



Pressure transmitter

DST P40M

Harsh environment marine application

Description

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.

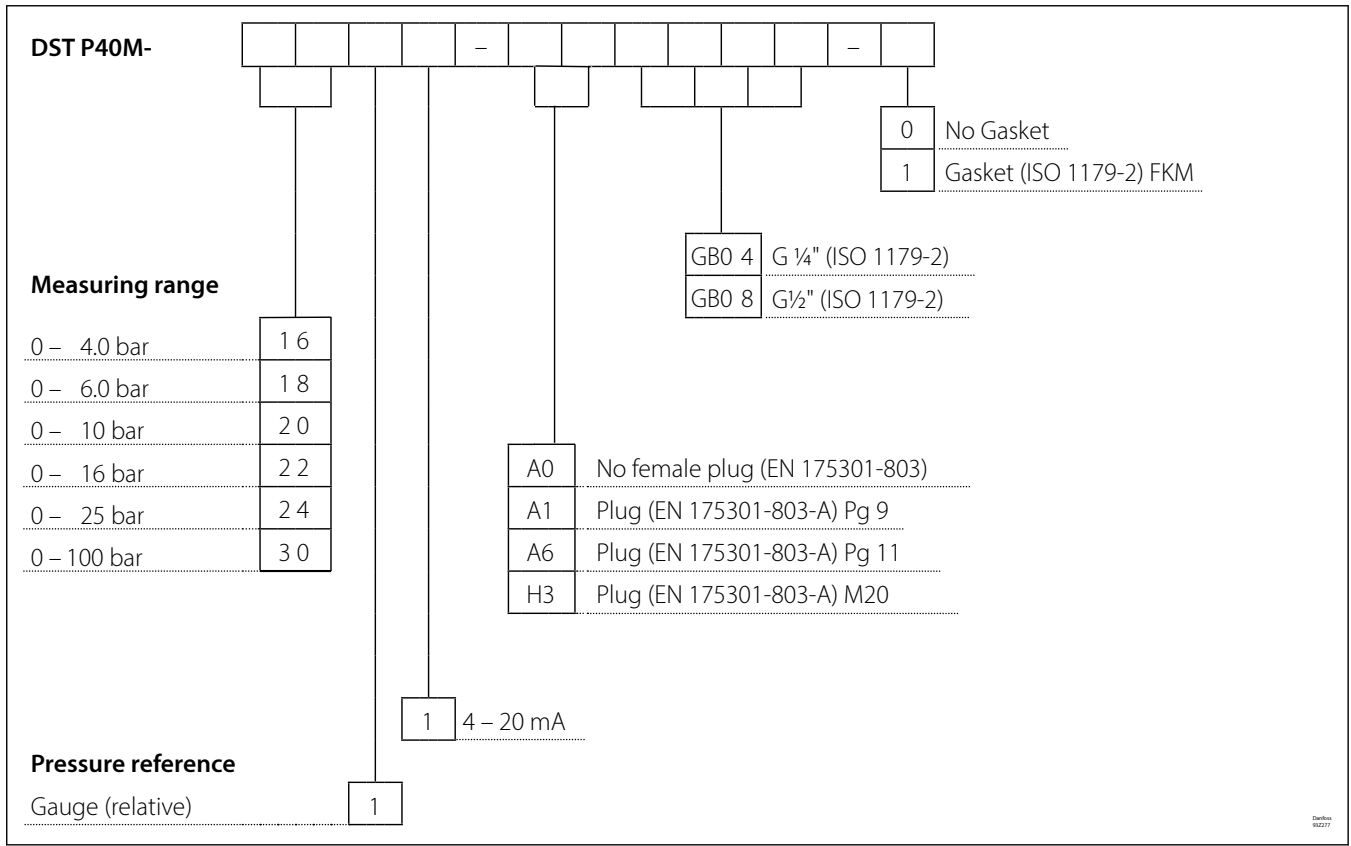
Features & benefits

- 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 Al_2O_3 96%
- High linearity and low hysteresis value
- RoHS compliance



Ordering

Product code numbers



Note: Non-standard build-up combinations may be selected. However, minimum order quantities may apply. Please contact your local Danfoss office for further information or request on other versions.

Note: For a detailed overview of our existing code numbers, please visit the Danfoss Product Store at store.danfoss.com. You can use the filtering options to find the right sensor for your specific needs.

Product details

General data

Technical specifications

Specifications			Values
Transmitter type			DST P40M
Accuracy (incl. non-linearity, hysteresis and repeatability)			$< \pm 1\%$ FS (typ.) @ ambient temperature
Compensated temperature range			0 – 80 °C
Total error band within compensated temperature range			$\pm 1.5\%$ 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]			$RL \leq (UB-8V)/0,02A$
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

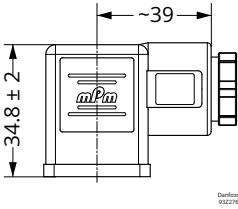
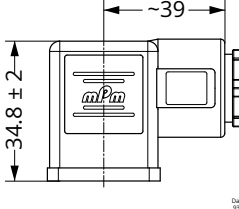
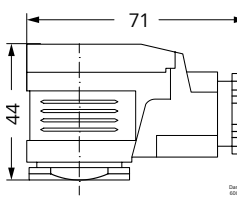
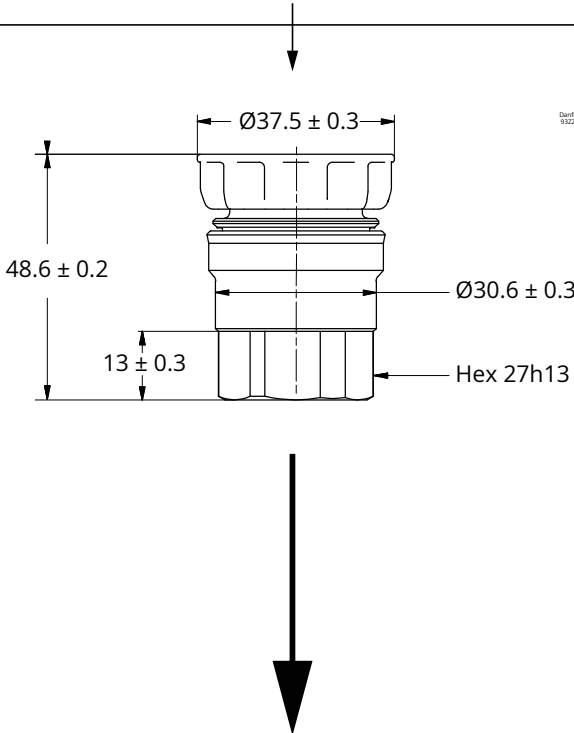
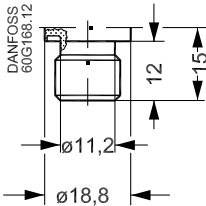
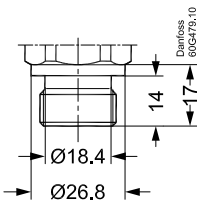
Pressure range

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



Dimensions

Dimensions and combinations of connector and connection types

Type code	A1	A6	H3
Connector	EN 175301-803-A, Pg 9 	EN 175301-803-A, Pg 11 	EN 175301-803-A, M20 
			
Connection Types			
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	

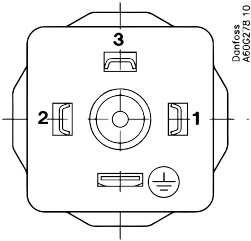
⁽¹⁾ Depends on different parameters such as gasket material, mating material, thread lubrication and pressure level

Note: Dimensions are in mm, unless stated otherwise.



Connections

Electrical connections

Type code	A0: Male A1: Pg 9 A6: Pg 11 H3: M20
	
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

Certificates, declarations and approvals

The list contains all certificates, declarations, and approvals for this product type. Individual code number may have some or all of these approvals, and certain local approvals may not appear on the list.

When you click on the link you will be directed to the latest version of the 'Declaration of Conformity'. Products developed and sold before this date of issue conform to the directives/standards in force at the time of their sale.

Approval type	Title	Issuer	Approval topic
Marine Certificate	NKK TA21093M	ClassNK - The Japanese Marine Association	Marine
EU-UK Declaration	Danfoss EU-UK 078R0006.04	Danfoss	EMC
UA Declaration	Danfoss UA 2023-01-10 Regulators PL01 PL04	Danfoss	Pressure
Pressure Safety Certificate	LLC CDC EURO-TYSK UA.TR.089.1015.05-22	LLC CDC EURO TYSK - Ukraine	Pressure
Marine Certificate	CCS TJ22PTB00047	CCS - China Classification Society	Marine
UA Declaration	Danfoss UA 2024-07-25 cooling sensors	Danfoss	LVD
Marine Certificate	DNV MRA000003B Rev.1	DNV	Marine
EAC Declaration	EAC KZ 7100841.13.12.00005	EAC - Eurasian Customs Union	EMC
Export Control Declaration	Pressure & Temperature Sensors	Danfoss	
Export Control Declaration	Refrigerant Leakage Sensor	Danfoss	
Marine Certificate	KR DNL34014-AE005	KR - Korean Register of Shipping	Marine
EU Declaration	PL 04 Packaging	Danfoss	Packaging

Contact details

Online support

Danfoss offers a wide range of support along with our products, including digital information, software, mobile apps and expert guidance. See the possibilities below.



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