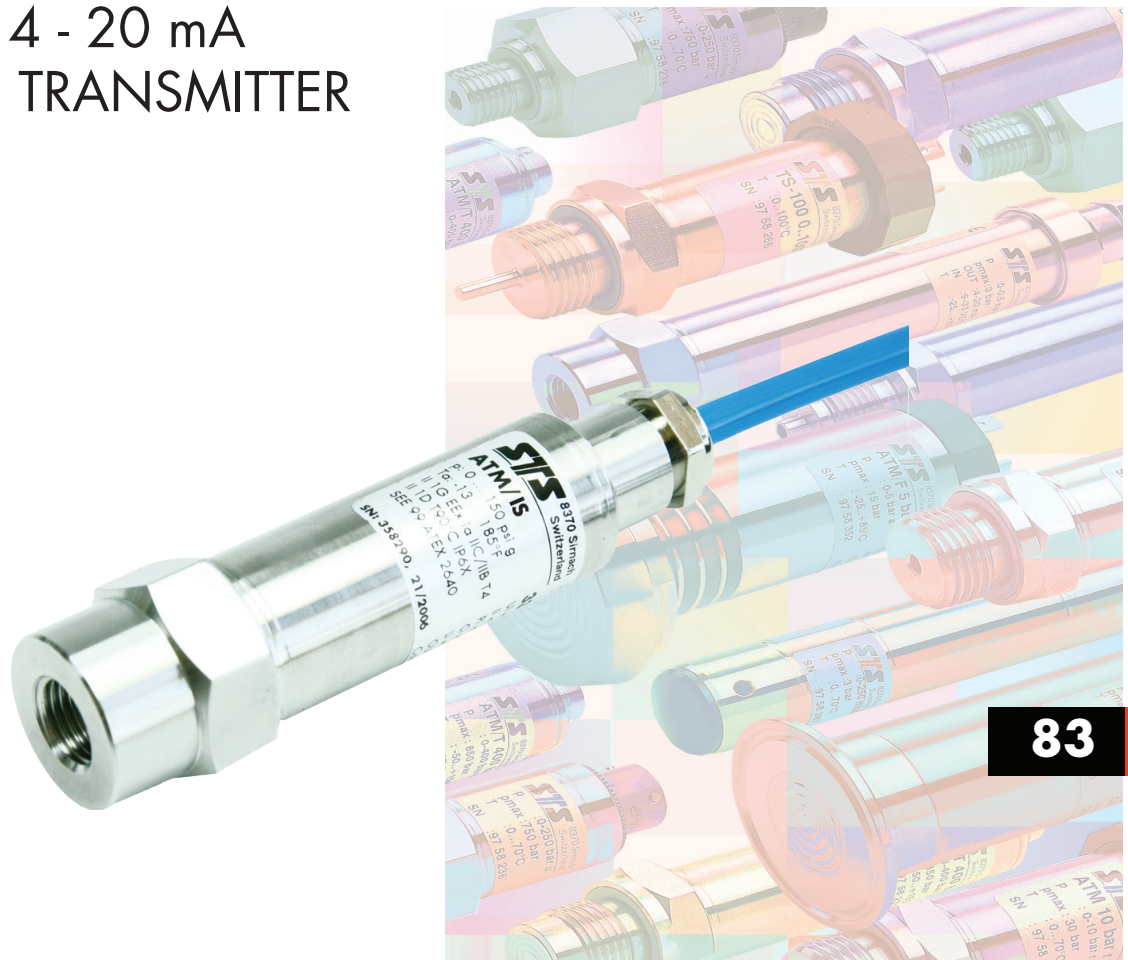


PROCESS 4 - 20 mA PRESSURE TRANSMITTER ATM/IS



83

Features

- Accuracy: $\leq \pm 0.1\%$ FS
Includes linearity, hysteresis, repeatability AND zero and span settings
- Full scale ranges from 1 to 10,000 psi
- Gauge, absolute or sealed gauge
- High overload: 3 x full scale
- Intrinsically safe certified
- Surge (lightning) protection option

Product overview and applications

The ATM/IS series 83 is specifically designed to meet the requirements of the process industry with various intrinsically safe approvals. The high performance/low cost combination offers the user a transmitter for use in health and safety monitoring applications more commonly achieved with a far higher priced alternate. Modular construction and the 25 year proven history of STS piezoresistive sensor technology provide manufacturing flexibility and offers fast delivery for all pressure ranges.

Examples of applications include:

- Oil and gas industry
- Process control and monitoring
- Food industry
- Power generation
- Chemical processing

Specification

Measurement

Pressure ranges

Any range from 1 to 10,000 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 - 10,000 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

-15 to 130°F (process media, Fig. 1)
 -15 to 212°F (process media, Fig. 1)
 -15 to 300°F (process media with cooling ext., Fig. 2)

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 -10 to 185°F, > 30 psi FS
 ±2.5% total for -10 to 185°F, 7 to 30 psi FS
 Prorated for ranges below 7 psi

Performance

Accuracy

Combined linearity, hysteresis, repeatability, Zero and Span set
 ≤ ±0.1% FS (≥ 7 psi FS)
 ≤ ±0.25% FS (< 7 psi FS)

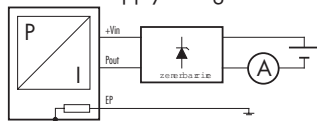
Specification continued

Long term stability

0.1% FS/yr for pressure ranges > 30 psi FS
 Prorated for ranges below 30 psi FS
 Under standard conditions

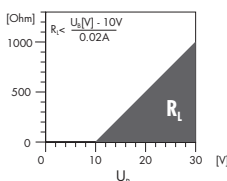
Supply voltage

10 - 30 VDC
 Influence of supply voltage < 0.1% FS



Load resistance

Influence of load resistance < 0.1% FS



Output signal

4 - 20 mA (2-wire)
 4 - 20 mA with surge (lighting) protection (option)

Insulation resistance

> 50 megohms @ 500 VDC (@ 68°F)

Response time

< 1ms/10 to 90% FS

Construction

Pressure media compatibility

Stainless steel 316L, Viton seals
 Other seal materials available
 For NACE compatibility consult factory

Pressure connection

1/4" NPT female
 1/4" NPT male
 7/16" - 20 male
 Other connections available

Electrical connection

DIN 43650 (Fig. 3)
 6-pin bayonet per MIL-C-26482 (10-6) (Fig. 4)
 Polyurethane cable (Fig. 5)
 Demountable versions and other types available

Specification continued

Intrinsically safe

SEV 11 ATEX 0142 X
 EEx 1G ia IIC T3 - T6
 FM/FM-C, Class 1, Div. 1 approved

Weight

7.5 oz approximate (not including cable)

Vibration

10 g, 10 to 2000 Hz

Mechanical shock

100 g / 6 ms

Ordering information

Please specify the following:

- 1) Model number - ATM/IS 83
- 2) Electrical connection
 01 - DIN 43650
 06 - 6 pin bayonet (mating connector extra)
 17 - Polyurethane cable (blue)
- 3) Pressure range, including eng. units, type
- 4) Accuracy
- 5) Output signal
- 6) Any special feature: i.e. lightning protection

Example ordering format:

ATM/IS 83. 17 - 100 psig - 0.1% - 4 - 20mA - 10 feet cable

Options

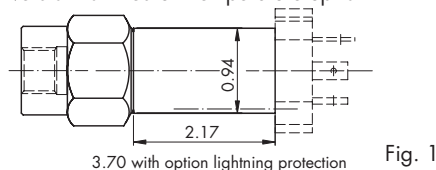
STS offers a wide range of options for these and other similar transmitters. Please consult the factory for any special requirements.

Examples include:

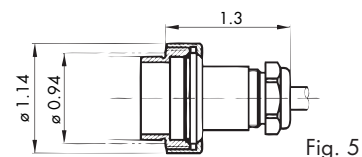
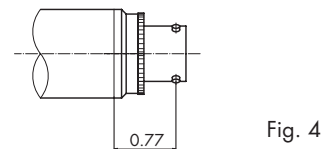
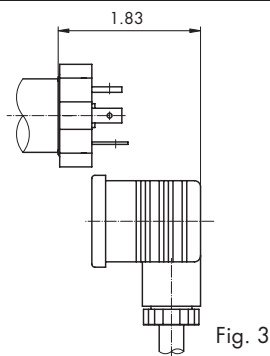
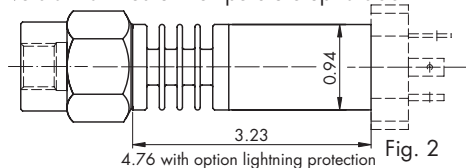
- Alternate electrical configurations (not IS) i.e. 1 to 5 VDC, 0 to 10 VDC, 0 to 20 mA, RS485
- Lightning protection
- Cooling extension
- Explosion proof certification
- Pressure snubber
- Special oil filling for food application etc.
- Alternate construction i.e. titanium, hastelloy
- Alternate seals i.e. EPDM, Kalrez
- Wide range of pressure connectors
- Wide range of electrical connectors
- Datalogging

Dimensions (inches)

Version for medium temperature up to 212°F



Version for medium temperature up to 300°F



Specifications may change without notice.

STS is registered ISO 9001-2008

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PMC Engineering LLC
STS Sensors
 11 Old Sugar Hollow Road
 Danbury, CT 06810 U.S.A

Tel: 203-792-8686
 Fax: 203-743-2051
 e-mail: salesUS@sts-sensors.com
 Internet: www.sts-sensors.com

Represented by: