MODUS

Modus W Series

General Eastern Liquid Differential Pressure Transmitters

The Modus W Series pressure transmitters are designed to measure low differential pressures of liquids or gases. A wide selection of standard pressure ranges and electrical ratings is available.

These transmitters feature no moving parts to wear out, a proven long term stability of piezoresistive devices, only 316 stainless steel in contact with the fluid, and an all-welded construction.

Modus W Series transmitters are an excellent choice for many HVAC, process and automation monitoring requirements. Typical applications include measurement of differential pressure across flow elements, heat exchangers, pumps and filters, liquid level monitoring and other demanding differential pressure measurement and control applications.

The transmitters are housed in a compact, heavy duty, gasketted, cast aluminum enclosure designed to IP 65 of IEC 529 standards and Type 4. The die cast aluminum enclosure incorporates a recessed neoprene gasket to prevent the ingress of moisture or dust. Wall mounting holes are enclosed in the cast aluminum box and concealed by the cover. The wall mounting holes and the cover attaching screws are outside the gasketted area.

Access to the electrical terminals are made through knockouts on the front of the box. A choice of two knockouts and three hole sizes are available to accommodate usage of 0.5 in (12.7 mm) conduit or metric sizes PG11 and PG13.

Pluggable terminal block connectors are provided with wire protection and captive terminal screws.

The Modus W Series includes one model: Model W30.

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This model is available with the following power and signal configuration:

Model W30
a
3c
c0dc

The span or zero adjustment is performed with a 20-turn potentiometer for fine resolution. A 50% adjustment in output is possible.

The Series W transmitters comply with the European requirements of Council Directive 2004/108/EC.

Operation

The pressure transmitter consists of two high accuracy piezoresistive sensors with stainless steel isolation diaphragms. Both sensors measure static pressure, and the difference between these two measurements is computed electronically. The use of high accuracy and stable sensors makes this measurement possible. Since each sensor measures the full static pressure, there is no possibility of over-pressurizing the transmitter if one sensor is disconnected from the line. No complex and/or expensive balancing valves are needed.

W Series Specifications

Performance

Accuracy
±1/2% of differential pressure range (includes non-linearity and hysteresis) or ±1% for 6 psid (50 kPA) range

Effect of Static Pressure on Differential Pressure Measurement
Less than ±0.25% for static pressure change from 0 to 100% or ±0.5% for 6 psid (50 kPa) range

Calibration
Traceable to National Institute of Standards and Technology (NIST)

Environmental
Process wetted surfaces are 316 stainless steel.

Operating Temperature Range
32°F to 122°F (0°C to 50°C)

Storage Temperature
-20°F to 160°F (-30°C to 70°C)

Effect of Temperature
On zero: ±0.05%/°C or ±0.1%/°C for 6 psid (50 kPa) range
On span: ±0.03%/°C or ±0.06%/°C for 6 psid (50 kPa) range

Operating Humidity Range
10% to 90% RH, non-condensing

Shock Resistance
10 G (11 ms)

Vibration Resistance
5 G 3 to 50 Hz

Electrical Connectors
Polarized Euro plug/connectors.

Connections
Pluggable terminal block for wire 14 to 26 AWG.
Mating connector is supplied

Connection to enclosure ground is provided.

Connector rating
10 Amps/300 V

Material
Glass-filled polyester

Physical

Dimensions
3.56 in x 4.54 in x 2.18 in (90 mm x 115 mm x 55 mm)

Enclosure material
Aluminum Alloy #A380

Cover screws
M4 stainless steel non-magnetic

Finish
Black epoxy paint

Knockout
Choice of 2 holes
Hole sizes are offered in a choice of 1/2 in (12.7 mm) conduit or metric sizes of PG11 or PG13.
Cable glands not included.

Pressure port connections
1/8-28 female NPT

Weight
1.2 lb (540 g)

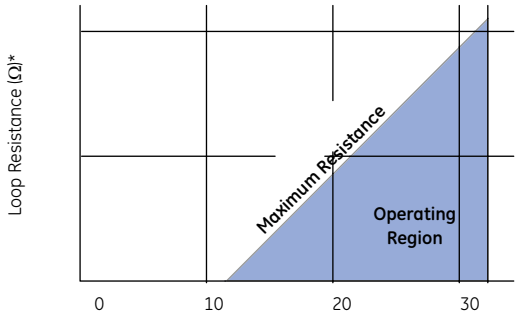
W30 Series Specifications

Electrical

Supply Voltage
11 to 32 VDC (See diagram for maximum loop resistance)

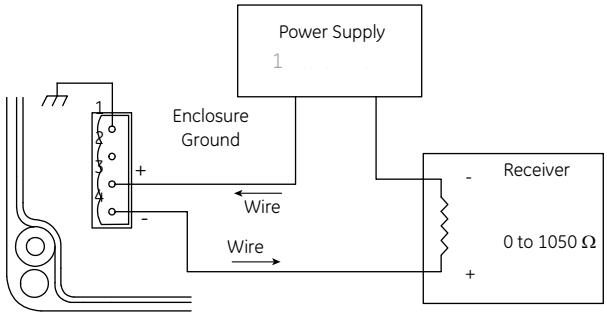
Output
Two-wire/4 to 20 mA output

Protected against reversal of polarity. Output limited to approximately 3.85 mA at low end of span and approximately 25 mA at upper end of span.



Power Supply Voltage

**Loop resistance = wire resistance + receiver resistance*



Standard Pressure Ranges for Modus W Series

US Units

Pressure Code	Differential Pressure Range, psid	Operating Static Pressure, psi
31E	0 to 6 psi	
32E	0 to 10 psi	0 to 100 psi
33E	0 to 15 psi	
34E	0 to 30 psi	
35E	0 to 60 psi	
36E	0 to 100 psi	0 to 300 psi
37E	0 to 150 psi	
38E	0 to 200 psi	

Metric Units, Millimeters of Water

Pressure Code	Differential Pressure Range, k mm H_2O	Operating Static Pressure, k mm H_2O
31M	0 to 5.0 k mm H_2O	
32M	0 to 7.5 k mm H_2O	0 to 70 k mm H_2O
33M	0 to 10 k mm H_2O	
34M	0 to 20 k mm H_2O	
35M	0 to 50 k mm H_2O	
36M	0 to 75 k mm H_2O	0 to 200 k mm H_2O
37M	0 to 100 k mm H_2O	
38M	0 to 150 k mm H_2O	

Metric Units, Pascal

Pressure Code	Differential Pressure Range, kPa	Operating Static Pressure, kPa
31P	0 to 50 Pa	
32P	0 to 75 Pa	0 to 700 kPa*
33P	0 to 100 Pa	
34P	0 to 200 Pa	
35P	0 to 500 Pa	
36P	0 to 750 Pa	0 to 2000 kPa
37P	0 to 1000 Pa	
38P	0 to 1500Pa	

Ordering Information

Record selected option in blank indicated at bottom of form.

W30

	Code	Pressure Range (PPP)
	X	See Standard Pressure Ranges Tables
	Code	Knockout Quantity (KQ)
	2	Two holes
	Code	Knockout Size (KS)
	R	1/2 in (12.7 mm) conduit
	S	PG 11

W30 - ___ - ___ - ___ **Typical model number.**

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www.amphenol-sensors.com

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