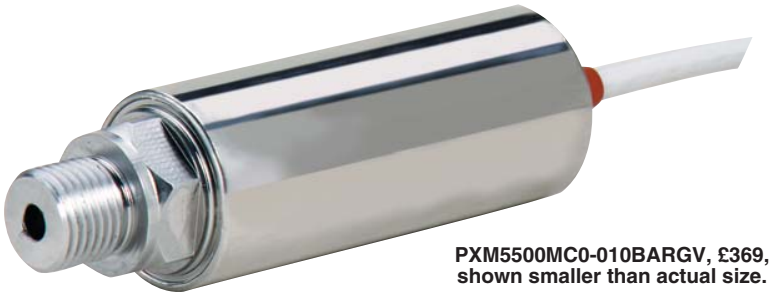
HIGH-PERFORMANCE TRANSMITTERS
LONG-TERM RELIABILITY

PXM5500 Series
4 to 20 mA, 0 to 5 Vdc or mV/V Output
0-1 to 0-600 bar

PXM5500MC6-010BARGI, £466, shown smaller than actual size.

Starts at
£369



PXM5500MC0-010BARGV, £369, shown smaller than actual size.

- High Accuracy 0.1%
- Solid State Reliability
- Sputtered Strain Gauge Design
- High Shock and Vibration
- Low Drift

Applications

- Testing
- R&D/Engineering Test Laboratories
- Functional Test Systems
- Production Testing
- Product Quality Assurance
- Flight Testing
- Gas Turbine and Engine Test Standards
- Ground Support Equipment
- Hydraulic Systems
- Custody Transfer Measurements

OMEGA's PXM5500 Transducer Series provides high performance in demanding industrial and research applications where accuracy, reliability, and price are important. This transducer has a 10-year MTBF rate and is stable to 0.1% of FS over an 18 month period. This translates into less down time, fewer test reruns, more time between calibrations, and high confidence in your pressure data. When recalibration is impossible, relying on the high stability of the PXM5500 Series transducer may be the only cost-effective way to obtain pressure data over the long term. OMEGA's thin film technology makes this premium in performance possible. The strain gauges and associated structures are sputter-deposited directly onto the pressure sensing element thus eliminating the need for adhesives. The resulting molecular bond between the sensing element and the strain gauges ensures virtually no shifting, drifting, or "creep" in the performance of the transducer.

The micro-geometry design of the PXM5500 sensing element results very small, low mass sensor that reduces effects of mechanical vibration and shock. The PXM5500 gives you the accuracy, reliability, and stability at competitive prices.

MOST POPULAR MODELS HIGHLIGHTED!

To Order *(Specify Model Number)*

Models with G ¼ Male Pressure Connection, Cable or Connector

RANGE (Bar)	MODEL NO.	PRICE	
Gauge Pressure		5V or mA	mV/V
0 to 1	PXM5500MC[*]-001BARG[**]	£466	£369
0 to 1.6	PXM5500MC[*]-1.60BARG[**]	466	369
0 to 4	PXM5500MC[*]-004BARG[**]	466	369
0 to 6	PXM5500MC[*]-006BARG[**]	466	369
0 to 10	PXM5500MC[*]-010BARG[**]	466	369
0 to 16	PXM5500MC[*]-016BARG[**]	466	369
0 to 25	PXM5500MC[*]-025BARG[**]	466	369
0 to 40	PXM5500MC[*]-040BARG[**]	466	369
0 to 60	PXM5500MC[*]-060BARG[**]	466	369
0 to 100	PXM5500MC[*]-100BARG[**]	466	369
0 to 160	PXM5500MC[*]-160BARG[**]	466	369
0 to 250	PXM5500MC[*]-250BARG[**]	466	369
0 to 400	PXM5500MC[*]-400BARG[**]	466	369
0 to 600	PXM5500MC[*]-600BARG[**]	466	369

*[*] Insert **"0"** for 0.6 m cable or **"6"** for micro DIN connector.*
*[**] Insert **"I"** for 4 to 20 mA, **"5T"** for 0 to 5 Vdc or **"V"** for mV/V outputs.*
*** See page 291 for compatible meters.*
*To order absolute pressure models, change **"G"** in the part number to **"A"**. No charge.*
*To order sealed gauge models, change **"G"** in the part number to **"S"**. No charge.*

Ordering Examples: PXM5500MC0-060BARSI,** 60 bar sealed gauge transducer with 4 to 20 mA output, 0.6 M cable connection and G ¼ male pressure port, **£466.
***PXM5500MC6-1.60BARAI,** 1.6 bar absolute pressure transducer with 4 to 20 mA output, micro DIN connection and G ¼ male pressure port, **£466.** Mating connector included.*

RUGGED SPUTTERED TECHNOLOGY

SPECIFICATIONS

mA MODELS:

Excitation: 10 to 40 Vdc unregulated Reverse Polarity Protected

Output (FS): 4-20mA ±2mA adj

Zero Balance: 4mA ±0.4mA adj

Input Current: 20mA max with no load

Operating Temp Range:
-40 to 85°C

Compensated Temp Range:
-18 to 82°C

Thermal Effects:
(Over the compensated range)
Span: ±0.036% FS/°C
Zero: ±0.036% FS/°C

Load Impedance: 50 (V-10) ▽ max where V is supply voltage (40 Vdc max)

Insulation Resistance:
100 M▽ @ 45 Vdc between all pins shorted together and case

5 Vdc MODELS:

Excitation: 12 to 40 Vdc unregulated

Output (FS):
5 Vdc ±0.1 Vdc ±10% adj

Zero Balance: 0 V ±0.1Vdc ±5% adj

Input Current: 20mA max with no load

Output Resistance: 100 Ω max

Insulation Resistance:
100 M▽ @ 45 Vdc between all pins shorted together and case

Operating Temp Range:
-54 to 121°C

Compensated Temp Range:
-18 to 82°C

Thermal Effects:
(Over the compensated range)
Span: ±0.027% FSO/°C
Zero: ±0.027% FSO/°C

mV/V MODELS:

Excitation: 10 Vdc

Output FSO:
30 mV typical, 26 mV minimum

Input Resistance: 1000 Ω typical, 800 Ω minimum, 1500 Ω max; for 350 Ω bridge models see custom configurations

Output Resistance: 1000 Ω typical, 800 Ω minimum, 1200 Ω maximum

Insulation Resistance: 500 MΩ @ 45 Vdc over the compensated range

Operating Temp Range:
-54 to 150°C

Compensated Temp Range:
-18 to 82°C

Thermal Effects:
Span: ±0.0045% FSO/°F
Zero: ±0.0045% FSO/°C

COMMON SPECIFICATIONS:

Sensing Element:
4 active-arm bridge using sputter-deposited thin-film elements

Accuracy: Combined Linearity, Hysteresis and Repeatability:
±0.10% FS (BFSL) 60 bar
±0.15% FS 100 bar and above

Electrostatic Discharge:
Protected to 15kV max

Vibration Sensitivity:
At 20 g (35 g for mV/V) peak sinusoidal vibration from 10 Hz to 2000 Hz (13 mm D.A.), the output shall not exceed 0.04% FS/g for 1 bar range, decreasing to 0.003% FS/g for 70 bar and above

Natural Frequency:
5 kHz for 1 bar, increasing logarithmically to 50 kHz for 300 bar

Shock: Qualification level of 100 g, 11 milliseconds half sine wave without damage

Proof Pressure: 2.0 times rated pressure or 1000 bar, whichever is less, will not cause changes in performance beyond the specified tolerance

Burst Pressure: 3.0 times rated pressure or 1,300 bar whichever is less, will not cause rupture of the pressure containment cavity

Wetted Parts: 17-4 PH or 15-5 PH stainless steel

Electrical Connection: 0.6 m cable or microDIN, see custom configurations

Dimensions: Excluding process fitting and electrical connector
5V and mA models: 76 x 38 mm Ø
mV/V models: 74 x 26 mm Ø

Pressure Port: G ¼ standard, see custom configurations

Optional: G ¼ Female, G ⅛ male/female

Mating Connector:
Style 1: PTS06A-10-6S (not included)
Style 6: Included

Weight: 225 g maximum

CUSTOM CONFIGURATIONS

MODEL NUMBER SPECIFICATION:

PXM5500MC0-006BARAI

OPTION CODES (add to end of model number)
–CAL11 For 11-point calibration certificate **+$250**
–[ ]m Optional cable length
Example: –12m = 12 meters total of cable

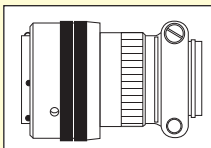
OUTPUT: V = 3 mV/V nominal
5T = 0 to 5 Vdc
I = 4 to 20 mA

UNITS (A = absolute, S = sealed gauge, G = gauge)

RANGE

ELECTRICAL CONNECTION:
0 = 0.6 m cable
1 = PTIH-10-6P connector or equiv.
3 = 4-pin eyelet
6 = micro DIN connector

PRESSURE PORT: MA = G 1/8 male
MB = G 1/8 female
MC = G 1/4 male (standard)
MD = G 1/4 female



Style 1 Mating Connector PTS06A-10-6S, £31.50

Ordering Examples: PX5500MC1-025BARSI, *25 bar sealed gauge pressure range and 4 to 20 mA output with G ¼ male fitting and* ***PTIH-10-6P,*** *electrical connection,* ***£466. PTS06A-10-6S,*** *mating connector (not included),* ***£31.50. PX5500MD0-001BARAV,*** *1 bar absolute pressure range and mV/V output with G ¼ female fitting and 0.6 m cable,* ***£369. PXM5500MA6-006BARGI,*** *6 bar gauge pressure range and 4 to 20 mA output with G ⅛ male pressure port and micro DIN electrical connection,* ***£466.*** *Mating connector included.*

omega.co.uk®

Your One-Stop Source for Process Measurement and Control!

Freephone 0800 488 488 | International +44(0) 161 777 6622 | Fax +44(0) 161 777 6622 | Sales@omega.co.uk

www.omega.co.uk

UNITED STATES
www.omega.com
1-800-TC-OMEGA
Stamford, CT.

CANADA
www.omega.ca
Laval(Quebec)
1-800-TC-OMEGA

GERMANY
www.omega.de
Deckenpfronn, Germany
0800-8266342

UNITED KINGDOM
www. omega.co.uk
Manchester, England
0800-488-488

FRANCE
www.omega.fr
088-466-342

CZECH REPUBLIC
www.omegaeng.cz
Karviná, Czech Republic
596-311-899

BENELUX
www.omega.nl
0800-099-33-44

More than 100,000 Products Available!

• Temperature

Calibrators, Connectors, General Test and Measurement Instruments, Handheld Instruments for Temperature Measurement, Ice Point References, Indicating Labels, Crayons, Cements and Lacquers, Infrared Temperature Measurement Instruments, Recorders, Relative Humidity Measurement Instruments, PT100 Probes, PT100 Elements, Temperature & Process Meters, Timers and Counters, Temperature and Process Controllers and Power Switching Devices, Thermistor Elements, Probes and Assemblies, Thermocouples, Thermowells and Head and Well Assemblies, Transmitters, Thermocouple Wire, RTD Probes

• Flow and Level

Air Velocity Indicators, Doppler Flowmeters, Level Measurement, Magnetic Flowmeters, Mass Flowmeters, Pitot Tubes, Pumps, Rotameters, Turbine and Paddle Wheel Flowmeters, Ultrasonic Flowmeters, Valves, Variable Area Flowmeters, Vortex Shedding Flowmeters

• pH and Conductivity

Conductivity Instrumentation, Dissolved Oxygen Instrumentation, Environmental Instrumentation, pH Electrodes and Instruments, Water and Soil Analysis Instrumentation

• Data Acquisition

Auto-Dialers and Alarm Monitoring Systems, Communication Products and Converters, Data Acquisition and Analysis Software, Data Loggers Plug-in Cards, Signal Conditioners, USB, RS232, RS485 and Parallel Port Data Acquisition Systems, Wireless Transmitters and Receivers

• Pressure, Strain and Force

Displacement Transducers, Dynamic Measurement Force Sensors, Instrumentation for Pressure and Strain Measurements, Load Cells, Pressure Gauges, Pressure Reference Section, Pressure Switches, Pressure Transducers, Proximity Transducers, Regulators, Pressure Transmitters, Strain Gauges, Torque Transducers, Valves

• Heaters

Band Heaters, Cartridge Heaters, Circulation Heaters, Comfort Heaters, Controllers, Meters and Switching Devices, Flexible Heaters, General Test and Measurement Instruments, Heater Hook-up Wire, Heating Cable Systems, Immersion Heaters, Process Air and Duct, Heaters, Radiant Heaters, Strip Heaters, Tubular Heaters