



# Pressure transmitter

## DST P140

For industry applications

## Description

The Danfoss Sensor Technology (DST) P140 is a pressure transmitter designed for industrial environments such as booster pumps and air compressors. It is based on more than 30 years of MEMS technology experience and provides stable and precise pressure measurement. The compact stainless-steel housing is corrosion resistant, and the integrated ARM-based micro-controller supports reliable operation and diagnostic functions for demanding conditions.

## Features & benefits

- Outstanding performance in a compact and durable stainless-steel package.
- Advanced oil filled MEMS technology provides high overload and burst pressure.
- Hermetically sealed media interface (all stainless steel, fully welded).
- Compact and cost effective design supports OEM applications.
- Superior shock and vibration resistance.
- Robust electronics platform for harsh electrical environments.
- Excellent long-term stability and reliability of sensor signal over lifetime.
- Industry water and air compressor - Water approval NFS (US) and WRAS (UK) (for some versions of the pressure connectors).
- FM / UL 218 approval (Fire Pump Controller Standards & Certification Requirements) available on request.

## Applications

- Water booster sets
- Industrial pump systems
- Irrigation systems
- Fire pump systems
- Electronic control valves
- Industrial air compressors

## Ordering

### Product code numbers

#### Standard ordering type

Type	Pressure reference	Pressure ranges	Output signal	Electrical connection / standard	Pressure connection / standard	Code no. <sup>(1)</sup>
DST 140	Gauge (relative)	0 – 4 bar	4 – 20 mA	M12x1.0 IEC 61076-2-101	G ¼ – A ISO 1179-2	075G4034
		0 – 6 bar				075G4035
		0 – 10 bar				075G4027
		0 – 16 bar				075G4029
		0 – 25 bar				075G4031
	Sealed gauge	0 – 40 bar		075G4033		
	Gauge (relative)	0 – 4 bar		075G4064		
		0 – 6 bar		075G4052		
		0 – 10 bar		075G4053		
		0 – 16 bar		075G4054		
		0 – 25 bar		075G4055		
	Sealed gauge	0 – 40 bar		075G4056		
	Gauge (relative)	0 – 100 psi	Ratiometric (10 – 90%)	Metri-Pack 150.2 SERIES (Round)	¼ – 18 NPT 8 mm Ø ANSI/ASME B1.20.1	075G4026
		0 – 150 psi				075G4028
		0 – 200 psi				075G4030
		0 – 300 psi				075G4032
		0 – 4 bar				075G4073
		0 – 6 bar			075G4074	
		0 – 10 bar			075G4059	
		0 – 16 bar			075G4060	
		0 – 25 bar			075G4061	
		Sealed gauge			0 – 40 bar	075G4075
	Gauge (relative)	0 – 4 bar	Ratiometric (10 – 90%)	Metri-Pack 150.2 SERIES (Round)	G ¼ – A ISO 1179-2	075G4110
		0 – 6 bar				075G4259
0 – 16 bar		075G4111				
Sealed gauge	0 – 25 bar				075G4121	

<sup>(1)</sup>These items are packaged in I-packs containing 60 pieces each, so orders must be placed in multiples of 60.

## Accessories code numbers

### Cable accessories

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

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

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

## Product details

### General data

#### 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

#### Electrical specifications

Nom. output signal (short-circuit protected)	4 – 20 mA	Ratiometric (10 – 90% V <sub>ss</sub> )
Supply voltage [UB], polarity protected	8 – 28 V	5 V DC ± 0.5 V DC
Supply voltage dependency	≤ ±0.1% FS / 10 V	–
Load [RL] (load connected to 0 V)	$RL \leq (UB - 8 V) / 0.022 A$	$RL \geq 2 k\Omega$ at 5 V DC
Max. overvoltage protection	+36 V DC	+16 V DC
Max. reverse voltage	-36 V DC	-16 V DC

#### Environmental conditions

Nom. output signal (short-circuit protected)	4 – 20 mA	Ratiometric (10 – 90% V <sub>ss</sub> )
Media temperature range	-40 – 100 °C	-40 – 135 °C
Ambient temperature range	-40 – 85 °C	-40 – 125 °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	

Electrical connections	M12x1.0 IEC 61076-2-101	Metri-Pack 150.2 SERIES (Round)	Angular DIN plug PG9 EN 175301-803-A
Vibration resistance Random (IEC 60068-2-64)	10 g (5 Hz - 2 kHz)	15 g (20 Hz - 2 kHz)	10 g (20 Hz - 2 kHz)
Shock resistance (IEC 60068-2-27)	500 g / 1 ms		
Enclosure with mating connector	IP67		IP65

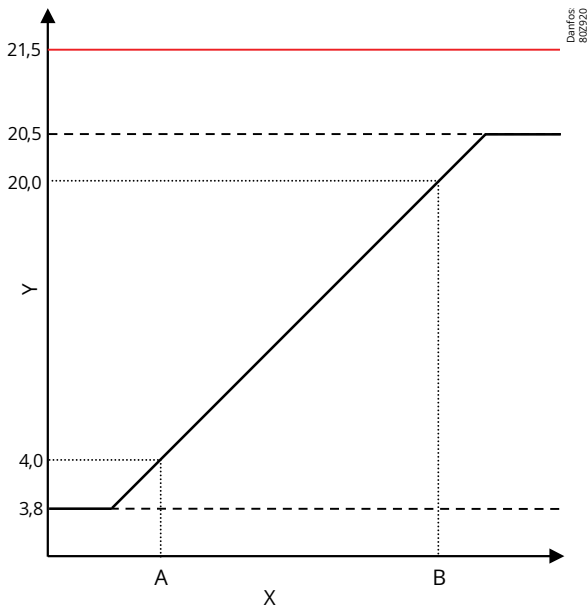
#### Mechanical characteristics

Wetted parts	AISI 304L Stainless steel
	AISI 316L Stainless steel
Electrical connections	See Electrical connections section
Weight (depending on pressure connection and electrical connection)	< 100 g

## Performance and environmental conditions

### Output and diagnostics

4 – 20 mA example



- **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.

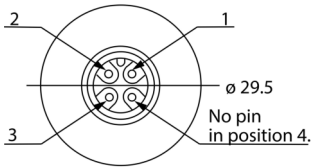
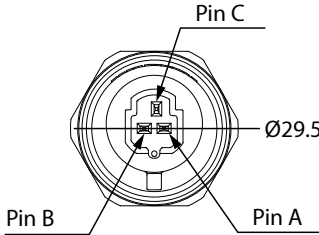
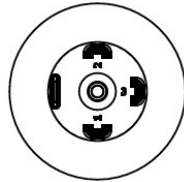
## Dimensions

<p style="text-align: center;"><b>Metri-Pack 150.2 (Round)</b></p> <p style="text-align: center;">G 1/4 - A - ISO 1179-2</p>	<p style="text-align: center;"><b>Metri-Pack 150.2 (Round)</b></p> <p style="text-align: center;">1/4 - 18NPT</p>
<p style="text-align: center;"><b>M12x1.0</b></p> <p style="text-align: center;">G 1/4 - A - ISO 1179-2</p>	<p style="text-align: center;"><b>M12x1.0</b></p> <p style="text-align: center;">R 1/4 - ISO 7-1</p>
<p style="text-align: center;"><b>Angular DIN plug Pg 9 EN 175301-803-A</b></p> <p style="text-align: center;">G 1/4 - A - ISO 1179-2</p>	<p style="text-align: center;"><b>Angular 4 pin EN 175301-803-A</b></p> <p style="text-align: center;">G 1/4 - A - ISO 1179-2</p>

**Note:** All dimensions are in mm if nothing else stated.

## Connections

### Electrical connection

Electrical connection specifications	M12x1.0	Metri-Pack 150.2 (Round)	Angular DIN plug Pg 9
HEX 27			
Pin-plating	Gold (Au)	Tin (Sn)	Tin (Sn)
Output signal 4 – 20 mA Pin configuration	Pin 1: +Supply Pin 2: not connected Pin 3: -Supply	Pin A: -Supply Pin B: +Supply Pin C: not connected	Pin 1: +Supply Pin 2: -Supply Pin 3: not connected Pin 4: Ground not connected
Output signal Ratiometric (10 – 90%) Pin configuration	–	Pin A: -Supply Pin B: +Supply Pin C: Output	Pin 1: +Supply Pin 2: -Supply Pin 3: Output Pin 4: Ground not connected

## 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	Certification body	Approval topic
Manufacturer's Declaration	<a href="#">Pressure Equipment Directive (PED)</a>	Danfoss	Pressure, PED
EU-UK Declaration	<a href="#">Danfoss EU-UK 075R0010.04</a>	Danfoss	EMC, EU RoHS, UK RoHS
Hygienic Certificate	<a href="#">WRAS 260302024</a>	WRAS - Water Regulations Advisory Scheme	Drinking Water
Hygienic Certificate	<a href="#">NSF C0252992</a>	NSF International	Drinking Water
Hygienic Certificate	<a href="#">NSF C863837</a>	NSF International	Drinking Water
Electrical Safety Certificate	<a href="#">UL E510763</a>	UL - Underwriters Laboratories inc.	
Hygienic Certificate	<a href="#">WRAS 2304018</a>	WRAS - Water Regulations Advisory Scheme	Drinking Water
Electrical Safety Certificate	<a href="#">UL E494625</a>	UL - Underwriters Laboratories inc.	
Export Control Declaration	<a href="#">Pressure &amp; Temperature Sensors</a>	Danfoss	
UA Declaration	<a href="#">Danfoss UA 2023-01-10 Regulators PL01 PL04</a>	Danfoss	Pressure, PED
Electrical Safety Certificate	<a href="#">UL E31024</a>	UL - Underwriters Laboratories inc.	
Explosive Safety Certificate	<a href="#">UL E227388</a>	UL - Underwriters Laboratories inc.	UL-CSA, Explosive
Pressure Safety Certificate	<a href="#">LLC CDC EURO-TYSK UA.TR.089.1015.05-22</a>	LLC CDC EURO TYSK - Ukraine	Pressure
UA Declaration	<a href="#">Danfoss UA 2024-07-25 cooling sensors</a>	Danfoss	LVD, EMC
Export Control Declaration	<a href="#">Refrigerant Leakage Sensor</a>	Danfoss	
EAC Declaration	<a href="#">EAC KZ 7100841.13.12.00005</a>	EAC - Eurasian Customs Union	EMC

- NSF and WRAS listed for 1/4-18NPT and R1/4 versions

## 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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