

## 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:

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

#### Repeatability:

$< \pm 0,05 \%$  (Temp. -fluctuation  
 $< 10 \text{ K}$ )

#### Characteristics deviation:

$< \pm 0,5 \%$  (linearity incl. hysteresis and repeatability, limit value)

#### Linearity deviation:

$< \pm 0,1 \%$  (BFSL) - best fit straight line /  $< \pm 0,2$  (LS) - limit value setting

#### Hysteresis deviation:

$< \pm 0,2 \%$

#### Long-term stability:

$< \pm 0,1 \%$  (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:

$< 15 \text{ mA}$

#### 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:

$< 0,3 \text{ s}$

#### Permanent current rating:

100 mA

#### Switching frequency:

$< 130 \text{ Hz}$

#### 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

## 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

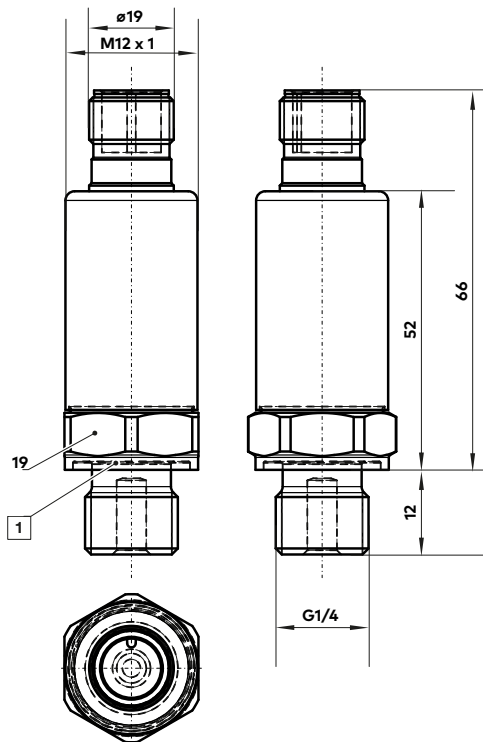
### Wireable M12 A-coded 90° connector without cable



Model
0523056000000000

### Dimensions pressure switch

Dimensions in mm  
Projection/First angle



**1** Seal