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ENGINEERING

Miniature Precision Pressure Transmitter ATM.mini

Global Sensor Excellence

Features

- 0.69” diameter
- 0-15 to 0-1500 psi
- TEB typ. 1.2%FS
- <0.05%FS accuracy
- -40 to 255°F

Applications

- Test & Measurement
- Industrial Process
- Test Benches
- Engine Tests
- Automotive

Product Overview

The ATM.mini pressure transmitter is a high performance pressure transmitter suitable for use in rugged, high vibration environments from -40 to 255°F. The ATM.mini provides a 2-wire, 4-20 mA or a 3-wire 0.5-4.5 VDC analog output within a lightweight housing of 0.69" diameter. Ranges are available from 0-15 to 0-1500 psi and accuracies of <0.05% FS or <0.1% FS. With a total error band of only 1.2%FS in a temperature range of -40 to 255°F the ATM.mini can cover a large area of test applications.

Contact

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Represented by:

Precision Pressure, Temperature and Level Measurement for Industry

Specification

Measurement

Pressure ranges

Absolute	from 0 - 15 to 0 - 1500 psi
Gauge	from 0 - 15 to 0 - 360 psi
Sealed gauge	from 0 - 150 to 0 - 1500 psi

Proof Pressure
FS ≥ 15 psi up to 72 psi: 3 x FS
FS > 72 psi up to 1500 psi: 3 x FS or max. 2900 psi

Burst Pressure
>3000 psi

Operating Temperature Range (ambient temperature)

2-wire, 4-20mA:	-40 to 212°F
3-wire, 0.5 - 4.5VDC:	-40 to 255°F

Process Temperature Range

2-wire, 4-20mA:	-40 to 212°F
3-wire, 0.5 - 4.5VDC:	-40 to 255°F

Compensated Temperature Range
32 to 160°F
-15 to 212°F
-40 to 255˚F for voltage version only

Performance

Accuracy
≤± 0.10%FS for pressure ranges ≤ 72 psi
≤± 0.05%FS or ±≤ 0.10%FS for pressure ranges > 72 psi
Including non-linearity, hysteresis, repeatability, zero & span setting errors

Total Error Band
Typ. ≤±0.8%FS total for 32 to 160˚F, ≤ 72 psi
Typ. ≤±1.3%FS total for -15 to 212˚F, ≤ 72 psi
Typ. ≤±1.5%FS total for -40 to 255˚F, ≤ 72 psi

Typ. ≤±0.3%FS total for 32 to 160˚F, > 72 psi
Typ. ≤±0.8%FS total for -15 to 212˚F, > 72 psi
Typ. ≤±1.2%FS total for -40 to 255˚F, > 72 psi

Long Term Stability
< 0.2%FS / < 0.06 psi for pressure ranges ≤ 72 psi
< 0.1%FS for pressure ranges > 72 psi

Specification Continued

Response Time
< 1ms / 10 to 90%FS

Supply Voltage
2-wire, 4-20mA: 9 to 33 VDC
3-wire, 0-5 - 4.5VDC: 8 to 30 VDC

Current Consumption
3-wire, 0-5 - 4.5VDC: <3 mA

Supply Voltage Influence
< 0.05%FS

Load Resistance
2-wire, 4-20mA: RL = (Vsupply - 9V) / 0.02A
3-wire, 0-5 - 4.5VDC: RL > 10kOhm

Load Influence
< 0.05%FS for current and voltage version

Start Up Time
< 170 ms

Construction

Material
All Welded 316L Stainless Steel

Process Connections
1/8 NPT male
3/8-24 UNJF-3A male
Consult factory for others

Electrical Connection
6-pin bayonet (10-6 pin layout)
4-pin Micro DIN connector
4-pin M12x1 connector
Polyurethane cable
Consult factory for others

Torque
< 22 ft.lbf

Specification Continued

Weight
1.4 oz.

Vibration
40 g, 10 to 2000 Hz, 3 axis

Mechanical Shock
300 g, 3 axis, half sine, 6ms

Ordering Information

Please specify the following:
1. Model Number - ATM.mini
2. Electrical Connection
   06 - 6-pin bayonet (10-6 layout)
   75 - 4-pin micro DIN connector
   07 - 4-pin M12x1 connector
   60 - Polyurethane cable
3. Pressure range, including eng. units, type
4. Output signal
5. Compensated temperature range
6. Cable length
7. Any special feature:

Example ordering format:
ATM.mini - 06 - 100 psia - 0.5 to 4.5 VDC - -40 to 255°F

Options

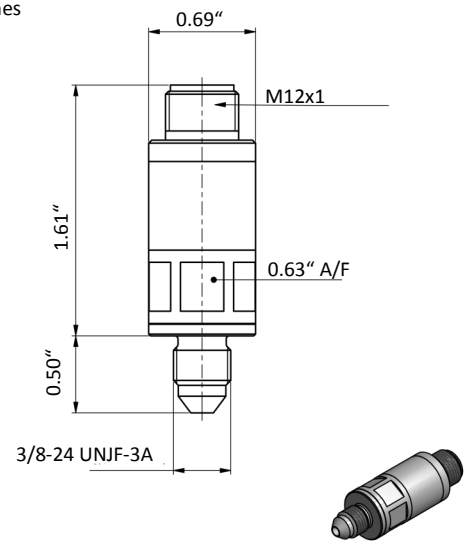
STS offers a wide range of options for these and other similar transmitters. Please consult the factory for any special requirements.

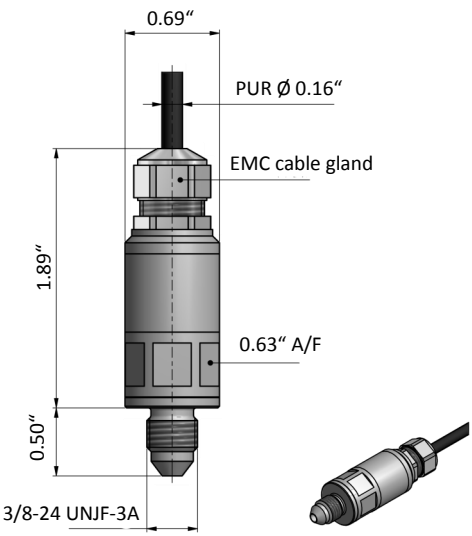
Example include:
Alternate electrical configurations
i.e. RS485, HART etc.
Lightning protection
Intrinsic safety certification
Pressure snubber
Special oil filling for food application etc.
Alternate construction i.e. titanium, hastelloy
Alternate seals i.e. EPDM, Kalrez
Wide range of pressure connectors
Wide range of electrical connectors

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

MECHANICAL DETAILS

Dimensions in inches





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