

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 Al₂O₃ 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			
Connection Types			

Pressure transmitter, type DST P40I

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

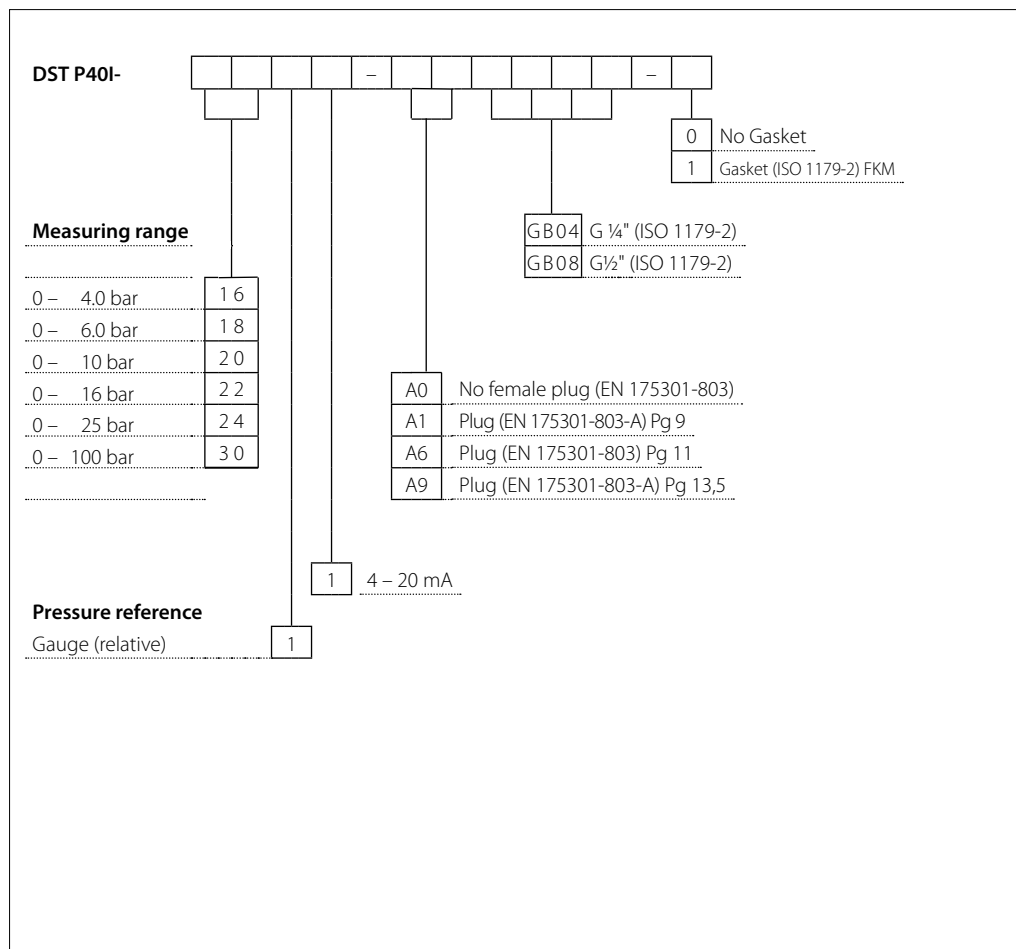
Electrical connections

Table 4: Electrical connection specifications

Type code	A0: Male A1: Pg 9 A6: Pg 11 A9: Pg 13.5
	<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: 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.

Online support

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

The Danfoss Product Store



The Danfoss Product Store is your one-stop shop for everything product related—no matter where you are in the world or what area of the cooling industry you work in. Get quick access to essential information like product specs, code numbers, technical documentation, certifications, accessories, and more.

Start browsing at store.danfoss.com.

Find technical documentation



Find the technical documentation you need to get your project up and running. Get direct access to our official collection of data sheets, certificates and declarations, manuals and guides, 3D models and drawings, case stories, brochures, and much more.

Start searching now at www.danfoss.com/en/service-and-support/documentation.

Danfoss Learning



Danfoss Learning is a free online learning platform. It features courses and materials specifically designed to help engineers, installers, service technicians, and wholesalers better understand the products, applications, industry topics, and trends that will help you do your job better.

Create your Danfoss Learning account for free at www.danfoss.com/en/service-and-support/learning.

Get local information and support



Local Danfoss websites are the main sources for help and information about our company and products. Find product availability, get the latest regional news, or connect with a nearby expert—all in your own language.

Find your local Danfoss website here: www.danfoss.com/en/choose-region.

Spare Parts



Get access to the Danfoss spare parts and service kit catalog right from your smartphone. The app contains a wide range of components for air conditioning and refrigeration applications, such as valves, strainers, pressure switches, and sensors.

Download the Spare Parts app for free at www.danfoss.com/en/service-and-support/downloads.