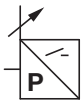
60D Pneumatic/Allfluid/Hydraulic - pressure switch with IO-Link

- -1 ... 400 bar in different pressure ranges
- Port size G1/4
- IO-Link output option
- Set points parameters set via software
- Additional application temperature output via IO-Link
- Robust pressure sensor for pneumatic, allfluid & hydraulic-applications
- Wide temperature range
- Excellent long life
- Suitable for harsh industrial environments
- High over pressure resistance
- UL listed



Technical features

Medium:
For neutral and aggressive, gaseous and liquid fluids

Pressure range:
-1 ... 10 bar (-14.5 ... 145 psi)
-1 ... 25 bar (-14,5 ... 360 psi)
0 ... 100 bar (0 ... 1450 psi)
0 ... 250 bar (0 ... 3625 psi)
0 ... 400 bar (0 ... 5800 psi)

Pressure-type:
Relative pressure, Vacuum

Mounting position:
Optional

Process connection:
G1/4 external, M5 internal

Accuracy/Deviation:
Characteristics deviation:
< ± 0,5 % (linearity incl. hysteresis and repeatability, limit value)

Linearity deviation:
< ± 0,1 % (BFSL) - best fit straight line / < ± 0,2 (LS) - limit value setting

Switching point accuracy:
< ± 0,5 % (DIN EN 61298-2)

Repeatability:
< ± 0,05 % (Temp. -fluctuation < 10 K)

Hysteresis deviation:
< ± 0,2 %

Long-term stability:
< ± 0,1 % (per 6 months)
Shock resistance:
500 g, (1 ms),
DIN EN 60068-2-27

Vibration resistance:
20 g, 10 ... 2000 Hz,
DIN EN 60068-2-6

Protection:
IP67, IP69K, DIN EN 60529

Tightening torque:
25 ... 35 Nm (depends on lubrication, seal and pressure rating)

Weight:
0,054 kg (0.12 lbs)

Ambient/Medium-temperature:
Ambient:
-40 ... +90°C (-40 ... +194°F)
Medium:
-40 ... +90°C (-40 ... +194°F)
Air supply must be dry enough to avoid ice formation at temperature below +2°C (+35°F)

Materials:
Housing:
Stainless steel (1.4542 / 17-4 PH / 630); Stainless steel (1.4404 / 316L); PEI
Wetted parts:
Stainless steel (1.4305 / 303); Stainless steel (1.4542 / 17-4 PH / 630)
Connection seal:
FKM

Electrical parameters

Electrical connection:
M12 x 1 (contacts gold plated)

Power supply:
UB = 18 ...30 VDC
Reverse-polarity protected

Current consumption:
< 15 mA
Max. voltage drop

switching output:
2 V

Output signal:
2 x Switching signal PNP/NPN or
1 x Switching signal + IO-Link

Min. insulation resistance:
100 MΩ (500 V DC)

Power-on delay time:
< 0,3 s

Permanent current rating:
100 mA

Switching frequency:
< 130 Hz

Electromagnetic compatibility:
DIN EN 61326-1

Protection class:
III

Communication interface:
IO-Link

Transmission type:
COM2 (38.4kBaud)

IO-Link revision:
1.1

Required master port type:
A

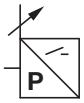
Min. process cycle time:
4.5 ms

IO-Link process data (cyclical):
Pressure - 16 bit length
Temperature - 16 bit length
Device status - 4 bit length
Binary switching information - 2 bit length

IO-Link functions (acyclical):
Application specific tag; internal temperature; operating hours counter; switching cycles counter; pressure peak counter; temperature peak counter

Our policy is one of continued research and development. We therefore reserve the right to amend, without notice, the specifications given in this document. (2022 - 9663a) © 2021 Norgren GmbH

Technical data

Symbol	Connection	Measuring range (bar)	(psi)	Over pressure*1 (bar)	(psi)	Output signal	Model
	G1/4	-1 ... 10	-14,5 ...145	25	360	2 x Switched outputs: OUT1 pressure, OUT2 pressure or temp. 1 x IO-Link digital comm. (OUT1), 1 x switched output (OUT2), pressure or temp.	60D-V110G-DD1-AA
	G1/4	-1 ... 25	-14,5 ... 360	65	940	2 x Switched outputs: OUT1 pressure, OUT2 pressure or temp. 1 x IO-Link digital comm. (OUT1), 1 x switched output (OUT2), pressure or temp.	60D-V125G-DD1-AA
	G1/4	0 ... 100	0 ...1450	250	3625	2 x Switched outputs: OUT1 pressure, OUT2 pressure or temp. 1 x IO-Link digital comm. (OUT1), 1 x switched output (OUT2), pressure or temp.	60D-P100G-DD1-AA
	G1/4	0 ... 250	0 ... 3625	625	9060	2 x Switched outputs: OUT1 pressure, OUT2 pressure or temp. 1 x IO-Link digital comm. (OUT1), 1 x switched output (OUT2), pressure or temp.	60D-P250G-DD1-AA
	G1/4	0 ... 400	0 ... 5800	1000	14500	2 x Switched outputs: OUT1 pressure, OUT2 pressure or temp. 1 x IO-Link digital comm. (OUT1), 1 x switched output (OUT2), pressure or temp.	60D-P400G-DD1-AA

*1) Over pressure, short-term pressure peaks are not allowed to exceed this limit value during operation.
Operative utilization of the over pressure is not permitted. The over pressure corresponds to the maximum testing pressure.

Electrical connection M12 x 1 (A-coding)

PIN-No.	Signal	Cable
1	L+	brown
2	OUT 2 switching output pressure / temperature	white
3	L-	blue
4	OUT 1 switching output pressure / IO-Link	black

Cable colours according to: DIN EN 60947-5-2

Option selector

60D-★★★★G- DD1-AA

Measuring range (bar)	Substitute
-1 ... 10	V110G
-1 ... 25	V125G
0 ... 100	P100G
0 ... 250	P250G
0 ... 400	P400G

Accessories

Cable 5 Pin A-coded
M12 - M12

Cable (m)	Model
0.6	NC-125FS-125MS-A
1.0	NC-125FS-125MS-1
2.0	NC-125FS-125MS-2
5.0	NC-125FS-125MS-5

Cable 5 pin A-coded
M12 – Open end

Cable (m)	Model
5.0	NC-125FS-00000-5

Cable 90° 5 pin A-coded
M12 – Open end

Cable (m)	Model
2.0	0523058000000000
5.0	0523053000000000

Wireable M12 A-coded
connector without cable

Model
0523055000000000

Wireable M12 A-coded 90°
connector without cable

Model
0523056000000000

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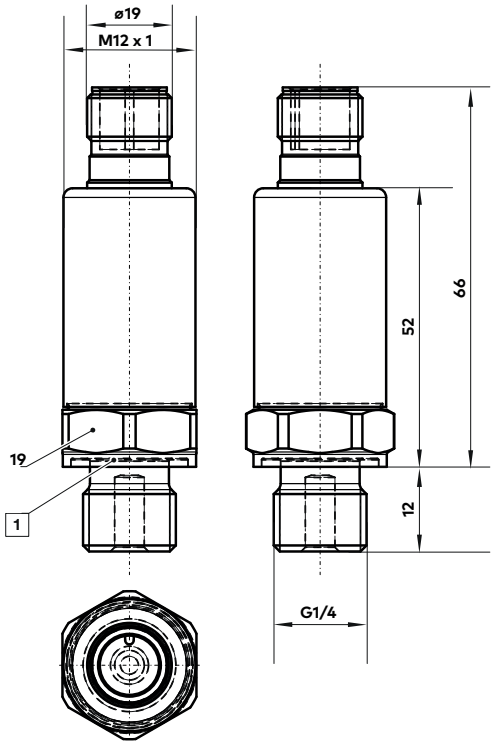
Dimensions pressure switch

Dimensions in mm
Projection/First angle



1 Seal

Warning

These products are intended for use in industrial compressed air systems only. Do not use these products where pressures and temperatures can exceed those listed under **»Technical features/data«**.
Before using these products with fluids other than those specified, for non-industrial applications, life-support systems or other applications not within published specifications, consult IMI Precision Engineering, Norgren GmbH.
Through misuse, age, or malfunction, components used in fluid power systems can fail in various modes.
The system designer is warned to consider the failure modes of all component parts used in fluid power systems and to provide adequate safeguards to prevent personal injury or damage to equipment in the event of such failure.
System designers must provide a warning to end users in the system instructional manual if protection against a failure mode cannot be adequately provided.
System designers and end users are cautioned to review specific warnings found in instruction sheets packed and shipped with these products.

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