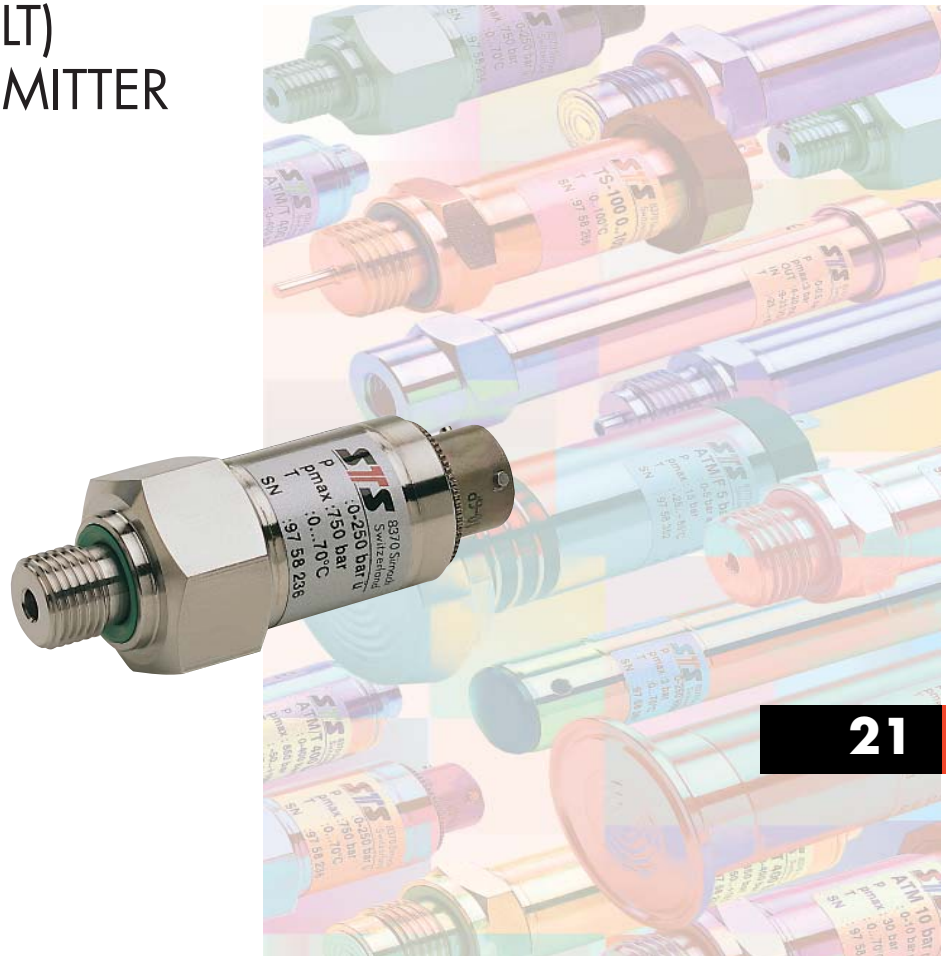


PASSIVE (MILLIVOLT) PRESSURE TRANSMITTER TM



21

Features

- Full scale ranges from 1 to 15,000 psi
- Gauge, absolute or sealed gauge
- High overload: 3 x full scale
- Operating temperature: -40 to 300°F
- Typical annual stability of 0.1%

Product overview and applications

The TM series 21 is a precision passive pressure transducer offering high performance and rugged flexible design for a wide range of industrial and OEM applications. The transducer is based on STS piezoresistive sensor technology with 20 years proven history. Low current consumption and pulsed operation make this an ideal pressure transducer for remote applications for long term operation and where limited power is available. The TM is ideal for the OEM looking for good price/performance and customer/technical support.

Examples of applications include:

- Machine control
- Environmental monitoring
- Test and calibration system
- Remote monitoring applications

Specification

Measurement

Pressure ranges

Any range from 1 to 15,000 psi FS available, in any engineering units such as psi, Pa, in H₂O, bar.

Absolute from 0 - 2 to 0 - 360 psia FS
 Gauge from 0 - 1 to 0 - 360 psig FS
 Sealed from 0 - 150 to 0 - 15,000 psig FS
 Compound ranges from -15 to 360 psig FS*
 Neg. ranges from 0 to -1 to 0 to -15 psig FS*
 *Consult factory

Proof pressure

FS up to 15 psi: 45 psi
 FS > 15 psi up to 4000 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
 Consult factory for higher burst pressure

Operating temperature range

-25 to 185°F (ambient)
 -40 to 300°F (process media)

Compensated temperature range

32 to 160°F (standard)
 -15 to 185°F (option)
 -40 to 185°F (option)

Temperature effects

±1.5% total for 32 to 160°F, > 30 psi FS
 ±2% total for 32 to 160°F, 7 to 30 psi FS
 ±2% total for -15 to 185°F, > 30 psi FS
 ±2.5% total for -15 to 185°F, 7 to 30 psi FS

Performance

Accuracy

≤ ±0.25% FS BSL which includes typical hysteresis and repeatability of ±0.02%
 ≤ ±0.1% FS BSL on request

Also available with ≤ ±0.5% FS including combined linearity, hysteresis, repeatability and zero and span settings

Specification continued

Common mode voltage

1/2 supply voltage ±10%

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

10 VDC standard, will operate 1 - 15 VDC

Output signal

Output ratiometric with supply voltage
 For 10 VDC supply full scale outputs are:
 Ranges up to 4 psi 15 mV
 Ranges above 4 psi up to 9 psi 25 mV
 Ranges above 9 psi up to 15 psi 35 mV
 Ranges above 15 psi 50 mV
 Higher output signals on request

Input impedance

> 10k ohm

Bridge resistance

3k ohm typical

Insulation resistance

> 50 megohms @ 500 VDC (@ 68°F)

Response time

< 0.1ms/10 to 90% FS

Construction

Pressure media compatibility
 Stainless steel 316L, Viton seals
 Other seal materials available
 Fully welded 316L version on request

Pressure connection

1/4" NPT male
 Other connections available

Electrical connection

DIN 43650 (Fig. 2)
 6-pin bayonet per MIL-C-26482 (10-6) (Fig. 3)
 Polyurethane cable (Fig. 4)
 Demountable versions and other types available

Specification continued

All sensors carry the CE mark

Weight

3.5 oz approximate (not including cable)

Ordering information

Please specify the following:

- 1) Model number - TM 21
- 2) Electrical connection
 01 - DIN 43650
 06 - 6 pin bayonet (mating connector extra)
 15 - Polyurethane cable
- 3) Pressure range, including eng. units, type
- 4) Accuracy
- 5) Any special features

Example ordering format:
 TM 21 - 15 - 100 psig - 0.25% - 30 feet cable

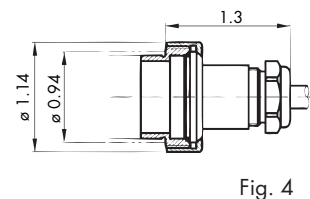
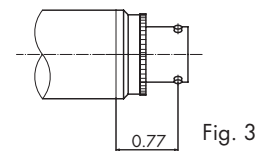
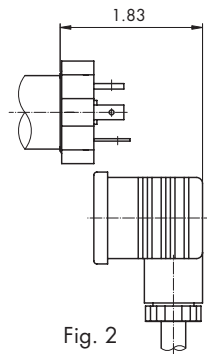
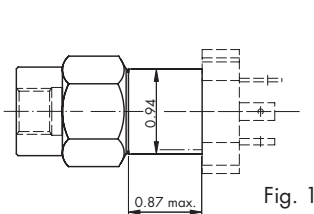
Options

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

Examples include:

- Alternate electrical configurations i.e. 0 to 5VDC, 0 to 10 VDC, 0 to 20 mA, 4 to 20 mA, RS485, CANopen
- Lightning protection
- Intrinsic safety certification (current output)
- Cooling extension
- Explosion proof 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
- Datalogging

Dimensions (inches)



Specifications may change without notice.

STS is registered ISO 9001-2000

10.00.0209C - 802



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