



## PRECISION PRESSURE TRANSMITTER DTM.OCS.S WITH RS485/MODBUS



## Global Sensor Excellence

### Features

- TEB: typical  $\pm 0.1\%$  FS
- 0-3 to 0-1500 psi
- $< 0.03\%$  FS accuracy
- -40 to 185 °F
- RS485, ModBus

### Applications

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

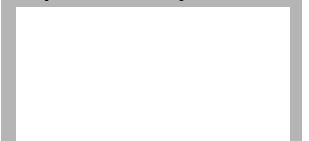
## PRODUCT OVERVIEW

The DTM.OCS.S series pressure transmitters are polynomial compensated high performing pressure sensors which achieve total error bands up to 0.1%FS over a temperature range of -40 to 185°F. The DTM.OCS.S are based on the standard RS485 ModBus protocol and can be easily connected to the control panel. In addition to the standard ModBus commands, specific commands were developed to take advantage of the full capabilities of the DTM.OCS.S For example the pressure units can be changed any time or an offset can be programmed onsite. In addition to measuring pressure this sensor also measures temperature.

### Contact

PMC Engineering LLC  
11 Old Sugar Hollow Rd  
Danbury, CT 06810  
USA  
sales@pmc1.com  
Tel: 203-792-8686  
Fax: 203-743-2051  
www.pmc1.com

Represented by:



## Specification

### Measurement

#### Pressure ranges

Absolute from 0 - 3 to 0 - 1500 psi  
 Gauge from 0 - 3 to 0 - 360 psi  
 Sealed Gauge from 0 - 150 to 0 - 1500 psi

#### Proof Pressure

FS ≤15 psi: 45 psi  
 FS >15 psi: 3 x FS

#### Burst Pressure

>3000 psi

#### Operating Temperature Range

-40 to 185°F (ambient)  
 -40 to 185°F (process temperature)

#### Compensated temperature Range

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

#### Temperature Measuring Range—Equal to chosen

#### Compensated Temperature Range

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

### Performance

#### Accuracy (Pressure)

±0.15%FS for pressure ranges ≤ 7.25 psi  
 ±0.05%FS for pressure ranges ≤ 30 psi  
 ±0.03%FS for pressure ranges > 30 psi  
*Including non-linearity, hysteresis, repeatability, zero & span setting errors*

#### Total Error Band - Typ./Max

±0.3%FS/0.8%FS total for 32 to 160°F ≤ 7.25 psi  
 ±0.5%FS/1.0%FS total for -15 to 185°F, ≤ 7.25 psi  
 ±0.8%FS/1.5%FS total for -40 to 185°F, ≤ 7.25 psi  
 ±0.1%FS/0.2%FS total for 32 to 160°F, ≤ 30 psi  
 ±0.2%FS/0.4%FS total for -15 to 185°F, ≤ 30 psi  
 ±0.3%FS/0.5%FS total for -40 to 185°F, ≤ 30 psi  
 ±0.1%FS/0.2%FS total for 32 to 160°F, > 30 psi  
 ±0.1%FS/0.2%FS total for -15 to 185°F, > 30 psi  
 ±0.1%FS/0.2%FS total for -40 to 185°F, > 30 psi

#### Long Term Stability

typ. < 0.5%FS for pressure ranges ≤ 7.25 psi  
 typ. < 0.2%FS for pressure ranges ≤ 30 psi  
 typ. < 0.1%FS for pressure ranges > 30 psi

## Specification Continued

#### Response Time Pressure

1 s

#### Accuracy (Temperature)

±0.5°C for temperature measuring range 32 to 160°F  
 ±1.5°C for temperature measuring range -15 to 185°F  
 ±1.5°C for temperature measuring range -40 to 185°F

#### Response Time Temperature

T 0.5: 9s  
 For all temperature ranges  
 T 0.63: 15s  
 For all temperature ranges  
 T 0.90: 27s  
 For all temperature ranges

#### Supply Voltage

9 to 30 VDC

#### Current Consumption

typ. 3 mA @ 24VDC supply voltage

#### Supply Voltage Influence

< 0.05%FS

#### Resolution

20 bit for pressure  
 0.1°C for temperature

#### Interface/Protocol

RS485 / ModBus RTU, 8n2

#### Baudrate

9600 bps

#### Max. cable length

3000ft (1000m)

*Cable length >1500ft only point to point connection possible*

### Construction

#### Material

316L Stainless Steel, Viton o-ring  
*All welded version available as option*

#### Process Connections

7/16-20 UNF male  
 1/4 NPT male or female  
*Consult factory for others*

#### Electrical Connection

6-pin bayonet (10-6 pin layout)  
 Polyurethane cable  
*Consult factory for others*

## Specification Continued

#### Weight

6oz. (approximate not including cable)

#### Vibration

10g rms, 5 to 2000 Hz

#### Mechanical Shock

500G (3ms)

## Ordering Information

For ordering code go to:

[www.pmc1.com/orderdtmocs](http://www.pmc1.com/orderdtmocs)

OR

Call the factory at:

**203 792-8686**

## Options

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

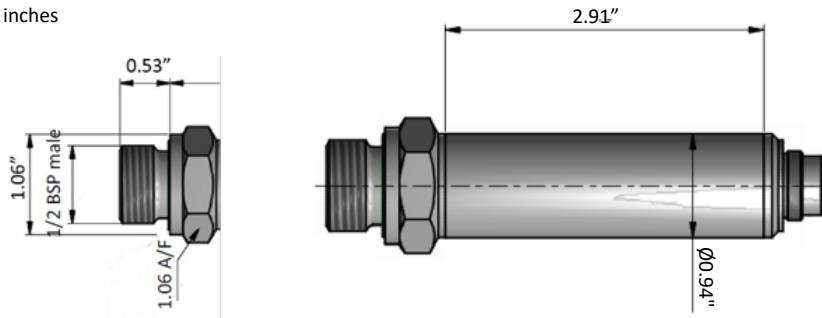
#### Example include:

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



STS is registered ISO 9001:2008