STS: Digital Transmitter for Exacting Standards

The professional measurement of pressure requires accurate data every time – there is no margin for error. STS has taken on this challenge since 1987 and we have been optimizing this measurement on a regular basis ever since. Today, we represent reliability and precision that meet the most exacting standards.

As a manufacturer, STS sells products based upon a modular design. This approach enables solutions that can be customized to the clients' needs, which in turn can be adapted to individual challenges. In doing so, we always put the highest emphasis on delivering the best quality product combined with user-friendly customer service. Our New Pressure Transmitter DTM.OCS.S is of course no exception to this.

The Digital Transmitter DTM.OCS.S by STS offers you the following benefits:

- Best quality: Receive precise data with one and the same sensor for many years.
- Easy to Use: The digital pressure transmitter with Modbus interface can be easily integrated.
- Short delivery times.
- Individual solutions: Mechanical adjustments according to the customers' needs.

The Digital Transmitter DTM.OCS.S by STS is available in two versions:

1. DTM.OCS.S for industrial applications
2. DTM.OCS.S/N for applications in liquid level

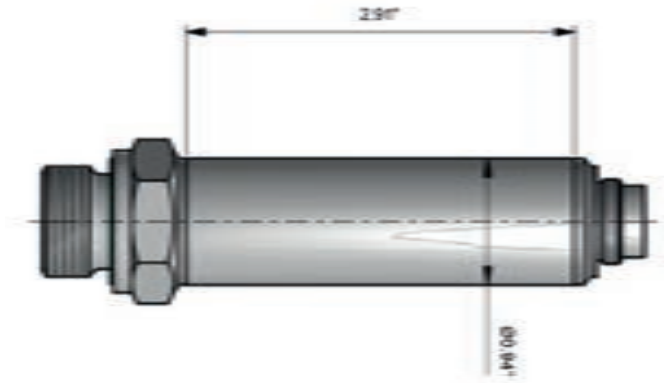
DTM.OCS.S – get precise measuring data even under harsh conditions

The qualified construction of machines necessitates comprehensive testing. An impeccable technology is required in order to receive only precise data and to uncover problems and malfunctions. Be on the safe side with the DTM.OCS.S by STS. The device ensures reliable pressure and temperature measurements.

Based on its modular design, the sensor features individual process connectors and plugs for any kind of facility.

Moreover, the Digital Transmitter comes with the industry-wide RS485, Modbus standard protocol facilitating the integration into your system.

The transmitter's rugged and robust design enables operations even under harsh conditions. The above-average long-term stability of the measuring cell ensures that customers can depend on the transmitter's precision for years to come.



The most important facts about the Digital Transmitter DTM.OCS.S at a glance:

- Pressure measuring range: 3 psi to 1500 psi
- Accuracy: ≤ ± 0.15 / 0.05 / 0.03 % FS
- Operating temperature: -40...185 °F
- Process temperature: -15...185 °F
- Interface: RS485 with Modbus RTU (standardized protocol)
- Simple implementation into existing system
- Simple recalibration and taring (offset)
- Highest precision over total lifespan of sensor: <0.1 % FS/year
- Material: stainless steel, titanium

Pressure measuring range (psi)

	3...7	> 7...30	> 30...1500
Overpressure	45 psi	45 psi or 3x FS	3 x FS
Burst pressure, (1)	> 3000 psi	> 3000 psi	> 3000 psi
Accuracy, (± % FS)	≤ 0.15	≤ 0.05	≤ 0.03
Total Error, (2) (3) (± % FS)			
32...160°F (typ./max.)	≤ 0.5 / 1.0	≤ 0.2 / 0.4	≤ 0.1 / 0.3
-15...185°F (4) (typ./max.)	≤ 1.5 / 1.7	≤ 0.3 / 0.5	≤ 0.2 / 0.4
Long term stability, (5)	< 0.5% FS	< 0.2% FS	< 0.1% FS

1. Transducer
2. Total error including accurancy, hysteresis, repeatability and temperature influences
3. The error values are valid within the corresponding temperature range
4. -40...185°F on request
5. 1 year typ.

Temperature measuring range, (1) (°F)

	32...160	-15...185 (2)
Accuracy	≤ ± 0.3°F	≤ ± 0.8°F
Response time, (3), (4)		
T 0.50	9 s	9 s
T 0.63	15 s	15 s
T 0.90	27 s	27 s

1. Temperature measurement (standard)
2. -40...185°F on request
3. Time in seconds that the sensor needs to measure, e.g. 63% of a temperature change
4. Time of measurement for liquid medium

The sensor enables the accurate pressure measurement over a very wide temperature range. Moreover, the standard version of the sensor also takes the temperature of the medium in which it is placed. All data is measured precisely.

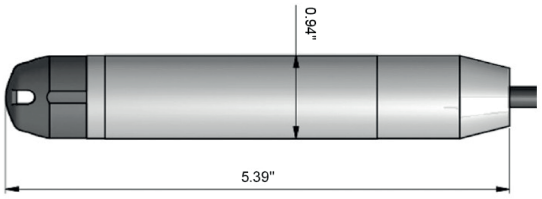
Operating temperature	-40...185°F
Process temperature (2)	-15...185°F
Storage temperature	-40...185°F

2. -40...185°F on request

The pressure sensor requires very little maintenance. This is one of the reasons why the Digital Transmitter DTM.OCS.S is recognized for its easy handling. STS produces all its pressure transmitters in-house. As an ISO 9001 Certified Company we guarantee to abide by our high production standards during every step of the production process.

Pressure Measurements at the Highest Level: DTM.OCS.S/N

Fresh water treatment and recovery, or ground and surface water monitoring: the Digital Transmitter DTM.OCS.S/N enables accurate level/pressure measurements. The high precision enables the exact monitoring and controlling of processes.



The most important facts about the Digital Transmitter DTM.OCS.S/N at a glance:

- Pressure measuring range: 3...360 psi
- Accuracy: ≤ ± 0.15 / 0.05 / 0.03 % FS
- Operating temperature: 25...175 °F
- Process temperature: 25...175 °F
- Interface: RS485 with Modbus RTU (standardized protocol)
- Simple implementation into existing system
- Simple recalibration and taring (offset)
- Highest precision over total lifespan of sensor: <0.1 % FS/year
- Material: stainless steel, Titanium

Pressure measuring range (psi)

	3...7	> 7...30	> 30...360
Overpressure	45 psi	45 psi or 3 x FS	3 x FS
Burst pressure (1)	> 3000 psi	> 3000 psi	> 3000 psi
Accuracy, (± % FS)	≤ 0.15	≤ 0.05	≤ 0.03
Total Error, (2)(3) (±% FS)			
25...125°F (typ./max.)	≤ 0.2 / 0.4	≤ 0.1 / 0.2	≤ 0.05 / 0.1
25...175°F (typ./max.)	≤ 0.5 / 1.0	≤ 0.1 / 0.2	≤ 0.1 / 0.2
Long term stability, (4)	< 0.5% FS	< 0.2% FS	< 0.1% FS

1. Transducer
2. Total Error including accuracy, hysteresis, repeatability and temperature influences
3. The error values are valid within the corresponding temperature range
4. 1 year typ.

The Digital Transmitter DTM.OCS.S/N is available with the following additional features:

- For applications in very demanding liquids, such as salt water, chlorine water, organic acids, etc., the sensor is available in Titanium to ensure a very high longevity.
- If required, the Digital Transmitter can be ordered with a detachable cable (IP68). The standard version comes with an attached cable.

The Digital Transmitter DTM.OCS.S and DTM.OCS.S/N by STS are the technical basis for precise and dependable data in pressure measuring.

Electrical specifications

Supply voltage (1)	9..30VDC
Charging rate (typ.)	3mA @ 24VDC
Resolution	
Pressure	21 Bit
Temperature	21 Bit
Output	
Interface	RS485
Protocol	Modbus RTU, 8n2
Baud rate	9600 bps

1. Power supply at the sensor

Pressure Sensors: analog versus digital

Analog sensors usually suffice for simple monitoring tasks. However, comprehensive, sophisticated measurements definitely call for digital sensors. The reason for this is the superior intelligence of digital sensors:

- All Data can be collected in various measuring units (Psi, ins H20, bar, Pa, etc.)
- Less cables are required.
- Setting up the sensor is very simple.
- Calibration is possible anytime.

Imprint

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