



# PRESSURE SENSORS FOR LIQUIDS & GASES

Pressure Sensors and Transducers/Barometer and Differential  
Pressure Sensors/Pressure Calibrators and Controllers



Your expert partner in sensors & controls

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**ALTHEN**  
SENSORS & CONTROLS

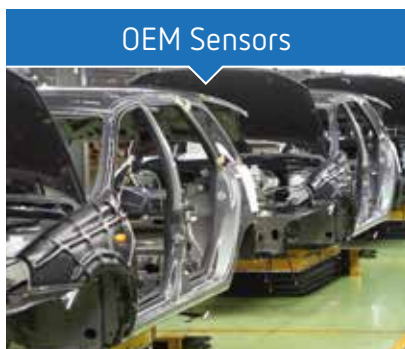
## About ALTHEN SENSORS & CONTROLS

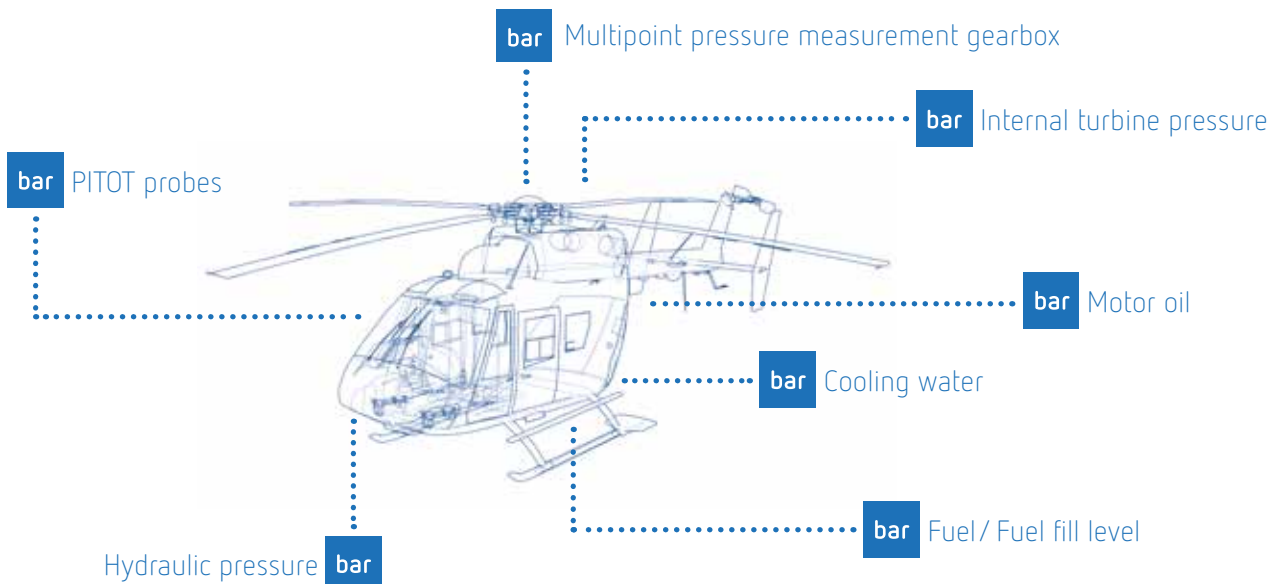
Althen Sensors & Controls stands for pioneering measurement and sensor solutions. We accept every measurement challenge. We are constantly looking for innovation and are only satisfied when we have found the perfect solution for your measurement task. We develop customer-specific solutions in our in-house production facilities. Althen is partner to many recognized universities and leading organizations. We find ourselves in an intensive knowledge transfer, developing future technologies. Althen is one of the first companies in its branch with a certification by the German technical inspection association in Hessen (TÜV PROFICERT) in accordance with DIN EN ISO 9001:2008.

## OUR SERVICE FOR YOU

Are you facing a metrological challenge or do you need a suitable spare part for your application? Our specialists will advise you - in detail and professionally. We keep an eye on your costs and develop customer-specific special solutions if required. Benefit from our many years of experience in the field of measurement technology and sensor technology:

- A High-quality Production**
- A Measurement and Rental**
- A Special Custom Calibration**
- A Training & Consulting**





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Wisely measured, efficiently turned  
Intelligent remote monitoring of the  
flow around rotor blades in wind turbines

SENSOR FOR VIBRATION  
MONITORING/DRIVETRAIN

$m/s^2$  VIBRATION



TILT SENSOR  
AT THE TOWER

$^\circ$  INCLINATION



bar PRESSURE

PRESSURE AND FLOW SENSOR  
AT THE BLADE



$^\circ/s$  ANGULAR RATE

ROTATION SENSOR  
AT THE GONDOLA





# PRESSURE SENSORS










FOR LIQUIDS & GASES

PRESSURE CALIBRATORS & CONTROLLERS



We offer a wide selection of pressure sensors for use with liquids and gases in all industrial applications, along with the right services surrounding measurement and sensor technology: Pressure sensors and transmitters, barometers and differential pressure sensors in standard and miniaturized versions, with and without ATEX certification.

To ensure the correct operation, calibration, and maintenance of all kinds of systems, we also offer an excellent selection of pressure calibrators and controllers – for simple and automatic monitoring and calibration of many types of sensors.

Product image	Model	Measurement Range	Pressure Type	Accuracy	Output (Supply Voltage)
STANDARD PRESSURE SENSORS					
	<b>AST44LP</b> Intrinsically Safe Pressure Transducer	0-1 PSI to 0-15 PSI	vented gauge	±0,25%	4-20 mA [10-28 VDC] 1-5 VDC, 1-6 VDC [10-28 VDC]
	<b>AST45PT</b> Temperature Submersible Sensor	0-1 PSI to 0-100 PSI	vented gauge	±0,25% (Druck) bzw. ±1,0% (Temperatur)	4-20 mA+ [10-28 VDC] 1-5 V, [10-28 VDC]
	<b>AST2000</b> Hydrogen Pressure Transducer	0-20 bar to 0-900 bar	vented gauge	±0,25%	0,5-4,5 V Ratiometric [5 VDC]
	<b>M5700</b> Submersible pressure Sensor	0-3,5 bar to 0-700 bar	vented gauge / sealed / compound	±0,25%	0,5-4,5 V [5 ± 0.25 V]
	<b>AST4510</b> Tauchbarer Druckaufnehmer für aggressive Flüssigkeiten Submersible pressure sensor for aggressive liquids	0-1 PSI bis 0-100 PSI	vented gauge	±0,25%	4-20 mA [10-28 VDC] 1-5 VDC, [10-28 VDC]
	<b>AST4520</b> Flush Diaphragm Liquid Level Sensor	0-2,5 PSI to 0-15 PSI	vented gauge	±0,25%	4-20 mA [10-28 VDC] 1-5 VDC, [10-28 VDC]
	<b>AST4530</b> Submersible Pressure Transducer PVDF/PTFE	0-2,5 PSI to 0-7,5 PSI	vented gauge	±0,5%	4-20 mA [10-28 VDC] 1-5 VDC, [10-28 VDC]
	<b>U5700</b> Submersible Pressure Transducer	0-0,35 mbar to 0-700 bar	vented gauge / absolute	±0,1 % bis ±0,75 %	0,5-4,5 V ratiometr. [5 VDC] 4-20 mA [9-30 VDC] 1-5 V, 0 - 5 V, 1-6 V [8-30 VDC] 0-10 V [15-30 VDC] 0,5-4,5 V [5-30 VDC]
	<b>AGS4000</b> General purpose pressure transducer	0-500 mbar to 0-700 bar	vented gauge / absolute	±0,4%	2 mV/V [10 VDC, max. 15 VDC] 0-5 V [13-30 VDC] 0-10 V [13-30 VDC] 4-20 mA [13-36 VDC]

Product image	Model	Measurement Range	Pressure Type	Accuracy	Output (Supply Voltage)
STANDARD PRESSURE SENSORS					
	<b>AGS4200</b> Standard Pressure Transducer in SOS-technology	0-0,5 bar to 0-1.500 bar	vented gauge	±0,25%	0-5 V [13-30 VDC] 0-10 V [13-30 VDC] 4-20 mA [13-36 VDC]
	<b>APS</b> Absolute Pressure Transducer, low-range	900-1.100 hPa 800-1.200 hPa 0-1.000 hPa 0-500 hPa	absolute	±1%	0-10 V [19-31 VDC] ±5 V [19-31 VDC] ±10 V [19-31 VDC] 0-20 mA [19-31 VDC] 4-20 mA [19-31 VDC] 4-20 mA 2L [12-32 VDC] [opt.: 230 VAC, 115 VAC, 24 VAC]
	<b>AS30   AS50</b> Precision thin-film Pressure Sensor (AS50 with pressure and temperature signal)	0-7 bar to 0-1.600 bar	vented gauge	±0,25%	0,5-4,5 V ratiometr. [5 VDC] 0,5-4,5 V [6,5-30 VDC] 1-5 V [7-30 VDC] 1-6 V [8-30 VDC] 1-10 V [12-30 VDC] only AS30: 4-20 mA [10-30 VDC] 0-5 V [7-30 VDC] 0-10 V [12-30 VDC]
	<b>AS3XCN</b> Precision thin-film Pressure Sensor	0-7 bar to 0-1.600 bar	vented gauge	±0,25%	CANopen DS301 & DS404
	<b>AS40</b> Standard Pressure Sensor	0-1 bar to 0-16 bar	vented gauge / absolute	±0,25%	0,5-4,5 V ratiometr. [5 VDC] 0,5-4,5 V [6,5-30 VDC] 1-5 V [7-30 VDC] 1-6 V [8-30 VDC] 1-10 V [12-30 VDC] 4-20 mA [10-30 VDC] 0-5 V [7-30 VDC] 0-10 V [12-30 VDC]
	<b>HP</b> Pressure Sensor for high pressure	0-50 kpsi to 0-100 kpsi (ca.3.500 bar to 7.000 bar)	gauge vented	±0,5%	1 mV/V [10 VDC] 0-5 V, ±5 V [11-28 VDC] 0-10 V, ±10 V [15-28 VDC] 4-20 mA 3L [22-32 VDC] 4-20 mA 2L [9-32 VDC] 4-20 mA 2L ATEX [9-28 VDC]
	<b>P6420-xxx-57</b> Standard Pressure Transducer for abrasive material (e.g. concrete)	0-5 bar to 0-50 bar	vented gauge	±1%	4-20 mA [10 - 32 VDC]
	<b>M5600</b> Wireless Pressure Sensor (Bluetooth)	0-3,5 bar to 0-700 bar	vented gauge / sealed / compound	±0,25%	0-2,3 VDC 2,3-3,6 VDC
	<b>P981-0107   P981-0120 P981-0121   P981-0181</b> Pressure Transducer for steelmill applications, 1/2" or 1/4" pressure adapter	0-350 bar	vented gauge	±0,1%	4-20 mA 2L [10-36 VDC]

Product image	Model	Measurement Range	Pressure Type	Accuracy	Output (Supply Voltage)
<b>STANDARD PRESSURE SENSORS</b>					
	<b>Z</b> Absolute Pressure Transducer / General purpose gage	0-35 mbar to 0-4.000 bar	vented gauge / absolute	±0,25%	3 mV/V [10 VDC] 0-5 V, ±5 V [11-28 VDC] 0-10 V, ±10 V [15-28 VDC] 4-20 mA 3L [22-32 VDC] 4-20 mA 2L [9-32 VDC] 4-20 mA 2L ATEX [9-28 VDC]
	<b>M5800</b> Standard Pressure Transducer with rotatable pressure display	0-3,5 bar to 0-700 bar	vented gauge / compound	±0,25%	1-5 V [8-30 V] 4-20 mA [12-30 V] 0-5 V [8-30 V] 0-10 V [12-30 V] 1-6 V [8-30 V] 0.5-4.5 V [8-30 V]
<b>PRECISION PRESSURE SENSORS</b>					
	<b>HI2000</b> Premium Pressure Transmitter in SOS-technology	0-0,5 bar to 0-1.500 bar	vented gauge	±0,1%	10 mV/V [5-15 VDC] 0-5 V [13-30 VDC] 0-10 V [13-30 VDC]
	<b>HI2300</b> Pressure Transmitter in SOS-technology for high temperatures	0-1 bar to 0-1.500 bar	vented gauge	±0,1%	10 mV/V [5-15 VDC]
	<b>HP1000   HP1100</b> High Pressure Transmitter in SOS-technology	0-400 bar to 0-4.000 bar	vented gauge	±0,25%	10 mV/V [10 VDC] 0-5 V [13-30 VDC] 0-10 V [13-30 VDC] 4-20 mA [10-36 VDC]
	<b>P900</b> High-Precision Pressure Transducer	0-700 mbar to 0-700 bar	vented gauge / absolute	±0,2% bzw. ±0,10%	2 mV/V [10 VDC, max. 12 VDC] 0-2,5 V [11-18 VDC] 0-5 V [10 VDC / 18-32 VDC / ±15 VDC] 0-10 V [15-36 VDC] 4-20 mA [10-36 VDC]
	<b>P1200</b> Heavy Industrial Pressure Transducer	0-5 bar to 0-700 bar	vented gauge / absolut (separately orderable)	±0,15%	20 mV [10 VDC max. 12 V] 100 mV [10 VDC max. 12 V] 5 VDC [10 VDC max. 12 V] 5 VDC [18-32 VDC max. 12 V] 4-20 mA (16% mA ±2%) [10-36 VDC]
	<b>PR3100</b> PROTRAN Pressure Transducer	0-1 bar to 0-600 bar	vented gauge / absolute	±0,3%	2 mV/V [5-15 VDC] 0-5 V [13-30 VDC] 0-10 V [13-30 VDC] 4-20 mA [13-36 VDC] ATEX available
	<b>Super TJE</b> High-Precision Pressure Transducer	0-10 psi to 0-7.500 psi (ca. 700 mbar to 500 bar)	vented gauge / absolute	±0,05%	2 mV/V [10 VDC] 0-5 V, ±5 V [11-28 VDC] 0-10 V, ±10 V [15-28 VDC] 4-20 mA 3L [22-32 VDC] 4-20 mA 2L [9-32 VDC] 4-20 mA 2L ATEX [9-28VDC]












Product image	Model	Measurement Range	Pressure Type	Accuracy	Output (Supply Voltage)
<b>PRECISION PRESSURE SENSORS</b>					
	<b>TJE</b> High-Precision Pressure Transducer	0-70 mbar to 0-4.000 bar	vented gauge / absolute	±0,1%	3 mV/V [10 VDC] 0-5 V, ±5 V [11-28 VDC] 0-10 V, ±10 V [15-28 VDC] 4-20 mA 3L [22-32 VDC] 4-20 mA 2L [9-32 VDC] 4-20 mA 2L ATEX [9-28VDC]
	<b>U5200</b> UltraStable Pressure Transducer for measurement of liquid or gas pressure	0-0,14 mbar to 0-700 bar	vented gauge / absolute	±0,1% to ±0,75 v.E (depending on measurement range)	0,5-4,5 V ratiometr. [5 VDC] 4-20 mA [9 - 30 VDC] 1-5 V, 0-5 V, 1-6 V [8-30 VDC] 0-10 V [15-30 VDC] 0,5-4,5 V [5-30 VDC]
	<b>U5300</b> UltraStable High-Accuracy Pressure Transducer for measurement of liquid or gas pressure	0-0,35 mbar to 0-700 bar	vented gauge / absolute	±0,1%	0,5-4,5 V ratiometr. [5 VDC] 4-20 mA [9-30 VDC] 1-5 V, 0-5 V, 1-6 V [8-30 VDC] 0-10 V [15-30 VDC] 0,5-4,5 V [5-30 VDC]
	<b>U5600</b> Wireless Pressure Transmitter	0-0,35 mbar to 0-700 bar	vented gauge / absolute	±0,1% to ±0,75%	2,5-3,6 VDC
	<b>UNIK5000</b> Pressure Transducer Series	0-70 mbar to 0-700 bar	vented gauge / absolute	±0,04% (mV-version 0,2 to 0,5)	0,5-4,5 V ratiometr. [5 VDC] 4-20 mA [9-30 VDC] 1-5 V, 0 - 5 V, 1-6 V [8-30 VDC] 0-10 V [15-30 VDC] 0,5-4,5 V [5-30 VDC]
<b>NEW</b> 	<b>DPS 5000 CANBus</b> Digital Pressure Sensing Platform	200 mbar to 700 bar	vented gauge / absolute	±0,1% ±0,2%	CANopen V2.0B



Product image	Model	Measurement Range	Pressure Type	Accuracy	Output (Supply Voltage)
<b>URTRA-HIGH PRECISION SENSORS</b>					
	<b>1000   6000   9000 Serie</b> Intelligent Pressure Transmitters	Absolute pressure: 0,1 MPa bis 275,8 MPa Gauge pressure: 0,1 MPa to 1,38 Mpa	vented gauge / absolute	±0,01%	RS-232 and RS-485
	<b>Model 715   Model 735</b> Display Models for pressure and temperature data	Model 715: for all High-precision Pressure Transducers with RS-232- and RS-485-interfaces Model 735: Supports all functions of 745 standard	vented gauge / absolute	±0,01%	RS-232 and RS-485
	<b>2000 Serie</b> Absolute and gauge pressure transducers	Absolute Pressure: 0,1 MPa to 3,45 MPa Gauge Pressure: 0,01 MPa to 1,38 Mpa	vented gauge / absolute	±0,01%	Frequency output [5-16 VDC]
	<b>202BG</b> Low range bi-directional gauge Pressure Transducer	±15 kPa	vented gauge	±0,01%	Frequency output [5-16 VDC]
	<b>3000   4000 Serie</b> Absolutdruckaufnehmer	0-6,9 Mpa to 0 - 276 Mpa	absolute	±0,01%	Frequency output [5-12 VDC]
	<b>4000KR Serie</b> Absolut Pressure Transducers	0-13,8 Mpa to 0-138 Mpa	absolute	±0,01%	Frequency output [5-16 VDC]
	<b>745   6000 Barometer</b> Digi quartz® barometric pressure standards	Model 6000-16B: 800-1.100 hPa Model 745-16B: 500-1.100 hPa	absolute	±0,08 hPa	Model 6000-16B: RS-232 and RS-485 [6 - 16 VDC] Model 745-16B: RS-232 [6-25 VDC, battery AA]
	<b>745 Serie</b> Portable Standards	Absolute Pressure: 0,1 MPa to 276 MPa Gauge Pressure: 0,1 MPa to 1,38 Mpa	vented gauge / absolute	±0,008%	RS-232 [6 - 25 VDC]
	<b>765 Serie</b> Portable Standards	Absolute Pressure: 0,1 MPa to 276 MPa Gauge Pressure: 0,1 MPa to 1,38 Mpa	vented gauge / absolute	±0,008%	RS-232 [100 - 240 VAC, internal battery]

Product image	Model	Measurement Range	Pressure Type	Accuracy	Output (Supply Voltage)
<b>URTRA-HIGH PRECISION SENSORS</b>					
	<b>765-16B</b> Portable Barometer	500-1.100 hPa	absolute	±0,08 hPa	RS-232 [100-240 VAC, internal battery]
	<b>8000 Serie</b> Submersible Depth Sensor	0-10 m H2O to 0-7000 m H2O 0-30 psia to 0-10,000 psia	vented gauge / absolute	±0,01%	USB 2.0 TTL + Diode RS232 RS485 CAN Bus
	<b>TERPS 8000</b> High accuracy Submersible Depth Pressure Sensor	0-2 bar to 0-70 bar	absolute	±0,01%	USB 2.0 TTL + Diode RS232 RS485 CAN Bus
	<b>TERPS 8100</b> Digital Submersible Depth Pressure Sensor	0-1 bar to 0-3,5 bar	absolute	±0,01%	TTL + Diode RS232 RS485
	<b>TERPS 8200</b> Digitally compensated High-precision Pressure Sensor	0-2 bar to 0-70 bar	absolute	±0,01%	TTL + Diode RS232 RS485
<b>MINIATURE PRESSURE SENSORS</b>					
<b>NEW</b> 	<b>PDCR/PMP 4300 SERIES</b> Druck Motorsport/ Automotive, Pressure Transducers	25psia to 3625psia	absolute	±0,1%	PDCR: 50 mV PMP: 4,7 V
	<b>EB100</b> High Accuracy Miniature Pressure Transducer	0-20 bar to 0-350 bar	absolute	±0,25%	0,5-4,5 V [8-30 V (current <5 mA)]
	<b>EPB</b> Miniature pressure sensor with stainless steel diaphragm	0-0,35 bar to 0-350 bar	vented gauge / absolute	±0,5% bis ±1%	1 to 12,5 mV/V [10 VDC], depending on measurement range
	<b>EBP-PW</b> Small pressure probe sensor for pore water applications in centrifuges or laboratory equipment	0-1bar to 0-70 bar	sealed gauge	±0,5%	5-12.5 mV/V [1-10 VDC]
	<b>EPIH</b> Subminiature pressure sensor with high frequency response	0-0,35 bar to 0-20 bar	vented gauge / absolute	±1%	2,4 to 15 mV/V [5 VDC], depending on measurement range

Product image	Model	Measurement Range	Pressure Type	Accuracy	Output (Supply Voltage)
<b>MINIATURE PRESSURE SENSORS</b>					
	<b>EPL</b> Miniature surface mount Pressure Sensor with stainless steel diaphragm	0-0,35 bar to 0-70 bar	vented gauge / absolute	±1% bzw. ±0,5%	1 to 12,5 mV/V [10 VDC], depending on measurement range
	<b>EPRB-1</b> Pressure transducer in miniature design with amplified output	0-3,5 bar to 0-700 bar	absolute	±0,25%	0,5-4,5 V [8 - 32 VDC] 0,5-4,5 V ratiometr. [5 VDC]
	<b>EPRB-2</b> Pressure transducer in miniature design with amplified output	0-0,35 bar to 0-700 bar	vented gauge / absolute	±0,25%	0,5-4,5 V [8-32 VDC] 0-5 V [8-32 VDC] 0,5-4,5 V ratiometr. [5 VDC]
	<b>EPRB-3</b> Ultra miniature pressure transducer with platinum RTD	0-3,5 bar to 0-700 bar	absolute	±0,25%	0,5-4,5 V [8 - 32 VDC] 0,5-4,5 V ratiometr. [5 VDC]
	<b>FP110</b> Flush Diaphragm Pressure Transducer with thread M16 x 1,5	0-10 bar to 10-500 bar	vented gauge	±0,3% to ±0,5%	1.2 mV/V [10 VDC] 4 V ±0,2 V [10-30 VDC] 5 V ±0,2 V [±15 VDC]
	<b>FP1124</b> High Temperature Pressure Transducer for measurement of pressure on the brake circuit, including ABS brake systems	0-30 bar to 30-350 bar	vented gauge	±0,3%	5V ±0.2 V [10-36 VDC]
	<b>LM</b> PVC isolated liquid level Pressure Transducer for small measurement ranges	0-1 psi bis 0-150 psi (ca. 0,07 bar to 10 bar)	vented gauge / absolute	±1%	0,5-4,5 V [5 VDC]
	<b>MP40</b> Flush mount Pressure Transducer	0-1 bar to 0-700 bar	vented gauge / absolute	±0,5 % bzw. ±0,25 %	20 mV/V [5 VDC] 4-20 mA [24 VDC]
	<b>XPM4</b> Miniature threaded (M4 x 0,7) Pressure Transducer	0-5 bar to 0-200 bar	vented gauge	v0,35% bzw. ±0,50%	3 to 10 mV/V [10 VDC] depending on measurement range

Product image	Model	Measurement Range	Pressure Type	Accuracy	Output (Supply Voltage)
<b>MINIATURE PRESSURE SENSORS</b>					
	<b>XPM5</b> Miniature threaded (M5 x 0,8) Pressure Transducer	0-1 bar to 0-350 bar	vented gauge / absolute	±0,25% to ±0,50%	2 bis 10 mV/V [10 VDC], depending on measurement range 0,5-4,5 V [10 - 30 VDC]
	<b>XPM6</b> Miniature threaded (M6 x 1,0) Pressure Transducer	1-100 bar to 0-1000 bar	vented gauge	±0.25	10mV/V [10 VDC regulated] 4 V ±0.2 V [10-30 VDC]
	<b>XP1113</b> Miniature threaded (M8 x 1,0) Pressure Transducer	0-1 bar to 0-350 bar	vented gauge / absolute	±0.25	5 to 10 mV/V [10 VDC] 0,5-4,5 V [10-30 VDC]
	<b>XPC10</b> High temperature Miniature Pressure Sensor with thread (M10 x 1,0)	0-10 bar to 0-500 bar	vented gauge / absolute	±0,25% to ±0,50%	1,2 mV/V [10 VDC] 0,5-4,5 V [10-30 VDC]
	<b>XPM10</b> Miniature Pressure Sensor with thread (M10 x 1,0)	0-1 bar to 0-350 bar	vented gauge / absolute	±0,25% to ±0,35%	5 bzw. 10 mV/V [10 VDC], depending on measurement range 0,5-4,5 V [10-30 VDC] 0-5 V [±12 - ±18]
	<b>XPR46</b> Miniature Pressure Sensor with integrated temperature compensation	0-0.5 bar to 0-100 bar	absolute / sealed gauge	±0,5% to ±1%	2.5 mV/V - 12.5mV/V [10 VDC]
<b>MULTI-CHANNEL PRESSURE SCANNERS / TEMPERATURE MEASURING SYSTEMS</b>					
	<b>DSA3016   DSAENCL3200</b> Pressure Scanner	±2,5 kPa to ±5.250 kPa	vented gauge	±0,05%	Ethernet [115 VAC, 230 VAC]
	<b>DSA3207   DSA3307</b> Pressure Scanner	0-5 psi to 0-1.000 psi (ca. 35 kPa to 70 kPa)	vented gauge / absolute / diff.	±0,12% to ±0,50%	Ethernet [20-36 VDC]
	<b>DSA3217   DSA3218</b> Pressure Scanner	103 kPa to 689 kPa bar ±2,5 kPa to ±5.171 kPa	absolute / diff.	±0,2% to ±0,08%	Ethernet [20-36 VDC]
	<b>MPS4000</b> Miniature Pressure Scanner	6,89 kPa to 995,4 kPa	vented gauge	±0,06% to ±0,2%	Ethernet [9-36 VDC]
	<b>PSC 8   16   24</b> Mult Channel Pressure Scanner	±1,25 mbar ±150 mbar	vented gauge / absolute / diff.	±0,25%	USB, LAN, CAN, Bus, RS 232

Product Image	Model	Measurement Range	Pressure Type	Accuracy	Output (Supply Voltage)
<b>MULTI-CHANNEL PRESSURE SCANNERS / TEMPERATURE MEASURING SYSTEMS</b>					
	<b>DSM4000</b> Digital Service Module for up to 8 ZOC multi channel pressure modules	—	—	—	Ethernet Arinc [9 -36 VDC]
	<b>DTS4050</b> Digital Temperature Scanner, accepts 16, 32, or 64 thermocouple inputs	Thermoelement-Types: E, J, K, N, R, S, T, B		±0,25°C bis ±4°C	Ethernet, °C, °F [18-36 VDC]
	<b>E-RAD4000</b> Pressure Measurement System, scalable from 1 to 8 ZOC multi channel pressure modules	—	—	—	Ethernet [±15 VDC, +5 VDC]
	<b>SPC4000</b> Pressure Calibrator	0-0,36 psi to 0-850 psi	vented gauge	0.01% F.S.	[100-240 VAC]
	<b>ZOC22B</b> Analog Multi-Channel Module	±2,5 kPa to ±350 kPa	diff.	±0,08% bis ±0,15%	±2,5 V [±15 VDC] ±5 V [±15 VDC] ±10 V [±15 VDC]
	<b>ZOC23B</b> Analog Multi-Channel Module	±2,5 kPa to ±350 kPa	diff.	±0,1% bis ±0,25%	±2,5 V [±15 VDC] ±5 V [±15 VDC] ±10 V [±15 VDC]
	<b>ZOC33</b> Analog Multi-Channel Module	±2,5 kPa to ±350 kPa	diff.	±0,08% bis ±0,15%	±2,5 V [±15 VDC] ±5 V [±15 VDC] ±10 V [±15 VDC]
<b>DIFFERENTIAL PRESSURE SENSORS</b>					
	<b>D5100</b> Differential Pressure Transducer for demanding environments	0-0,07 bar to 0-35 bar	diff.	±0,1% (from 1 bar)	0-100 mV [10 VDC, max. 14 VDC] 0,5-4,5 V ratiom. [5 VDC] 1-5 V [8-30 VDC] 4-20 mA [9-30 VDC]
	<b>DPS</b> Differential Pressure Transducer for low ranges, for non-aggressive gases	0,1 mbar to 1.000 mbar	diff. / vented gauge	±1% ±0,5% ±0,2%	0-10 V [19-31 VDC] ±5 V [19-31 VDC] ±10 V [19-31 VDC] 0-20 mA [19-31 VDC] 4-20 mA [19-31 VDC] 4-20 mA 2L [12-32 VDC] [opt.: 230 VAC, 115 VAC, 24 VAC]

Product Image	Model	Measurement Range	Pressure Type	Accuracy	Output (Supply Voltage)
<b>DIFFERENTIAL PRESSURE SENSORS</b>					
	<b>FDD   FDW</b> Differential Pressure Transducers Modell FDW wwet/wet Modell FDD wet/dry	0-35 mbar to 0-70 bar	diff.	±0,1% bzw. ±0,25%	5-10 mV/V [10 VDC] 0-5 V [9-28 VDC] 0-10 V [15-28 VDC] 4-20 mA [9-32 VDC] 4-20 mA ATEX [9-28 VDC]
	<b>UNIK5000</b> Differential Pressure Transducers	70 mbar to 700 bar	diff.	±0,04%	1-5 V 1-6 V 1-10V 0,5-4,5V
	<b>AST5400   AST54ED   AST54EN</b> Differential Pressure Transducers	0-1 PSI to 0-10 PSI	diff.	±0,5%	10-28 VDC
	<b>AST5300   AST53ED   AST53EN</b> Differential Pressure Transducers	1-10 PSI to 0-5.000 PSI	diff.	±1%	10-28 VDC
<b>PRESSURE PROBES</b>					
	<b>Conventional Multi-hole Probes</b>	5 m/sec to 320 m/sec	—	—	—
	<b>µADS - Micro-Air-Data-System and Air-Data-Pressure Probes</b>	5 m/sec to MACH 2.0	vented gauge + barometer	—	7-30 VDC
	<b>PSC 5</b> 5 channels / 1 barometer	Baro 600 - 1100mbar 0-1,100 mbar ±1,25 mbar ±150 mbar	vented gauge with REF to BARO	±0,25%	CAN, USB
	<b>Fast-Response Probes</b>	5 m/sec to 320 m/sec	vented gauge	—	10-18 VDC
	<b>Omniprobe</b>	5 m/sec to 320 m/sec	—	—	—

Product Image	Model	Measurement Range	Accuracy	Output (Supply Voltage)
<b>PRESSURE CALIBRATORS AND PRESSURE CONTROLLERS</b>				
	DPI 705 Serie	0-70 mbar to 0-700 bar	0,1%	—
	DPI 800/802 Serie	0-25 mbar to 0-700 bar	0,05%	RS232
	DPI 611	Vakuum to $\pm 200$ mV to $\pm 30$ V Vakuum to $\pm 20$ mA to $\pm 55$ mA	0,0435%	USB 4Sight2™
	DPI 612 Serie	Vakuum to 20 bar 0-20 bar, 0-100 bar, 0-1000 bar $\pm 200$ mV to $\pm 2000$ mV $\pm 20$ mA to $\pm 50$ mA	0,03% to 0,072%	USB 4Sight2™
	DPI 620 Genii	HART, PROFIBUS® Thermoelement, RTD, Frequency $\pm 200$ mVDC, $\pm 30$ VDC 0-2 VAC to 0-300 VAC $\pm 20$ mA to $\pm 55$ mA $\pm 25$ mbar to 0-1000 bar	0,005% to 0,090%	USB 4Sight2™
	PACE1001 Barometer	750-1150 mbar absolute	0,025 mbar to 0,1 mbar	RS232, IEEE, Ethernet, USB, Analog
	PACE1000	25 mbar to 700 mbar G 1 to 1000 bar G+A 750 to 1150 mbar Barometer optional	0,005% to 0,01%	RS232, IEEE, Ethernet, USB, Analog
	PACE 5000/6000 Modular Pressure Controller	0-25 mbar G to 0-210 mbar G 0-2 bar A, 0-3,5 bar G	0,0016% of measured value +0,0033 % from end value	RS232, IEEE, Ethernet, USB, Analog
	4Sight2™ Calibration and Asset Management Software	ab Windows 7, Google Chrome, Adobe Reader 8.0	—	—



## IT'S ALL ABOUT THE REFERENCE PRESSURE

Pressure sensors and transmitters vary not only by their shape and output signal, but especially with regards to the type of reference pressure used: There are pressure sensors for relative pressure and absolute pressure, as well as differential pressure.

### RELATIVE PRESSURE

For measuring relative pressure, we apply the surrounding air pressure to the back of the sensor element. In a typical assembly, this is done via a small tube leading from the back of the sensor to the plug or through the connecting lines. These pressure sensors have the advantage that changes in air pressure do not lead to variance in the sensor output.

### ABSOLUTE PRESSURE

Sensors for absolute pressure have a small chamber on the back of the sensor membrane which is completely evacuated and therefore has an absolute pressure of 0 bars. As long as no particular pressure is applied, these pressure sensors show the current air pressure, which lies between 950 and 1050 mbar. Any change in air pressure (e.g., from changing weather conditions) therefore leads to a change in the measurement signal, even if there is no change in the actual pressure you are measuring. Barometers are a special type of absolute pressure sensors which measure the surrounding air pressure with great precision.

Another special type of pressure sensors are so-called sealed gauge sensors. Their reference chamber is sealed at approx. 1000 mbar. These pressure sensors are primarily used for measurements above 10 bar. The seal protects the reference chamber against the introduction of aggressive gases, which can cause corrosion.

### DIFFERENTIAL PRESSURE SENSORS

The so-called differential pressure sensors are another special type of pressure sensors. The back of their sensor membrane is mechanically constructed in such a way that it serves as its own pressure connector for pressure measurements. A pressure sensor (pressure socket or pressure measurement socket) like this will measure zero pressure if the pressure is the same on the input and reference sides. Differential pressure sensors come in a wide variety of mechanical designs. There are simple designs which can only be used with dry gases on the reference side, or highly specialized pressure transducers that allow for more than 200 bar overload, even on one side, and still measure in the range of 35 mbar.

### PRESSURE TRANSDUCER

Pressure transducers are typically constructed to be very rugged and provide a common output signal of 4-20 mA for process measurement technology.

## THE RIGHT SOLUTION FOR YOUR REQUIREMENTS







Thanks to our decades of experience, we at Althen can provide both standard and highly specialized custom sensors as well as complete measurement systems for our customers.

Our product portfolio covers all physical measurements, and we use a wide range of technologies to ensure you always get the best solution for your measurement requirements. Thanks to our vast knowledge, technical expertise, our strong team of engineers from various professional backgrounds, and our broad range of products, we can offer you the most efficient solution for almost any application in every industry.

Our team will be happy to give you advice!

You can call us at **+49 (0)6195 70060** or send an email to **sales@althen.de**.

## OUR PRODUCT SCOPE

<b>bar</b>	Pressure	<b>mm</b>	Displacement	<b>g</b>	Acceleration		Amplifier
<b>N</b>	Force	<b>α</b>	Rotation	<b>m/s<sup>2</sup></b>	Vibration		Datenlogger
<b>Nm</b>	Torque		Joystick	<b>°/s</b>	Angular Rate		Automation
<b>ε</b>	Strain		Inclination	<b>°C</b>	Temperature		Measurement Solutions