-	-	-
DPG-009*	**DPG-109**	1000	70.3	68.98	2036	2307	6895	-	-	-	-	-
DPG-010*	**DPG-110**	3000	210.9	206.9	6108	6921	-	-	-	-	-	-
DPG-011*	**DPG-111***	5000	351.5	344.8	-	-	-	-	-	-	-	-
DPG-020*	-	-14.70 to 15.00	-1.033 to 1.055	-1.013 to 1.034	-29.93 to 30.54	-33.94 to 34.61	-101.4 to 103.4	-235.2 to 240	-407.3 to 415.2	-1013 to 1034	-1034 to 1055	-760.7 to 775.7
DPG-021*	-	-14.70 to 30.00	-1.033 to 2.109	-1.013 to 2.069	-29.93 to 61.08	-33.94 to 69.21	-101.4 to 206.9	-235.2 to 480	-407.3 to 830.4	-1013 to 2069	-1034 to 2109	-760.7 to 1551
DPG-022*	-	-14.70 to 45.00	-1.033 to 3.164	-1.013 to 3.103	-29.93 to 91.63	-33.94 to 103.8	-101.4 to 310.3	-235.2 to 720	-407.3 to 1245	-1013 to 3102	-1034 to 3164	-760.7 to 2327
DPG-023*	-	-14.70 to 60.00	-1.033 to 4.218	-1.013 to 4.137	-29.93 to 122.2	-33.94 to 138.4	-101.4 to 413.7	-235.2 to 960	-407.3 to 1661	-1013 to 4137	-1034 to 4218	-760.7 to 3103
DPG-024*	-	-14.70 to 100.0	-1.033 to 7.03	-1.013 to 6.895	-29.93 to 203.6	-33.94 to 230.7	-101.4 to 689.5	-235.2 to 1600	-407.3 to 2768	-1013 to 6895	-1034 to 7031	-760.7 to 5172

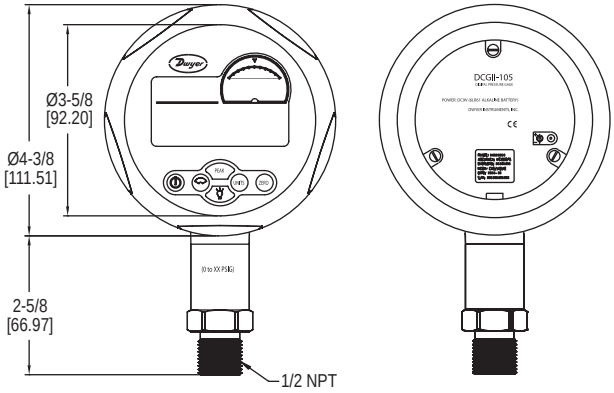
*Model is not FM approved.

Dwyer

SERIES DCGII

DIGITAL CALIBRATION PRESSURE GAGE

±0.05% FS Accuracy, 316 SS Wetted Parts



The **Series DCGII Digital Calibration Pressure Gage** offers a complete pressure gage with calibration capabilities. With a precise 0.05% full-scale accuracy and large 5 digit resolution, this gage can be used in critical industrial applications where precision is most important. This versatile gage only requires one 9V battery or power adapter and can operate up to 5,000 working hours. The Series DCGII 0.05% Digital Pressure Gage can display percent of range, pressure swings or alarm set points. This pressure gage comes complete with eleven selectable pressure units, backlight and zeroing capability.

FEATURES/BENEFITS

- Highest accuracy provides exceptional measurement for calibration minimizing costly out of specification conditions
- Stainless steel housing resists ambient corrosion for longer service life in harsh environments
- Lightweight and slim, yet large easy to read battery-powered gage make them easy to carry and read
- Specified with high ambient temperature rating means more robust uses and longer service-life
- Indicator can display pressure swings, minimum and maximum peak detection with alarm set points provides a multipurpose tool where critical calibration is needed

APPLICATIONS

- Field gage calibration
- Permanent installation
- Burst disc testing
- Torque data logging
- Pressure regulator testing and hydrostatic leak testing

SPECIFICATIONS

Service: Compatible, non-combustible liquids and gases.
Wetted Materials: 316 SS.
Other Materials: Housing: Aluminum alloy; Display: Acrylic MR200; Buttons: Silicon gel; Back plate: 304 SS; Back seal: Oil-proof latex.
Accuracy: 0.05% FS; ±1 least significant digit.
Temperature Accuracy: ±1°C.
Pressure Limits: 120% FS.
Temperature Limits: 14 to 122°F (-10 to 50°C).
Compensated Limits: 32 to 122°F (0 to 50°C).
Process Connection: 1/2″ male NPT.
Display: 5-digit LCD with blue backlight.
Power Requirements: 9 V alkaline battery, not included, or power adapter accessory.
Battery Life: Up to 10,000 hours (600 working hours @ default 3 times/s).
Auto Shut-Off: Backlight: On/off, 10 s, 20 s, 30 s.
Weight: 1.28 lb (0.58 kg).
Agency Approvals: CE.

MODEL CHART

Model	Range (psig)	kPa	mPa	kgf/cm²	in H₂O	in Hg	mm Hg	psi	mbar	bar
DCGII-100	-14.7 to 0	-101.35	-0.1013	-1.0335	-406.90	-29.929	-760.21	-14.700	1013.5	-1.0135
DCGII-101	0 to 15	103.42	0.1034	1.0546	415.20	30.540	775.72	15.000	1034.2	1.0342
DCGII-102	0 to 30	206.84	0.2067	2.1092	830.40	61.080	1551.4	30.000	2068.4	2.0684
DCGII-103	0 to 60	413.69	0.4134	4.2184	1660.8	122.16	3102.9	60.000	4136.9	4.1369
DCGII-104	0 to 100	689.48	0.6890	7.0307	2768.0	203.60	5171.5	100.00	6894.8	6.8948
DCGII-105	0 to 200	1379.0	1.3780	14.061	5536.0	407.20	1034.3	200.00	1379.0	13.790
DCGII-106	0 to 300	2068.4	2.0670	21.092	8304.0	610.80	1551.4	300.00	2068.4	20.684
DCGII-107	0 to 500	3447.4	3.4450	35.153	1384.0	1018.0	2585.7	500.00	3447.4	34.474
DCGII-108	0 to 1000	6894.8	6.8900	70.307	2768.0	2036.0	5171.5	1000.00	6894.8	68.948
DCGII-109	0 to 2000	1379.0	13.780	140.61	5536.0	4072.0		2000.00		137.90

ACCESSORIES

Model	Description
A-644	9 V DC power adapter
BBV-0N	2-valve block manifold
PCHP-1❶	Pneumatic calibration pump

OPTIONS

Use order code:	Description
NISTCAL-PG2	NIST traceable pressure calibration certificate

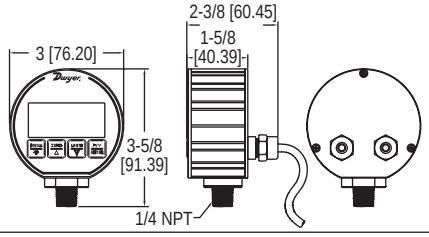
❶See page 198 (Series PCHP)

Dwyer

SERIES DPG-200

DIGITAL PRESSURE GAGE

3-in-1: Gage, Transmitter and Switch



The **Series DPG-200 Digital Pressure Gage** has a precise ±0.25% full-scale accuracy. The 4 digit digital display will reduce the potential for errors in readings by eliminating parallax error commonly produced with analog gages. The DPG-200 is packaged in a durable extruded aluminum case designed to meet NEMA 4X (IP66). The unit is powered by 12-24 VDC/VAC and contains two alarm set points along with a 4-20 mA process output. A four-button keypad allows easy access to features. These features include backlight, peak and valley, auto zero and conversion of the pressure units. Pressure ranges also in mbar, kg/cm^2, oz/in^2, in Hg, mm Hg, ft w.c. and ft sw for various models.

FEATURES/BENEFITS
- High accuracy provides exceptional measurement minimizing costly out of specification conditions
- Backlit 4-digit display provides clear parallax-free reading reducing potential for errors
- Durable aluminum case to meet NEMA 4X (IP66) requirements supports use in harsh or outdoor environments
- Push-button zero reduce installation and service time

APPLICATIONS
- Process control
- Compressor control

MODEL CHART

Model	Range (psig)	Pressure Ranges				
		bar	ft w.c.	kPa	in w.c.	cm w.c.
DPG-200	-14.70-0	-1.013	-33.94	-101.4	-407.3	-1034
DPG-202	15.00	1.034	34.61	103.4	415.2	1055
DPG-203	30.00	2.069	69.21	206.9	830.4	2109
DPG-204	50.00	3.448	115.4	344.8	1384	3515
DPG-205	100.0	6.895	230.7	689.5	2768	7031
DPG-206	200.0	13.79	461.4	1379	5536	-
DPG-207	300.0	20.69	692.1	2069	8304	-
DPG-208	500.0	34.48	1154	3448	-	-
DPG-209	1000	68.98	2307	6895	-	-
DPG-210	3000	206.9	6921	-	-	-
DPG-211	5000	344.8	-	-	-	-

Compound range available: DPG-220 range: 30˝ Hg-0-15 psi.

SPECIFICATIONS

DIGITAL GAGE SPECIFICATIONS
Service: Liquids and non-combustible compatible gases.
Wetted Materials: Type 316L SS.
Enclosure: Black polycarbonate front & back cover, anodized aluminum extruded enclosure with recessed grooves, polycarbonate overlay, Buna-N O-rings, 316L SS sensor construction.
Accuracy: 0.25% FS ±1 least significant digit (includes linearity, hysteresis, repeatability).
Pressure Limit: 2x pressure range for models ≤ 1000 psi; 5000 psi for 3000 psi range; 7500 psi for 5000 psi range.
Temperature Limits: 32 to 158°F (0 to 70°C).
Process Connection: 1/4˝ male NPT.
Display: 4 digit (.425˝ H x .234˝ W digits).
Size: 3.00˝ OD x 1.90˝ deep (not including cables).
Weight: 8.84 oz (275 g).

SWITCH SPECIFICATIONS
Switch Type: 2 SPDT form C contacts.
Electrical Rating: 0.5 A @ 125 VAC resistive, 1 A @ 24 VDC.
Relay Differential: 1 least significant digit.
Electrical Connections: 3 ft (.91 m) cable.
Mounting Orientation: Mount in any position.
Set Point Adjustment: Via menu.

TRANSMITTER SPECIFICATIONS
Temperature Limits: 0 to 158°F (0 to 70°C).
Thermal Effect: Between 70 to 158°F = 0.016%/°F. Between 0 to 70°F = 0.026%/°F.
Power Requirements: 12-24 VAC ±20% 50 to 400 Hz, 12-24 VDC ±20%.
Output Signal: 4-20 mA.
Loop Resistance: 600 Ω max.
Power Consumption: 0.8 W max.
Electrical Connections: 3 ft (.91 m) cable.
Enclosure Rating: Designed to meet NEMA 4X (IP66).

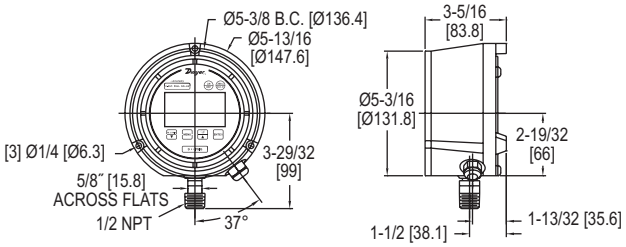
OPTIONS

Use order code:	Description
-NIST	NIST traceable calibration certificate

SERIES DSGT

DIGITAL INDICATING TRANSMITTER

±0.25% Full-Scale Accuracy



The **Series DSGT Digital Indicating Transmitter** is a versatile multi-function process gage that features an excellent 0.25% full-scale accuracy. This all-in-one digital gage package is designed to reduce installation costs, instrument cost, and save space where an application requires a gage, transmitter, and switches. The Series DSGT gage comes standard with a loop-powered 4-20 mA transmitter. The Series DSGT gage is enclosed in a durable fiberglass reinforced thermoplastic case that is designed to meet NEMA 4 IP56 requirements. The gage features a menu-driven display for easy customization. User selectable features include 12 engineering units of measure, password protected calibration and disable functions, as well as an adjustable bar graph and update/dampening rates.

FEATURES/BENEFITS
- All-in-one digital gage package is designed to reduce installation costs, instrument cost, and save space where an application requires a gage, transmitter, and switches
- Durable fiberglass reinforced thermoplastic case to meet NEMA 4 (IP56) requirements supports use in harsh environments
- Password protected calibration and disable functions helps to insure no errors by untrained personnel

APPLICATIONS
- Process
- Compressor
- Outdoor
- OEM

SPECIFICATIONS

GAGE SPECIFICATIONS
Service: Compatible, non-combustible liquids & gases.
Wetted Materials: 17 to 4 stainless steel sensor, 316 SS socket.
Housing Materials: Fiberglass reinforced thermoplastic case.
Accuracy: 0.25% FS (includes linearity, hysteresis, repeatability).
Pressure Limit: 2 x FS range.
Process Connection: 1/2˝ male NPT.
Display: 5 digit (0.88˝ high).

TRANSMITTER SPECIFICATIONS
Power Requirements: 12-36 VDC (loop powered).
Memory Back Up Supply: (2) C alkaline batteries, installed functional, user replaceable.
Output Signal: 4-20 mA.
Response Time: 100 ms.
Temperature Limits: 14 to 140ºF (-10 to 60ºC).
Thermal Effects: 0.04% FS/°F.
Electrical Connections: 3 ft flying leads.
Loop Resistance: DC; 0 to 1090 Ω max.
Set Point Adjustments: Adjustable through menu selections.
Weight: 1.45 lb (.66 kg).

OPTIONS

Use order code:	Description
NISTCAL-PT1	NIST traceable calibration certificate

MODEL CHART

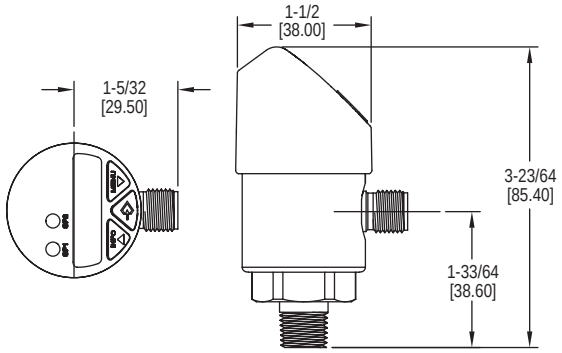
Model	Range (psig)	Model	Range (psig)	Model	Range (psig)	Model	Range (psig)
DSGT-101-C0S	30˝ Hg-0 to 15	**DSGT-106-C0S**	0 to 100	**DSGT-109-C0S**	0 to 300	**DSGT-116-C0S**	0 to 5000
DSGT-102-C0S	30˝ Hg-0 to 30	**DSGT-107-C0S**	0 to 160	**DSGT-110-C0S**	0 to 600	**DSGT-117-C0S**	0 to 8000
DSGT-104-C0S	0 to 30	**DSGT-108-C0S**	0 to 200	**DSGT-112-C0S**	0 to 1000	**DSGT-118-C0S**	0 to 10000
DSGT-105-C0S	0 to 60						

Dwyer

SERIES DPT

DIGITAL PRESSURE TRANSMITTER WITH SWITCHES

Two Solid State Switches, LED Display



The **Series DPT Digital Pressure Transmitter with Switches** combines a large, 14-segment LED display with two programmable solid state switches into one compact unit. A unique, 3-way rotating design allows the DPT to meet specific installation requirements without any retrofitting. The display and electrical connection can be rotated independently to maximize visibility while still orienting the electrical connection in the best position for the cable connector. Large, ergonomically designed push-buttons allow for quick/easy programming and thin-film piezoresistive sensor technology guarantees long-term reliability and stability.

FEATURES/BENEFITS

- Compact size, lightweight, and high accuracy supports multiple installation methods to support application need and footprint
- Rotating display and electrical connection to maximize visibility while orienting the electrical connection in the best position for the cable connector

APPLICATIONS

- Calibration
- Hydraulics and pneumatics
- Machine tools
- Compressors and pumps
- Machine building

SPECIFICATIONS

Service: Compatible gases, liquids or vapors.
Wetted Materials: Pressure connection: 316 L SS; Pressure sensor: 316 L SS (13-8 PH for ranges above 150 psi).
Housing: 316 L lower body, heat and chemical resistant fiberglass reinforced plastic (PBT) plastic head, TPE-E keyboard, PC display window.
Accuracy: 1.0% FS (includes non-linearity, hysteresis, zero point).
Pressure Limit: See table.
Temperature Limits: 32 to 176°F (0 to 80°C).
Process Connections: 1/4″ male NPT.
Display: Red LED 4-digit (0.35″ H digits).
Weight: 7 oz (0.2 kg).

SWITCH SPECIFICATIONS
Switch Type: PNP.
Electrical Rating: 250 mA.
Electrical Connections: M 12x1, 5-pin.
Mounting Orientation: Mount in any position.

TRANSMITTER SPECIFICATIONS
Temperature Limits: 32 to 176°F (0 to 80°C).
Thermal Effect: 0.2% FS / 10k.
Power Requirements: 15-35 VDC.
Output Signal: DPT-A: 4-20 mA; DPT-V: 0-10 VDC.
Loop Resistance: DPT-A: ≤ 0.5k; DPT-V: > 10k.
Power Consumption: ≤ 100 mA.
Electrical Connections: M 12x1, 5-pin.
Enclosure Rating: IP67.

MODEL CHART

0-10 VDC Model	4-20 mA Model	Range (psig)	Maximum Pressure (psig)	Burst Pressure (psig)	Pressure Ranges bar	MPa	kPa	kg/cm²
DPT-V00	DPT-A00	-14.5 to 0	30	75	1.034	.1034	103.4	1.055
DPT-V01	DPT-A01	0 to 15	30	75	1.034	.1034	103.4	1.055
DPT-V02	DPT-A02	0 to 25	60	150	1.724	.1724	172.4	1.758
DPT-V03	DPT-A03	0 to 30	60	150	2.068	.2068	206.8	2.109
DPT-V04	DPT-A04	0 to 50	100	250	3.447	.3447	344.7	3.515
DPT-V05	DPT-A05	0 to 100	200	500	6.895	.6895	689.5	7.031
DPT-V06	DPT-A06	0 to 160	290	500	11.03	1.103	1103	11.25
DPT-V07	DPT-A07	0 to 200	400	1500	13.79	1.378	1378	14.06
DPT-V08	DPT-A08	0 to 300	600	1500	20.68	2.068	2068	21.09
DPT-V09	DPT-A09	0 to 500	1000	2500	34.47	3.447	3447	35.15
DPT-V10	DPT-A10	0 to 1000	1740	7975	68.95	6.895	6895	70.31

OPTIONS

Use order code:	Description
NISTCAL-PT1	NIST traceable calibration certificate

ACCESSORIES

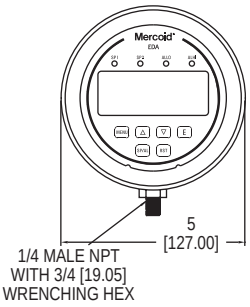
Model	Description
A-195	6′ (2 m) shielded cable with 5 pin female M-12 connections

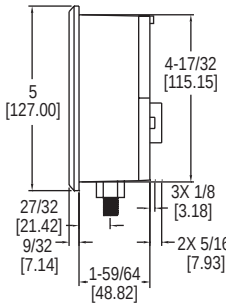
Dwyer

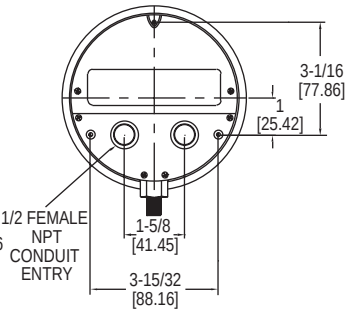
SERIES EDA | MERCOID® BY DWYER

ELECTRONIC PRESSURE CONTROLLER

2 Switches, Indicating Gage, and Transmitter in One Package







Series EDA Electronic Pressure Controller is an extremely versatile compact package that can replace a separate gage, two switches, and a transmitter in a system saving money, installation time, and panel space. The EDA incorporates two SPDT relays that have the on and off points fully adjustable over the range for control or alarm use. Front face has LED indicators for switch status and a large backlight two-line display showing process value and indication units. Programming is easy with simple menu structure, two-line display, and external programming buttons. Weatherproof housing is ideal for a wide variety of applications with panel mount, flush mount, or pipe mount ability. Features include zero set, adjustable dampening, menu lock out, peak and valley indication, removable terminal blocks, adjustable time delay, and scalable transmitter output.

FEATURES/BENEFITS

- Versatile compact package that can replace a separate gage, two switches, and a transmitter in a system saving money, installation time, and panel space
- Fully programmable to meet simple or complex application needs
- Test mode function simulates input over the range without pressuring to easily test switches and transmitter output function
- Fail-safe relay output choices in case of sensor failure, over pressure, high temperature limit, low temperature limit, or keypad short
- Selectable alternation of set points between the relays for even wear on duplex pump applications
- Weatherproof housing is ideal for a wide variety of applications with panel mount, flush mount, or pipe mount ability

APPLICATIONS

- Process control
- Compressor control
- Filter status
- Duct or building static pressure
- Damper and fan control

SPECIFICATIONS

Service: Compatible liquids and gases.
Wetted Materials: 316L SS.
Housing: Polycarbonate.
Accuracy: ±1% of FS including linearity, hysteresis, and repeatability (indicator and transmitter).
Stability: < ±2% of FS per year.
Pressure Limits: 1.5 x range.
Temperature Limits: Ambient: 20 to 140°F (-6.6 to 60°C); Process: 0 to 176°F (-18 to 80°C).
Compensated Temperature Limits: 32 to 122°F (0 to 50°C).
Thermal Effect: ±0.05% of FS/°F.
Display: 4-digit backlit LCD (digits: 0.60″H x 0.33″ W).
Power Requirements: 12-30 VDC/AC.
Power Consumption: 2.5 watts.
Electrical Connections: Removable terminal blocks with two 1/2″ female NPT conduit connections.
Enclosure Rating: Meets NEMA 4X (IP66).
Warm Up Time: <10 s.
Mounting Orientation: Any position.
Weight: 1.18 lb (535 g).
Agency Approvals: CE, UL.

SWITCH SPECIFICATIONS

Switch Type: 2 SPDT relays.
Electrical Rating: 5 A @ 120/240VAC, 1 A @ 30 VDC.
Repeatability: ±1% of FS (switching only).
Set Points: Adjustable 0-100% of FS.
Switch Indication: External LED for each relay on the front panel.
Switch Reset: Manual or automatic.

TRANSMITTER SPECIFICATIONS

Output Signal: 4-20 mA, 1-6 VDC, 1-5 VDC, 0-5 VDC, or 0-10 VDC (direct or reverse output selection).
Minimum Excitation: 14 VDC.
Zero and Span Adjustments: Menu scalable within the range.

MODEL CHART

Example	EDA	W	-N1	E1	-02	T0	-AT	EDAW-N1E1-02T0-AT
Series	EDA							Electronic pressure controller
Housing		W						Weatherproof
Process Connection			N1					1/4″ NPT male bottom
Electrical Connection				E1				Two 1/2″ female NPT conduit connections
Range					02 03 04 05 06 07 08 09 10			0-20 psi (1.379 bar) 0-60 psi (4.14 bar) 0-100 psi (6.89 bar) 0-150 psi (10.34 bar) 0-300 psi (20.68 bar) 0-600 psi (41.4 bar) 0-1000 psi (68.9 bar) 0-1500 psi (103.4 bar) 0-3000 psi (206.8 bar)
Transmitter Output						T0 T1 T2 T3 T4 T5		None 4-20 mA 1-5 VDC 0-5 VDC 1-6 VDC 0-10 VDC
Options							AT NIST 23444	Aluminum adhesive tag NIST certificate Oxygen cleaning

ACCESSORIES

Model	Description
A-590	1/2″ conduit plug, watertight
A-EDA-BRK	Flush mount bracket for EDA, bracket is then surface mounted, steel with gray hammertone epoxy finish

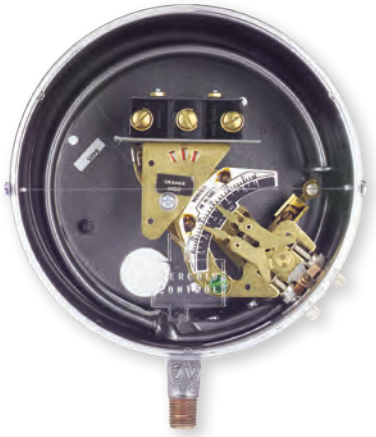
A-EDA-BRK with EDA installed

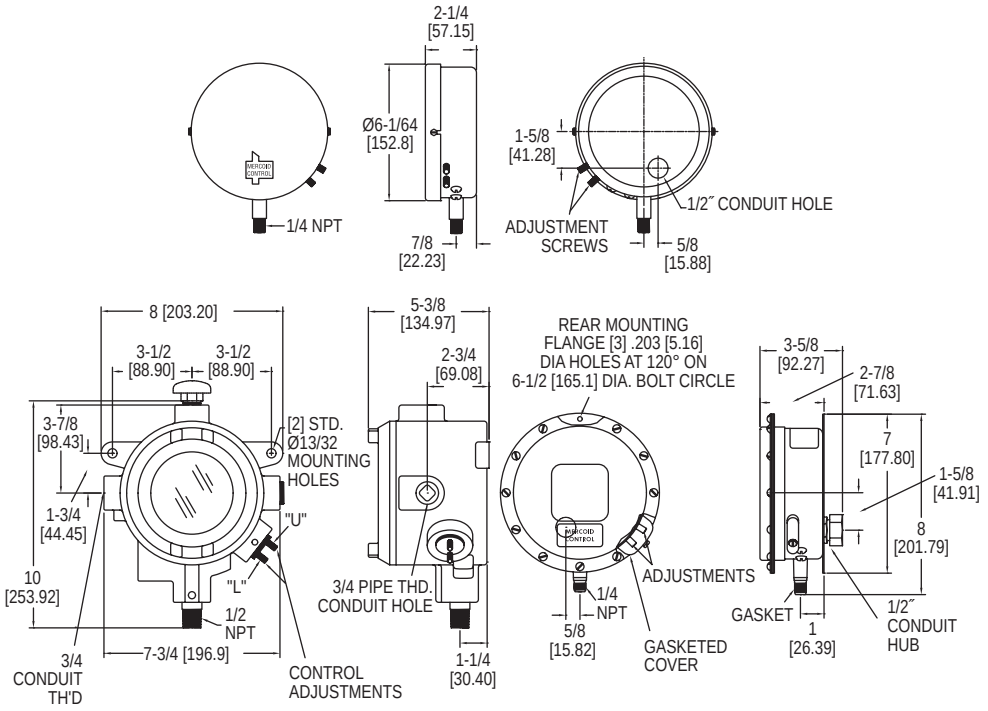
Dwyer

SERIES DA/DS | MERCOID® BY DWYER

BOURDON TUBE PRESSURE SWITCH

Pressure Ranges to 8000 psi (551.6 bar)





DAH **DAW**

VIDEO ONLINE

Customers tell us that the **Series DA/DS Bourdon Tube Pressure Switch** is the best pressure switch made. The Mercoid DA/DS Series is one of the world's broadest lines of pressure switches. The DA/DS Series has extremely high sensitivity and great repeatability. The DA Models are equipped with two external adjustments, one for setting high pressure operating point, the other for setting low pressure operating point. Deadband, the difference between high and low setpoints, is adjustable over the full-scale. The DS Models are equipped with a single external adjustment for setting operating point only. For mercury-free switches, choose between the snap action switch or hermetically sealed snap action switch. Hermetically sealed mercury switch also available.

FEATURES/BENEFITS

- Visible calibrated dial provides an easy and fast check without having to open device causing dangerous conditions to operators
- On/off indication (except hermetically sealed snap switch models) gives operator clear indication of state of switched equipment that could be located in another location
- Adjustable or fixed deadband supports control applications by reducing equipment wear-out by unnecessary recycling
- External switch set point adjustment reduces set-up time
- Pressure ranges of full vacuum to 8000 psig gives application designers the ability to specify standard equipment, simplifying install and training, and reducing servicing costs
- UL listed, CSA approved, many models FM approved to support rigorous process applications and regulations
- General purpose, weatherproof or explosion-proof enclosures for a variety of indoor or outdoor environments meeting the needs of multiple applications and uses

APPLICATIONS

- Compressors
- Mechanical HVAC or process equipment
- Pump control

SPECIFICATIONS

Wetted Materials: Brass, 403 SS, or 316 SS.
Temperature Limit: 180°F (82°C).
Pressure Limit: Maximum pressure of the operating range.
Enclosure Rating: General purpose, weatherproof or explosion-proof.
Repeatability: ±1% of full operating range, ±1.5% on DS-7300 models.
Switch Type: SPST mercury switch, SPDT mercury switch, SPDT snap switch, or SPDT hermetically sealed snap switch. Other circuit types available.
Electrical Rating: See model charts.
Electrical Connections: Screw terminal.
Conduit Connection: General purpose: 1/2″ hole for conduit hub; Weatherproof: 1/2″ conduit hub; Explosion-proof: 3/4″ female NPT.
Process Connection: General purpose and weatherproof: 1/4″ male NPT, 1/2″ male NPT on ranges 15S and 16S; Explosion-proof: 1/2″ male NPT and 1/4″ female NPT.
Mounting Orientation: Vertical.
Set Point Adjustment: Thumbscrew.
Weight: General purpose: 4 lb (1.8 kg); Weatherproof: 6 lb (2.7 kg); Explosion-proof: 8 lb (3.5 kg).
Deadband: See model chart.
Agency Approvals: CSA, FM, UL (mercury switch units are not CE approved) (Consult factory for FM approved models).

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

Dwyer

SERIES DA/DS | MERCOID® BY DWYER

BOURDON TUBE PRESSURE SWITCH

Pressure Ranges to 8000 psi (551.6 bar)

MODEL CHART - D SERIES PRESSURE SWITCH WITH SNAP ACTION SWITCH AND GENERAL PURPOSE ENCLOSURE

		Adjustable Deadband SPDT: 10 A @ 120/240 VAC		Fixed Deadband SPDT: 15 A @ 120/240 AC		Hermetically Sealed, Fixed Deadband SPDT: 5 A @ 120/240 VAC, 5 A res. @ 30 VDC	
Bourdon Tube Material	Adjustable Operating Range (psig)	Minimum Deadband (psig)	Model	Fixed	Model	Fixed	Model
Brass	0 to 30″ Hg VAC	13.5″ Hg	DA-7031-153-2	3″ Hg	DS-7231-153-2	5″ Hg	DS-7331-153-2
Brass	10″ Hg VAC to 12	6	DA-7031-153-3	1.5	DS-7231-153-3	3	DS-7331-153-3
Brass	25″ Hg VAC to 50	12	DA-7031-153-27	2.5	DS-7231-153-27	3.75	DS-7331-153-27
Brass	1/8 to 15	6	DA-7031-153-1	1.5	DS-7231-153-1	3	DS-7331-153-1
Brass	1/8 to 20	6	DA-7031-153-3A	1.5	DS-7231-153-3A	3	DS-7331-153-3A
Brass	1 to 35	7.5	DA-7031-153-4	1.5	DS-7231-153-4	3	DS-7331-153-4
Brass	2 to 60	9	DA-7031-153-5	2	DS-7231-153-5	3	DS-7331-153-5
Brass	5 to 100	13.5	DA-7031-153-6	2.5	DS-7231-153-6	3.75	DS-7331-153-6
Brass	5 to 150	24	DA-7031-153-7	3	DS-7231-153-7	5.25	DS-7331-153-7
Brass	10 to 200	24	DA-7031-153-8	4	DS-7231-153-8	6.75	DS-7331-153-8
Brass	10 to 300	37.5	DA-7031-153-9	5	DS-7231-153-9	9	DS-7331-153-9
403 stainless steel	30″ Hg VAC to 60	18	DA-7021-153-25S	3.5	DS-7221-153-25S	5.25	DS-7321-153-25S
403 stainless steel	30″ Hg VAC to 75	22.5	DA-7021-153-26S		DS-7221-153-26S	5.25	DS-7321-153-26S
403 stainless steel	2 to 60	13.5	DA-7021-153-5S	3	DS-7221-153-5S	4.5	DS-7321-153-5S
403 stainless steel	5 to 100	19.5	DA-7021-153-6S	3.5	DS-7221-153-6S	5.25	DS-7321-153-6S
403 stainless steel	10 to 200	22.5	DA-7021-153-8S	4	DS-7221-153-8S	7.125	DS-7321-153-8S
403 stainless steel	10 to 300	28.5	DA-7021-153-9S	6	DS-7221-153-9S	10.5	DS-7321-153-9S
403 stainless steel	40 to 350	30	DA-7021-153-9AS	6	DS-7221-153-9AS	10.5	DS-7321-153-9AS
403 stainless steel	25 to 600	67.5	DA-7021-153-10S	10	DS-7221-153-10S	18	DS-7321-153-10S
403 stainless steel	50 to 1000	142.5	DA-7021-153-11S	20	DS-7221-153-11S	33	DS-7321-153-11S
403 stainless steel	100 to 1500	195	DA-7021-153-12S	30	DS-7221-153-12S	52.5	DS-7321-153-12S
403 stainless steel	300 to 2500	390	DA-7021-153-13S	60	DS-7221-153-13S	90	DS-7321-153-13S
403 stainless steel	500 to 5000	1350	DA-7021-153-15S	200	DS-7221-153-15S	300	DS-7321-153-15S
403 stainless steel	800 to 8000	2250	DA-7021-153-16S	500	DS-7221-153-16S	5.25	DS-7341-153-26E
316 stainless steel	30″ Hg VAC to 75	15	DA-7041-153-26E	3.5	DS-7241-153-26E	6	DS-7341-153-23E
316 stainless steel	5 to 75	12	DA-7041-153-23E	4	DS-7241-153-23E	5.25	DS-7341-153-6E
316 stainless steel	10 to100	15	DA-7041-153-6E	3.5	DS-7241-153-6E	6.75	DS-7341-153-24E
316 stainless steel	10 to 150	16.5	DA-7041-153-24E	4	DS-7241-153-24E	12	DS-7341-153-9E
316 stainless steel	10 to 300	42	DA-7041-153-9E	8	DS-7241-153-9E	18	DS-7341-153-21E
316 stainless steel	30 to 400	78	DA-7041-153-21E	10	DS-7241-153-21E	37.5	DS-7341-153-22E
316 stainless steel	75 to 800	180	DA-7041-153-22E	25	DS-7241-153-22E	52.5	DS-7341-153-11E
316 stainless steel	100 to 1000	285	DA-7041-153-11E	35	DS-7241-153-11E	112.5	DS-7341-153-13E
316 stainless steel	200 to 2500	600	DA-7041-153-13E	75	DS-7241-153-13E		

MODEL CHART - D SERIES PRESSURE SWITCH WITH MERCURY SWITCH AND GENERAL PURPOSE ENCLOSURE

		Adjustable Deadband			
Bourdon Tube Material	Adjustable Operating Range (psig)	Minimum Deadband (psig)	SPDT 4 A @ 120 V, 2 A @ 240 V AC/DC	SPST Open on Increase 10 A @ 120 V, 5 A @ 240 V AC/DC	SPST Close on Increase 10 A @ 120 V 5 A @ 240 V AC/DC
Brass	30″ to 0 Hg VAC	2″ Hg	DA-31-153-2	DA-31-2-2	DA-31-3-2
Brass	10″ Hg VAC to 12	1	DA-31-153-3	DA-31-2-3	DA-31-3-3
Brass	25″ Hg VAC to 50	3.5	DA-31-153-27	DA-31-2-27	DA-31-3-27
Brass	1/8 to 15	1	DA-31-153-1	DA-31-2-1	DA-31-3-1
Brass	1/8 to 20	1	DA-31-153-3A	DA-31-2-3A	DA-31-3-3A
Brass	1 to 35	1.75	DA-31-153-4	DA-31-2-4	DA-31-3-4
Brass	2 to 60	3	DA-31-153-5	DA-31-2-5	DA-31-3-5
Brass	5 to 100	3.75	DA-31-153-6	DA-31-2-6	DA-31-3-6
Brass	5 to 150	6	DA-31-153-7	DA-31-2-7	DA-31-3-7
Brass	10 to 200	8	DA-31-153-8	DA-31-2-8	DA-31-3-8
Brass	10 to 300	12	DA-31-153-9	DA-31-2-9	DA-31-3-9
403 stainless steel	30″ Hg VAC to 60	6	DA-21-153-25S	DA-21-2-25S	DA-21-3-25S
403 stainless steel	30″ Hg VAC to 75	8	DA-21-153-26S	DA-21-2-26S	DA-21-3-26S
403 stainless steel	2 to 60	4	DA-21-153-5S	DA-21-2-5S	DA-21-3-5S
403 stainless steel	5 to 100	6	DA-21-153-6S	DA-21-2-6S	DA-21-3-6S
403 stainless steel	10 to 200	8	DA-21-153-8S	DA-21-2-8S	DA-21-3-8S
403 stainless steel	10 to 300	14	DA-21-153-9S	DA-21-2-9S	DA-21-3-9S
403 stainless steel	40 to 350	14	DA-21-153-9AS	DA-21-2-9AS	DA-21-3-9AS
403 stainless steel	25 to 600	25	DA-21-153-10S	DA-21-2-10S	DA-21-3-10S
403 stainless steel	50 to 1000	60	DA-21-153-11S	DA-21-2-11S	DA-21-3-11S
403 stainless steel	100 to 1500	90	DA-21-153-12S	DA-21-2-12S	DA-21-3-12S
403 stainless steel	300 to 2500	150	DA-21-153-13S	DA-21-2-13S	DA-21-3-13S
403 stainless steel	500 to 5000	450	DA-21-153-15S	DA-21-2-15S	DA-21-3-15S
403 stainless steel	800 to 8000	750	DA-21-153-16S	DA-21-2-16S	DA-21-3-16S
316 stainless steel	30″ Hg VAC to 75	7	DA-41-153-26E	DA-41-2-26E	DA-41-3-26E
316 stainless steel	5 to 75	3	DA-41-153-23E	DA-41-2-23E	DA-41-3-23E
316 stainless steel	10 to100	7	DA-41-153-6E	DA-41-2-6E	DA-41-3-6E
316 stainless steel	10 to 150	6	DA-41-153-24E	DA-41-2-24E	DA-41-3-24E
316 stainless steel	10 to 300	18	DA-41-153-9E	DA-41-2-9E	DA-41-3-9E
316 stainless steel	30 to 400	30	DA-41-153-21E	DA-41-2-21E	DA-41-3-21E
316 stainless steel	75 to 800	75	DA-41-153-22E	DA-41-2-22E	DA-41-3-22E
316 stainless steel	100 to 1000	100	DA-41-153-11E	DA-41-2-11E	DA-41-3-11E
316 stainless steel	200 to 2500	210	DA-41-153-13E	DA-41-2-13E	DA-41-3-13E

OPTIONS

Weatherproof Enclosure - Series DAW

Note: To order, add "W" to model number after DA or DS, change 1 to 3.
Example: DAW-33-153-7

Explosion-Proof Enclosure - Series DAH

Suitable for Class I, Groups C and D; NEMA 7; Class II, Groups E, F, G; Class III NEMA 9 and 9A, Division 1.

Note: To order, add "H" to model number after DA or DS. **Example:** DAH-31-153-7

FM Approved

For general purpose and explosion-proof models see agency approvals.

Note: To order, add "F" to model number after DA, DS, DAH or DSH.
Examples: DAF-31-153-7 or DAHF-31-153-7

Other Options (Consult Factory)

DPDT switches or other switch types, fixed deadband mercury switch units for low deadband applications, manual reset operation, two-stage operation, acetal bushed movement for applications with high amounts of vibration and/or pulsation, fungus proofing, siphon, diaphragm seals, mounting flange and remote connection.

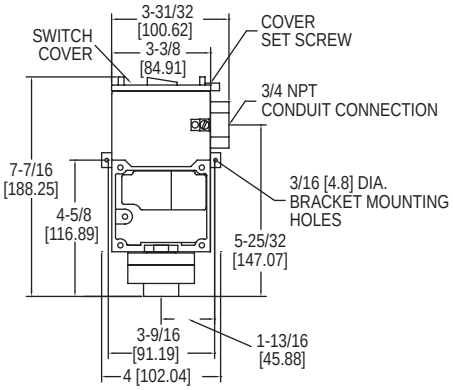
USA: California Proposition 65
⚠WARNING: Cancer and Reproductive Harm - www.P65Warnings.ca.gov

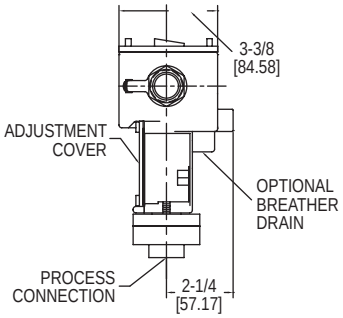
Dwyer

SERIES SA1100 | MERCOID® BY DWYER

DIAPHRAGM OPERATED PRESSURE SWITCH

Visible Set point, Adjustable Deadband, Hermetically Sealed Snap Switch, Weatherproof and Explosion-Proof





The **Series SA1100 Diaphragm Operated Pressure Switch** is weatherproof and explosion-proof in one economical enclosure. Extremely rugged construction assures excellent reliability in chemical, petroleum and industrial plants. New design also provides burst pressure protection to 3000 psi (206 bar). The rolling diaphragm design maintains a constant effective area to minimize friction. This results in a minimum deadband as low as 5% of full-scale. Since many applications require higher deadbands, the SA1100 includes a separate adjustment of this when necessary. A pump being used to control liquid level in a tank would be a typical situation where this feature would be important. Both set point and deadband adjustments are protected, yet clearly visible behind a clear polycarbonate window and are fully isolated from the electrical components for additional safety. A 7/16″ open-end wrench is the only tool required to change settings. Terminal blocks are provided for switch wiring connections and both internal and external ground screws are included. Standard housing is weatherproof to NEMA standards 1 through 4X and 13; explosion-proof to NEMA 7, Class I, Groups B, C & D; NEMA 9, Class II, Groups E, F & G. Optional construction adds drain to meet NEMA 3R IP54.

FEATURES/BENEFITS

- Explosion-proof and weatherproof housing provides device protection for outdoor use or harsh environment operation
- Burst pressure protection prevents device failure where high-pressure surges may damage device costing down-time and repair/replacement
- Adjustable deadband reduces equipment cycling and potential failure
- Visible set point and deadband adjustments provide an easy and fast check without having to open device causing dangerous conditions to operators

APPLICATIONS

- Chemical, petroleum, food and drug processing industries
- Used indoor, outdoor or in explosion-proof area
- Pump control

SPECIFICATIONS

Wetted Materials: See pressure chamber and diaphragm material in model chart.
***Temperature Limits:** -30 to 180°F (-35 to 82°C) standard; ATEX compliant at Ambient Temperature: -4 to 167°F (-20 to 75°C); Process Temperature: -4 to 167°F (-20 to 75°C).
Pressure Limit: 1200 psig (82.6 bar).
***Enclosure Rating:** Weatherproof and Explosion-proof. Listed with UL and CSA for Class I, Groups B, C and D; Class II Groups E, F, and G. ATEX Compliant CE 0344 Ex II 2 G EEx d IIC T6 Process Temperature 75°C. Weatherproof UL Rated Type 4. Meets NEMA 4X (IP66).
Switch Type: SPDT or DPDT snap switch.
Electrical Rating: See model chart.
Electrical Connections: Screw terminal.
Conduit Connection: 3/4″ female NPT.
Process Connection: 1/2″ female NPT.
Mounting Orientation: Within 20° of vertical.
Set Point Adjustment: Internal 7/16″ hex nuts.
Weight: 3.5 lb (1.6 kg).
Deadband: See deadband chart.
***Agency Approvals:** ATEX, CE, CSA, UL.

*Options that do not have ATEX.

SWITCH DEADBAND CHART

Range Number	Adjustable Operating Range		Approximate Minimum Deadband				Approximate Maximum Deadband	
			Low		High			
	psig	bar	psig	bar	psig	bar	psig	bar
11	10-150	0.7-10	4.0	0.28	7.5	0.52	75	5.2
12	20-250	1.4-17.2	5.0	0.35	12.5	0.86	150	10
13	30-500	2.0-34	12	0.83	45	3.1	300	21

MODEL CHART

Example	SA11	13	E	-A	4	-K	2		SA1113E-A4-K2
Construction	SA11								Series designator, weatherproof NEMA 4X, explosion-proof NEMA 7, 9
Adjustable Pressure Ranges		11							Adjustable range 10 to 150 psig (0.7-10 bar)
		12							Adjustable range 20 to 250 psig (1.4-17.2 bar)
		13							Adjustable range 30 to 500 psig (2.0-34.0 bar)
Circuit (Switch) Options			E						Snap action switch rated 15 A @ 125/250/480 VAC, 1/8 HP @ 125 VAC, 1/4 HP @ 250 VAC, 1/2 A @ 125 VDC resistive, 1/4 A @ 250 VDC resistive
			HS						Hermetically sealed snap action switch rated 5 A @ 125/250 VAC, 5 A resistive @ 30 VDC*
			HG						Hermetically sealed snap action switch with gold contacts rated 1A @ 125 VAC, 1 A resistive @ 30 VDC*
Pressure Chamber Material (Wetted)				A					Aluminum
				S					316 SS
Diaphragm Material (Wetted)					4				Buna-N diaphragm and O-ring
					5				Fluorocarbon diaphragm and O-ring
Circuit (Switch) Type						K			SPDT
						L			DPDT (not available with HS or HG switch options)
Process Connection							2		1/2 inch female NPT
***Options**								AT	ATEX certified construction
								DRAIN	Housing with drain - allows condensate to be drained from inside enclosure (meets NEMA 3R instead of 4X)

*Options that do not have ATEX

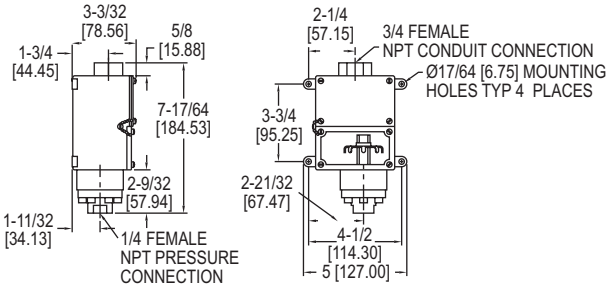
Examples: SA1111E-A4-K2; SA1111E-S5-K2

Dwyer

SERIES 1000W | MERCOID® BY DWYER

WEATHERPROOF DIAPHRAGM OPERATED PRESSURE SWITCH

Visible Set point, Fixed Deadband, Pressure Ranges to 1400 psi



With extremely rugged construction the **Series 1000W Weatherproof Diaphragm Operated Pressure Switch** provides excellent reliability in chemical, petroleum and industrial plants. Bellville spring movement permits mounting of control in any position and helps prevent contact chatter. New design also provides high over-pressure protection. Weatherproof housing is standard.

FEATURES/BENEFITS
- Weatherproof housing is ideal for a wide variety of applications where dust or water is present
- Spring movement design provides for control in any mounting position and prevents contact chatter reducing false or inconsistent switching

APPLICATIONS
- Chemical, petroleum, food and drug processing industries
- Process and Industrial applications

SPECIFICATIONS

Wetted Materials: See pressure chamber and diaphragm material in model chart.
Temperature Limits: -30 to 170°F (-35 to 77°C).
Pressure Limit: 3000 psig (206.8 bar).
Enclosure Rating: Weatherproof, meets NEMA 4X (IP66).
Switch Type: SPDT snap switch.
Electrical Rating: 15 A @ 125/250 VAC resistive.
Electrical Connections: Screw type.
Conduit Connection: 3/4″ female NPT.
Process Connection: 1/4″ female NPT.
Mounting Orientation: Any position.
Set Point Adjustment: Internal thumbwheel.
Weight: 3 lb (1.4 kg).
Deadband: See model chart.
Agency Approvals: CE, UL.

MODEL CHART

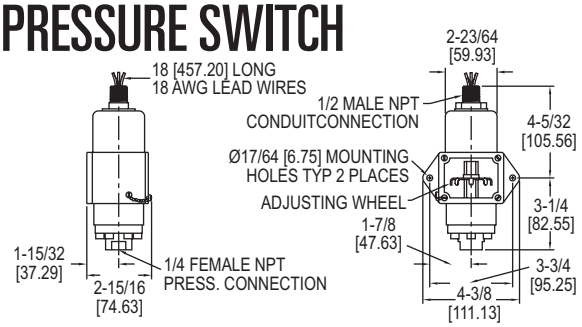
Aluminum Pressure Chamber Polyamide Diaph. Model	316 SS Pressure Chamber FEP Diaph. Model	Adjustable Operating Range psig (bar)	Approx.* Deadband (Fixed) psig (bar)
1003W-A1-D	**1003W-B3-D**	5 to 40 (.48 to 2.8)	2 (.14)
1004W-A1-D	**1004W-B3-D**	10 to 70 (.69 to 4.8)	4 (.28)
1005W-A1-D	**1005W-B3-D**	25 to 200 (1.7 to 13.8)	8 (.55)
1006W-A1-D	**1006W-B3-D**	50 to 350 (3.5 to 24.1)	15 (1.0)
1007W-A1-D	**1007W-B3-D**	75 to 550 (5.2 to 37.9)	30 (2.1)
1008W-A1-D	**1008W-B3-D**	100 to 900 (6.9 to 62.1)	50 (3.5)
1009W-A1-D	**1009W-B3-D**	200 to 1400 (13.8 to 96.5)	75 (5.2)

*Deadband 10-15% larger when using 316 SS diaphragm.
Note: To order, change A1 to B2 for 316 SS diaphragm and pressure chamber.
Example: 1003W-B2-D. Values shown are for mid-scale.

SERIES 1000E | MERCOID® BY DWYER

EXPLOSION-PROOF DIAPHRAGM OPERATED PRESSURE SWITCH

Visible Set point, Fixed Deadband, Pressure Ranges to 1400 psi



The **Series 1000E Explosion-Proof Diaphragm Operated Pressure Switch** has the same rugged construction as used in Series 1000W plus explosion-proof design are combined in this new unit. UL listed for Class I, Groups A, B, C & D; Class II, Groups E, F & G. Bellville spring movement permits mounting of control in any position and helps prevent contact chatter. High over-pressure protection and vibration resistance are also featured.

FEATURES/BENEFITS
- Weatherproof housing is ideal for a wide variety of applications where dust or water is present
- Spring movement design provides for control in any mounting position and prevents contact chatter reducing false or inconsistent switching
- UL listed to support rigorous process applications and regulations

APPLICATIONS
- Chemical, petroleum, food and drug processing industries
- Process and industrial applications

SPECIFICATIONS

Wetted Materials: See pressure chamber and diaphragm material in model chart.
Temperature Limits: -30 to 170°F (-35 to 77°C).
Pressure Limit: 3000 psig (206.8 bar).
Enclosure Rating: Explosion-proof, UL listed for Class I, Groups A, B, C and D; Class II, Groups E, F, and G.
Switch Type: SPDT snap switch. Hermetically sealed optional.
Electrical Rating: 15 A @ 125/250/480 VAC res., 0.5 A @ 125 VDC, 0.25 A @ 250 VDC.
Wiring Connections: 18 AWG, 18″ (460 mm) color-coded leads: N.O. (yellow), N.C. (black), and common (red).
Conduit Connection: 1/2″ male NPT.
Process Connection: 1/4″ female NPT.
Mounting Orientation: Any position.
Set Point Adjustment: Internal thumbwheel.
Weight: 3 lb (1.4 kg).
Deadband: See model chart.
Agency Approvals: CE, UL.

MODEL CHART

Aluminum Pressure Chamber Polyamide Diaph. Model	316 SS Pressure Chamber FEP Diaph. Model	Adjustable Operating Range psig (bar)	Approx.* Deadband (Fixed) psig (bar)
1003E-A1-J	**1003E-B3-J**	5 to 40 (.48 to 2.8)	2.5 (.17)
1004E-A1-J	**1004E-B3-J**	10 to 70 (.69 to 4.8)	5 (.34)
1005E-A1-J	**1005E-B3-J**	25 to 200 (1.7 to 13.8)	10 (.69)
1006E-A1-J	**1006E-B3-J**	50 to 350 (3.5 to 24.1)	18 (1.2)
1007E-A1-J	**1007E-B3-J**	75 to 550 (5.2 to 37.9)	36 (2.5)
1008E-A1-J	**1008E-B3-J**	100 to 900 (6.9 to 62.1)	60 (4.1)
1009E-A1-J	**1009E-B3-J**	200 to 1400 (13.8 to 96.5)	90 (6.2)

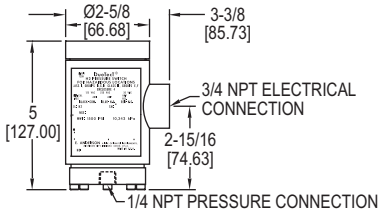
*Deadband 10-15% larger when using 316 SS diaphragm.
Note: To order, change A1 to B2 for 316 SS diaphragm and pressure chamber.
Example: 1003E-B2-J. Values shown are for mid-scale.

Dwyer

SERIES H2 | W. E. ANDERSON™ BY DWYER

DUAL-ACTION EXPLOSION-PROOF PRESSURE SWITCH

Explosion-proof and Weatherproof Enclosure



Explosion-Proof, UL & CSA Listed for Class I, Groups B, C & D and Class II, Groups E, F & G. The **Series H2 Dual-Action Explosion-Proof Pressure Switch** is designed for sequencing two different actions as pressure of a liquid or gas increases or decreases. The design consists of two concentric pistons operated by a single diaphragm with one pressure chamber. Each piston actuates a separate switch independent of the other. The switches may be adjusted to operate together, at opposite ends of the range or at two intermediate set points. The threaded top is removed to field adjust or service switches without disturbing electrical or pressure connections. The Duotect® switch is explosion-proof and weatherproof. It can be mounted in any position and is not affected by vibration.

FEATURES/BENEFITS
- Explosion-proof and weather-proof housing provides device protection for outdoor use or harsh environment operation
- UL listed, CSA approved to support rigorous process applications and regulations
- Independent piston action design for either gas or liquid allows switches to active together or independently based on settings
- Mounting in any position and not affected by vibration provides reliable switching for equipment

APPLICATIONS
- Mechanical HVAC or process equipment
- Chemical, petroleum, food and drug processing industries
- Process and Industrial applications

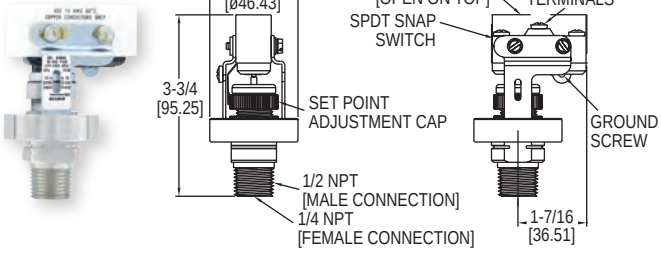
SPECIFICATIONS	
Wetted Materials: 316 SS chamber with FEP diaphragm and Buna-N O-ring standard. Fluoroelastomer or EPDM O-ring optional. **Temperature Limit:** 275°F (135°C). CSA approved: -20 to 90°C (-4 to 184°F). **Pressure Limit:** 1500 psig (103 bar). **Enclosure Rating:** UL listed explosion-proof, Class I, Groups B, C, and D. Class II Groups E, F, and G. Meets NEMA 4X (IP66). CSA optional. Class I, Groups B, C & D. Class II, Groups E, F, & G -20°C ≤ Tamb ≤ 75°C T6 [optional -20°C ≤ Tamb ≤ 40°C T5] Type 4.	**Switch Type:** Two SPDT snap switches. **Electrical Rating:** 5 A @ 125/250 VAC. 5 A res., 3 A ind. @ 30 VDC. Gold contacts optional. **Electrical Connections:** 18 AWG, 18″ (460 mm) long. **Conduit Connection:** 3/4″ female NPT. **Process Connection:** 1/4″ female NPT. **Mounting Orientation:** Any position. **Set Point Adjustment:** Internal nut. **Weight:** 2 lb (.9 kg). **Deadband:** Approximately 10% of range. **Agency Approvals:** CSA, UL.

MODEL CHART		
Model	**Low Range psig (bar)**	**High Range psig (bar)**
H2S-1	3 to 40 (0.21 to 2.76)	5 to 75 (0.35 to 5.17)
H2S-2	25 to 250 (1.72 to 17.2)	30 to 400 (2.07 to 27.6)
H2S-3	100 to 1000 (6.89 to 68.9)	150 to 1500 (10.3 to 103)

SERIES A1F | MERCOID® BY DWYER

OEM PRESSURE SWITCH

Field Adjustable with Weather-Proof Enclosure



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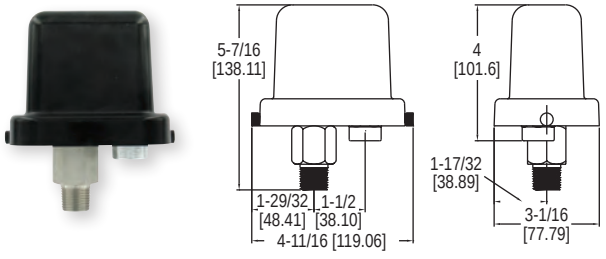


A1F with weatherproof enclosure

Low cost and precision made, the **Series A1F Low Cost OEM Pressure Switch** is ideal for OEM industrial applications. Wetted materials of 316 SS and fluorocarbon ensure great chemical compatibility with a wide range of process media. The open case style is perfect for panel mounting applications like pump skids. Weatherproof enclosure is available in polycarbonate offering a low cost weatherproof switch. Superior 15 A contact allows direct control of motors or pumps without the use of external relays, a true cost savings. Features include a convenient indicating scale for quick and easy field adjustment.

FEATURES/BENEFITS
- 15 A contact allows direct control reducing costs and reliability by having to introduce additional contacts and relays
- Case style allows use for panel mounting application with optional weather-proof enclosure for use in outdoor environments
- Field adjustable reduces installation time bring application on-line faster
- Wetted material provides support for wider range of process media

APPLICATIONS
- OEM
- Compressors
- Motor control
- Process equipment
- Pump control

SPECIFICATIONS
Service: Compatible liquids and gases. **Wetted Materials:** Pressure chamber: 316 SS; Diaphragm: Fluorocarbon. **Temperature Limit:** -40 to 175°F (-40 to 80°C). **Pressure Limits:** 500 psig (34 bar). **Enclosure Rating:** No rating for open construction. Installed properly within an optional weatherproof enclosure meets NEMA 4X (IP66) standards. **Switch Type:** SPDT snap switch. **Electrical Rating:** 15 A @ 120/240/480 VAC; 1/8 HP @ 125 VAC; 1/4 HP @ 250 VAC. **Electrical Connection:** Screw terminals. **Process Connection:** 1/4″ female NPT and 1/2″ male NPT. **Mounting Orientation:** Within 20° of vertical. **Set Point Adjustment:** Knurled screw cap with indicating scale. **Deadband:** Fixed. See deadband chart. **Weight:** 10.5 oz (297 g). **Agency Approvals:** cULus.

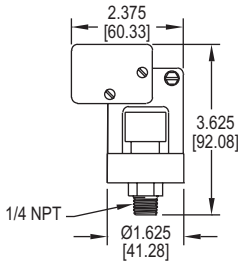
MODEL CHART			
Model	**Range psg (bar)**	**Deadband at Min. Range psg (bar)**	**Deadband at Max. Range psg (bar)**
A1F-O-SS-1-1	2 to 15 (0.14 to 1.03)	2 (0.14)	3 (0.21)
A1F-O-SS-1-2	4 to 75 (0.28 to 5.17)	4 (0.27)	15 (1.0)
A1F-O-SS-1-3	8 to 225 (0.55 to 15.5)	8 (0.55)	25 (1.7)
A1F-O-SS-1-4	16 to 450 (1.1 to 31.0)	15 (1.0)	50 (3.5)
Note: Optional enclosure factory installed. To order, change O to PC.			
Example: A1F-PC-SS-1-1			

Dwyer

SERIES A1PS/A1VS

ECONOMICAL PRESSURE SWITCH

Vacuum and Compound Ranges Available, Adjustable Set Point



The **Series A1PS/A1VS Economical Pressure Switch** is designed with a 15 Amp SPDT switch for direct control of pumps and motors. Available in pressure, vacuum, or compound ranges, the switches offer a field adjustable set point. Easily adjust the switch by aligning the top of the self locking adjusting nut with the desired setting indicated on the adjacent range scale. Connection is 1/4″ male NPT for quick installation and can be mounted in any position.

FEATURES/BENEFITS
- 15 A contact allows direct control reducing costs and reliability by having to introduce additional contacts and relays
- Field adjustable reduces installation time bring application on-line faster

APPLICATIONS
- OEM
- Compressors
- Process equipment
- Motor control
- Pump control

SPECIFICATIONS

Service: Compatible liquids or gases.
Wetted Materials: Diaphragm: Buna-N; Body with fitting: Zinc alloy, chromate finish.
Temperature Limits: -31 to 185°F (-35 to 85°C).
Pressure Limits: 600 psig.
Vacuum Limits: 29.9″ Hg (vacuum and compound models only).
Switch Type: SPDT snap action.
Electrical Ratings: 15 A (resistive) @ 250 VAC, 1/2 HP @ 250 VAC.
Electrical Connections: Three screw terminals.
Process Connection: 1/4″ male NPT.
Set Point: Field adjustable via knurled screw cap.
Cycling: Not to exceed 1 Hz.
Sensor Element: Diaphragm.
Weight: 7.4 oz (209 g).
Agency Approvals: UL.

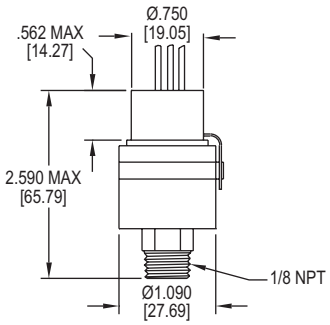
MODEL CHART

Model	Set Point Range (kPa)	Repeatability (kPa)	Deadband (approx.) (kPa)	Model	Set Point Range (kPa)	Repeatability (kPa)	Deadband (approx.) (kPa)
A1PS-14	1.5 to 3.5 psi (10 to 24)	±0.15 psi (1)	0.5 to 1.7 psi (3 to 11)	**A1VS-14**	6-28″ Hg (-20 to -94)	±1.2″ Hg (-4)	3-14″ Hg (-10 to -47)
A1PS-24	3 to 40 psi (21 to 276)	±1.0 psi (7)	2 to 5 psi (14 to 34)	**A1VS-24**	28″ Hg to 3.5 psig (-94 to 24)	±1.2″ Hg (-4), ±0.15 psi (1)	6″ Hg - 1.5 psi (-20 to 10)
A1PS-34	30 to 150 psi (207 to 1034)	±5.0 psi (34)	5 to 30 psi (34 to 207)				
A1PS-44	100 to 500 psi (689 to 3445)	±20.0 psi (138)	30 to 120 psi (207 to 827)				

SERIES APS/AVS

ADJUSTABLE PRESSURE SWITCH

Vacuum and Pressure Ranges, 5 A Switch, Compact Size



Miniature **Series APS/AVS Adjustable Pressure Switch** offers reliable switching for pressure/vacuum alarm, shutdown or control. The units are readily adjustable throughout their range using the locking adjusting ring and indicating pointer. The body is constructed of stainless steel for durability in harsh environments. Switches include 12″ (30 cm) wire leads sealed with epoxy for additional protection.

FEATURES/BENEFITS
- Field adjustable with simple indicating pointer reduces installation time bring application on-line faster
- Stainless steel construction provides a durable solution in harsh environments

APPLICATIONS
- OEM
- Process equipment
- Compressors
- Motor control
- Pump control

SPECIFICATIONS

Service: Compatible liquids or gases.
Wetted Materials: Capsule: 17-7 PH SS; Fitting: 303 SS.
Temperature Limits: -65 to 225°F (-54 to 107°C), a set point change of up to 2% when used below -10°F (-23°C) or above 125°F (52°C).
Pressure/Vacuum Limits: 150% of range.
Switch Type: SPDT snap action.
Electrical Ratings: 5 A @ 250 VAC, 3 A @ 28 VDC.
Electrical Connections: 3-wire, 20 AWG insulated with PVC, 12″ (30 cm) length.
Process Connection: 1/8″ male NPT.
Set Point: Field adjustable.
Cycling: Not to exceed 20 CPM.
Sensor Element: Capsule.
Weight: 3 oz (85 g).
Agency Approvals: UR.

MODEL CHART

Model	Set Point Range psi (bar)		Repeatability psi (bar)	Deadband psi (bar)	Model	Set Point Range ″Hg (cm Hg) VAC		Repeatability ″Hg (cm Hg)
	Decreasing	Increasing				Decreasing	Increasing	
APS-150	0.8 to 28.5 (.06 to 2.0)	1.6 to 30.0 (.11 to 2.1)	±0.6 (.04)	0.8 to 1.3 (.06 to .09)	**AVS-150**	1.6 to 27.1 (4.1 to 68.6)	2.7 to 28.2 (6.9 to 71.6)	±1.2 (3.1)
APS-250	2.0 to 48.0 (.14 to 3.3)	3.0 to 50.0 (.21 to 3.5)	±1.0 (0.7)	1 to 1.7 (.07 to .12)				
APS-350	3.0 to 96.5 (.21 to 6.7)	4.5 to 100 (.31 to 6.9)	±2.0 (.14)	1.6 to 4 (.11 to .28)	**AVS-250**	4.0 to 24.8 (10.2 to 63.0)	5.1 to 28.2 (13.0 to 71.6)	±2.0 (5.1)
APS-450	7.5 to 242 (.52 to 16.7)	9.7 to 250 (.67 to 17.2)	±5.0 (.35)	2.5 to 9 (.17 to .62)				
APS-550	15.0 to 485 (1.0 to 33.4)	20.0 to 500 (1.4 to 34.5)	±10.0 (.69)	5 to 22 (.35 to 1.5)	**AVS-350**	6.0 to 21.5 (15.2 to 54.6)	8.4 to 28.2 (21.3 to 71.6)	±4.0 (10.2)

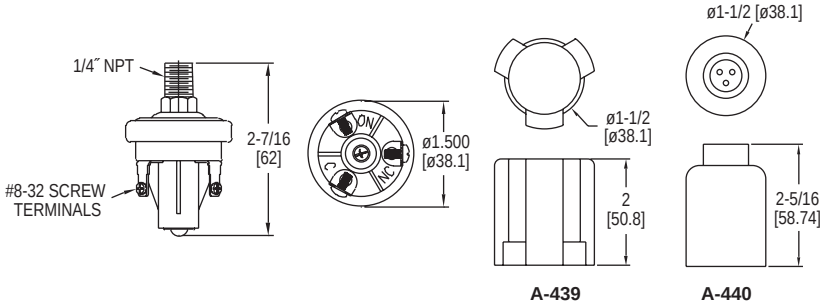
Dwyer

SERIES A6 | MERCOID® BY DWYER

DURABLE PRESSURE SWITCHES

Designed for Extended Duty, Simple and Reliable

A-439 A-440



A-439 A-440

Series A6 Durable Pressure Switches have been specifically designed to stand up to extended duty applications. These switches are constructed with a polyimide film diaphragm and are compatible with a variety of fluids. For ease of installation, the switches come with a 1/4˝ male NPT process connection and can be mounted in any orientation. The Series A6 pressure switches are compact and have great set point integrity, and feature simple, easy set point field adjustment.

FEATURES/BENEFITS
- High switch cycle means long life for extended duty applications
- Mounting in any position and feature simple makes a reliable switching for equipment and OEM applications

APPLICATIONS
- OEM
- Process equipment
- Process applications

MODEL CHART

Model	Set Point Range psi (bar)	
	NC	NO
A6-153221	0.5 to 1 (0.03 to 0.07)	1.1 to 3.1 (0.08 to 0.21)
A6-253221	1.1 to 3 (0.08 to 0.21)	2.27 to 6.05 (0.16 to 0.42)
A6-353221	3.1 to 7 (0.21 to 0.48)	4.22 to 10.75 (0.29 to 0.74)
A6-453221	8 to 13 (0.55 to 0.90)	12.3 to 17.5 (0.85 to 1.21)
A6-553221	14 to 24 (0.97 to 1.66)	18.6 to 31.8 (1.28 to 2.19)
A6-653221	25 to 50 (1.73 to 3.45)	33.1 to 61 (2.28 to 4.21)
A6-753221	51 to 90 (3.52 to 6.21)	65.6 to 112.3 (4.53 to 7.75)
A6-853221	91 to 150 (6.28 to 10.35)	114.7 to 198.3 (7.94 to 13.68)

SPECIFICATIONS

Service: Air, motor oils, transmission oils, jet fuels, and similar hydrocarbon media. (Not for water use)
Wetted Materials: Base: 304 SS; Diaphragm: Polyamide film.
Temperature Limits: -40 to 248°F (-40 to 120°C).
Pressure Limits: Operating pressure: 150 psi (10.3 bar) for 0.5-24 psi set point ranges, 250 psi (17.2 bar) for 25 to150 psi set point ranges; Proof pressure: 500 psi (34.5 bar); Burst pressure: 750 psi (51.7 bar) for 0.5-24 psi set point ranges, 1250 psi (86.2 bar) for 25-150 psi set point ranges.
Enclosure Rating: General purpose or with cover: IP65 - weatherproof.
Repeatability: ±10% of set point.
Set Point Tolerance: ±15% of range.
Switch Type: 1 SPST NO, 1 SPST NC. NO and NC switch independent from each other.
Electrical Ratings: Resistive: 15 A @ 6 VDC, 8 A @ 12 VDC, 4 A @ 24 VDC; Inductive: 1 A @ 120 VAC, 0.5 A @ 240 VAC.
Electrical Connections: #8-32 screw terminals.
Process Connection: 1/4˝ NPT male.
Mounting Orientation: Switch can be installed in any position.
Set point Adjustment: Screw.
Weight: 0.13 lb (0.06 kg).

ACCESSORIES

Model	Description
A-439	Weatherproof IP65 cover
A-440	Weatherproof IP65 with fly-wire holes

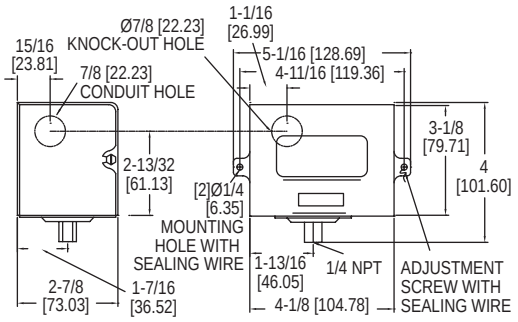
USA: California Proposition 65
⚠WARNING: Cancer and Reproductive Harm - www.P65Warnings.ca.gov

SERIES AP | MERCOID® BY DWYER

FM APPROVED UL LISTED

DIAPHRAGM OPERATED PRESSURE SWITCH

Visible Set point Adjustment, Compact



Reliable and convenient, the **Series AP Diaphragm Operated Pressure Switch** is a compact switch for instrument air or other low pressure applications. Visible set point and external adjustment add convenience. Used on air, non-corrosive gas or liquid service compatible with wetted parts. Units are available in weather-proof and explosion-proof housing.

FEATURES/BENEFITS
- Explosion-proof and weatherproof housing provides device protection for outdoor use or harsh environment operation
- External switch set point adjustment reduces set-up time

APPLICATIONS
- Low pressure applications
- Instrument air

SPECIFICATIONS

Wetted Materials: Nylon reinforced Buna-N and steel. PTFE and 316 SS optional.
Temperature Limits: -30 to 150°F (-35 to 66°C).
Pressure Limit: See model chart.
Enclosure Rating: General purpose. Weatherproof and explosion-proof optional.
Switch Type: SPDT mercury switch or SPDT snap switch. Other switch types available.
Electrical Rating: Mercury switch: 4 A @ 120 VAC/DC, 2 A @ 240 VAC/DC; Snap switch: 15 A @ 120 VAC, 8 A @ 240 VAC, 0.5 A @ 120 VDC, 0.25 A @ 240 VDC.
Electrical Connections: Screw terminal.
Conduit Connection: 7/8˝ (22.23 mm) hole for 1/2˝ (12.7 mm) conduit hub.
Process Connection: 1/4˝ female NPT.
Mounting Orientation: Vertical for mercury switch models, any position for snap switch models.
Set Point Adjustment: External screw.
Weight: General purpose: 2 lb (0.9 kg).
Deadband: See model chart.
Agency Approvals: FM, UL. For FM consult factory.

MODEL CHART

Model	Switch* Type SPDT	Ranges	Switch Deadband		Max. Press. psig(bar)
			Low	High	
AP-153-33	Mercury	10 in VAC to 50 in w.c. (2.5 to 12.4 kPa)	5 in w.c. (1.2 kPa)	6 in w.c. (1.49 kPa)	15 (1.03)
AP-153-37	Mercury	1 to 30 psig (.07 to 2.1 bar)	0.4 psig (0.03 bar)	0.75 psig (0.05 bar)	60 (4.14)
AP-153-39	Mercury	10 to 125 psig (.69 to 8.6 bar)	2 psig (0.14 bar)	6 psig (0.04 bar)	160 (11.0)
AP-7021-153-33	Snap	10 in VAC to 50 in w.c. (2.5 to 12.4 kPa)	8 in w.c. (2.0 kPa)	10 in w.c. (2.49 kPa)	15 (1.03)
AP-7021-153-37	Snap	1 to 30 psig (.07 to 2.1 bar)	0.75 psig (0.05 bar)	1.5 psig (0.10 bar)	60 (4.14)
AP-7021-153-39	Snap	10 to 125 psig (.69 to 8.6 bar)	3 psig (0.21 bar)	7 psig (0.48 bar)	160 (11.0)

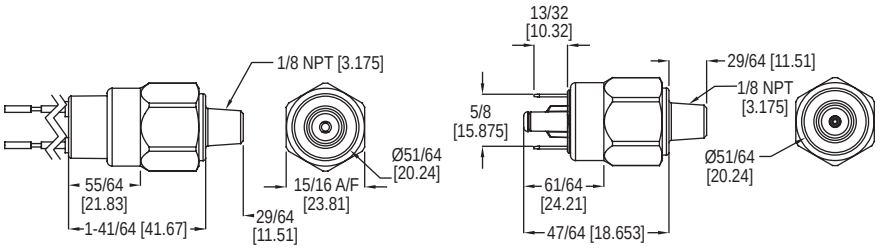
*Mercury switch units are not CE approved.

Dwyer

SERIES A2

SUBMINIATURE PRESSURE SWITCH

Field Adjustable



Designed for OEM applications, the **Series A2 Subminiature Pressure Switch** is economical and is equipped with high proof pressure capabilities for demanding applications. The A2 is available with either spade terminals or flying leads (submersible). Switches with spade terminals can be easily adjusted in the field.

FEATURES/BENEFITS
- High-proof pressure to meet application demands
- Easy adjustment reduces installation and service times

APPLICATIONS
- OEM

SPECIFICATIONS

Service: Compatible liquids and gases.
Wetted Materials: Polyamide film and brass.
Temperature Limits: -40 to 230°F (-40 to 110°C).
Pressure Limits: 350 psi (24 bar).
Enclosure Rating: IP69 (flying lead models only).
Repeatability: ±3% of highest set point at 70°F (21°C).
Switch Type: SPST, 100 VA, 42 VDC.
Electrical Connection: 1/4″ (6.3 mm) spade terminals or flying leads.
Process Connection: 1/8″ male NPT, or 1/4″ male NPT.
Weight: 0.15 lb (0.07 kg).
Deadband: <10% of actuation point.
Agency Approvals: CE.

MODEL CHART

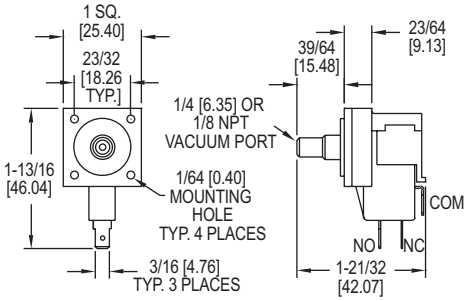
Model	Range psi (bar)	Electrical Connection	NO/NC	Model	Range psi (bar)	Electrical Connection	NO/NC
A2-5801	2 to 20 (0.14 to 1.4)	Spade terminals	NO	**A2-6811**	15 to 100 (1.03 to 6.9)	Spade terminals	NC
A2-5803	2 to 20 (0.14 to 1.4)	Flying leads	NO	**A2-6813**	15 to 100 (1.03 to 6.9)	Flying leads	NC
A2-5811	2 to 20 (0.14 to 1.4)	Spade terminals	NC	**A2-7801**	50 to 150 (3.5 to 10.3)	Spade terminals	NO
A2-5813	2 to 20 (0.14 to 1.4)	Flying leads	NC	**A2-7803**	50 to 150 (3.5 to 10.3)	Flying leads	NO
A2-6801	15 to 100 (1.03 to 6.9)	Spade terminals	NO	**A2-7811**	50 to 150 (3.5 to 10.3)	Spade terminals	NC
A2-6803	15 to 100 (1.03 to 6.9)	Flying leads	NO	**A2-7813**	50 to 150 (3.5 to 10.3)	Flying leads	NC

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

SERIES MVS

MINIATURE VACUUM SWITCH

SPDT N/O or N/C Switch, Adjustable Set Point, Ideal for OEM's



Compact, lightweight, and adjustable, the **Series MVS Miniature Vacuum Switch** is specially designed for OEM applications. This low cost switch has a minimum life expectancy of 10 million cycles and has an extremely fast response time. Typical applications for the MVS are HVAC, home appliance, dairy systems, medical, office equipment, and pump control.

FEATURES/BENEFITS
- High switch cycle means long life for extended duty applications

APPLICATIONS
- OEM
- HVAC applications
- Medical equipment
- Dairy equipment
- Pump control

SPECIFICATIONS

Service: Air or compatible fluids.
Wetted Materials: Enclosure: Polycarbonate; Diaphragm: Polyurethane.
Temperature Limits: 40 to 150°F (4 to 66°C).
Pressure Limits: Up to maximum range.
Repeatability: ±20%.
Switch Type: SPDT normally open or normally closed.
Electrical Rating: Range 3 to 8 in w.c.: 3 A, 125/250 VAC; Range 9 to 80 in w.c.: 10 A, 125/250 VAC; Range 81 to 330 in w.c.: 15 A, 125/250 VAC.
Contacts: Silver with brass terminals.
Electrical Connections: Terminals 0.187″ x 0.20″ spade for use with quick disconnects.
Process Connections: Models MVS 1 to MVS 3: Smooth port 0.25″ diameter; Models MVS 4 to MVS 6: 1/8″ male NPT.
Mounting: Use #2 screws through eyelets.
Weight: Less than 0.671 oz (19 g.)
Agency Approvals: cULus.

MODEL CHART

Model	Set Point in H_2O (mbar)	
	Minimum	Maximum
MVS-1	3 (8)	8 (20)
MVS-2	9 (21)	80 (199)
MVS-3	81 (200)	330 (822)
MVS-4*	3 (8)	8 (20)
MVS-5*	9 (21)	80 (199)
MVS-6*	81 (200)	330 (822)

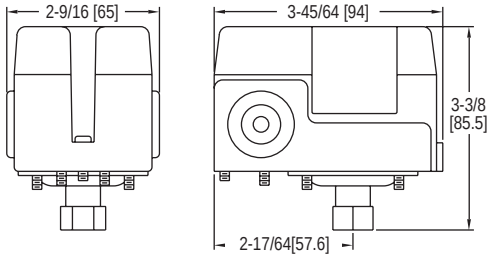
*Models have 1/8″ male NPT process connections

Dwyer

SERIES CXA | MERCOID® BY DWYER

WATER PUMP PRESSURE SWITCH

Simple, Reliable, Adjustable Set Point and Deadband



The **Series CXA Water Pump Pressure Switch** has been proven reliable for controlling automatic water systems. These switches are very popular for use on water well pumps and pumping systems. The set point and dead-band are both easily adjustable via screws inside the cover. For ease of installation, the switches come with a 1/4″ female NPT process connection and can be mounted in any orientation. The series CXA's simple design makes it a great switch for an installer at any skill level.

FEATURES/BENEFITS
- The set point and deadband are both easily adjustable reducing time to install and operation
- Mounting in any position and feature simple makes a reliable switch that can be installed by any skill level

APPLICATIONS
- Electric water pumps
- Water system applications
- Well pumps
- Pumping systems

SPECIFICATIONS

Service: Compatible liquids and gases.
Wetted Materials: Silicone, steel, and SS.
Temperature Limits: 140°F (60°C).
Pressure Limits: See model chart.
Enclosure Rating: General purpose.
Repeatability: ±5 psig (±0.3 bar).
Switch Type: DPST snap action (see model chart).
Electrical Ratings: 20 A @ 120 VAC, 12 A @ 240 VAC, 9.6 A @ 240 VAC (3 phase), 8.6 A @ 32 VDC, 3.1 A @ 120 VDC, 1.6 A @ 240 VDC.
Electrical Connections: Screw terminal.
Conduit Connection: 7/8″ hole for 1/2″ conduit hub (2 places).
Process Connection: 1/4″ female NPT.
Mounting Orientation: Switch can be installed in any position.
Set Point Adjustment: Internal screws.
Weight: 0.75 lb (0.34 kg).
Deadband: See model chart.

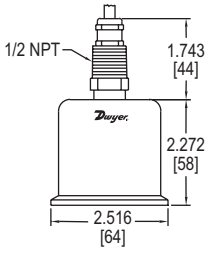
MODEL CHART

Model	Switch Type	Range psig (bar)	Approx. Adjustable Deadband psig (bar)	Max. Pressure psig (bar)
CXA-S1	NC	15 to 80 (1.0 to 5.5)	15 to 30 (1.0 to 2.1)	129 (8.9)
CXA-S2	NC	30 to 100 (2.1 to 6.9)	20 to 35 (1.4 to 2.4)	179 (12.3)
CXA-S3	NC	35 to 150 (2.4 to 10.3)	30 to 40 (2.1 to 2.8)	204 (14.1)
CXA-R1	NO	15 to 80 (1.0 to 5.5)	15 to 30 (1.0 to 2.1)	129 (8.9)
CXA-R2	NO	30 to 100 (2.1 to 6.9)	20 to 35 (1.4 to 2.4)	179 (12.3)
CXA-R3	NO	35 to 150 (2.4 to 10.3)	30 to 40 (2.1 to 2.8)	204 (14.1)

SERIES 681

SANITARY PRESSURE TRANSMITTER

No Liquid Fill Diaphragm, Sanitary Clamp Fitting



The **Series 681 Sanitary Pressure Transmitter** is designed to meet 3A standards for applications in food, dairy, beverage and pharmaceutical processing, liquid level control, and sanitary pipelines. The unit is fully sealed to withstand high pressure wash-down in Clean-in-Place (CIP) and Sterilize-in-Place (SIP) installations. The Series 681 is designed with a unique, no liquid fill diaphragm and a sanitary clamp pressure fitting for easy installation with negligible clamping effect. A conduit fitting, shielded cable with vent tube and sealed screws for zero and span adjustment combine to make the Series 681 completely watertight.

FEATURES/BENEFITS
- Fully sealed to withstand Clean-in-Place and Sterilize-in-Place installations supports regulatory conditions for sanitary processes
- Sanitary clamp fitting makes for easy installation

APPLICATIONS
- Sanitary process applications
- Food and beverage processing
- Water processing
- Dairy processing
- Pharmaceutical processing

SPECIFICATIONS

Service: Compatible liquids and gases.
Wetted Parts: 316L SS.
Accuracy: ±.20% FS (includes non-linearity, hysteresis and non-repeatability).
Temperature Limits: -40 to 260°F (-40 to 125°C) 10 to 90% RH, non-condensing.
Pressure Limits: See table.
Compensated Temperature Range: 20 to 180°F (-7 to 80°C).
Thermal Effect: Zero and span shift: ±2.0% FS/100°F.
Power Requirements: 9-30 VDC.
Output Signal: 4-20 mA, 2-wire.
Zero and Span Adjustment: ±0.5 mA, non-interactive.
Response Time: ≤ 10 ms.
Loop Resistance: 800 Ω.
Electrical Connections: 1/2″ conduit fitting and strain relief with 15 ft (4.5 m) cable.
Process Connection: 2″ or 1-1/2″ sanitary clamp fitting male NPT.
Clamping Effect: Zero and span shift: ±0.15% FS for ranges up to 30 psi; ±0.25% FS for ranges >30 psi.
Weight: 8 oz (227 g).

MODEL CHART

Model	Range	Overpressure	Sanitary Clamp Connection
681-02	0 to 1 psi	50 psi	2″
681-12	0 to 2 psi	100 psi	2″
681-42	0 to 15 psi	150 psi	2″
681-52	0 to 30 psi	150 psi	2″
681-62	0 to 60 psi	180 psi	2″

OPTIONS

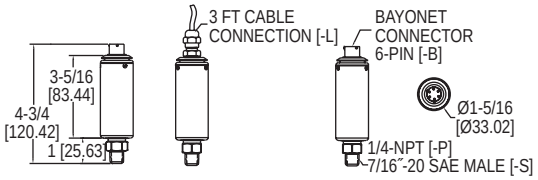
Use order code:	Description
NISTCAL-PT1	NIST traceable calibration certificate for pressure transmitters

Dwyer

SERIES 644

HIGH ACCURACY PRESSURE TRANSMITTER

±0.05% FS, <±0.25% FS Total Error Band



The **Series 644 High Accuracy Pressure Transmitter** is a robust transmitter designed for high accuracy pressure applications. Boasting an accuracy of ±0.05% FS RSS (<±0.25% TEB), the 644 is intended for precise measurements in the critical applications.

FEATURES/BENEFITS
- High accuracy provides exceptional measurement for insuring tight-control and minimizing costly out of specification conditions
- NIST calibrated to provide traceability for regulated processes where production and documentation is monitored
- Low thermal error over a wide range of temperatures helps to insure accurate pressure measurement and process operation

MODEL CHART						
Example	**644**	**-L**	**-V**	**-00**	**-P**	**644-L-V-00-P**
Series	644					Industrial pressure transmitter
Electrical Connection		L B				3 ft cable Male 6-pin bayonet
Signal Output			V C			0-10 V 4-20 mA
Range				00 01 02 03 04 05 06 07 08 09 10 11		0 to -14.7 psig 0 to 15 psig 0 to 25 psig 0 to 50 psig 0 to 100 psig 0 to 150 psig 0 to 200 psig 0 to 300 psig 0 to 500 psig 0 to 750 psig 0 to 1000 psig 0 to 15 psia
Process Connection					P S	1/4˝ male NPT 7/16˝-20 SAE male

SPECIFICATIONS	
Service: Compatible gases and liquids. **Wetted Materials:** 17- 4 PH SS. **Accuracy:** ±0.05% FS RSS. **Total Error Band (Includes all thermal effects):** <±0.25% FS over entire temperature compensated range. **Stability:** < 0.15% FS/year. **Temperature Limits:** -40 to 185°F (-40 to 85°C). **Pressure Limits:** Proof pressure and burst pressure: See pressure limits table below. **Compensated Temperature Range:** -4 to 140°F (-20 to 60°C). **Power Requirements:** 9-30 VDC for current output; 15-30 VDC for voltage output.	**Minimum Supply Voltage:** Min. supply voltage (VDC) for current output = 9 + 0.02 x loop resistance Ω (loop resistance Ω = line resistance + receiver resistance). **Output Signal:** 0-10 VDC (4-wire); 4-20 mA (2-wire). **Response Time:** < 10 ms (voltage output), < 80 ms (current output). **Max Current Consumption:** 4-20 mA: 22 mA; 0-10 VDC: 20 mA. **Electrical Connections:** 3 ft cable or 6-pin male bayonet connector. **Process Connection:** 1/4˝ male NPT or 7/16˝-20 male SAE with O-ring. **Enclosure Rating:** NEMA 4X (IP65). **Mounting Orientation:** Vertical. **Weight:** 9 oz (254 g). **Agency Approvals:** CE.

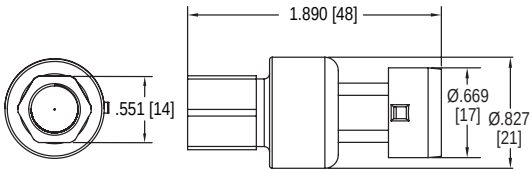
APPLICATIONS
- Calibration equipment
- Hydraulic/pneumatic controls
- Test benches
- Transportation
- Pulp and paper mills
- Power generation

ACCESSORIES	
Model	**Description**
A-495	6-pin female bayonet mate connector

SERIES 638R

OEM PRESSURE TRANSMITTER

Excellent Pressure Surge Resistance, Fast Response



The **Series 638R OEM Pressure Transmitter** is a high-accuracy, low-cost pressure transmitter designed for industrial equipment markets. This transmitter is designed to work with all liquids and gases that are compatible with the wetted materials. The series features a number of configurable options including wetted materials, process connections, and pressure ranges. Whether the application involves aggressive fluids or extreme temperatures, this transmitter is a great option for most applications.

FEATURES/BENEFITS
- High-accuracy pressure transmitter with a fast response time and excellent pressure surge protection
- Suitable for use in applications with extreme temperatures and aggressive fluids
- Highly configurable cost-effective transmitter with a compact design

APPLICATIONS
- HVAC equipment
- Refrigeration equipment
- Refrigerant recovery
- Leak detection systems
- Building pressurization
- Isolated diaphragm packages
- Closed loop hydraulics
- Paint and agriculture spraying

SPECIFICATIONS	
Service: Compatible gases and liquids. **Wetted/Housing Materials:** Brass, aluminum, or 316 SS. **Accuracy:** ±1.2% FS (includes linearity, hysteresis, repeatability and calibration); Static error band @ 25°C, 5.0 VDC supply voltage. **Cycle Life:** 10 million FS cycles. **Storage Temperature:** -40 to 302°F (-40 to 150°C). **Operating Temperature:** -40 to 275°F (-40 to 135°C). **Pressure Limit:** see model chart. **Thermal Effect:** ± 0.013% FS/°C. **Power Supply:** 5 VDC.	**Output Signal:** 0.5-4.5 VDC ratiometric. **Response Time:** 10 ms typical. **Output Load:** 20 k Ω min. (pull-up or pull-down). **Current Consumption:** < 10 mA @ 5.5 VDC (8.5 mA typical). **Electrical Connection:** Packard connection. **Process Connection:** 7/16˝ 20 UNF (female) or 1/4˝ NPT (female). **Enclosure Rating:** IP67 (with IP67 plug). **Mounting Orientation:** Mount in any position. **Weight:** 1.1 oz (30 g). **Agency Approvals:** CE.

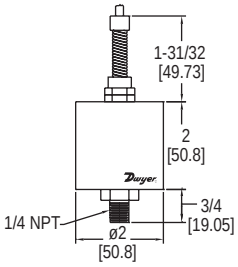
MODEL CHART							
Example	**638R**	**-00**	**-P2**	**-E1**	**-S2**	**-SS**	**638R-00-P2-E1-S1-SS**
Series	638R						OEM pressure transmitter
Pressure Range		00 01 02 03 04 05 06					0 to 75 psia (0 to 5.2 bar(a)) 0 to 150 psia (0 to 10.3 bar(a)) 0 to 200 psia (0 to 13.8 bar(a)) 14.5 to 265 psia (1 to 18.3 bar) 14.5 to 315 psia (1 to 21.7 bar(a)) 14.5 to 515 psia (1 to 35.5 bar(a)) 14.5 to 667 psia (1 to 46 bar(a))
Process Connection			P1 P2				7/16˝ 20 UNF (female) 1/4˝ NPT (female)
Electrical Connection				E1			Packard connection
Electrical Output					S2		0.5-4.5 V ratiometric
Housing Material						AL BR SS	Aluminum Brass 316L SS

Dwyer

SERIES 682

INDUSTRIAL PRESSURE TRANSMITTER

±0.13% FS Accuracy, External Adjustments, 4-20 mA Output



The **Series 682 Industrial Pressure Transmitter** is designed to withstand environmental effects such as shock, vibration, temperature, and EMI/RFI. The electronics and capacitive sensor are packaged in a welded stainless steel housing and meets NEMA 4 (IP65) protection ratings.

FEATURES/BENEFITS
- Weather-proof welded housing provides device protection for outdoor use or harsh environment operation
- Not affected by environmental effects such as temperature, shock, vibration, and EMI/RFI provides reliable switching for equipment
- External span and zero adjustments reduce installation and service time

APPLICATIONS
- Off-road equipment
- Compressor control
- Industrial refrigeration
- Hydraulic systems
- Industrial engines

SPECIFICATIONS	
Service: Compatible liquids and gases. **Wetted Parts:** 17-4 PH SS. **Accuracy:** ±.13% FS (includes non-linearity, hysteresis and non-repeatability). **Temperature Limits:** -40 to 260°F (-40 to 125°C) 10 to 90% RH, non-condensing. **Pressure Limit:** See table. **Compensated Temperature Range:** -4 to 176°F (-20 to 80°C). **Thermal Effect: Zero shift:** 1.0% FS/100°F span shift: ±1.5% FS/100°F.	**Power Requirements:** 9-30 VDC. **Output Signal:** 4-20 mA, 2-wire. **Zero and Span Adjustment:** ±0.5 mA, non-interactive. **Response Time:** 5 ms. **Loop Resistance:** 800 Ω. **Electrical Connections:** 2 ft (51 cm) multiconductor cable. **Process Connection:** 1/4˝ male NPT. **Weight:** 8 oz (227 g). **Shock:** 200 g operating. **Vibration:** 20 g 50-2000 Hz.

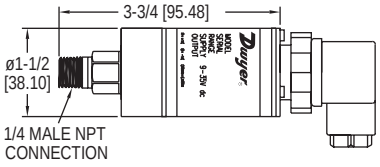
MODEL CHART					
Model*	**Range**	**Overpressure**	**Model***	**Range**	**Overpressure**
682-1	0 to 50 psi	150 psi	**682-3**	0 to 250 psi	500 psi
682-2	0 to 100 psi	300 psi	**682-4**	0 to 500 psi	1000 psi
*Units calibrated in bar also available. Consult factory.					

OPTIONS	
Use order code:	**Description**
NISTCAL-PT1	NIST traceable calibration certificate

SERIES 672

LOW PRESSURE TRANSDUCER

Single Pressure Connection, Ranges down to 10 in w.c.



The **Series 672 Low Pressure Transducer** is a perfect solution to any The Series 672 Low Pressure Transducer is a perfect solution to any application where a very accurate low pressure transducer is necessary. Using variable capacitance technology, the Series 672 is designed to measure pressures as low as 10 in w.c. up to 400 in w.c., very low ranges for a single connection pressure transducer. The 672 also features a 0.25% FS accuracy. Use the Series 672 in liquid level, flood warning, waste water, clean room, and open channel flow applications.

FEATURES/BENEFITS
- Low range high accuracy provides precise control for process applications

APPLICATIONS
- Liquid level
- Flood warning
- Waste water
- Clean room
- Open flow applications

SPECIFICATIONS
Service: Compatible liquids and gases. **Wetted Materials:** 318 duplex SS, ceramic, fluoroelastomer (FKM). **Housing Material:** 318 stainless steel. **Accuracy:** ±0.25% FS (RSS). Includes non-linearity, hysteresis, and non-repeatability. **Stability:** 0.25% FS/1 year. **Temperature Limits:** -40 to 212°F (-40 to 100°C). **Compensated Temperature Limits:** -5 to 140°F (-20 to 60°C). **Pressure Limits:** 29 psi (2 bar) for up to 85 in w.c. (0.2 bar) ranges; 58 psi (4 bar) for 85 to 140 in w.c. (0.2 to 0.35 bar); 73 psi (5 bar) for 141 to 400 in w.c. (0.35 to 1 bar). **Thermal Effects:** Zero: 1.0%FS/100°F (2.0%FS/100°C); Span: 1.0%FS/100°F (2.0%FS/100°C). **Power Requirements:** 4-20 mA: 9-35 VDC; 0-5 VDC: 7.5-35 VDC. **Output Signal:** 4-20 mA (2-wire) or 0-5 VDC (3-wire). **Zero & Span Adjustment:** ±10% FS each (by potentiometer). **Response Time:** 5 ms. **Max Loop Resistance:** 1.325 kΩ. **Electrical Connections:** Large DIN 43650 connector with mating plug. **Process Connection:** 1/4˝-18 NPT male. **Enclosure Rating:** NEMA 4X (IP66). **Weight:** 11.6 oz (330 g).

MODEL CHART		
Model	**Operating Range**	**Output**
672-1-A	0 to 10 in w.c.	4-20 mA, 2-wire
672-2-A	0 to 15 in w.c.	4-20 mA, 2-wire
672-3-A	0 to 25 in w.c.	4-20 mA, 2-wire
672-4-A	0 to 50 in w.c.	4-20 mA, 2-wire
672-5-A	0 to 100 in w.c.	4-20 mA, 2-wire
672-6-A	0 to 150 in w.c.	4-20 mA, 2-wire
672-7-A	0 to 200 in w.c.	4-20 mA, 2-wire
672-8-A	0 to 300 in w.c.	4-20 mA, 2-wire
672-9-A	0 to 400 in w.c.	4-20 mA, 2-wire
Note: For voltage output models change -A to -V.		

OPTIONS	
Use order code:	**Description**
NISTCAL-PT1	NIST traceable calibration certificate

Dwyer

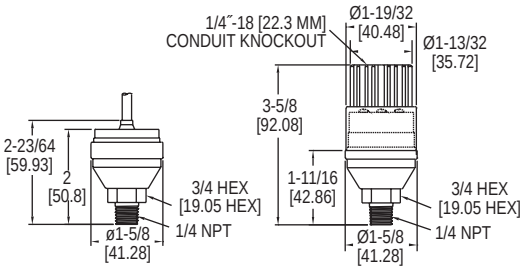
SERIES 673

PRESSURE TRANSMITTER

±0.25% FS Accuracy, 4-20 mA Signal, Ranges to 1000 psi

Cable anchor

Conduit version



Cable anchor Conduit version

The low cost **Series 673 Pressure Transmitter** is a fixed range transmitter designed for harsh environments and suitable for high shock and vibration applications. Constructed of stainless steel, the Series 673 provides a 4-20 mA output signal with 0.25% accuracy. Use the Series 673 in industrial OEM equipment, hydraulic systems, HVAC equipment, industrial engines and compressor control.

FEATURES/BENEFITS

- High-shock and vibration resistant insures stability in controlling pressure for process applications

APPLICATIONS

- OEM
- Industrial engines
- Hydraulic systems
- Compressors
- HVAC equipment

MODEL CHART			
Model	**Range psi**	**Model**	**Range psi**
673-1	0 to 1	**673-1C**	0 to 1
673-2	0 to 2	**673-2C**	0 to 2
673-3	0 to 5	**673-3C**	0 to 5
673-4	0 to 10	**673-4C**	0 to 10
673-5	0 to 25	**673-5C**	0 to 25
673-6	0 to 50	**673-6C**	0 to 50
673-7	0 to 100	**673-7C**	0 to 100
673-8	0 to 200	**673-8C**	0 to 200
673-9	0 to 500	**673-9C**	0 to 500
673-10	0 to 1000	**673-10C**	0 to 1000
673-14	-14.7 to 100	**673-14C**	-14.7 to 100

*The model numbers followed by a “C” represent the conduit version, which is hand tightened to ensure proper electrical seal.

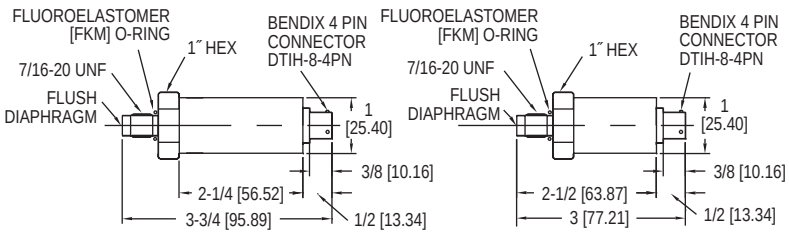
SPECIFICATIONS
Service: Liquid, gas, or vapor.
Wetted Materials: 17-4 PH SS.
Accuracy: ±0.25% FS (RSS), (includes non-linearity, hysteresis and non-repeatability).
Temperature Limits: -40 to 185°F (-40 to 85°C).
Compensated Temperature Limits: -40 to 176°F (-40 to 80°C).
Pressure Limits: 2 x max range.
Thermal Errors: Zero: ±3.6% FS/100°F(100°C); Span: ±2.7% FS/100°F(100°C).
Power Requirements: 9-30 VDC.
Output: 4-20 mA, 2-wire.
Zero & Span Adjustment: Fixed.
Response Time: 5 ms.
Loop Resistance: 0 to 800 Ω.
Stability: 0.5% FS/year.
Shock: 200 g.
Vibration: 20 g.
Electrical Connections: 2 ft (61 cm) multiconductor cable.
Conduit Connection: 1/4˝-18 (22.3 mm) knockout.
Enclosure: Stainless steel and Valox.
Weight: 2.3 oz (65 g).

OPTIONS	
Use order code:	**Description**
NISTCAL-PT1	NIST traceable calibration certificate

SERIES FDT

FLUSH DIAPHRAGM TRANSMITTER

Non-Liquid Filled, ±0.5% FS Accuracy, SS Wetted Parts



FDT-V FDT-A

The **Series FDT Flush Diaphragm Transmitter** is designed for highly cyclical conditions. Flush sensor feature prevents any potential inaccuracies due to build-up or blockage which is a typical problem found in most non-flush transmitter sensors.

FEATURES/BENEFITS

- Performs well in high cyclical environments with the presence of water-hammering or spiking for long service life

APPLICATIONS

- OEM
- Hydraulic systems
- Process systems

MODEL CHART					
Example	**FDT**	**-A**	**-01**	**-NPT**	**FDT-A-01-NPT**
Series	FDT				Flush diaphragm transmitter
Output		A V			4-20 mA 0-5 VDC
Range			01 02 03 04 06 11 12 15		100 psi 150 psi 200 psi 300 psi 500 psi 1000 psi 2000 psi 5000 psi
Options				-NPT -C08	1/4˝ male NPT 0.25% FS accuracy
Note: Contact factory for additional range availability.					

SPECIFICATIONS	
Service: Compatible liquids and gases, adhesives, slurries, materials that can harden, or where a pressure cavity is not desired. **Wetted Materials:** 316 & 15-5 SST. **Accuracy:** ±0.5% FS (includes non-linearity, hysteresis, and repeatability). **Stability:** ±0.25% FS per year. **Temperature Limits:** -40 to 200°F (-40 to 93°C). **Compensated Temperature Limits:** 0 to 170°F (-18 to 77°C). **Pressure Limit:** 150% FS; Burst: 200% FS. **Thermal Effect:** ±1.5% FSO over compensated range.	**Power Requirements:** 8-38 VDC. **Output Signal:** FDT-A: 4-20 mADC; FDT-V: 0-5 VDC. **Response Time:** <1 ms. **Loop Resistance:** FDT-A: 0 to 1.5 Ω; FDT-V: 100 Ω. **Electrical Connections:** 4-pin. **Process Connection:** 7/16-20 UNF male flush diaphragm. Optional 1/4˝ male NPT. **Enclosure Rating:** NEMA 4X (IP66). **Mounting Orientation:** Mount in any position. **Weight:** 2 oz (57 g). **Agency Approvals:** CE.

ACCESSORIES	
Model	**Description**
A-168	Mating connector for 4 pin M-12

OPTIONS	
Use order code:	**Description**
NISTCAL-PT1	NIST traceable calibration certificate

Dwyer

SERIES 626 & 628

INDUSTRIAL PRESSURE TRANSMITTERS

Complete Offering of Ranges, Connections and Outputs

626/628 pressure transmitters with general purpose housing (-GH)

626/628 pressure transmitters with conduit box housing (-CB) and LCD display

VIDEO ONLINE

***Please see our website for dimensional drawings.**

The **Series 626 Industrial Pressure Transmitters** possess a highly precise 0.25% full-scale accuracy piezo-resistive sensor contained in a compact, rugged, NEMA 4X (IP66) stainless steel general purpose housing or cast aluminum conduit housing. The **Series 628 Industrial Pressure Transmitters** are ideal for OEMs with 1% full-scale accuracy sensors. The corrosion resistant 316L stainless steel wetted parts allow the Series 626 and 628 transmitters to measure the pressure in a multitude of processes from hydraulic oils to chemicals. The Series 626 and 628 are available in absolute and pressure ranges with a variety of optional outputs, process connections and electrical terminations to allow you to select the right transmitter for your application.

FEATURES/BENEFITS

- NEMA 4X rated enclosure provides protection in harsh environments permitting outdoor monitoring or in areas where dust and particulate matter exists
- Robust 316 SS oil filled sensor provides shock and vibration resistance insuring stability in controlling pressure for process applications
- A wide range of models and connections that can meet pressure measurement specifications from low to very high

APPLICATIONS

- Compressors
- Pumping systems
- Irrigation equipment
- Hydraulic
- Industrial process monitoring

SPECIFICATIONS

Service: Compatible gases and liquids.
Wetted Materials: Type 316L SS.
Accuracy: 626: 0.25% FS; 626: 0.20% RSS; 628: 1.0% FS; 628: 0.5% RSS; 626 Absolute Ranges: 0.5% FS; 626 absolute ranges: 0.30% RSS. (Includes linearity, hysteresis, and repeatability.)
Temperature Limit: 0 to 200°F (-18 to 93°C).
Compensated Temperature Range: 0 to 175°F (-18 to 79°C).
Thermal Effect: ±0.02% FS/°F (includes zero and span).
Pressure Limits: See table.
Power Requirements: 10-30 VDC (for 4-20 mA, 0-5, 1-5, 1-6 VDC outputs); 13-30 VDC (for 0-10, 2-10 VDC outputs); 5 VDC ±0.5 VDC (for 0.5-4.5 VDC ratio-metric output), 10-35 VDC (for 4-20 mA with -CB option); 13-35 VDC or isolated 16-33 VAC (for selectable output with -CB option).
Output Signal: 4-20 mA, 0-5 VDC,1-5 VDC, 0-10 VDC, or 0.5-4.5 VDC, or selectable 0-5, 1-5, 0-10, 2-10 VDC for -CB option.
Response Time: 300 ms.
Loop Resistance: 0 to 1000 Ω max. R max = 50 (Vps-10) Ω (4-20 mA output), 0-1250 Ω max. Rmax = 50(Vps-10) Ω (4-20 mA output with -CB option), 5K Ω (0-5, 1-5, 1-6, 0-10, 2-10, 0.5-4.5 VDC output).
Stability: 1.0% FS/year (Typ.).
Current Consumption: 38 mA maximum (for 4-20 mA output); 10 mA maximum (for 0-5, 1-5, 1-6, 0-10, 2-10, 0.5-4.5 VDC output); 140 mA maximum (for all 626/628/629-CH with optional LED).
Electrical Connections: Conduit Housing (-CH): terminal block, 1/2″ female NPT conduit; General Purpose Housing (-GH): cable DIN EN 175801-803-C.
Process Connection: 1/4″ male or female NPT and BSPT.
Enclosure Rating: NEMA 4X (IP66).
Mounting Orientation: Mount in any position.
Weight: 10 oz (283 g).
Agency Approvals: CE, NSF, UL.

Dwyer

SERIES 626 & 628

INDUSTRIAL PRESSURE TRANSMITTERS

Complete Offering of Ranges, Connections and Outputs

MODEL CHART								
Example	**626**	**-00**	**-CH**	**-P1**	**-E1**	**-S1**	**-AT**	**626-00-CH-P1-E1-S1-AT**
Accuracy	626 628							0.25% full-scale accuracy 1.0% full-scale accuracy
Range		00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 22 15 16 18 19 26 67 71 75 81						0 to 15 psia⑤ 0 to 30 psia⑤ 0 to 50 psia⑤ 0 to 100 psia⑤ 0 to 200 psia⑤ 0 to 300 psia⑤ 0 to 5 psi 0 to 15 psi 0 to 30 psi 0 to 50 psi 0 to 100 psi 0 to 150 psi 0 to 200 psi⑥ 0 to 300 psi⑥ 0 to 500 psi⑥ 0 to 600 psi⑥ 0 to 1000 psi 0 to 1500 psi⑥ 0 to 3000 psi 0 to 5000 psi 0 to 8000 psi 0 to 0.5 bar 0 to 2.5 bar 0 to 10 bar 0 to 40 bar
Housing			CB GH					Conduit box housing General purpose housing
Process Connection				P1 P2 P3 P5 P9				1/4″ male NPT 1/4″ female NPT 1/4″ male BSPT 1/4″ female SAE with refrigerant valve depressor① 1/2″ male NPT①
Electrical Connection					E1 E3 E4 E5 E6 E8 E9			Cable gland with 3′ of prewired cable Cable gland with 9′ of prewired cable DIN EN 175801-803-C① 1/2″ female NPT conduit② M-12 4 pin connector-UL④ Packard connector M-12 4 pin connector non-UL
Signal Output						S1 S2 S4 S5 S7 S8		4-20 mA 1-5 VDC 0-5 VDC 0-10 VDC 0.5-4.5 VDC①③ Selectable 0-5, 1-5, 0-10, 2-10 VDC②
Options							AT LCD NIST NW	Aluminum tag LCD indication② NIST traceable certificate NSF/ANSI 61/372 certified

①Available with -GH housing only, NEMA 4 (IP65) ②Available with -CB housing only ③Power requirement: 5 VDC ±10%
④Available with -GH housing only ⑤Absolute ranges for 626 are 0.5% FS accuracy and for 628 are 2% FS accuracy
⑥UL listed pump controllers, fire-component - See online certificate for information and limitations

Note: Bar and absolute ranges are only available with -GH housing.

PRESSURE LIMITS							
Range Number	**Pressure Range**	**Maximum Pressure (psig)**	**Over Pressure (psig)**	**Range Number**	**Pressure Range (psig)**	**Maximum Pressure (psig)**	**Over Pressure (psig)**
00	0 to 15 psia	30	45	12	0 to 200	400	1000
30	15 to 0 psia	30	45	13	0 to 300	600	1500
06	0 to 5 psig	10	50	14	0 to 500	1000	2500
07	0 to 15 psig	30	150	15	0 to 1000	2000	5000
08	0 to 30 psig	60	300	16	0 to 1500	3000	5000
09	0 to 50 psig	100	300	18	0 to 3000	6000	7500
10	0 to 100 psig	200	500	19	0 to 5000	7500	10000
11	0 to 150 psig	300	750	26	0 to 8000	10000	12000

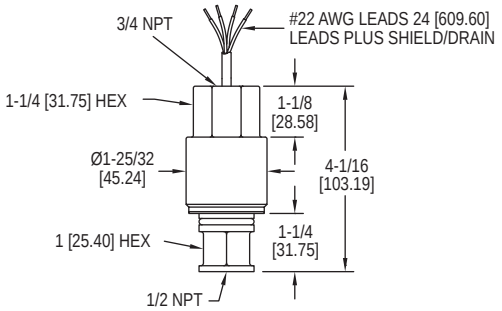
ACCESSORIES	
Model	**Description**
A-164	16.4′ (5 m) cable with M-12 4-pin female connector
A-62X-LCD	Field-upgradeable LCD
A-960	3′ packard cable
A-961	9′ packard cable
A-962	20′ packard cable

Dwyer

SERIES 636

FIXED RANGE PRESSURE TRANSMITTER

Stainless Steel, Explosion-Proof, Accuracy ±0.30%, 4-20 mA or 1-5 VDC Signal



The **Series 636 Fixed Range Pressure Transmitter** is a low cost, fixed range, stainless steel transmitter with ±0.30% accuracy. It is designed to continuously measure pressure for years in even the toughest environmental and media conditions. Transmitters are explosion-proof, (FM approved) and meet NACE standards for off-shore applications.

FEATURES/BENEFITS

- Long service life and lower cost to maintain reduces total cost of ownership
- Explosion-proof housing for use in applications where protection of process and personnel is needed

APPLICATIONS

- Off-shore
- Process applications

MODEL CHART			
4-20 mA OUT	**1-5 VDC OUT**	**Operating Range, psi**	**Operating Range, Bar**
636-0	**636-0-LP**	0 to 15	0 to 1
636-1	**636-1-LP**	0 to 30	0 to 2
636-2	**636-2-LP**	0 to 100	0 to 7
636-3	**636-3-LP**	0 to 300	0 to 20

OPTIONS	
Use order code:	**Description**
NISTCAL-PT1	NIST traceable calibration certificate

SPECIFICATIONS

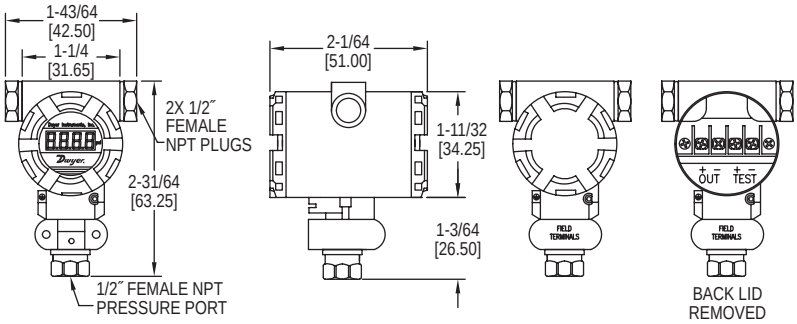
Service: Liquid, gas or vapor.
Wetted Materials: 316 L SS.
Fill Fluid: DC 200 silicone (standard).
Accuracy: ±0.30% of calibrated span.
Stability: ±0.5% of upper range limit for six months.
Temperature Limits: Electronics (ambient): -40 to 140°F (-40 to 60°C); Process interface: -40 to 212°F (-40 to 100°C).
Pressure Limits: 300% upper range limit.
Compensated Temperature Range: -20 to 180°F (-29 to 82°C).
Thermal Effect: (includes zero and span). Between -20 and 180°F (-29 and 82°C). ±2.0% per 50°F (28°C).
Power Requirements: 12-30 VDC (636), 8-14 VDC (636LP), reverse polarity protection.
Output Signal: 4-20 mA DC, limited to 30 mA DC (636), 1-5 VDC (636LP).
Zero & Span Adjustments: Null: 4.0 mA ±2% span (636),1 VDC ±1% span (636LP); Span: 16.0 mA ±1% span (636), 4 VDC ±1% span (636LP).
Loop Resistance: 900 Ω max @ 30 V.
Electrical Connection: 3/4″ female NPT 24″ (61 cm), 22 AWG.
Process Connection: 1/2″ female NPT.
Enclosure Rating: NEMA 4 (IP56).
Weight: 0.83 lb (374 g).
Agency Approvals: CSA, FM.
FM and CSA approved explosion-proof for Class I, Division 1, Groups B, C, & D, Class II Groups E, F, & G Class III.

Dwyer

SERIES IWP

INDUSTRIAL WEATHERPROOF PRESSURE TRANSMITTER

Exceptional Reliability for Harsh Environments



The **Series IWP Industrial Weatherproof Pressure Transmitter** provides an exceptional value solution to pressure measurement in industrial conditions requiring high-performance, stability and long service life. The precise operation under dirty and wet conditions, make the Series IWP an ideal choice for petroleum, chemical and metallurgical industry applications.

FEATURES/BENEFITS

- Rugged, weather-proof design supports use in harsh environments

APPLICATIONS

- Harsh environments
- Process
- Chemical
- Petroleum
- Metallurgical

SPECIFICATIONS
Service: Gases and liquids compatible with wetted materials.
Wetted Materials: 304 and 316 stainless steel.
Accuracy: 0.5% FS.
Stability: <0.2% FS per year.
Temperature Limits: -22 to 203°F (-30 to 95°C).
Compensated Temperature Limits: 32 to 158°F (0 to 70°C).
Pressure Limits: 1.5 x pressure range.
Temperature Coefficient: 0.3% FS per 10°C.
Power Requirements: 12-36 VDC.
Output Signal: 4-20mA.
Loop Resistance: 1200 Ω max.
Electrical Conduit Connection: 1/2″ female NPT.
Process Connection: 1/2″ female NPT.
Enclosure Rating: IP65.

MODEL CHART			
Model	**Pressure Range**	**Model**	**Pressure Range**
IWP-00	0 to 30 psig	**IWP-04**	0 to 300 psig
IWP-01	0 to 50 psig	**IWP-05**	0 to 500 psig
IWP-02	0 to 100 psig	**IWP-06**	0 to 1000 psig
IWP-03	0 to 200 psig	**IWP-10**	0 to 30 psia

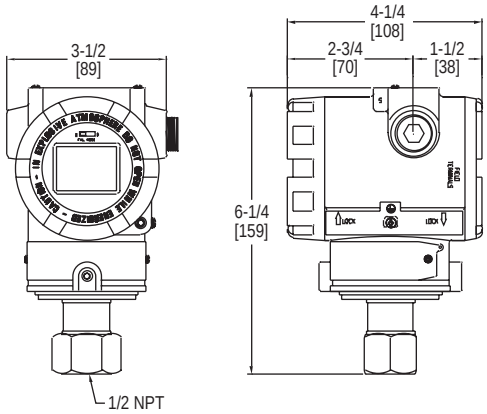
OPTIONS	
Use order code:	**Description**
NISTCAL-PT1	NIST traceable calibration certificate

Dwyer

SERIES 3200G | MERCOID® BY DWYER

EXPLOSION-PROOF PRESSURE TRANSMITTER

HART®, Push-Button Configuration, Rangeability (100:1)



The Mercoid® **Series 3200G Explosion-Proof Smart Pressure Transmitter** is a microprocessor-based high performance transmitter, which has flexible pressure calibration, push-button configuration, and programmable using HART® Communication. The Series 3200G is capable of being configured with the zero and span buttons, a field calibrator is not required for configuration. The transmitter software compensates for thermal effects, improving performance. EEPROM stores configuration settings and stores sensor correction coefficients in the event of shutdowns or power loss. The Series 3200G is FM approved for use in hazardous (Classified) locations. The 100:1 rangeability allows the smart transmitter to be configured to fit any application.

FEATURES/BENEFITS

- Completely configurable using zero/span buttons (no calibrator required)
- Rangeability (100:1)
- High accuracy (±0.075%)
- Automatic sensor temperature compensation
- Fail-mode process function

APPLICATIONS

- Water and wastewater
- Chemical and petrochemical
- Pulp and paper
- Oil and gas
- Food and beverage

SPECIFICATIONS

Service: Compatible gases, steam, liquids or vapors.
Wetted Materials: 316L SS.
Accuracy: ±0.075% FS (@ 20°C).
Rangeability: 100:1 turn down.
Stability: ±0.125% FSO/yr.
Temperature Limits: Process: -40 to 248°F (-40 to 120°C); Ambient: Without LCD -40 to 185°F (-40 to 85°C); With LCD -22 to 176°F (-30 to 80°C).
Thermal Effect: ±0.125% span/32°C.
Power Requirements: 11.9 to 45 VDC.
Output Signal: 4 to 20 mA / HART® Communication.
Response Time: 0.12 s.
Damping Time: 0.25 to 60 s.
Loop Resistance: Operation: 0 to 1500 Ω; HART® Communication: 250 to 500 Ω.
Electrical Connection: Two 1/2″ female NPT conduit, screw terminal.
Process Connections: 1/2″ female NPT.
Display: Optional 5 digit LCD.
Enclosure Rating: NEMA 4X (IP66) and explosion proof for Class I, Div I Groups A, B, C and D.
Weight: 5.5 lb (2.5 kg).
Agency Approvals: ATEX, CE, FM.

MODEL CHART

Model	Range psi (kPa)	Calibrated Span (Min. to Max.) psi (kPa)	Max. Pressure psi (bar)	LCD Display
3200G-1-FM-1-1	-14.5 to 21 (-100 to 150)	0.22 to 21 (1.5 to 150)	58 (4)	No
3200G-2-FM-1-1	-14.5 to 217 (-100 to 1500)	2 to 217 (15 to 1500)	580 (40)	No
3200G-3-FM-1-1	0 to 725 (0 to 5000)	7.25 to 725 (50 to 5000)	2000 (138)	No
3200G-4-FM-1-1	0 to 3600 (0 to 25000)	36 to 3600 (250 to 25000)	10000 (690)	No
3200G-5-FM-1-1	0 to 8500 (0 to 60000)	87 to 8700 (600 to 60000)	11600 (800)	No
3200G-1-FM-1-1-LCD	-14.5 to 21 (-100 to 150)	0.22 to 21 (1.5 to 150)	58 (4)	Yes
3200G-2-FM-1-1-LCD	-14.5 to 217 (-100 to 1500)	2 to 217 (15 to 1500)	580 (40)	Yes
3200G-3-FM-1-1-LCD	0 to 725 (0 to 5000)	7.25 to 725 (50 to 5000)	2000 (138)	Yes
3200G-4-FM-1-1-LCD	0 to 3600 (0 to 25000)	36 to 3600 (250 to 25000)	10000 (690)	Yes
3200G-5-FM-1-1-LCD	0 to 8500 (0 to 60000)	87 to 8700 (600 to 60000)	11600 (800)	Yes

Note: Contact factory for custom calibration.

ACCESSORIES

Model	Description
A-630	Stainless steel angle type bracket with SS bolts
A-631	Stainless steel flat type bracket with SS bolts
BBV-0N	2-valve block manifold
DevCom2000	HART® Communication Protocol Software

Dwyer

SERIES 3200G | MERCOID® BY DWYER

EXPLOSION-PROOF PRESSURE TRANSMITTER

HART®, Push-Button Configuration, Rangeability (100:1)

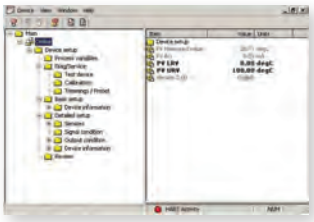
MODEL CHART														
Example	**3200G**	**-2**	**-FM**	**-3**	**-1**	**-LES**	**S2**	**A1**	**05**	**S**	**2**	**-05**	**-LCD**	**3200G-2-FM-3-1-LESS2A105S2-05-LCD**
Series	3200G													Explosion-proof pressure transmitter
Range		1 2 3 4 5												-14.5 to 21 psig (factory set 0 to 21 psig) -14.5 to 217 psig (factory set 0 to 217 psig) 0 to 725 psig 0 to 3600 psig 0 to 8500 psig
Approval			FM ATEX WP											FM approved ATEX approved Weatherproof only (Only available with 316 SS housing)
Process Connection				1 3										1/2″ female NPT Diaphragm seal
Electrical Connection					1									1/2″ female NPT
Diaphragm Seal Type						LED LES LFD LFS								1 extended diaphragm seal direct mount 1 extended diaphragm seal capillary type high 1 flush diaphragm seal direct mount 1 flush diaphragm seal capillary type
Mounting Flange							S2 S3							2″ (50 mm) 316L SS 3″ (80 mm) 316L SS
Mounting Flange Rating								A1 A2 D1 D2 J1 J2						ANSI class 150# ANSI class 300# DIN PN 10/16 DIN PN 25/40 JIS 10 K JIS 20 K
Extension Length									00 05 10 15					No extension (standard for flush mount) 2″ extension 4″ extension 6″ extension
Diaphragm Material										S P H T				316L SS diaphragm PTFE and 316L SS diaphragm Hastelloy C-276 diaphragm Tantallum diaphragm
Fill Fluid											2			Silicon oil (-40 to 400°F)
Capillary Length												XX		0 to 20 feet
Options													LCD SSH NIST CC	5 digit LCD 316 SS housing (only available with WP approval) NIST calibration Custom calibration

CUSTOM CALIBRATION VALUES	
Primary Units	in w.c., ft w.c., mm w.c., in Hg, psig, g/cm², kg/cm², Pa, kPa, bar, mbar, Torr, Atm, mm Hg
Upper Range Limit	20 mA value
Lower Range Limit	4 mA value
Damping Time	0 to 60 seconds
Display Mode	Primary unit, %, mA, rotate

MODEL DEVCOM2000

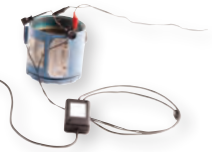
HART® COMMUNICATION PROTOCOL SOFTWARE

Includes USB HART Modem



DevCom2000 software

HART field device



Windows®-based PC **USB HART modem**

The **Model DEVCOM2000 HART® Communication Protocol Software** turns your PC into a full-featured HART® communicator. Now it is possible to configure transmitters and control valves at the desktop or in the field. DevCom2000 uses device descriptions (DDs) to retrieve data that is stored in the memory of smart field devices. This software is a simple, reliable and secure method to add new measurement values to control systems without the need of additional wires. This software eliminates the need to purchase and maintain a separate handheld HART® communicator.

FEATURES/BENEFITS
- Complete DD library
- Includes USB HART modem
- USB 1.1 and 2.0 compatible
- Self powered modem

APPLICATIONS
- For use with pressure transmitters and control-valves in:
  - Water and wastewater
  - Chemical and petrochemical
  - Oil and gas
  - Pulp and paper
  - Food and beverage

MODEL CHART	
Model	**Description**
COM-PC	DevCom2000 Hart® software and modem

SPECIFICATIONS

HART® Communicator Software
DD Library: Included.
Generic DD: Included.
Operating System: Windows NT®, Windows® 2000, Windows XP®, Windows® Vista (32/64), Windows® 7 (32/64).

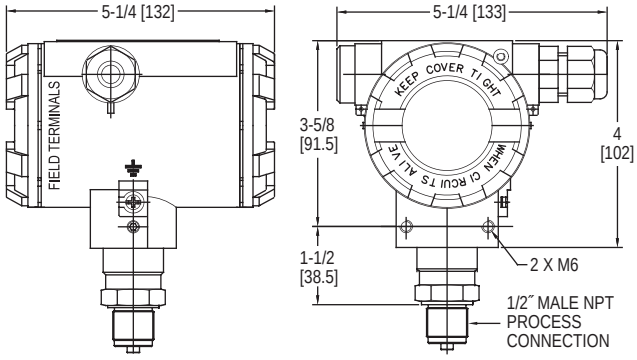
USB HART MODEM
Material: High strength ABS plastic.
Temperature Limits: 0 to 50°C (32 to 122°F).
Storage Temperature: -40 to 85°C (-40 to 185°F).
Humidity: 0 to 99% (non-condensing).
HART® Cable Length: 4´ (1.2 m).
HART® Cable Connectors: Mini-grabber.
USB Cable Length: 18″ (0.5 m).
USB Cable Connector: USB Type A.
USB: USB 1.1, USB 2.0.
Power: USB port provides power to unit.
Current Draw: 20 mA.
Output: 600 mVpp.
Leakage: < 10 uA.
Isolation Voltage: 1500 VDC.
HART®: HART® 4, HART® 5, HART® 6, HART® 7, HART® Physical Layer Spec HCF_SPEC-54.
Weight: 3 oz (85 g).
Agency Approvals: CE.

Dwyer

SERIES 3400

SMART PRESSURE TRANSMITTER

HART® Communication, Push-Button Configuration, Rangeability (Up to 100:1)



VIDEO ONLINE

The **Series 3400 Smart Pressure Transmitter** is a microprocessor-based high performance transmitter, which has flexible pressure calibration, push-button configuration, and is programmable using HART® Communication. The Series 3400 is capable of being configured with the zero and span buttons (a field calibrator is not required for configuration). The transmitter software compensates for thermal effects, improving performance. EEPROM stores configuration settings and stores sensor correction coefficients in the event of shutdowns or power loss. The Series 3400 can be configured to be ATEX or IECEX approved for use in hazardous (classified) locations. The rangeability allows the smart transmitter to be configured to fit most applications.

FEATURES/BENEFITS

- High accuracy (±0.075% FS)
- Rangeability (up to 100:1)
- Configurable using zero/span buttons (no calibrator required)
- Fail-mode process function
- Automatic ambient temperature compensation

APPLICATIONS

- Water and wastewater
- Chemical and petrochemical
- Pulp and paper
- Oil and gas
- Food and beverage

SPECIFICATIONS

Service: Compatible gases, steam, liquids or vapors.
Wetted Materials: 316L SS.
Accuracy: ±0.075% FS (@ 20°C).
Rangeability: Up to 100:1 turn down.
Stability: ≤0.075% FSO/3 years.
Temperature Limits: Ambient: -40 to 185°F (-40 to 85°C); Process with -DS: -40 to 400°F (-40 to 204°C).
Thermal Effect: < ±0.05% span/10°C.
Power Requirements: 10-55 VDC.
Output Signal: 4-20 mA.
Response Time: 16 to 480 ms (programmable).
Damping Time: 0 to 60 s.
Electrical Connection: Packing gland M20x1.5, two 1/2″ female NPT conduit, screw terminal.
Process Connections: 1/2″ female or male NPT.
Enclosure Rating: NEMA 4X IP66/IP67.
Agency Approvals: CE; -IS, -FP suffix: ATEX Compliant CE 0518 II 2G Ex ia/db IIC T6/T5 Gb Ta<80°C, T5 / II 2D Ex ia/tb IIIC T85°C/T100°C Db. Type Certificate No. KDB 17ATEX0056X. ATEX Standards: EN 60079-0:2012+A11:2013, EN 60079-1:2014, EN 60079-11:2012, EN 60079-26:2015, EN 60079-31:2014 IECEx Compliant: Ex ia/db IIC T6/T5 Gb / Ex ia/tb IIIC T85°C/T100° Db. Certificate of Conformity IECEx KDB 17.0008X. IECEx Standards: IEC 60079-0:2011, IEC 60079-1:2014-06, IEC 60079-11:2011, IEC 60079-26:2006, IEC 60079-31:2013.

MODEL CHART

Model	Range	Min. Set Range	Overpressure limit
3400-AL-10-NM-2	0 to 15 psi	1.45 psi	30 psi
3400-AL-13-NM-2	0 to 100 psi	1.45 psi	200 psi
3400-AL-15-NM-2	0 to 350 psi	3.6 psi	725 psi
3400-AL-20-NM-2	0 to 2300 psi	14.5 psi	6525 psi
3400-AL-23-NM-2	0 to 4350 psi	43.5 psi	6525 psi

Note: Bar ranges are also available.

Dwyer
SERIES 3400

SMART PRESSURE TRANSMITTER

HART® Communication, Push-Button Configuration, Rangeability (Up to 100:1)

MODEL CHART											
Example	**3400**	**-AL**	**-01**	**-DS**	**-1**	**-SPD**	**A**	**0**	**-1**	**-NIST**	**3400-AL-01-DS-1-SPDA0-1-NIST**
Series	3400										Single pressure smart transmitter
Housing		AL AS									Aluminum housing Stainless steel housing
Range			01 03 05 07 10 11 13 15 17 20 23 26 29								0 to 18 psia 0 to 100 psia 0 to 350 psia 0 to 1000 psia 0 to 15 psi 0 to 30 psi 0 to 100 psi 0 to 350 psi 0 to 1000 psi 0 to 2300 psi 0 to 4350 psi 0 to 8700 psi 0 to 14500 psi
Process Connections				NM NF DS							1/2″ male NPT 1/2″ female NPT Diaphragm seal selection
Electrical Connections					1 2						Packing gland M20x1.5 Thread 1/2″ female NPT
Diaphragm Seal Type						SPD SPR STD STR					S-P flush diaphragm seal direct mount S-PK flush diaphragm seal capillary mount S-T extended diaphragm seal direct mount S-TK extended diaphragm seal capillary mount
Mounting Flange							A B C D				2″ ANSI 2″ DN50 3″ ANSI 3″ DN80
Extension Length								0 2 4 6			No extension, flush mount 2″ (50 mm) 4″ (100 mm) 6″ (150 mm)
Capillary Length									#		Capillary length, 1 to 20 ft (increments of 1)
Options										FP IS MT NIST GM SM ST	ATEX/IECEx flameproof ATEX/IECEx intrinsically safe Stainless steel tag plate mounted on wire NIST traceable calibration certificate 2″ galvanized steel mounting bracket 2″ SS mounting bracket Stainless steel plate riveted to the housing

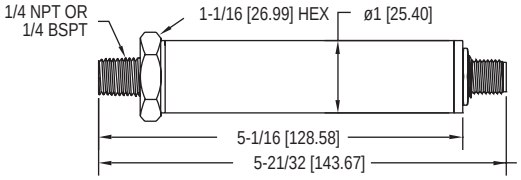
ACCESSORIES	
Model	**Description**
A-630	Stainless steel angle type bracket with SS bolts
A-631	Stainless steel flat type bracket with SS bolts
BBV-0N	2-valve block manifold
DevCom2000	HART® communication protocol software

Dwyer

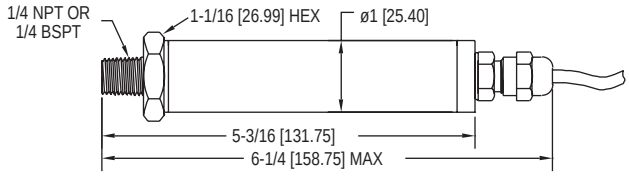
SERIES IS626

INTRINSICALLY SAFE PRESSURE TRANSMITTERS

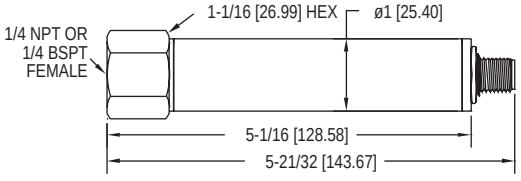
For Use In Hazardous Locations



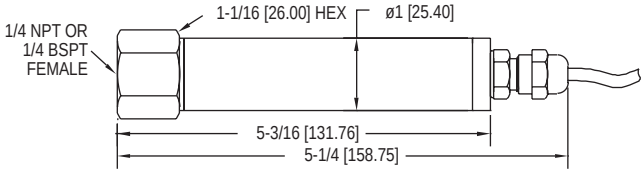
Male NPT/BSPT connector with male M-12 connector



Male NPT/BSPT connector with cable gland



Female NPT/BSPT connector with male M-12 connector



Female NPT/BSPT connector with cable gland

The Dwyer **Series IS626 Intrinsically Safe Pressure Transmitters** can be used to accurately measure compatible gases and liquids compatible with its 316/316L stainless steel wetted parts. Series IS626 full-scale accuracy is 0.25%. Designed for industrial environments with a NEMA 4X (IP66) housing, this transmitter resists most effects of shock and vibration. Models are available with a 3´ cable or M-12 4 pin connection.

The IS626 is UL listed for use in Hazardous (Classified) Locations. The protection method is by Intrinsic Safety, "ia". It was investigated by UL under UL Standard 913 Sixth Edition and CSA Standard No. 157-92.

FEATURES/BENEFITS

- Exceptional accuracy for insuring tight-control and minimizing costly out of specification conditions
- NEMA 4x rated enclosure provides protection in harsh environments permitting outdoor monitoring or in areas where dust and particulate matter exists
- Robust sensor provides shock and vibration resistance insuring stability in controlling pressure for process applications

APPLICATIONS

- Monitoring pressure in hazardous environments
- Process

SPECIFICATIONS

Service: Compatible gases and liquids.
Wetted Materials: Type 316, 316L SS.
Accuracy: 0.25% FS.
Temperature Limit: 0 to 176°F (-18 to 80°C).
Compensated Temperature Range: 0 to 176°F (-18 to 80°C).
Thermal Effect: ±0.02% FS/°F (includes zero and span).
Pressure Limits: See Pressure Range Table.
Power Requirements: 10-28 VDC.
Output Signal: 4-20 mA.
Response Time: 50 ms.
Loop Resistance: 0-900 Ω max.
Current Consumption: 38 mA (max).
Electrical Connections: 3 ft cable or 4-pin M-12 connector.
Process Connection: 1/4˝ male or female NPT and BSPT.
Enclosure Rating: NEMA 4X (IP66).
Mounting Orientation: Mount in any position.
Weight: 8.9 oz (252 g).
Agency Approvals: CE, cULus Intrinsically Safe to UL Standard 913.

For use in Hazardous (Classified) Locations:
Class I Div. 1 Groups A,B,C,D
Class II Div. 1 Groups E,F,G
Class III Div. 1
Temperature Code: T4 @ 80°C ambient
Install in accordance with control drawing 01-700797-00.
WARNING To prevent ignition of flammable or combustible atmospheres, disconnect power before servicing.
Use with approved safety barriers using entity evaluation.

MODEL CHART

Model	Range	Maximum Pressure (psig)	Over Pressure (psig)
IS626-07-GH-P1-E1-S1	15 psig	30	150
IS626-08-GH-P1-E1-S1	30 psig	60	300
IS626-09-GH-P1-E1-S1	50 psig	100	300
IS626-10-GH-P1-E1-S1	100 psig	200	500
IS626-11-GH-P1-E1-S1	150 psig	300	750
IS626-12-GH-P1-E1-S1	200 psig	400	1000
IS626-13-GH-P1-E1-S1	300 psig	600	1500
IS626-14-GH-P1-E1-S1	500 psig	1000	2500

Note: For optional M-12 4 pin electrical connection, change E1 to E6.

OPTIONS

To order add suffix:	Description
-NIST	NIST traceable calibration certificate

Example: IS626-07-GH-P1-E1-S1-NIST

ACCESSORIES

Model	Description
A-295	Female four pin M-12 to cable gland connector
A-231	16´ (5 m) shielded cable with 4 pin female M-12 connection
MTL5541	Galvanic barrier
MTL7706	Intrinsically safe zener barrier