

PRESSURE MONITORING

The Veris selection of pressure sensing devices includes sensors for both wet and dry media, as well as a series of electropneumatic transducers. Our products are known for their accuracy, versatility, and labor-saving installation.

MODEL	DESCRIPTION	PAGE
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PD	Display Digital Pressure/Vacuum Gauges	163
PASxx	Differential Air Pressure Switch	165
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PRESSURE SENSOR SELECTION GUIDE

	WET MEDIA	DRY MEDIA
Analog Output	PH, PD, PG, PW, PW2 pages 161, 163, 173, 175, 179	PD, PX, PG pages 163, 167, 173
Negative Pressure	PD page 163	PD page 163
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LCD Display Option Available	PD, PW, PW2 pages 163, 175, 177	PD, PXP/PXD/PXU pages 163, 167
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Transmitter Only (No local display)	PH, PG pages 161, 173	PXP/PXD/PXUX, PG pages 167, 173
Switch		PASxx page 165

ELECTROPNEUMATIC TRANSDUCERS WET MEDIA DRY MEDIA Pneumatic Systems EP2, EP3 pages 169, 171



Take the Pressure Off Installation Costs

With the industry's most adaptable remote pressure sensor

PWR Remote Pressure Sensor

Don't Sweat the Requirements Wiring options no matter

the code requirements.

Reduce the Tension

Innovative, modular design for ease of installation at any point.

Alleviate the Burden

Eliminate communication and cable runs with mounting and connection freedom.

Interested in learning more about the innovative PWR design? Contact a Pressure Monitoring Specialist today: 800.354.8556 or at sales@veris.com See Product Specifications on page 179



PH SERIES

Three Switch-Selectable Ranges with Test Mode

PH

The PH Series pressure transducers are designed for steam, air, gas, and liquid pressure measurement in all media compatible with 17-4PH N8 stainless steel. They utilize a microprocessor controlled sensor profiled for exceptional accuracy and reliability. All models feature three switch-selectable ranges and a "test mode" to verify wiring and panel input scaling. A pushbutton and digital input terminal is used to automatically zero the output, and the microprocessor guards against accidental zero adjustment during operation. The field-selectable output, offering options of 0 to 5 V, 0 to 10 Vdc, or 4 to 20 mA, ensures excellent systems compatibility. Jumper controlled surge damping is provided on all models to reduce false alarms.

Reduces failures

Micromachined silicon sensor design...improves overpressure capacity and reduces failures

High stability

Electronic surge damping for high stability

Zero calibration

Pushbutton zero calibration... no trim pots to adjust, saves installation time

Switch-selectable

Switch-selectable pressure ranges...fewer models to order and stock

Pushbutton

Pushbutton and remote zero adjustment...maintain accuracy and prevent callbacks with automatic zero calibration

Microprocessor

Microprocessor controlled signal conditioning (see graph)

APPLICATIONS

- Chilled and hot water pump monitoring
- HVAC and industrial gas
 monitoring
- Instrument air pressure
- Hydraulic oil pressure

SPECIFICATIONS

GENERAL

Input Power	Class 2; 12 to 30 Vdc/24 Vac
Output	3-wire transmitter; user selectable 4 to 20 mA (clipped & capped)/0-5 V/0-10 V*
Surge Damping	Electronic; 5-second averaging
Test Mode	Overrides output to full-scale (20 mA, 5 V, 10 V)
Zero Adjust	Pushbutton auto-zero and digital input (2-pos terminal block)
Status Indication	Dual-color LED: Green = Normal, Red = Overpressure, Flashing Red = Fault
Housing Material	White powder-coated steel
PRESSURE RANGES	
0 to 100 psi	25/50/100 psig switch selectable
0 to 250 psi	62.5/125/250 psig switch selectable
0 to 500 psi	125/250/500 psig switch selectable
0 to 1000 psi	250/500/1000 psig switch selectable
OTHER SPECS	
Product Operating Environment	-10 to 55 °C (-4 to 130 °F); 0 to 90% RH non-condensing

SENSOR

Accuracy	$\pm 1\%$ F.S. Combined linearity, hysteresis, and repeatability
Long Term Stability	±0.25% per year
Media Compatibility	Media compatible with 17-4 PH stainless steel
Proof Pressure	Max. 2x F.S. range
Burst Pressure	Max. 5x F.S. range
Temp Compensated Range	0 to 50 °C (32 to 122 °F)
Media Temperature Limits	-20 to 85 °C (-4 to 185 °F); 0 to 90% RH non-condensing
Fittings	1/4" NPT male thread, 17-4 PH stainless
WARRANTY	
Limited Warranty	5 years

*Minimum input voltage for 4 to 20 mA operation: 250 Ω loop (1 to 5 V) = 12 Vdc 500 Ω loop (2 to 10 V) = 15 Vdc





SIGNAL CONDITIONING DIAGRAM



ORDERING INFORMATION



DIMENSIONAL DRAWING



PD SERIES

Rugged, One-Piece Construction



Multiple pressure range options

Fits a wide variety of application needs

Rugged

Rugged one-piece construction... provides long product life

Large LCD display

Clear readings at a distance

Switch-selectable

Switch-selectable scales... for maximum resolution and versatility

Pushbutton zero

Maximizes accuracy and prevents callbacks

NEMA 4/IP65

NEMA 4/IP65 housing

The versatile PD Digital Pressure Gauge can be used with any gas, liquid, ay

APPLICATIONS

- Pump inlet/outlet and compressors
- Inert gas pressure measurement
- Hydraulic/pneumatic systems •
- Energy and fluid management •
- Refrigeration equipment/ fluids/test stands
- Industrial process control
- Vacuum chambers
- Lab and research
- Irrigation

or solid that is compatible with 17-4 stainless steel. The one-piece
construction employs no silicone oil, welds, O-rings, or seals, making i
the ideal universal pressure measurement device. The large LCD displa
shows the current reading, the selected scale, and the maximum and
minimum pressure. All functions are easily controlled from the four
panel push buttons located below the display.

SPECIFICATIONS

GENERAL

Input Power: 4 to 20mA Output Models Voltage Output Models	7.5 to 32 Vdc 15 to 32 Vdc
Pressure	See ordering table; consult factory for additional ranges
Measurement Units	psi, bar, kg/cm ² , atm, in. of Hg, in. of H_2O^* (selectable)
Accuracy**	<± 0.5% BFSL***
Stability (1 yr)	±0.25% of FS Typical
Over Range Protection	2x Rated Pressure
Burst Pressure	5x Rated Pressure or 5000 psi, whichever is less
Pressure Cycles	>100 Million
TEMPERATURE RANGES	
Media	-55 to 125 °C (-65 to 257 °F)
Operating (Ambient)	-10 to 70 °C (15 to 158 °F)
Storage: 4 to 20mA and Voltage Output Models	-40 to 65 °C (-40 to 150 °F)
THERMAL LIMITS	
Compensated Range	0 to 55 °C (32 to 130 °F)
TC Zero	<±1.5% of FS
TC Span	<±1.5% of FS

Connection	¼"NPT Male
Update Rate 4 to 20mA and Voltage Output Models	32 times per second
Housing	NEMA 4, IP65, Polycarbonate
Output: Analog Output Models	4 to 20 mA loop powered or 0-5/0-10 Vdc
WARRANTY	
Limited Warranty	1 year

*Inches H₂O units available on ≤250 psi range devices only

Accuracy includes non-linearity, hysteresis, and non-repeatability, measured at 25 °C (77 °F) *Best fit straight line

Note: Select a loop power supply and total loop resistance so that when the loop current is 20 mA, the gauge will have at least 7.5 Vdc at its terminals.

ANALOG OUTPUT VERSION

Wiring Diagram



4 TO 20 MA OUTPUT VERSION

Dimensional Drawing



VOLTAGE OUTPUT VERSION





ORDERING INFORMATION





PASXX SERIES

Monitor Air Ducts, Filters and Fans



This series of four PASxx differential air flow switches are intended for use in air handling systems for the monitoring of air ducts, filters and fans.

The enclosure is plastic with a rating of IP54. A set-point adjustment is provided under the clip-on clear plastic cover.

Supplied complete with mounting adaptor ring, two straight duct probes and a 6-foot length of clear tubing.

Easy cable lead-in Integrated cable Case geometry allows easy cable strain relief

Case geometry allows easy cable lead-in

High accuracy

High adjustment accuracy through individual laser etched scale

Stable switching points

Long-term stability of switching points through trapezoidal bead diaphragm

APPLICATIONS

- High pressure monitoring
- Vacuum pressure monitoring
- Filter monitoring

Cable strain relief integrated in

PG11 (DIN 40430)

Snap cover User-friendly snap cover

Fan monitoring

SPECIFICATIONS

Medium		Air and neutral gases
Pressure range		See Ordering Information table
Set-point scale		Inches WC
Tolerable overload	on one side	20 in. WC at -22 to +185 °F
Repeatability	PAS01	±2.5 (0.01 in. WC)
	PAS02	±5 (0.02 in. WC)
	PAS03	±5 (0.02 in. WC)
	PAS04	±5 (0.02 in. WC)
Switching load	Resistive load	5 A at 250 Vac 4 A at 30 Vdc
	Inductive	0.8 A at 250 Vac 0.7 A at 30 Vdc
Materials in contact with the medium		Case: PC 10% GF Cover: PC Diaphragm: Silicone LSR tempered 200 °C, free of gas emissions
Operating temperature	Medium/ ambient	-22 to +185 °F (-30 to +85 °C)
	Storage	-40 to +185 °F (-40 to +85 °C)
Service life		Mechanical > 106 switching cycles
Electrical connection		Screw terminals Cable gland type PG11 (DIN 40430) complete with cable strain relief
Switch contact type		SPDT (change-over)
Protection standard	Without cover	IPOO
	With cover	IP54

Pressure connections	Pipe Ø 6.2 mm
Tests/admissions	EU Conformity, Electromagnetic Compatibility: CE ¹ conformity according to EN 60730-2-6:2008 Low Voltage Directive: 2014/35/EU Gas Appliance Directive: 2009/142/EC Pressure Sensing Devices for Gas Burners and Gas Burning Appliances: EN 1854:2010 EU Directive on RoHS: 2011/65/EU
WARRANTY	
Limited Warranty	5 years
AGENCY APPROVALS	

CE

* The CE mark indicates RoHS2 compliance. Please refer to the CE Declaration of Conformity for additional details.



DIMENSIONAL DRAWING









4 x hole PT - screw d_1 = 3.0 mm (0.12 in.)

FUNCTIONALITY

The pressure switch has two separate pressure chambers, each with its own connection. The switch operates when the setpoint is either exceeded or not reached.

Vacuum Monitoring

Connect the pressure switch via P2. Do not connect P1. Leave P1 open. Make sure that debris cannot get into P1.

High Pressure Monitoring

Connect the pressure switch via Pa. Do not Connect P2. Leave P2 open. Make sure that debris cannot get into P2.

Filter Monitoring

Connect P1 before the filter and P2 after it.

Fan Monitoring

Connect P1 after the fan (in blowing direction) and P2 before the fan.









Filter monitoring

ORDERING INFORMATION

PART NUMBER	DESCRIPTION	PRESSURE RANGE
PAS01		0.08 to 1.2 in. WC (20 to 300 Pa)
PAS02	Differential Air Pressure Switch	0.2 to 2.0 in. WC (50 to 500 Pa)
PAS03		0.4 to 4.0 in. WC (100 to 1000 Pa)
PAS04		2.0 to 8.0 in. WC (500 to 2000 Pa)

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PX SERIES

Selectable Ranges, LCD Display and Automatic Zero for Easy Operation



The digital PX Series differential pressure transducers utilize highly accurate, microprocessor profiled sensors and an advanced ceramic capacitive sensing element. Designed to monitor duct and room pressure in commercial buildings, the PX Series offers exceptional jobsite flexibility. PXP and PXD models feature four field-selectable ranges. The PXU features seven field-selectable ranges, allowing just one model to cover applications for 0 to 0.1" to 0 to 10" W.C. The directional mode jumper is used to configure the transducer in uni-directional or bi-directional mode for room and building static pressure applications. All models feature a pushbutton and digital input terminal to zero the output. The microprocessor is programmed to reduce accidental zero adjustment during normal operation.

SPECIFICATIONS

GENERAL

Media Compatibility	Dry air or inert gas
Input Power	Class 2; 12 to 30 Vdc, or 24 Vac nominal; 2-wire: 20 mA max.; 3-wire: 30 mA max.
Output	Field-selectable: 2-wire, loop-powered 4 to 20 mA (DC only, clipped & capped), or 3-wire 0-5 V/0-10 V *
Mode	Unidirectional or bidirectional, switch selectable
Display (option)	Signed 3-1/2 digit LCD, indicates pressure, overrange indicator
Zero Adjust	Pushbutton auto-zero & digital input (2-pos terminal block)
Fittings	Brass barb; 0.24" (6.1 mm) o.d.
Physical	UL 94 V-0 Fire Retardant ABS
PRESSURE RANGES	
PX: 01 Uni-directional Bi-directional	0.1/0.25/0.5/1.0" W.C. F.S., switch selectable $\pm 0.1/\pm 0.25/\pm 0.5/\pm 1.0$ " W.C. F.S., switch selectable 25 Pa/50 Pa/100 Pa/250 Pa, F.S., switch selectable ± 25 Pa/ ± 50 Pa/ ± 100 Pa/ ± 250 Pa, F.S., switch selectable
PX: 02 Uni-directional Bi-directional	1.0/2.5/5.0/10" W.C. F.S., switch selectable $\pm 1.0/\pm 2.5/\pm 5.0/\pm 10$ " W.C. F.S., switch selectable 0.25 kPa/0.5 kPa/1.0 kPa/2. 5 kPa, F.S., switch selectable ± 0.25 kPa/ ± 0.5 kPa/ ± 1.0 kPa/ ± 2.5 kPa, F.S., switch selectable

Reduce field failures

Excellent tolerance to overpressure & vibration reduces field failures

High accuracy

High accuracy digital sensor maintains calibration and reduces callbacks

Maintenance free

High reliability sensor technology for long-term, maintenance-free operation

APPLICATIONS

- Static pressure in building, duct or room applications
- Variable air volume system control

Reduce setup

Selectable ranges and scales reduce setup time and number of models to stock

Microprocessor

Microprocessor-based design allows for digitally profiled sensor increasing product accuracy and reliability

Circuit protection

Circuit protection avoids damage due to incorrect input wiring

- Filter status monitoring
- Clean rooms, hospitals, fume hoods, computer rooms, and other very low differential pressure applications

PXU: 05	
Uni-directional	0.1/0.25/0.5/1.0/2.5/5/10″ W.C. 25 Pa/50 Pa/100 Pa/250 Pa/0.5 kPa/1 kPa/2.5 kPa F.S. switch selectable
Bi-directional	±0.1/0.25/0.5/1.0/2.5/5/10″ W.C. 25 Pa/50 Pa/100 Pa/250 Pa/0.5 kPa/1 kPa/2.5 kPa F.S. switch selectable
SENSOR	
Response Time	Standard: T95 in 20 sec, Fast: T95 in 2 sec, switch selectable
Proof Pressure	3 psid (20.6 kPa)
Burst Pressure	5 psid (34.5 kPa)
Accuracy	$\pm 1\%$ F.S. of selected range (combined linearity and hysteresis)
Temperature Effect	1" (250 Pa) models: 0.05%/°C; 10" (2.5 kPa) models: 0.01%/°C; (Relative to 25°C) 0° to 50°C (32° to 122°F)
Zero Drift (1-year)	1" (250 Pa) models: 2.0% max.; 10" (2.5 kPa) models: 0.5% max.
Operating Environment	0 to 60 °C (32 to 140 °F); 0 to 90% RH non-condensing
WARRANTY	

Limited Warranty 5 years

AGENCY APPROVALS



EMC Conformance: Low voltage directive 2014/35/EU; EMC directive 2014/30/EU. EMC Special Note: Connect this product to a DC distribution network or an AC/DC power adaptor with proper surge protection (EN 61000-6-1 specification requirements). *Minimum input voltage for 4 to 20 mA operation: $250 \Omega \log p = 13 Vdc; 500\Omega \log p = 19 Vdc.$

*The CE mark indicates RoHS2 compliance. Please refer to the CE Declaration of Conformity for additional details.

3-WIRE, 0-5 V/0-10 V





DIMENSIONAL DRAWING



	РХ	(01	РХ	02	РХ	05
ROTARY SWITCH POSITION	INCHES W.C.	PASCAL	INCHES W.C.	PASCAL	INCHES W.C.	PASCAL
0	0.1	25	1	250	0.1	25
1	0.25	50	1	250	0.25	50
2	0.5	100	1	250	0.5	100
3	1	250	1	250	1	250
4	1	250	2.5	0.5kPa	2.5	0.5kPa
5	1	250	5	1kPa	5	1kPa
6	1	250	10	2.5kPa	10	2.5kPa
7	1	250	10	2.5kPa	10	2.5kPa

2-WIRE, 4 TO 20 MA

Wiring Diagram



ORDERING INFORMATION





EP2 SERIES

Micro-Controlled with High-Performance, Low-Power Coil Poppet Valve Technology



EP S Obs

EP Series transducers are sold as an open device. Observe handling precautions for static sensitive devices to avoid damage to the circuitry which would not be covered under the factory warranty.

The EP2 Series electropneumatic pressure transducer uses microcontrolled poppet valve technology for highly accurate pressure sensing in multiple applications. The poppet valves consume no air, eliminating unnecessary air losses in the system and allowing for stable and reliable operation. The EP2 comes installed on standard SnapTrack, and an optional dust cover is available to protect from the environment. An LCD display and LED indicators make it easy to read system status at a glance.

SPECIFICATIONS

GENERAL

Input Power	Class 2; 24 Vac/dc nominal, 30 Vac max.; 150 mA max.
Control Input	Class 2; 4 to 20mA/0-5 V/0-10 Vdc; jumper-selectable
Input Impedance	4 to 20 mA, 250 $\Omega;$ 0-5 V/0-10 Vdc, 10 k Ω
Manual Override	Jumper-selectable mode, digital pushbutton adjust
Alarm Contact	100 mA@30 Vac/dc (pressure loss, manual mode, jumper selectable)
Accuracy	1% FS; combined linearity, hysteresis, repeatability
Compensated Temp Range	-4 to 65 °C (25 to 140 °F)
Temperature Coefficient	+0.05%/°C

Field selectable

Field-selectable 4 to 20 mA/ 0-5 V/0-10 Vdc input for application flexibility

Quiet operation

Poppet valve technology for quiet operation

Manual override

Manual override with set and hold feature...great for commissioning leaky systems

APPLICATIONS

- Hospitals
- Schools

Multi-point calibration

Multi-point calibration; 3 to 15 psi (5-point calibration) and 0 to 20 psi (6-point calibration)

Pressure loss alarm

Pressure loss alarm provides a contact closure if the EP3 is unable to achieve the desired output within a fixed length of time

Fail-safe vent

Fail-safe vent solenoids bleed branch pressure on power failure for added safety

Pneumatic dampers/actuators

Operating Environment	10 to 90% RH non-condensing
Air Capacity	523 in3/min @ 45 psi (8570 cm3/min @ 310.3 kPa); 333 in3/min @ 20 psi (5456 cm3/min @ 137.9 kPa)
Supply Pressure	45 psig max.
Control Range	0 to 20 psig or 3 to 15 psig, jumper-selectable
Pressure Differential	0.1 psig (supply to branch)
Pressure Indication	Electronic, 3-1/2 digit LCD
Minimum Tubing Length	15 feet*
Port Connection	1/8" I.D. poly tubing
Media Connection	Clean, dry air, or inert gas. Do not use with oxygen service
WARRANTY	
Limited Warranty	5 years

AGENCY APPROVALS



*For shorter tubing runs use AA45 Pneumatic Capacitor

EMC Conformance - CE option: Low voltage directive 2014/35/EU; EMC directive 2014/30/EU. EMC Special Note: Connect this product to a DC distribution network or an AC/DC power adaptor with proper surge protection (EN 61000-6-1 specification requirements).

**The CE mark indicates RoHS2 compliance. Please refer to the CE Declaration of Conformity for additional details.





CONFIGURATION



DIMENSIONAL DRAWINGS



Side View

DUST COVER

Dimensional Drawings (Front View)

4.9" (125 mm)



If the dust cover is ordered, the EP2 is mounted to a longer Snaptrack.

ORDERING INFORMATION





EP3 SERIES

Micro-Controlled with High-Performance, Low-Power Coil Poppet Valve Technology



EP

EP Series transducers are sold as an open device. Observe handling precautions for static sensitive devices to avoid damage to the circuitry which would not be covered under the factory warranty.

The EP3 Series combines a microcontroller with high performance, low power coil poppet valve technology to create a system with unparalleled accuracy and proven reliability. The poppet valves used in the EP3 consume no air, eliminating unnecessary air losses in the system and allowing for efficient, long-term operation. The EP3 permits versatility, since all models feature manual override and a tri-state control option. The LCD provides easy visibility and the LED indicators provide visual status of valve operation in manual or automatic mode. All models come with SnapTrack housing and optional covers are available.

SPECIFICATIONS

GENERAL

Input Power	Class 2; 22 to 30 Vdc/20 to 30 Vac, 47 to 63 Hz,150 mA max. average, 350 mA peak
Control Input	Class 2; 4 to 20 mA/0-5 V/0-10 Vdc; switch- selectable, Tri-State, PWM
Input Impedance	4 to 20 mA, 250 $\Omega;$ 0-5 V/0-10 Vdc, 10 k Ω
Manual Override	Digital pushbutton adjust, switch-selectable mode
Alarm Contact	100 mA@30 Vac/dc (Pressure loss, manual mode, jumper selectable)
Accuracy	1% FS; combined linearity, hysteresis, repeatability @20 °C (68 °F) ambient
Temperature Coefficient	±0.1%/°C
Operating Temp Range	41 to 140 °F (5 to 60 °C)
Operating Hum. Range	10 to 90% RH non-condensing

Field-selectable

Field-selectable 4 to 20 mA/ 0-5 V/0-10 Vdc input for application flexibility

Quiet operation

Poppet valve technology for quiet operation

Manual override

Manual override with set and hold feature...great for commissioning leaky systems

APPLICATIONS

- Hospitals
- Schools

Multi-point calibration

3 to 15 psi (5-point calibration) and 0 to 20 psi (6-point calibration)

Pressure loss alarm

Pressure loss alarm provides a contact closure if the EP3 is unable to achieve the desired output within a fixed length of time

Fail-safe vent

Fail-safe vent solenoids bleed branch pressure on power failure for added safety

Pneumatic dampers/actuators

SCIM	523 in3/min @ 45 psi; (8570 cm3/min @ 310.3 kPa); 333 in3/min @ 20 psi (5457 cm3/min @ 137.9 kPa)
Supply Pressure	Min (0.1 psi + user F.S. pressure); Max 45 psig
Control Range	User programmable zero selectable from 0 to 25 psi: Full scale 0 to 25 psi
Pressure Differential	0.1 psig (supply to branch)
Pressure Indication	Electronic, 3-1/2 digit backlit LCD
Min. Tubing Length	15 feet*
Port Connection	1/8" I.D. poly tubing
Media Connection	Clean, dry air, or inert gas. Do not use with oxygen service
WARRANTY	
Limited Warranty	5 years
A CENCY ADDDOVALC	

AGENCY APPROVALS

CE Available

*For shorter tubing runs use the Veris AA45 Pneumatic Capacitor EMC Conformance: Low voltage directive 2014/35/EU; EMC directive 2014/30/EU. EMC Special Note - CE option: Connect this product to a DC distribution network or an AC/DC power adaptor with proper surge protection (EN 61000-6-1 specification requirements).

**The CE mark indicates RoHS2 compliance. Please refer to the CE Declaration of Conformity for additional details.



CURRENT/VOLTAGE CONTROL

Wiring Diagrams



Input switch set to voltage (0 to 5 Vdc or 0 to 10 Vdc)
Input volt jumper set to either 0 to 5 Vdc or 0 to 10 Vdc
Input switch set to 4 to 20 mA
Output jumper set to 0 to 10 Vdc

TRI-STATE CONTROL





ORDERING INFORMATION



DIMENSIONAL DRAWINGS



DUST COVER

Dimensional Drawings (Front View)



Side View



CONFIGURATION



PG SERIES

Rugged Stainless Steel Construction



Versatile

A wide operating temperature range of -40 to 85 °C (-40 to 185 °F) for operation versatility

Fewer parts to fail

No silicon oil, no internal O-rings, no welds

Sturdy construction

Suitable for high shock and vibration applications

Rugged

Stainless steel wetted construction

APPLICATIONS

- Pump inlet/outlet and compressors
- Hydraulic/pneumatic systems
- Energy and water management

,	Refrigeration	equipment, fluids	
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Gas pressure measurement

The durable PG Series pressure transducers are ideal for a wide variety of HVAC/R and industrial applications, such as refrigeration measurement, pneumatic pressure measurement, gas pressure measurement, pump inlet, and outlet fluid pressure. They are even compatible with extreme applications, such as aerospace and motor sports equipment.

SPECIFICATIONS

GENERAL

Supply Voltage	Class 2; 10 to 28 Vdc
Output	0 to 5 (3-wire), 0 to 10 Vdc (3-wire), or 4 to 20 mA (2-wire)
Load Impedance	>100 kΩ
Standard Connection	Cable gland 24" (600 mm) length
Pressure Port	1/4" NPT Male
PERFORMANCE AT 25 °C (72	7 °F)
Accuracy *	±0.25% BFSL **
Media Compatibility	Fluids & gases compatible with 316L stainless steel
Pressure Cycles	>100 million cycles
Over Pressure	2x F.S. without change in calibration
Burst Pressure	5x rated pressure or 20,000 psi
ENVIRONMENTAL	
Shock	100G, 11 msec, 1/2 sine
Vibration	20G peak, 20 to 2400 Hz;
EMI/RFI Protection	Yes
Rating	IP-66
Operating Temp Range	-40 to 85 °C (-40 to 185 °F)
Compensated Temp Range	0 to 55 °C (32 to 130 °F)
Total Error Band Over Temp	<±3% of FS
Humidity	0 to 95% RH non-condensing

WARRANTY

Limited Warranty	5 years
AGENCY APPROVALS	
CE	

* Accuracy includes nonlinearity and hysteresis. ** BFSL = Best fit straight line

***The CE mark indicates RoHS2 compliance. Please refer to the CE Declaration of Conformity for additional details. Deluxe models only.



3-WIRE, 0-5 VDC/0-10 VDC



Red (+V) Blue or Black (-V) Yellow or White (Output) 2-WIRE, 4 TO 20 MA Wire Color Coding



DIMENSIONAL DRAWING



ORDERING INFORMATION





PW SERIES

Jumper-Selectable Port Swap Feature



The PW Series wet pressure transducers incorporate microprocessor profiled sensors for exceptional accuracy and reliability. Easy to use and designed to provide exceptional installation savings, the PW Series is ideal for measuring pressure across pumps, filters, heat exchangers, compressors, and other non-corrosive wet media applications.

The jumper-selectable port swap feature eliminates costly replumbing when the high and low ports are improperly plumbed, allowing the jumper position to be changed from normal to swap.

SPECIFICATIONS

CENEDAL

GENERAL	
Input Power	Class 2; 12 to 30 Vdc or 24 Vac nominal, 50/60 Hz
Max. Current Draw	DC: 125 mA; AC: 280 mA
Output	3-wire transmitter; user selectable 4 to 20 mA (clipped & capped)/0-5 V/0-10 V*
Surge Damping	Electronic; 5-second averaging
Test Mode	Overrides output to full-scale (20 mA, 5 V, 10 V)
Zero Adjust	Pushbutton auto-zero & digital input (2-pos terminal block)
Status Indication	Dual-color LED: Green = Normal, Green Blinking = Low > High, Red = Overrange, Red Blinking = Overpressure
Housing Material	White powder-coated aluminum
Fittings	psig: 1/8" NPT female thread, 17 to 4 PH stainless; barg: 1/8" BSPT female thread, 17 to 4 PH stainless
PRESSURE RANGES (SELEC	TABLE)
0 to 50 psig (Gauge)	0 to 5/10/25/50 psid (Differential)
0 to 100 psig (Gauge)	0 to 10/20/50/100 psid (Differential)
0 to 250 psig (Gauge)	0 to 25/50/125/250 psid (Differential)
0 to 3.5 barg (Gauge)	0.35/0.7/1.75/3.5 bard (Differential)
0 to 7.0 barg (Gauge)	0.7/1.4/3.5/7.0 bard (Differential)
0 to 17.0 barg (Gauge)	1.7/3.4/8.5/17.0 bard (Differential)
SENSOR	
SENSOR Accuracy @ 25 °C**	Range A, B, C: ±1% F.S.; Range D: ±2% F.S.***
SENSOR Accuracy @ 25 °C** Long Term Stability	Range A, B, C: ±1% F.S.; Range D: ±2% F.S.*** ±0.25% per year
SENSOR Accuracy @ 25 °C** Long Term Stability Media Compatibility	Range A, B, C: ±1% F.S.; Range D: ±2% F.S.*** ±0.25% per year Media compatible with 17 to 4 PH stainless steel
SENSOR Accuracy @ 25 °C** Long Term Stability Media Compatibility Proof Pressure	Range A, B, C: ±1% F.S.; Range D: ±2% F.S.*** ±0.25% per year Media compatible with 17 to 4 PH stainless steel Max. 2x F.S. range
SENSOR Accuracy @ 25 °C** Long Term Stability Media Compatibility Proof Pressure Burst Pressure	Range A, B, C: ±1% F.S.; Range D: ±2% F.S.*** ±0.25% per year Media compatible with 17 to 4 PH stainless steel Max. 2x F.S. range Max. 5x F.S. range

The jumper-selectable output switch for normal (4 to 20 mA) or reverse (20 to 4 mA) operation provides application flexibility

Rugged

Rugged, die-cast enclosure provides NEMA 4 sealing

High stability

Jumper-controlled electronic surge dampening for high stability

APPLICATIONS

- Monitoring and controlling pump differential pressure
- Chiller/boiler differential pressure drop

Jumper-selectable Switch-selectable

Switch-selectable pressure ranges...fewer models to order and stock

Zero calibration

Pushbutton and remote zero adjustment...maintain accuracy and reduce callbacks with automatic zero calibration

CW/HW system differential pressure

Temperature Compensated Range	0 to 50 °C (32 to 122 °F); TC Zero < \pm 1.5% of product F.S. per sensor ; TC Span< \pm 1.5% of product F.S. per sensor, (2 sensors per unit)
Media Temp Limits	-20 to 85 °C (-4 to 185 °F); 0 to 90% RH non-condensing
Product Operating Environment	-10 to 55 °C (14 to 130 °F); 0 to 90% RH non-condensing
WARRANTY	
Limited Warranty	5 years
AGENCY APPROVALS	



*Minimum input voltage for 4 to 20 mA operation: 250Ω loop (1 to 5 V) = 12 Vdc; 500 Ω loop (2 to 10 V) = 15 Vdc; Minimum input voltage for volt operation: 0 to 5 Vdc output = 12 Vdc; 0 to 10 Vdc output = 15 Vdc.

**Accuracy combines linearity, hysteresis, and repeatability.

***FS is defined as full span of selected range in bi-directional mode.

EMC Conformance - CE option: Low voltage directive 2014/35/EU; EMC directive 2014/30/EU. EMC Special Note: Connect this product to a DC distribution network or an AC/DC power adaptor with proper surge protection (EN 61000-6-1 specification requirements).

† The CE mark indicates RoHS2 compliance. Please refer to the CE Declaration of Conformity for additional details.







* Select operational range according to maximum gauge pressure, NOT differential pressure.

Example: High gauge pressure=90 psig, Select 100 psig model (04).

**Barg models use BSPT threads on sensor fittings

***Not available with barg units

O Contraction of the second se

Noise Rejection

Output Clamping

5

Actual Pressure TIME
 Digitally Conditioned Output



F.S

PRESSURE

PW2 SERIES

4 to 20 mA, 2-Wire Device



The PW2 Series 2-wire, 4 to 20 mA wet pressure transducers incorporate microprocessor profiled sensors for exceptional accuracy and reliability. Easy to use and designed to provide exceptional installation savings, the PW2 Series is ideal for measuring pressure across pumps, filters, heat exchangers, compressors, and other non-corrosive wet media applications

Jumper selectable Dual sensor

The jumper-selectable output switch for normal (4 to 20 mA) or reverse (20 to 4 mA) operation provides application flexibility

Rugged

Rugged, die-cast enclosure provides NEMA 4 sealing

Selectable

Selectable differential units: psid or bard

APPLICATIONS

- Monitoring and controlling pump differential pressure
- Chiller/boiler differential pressure drop

Dual sensor design for improved overpressure tolerance... eliminates the requirement for a bypass valve assembly in most applications

High stability

Jumper-controlled electronic surge dampening for high stability

Zero calibration

Pushbutton zero calibration - no trim pots to adjust...maintain accuracy and reduce callbacks with automatic zero calibration

CW/HW system differential pressure

SPECIFICATIONS

GENERAL

Input Power	Class 2; 12 to 24 Vdc, loop powered (polarity insensitive)
Maximum Current Draw	29 mA
Output	2-wire transmitter; user selectable 4 to 20 mA (clipped & capped)*
Surge Damping	Electronic; 5-second averaging
Zero Adjust	Pushbutton auto-zero terminals
Housing Material	White powder-coated aluminum
PRESSURE RANGES (SELEC	TABLE)
0 to 50 psi (0 to 3.45 barg) (Gauge)	0-5/10/25/50 psid (0-0.34/0.69/1.72/3.45 bard) (Differential)
0 to 100 psig (0 to 6.89 barg) (Gauge)	0-10/20/50/100 psid (Differential) (0-0.69/1.38/3.45/6.89 bard) (Differential)
0 to 250 psi (0 to 17.24 bar) (Gauge)	0-25/50/125/250 psid (Differential) (0-1.72/3.45/8.62/17.24 bard) (Differential)
SENSOR	
Accuracy @ 25 °C**	Range A, B, C: ±1% F.S.; Range D: ±2% F.S.***
Media Compatibility	Media compatible with 17-4 PH stainless steel
Long Term Stability	±0.25% per year
Proof Pressure	Max. 2x F.S. range
Burst Pressure	Max. 5x F.S. range

Temperature Compensated Range	0 to 50 °C (32 to 122 °F); TC Zero < \pm 1.5% of product F.S. per sensor ; TC Span< \pm 1.5% of product F.S. per sensor, (2 sensors per unit)
Media Temperature Limits	-20 to 85 °C (-4 to 185 °F); 0 to 90% RH non-condensing
Product Operating Environment	-10 to 55 °C (14 to 130 °F); 0 to 90% RH non-condensing
WARRANTY	
Limited Warranty	5 years

AGENCY APPROVALS



* Minimum input voltage: 250 Ω loop = 12 Vdc; 500 Ω loop = 17 Vdc

**Accuracy combines linearity, hysteresis, and repeatability.

***FS is defined as full span of selected range in bi-directional mode.

EMC Conformance - CE option: Low voltage directive 2014/35/EU; EMC directive 2014/30/EU. EMC Special Note: Connect this product to a DC distribution network or an AC/DC power adaptor with proper surge protection (EN 61000-6-1 specification requirements).

† The CE mark indicates RoHS2 compliance. Please refer to the CE Declaration of Conformity for additional details.





Bidirectional Operation				
Input Conditions			Result	Outputs Read
HI PORT	LO PORT		DP	4-20mA
100 psi	0 psi	+1	00 psi	20mA
100 psi	50 psi	+	-50 psi	16mA
50 psi	50 psi		0 psi	12mA
50 psi	100 psi	-	-50 psi	8mA
0 psi	100 psi	-1	00 psi	4mA

DIMENSIONAL DRAWING





ORDERING INFORMATION



MICROPROCESSOR PROVIDES DIGITAL SIGNAL CONDITIONING

- Noise rejection reduces fluctuating readings due to noise or turbulence
- Surge damping prevents false





PWR SERIES

3-Wire Device, User-Selectable Output



The PWR Series remote wet media pressure transducers allow remote pressure sensing capability using existing plumbing runs. With no need to run plumbing lines all the way to the transducer, the installation time and cost is greatly reduced. Select either armored (6 ft.) or shielded (10 or 20 ft.) cable, depending on the application.

Armor cable

Armor cable or conduit connector minimizes the need for field customization

Lower costs

Remote probes reduce need for plumbing or bypass assemblies... lower costs and reduced labor for installation

Zero calibration

Pushbutton zero calibration – no trim pots to adjust...maintain accuracy and prevent callbacks with automatic zero calibration

Switch-selectable

Switch-selectable pressure ranges...fewer models to order and stock

APPLICATIONS

- Monitoring and controlling pump differential pressure
- Chiller/boiler differential
 pressure drop
- CW/HW system differential pressure

SPECIFICATIONS

GENERAL

Input Power	Class 2; 15 to 30 Vdc, 24 Vac nom. 50/60 Hz*
Maximum Current Draw	DC: 125 mA; AC: 280 mA
Output	3-wire transmitter; user-selectable 4 to 20mA/ 0 to 5 V/0 to 10 V
Status Indication	Dual color LED
Surge Damping	Electronic; 1 or 5 second averaging
Zero Adjust	Pushbutton auto-zero and digital input (2-position terminal block)
Fittings	1/4" NPT male thread, stainless steel 17-4 PH Overall thread length: 0.5946" (conforms to ANSI/ASME B1.20.1 standard)
SENSOR	
Media Compatibility	17-4 PH stainless steel
Proof Pressure	2x max. F.S. range**
Burst Pressure	5x max. F.S. range**
Accuracy at 25 °C***	Ranges A and B: ±1% F.S. typical; Range C: ±1.5% F.S. typical; Range D: ±2% F.S. typical. (For less than or equal to 20 ft. (6.1 m) cable length)
Long Term Stability	±0.25%
Zero Offset (Bidirectional and Port Swap Modes Only)	±0.5%
Temperature Compensated Range	0 to 50 °C (32 to 122 °F); TC Zero <1.5% of product F.S. per sensor; TC Span <1.5% of product F.S. per sensor

PRESSURE RANGES

0 to 50 psig (Gauge)	5/10/25/50 psid (Differential)	
0 to 100 psig (Gauge)	10/20/50/100 psid (Differential)	
0 to 250 psig (Gauge)	25/50/125/250 psid (Differential)	
OPERATING CONDITIONS		
Sensor Operating Range	-20 to 85 °C (-4 to 185 °F)	
Operating Environment	-10 to 50 °C (14 to 122 °F); 10 to 90% RH non-condensing	
WARRANTY		
Limited Warranty	5 years	
COMPLIANCE INFORMATION		
Approvals	RoHS, CE, NEMA4, IP65 at sensor	

CE

*VFD systems and system wiring generate fields that can disrupt electrical devices. Ensure that these fields are minimized and are not affecting the sensor or sensor wiring. **F.S. is defined as full span of selected range.

***Accuracy combines linearity, hysteresis, and repeatability.

+ The CE mark indicates RoHS2 compliance. Please refer to the CE Declaration of Conformity for additional details.





	Range			
Model	А	В	C	D
-03	50	25	10	5
-04	100	50	20	10
-05	250	125	50	25

Wire Colors (coming from sensor cable)		
Red	Power	
Uninsulated	Shield	
White/Clear	Signal	
Black	Common	

	DIP Switches		
Num	Function	Off/On ¹	
1	Damping	Fast/Slow	
2	Test	Operate/Test	
3	Mode	Normal/Bidirec.	
4	Analog	Normal/Reverse	
5	Port	Normal/Swap	
6	Voltage Out ²	0 to 10 V/0 to 5 V	

1. "Off" position is the default setting for all DIP switches. 2. Ignored in mA mode.

DIMENSIONAL DRAWING



ORDERING INFORMATION



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Example: High gauge pressure=90 psig, Select 100 psig model (04).

** Standard cable available only in 10 ft and 20 ft lengths.

*** Armored cable available only in 6 ft length.

Note: Extension of total cable length greater than 20 feet may result in reduced accuracy.