Precision Piezoresistive Pressure Transmitters

PMC ENGINEERING

STS global.sensor.excellence

OEM PIEZORESISTIVE PRESSURE TRANSDUCER

TD

Pressure range
0 - 1 to 0 - 15,000 psi

Accuracy
≤± 0.25% FS (standard)
≤± 0.5% FS (option)
≤± 0.1% FS (on request)

Compensated temp. range
Standard: 32 to 160°F
Option: -15 to 185°F
Option: -40 to 185°F

Process media temperature
Standard: -40 to 300°F
Option: -65 to 300°F

Construction
Ø 0.59" flush diaphragm
Ø 0.75" with welding ring
Ø 0.75" flush diaphragm
Ø 0.72" with welding ring
Ø 0.72" flush diaphragm
others on request

Output signal
Depending on pressure range, typically between 25 and 200mV (at 1mA power supply and full scale pressure)

Electrical connection
5 gold plated pins

PASSIVE PRESSURE TRANSMITTER

TM

Pressure range
0 - 1 to 0 - 15,000 psi
0 - 1 to 0 - 360 psi (as submersible version)

Accuracy
≤± 0.25% FS (standard)
≤± 0.5% FS (option)

Compensated temp. range
Standard: 32 to 160°F
Option: -15 to 185°F
Option: -40 to 185°F

Process media temperature
-40 to 300°F

Pressure connection
1/4" NPT male
1/2" NPT male
7/16"- 20 UNF to MS 33656
1/4" NPT female*, others on request
*Not recommended for pressure > 10,000 psi

Output signal
Depending on pressure range typically between 15 and 100 mV at 10 VDC power supply and full scale pressure

Electrical connection
6-pin bayonet per MIL-C-26482 (10-6)
PUR, PE or FEP cable
others on request

PRECISION PRESSURE TRANSMITTER

ATM.1ST

Pressure range
0 - 1 to 0 - 15,000 psi
0 - 1 to 0 - 360 psi (as submersible version)

Accuracy
≤± 0.1% FS (standard)
≤± 0.25% FS (option)

Compensated temp. range
Standard: 32 to 160°F
Option: -15 to 212°F
Option: -40 to 255°F

Process media temperature
-40 to 255°F
up to 300°F with optional cooling fins

Pressure connection
1/4" NPT male
1/2" NPT male
7/16"- 20 UNF to MS 33656
1/4" NPT female*, others on request
*Not recommended for pressure > 10,000 psi

Output signal
4 - 20 mA, 0 - 5 V or 0 - 10 V

Total Error Band
Typ. ± 0.8% (32 to 160°F) ≤ 7.25 psi
Typ. ± 0.3% (32 to 160°F) > 7.25 psi

Typ. ± 0.5% (32 to 160°F) ≤ 7.25 psi
Typ. ± 0.2% (32 to 160°F) > 7.25 psi
with option active compensation
(4 to 20mA and non-submersible only)

Electrical connection
6-pin bayonet per MIL-C-26482 (10-6)
PUR, PE or FEP cable
others on request

PROCESS 4 - 20 mA PRESSURE TRANSMITTER

ATM.1ST/IS

Pressure range
0 - 1 to 0 - 10,000 psi

Accuracy
≤± 0.1% FS (standard)
≤± 0.25% FS (option)

Approvals
ATEX, FM or FM-C
EEx 1G ia IIC T3 - T6
FM/FM-C, Class 1, Div. 1 approved

Process media temperature
-40 to 120°F/230°F
up to 300°F with optional cooling fins

Pressure connection
1/4" NPT male
1/2" NPT male
7/16"- 20 UNF to MS 33656
1/4" NPT female*, others on request
*Not recommended for pressure > 10,000 psi

Output signal
4 - 20 mA

Total Error Band
Typ. ± 0.8% (32 to 160°F) ≤ 7.25 psi
Typ. ± 0.3% (32 to 160°F) > 7.25 psi

Typ. ± 0.5% (32 to 160°F) ≤ 7.25 psi
Typ. ± 0.2% (32 to 160°F) > 7.25 psi
with option active compensation

Electrical connection
Industrial DIN and Mini DIN connectors
PUR or FEP cable
others on request

PRECISION PRESSURE AND TEMPERATURE TRANSMITTER

ATM.1ST/T

Pressure/Temperature range
0 - 1 to 0 - 360 psi (same for submersible)
Temp. meas. range between -58 to 300°F, or any other span of min. 55°F

Accuracy
≤± 0.1% FS (standard)
≤± 0.25% FS (option)
Typ. ± 0.8°F (temperature accuracy)

Compensated temp.range
Standard: 32 to 160°F
Option: -15 to 212°F
Option: -40 to 212°F

Process media temperature
-40 to 255°F

Pressure connection
1/2" BSP male, probe tip ø 0.16 x 0.25
1/2" NPT male, probe tip ø 0.16 x 0.11
others on request

Dual output signal
4 - 20 mA, 3 or 4 wire configuration

Total Error Band
Typ. ± 0.8% (32 to 160°F) ≤ 7.25 psi
Typ. ± 0.3% (32 to 160°F) > 7.25 psi

Typ. ± 1.3% (-15 to 212°F) ≤ 7.25 psi
Typ. ± 0.75% (-15 to 212°F) > 7.25 psi

Electrical connection
6-pin bayonet per MIL-C-26482 (10-6)
PUR, PE or FEP cable
others on request

DIGITAL PRESSURE TRANSMITTER

DTM

Pressure range
0 - 1 to 0 - 15,000 psi
0 - 1 to 0 - 360 psi (as submersible version)

Accuracy
≤± 0.25% FS (≤ 7psi)
≤± 0.1% FS (> 7psi)
Resolution: < 0.02%FS

Compensated temp. range
Standard: 32 to 160°F
Option: -15 to 185°F
Option: -40 to 185°F

Process media temperature
-40 to 212°F
up to 300°F with optional cooling fins

Pressure connection
1/4" NPT male
1/2" NPT male
7/16"- 20 UNF to MS 33656
1/4" NPT female*, others on request
*Not recommended for pressure > 10,000 psi

Interface
RS232C, RS485

Electrical connection
6-pin bayonet per MIL-C-26482 (10-6),
PUR, PE or FEP cable
others on request

PROGRAMMABLE PRESSURE TRANSMITTER

PTM

Pressure range
0 - 1 to 0 - 15,000 psi
0 - 1 to 0 - 360 psi (as submersible version)
4:1 turn down

Accuracy
≤± 0.25% FS (≤ 7psi)
≤± 0.1% FS (> 7psi)
Resolution: 14bit

Compensated temp. range
Standard: 32 to 160°F
Option: -15 to 185°F
Option: -40 to 185°F

Process media temperature
-40 to 212°F
up to 300°F with optional cooling fins

Pressure connection
1/4" NPT male
1/2" NPT male
7/16"- 20 UNF to MS 33656
1/4" NPT female*, others on request
*Not recommended for pressure > 10,000 psi

Output signal
4 - 20mA, 2-wire

RS485 with additional output signal
4 - 20mA for pressure

RS485 with additional output signals
4 - 20mA for pressure and temperature (option)

Digitally corrected with active compensation (option)

Electrical connection
6-pin bayonet per MIL-C-26482 (10-6),
PUR, PE or FEP cable,
Demountable (option)
others on request

MINIATURE - 0.69" dia. PRESSURE TRANSDUCER

ATM.1ST/17.5

Pressure range
0 - 14.5 to 0 - 725 psi

Accuracy
≤± 0.1% FS (standard)
≤± 0.25% FS (option)

Compensated temp. range
Standard: 32 to 160°F
Option: -15 to 185°F

Process media temperature
-40 to 255°F

Pressure connection
3/8"- 24 UNJF-3A
others on request

Output signal
0.5 - 4.5 V or 4 - 20 mA

Total Error Band
Typ. ± 1.5% (-40 to 212°F) ≤ 7.25 psi
Typ. ± 1.2% (-40 to 212°F) > 7.25 psi

Electrical connection
Connector RSF4
others on request

TEMPERATURE TRANSMITTER

TS 100

Temperature range
-65 to 300°F
or any other span of min. 55°F

Pressure resistance
up to 12,000 psi

Accuracy
32 to 160°F ≤± 2°F
-15 to 185°F ≤± 2.7°F
-65 to 300°F ≤± 3.6°F

Process connection/Sensor
7/16 - 20 UNF male
1/4" NPT male , 1/2" NPT male
others on request

Probe Dimensions
Ø 0.126 x 0.85" (standard)
Ø 0.138 x 1.76"
Ø 0.20 x 1.25"
Ø 0.138 x 1"
Ø 0.20 x 7.9"
others on request

Output signal
4 - 20mA, 0 - 5V, 0 - 10V

Electrical connection
6-pin bayonet per MIL-C-26482 (10-6), PUR, PE or FEP cable
others on request

PRESSURE TRANSMITTER WITH DATALOGGER

DL

Pressure range
0 - 1 to 0 - 15,000 psi
0 - 1 to 0 - 360 psi (as submersible version)

Accuracy
≤± 0.25% FS (≤ 7psi)
≤± 0.1% FS (> 7psi)

Compensated temp. range
Standard: 32 to 160°F
Option: -15 to 185°F

Process media temperature
-15 to 212°F

Pressure connection
1/4" BSP male
1/4" BSP female
1/2" BSP male*
1/2" BSP male flush or frontal
others on request
*Not recommended for pressure > 10,000 psi

Interface/Specifications
RS232

Sampling rate: 2s - 24h
Data memory: up to 130,000 measured values
Battery: Lithium battery 3.6V (user replaceable)

Electrical connection
Connector RSF5

MINIATURE DEPTH AND LEVEL PRESSURE SENSOR

MTM3000

Pressure range
0 - 15 to 0 - 500 psi

Accuracy
≤± 0.25% FS (standard)
≤± 0.1% FS (option)

Compensated temp. range
25 to 125°F

Process media temperature
25 to 125°F

Construction
3/8" diameter with nose cone

Version
closed, open

Output signal
passive:
Typ. 50 mV at 10 VDC power supply and full scale pressure

active:
4 - 20mA, 0 - 5V, 1 - 5V or 0 - 10V with optional remote electronics

Electrical connection
PUR cable

CUSTOMIZED SENSORS

APPLICATION EXAMPLES

Test benches

Vehicle development

Mining / Hazardous Locations

Machine and plant construction

Offshore / Subsea

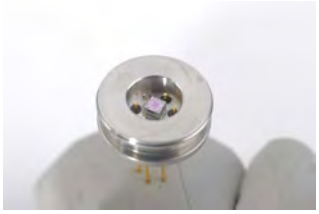
Shipbuilding / Drydocks

TECHNOLOGY

Some core technologies used in our products:

- Piezoresistive Silicon Sensor Technology
- Analog and Digital Communication
- Custom ruggedized cable
- Re-Rangeable and Datalogging
- Ceramic Capacitive Sensor Technology

The sensor element is a high stability piezoresistive silicon chip, physically and electrically isolated from the process media with an isolation diaphragm.
Either Stainless steel 316L or Titanium contact the process media.



The ceramic capacitive element is ideal for waste water applications and very low pressures. It is ideal for flush mount installations to avoid clogging.

COMPANY PROFILE

Based in Danbury, CT, PMC Engineering LLC (*formerly Process Measurement & Controls*) and Sensor Technik Sirnach AG (STS) have combined to provide an extremely broad range of pressure transmitters and transducers for the North American market. With manufacturing both in Switzerland and the United States, this combination provides our customers with Swiss precision and on-time deliveries, in addition to very knowledgeable and experienced US-based personnel. The company goals are to become the market leader by pursuing a consistent niche market strategy, providing industry with innovative solutions, and maintaining our policy of continual product development.

STS is an internationally recognized company specializing in the design and manufacture of high performance sensors specifically for the measurement of pressure, temperature and level. Its headquarters and main manufacturing facilities are in Sirnach, Switzerland. STS has been developing solutions for customer specific applications since 1987. It manufactures both individual sensors and entire systems primarily in the field of pressure measurement. Its products are based on highly developed piezoresistive technology with significant market success in applications including gas/oil exploration and transmission, offshore/subsea, shipbuilding, surface/ground water, environmental and a wide range of test applications, particularly in the automotive and aerospace sectors.

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