



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. ⁽¹⁾	
DST 140	Gauge (relative)	0 – 4 bar	4 – 20 mA	M12 x 1.0 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%)	Round Packard Metri-Pack 150.2 SERIES	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%)	Round Packard Metri-Pack 150.2 SERIES	G ¼ – A ISO 1179-2	075G4110	
		0 – 6 bar				075G4259	
		0 – 16 bar				075G4111	
	Sealed gauge	0 – 25 bar	075G4121				

⁽¹⁾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
Round Packard Metri-Pack 150	060G8085	60	0.8 m with outer sheath
Round Packard Metri-Pack 150	060G8086	60	1.3 m with outer sheath
Round Packard Metri-Pack 150	060G8193	100	1.7 m with outer sheath
Round Packard Metri-Pack 150	064G0910 ⁽¹⁾	14	10 m with outer sheath
Round Packard Metri-Pack 150	060G8195	100	1 m without outer sheath
Round Packard Metri-Pack 150	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	–

⁽¹⁾ 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 _{ss})
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)	$RL \leq (UB - 8V) / 0.022 A$	RL ≥ 2 kΩ 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 _{ss})
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	M12 x 1.0 IEC 61076-2-101	Round Packard Metri-Pack 150.2 SERIES	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

 Image

X	Application pressure
Y	Output signal [mA]
A	Zero
B	Full scale
 Image	Fault detection signal
-----	Output clamping
 Image	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

Round Packard Metri-Pack 150.2	Round Packard Metri-Pack 150.2
 Image	 Image
G ¼ - A - ISO 1179-2	¼ - 18NPT

M12 x 1.0	M12 x 1.0
 Image	 Image
G ¼ - A - ISO 1179-2	R ¼ - ISO 7-1

Angular DIN plug PG9 EN 175301-803-A	Angular 4 pin EN 175301-803-A
 Image	 Image
G ¼ - A - ISO 1179-2	G ¼ - A - ISO 1179-2

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

Connections

Electrical connection

<p style="writing-mode: vertical-rl; transform: rotate(180deg);">Electrical connection specifications</p>	<p style="text-align: center;">M12 x 1.0</p>	<p style="text-align: center;">Round packard Metri-Pack 150.2</p>	<p style="text-align: center;">Angular DIN Pg 9</p>
<p style="writing-mode: vertical-rl; transform: rotate(180deg);">HEX 27</p>	<p style="text-align: center;"> Image</p>	<p style="text-align: center;"> Image</p>	<p style="text-align: center;"> Image</p>
<p style="writing-mode: vertical-rl; transform: rotate(180deg);">Pin-plating</p>	<p style="text-align: center;">Gold (Au)</p>	<p style="text-align: center;">Tin (Sn)</p>	<p style="text-align: center;">Tin (Sn)</p>



<p>O u t p u t s i g n a l 4 - 2 0 m A P i n c o n f i g u r a t i o n</p>	<p>Pin 1: +Supply Pin 2: Not connected Pin 3: -Supply</p>	<p>Pin A: -Supply Pin B: +Supply Pin C: Not connected</p>	<p>Pin 1: +Supply Pin 2: -Supply Pin 3: Not connected Pin 4: Ground connected</p>
<p>O u t p u t s i g n a l R a t i o m e t r i c (1 0 - 9 0 %) P i n c o n f i g u r a t i o n</p>	<p>-</p>	<p>Pin A: -Supply Pin B: +Supply Pin C: Output</p>	<p>Pin 1: +Supply Pin 2: -Supply Pin 3: Output Pin 4: Ground connected</p>

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
Electrical Safety Certificate	UL E510763	UL - Underwriters Laboratories inc.	
Explosive Safety Certificate	UL E227388	UL - Underwriters Laboratories inc.	UL-CSA
Electrical Safety Certificate	UL E494625	UL - Underwriters Laboratories inc.	
EU-UK Declaration	Danfoss EU-UK 075R0010.04	Danfoss	EMC
Electrical Safety Certificate	UL E31024	UL - Underwriters Laboratories inc.	
Hygienic Certificate	NSF C0252992	NSF International	Drinking Water
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
Manufacturer's Declaration	Pressure Equipment Directive (PED)	Danfoss	Pressure
UA Declaration	Danfoss UA 2024-07-25 cooling sensors	Danfoss	LVD
EAC Declaration	EAC KZ 7100841.13.12.00005	EAC - Eurasian Customs Union	EMC
Hygienic Certificate	WRAS 2304018	WRAS - Water Regulations Advisory Scheme	Drinking Water
Hygienic Certificate	NSF C863837	NSF International	Drinking Water
Export Control Declaration	Pressure & Temperature Sensors	Danfoss	
Export Control Declaration	Refrigerant Leakage Sensor	Danfoss	
Hygienic Certificate	WRAS 260302024	WRAS - Water Regulations Advisory Scheme	Drinking Water

Note: Drinking water - NSF and WRAS listed for ¼-18NPT 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.



The Danfoss Design center

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