ENGINEERING TOMORROW

Data Sheet

Pressure transmitter Type **DST P40I**

For use in corrosive industrial environments such as desalination systems, sea water cooling, waste water



Danfoss Sensor Technology (DST) P40I pressure transmitter has been designed for use in corrosive industrial environments such as desalination systems, sea water cooling, waste water, etc..

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 Al2O3 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 Al_2O_3 96%
- High linearity and low hysteresis value
- ROHS compliance

Product specification

Technical data

Table 1: Technical specifications

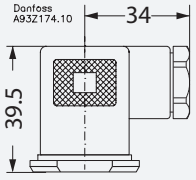
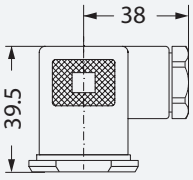
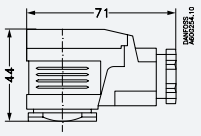
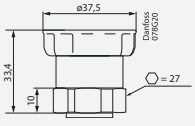
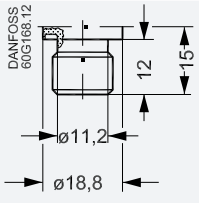
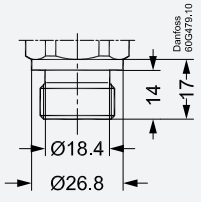
Specifications			Values
Transmitter type			DST P40I
Accuracy (incl. non-linearity, hysteresis and repeatability)			< ± 1% FS (typ.) @ ambient temperature
Compensated temperature range			0 – 80 °C
Total error band within compensated temperature range			± 1.5% FS (typ.)
Output type			4 – 20 mA
Pressure 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	Gauge

Dimensions / Combinations

Table 3: Dimensions and combinations of connector and connection types

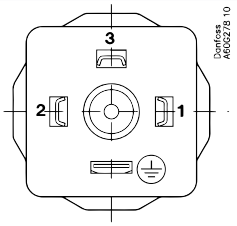
Type code	A1	A6	A9
Connector	 EN 175301-803-A, Pg 9	 EN 175301-803-A, Pg 11	 EN 175301-803-A, Pg 13.5
			
Connection Types			

Type code	A1	A6	A9
Type	G ¼"; ISO 1179-2		G ½"; 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

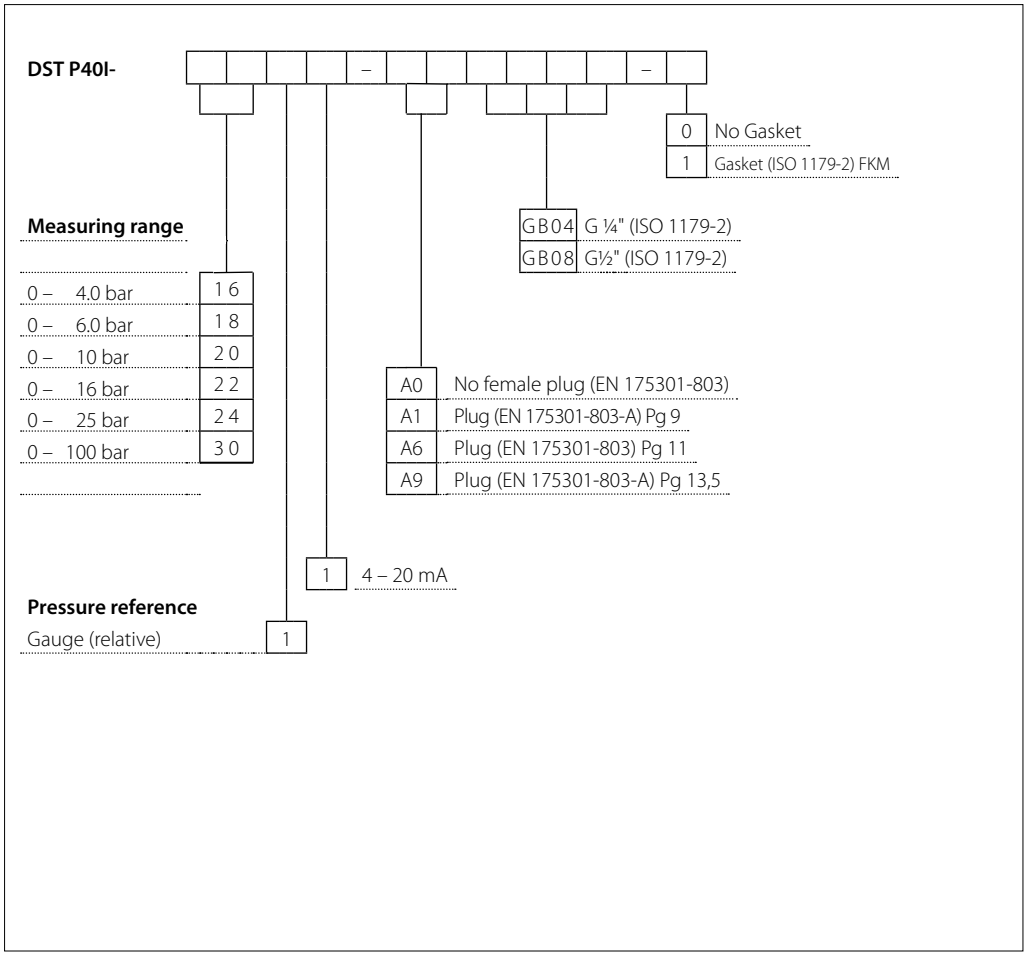
Electrical connections

Table 4: Electrical connection specifications

Type code	A0: Male A1: Pg 9 A6: Pg 11 A9: Pg 13.5
	 EN 175301-803-A, Pg 9
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: not connected to housing

Ordering

Ordering standard



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.

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.

Some approvals may change over time. You can check the most current status at danfoss.com or contact your local Danfoss representative if you have any questions.

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