

Digital Pressure Transmitter

DTM.OCS.S - Modbus Transmitter



CUSTOMER BENEFITS

- High precision digital pressure sensor with standard Modbus interface
- Fast customization thanks to modular product design
- High measurement accuracy is ensured by sophisticated digital temperature compensation algorithms
- Adjustment of zero and span setting through Modbus commands

Technical Specifications

PRESSURE MEASURING RANGE (BAR)

	0.2 ... 0.5	> 0.5 ... 2	> 2 ... 100
Overpressure	3 bar	3 x FS (\geq 3 bar)	3 x FS
Burst pressure, (1)	> 200 bar	> 200 bar	> 200 bar
Accuracy, (2), (\pm % FS)	\leq 0.15	\leq 0.05	\leq 0.03
Total Error, (3) (4) (\pm % FS)			
0...70°C (typ./max.)	\leq 0.3 / 0.8	\leq 0.1 / 0.2	\leq 0.1 / 0.2
-25...85°C (typ. / max.)	\leq 0.5 / 1.0	\leq 0.2 / 0.4	\leq 0.1 / 0.2
-40...85°C (typ. / max.)	\leq 0.8 / 1.5	\leq 0.3 / 0.5	\leq 0.1 / 0.2
Long term stability, (5)	< 0.5% FS / < 4 mbar	< 0.2% FS / < 4 mbar	< 0.1% FS / < 0.2% FS

(1) Transducer

(2) System limitation 0.5mbar

(3) Total error including accuracy, hysteresis, repeatability and temperature influences

(4) The error values are valid within the corresponding temperature range

(5) 1 year (typ. / max.)

TEMPERATURE MEASURING RANGE, (1) (°C)

	0 ... 70	-25 ... 85	-40 ... 85°C
Accuracy, (2)	$\leq \pm$ 0.5 °C	$\leq \pm$ 1.5 °C	$\leq \pm$ 1.5 °C
Response time, (3), (4)			
T 0.50	9 s	9 s	9 s
T 0.63	15 s	15 s	15 s
T 0.90	27 s	27 s	27 s

(1) Temperature measurement included

(2) Accuracy of the equipment \pm 2 °C

(3) Time in seconds that the sensor needs to carry out eg 63% of a temperature change

(4) Time of measurement for liquid medium

TEMPERATURE RANGE (1)

Operating temperature	-40...85 °C
Process temperature	-40...85 °C
Storage temperature	-40...85 °C

(1) Depending on connector type, pressure range, seal, measuring medium

ELECTRICAL SPECIFICATIONS

Power supply (1)	9...30 VDC
Current consumption (typ.)	3mA @ 24VDC
Resolution	
Pressure	20 Bit
Temperature	0.1°C
Output	
Protocol	Modbus RTU, 8n2
Interface	RS485
Baudrate	9600 bps
Cable length (2)	max. 1000m

(1) Power supply at the sensor

(2) Cable length >500m only Point-to-Point connection possible

QUALIFICATIONS (1)

	Description	Level	Typical interferences
IEC 60068-2-27	Schock	500 G (3ms)	
IEC 60068-2-64	Vibration	10 G rms (5 ... 2000 Hz)	
EN 55011 EN 55022 EN 61326-1	Emission, class B	0.03...6 GHz	
EN 61000-4-2 EN 61326-1	Electrostatic discharge	8 kV contact / 15 kV air	
EN 61000-4-3 EN 61326-1	Irradiated RF	10 V/m (0.08 ... 6 GHz)	Radio sets, wireless phones, Wi-Fi
EN 61000-4-4 EN 61326-1	Transients (burst)	4 kV	Motors, valves
EN 61000-4-6 EN 61326-1	Conducted RF	10 V (0.15 ... 80 MHz)	Frequency converters
EN 61000-4-5 EN 61326-1	Surge	2 kV	Overvoltage

(1) Only with connected shield

PHYSICAL SPECIFICATIONS

Materials	
Transducer	Stainless steel (316L / 1.4435), titanium (Gr. 2), (1)
Housing	Stainless steel (316L / 1.4404), titanium (Gr. 2)
Seals	Viton (Standard), EPDM, Kalrez

(1) Hastelloy (C-276) on request

Accessories

OVERVIEW

10.00.0091	Accessories overview

Additional documents

OPERATING MANUAL

	Article number
10.00.0430	Operating manual

Seals: EPDM

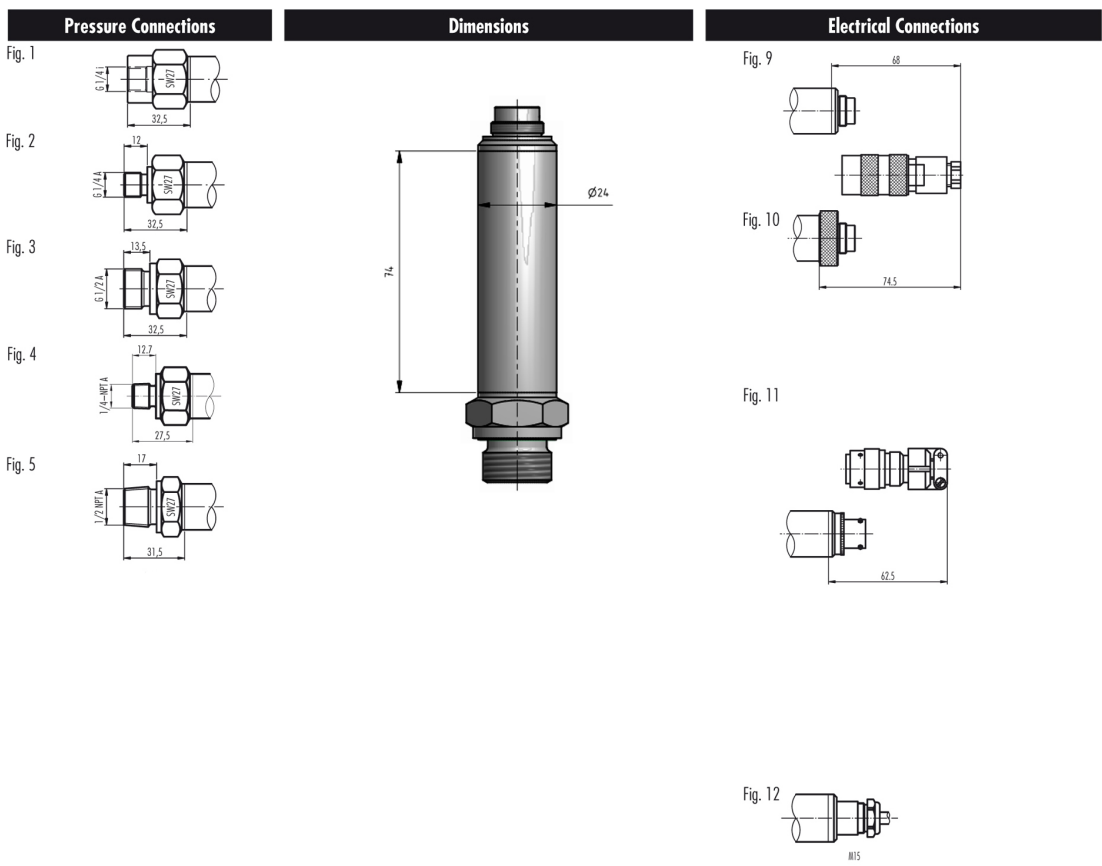
Seals: Kalrez (Industry)

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(1) Cable socket connector not included

Technical drawings



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