

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

- $\pm 1.0\%$ 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 | $\leq 500\Omega$ (Current), $\geq 2k\Omega$ (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 |

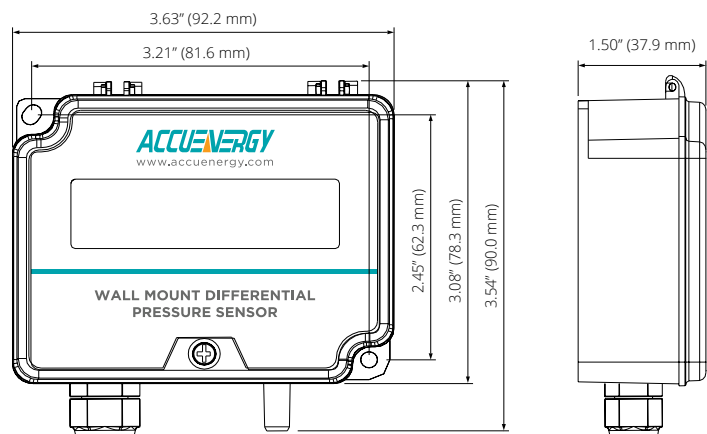
PERFORMANCE

| | |
|----------------|--|
| Accuracy | $\pm 1.0\%$ FS ($\pm 2.0\%$ FS@0.10 inWC Range) |
| Stability | $\pm 0.5\%$ 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 |

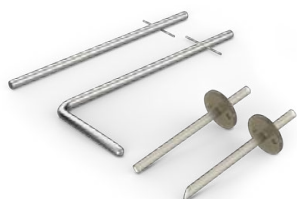
Dimensions



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 | | | | - See Range Selection Chart for Field Selectable Options | - 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"). | |
| Ordering Example: AcuPRE-WM-04-A-3 | | | | | | | 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. |

Revision Date: November 2025 Version: 1.0.1
Specs Subject To Change Without Notice.