

Data Sheet

Pressure transmitters
Type DST P40M

Harsh environment marine application



The P40M pressure transmitter has been designed specific for pressure monitoring of marine applications such as Ballast water treatment systems, Exhaust gas scrubbers, Desalination and Sea water cooling systems where high corrosion resistance and longevity are essential for the continued operation of auxiliary & propulsion systems onboard the vessel.

The enclosure of the pressure transmitter is machined out from a single piece of Titanium to eliminate any structural weaknesses. Titanium is exceptionally resistant to a broad range of acids and alkalis, as well as Sodium Chloride and polluted waters. Titanium's corrosion resistance together with its low density, high strength and erosion resistance, make this pressure transmitter ideal for numerous chemical processing and marine uses.

The pressure sensing element is made from ceramic Al_2O_3 96% which has excellent chemical immunity and is suitable for nearly all aggressive media. The pressure transmitter works following the piezo resistive principle and the Wheatstone bridge is screen printed directly on one side of the ceramic diaphragm by means of Thick Film technology

Features

- Designed for use in corrosive industrial environments such as desalination systems, medical industry, chemical processing, chlorate containing liquids, hydro-carbon processing, etc.
- Enclosure Titanium grade 2
- Temperature compensated
- Reverse polarity protected
- Gauge (relative)
- Wetted parts: Titanium & Ceramic
- Ceramic Al₂O₃ 96%
- High linearity and low hysteresis value
- RoHS compliance

Product specification

Technical data

Table 1: Technical specifications

Specifications			Values
Transmitter type			DST P40M
Accuracy (incl. non-linearity, hysteresis and repeatability)			< ± 1% FS (typ.) @ ambient temperature
Compensated temperature range			0 – 80 °C
Total error band within compensated temperature range			± 1.5% FS (typ.)
Output type			4 – 20 mA
Pressure reference			Gauge
Supply voltage range			9 – 32 V DC
Rise time (10 – 90%)			< 5 ms
Overload pressure			2 x FS
Burst pressure			2.5 x FS
Durability			P:10-90%FS > 10 mio cycles
Media temperature range			-15 – 85 °C
Ambient temperature range			Depending on electrical connection see Electrical connections
Storage temperature range			-40 – 105 °C
Load [R _L]			RL ≤ (UB-8V)/0,02A
EMC – Emission			EN 61000-6-3
EMC – Immunity			EN 61000-6-2
Vibration stability	Sinusoidal	15.9 mm-pp, 5 Hz – 25 Hz	IEC 60068-2-6
		20 g, 25 Hz – 2 kHz	
Shock resistance	Shock	100 g / 1 ms	IEC 60068-2-27

Table 2: Pressure range

0 – 4 bar	Gauge
0 – 6 bar	Gauge
0 – 10 bar	Gauge
0 – 16 bar	Gauge
0 – 25 bar	Gauge
0 – 100 bar	Sealed gauge

Electrical connections

Table 3: Electrical connections

Type code	A0: Male A1: Pg 9 A6: Pg 11 A9: Pg 13.5
	<p>EN 175301-803-A, Pg 9</p>
Ambient temperature	-25 – 85 °C
Enclosure (IP protection fulfilled together with mating connector)	IP65
Electrical connection, 4 – 20 mA output (2 wire)	Pin 1: + supply Pin 2: ÷ supply Pin 3: not used Pin 4: Ground connection to sensor house

Dimensions / Combinations

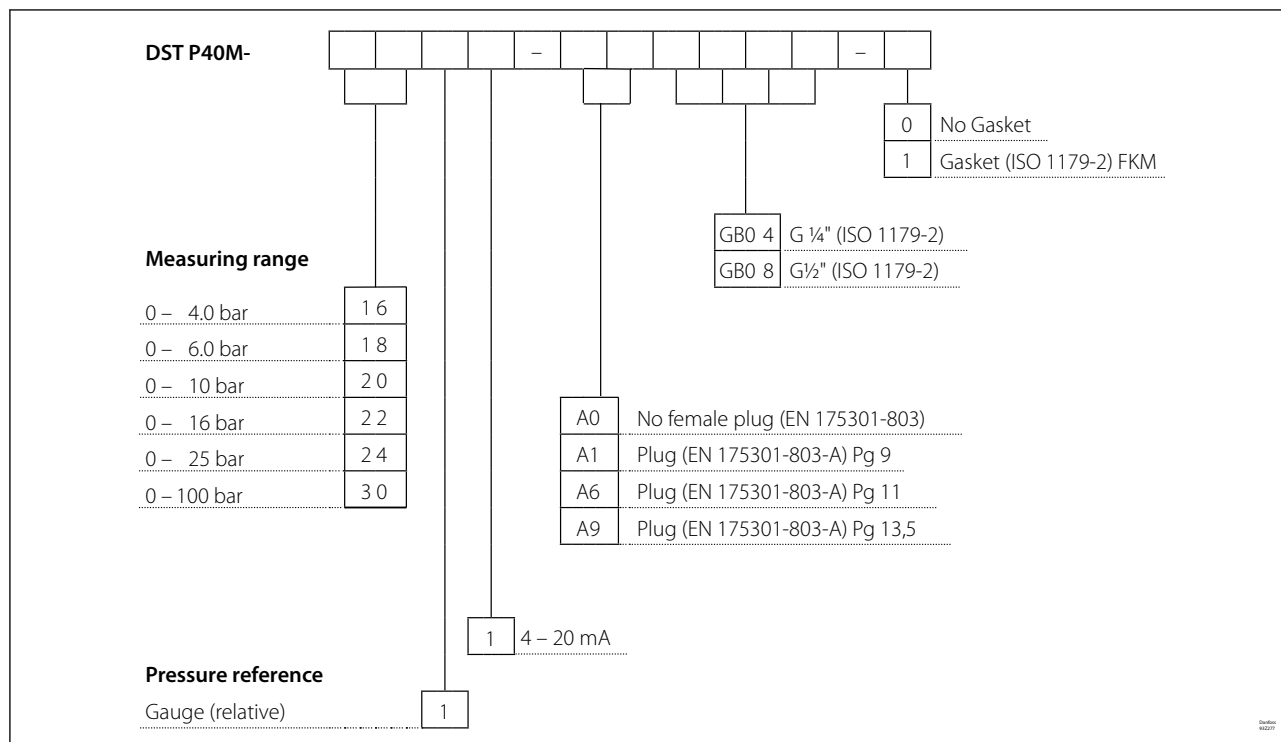
Table 4: Dimensions and combinations of connector and connection types

Type code	A1	A6	A9
Connector	<p>EN 175301-803-A, Pg 9 Danfoss 932276</p>	<p>EN 175301-803-A, Pg 11 Danfoss 932276</p>	<p>EN 175301-803-A, Pg 13.5 Danfoss 606254</p>
	<p>Danfoss 932276</p>		
Connection Types	<p>DANFOSS 60G1188.12</p>	<p>DANFOSS 60G475.10</p>	
Type	G 1/4"; ISO 1179-2		G 1/2"; ISO 1179-2
Gasket	FKM		FKM
Type code	GB04		GB08
Recommended torque ⁽¹⁾	30 – 35 Nm		30 – 35 Nm

⁽¹⁾ Depends on different parameters such as gasket material, mating material, thread lubrication and pressure level

Ordering

Ordering standard



Non-standard build-up combinations may be selected. However, minimum order quantities may apply.

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File name	Document type	Document topic	Approvals Authority
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DLN34014-AE005	Approval Certificate	Marine classification	Korean Register
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