

SUBSEA PRESSURE/TEMPERATURE TRANSMITTER CANBUS PROTOCOL - EPS1005



Process Measure Control

Features

- Canbus Output
- 1 to 20,000 psi
- Sealed/Gauge/Abs.
- Temperature output *optional*
- Rated to 12,000 FSW

Applications

- Subsea Pods
- ROV Controls
- Subsea Hydraulics

PRODUCT OVERVIEW

The EPS1005 Sensor is an electronically compensated pressure transmitter providing CANbus outputs in several common protocols. The transmitter offers accuracies of $\leq 0.1\%FS$ including linearity, hysteresis, repeatability, zero and span setting errors.

The transmitters utilize piezoresistive silicon sensor technology which PMC has been refining for 25 years. The modular construction provides manufacturing flexibility and offers fast delivery for all pressure ranges and standard options.

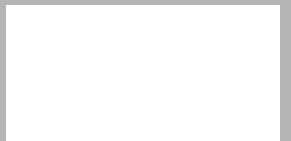
Available with pressure output only, or combination pressure and temperature.

Contact

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Represented by:



Specification

Measurement

Pressure ranges

Any range from 1 to 20,000 psi FS available, in any engineering units such as psi, kPa, in H₂O, bar. Absolute, Gauge, Sealed Gauge available.

Consult factory for any other pressure ranges

Proof Pressure

FS up to 15 psi:	45 psi
FS > 15 psi up to 4,000 psi:	3 x FS
FS > 4000 psi up to 9000 psi:	12,000 psi
FS > 9000:	22,000 psi

Consult factory for higher proof pressure

Burst Pressure

FS up to 350 psi:	>3000 psi
FS up to 9000 psi:	>12,000 psi
FS > 9000 psi:	>22,000 psi

Operating Temperature Range

-40 to 255°F

Compensated Temperature Range

32 to 160°F (standard)

-15 to 212°F (option)

-40 to 255°F (option)

Storage Temperature Range

-40 to 255F

Performance

Total Error Band (TEB)

typ. ±0.8% total for 32 to 160°F, ≤ 7.25 psi FS

typ. ±1.3% total for -15 to 212°F, ≤ 7.25 psi FS

typ. ±0.3% total for 32 to 160°F, > 7.25 psi FS

typ. ±0.75% total for -15 to 185°F, > 7.25 psi FS

Specification Continued

Accuracy

Combined linearity, hysteresis, repeatability, Zero and Span set:

≤±0.25% FS (standard, up to 15,000psi)

≤±0.10% FS (option)

Long term stability

<0.1% FS/yr for pressure ranges > 30 psi FS

Prorated for ranges below 30 psi FS

Under standard conditions

Supply voltage

9 - 30 VDC

Influence of supply voltage < 0.05% FS

Output signal - CANbus

- CAN 2.0(A&B), 11 or 29 bit identifiers
- CANopen
- J1939
- ISO 11898-3 Low speed fault tolerant

A/D Resolution:

16-bit

Response time:

<1ms (10 to 90%FS)

Insulation resistance

> 50 megohms @ 500 VDC (@ 68°F)

Construction

Pressure media compatibility

Stainless steel 316L, Zeron 100, Inconel 718NACE, Viton seals. Other seal materials available. Elastomer-free NACE version available.

Pressure connection

Autoclave F250C standard. Other connections available

Electrical connection

Teledyne Impulse MCBH-4MP standard

Other types available

Specification Continued

Weight

12 oz. approximate

Vibration

10 g, 4 to 2000 Hz

Mechanical Shock

100 g / 6ms

Ordering Information

Please specify the following:

1. Model Number - EPS1005
2. Electrical Connection
99 - MCBH-4MP-SS (mating conn. extra)
others by request
3. Pressure range, including eng. units, type
4. Accuracy
5. CAN output type
6. Any special feature
7. Optional temperature output & range

Example ordering format:

EPS1005 - 99 - 10000 psig - 0.1% - J1939

Options

STS offers a wide range of options for these and other similar transmitters. Please consult the factory for any special requirements.

Example include:

Alternate electrical configurations

i.e. RS485, HART etc.

Lightning protection

Intrinsic safety certification

Pressure snubber

Special oil filling for food application etc.

Alternate construction i.e. titanium, hastelloy

Alternate seals i.e. EPDM, Kalrez

Wide range of pressure connectors

Wide range of electrical connectors

PMC Engineering adopts a continuous development program which sometimes necessitates specification changes without notice

MECHANICAL DETAILS

Dimensions in inches

