We design and manufacture pressure sensors ranging from the sensing element to system packaging for harsh environments. We are an industry leader for our range of both standard and custom pressure sensors, from board level components to fully amplified and packaged transducers. Based on piezoresistive Microelectromechanical (MEMS) and silicon strain gage (Microfused, Krystal Bond) technology, our sensors measure everything from inches of water column (<5 mbar) to 100K psi (7K bar). Sophisticated design and advanced manufacturing techniques create reliable cost-effective solutions for medical, HVACR, off road/heavy equipment and general industrial applications. We manufacture one of the world’s lowest power and smallest package pressure sensors for altimeter/NAV applications. Our sensors are signal conditioned, calibrated over temperature and include digital or analog outputs.
## BOARD LEVEL PRESSURE SENSORS

### Digital Output and Altimeter

#### MEAS MS4515DO, MS4525DO

- **Package**: 8 pin DIL
- **Type**: Gage, compound (MS4515DO), Gage, absolute, differential, compound (MS4525DO)
- **Pressure Range**: 0 - 2 to 30” H2O (MS4515DO), 0 - 1 to 150 psi (MS4525DO)
- **Output / Span**: 14-bit ADC SPI or I2C
- **Resolution**: —
- **Unique Features**: Optional gel coat, low power, Pressure and temperature measurement, Single supply of 3.3 or 5.0 VDC, Top, side barbed or manifold o-ring port, J lead or thru hole pins
- **Linearity/Absolute Accuracy**: 0.25% / 1% TEB
- **Overpressure**: 300 psi
- **Operating Temp.**: -10°C to 85°C (MS4515DO), -25°C to 105°C (MS4525DO)
- **Dimensions (mm)**: 12.5 x 9.9
- **Typical Applications**: Medical instruments, air flow measurements, process control, leak detection

#### MEAS MS5803

- **Type**: Surface mountable
- **Pressure Range**: Absolute
- **Output / Span**: 12 mbar (MS5803-01BA), 0.5 mbar (MS5803-30BA)
- **Resolution**: —
- **Unique Features**: 24-bit digital sensor, software calibration and temperature compensation (I²C and SPI), no external components
- **Linearity/Absolute Accuracy**: ±1.5 mbar at 25°C (MS5803-01BA), ±250 mbar at 0°C to 40°C (MS5803-30BA)
- **Overpressure**: 10 bar (1, 2 bar), 30 bar (3, 7, 14 bar), 50 bar (30 bar)
- **Operating Temp.**: -40°C to 85°C
- **Dimensions (mm)**: 6.4 x 6.2 x 2.9
- **Typical Applications**: Precision altimeter, diving and multi-mode watches, in-building navigation, variometers / flight instruments

#### MEAS MS5837

- **Type**: Surface mountable
- **Pressure Range**: Absolute
- **Output / Span**: 0 - 30 bar
- **Resolution**: 0.2 mbar
- **Unique Features**: Supply voltage: 1.5 to 3.6 V, Excellent long term stability, Hermetically sealable for outdoor devices, Sealing designed for 1.8 x 0.88 mm o-ring
- **Linearity/Absolute Accuracy**: ±400 mbar
- **Overpressure**: 50 bar
- **Operating Temp.**: -20 to 85°C
- **Dimensions (mm)**: 3.3 x 3.3 x 2.75
- **Typical Applications**: Mobile water depth measurement systems, diving computers, adventure or multi-mode watches, data loggers

#### MEAS MS5525DSO

- **Package**: SOIC-14
- **Type**: Gage, absolute, differential, compound
- **Pressure Range**: 0 - 1 to 30 psi
- **Output / Span**: 24-bit ADC I²C protocol
- **Resolution**: —
- **Unique Features**: 24-bit digital small outline sensor, Pressure and temperature measurement, Single supply of 1.8 or 3.6 VDC, Barb, tube and hole package style options
- **Linearity/Absolute Accuracy**: 0.25% / 2.5% TEB
- **Overpressure**: 3X range
- **Operating Temp.**: -40°C to 125°C
- **Dimensions (mm)**: 12.5 x 7.9
- **Typical Applications**: Medical respirators, ventilators, factory automation, altitude and airspeed measurements, leak detection, home appliances

#### MEAS MS5607, MS5611, MS5637

- **Type**: Surface mountable
- **Pressure Range**: Absolute
- **Output / Span**: 10 - 2K mbar
- **Resolution**: 0.016 mbar
- **Unique Features**: 24-bit digital sensor, 13 cm resolution (MS5607, MS5637), 10 cm resolution (MS5611), Supply voltage: 1.5 to 3.6 V (MS5637), Supply voltage: 1.8 to 3.6 V (MS5607, MS5611), Low power, 0.6 μA (Standby ≤ 0.1 μA at 25°C)
- **Linearity/Absolute Accuracy**: ±2.0 mbar at 25°C
- **Overpressure**: 6 bar
- **Operating Temp.**: -40 to 85°C
- **Dimensions (mm)**: 3 x 3 x 0.9 (MS5607, MS5611), 5 x 3 x 1 (MS5611)
- **Typical Applications**: Medical respirators, ventilators, factory automation, altitude and airspeed measurements, leak detection, home appliances

#### MEAS MS5805

- **Type**: Surface mountable
- **Pressure Range**: Absolute
- **Output / Span**: 10 - 2K mbar
- **Resolution**: 0.02 mbar
- **Unique Features**: 24-bit digital sensor, 20 cm resolution, Supply voltage: 1.8 to 3.6 V, Sealing designed for 2.5 x 1 mm o-ring, Silicone gel protection, Waterproof
- **Linearity/Absolute Accuracy**: ±2.0 mbar at 25°C
- **Overpressure**: 5 bar
- **Operating Temp.**: -40 to 85°C
- **Dimensions (mm)**: 4.5 x 4.5 x 3.5
- **Typical Applications**: Mobile altimeter and barometer systems, bike computers, adventure or multi-mode watches, variometers, data loggers

#### MEAS MS8607

- **Type**: Surface mountable
- **Pressure Range**: Absolute
- **Output / Span**: 10 - 2K mbar
- **Resolution**: 0.016 mbar
- **Unique Features**: Integrated pressure, humidity and temperature, Supply voltage: 1.5 to 3.6 V, Fully factory calibrated sensor
- **Linearity/Absolute Accuracy**: ±2.0 mbar
- **Overpressure**: 6 bar
- **Operating Temp.**: -40°C to 85°C
- **Dimensions (mm)**: 5 x 3 x 1
- **Typical Applications**: Smart phones, tablets, HVACR, weather stations, printers, home appliances and humidifiers
# Pressure Sensors

## Board Level Pressure Sensors

### Amplified Output

<table>
<thead>
<tr>
<th>Model</th>
<th>Package</th>
<th>Type</th>
<th>Pressure Range</th>
<th>Output / Span</th>
<th>Unique Features</th>
<th>Accuracy</th>
<th>Operating Temp.</th>
<th>Dimensions (mm)</th>
<th>Typical Applications</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>MEAS MS4515, MS4525</strong></td>
<td>8 pin DIL</td>
<td>Gage, differential (MS4515) Gage, absolute, differential, compound (MS4525)</td>
<td>0 - 2 to 30” H₂O (MS4515) 0 - 1 to 150 psi (MS4525)</td>
<td>10% to 90% or 5% to 95% of supply</td>
<td>• Ratiometric analog output sensor • Single supply of either 3.3 or 5.0 VDC • Top, side barbed or manifold o-ring port • J lead or thru-hole pins • Optional gel coat</td>
<td>±0.25% span / 1% TEB</td>
<td>-10°C to 85°C (MS4515), -25°C to 105°C (MS4525)</td>
<td>12.5 x 9.9</td>
<td>Medical instruments, air flow measurements, process control, leak detection</td>
</tr>
<tr>
<td><strong>MEAS MS5525ASO</strong></td>
<td>SOIC-14</td>
<td>Gage, absolute, differential, compound</td>
<td>0 - 1 to 30 psi</td>
<td></td>
<td></td>
<td>±0.5% span / 2.5% TEB</td>
<td>-25°C to 105°C</td>
<td>12.5 x 9.9</td>
<td>Factory automation, altitude and airspeed measurements, medical instruments, leak detection</td>
</tr>
</tbody>
</table>

### mV Output

<table>
<thead>
<tr>
<th>Model</th>
<th>Package</th>
<th>Type</th>
<th>Pressure Range</th>
<th>Output / Span</th>
<th>Unique Features</th>
<th>Accuracy</th>
<th>Operating Temp.</th>
<th>Dimensions (mm)</th>
<th>Typical Applications</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>MEAS 1210, 1220, 1230, 1240</strong></td>
<td>8 pin DIL</td>
<td>Gage, absolute, differential</td>
<td>0 - 5 and 10” H₂O 0 - 1 to 100 psi</td>
<td>50 mV and 100 mV typical</td>
<td>• Temperature compensated • High performance UltraStable die (1230, 1240) • Current excitation (1210, 1230) • Voltage excitation (1220, 1240)</td>
<td>±0.1% non-linearity</td>
<td>-40°C to 125°C</td>
<td>15.2 x 14.7</td>
<td>Medical instruments, air flow measurement, process control, factory automation, leak detection</td>
</tr>
<tr>
<td><strong>MEAS 13, 23, 33, 43, 17, 27, 37, 47</strong></td>
<td>TO-8</td>
<td>Gage, absolute, differential</td>
<td>0 - 1 to 250 psi</td>
<td>100 mV typical</td>
<td>• Temperature compensated • High performance UltraStable die (17, 27, 37, 47) • Can gel fill for humid conditions</td>
<td>±0.1% non-linearity</td>
<td>-40°C to 125°C</td>
<td>Ø11.4, application dependent</td>
<td>Medical instruments, air flow measurement, HVACR, process control, factory automation, leak detection</td>
</tr>
<tr>
<td><strong>MEAS MS4425, MS4426</strong></td>
<td>6 pin DIL</td>
<td>Gage, absolute, differential</td>
<td>0 - 1 to 300 psi</td>
<td></td>
<td></td>
<td>±0.1% non-linearity</td>
<td>-25°C to 85°C</td>
<td>15.2 x 13.7</td>
<td>Drop-in for 6 pin industrial sensor for PCB mounted medical</td>
</tr>
</tbody>
</table>
## PRESSURE SENSORS

### BOARD LEVEL PRESSURE SENSORS

**mV Output**

<table>
<thead>
<tr>
<th>Package</th>
<th>Surface mountable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type</td>
<td>Gage, absolute</td>
</tr>
<tr>
<td>Pressure Range</td>
<td>0 - 5 to 500 psi</td>
</tr>
<tr>
<td>Output / Span</td>
<td>60 mV typical</td>
</tr>
</tbody>
</table>

**Unique Features**

- Low cost
- Coarse calibrated at room temp. (MS1471)
- With gel to protect against moisture
- Tube or hole

**Accuracy**

±0.25% non-linearity

**Operating Temp.**

-40°C to 125°C

**Dimensions (mm)**

7.6 x 7.6, application dependent

**Typical Applications**

- Altitude measurement, barometric pressure, medical instrumentation, consumer appliances, tire pressure

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<table>
<thead>
<tr>
<th>Package</th>
<th>MEAS MS1451, MS1471</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type</td>
<td>MEAS MS52xx, MS54xx</td>
</tr>
<tr>
<td>Pressure Range</td>
<td>0 - 1 to 12 bar</td>
</tr>
<tr>
<td>Output / Span</td>
<td>150 mV, 240 mV</td>
</tr>
</tbody>
</table>

**Unique Features**

- Small size (MS54xx)
- High linearity or high sensitivity options
- Plastic tube or metal ring options
- With gel to protect against moisture
- High endurance (Option HM)
- ±0.05%, ±0.15% FS non-linearity (MS52xx)
- ±0.05%, ±0.2% FS non-linearity (MS54xx)

**Accuracy**

±0.05%, ±0.15% FSO ±0.2% FSO non-linearity (MS54xx)

**Operating Temp.**

-40°C to 125°C

**Dimensions (mm)**

7.6 x 7.6, application dependent (MS52xx)

**Typical Applications**

- Absolute pressure sensor systems, engine controls, high resolution altimeters, variometers, waterproof watches, diver computers, barometers, tire pressure monitoring systems (TPMS), medical instrumentation, pneumatic controls

---

### DISPOSABLE MEDICAL PRESSURE SENSORS

**mV Output**

<table>
<thead>
<tr>
<th>Package</th>
<th>MEAS 1620, 1630</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type</td>
<td>Hybrid assembly</td>
</tr>
<tr>
<td>Pressure Range</td>
<td>-30 to 300 mmHg</td>
</tr>
<tr>
<td>Output / Span</td>
<td>5 µV/V/mmHg</td>
</tr>
</tbody>
</table>

**Unique Features**

- Low cost, disposable design
- Supplied in tape and reel
- Compliant to AAMI spec
- ISO13485 certified

**Accuracy**

±1.0% FSO

**Operating Temp.**

10°C to 40°C

**Dimensions (mm)**

1620: 11.43 x 8.13 x 4.20
1630: 12.7 x 5.08 x 3.94

**Typical Applications**

- Disposable blood pressure, surgical procedures, ICU, kidney dialysis machines, medical instrumentation

---

<table>
<thead>
<tr>
<th>Package</th>
<th>MEAS Fully Assembled 1620</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type</td>
<td>Plastic housing</td>
</tr>
<tr>
<td>Pressure Range</td>
<td>-30 to 300 mmHg</td>
</tr>
<tr>
<td>Output / Span</td>
<td>5 µV/V/mmHg</td>
</tr>
</tbody>
</table>

**Unique Features**

- Low cost, disposable design
- Compliant to AAMI spec
- Custom designs available

**Accuracy**

±1.0% FSO

**Operating Temp.**

10°C to 40°C

**Dimensions (mm)**

42.8 x 30.3 x 19.0

**Typical Applications**

- Disposable blood pressure, kidney dialysis machines, surgical procedures and intensive care units. Ready to use, fully assembled disposable sensor units with cable, connector, stop cock, flush device in a plastic housing.
### MEDIA ISOLATED PRESSURE SENSOR MODULES
#### Digital Output

<table>
<thead>
<tr>
<th>Model</th>
<th>Package</th>
<th>Type</th>
<th>Pressure Range</th>
<th>Output / Span</th>
<th>Unique Features</th>
<th>Accuracy</th>
<th>Total Error Band</th>
<th>Overpressure</th>
<th>Operating Temp.</th>
<th>Dimensions (mm)</th>
<th>Typical Applications</th>
</tr>
</thead>
<tbody>
<tr>
<td>MEAS 85BSD</td>
<td>13 mm diaphragm diameter</td>
<td>Gage, absolute</td>
<td>0 - 0.35 to 20 bar / 0 - 5 to 300 psi</td>
<td>±0.25% span</td>
<td>±0.1% FSO</td>
<td>2X</td>
<td>-40°C to 125°C</td>
<td>Ø15.85 x 7.9</td>
<td>Level controls, tank level measurement, corrosive fluids and gas measurement systems, sealed systems, manifold pressure measurement, submersible depth monitoring</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MEAS 86BSD</td>
<td>16 mm diaphragm diameter</td>
<td>Gage, absolute</td>
<td>0 - 0.07 to 20 bar / 0 - 1 to 300 psi</td>
<td>±0.25% span</td>
<td>±0.1% FSO</td>
<td>2X</td>
<td>-40°C to 125°C</td>
<td>Ø15.82 x 9.3</td>
<td>Level controls, tank level measurement, corrosive fluids and gas measurement systems, sealed systems, manifold pressure measurement, submersible depth monitoring</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MEAS 89BSD</td>
<td>9 mm diaphragm diameter</td>
<td>Gage, absolute</td>
<td>0 - 0.07 to 20 bar / 0 - 5 to 300 psi</td>
<td>±0.25% span</td>
<td>±0.1% FSO</td>
<td>2X</td>
<td>-40°C to 85°C</td>
<td>Ø9.04 x 7.5</td>
<td>Level controls, tank level measurement, corrosive fluids and gas measurement systems, sealed systems, manifold pressure measurement, submersible depth monitoring</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MEAS 154BSD</td>
<td>19 mm diaphragm diameter</td>
<td>Gage, absolute</td>
<td>0 - 1 to 300 psi</td>
<td>±0.25% span</td>
<td>±0.1% FSO</td>
<td>2X</td>
<td>-40°C to 125°C</td>
<td>Ø19 x 13.8</td>
<td>Level controls, tank level measurement, corrosive fluids and gas measurement systems, sealed systems, manifold pressure measurement, submersible depth monitoring</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Analog Output

<table>
<thead>
<tr>
<th>Model</th>
<th>Package</th>
<th>Type</th>
<th>Pressure Range</th>
<th>Output / Span</th>
<th>Unique Features</th>
<th>Non-linearity</th>
<th>Operating Temp.</th>
<th>Dimensions (mm)</th>
<th>Typical Applications</th>
</tr>
</thead>
<tbody>
<tr>
<td>MEAS 82, 85 with Fittings</td>
<td>Weldable (85) or process fitting</td>
<td>Gage, absolute, vacuum gage</td>
<td>0 - 5 to 500 psi (85)</td>
<td>100 mV typical</td>
<td>±0.3% FSO (1 psi)</td>
<td>-40°C to 125°C</td>
<td>Fittings: application dependent</td>
<td>Medical, process control, refrigeration compressor, oceanography, level systems</td>
<td></td>
</tr>
<tr>
<td>MEAS 89 Button, 89 with Fittings</td>
<td>Weldable or process fitting</td>
<td>Sealed gage, absolute</td>
<td>0 - 1K to 10K psi</td>
<td>100 mV typical</td>
<td>±0.3% FSO (1 psi)</td>
<td>-40°C to 125°C</td>
<td>89 Button: Ø9.04 x 13.2</td>
<td>Air tank pressure, hydraulics, process control, robotics, refrigeration compressors, oceanography</td>
<td></td>
</tr>
<tr>
<td>MEAS 86A Amplified</td>
<td>5/8” (16 mm) diameter o-ring mount</td>
<td>Gage, absolute</td>
<td>0 - 1 to 150 psi</td>
<td>0.5 - 4.5 VDC</td>
<td>±0.3% FSO (1 psi)</td>
<td>-20°C to 85°C</td>
<td>Ø15.82 x 9.3</td>
<td>Level measurement, OEM transmitters and transducers, process control</td>
<td></td>
</tr>
</tbody>
</table>
MEDIA ISOLATED PRESSURE SENSOR MODULES

Analog Output

**MEAS 82, 85, 85F, 86, 154N**

- **Package**
  - 3/4” (19 mm) diameter o-ring mount (82, 154N)
  - 5/8” (16 mm) diameter o-ring mount (86)
  - 1/2” (13 mm) diameter o-ring flush mount (85F)
  - 1/2” (13 mm) diameter o-ring mount (85)

- **Type**
  - Gage, absolute, vacuum gage (82, 85, 86, 154N)
  - Gage, absolute (85F)

- **Pressure Range**
  - 0 - 1 to 500 psi (Absolute, gage: 82, 154N)
  - 0 - 5 to 500 psi (Absolute, gage: 85, 86)
  - 0 - 15 to 500 psi (85F, vacuum gage: 82, 85, 86, 154N)

- **Output / Span**
  - 100 mV typical

- **Unique Features**
  - High performance
  - High stability for OEM applications
  - Minimizes trapped volume

- **Non-linearity**
  - ±0.3% FSO (1 psi), ±0.2% FSO (5 psi)
  - ±0.1% FSO (≥15 psi)

- **Operating Temp.**
  - -40°C to 125°C (82 / 85 / 86 / 154N), -20°C to 125°C (85F)

- **Dimensions (mm)**
  - 82: Ø19 x 6.48
  - 154N: Ø18.97 x 13.8
  - 85F: Ø17.2 x 11.33
  - 85: Ø15.85 x 9.3
  - 86: Ø15.82 x 11.4

- **Typical Applications**
  - Hydraulic controls, process control, oceanography
  - Refrigeration/compressors, pressure transmitters, level systems, dialysis machines, infusion pumps, medical systems

**MEAS DP86 O-Ring Mount, with Fittings/Cable**

- **Type**
  - 5/8” (16 mm) diameter o-ring mount or threaded process fittings

- **Output / Span**
  - 100 mV typical / sensitivity dependent

- **Unique Features**
  - Wet/wet differential pressure
  - Line pressure max. 1000 psi

- **Non-linearity**
  - ±0.3% FSO (1 psi)
  - ±0.2% FSO (5 psi)
  - ±0.1% FSO (≥15 psi)

- **Operating Temp.**
  - -40°C to 125°C

- **Dimensions (mm)**
  - Ø15.82 x 13.6

- **Typical Applications**
  - Level controls, tank level measurement, corrosive fluids and gas measurement systems, flow measurement

**MEAS U86B**

- **Type**
  - Mountable with o-ring seal

- **Output / Span**
  - Sealed gage, absolute

- **Unique Features**
  - Amplified

- **Non-linearity**
  - ±0.5% FSO

- **Operating Temp.**
  - -7°C to 105°C

- **Dimensions (mm)**
  - Ø15.82 x 13.6
  - Socket spacing: 31.75

- **Typical Applications**
  - Level controls, urea pressure, air brakes, corrosive fluid measurement for E&V applications

TRANSDUCERS AND TRANSMITTERS

Wireless

**MEAS M5600, U5600**

- **Type**
  - Gage, sealed, absolute, compound

- **Output / Span**
  - 24-bit ADC

- **Unique Features**
  - Pressure and temperature
  - 2.3 – 3.6 V supply voltage
  - Compact and battery-powered
  - Weather resistant (IP66 and IP67)
  - Stainless steel and polycarbonate enclosure

- **Accuracy**
  - ±0.25% FS (M5600)
  - Down to ±0.1% FS (U5600)

- **Operating Temp.**
  - -20°C to 85°C

- **Dimensions (mm)**
  - 24 x 24 x 69

- **Typical Applications**
  - Industrial process control and monitoring, HVAC systems, data acquisition systems, sensor systems, mobile test stands, field devices, off-road vehicles, pumps and compressors, hydraulic and pneumatic systems, agriculture equipment, energy generation and management

- **Agency Approvals**
  - CE, FCC

**MEAS MSP100**

- **Output / Span**
  - 100 mV typical

- **Unique Features**
  - Microfused
  - Low cost stainless steel isolated transducer
  - Small size
  - Solid state reliability

- **Accuracy**
  - ±0.5% FSO

- **Operating Temp.**
  - 0°C to 55°C

- **Dimensions (mm)**
  - 12.7 x 24.38 x 20.32

- **Typical Applications**
  - Beverage dispensing systems, automation, HVAC/C controls, energy and water management, pumps, compressors, pneumatic equipment

**MEAS MSP300, MSP340**

- **Output / Span**
  - 100 mV, 0.5 - 4.5 VDC, 1 - 5 VDC, 4 - 20 mA

- **Unique Features**
  - Microfused
  - Highly customized for OEM applications
  - Small size
  - Solid state reliability

- **Accuracy**
  - ±1% FSO

- **Operating Temp.**
  - -20°C to 85°C

- **Dimensions (mm)**
  - MSP300: 22.23 x 22.23 x 55.88
  - MSP340: 15.88 x 15.88 x 75.44

- **Typical Applications**
  - Paint sprayers, braking systems, HVAC/C controls, energy and water management, pumps, compressors, pneumatic equipment, off-road heavy equipment, agriculture equipment

- **Agency Approvals**
  - UL 508 (MSP300)

**MEDIA ISOLATED PRESSURE SENSOR MODULES**

Analog Output

**MEAS 82, 85, 85F, 86, 154N**

- **Package**
  - 3/4” (19 mm) diameter o-ring mount (82, 154N)
  - 5/8” (16 mm) diameter o-ring mount (86)
  - 1/2” (13 mm) diameter o-ring flush mount (85F)
  - 1/2” (13 mm) diameter o-ring mount (85)

- **Type**
  - Gage, absolute, vacuum gage (82, 85, 86, 154N)
  - Gage, absolute (85F)

- **Pressure Range**
  - 0 - 1 to 500 psi (Absolute, gage: 82, 154N)
  - 0 - 5 to 500 psi (Absolute, gage: 85, 86)
  - 0 - 15 to 500 psi (85F, vacuum gage: 82, 85, 86, 154N)

- **Output / Span**
  - 100 mV typical

- **Unique Features**
  - High performance
  - High stability for OEM applications
  - Minimizes trapped volume

- **Non-linearity**
  - ±0.3% FSO (1 psi), ±0.2% FSO (5 psi)
  - ±0.1% FSO (≥15 psi)

- **Operating Temp.**
  - -40°C to 125°C (82 / 85 / 86 / 154N), -20°C to 125°C (85F)

- **Dimensions (mm)**
  - 82: Ø19 x 6.48
  - 154N: Ø18.97 x 13.8
  - 85F: Ø17.2 x 11.33
  - 85: Ø15.85 x 9.3
  - 86: Ø15.82 x 11.4

- **Typical Applications**
  - Hydraulic controls, process control, oceanography, refrigeration/compressors, pressure transmitters, level systems, dialysis machines, infusion pumps, medical systems

**MEAS DP86 O-Ring Mount, with Fittings/Cable**

- **Type**
  - 5/8” (16 mm) diameter o-ring mount or threaded process fittings

- **Output / Span**
  - 100 mV typical / sensitivity dependent

- **Unique Features**
  - Wet/wet differential pressure
  - Line pressure max. 1000 psi

- **Non-linearity**
  - ±0.3% FSO (1 psi)
  - ±0.2% FSO (5 psi)
  - ±0.1% FSO (≥15 psi)

- **Operating Temp.**
  - -40°C to 125°C

- **Dimensions (mm)**
  - Ø15.82 x 13.6

- **Typical Applications**
  - Level controls, tank level measurement, corrosive fluids and gas measurement systems, flow measurement

**MEAS U86B**

- **Type**
  - Mountable with o-ring seal

- **Output / Span**
  - Sealed gage, absolute

- **Unique Features**
  - Amplified

- **Non-linearity**
  - ±0.5% FSO

- **Operating Temp.**
  - -7°C to 105°C

- **Dimensions (mm)**
  - Ø15.82 x 13.6
  - Socket spacing: 31.75

- **Typical Applications**
  - Level controls, urea pressure, air brakes, corrosive fluid measurement for E&V applications
### PRESSURE SENSORS

**TE Connectivity**

**TRANSDUCERS AND TRANSMITTERS**

**Industrial**

<table>
<thead>
<tr>
<th>Type</th>
<th>MEAS US300</th>
<th>AST20HA, AST20PT, AST20SW</th>
<th>AST4000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pressure Range</td>
<td>Gage, absolute</td>
<td>Gage, sealed gage, absolute</td>
<td>Gage, sealed gage, compound</td>
</tr>
<tr>
<td>0 - 15 to 5K psi</td>
<td>0 - 1 to 60K psi</td>
<td>0.5 - 4.5 V [Ratiometric], 1 - 5 V</td>
<td>0.5 - 25 to 10K psi</td>
</tr>
<tr>
<td>Output / Span</td>
<td>0 - 10 mV/V, 0.5 - 4.5 V, 1 - 5 V, 4 - 20 mA</td>
<td>0 - 5 V, 0 - 10 V, switch (AST20SW)</td>
<td>0.5 - 2.5 V</td>
</tr>
<tr>
<td>Unique Features</td>
<td>• UltraStable technology</td>
<td>• Excellent performance over temperature</td>
<td>• Four standard sensor material options</td>
</tr>
<tr>
<td></td>
<td>• Highly customized for OEM applications</td>
<td>• Semi-custom designs available</td>
<td>• Rugged construction</td>
</tr>
<tr>
<td></td>
<td>• Small size</td>
<td>• Fault mode condition settings</td>
<td>• 100 V/m EMI/RFI protection</td>
</tr>
<tr>
<td></td>
<td>• Solid state reliability</td>
<td>• Four standard sensor material options</td>
<td>• Semi-custom designs available</td>
</tr>
<tr>
<td>Accuracy</td>
<td>±0.15% FSO (15 - 1K psi), ±0.25% FSO (&gt;1K psi)</td>
<td>±0.1% FSO</td>
<td>±0.5% FSO</td>
</tr>
<tr>
<td>Operating Temp.</td>
<td>-40°C to 105°C</td>
<td>-40°C to 85°C</td>
<td>-40°C to 85°C</td>
</tr>
<tr>
<td>Dimensions (mm)</td>
<td>15.88 x 15.88 x 98.00</td>
<td>Application dependent</td>
<td>Application dependent</td>
</tr>
<tr>
<td>Typical Applications</td>
<td>Paint sprayers, braking systems, HVACR controls, energy and water management, pumps, compressors, pneumatic equipment, off road heavy equipment, agriculture equipment</td>
<td>Test and measurement, industrial controls</td>
<td>Water, hydraulic equipment, HVAC, industrial controls</td>
</tr>
<tr>
<td>Agency Approvals</td>
<td>ABS, CE</td>
<td>ABS, CE</td>
<td>UL/cUL508, ABS, CE</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Type</th>
<th>MEAS M5200</th>
<th>MEAS US5200, U5300</th>
<th>MEAS D5100</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pressure Range</td>
<td>Gage, sealed, compound</td>
<td>Gage, sealed, absolute, compound</td>
<td>Differential wet/wet</td>
</tr>
<tr>
<td>0 - 3.5 to 1K bar / 0 - 50 to 15K psi</td>
<td>0 - 0.14 to 700 bar / 0 - 2 to 10K psi</td>
<td>0 - 0.7 to 35 bar / 0 - 1 to 500 psi</td>
<td></td>
</tr>
<tr>
<td>Output / Span</td>
<td>0.5 - 4.5 V, 1 - 5 V, 0 - 5 V, 0 - 10 V, 4 - 20 mA</td>
<td>0 - 5 V, 1 - 5 V, 0 - 5 V, 0 - 10 V, 4 - 20 mA</td>
<td>80 mV / 100 mV, 0.5 - 4.5 VDC, 1 - 5 VDC, 4 - 20 mA</td>
</tr>
<tr>
<td>Unique Features</td>
<td>• Microfused technology</td>
<td>• UltraStable technology</td>
<td>• UltraStable technology</td>
</tr>
<tr>
<td></td>
<td>• High performance at a low cost</td>
<td>• High performance at a low cost</td>
<td>• High performance at a low cost</td>
</tr>
<tr>
<td></td>
<td>• Solid state reliability</td>
<td>• ±0.75% FSO TEB (-20°C to 85°C)</td>
<td>• Solid state reliability</td>
</tr>
<tr>
<td></td>
<td>• ±1% FSO TEB (-20°C to 85°C)</td>
<td>• ±0.5% FSO TEB (+20°C to 85°C)</td>
<td>• ±1% FSO TEB (-20°C to 85°C)</td>
</tr>
<tr>
<td></td>
<td>• Weatherproof</td>
<td>• Weatherproof</td>
<td>• Weatherproof</td>
</tr>
<tr>
<td></td>
<td>• 17 - 4 PH or 316L SS</td>
<td>• High accuracy (US300)</td>
<td>• Line pressure max. 1000 psi</td>
</tr>
<tr>
<td>Accuracy</td>
<td>±0.25% FSO</td>
<td>±0.1% FSO (+5 and ≤500 psi)</td>
<td>±0.3% FSO (&lt;5 psi), ±0.25% FSO (5 psi), ±0.1% FSO (≥5 psi)</td>
</tr>
<tr>
<td>Operating Temp.</td>
<td>-40°C to 125°C</td>
<td>-40°C to 125°C</td>
<td>-40°C to 125°C</td>
</tr>
<tr>
<td>Dimensions (mm)</td>
<td>24 X 24 X 82 max.</td>
<td>24 X 24 X 82 max.</td>
<td>25.4 x 58.4 x 72.0</td>
</tr>
<tr>
<td>Typical Applications</td>
<td>Industrial process control and monitoring, advanced HVACR systems, refrigeration systems, automotive test stands, off road vehicles, pumps and compressors, hydraulic and pneumatic systems, agriculture equipment, energy generation and management</td>
<td>Industrial process control and monitoring, advanced HVACR systems, refrigeration systems, automotive test stands, off road vehicles, pumps and compressors, hydraulic and pneumatic systems, agriculture equipment, energy generation and management, military and aerospace test stands, calibration equipment, high accuracy applications, stationary motor fuel control, high end industry machinery</td>
<td>Process controls, tank level measurement, filter performance monitoring, corrosive fluids and gas measurement systems, flow measurement</td>
</tr>
<tr>
<td>Agency Approvals</td>
<td>CE (EMC)</td>
<td>CE (EMC), UL 508</td>
<td>CE (EMC)</td>
</tr>
</tbody>
</table>
## PRESSURE SENSORS

### TRANSDUCERS AND TRANSMITTERS

#### Industrial

<table>
<thead>
<tr>
<th>MEAS M7100, U7100</th>
<th>MEAS P900, P981, P1200, P700, P9000</th>
<th>MEAS P101, P105, P125</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Type</strong></td>
<td>Gage, no vent gage (M7100)</td>
<td>Gage, absolute</td>
</tr>
<tr>
<td></td>
<td>Gage, sealed gage, absolute (U7100)</td>
<td></td>
</tr>
<tr>
<td><strong>Pressure Range</strong></td>
<td>0 - 10 to 700 bar / 0 - 150 to 10K psi (M7100)</td>
<td>0 - 5 bar to 700 bar / 0 - 75 to 10K psi</td>
</tr>
<tr>
<td></td>
<td>0 - 1 to 10 bar / 0 - 15 to 150 psi (U7100)</td>
<td>0 - 5 VDC, 0 - 10 VDC, 4 - 20 mA</td>
</tr>
<tr>
<td><strong>Output / Span</strong></td>
<td>0.5 - 4.5 VDC [Ratiometric output]</td>
<td>0.1% to 0.2% FSO</td>
</tr>
<tr>
<td></td>
<td>1 - 5 VDC [Regulated] (M7100)</td>
<td>-54°C to 120°C</td>
</tr>
<tr>
<td></td>
<td>0.5 - 4.5 VDC [Ratiometric output] (U7100)</td>
<td>Application dependent</td>
</tr>
<tr>
<td><strong>Unique Features</strong></td>
<td>±1% FSO TEB (-20°C to 85°C)</td>
<td>High overpressure (10X over pressure)</td>
</tr>
<tr>
<td></td>
<td>• Solid state reliability</td>
<td>• Shock and vibration resistant</td>
</tr>
<tr>
<td></td>
<td>• Survives high vibration and immersion</td>
<td>• Heavy industrial grade transducer (P9000)</td>
</tr>
<tr>
<td></td>
<td>• Microfused technology (M7100)</td>
<td>• Advanced digital compensation / calibration</td>
</tr>
<tr>
<td></td>
<td>• UltraStable technology (U7100)</td>
<td>• Mechanical over pressure stops</td>
</tr>
<tr>
<td></td>
<td>• Copper tube for HVACR (M7100)</td>
<td>• High temperature operation</td>
</tr>
<tr>
<td><strong>Accuracy</strong></td>
<td>0.25% FSO</td>
<td>0.1% to 0.35% FSO</td>
</tr>
<tr>
<td><strong>Operating Temp.</strong></td>
<td>-40°C to 125°C</td>
<td>-20°C to 80°C</td>
</tr>
<tr>
<td><strong>Dimensions (mm)</strong></td>
<td>26.7 x 26.7 x 50.0</td>
<td>Ø29 x 85 max.</td>
</tr>
<tr>
<td><strong>Typical Applications</strong></td>
<td>HVACR refrigeration controls, off road vehicles engine control, compressors, hydraulic, energy and water management</td>
<td>Steel mills, hydraulic controls, power generation equipment, torpedo depth, military and aerospace, vehicle braking systems</td>
</tr>
<tr>
<td><strong>Agency Approvals</strong></td>
<td>CE (EMC), UL 508</td>
<td>CE, CENELEC (Intrinsically Safe)</td>
</tr>
</tbody>
</table>

#### Heavy Industrial

- Stainless steel diaphragm
- Female pressure connectors: M16 x 1.5, M20 x 1.5, 1/4 NPT
- Metal to metal seal
- ±0.3% FSO
- -20°C to 80°C

#### Agency Approvals

- CE (EMC), UL 508
- CENELEC (Intrinsically Safe)

### TRANSDUCERS AND TRANSMITTERS

#### Miniature

<table>
<thead>
<tr>
<th>MEAS XP Series</th>
<th>MEAS XPC10</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Type</strong></td>
<td>Gage, sealed, absolute</td>
</tr>
<tr>
<td><strong>Pressure Range</strong></td>
<td>0 - 1 to 350 bar / 0 - 15 to 5K psi (XP5, XPM10)</td>
</tr>
<tr>
<td></td>
<td>0 - 5 to 200 bar / 0 - 75 to 3K psi (XPM4)</td>
</tr>
<tr>
<td></td>
<td>0 - 100 to 1K bar / 0 - 1.5K to 15K psi (XPM6)</td>
</tr>
<tr>
<td><strong>Output / Span</strong></td>
<td>20 - 100 mV, 4 V FSO (Amplified)</td>
</tr>
<tr>
<td><strong>Unique Features</strong></td>
<td>• Titanium construction (XPM4)</td>
</tr>
<tr>
<td></td>
<td>• Stainless steel housing (XPM6, XPM10)</td>
</tr>
<tr>
<td></td>
<td>• Amplified output options (XP5, XPM6, XPM10)</td>
</tr>
<tr>
<td></td>
<td>• Cable and connector options</td>
</tr>
<tr>
<td></td>
<td>• For static and dynamic applications</td>
</tr>
<tr>
<td><strong>Accuracy</strong></td>
<td>Down to ±0.25% FSO (XP5, XPM6, XPM10), down to ±0.35% FSO (XPM4)</td>
</tr>
<tr>
<td><strong>Operating Temp.</strong></td>
<td>-40°C to 120°C</td>
</tr>
<tr>
<td><strong>Dimensions (mm)</strong></td>
<td>XPM4: M4 x 0.7 thread; Hex 8</td>
</tr>
<tr>
<td></td>
<td>XPM5: M5 x 0.8 or 10-32 UNF thread; Hex 10</td>
</tr>
<tr>
<td></td>
<td>XPM6: M6 x 1 thread; Hex 12</td>
</tr>
<tr>
<td></td>
<td>XPM10: M10 x 1 thread; Hex 15</td>
</tr>
<tr>
<td><strong>Typical Applications</strong></td>
<td>Corrosive liquids and gases, braking system pressure, onboard equipment monitoring, military and aerospace, explosive test benches, robotics and effectors, laboratory and research, extreme miniature devices</td>
</tr>
<tr>
<td><strong>Agency Approvals</strong></td>
<td>CE, CENELEC</td>
</tr>
</tbody>
</table>

- Amplified output available
- For static and dynamic applications
- Optional IP67 ingress protection
- High temperature operation

**Accuracy**

- Down to ±0.25% FSO
- -40°C to 220°C

**Dimensions (mm)**

- M10 x 1 or 3/8-24 UNF thread; Hex 15

**Typical Applications**

- Aerospace, test benches, oven monitoring equipment, cooling regulation systems
### PRESSURE SENSORS

#### TRANSDUCERS AND TRANSMITTERS

**Miniature**

<table>
<thead>
<tr>
<th>Type</th>
<th>MEAS EB, EPRB</th>
<th>MEAS EPIH</th>
<th>MEAS EPB, EPB-PW, EPL</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Type</strong></td>
<td>Gage, sealed, absolute</td>
<td>Gage, sealed, absolute</td>
<td>Gage, sealed, absolute</td>
</tr>
<tr>
<td><strong>Pressure Range</strong></td>
<td>0 - 0.35 to 700 bar / 0 - 5 to 10K psi</td>
<td>0 - 0.35 to 20 bar / 0 - 5 to 300 psi</td>
<td>0 - 0.35 to 350 bar / 0 - 5 to 5K psi</td>
</tr>
<tr>
<td><strong>Output / Span</strong></td>
<td>0.5 to 4.5 VDC</td>
<td>12 mV to 75 mV</td>
<td>10 mV to 125 mV</td>
</tr>
<tr>
<td><strong>Unique Features</strong></td>
<td>• High accuracy</td>
<td>• Diffused silicon diaphragm with a large variety of sizes and shapes available as small as 0.05” outside diameter</td>
<td>• Miniature flush mountable</td>
</tr>
<tr>
<td></td>
<td>• UltraStable technology</td>
<td>• High frequency response (To 1.7 MHz)</td>
<td>• Flush stainless steel diaphragm, flanged or non-flanged</td>
</tr>
<tr>
<td></td>
<td>• EMI protected</td>
<td>• Ultra-miniature design</td>
<td>• Bonded silicon gage, high frequency response (To 400 KHz)</td>
</tr>
<tr>
<td></td>
<td>• Combined pressure and temperature</td>
<td></td>
<td>• IP68 ingress protection in Titanium construction (EPB-PW)</td>
</tr>
<tr>
<td><strong>Accuracy</strong></td>
<td>±0.25% FSO</td>
<td>±10% FSO</td>
<td>±0.5 to ±1% FSO</td>
</tr>
<tr>
<td><strong>Operating Temp.</strong></td>
<td>-40°C to 125°C</td>
<td>-40°C to 120°C</td>
<td>-40°C to 120°C</td>
</tr>
<tr>
<td><strong>Dimensions (mm)</strong></td>
<td>11 body diameter</td>
<td>Application dependent</td>
<td>3.2 to 7 outside diameter</td>
</tr>
<tr>
<td><strong>Typical Applications</strong></td>
<td>Motor sport, hydraulic / pneumatic systems, automotive test stands, military and aerospace test stands</td>
<td>Aerospace testing, wind tunnels, biomedical testing, aircraft body and wing dynamics, high frequency measurements</td>
<td>Air flow testing, hydraulic pressure systems, air pressure systems, bearing studies, ballistics, water hammer, miniature scale model testing, centrifuge pore water pressure measurements</td>
</tr>
<tr>
<td><strong>Agency Approvals</strong></td>
<td>CE (EMC)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Agency Approvals

- CE (EMC)

---

**Liquid Level**

<table>
<thead>
<tr>
<th>Type</th>
<th>MEAS U5700</th>
<th>AST45xx</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Type</strong></td>
<td>Gage, sealed, absolute, compound</td>
<td>Gage, absolute</td>
</tr>
<tr>
<td><strong>Pressure Range</strong></td>
<td>0 - 2 to 10K psi</td>
<td>0 - 1 to 100 psi (AST4500, AST4510, AST4520)</td>
</tr>
<tr>
<td><strong>Output / Span</strong></td>
<td>0.5 - 4.5 V, 1 - 5 V, 0 - 5 V, 0 - 10 V, 4 - 20 mA, 1 - 6 V</td>
<td>0.5 - 4.5 V [Ratiometric], 1 - 5 V, 4 - 20 mA, 0.5 - 2.5 V</td>
</tr>
<tr>
<td><strong>Unique Features</strong></td>
<td>• UltraStable technology</td>
<td>• Intrinsically safe ratings</td>
</tr>
<tr>
<td></td>
<td>• High accuracy</td>
<td>• Material options including: 316L, alloy C276, and PVDF</td>
</tr>
<tr>
<td></td>
<td>• IP68 rated connection and submersible polyurethane jacketed cable</td>
<td>• Low power options</td>
</tr>
<tr>
<td></td>
<td>• Optional Polyoxymethylene cap</td>
<td>• High quality cable options</td>
</tr>
<tr>
<td><strong>Accuracy</strong></td>
<td>0.1% FSO</td>
<td>±0.25% FSO</td>
</tr>
<tr>
<td><strong>Operating Temp.</strong></td>
<td>-10°C to 60°C</td>
<td>-40°C to 85°C</td>
</tr>
<tr>
<td><strong>Dimensions (mm)</strong></td>
<td>22.23 x 22.23 x 98.04</td>
<td>Application dependent</td>
</tr>
<tr>
<td><strong>Typical Applications</strong></td>
<td>Industrial process control and monitoring, advanced HVACR systems, refrigeration systems, automotive test stands, off road vehicles, pumps and compressors, hydraulic / pneumatic systems, agriculture equipment, energy generation and management, liquid level applications</td>
<td>Diesel tanks, chemical tanks, water tanks</td>
</tr>
<tr>
<td><strong>Agency Approvals</strong></td>
<td>CE (EMC)</td>
<td>UL/CSA Class I Div I, ATEX/IECEx Exia, ABS, CE</td>
</tr>
</tbody>
</table>
# PRESSURE SENSORS

## TRANSDUCERS AND TRANSMITTERS

### Hazardous Location

<table>
<thead>
<tr>
<th><strong>AST43xx, AST44xx</strong></th>
<th><strong>AST46xx</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Type</strong></td>
<td>Gage, sealed gage, compound, absolute</td>
</tr>
<tr>
<td><strong>Pressure Range</strong></td>
<td>0 - 1 to 15 psi (AST43LP, AST44LP) 0 - 25 to 20K psi (AST4300, AST4400, AST4401)</td>
</tr>
<tr>
<td><strong>Output / Span</strong></td>
<td>0.5 - 4.5 V [Ratiometric], 1 - 5 V, 4 - 20 mA, 0.5 - 2.5 V</td>
</tr>
</tbody>
</table>
| **Unique Features** | • Available with 316L, alloy C276, or alloy 718 materials  
• Low current consumption options  
• Low power options  
• High proof and burst pressure |
| **Accuracy** | ±0.25% FSO |
| **Operating Temp.** | 0°C to 85°C |
| **Dimensions (mm)** | Application dependent |
| **Typical Applications** | Compressors, well sites, ships, factory automation, SCADA equipment, offshore equipment |
| **Agency Approvals** | UL/CSA Class I Div I and II, ATEX/IECEEx Exia/Exn, CCOE, CNEx, ABS, CE |

### AST5100, AST5300, AST5400

| **Type** | Differential |
| **Pressure Range** | 0 - 5 H2O" to 5K psi |
| **Output / Span** | 0.5 - 4.5 V [Ratiometric], 0 - 5 V, 1 - 5 V, 4 - 20 mA |
| **Unique Features** | • Wide range of pressures available  
• Full line pressure on either side without zero shifts  
• Hazardous location approvals (AST5300, AST5400) |
| **Accuracy** | ±0.25% FSO (AST5100, AST5300), 1% TEB (AST5400) |
| **Operating Temp.** | -40°C to 85°C |
| **Dimensions (mm)** | Application dependent |
| **Typical Applications** | Filter monitoring, flow measurement, tank level measurement |
| **Agency Approvals** | CSA Class I/II Div I and II, ATEX/IECEEx Exd, ABS, CE |