

AcuPRE™ WM Series

Wall Mount Differential Pressure Sensor
Datasheet



Designed for accurate pressure measurement in localized spaces, the AcuPRE WM series differential pressure sensor is suitable for wall mount installations with minimum surface exposure. It employs a high-accuracy MEMS sensor to measure positive, negative, and differential pressure (DP) to monitor airflow, building or room pressure, or indicate when filters need to be replaced. The DP sensor features configurable settings, including zero calibration, pressure range, response time, and unit of measurement. The AcuPRE WM sensor includes a 4-digit LCD that aids in troubleshooting and installation.

Features

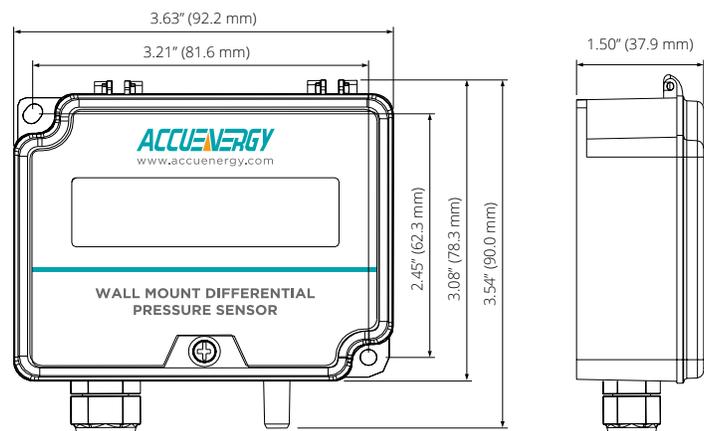
- ±1.0% full range accuracy ensuring precise measurements.
- Designed for wall/surface mount applications.
- Field selectable ranges as low as 0 to 0.1 inWC up to 0 to 40 inWC based on model number selection.
- Unidirectional or bidirectional measurements.
- 0.5/1/2/5s user selectable response time.
- User selectable units of measurement with DIP switches allowing quick unit conversion.
- All models come with 4-digit LCD display.
- IP 65 rated water-resistant & UL94V-0 fire retardant enclosure.
- Easy zero calibration to remove offset errors.



Specifications

ELECTRICAL	
Voltage Power	16~28VAC/ 16~35VDC
Current Power	18.5~35VDC (RL=500Ω), 8.5~35VDC (RL=0Ω)
Output (Based on Select Models)	0~5VDC, 0~10VDC, 4~20mA (2 Wires)
Output Load	≤500Ω (Current), ≥2kΩ (Voltage)
ENVIRONMENTAL	
Medium	Non-Combustible, Non-Corrosive Air
Medium Temperature Range	0 to 60°C (32 to 140°F)
Operating Temperature Range	-20 to 70°C (-4 to 158°F)
Temperature Compensation	0 to 50°C (32 to 122°F)
Working Pressure	Overload 10xFS, Burst 15xFS
MECHANICAL	
Mounting	2-Screw Surface Mount with Hinged Cover
Connection	5mm ID Tubing (0.19") High/Low Pressure Ports
Weight	165g (0.36 lbs)
Display	4-Digit LCD, Size 65x18mm (2.56"x0.70") with Unit Indication
PERFORMANCE	
Accuracy	±1.0% FS (±2.0% FS@0.10 inWC Range)
Stability	±0.5% FS/Year
Thermal Effect	<0.08% FS/°C (FS) (+/- 0.045% FS/°F)
Response Time	0.5/1/2/5s, Can be Set by DIP Switches
CERTIFICATIONS/WARRANTY	
Enclosure Material	ABS+PC (Housing) & PC (Cover), Fire Retardant UL94V-0
Protection	IP65
Agency Approvals	CE
Warranty	5 Years

Dimensions



ACCESSORIES

Pressure Tip

Designed to be compatible with AcuPRE DP sensors, these pressure tips are available in straight or L-type, 0° or 60° angle openings, stainless steel or ABS. Supported in both static and total pressure, ensuring reliable pressure measurements in demanding environments.



Clear PVC Tubing

Accuenergy offers clear PVC tubing designed for all AcuPRE differential pressure sensors. Available in 6.5' (2m) and 330' (100m) options, suitable for various installation conditions.



Pressure Pickup Port

A pickup port is an inlet connected to a DP sensor, allowing the sensor to sample air pressure while preventing large particles from entering the pressure ports and damaging the sensor. Accuenergy offers both room pressure pickup ports and wall plate stainless steel pickup ports.



Range Selection Chart

+ Range Code	Unit, Range, and Display Resolution				
	inWC	Pascals	kPa	mmWC	mbar
1	0.1	25	0.025	2.5	0.25
	0.25	60	0.06	6	0.6
	0.5	125	0.125	12	1.25
2	1	250	0.25	25	2.5
	2	500	0.5	50	5
	4	1000	1	100	10
3	10	2500	2.5	250	25
	20	5000	5	500	50
	40	10000	10	1000	100

Ordering Information

+ Model	- Range (inWC) <i>See Range Selection Chart for Field Selectable Options</i>	- Display	- Output	+ Accessories (Optional)
AcuPRE-WM	01: 0-0.1", 0.25", 0.5" Unidirectional	A: With Display	1: 4 to 20mA	AcuPRE-XX-001 Clear PVC Tubing 0.19"(5mm) ID x 0.27"(7mm) OD x 6.5' (2m) Length.
	02: 0-1.0", 2.0", 4.0" Unidirectional		2: 0 to 5 VDC	AcuPRE-XX-002 Clear PVC Tubing 0.19"(5mm) ID x 0.27"(7mm) OD x 330' (100m) Length.
	03: 0-10", 20", 40" Unidirectional		3: 0 to 10 VDC	AcuPRE-XX-003 Static pressure tip, straight type, ABS, 0° angle opening.
	04: -0.125" to +0.125", -0.25" to +0.25" Bidirectional		AcuPRE-XX-004 Total pressure tip, straight type, ABS, 60° angle opening.	
	05: -0.50" to +0.50", -1.0" to +1.0", -2.0" to +2.0" Bidirectional		AcuPRE-XX-005 Static pressure tip, straight type, 304SS, 0° angle opening, 125mm (4.92").	
				AcuPRE-XX-006 Static pressure tip, straight type, 304SS, 0° angle opening, 200mm (7.87").
				AcuPRE-XX-007 Static pressure tip, L shape type, 304SS, 0° angle opening, 125mm (4.92").
				AcuPRE-XX-008 Static pressure tip, L shape type, 304SS, 0° angle opening, 200mm (7.87").
				AcuPRE-XX-009 Room pressure pickup port.
				AcuPRE-XX-010 Wall plate stainless steel pickup port.

Ordering Example: AcuPRE-WM-04-A-3



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