

PRESSURE SENSOR WITH LED DISPLAY



- 0 ... 10 KPA TO 0 ... 1000 BAR
- IO-LINK · RS485 · ANALOGUE
- TWO SWITCHING OUTPUTS
- LED DISPLAY, HEAD TURNS 330°
- STAINLESS STEEL · IP67 · M12



IP67



Stainless Steel
AISI 304 · 1.4301



M12



IO-Link



RS485



4...20 mA
0...10 V



Display

VERSIONS

Feature	Versions
Measuring range	0 ... 10 / 60 kPa · 0 ... 1 / 2 / 5 / 10 / 25 / 60 / 100 / 160 / 250 / 400 / 600 / 1000 bar · compound -10 ... 10 kPa, -60 ... 60 kPa, -1 ... 1 / 2 / 5 / 10 bar
Pressure type	gauge pressure · negative pressure
Thread	G1/4 male, G1/2 male, M20 x 1.5 male (with ED seal) · R1/4 male, R1/2 male, NPT1/4 male · G1/4 female
Other connections	clamp 1.5" (OD 50.5 mm), flush diaphragm, nominal pressure 1.6 MPa · KF16 vacuum flange
Output	two switching outputs / frequency (4-pin) · one switching output / IO-Link / frequency + analogue (4-pin) · two switching outputs / IO-Link / frequency + analogue (5-pin) · RS485 (4-pin)



OVERVIEW

Pressure sensor with bright LED display, two switching outputs and analogue or IO-Link output – for gauge and negative pressure up to 1000 bar.

A diffused silicon sensor measures the pressure; the electronics convert it into a standard signal and display it. Housing and wetted parts are stainless steel 304; the display head rotates by 330° and stays readable in any mounting position. Switching points and outputs are set with three keys and a menu. Threaded, clamp and vacuum connections are available.

0 ... 1000 bar largest range	$\leq \pm 0.5 \%$ accuracy F.S.	IO-Link or RS485	IP67 protection class
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MEASUREMENT	OUTPUTS
■ gauge and negative pressure	■ two switching outputs PNP / NPN
■ 0 ... 10 kPa to 0 ... 1000 bar	■ 4 ... 20 mA / 1 ... 5 V / 0 ... 10 V
■ accuracy $\leq \pm 0.5 \%$ F.S.	■ IO-Link or RS485
■ annual drift $\leq \pm 0.3 \%$ F.S.	■ frequency output 100 Hz



TECHNICAL DATA

MEASUREMENT AND PRECISION

Measuring principle	diffused silicon sensor
Accuracy	$\leq \pm 0.5 \% \text{ F.S.}$
Linearity	$\leq 0.5 \% \text{ F.S.}$
Stability (annual drift)	$\leq \pm 0.3 \% \text{ F.S.}$
Switching accuracy	$\leq \pm 0.5 \% \text{ F.S.}$
Analogue output accuracy	$\leq \pm 0.5 \% \text{ F.S.}$

TEMPERATURES

Medium temperature	$-20 \dots +85 \text{ }^{\circ}\text{C}$
Ambient temperature	$-20 \dots +80 \text{ }^{\circ}\text{C}$
Storage temperature	$-30 \dots +80 \text{ }^{\circ}\text{C}$

MECHANICAL PROPERTIES

Display head	engineering plastic, flame class UL-94 V-0, rotatable 330°
Housing	stainless steel 304
Wetted parts	stainless steel 304
Protection class	IP67
Electrical connection	M12 × 1 connector

PRESSURE RESISTANCE

Measuring range	Max. overload pressure	Min. damage pressure
1 · 2 · 5 bar	× 5	× 6
10 · 16 · 25 bar	× 3	× 4
60 · 100 · 160 bar	× 2	× 3
250 · 400 bar	× 1.5	× 2
600 bar	× 1.3	× 1.6

PIN ASSIGNMENT M12 × 1 – SWITCHING AND ANALOGUE OUTPUTS

Pin · wire	two switching outputs + analogue (5-pin)	one switching output + analogue (4-pin)
1 · BN brown	supply +	supply +
3 · BU blue	supply –	supply –
4 · BK black	OUT1: SP1 PNP (default) / NPN · IO-Link · frequency	OUT1: SP1 PNP (default) / NPN · IO-Link · frequency
2 · WH white	OUT2: SP2 PNP (default) / NPN	OUT2: 4 ... 20 mA (default) / 1 ... 5 V / 0 ... 10 V
5 · GY grey	OUT3: 4 ... 20 mA (default) / 1 ... 5 V / 0 ... 10 V	–

PIN ASSIGNMENT M12 × 1 – TWO SWITCHING OUTPUTS · RS485

Pin · wire	two switching outputs (4-pin)	RS485 (4-pin)
1 · BN brown	supply +	supply +
3 · BU blue	supply –	supply –
4 · BK black	OUT1: SP1 PNP (default) / NPN · frequency	RS485 B
2 · WH white	OUT2: SP2 PNP (default) / NPN	RS485 A

ELECTRICAL PROPERTIES

Supply voltage	12 ... 30 V DC
No-load current	max. 40 mA at 24 V DC
Protection	reverse polarity, overload, short circuit

OUTPUTS

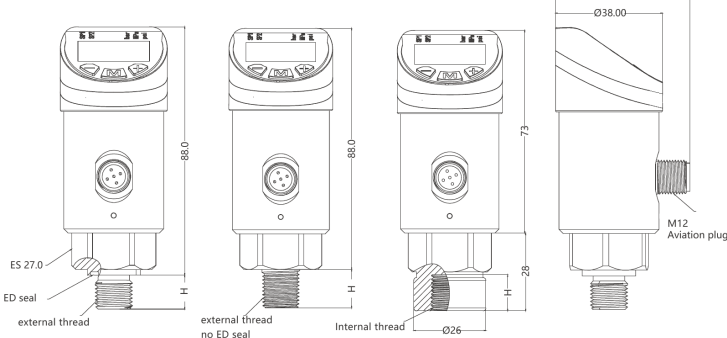
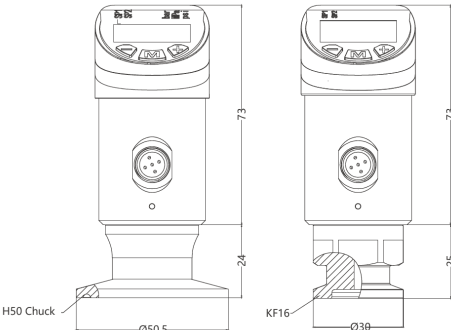
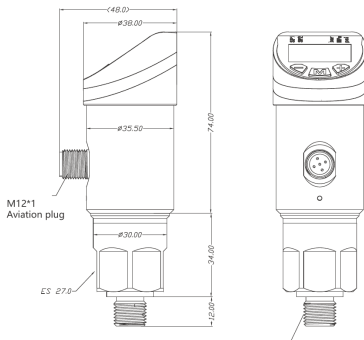
Switching output	PNP / NPN switchable, NO / NC selectable
Switching load	< 200 mA / 24 V DC
Response time	0.01 ... 2 s
Analogue output	4 ... 20 mA / 1 ... 5 V / 0 ... 10 V selectable
Load	$\leq 500 \Omega$
Frequency output	100 Hz at full scale
Communication	IO-Link / RS485

DISPLAY AND OPERATION

Display	4-digit LED, red, 12 mm high
Display range	–1999 ... 9999
Operation	three keys with menu



DIMENSIONS (mm)

Threaded version up to < 600 bar: male thread with and without ED seal, female thread, side view		
		
Clamp H50 (Ø 50.5) and KF16, < 600 bar		
		
Version ≥ 600 bar (process connections as for < 600 bar)		
		
	Thread length H	ED seal
G1/4 · G1/2 · M20 × 1.5 male	12	yes
R1/4 · R1/2 · NPT1/4 male	14	no
R1/4 · G1/4 female	13	no

Dimensions in mm. ES = width across flats.

COMPLIANCE AND CERTIFICATION

Protection Rating IP67

