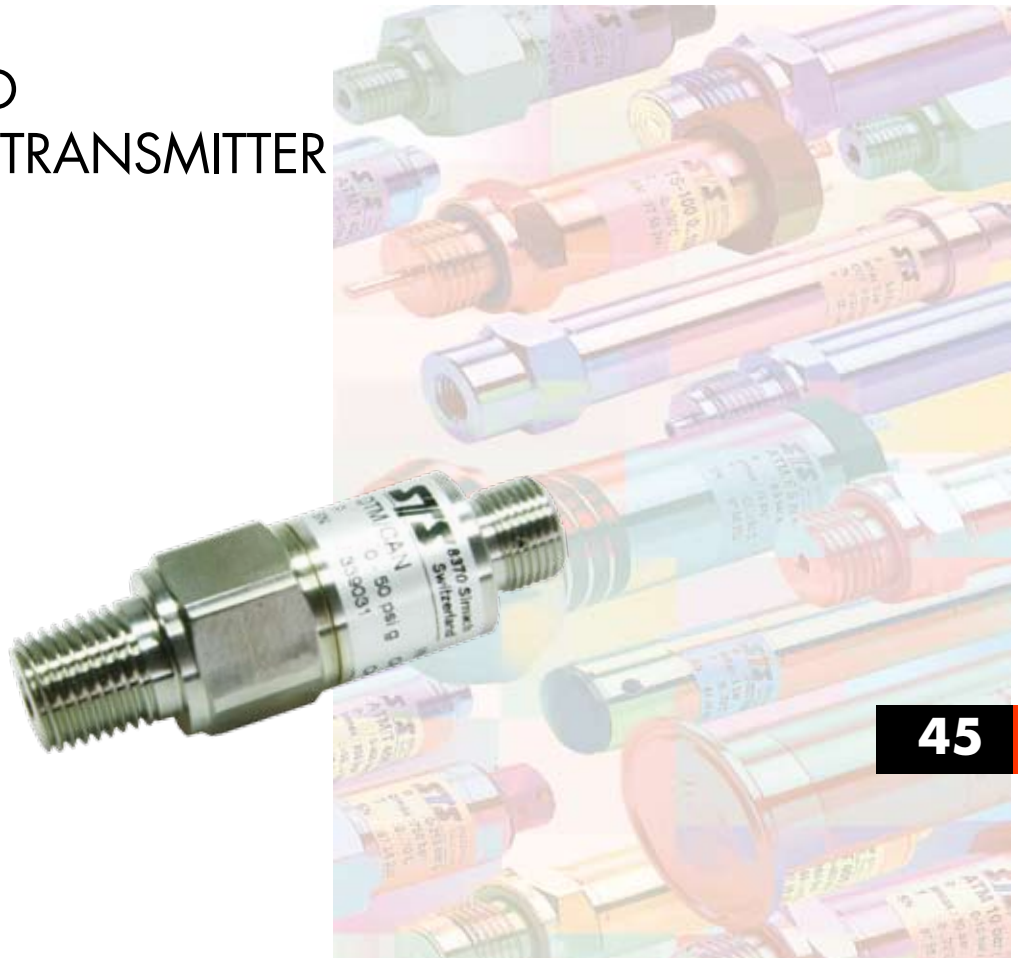


# CANopen PRESSURE AND TEMPERATURE TRANSMITTER DTM/CAN



45

## Features

- Compact, rugged construction
- Accuracy:  $\pm 0.15\%$  FS
- Total error band:  $\pm 0.2\%$  FS
- Operating temp. range:  $-40$  to  $255^{\circ}\text{F}$
- Auto baudrate detection
- Integral temperature sensor

## Product overview and applications

The DTM/CAN series 45 is a high precision pressure transmitter operating from a 8 - 32 VDC input and providing CANopen protocol in accordance with international specifications. This device is specifically designed for industrial users of the CANopen protocol and is particularly suitable for vehicles and testing applications where this interface is part of the existing process.

Examples of applications include:

- Test and measurement
- Industrial process monitoring and control
- Test benches and calibration
- Automotive and engine test
- Onboard vehicle testing
- Engine manufacturing

**Specification**

**Measurement**

**Pressure ranges**

Any range from 15 to 8,700 psi FS available, in any engineering units such as psi, Pa, bar.

Gauge from 0 - 15 to 0 - 8,700 psig FS  
 Absolute from 0 - 15 to 0 - 580 psig FS  
 Compound ranges from -15 to 360 psig FS\*  
 Neg. ranges from 0 to -15 psig FS\*  
 \* Consult factory for special pressure ranges

**Proof pressure**

FS up to 85 psi: 175 psi  
 FS > 85 psi up to 8,700 psi: 2 x FS  
 Consult factory for higher proof pressure

**Burst pressure**

FS up to 250 psi: 10 x FS  
 FS > 250 psi to 3500 psi: 4 x FS  
 FS > 3500 psi: 3 x FS  
 Consult factory for higher burst pressure

**Operating temperature range**

-40 to 185°F (ambient)  
 -40 to 255°F (ambient), option  
 -60 to 255°F (process media)  
 -60 to 275°F (process media), option

**Compensated temperature range**

-15 to 185°F

**Performance**

**Accuracy: Class 0.15% FS**

± 0.15% FS error @ 77°F  
 Total Error Band over compensated temperature range ± 0.2% FS typical

**Accuracy: Class 0.5% FS**

± 0.5% FS error @ 77°F  
 Total Error Band over compensated temperature range ± 2.0% FS typical

**Long term stability**

< ± 0.1% FS/yr for accuracy class 0.15%  
 < ± 0.2% FS/yr for accuracy class 0.5%

**Specification continued**

**Supply voltage**

8 - 32 VDC

**Current consumption**

approximately 20 mA

**Response time**

typical 1ms, 10 to 90% FS

**Signal - Pressure Sensor**

Resolution ( $\Delta\Sigma$  20bit/s): 0.01% @ ≥ 10 ms  
 Sampling rate: 1 kHz fixed  
 Measuring filter: moving average: 1 ms to 65s

**Signal - Temperature Sensor**

Total error @ -15 to 185°F: typ. ± 1°C  
 Sampling rate: 1 Hz fixed  
 Measuring filter: moving average: 0.1s to 1.8h

**CANOpen**

**Bus Protocol**

Output signal: CANBus (ISO 11898-2)  
 CANopen: DS301 V 4.0  
 Device Profile: DS404 V 1.2  
 Baudrate (Autobaud): 10kBit/s to 1MBit/s  
 Error Control: Nodeguarding, Heartbeat  
 Node ID: LSS (DSP 305 V 2.0), fully implemented, proprietary  
 No. of PDO's: 4 TX  
 PDO modes: event/time triggered, remotely requested, sync (cyclic/acyclic)  
 PDO linking: yes  
 PDO mapping: yes  
 No. of SDO's: 1 server  
 Emergency message: yes

**Construction**

**Pressure media compatibility**

Sensor: 17-4 PH stainless  
 Housing: 304 stainless  
 Mounting torque: 18 lb-ft

**Pressure connection**

1/4" NPT male  
 Other connections available

**Electrical connection**

5-pins, M12x1 Connector  
 Mating connector available, option

**Specification continued**

**Weight**

2.2 oz approximate

**Vibration**

40 g, 20 to 2000 Hz

**Mechanical shock**

100 g / 11 ms

**Ordering information**

Please specify the following:

- 1) Model number - DTM/CAN
- 2) Pressure range, including eng. units, type
- 3) Accuracy Class
- 4) Any special features

Example ordering format:  
 DTM/CAN 45 - 50 psig - 0.15%

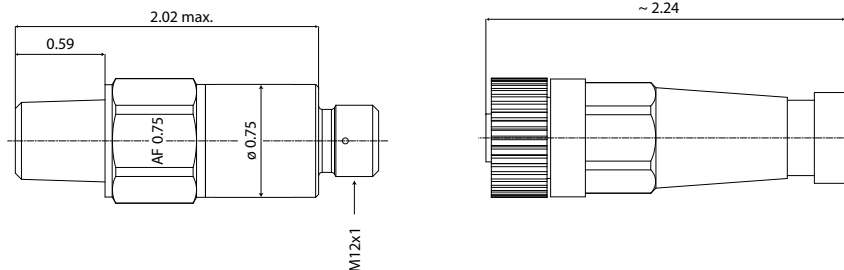
**Options**

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 5 VDC, 0 to 10 VDC, 0 to 20 mA RS 485, CANopen
- Lightning protection
- Intrinsic safety certification
- 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

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