

Data Sheet

# Pressure transmitter Type **DST P140**

For industry applications



The Danfoss Sensor Technology (DST) P140 is designed for use in industrial applications like Booster Pumps and Air Compressors.

Drawn from over 30 years of experience with MEMS technology, the DST P140 offers outstanding performance in a compact and durable stainless-steel package.

Running a powerful ARM-based microcontroller, the DST P140 offers diagnostic features and performance features at a competitive level.

#### **Features**

- Hermetically sealed media interface (all stainless steel, fully welded)
- Compact and cost effective design for OEM applications
- Superior shock and vibration resistance
- High overload and burst pressure
- Robust electronics platform for harsh electrical environments

## Product specification

### Technical data

**Table 1: Performance**

Accuracy @ 20 °C	≤ ±0.5% FS
Total error band	0 - 100 °C: 2% -40 - 0 °C: 3%
Response time	< 2 ms
Overload pressure	4 × FS
Burst pressure	5 × FS
Durability, P: 10-90% FS	>10 mil. cycles

**Table 2: Electrical specifications**

Nom. output signal (short-circuit protected)	4 – 20 mA
Supply voltage [UB], polarity protected	8 - 28 V
Supply voltage dependency	≤ ±0.1% FS/10 V
Load [RL] (load connected to 0 V)	RL ≤ (UB-8V)/0.022 A

**Table 3: Environmental conditions**

Media temperature range	-40 – 100 °C		
Ambient temperature range	-40 – 85 °C		
Storage temperature range	-40 – 150 °C		
EMC - Emission	EN 61000-6-3		
EMC Immunity up to 6 GHz	EN 61000-6-2		
Insulation resistance	> 100 MΩ at 500 V		
Vibration resistance	Random	10 grms, 5 Hz - 2 kHz	IEC 60068-2-64
Shock resistance	Shock	500 g / 1 ms	IEC 60068 - 2 - 27
Enclosure with mating connector			IP67

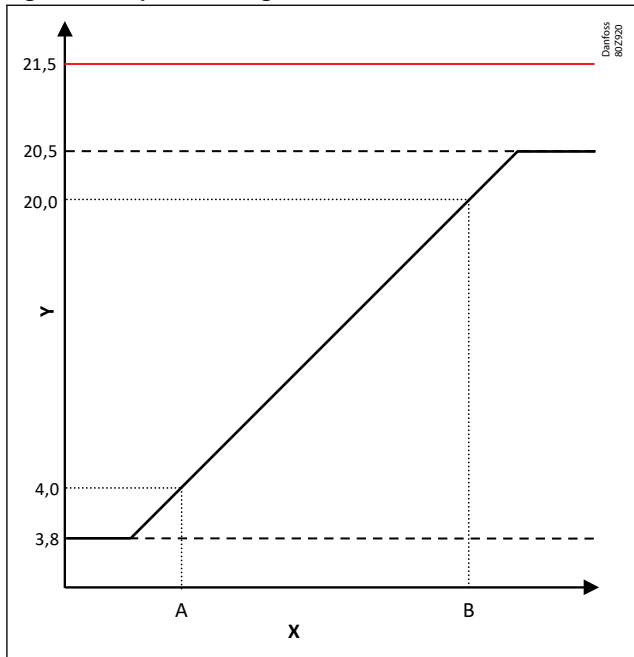
**Table 4: Mechanical characteristics**

Wetted parts	AISI 304L AISI 316L
Electrical connections	see <a href="#">Electrical connections</a> section
Weight (depending on pressure connection and electrical connection)	< 100 g

## Output and diagnostics

4 - 20 mA example

Figure 1: Output and Diagnostics



<b>X</b>	Application pressure
<b>Y</b>	Output signal [mA]
<b>A</b>	Zero
<b>B</b>	Full scale
<b>—</b> (red)	Fault detection signal
<b>- - - -</b> (dashed)	Output clamping
<b>—</b> (solid)	Pressure transfer function

### Output clamping levels

- Limit the output signal if the pressure rises above or falls below the normal range

### Fault detection signal level

- Placed above the pressure output range. Output at this level signals a sensor fault

Contact Danfoss for detailed information and requirements.

## Dimensions / Combinations

Table 5: Dimensions

M12x1.0	Metri-Pack 150.2 (Round)
<p>45,45</p> <p>31,46</p> <p>G1/4</p> <p>G 1/4 - ISO 1179-2</p>	<p>59,1</p> <p>44,11</p> <p>1/4-18NPT</p> <p>1/4-18NPT</p>

Table 6: Dimensions

Metri-Pack 150.2 (Round)	M12
<p>58,1</p> <p>44,1</p> <p>G1/4</p> <p>G 1/4 - ISO 1179-2</p>	<p>46,45</p> <p>31,45</p> <p>R 1/4</p> <p>R 1/4 - ISO 7-1</p>

## Electrical connections

Table 7: Electrical connection specifications

	M12x1.0	Metri-Pack 150.2 (Round)
HEX 27	<p>1</p> <p>2</p> <p>3</p> <p>Ø29.5</p> <p>No pin in position 4.</p>	<p>Pin C</p> <p>Pin B</p> <p>Pin A</p> <p>Ø29.5</p>
Pin-plating	Gold (Au)	Tin (Sn)
Pin configuration	Pin 1: +Supply Pin 2: not connected Pin 3: -Supply	Pin A: -Supply Pin B: +Supply Pin C: not connected

## Ordering

**Table 8: Ordering type**

Type	Pressure reference	Pressure ranges	Electrical connection	Output signal	Pressure connection	Standard	Code no. <sup>(1)</sup>
DST P140	Gauge	0 - 4 bar	M12x1.0	4 - 20 mA	G ¼A	ISO 1179-2	075G4034
		0 - 6 bar					075G4035
		0 - 10 bar					075G4027
		0 - 16 bar					075G4029
		0 - 25 bar					075G4031
		0 - 40 bar					075G4033
		0 - 4 bar	Metri-Pack 150 (Round)		G ¼A	ISO 1179-2	075G4064
		0 - 6 bar					075G4052
		0 - 10 bar					075G4053
		0 - 16 bar					075G4054
		0 - 25 bar					075G4055
		0 - 40 bar					075G4056
		0 - 100 psi	Metri-Pack 150 (Round)		¼-18NPT 8 mm Ø	ANSI/ASME B1.20.1	075G4026
		0 - 150 psi					075G4028
		0 - 200 psi					075G4030
		0 - 300 psi					075G4032
		0 - 4 bar	M12x1.0		R ¼	None	075G4073
		0 - 6 bar					075G4074
		0 - 10 bar					075G4059
		0 - 16 bar					075G4060
0 - 25 bar	075G4061						
0 - 40 bar	075G4075						

<sup>(1)</sup> Are delivered in I-pack of 60 pcs., and must therefore be ordered in multiplum of 60 pcs.

## Accessories

**Table 9: Cable accessories**

Type	I-Pack Code no.	Qty/Box	Description
Cable with Metri-Pack 150 (Round) mating connector	060G8085	60 pcs	0.8 m with outer sheath
Cable with Metri-Pack 150 (Round) mating connector	060G8086	60 pcs	1.3 m with outer sheath
Cable with Metri-Pack 150 (Round) mating connector	060G8193	100 pcs	1.7 m with outer sheath
Cable with Metri-Pack 150 (Round) mating connector	064G0910 <sup>(1)</sup>	14 pcs	10 m with outer sheath
Cable with Metri-Pack 150 (Round) mating connector	060G8195	100 pcs	1 m without outer sheath
Cable with Metri-Pack 150 (Round) mating connector	060G8196	100 pcs	2.5 m without outer sheath
Cable with M12 mating connector	060G8198	60pcs	2m shielded
M12 to PG9 angle adaptor	060G8227	60pcs	-
M12 to PG9 straight adaptor	060G8228	60pcs	-

<sup>(1)</sup> Multi Pack code number is 064G0950

For more options and info, please go to <https://store.danfoss.com>

## 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](http://danfoss.com) or contact your local Danfoss representative if you have any questions.

**Table 10: Certificates and declarations**

File name	Document type	Document topic	Approval authority
060R3142.06	Manufacturers Declaration	PED	Danfoss
E494625	Electrical - Safety Certificate	-	UL
E510763	Electrical - Safety Certificate	-	UL

### Conformity

- CE marked
- RoHS compliant
- EAC declaration
- UL (file no: E494625)
- NSF and WRAS listed for ¼-18NPT and R1/4 versions

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