Pressure Sensor
with IO-Link

FX9P003
Part Number

- ● **Compact, laser-welded V4A stainless steel housing**
- ● **Individual parameters configuration via IO-Link 1.1**
- ● **Outstanding measuring accuracy: ±0.5%**
- ● **Quick sensor replacement thanks to data storage**

weFlux² pressure sensors precisely measure the relative pressure of any desired media to an accuracy level of ±0.5%. Depending on application requirements, either two switching outputs or one switching output and one analog output can be selected for the purpose of reading out measured values. Furthermore, weFlux² pressure sensors offer new dimensions in individual parameters configurability. Sensor parameters, filter and output functions, as well as the unit of measure of the measured values (bar, PSI or Pascal), can be flexibly adjusted.

Technical Data

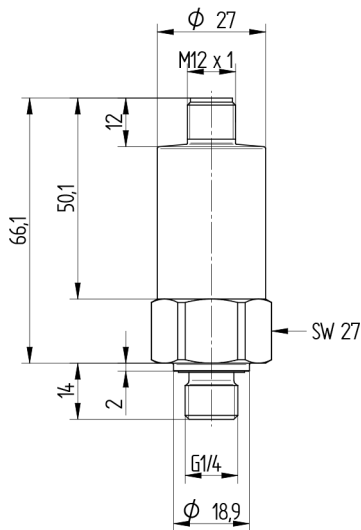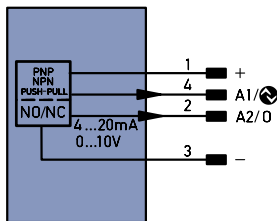| Sensor-specific data	
Measuring Range	0...250 bar
Measurement Type	relative
Maximum overload pressure	500 bar
Bursting pressure	750 bar
Medium	Liquids, gases
Pressure Response Time (t90)	< 10 ms
Measuring error (total)	< 1 %
Temperature Coefficient Zero-Point	<± 0,15% /10K
Temperature Coefficient Range	<± 0,2% /10K
Environmental conditions	
Temperature of medium	-25...125 °C**
Ambient temperature	-25...80 °C
Atmospheric humidity	100 % r.H.
Storage temperature	-25...80 °C
EMC	DIN EN 61326-2-3
Shock resistance per DIN IEC 68-2-27	50 g / 11 ms
Vibration resistance per DIN IEC 60068-2-6	10 g (10...2000 Hz)
Electrical Data	
Supply Voltage	12...32 V DC
Current Consumption (Ub = 24 V)	< 15 mA
Number of Switching Outputs	2
Switching Output/Switching Current	100 mA
Switching Output Voltage Drop	< 1,5 V
Analog Outputs	1
Analog Output	4...20 mA/0...10 V
Current Output Load Resistance	< 500 Ohm
Voltage output load resistance	> 1 kOhm
Interface	IO-Link V1.1
Short Circuit Protection	yes
Reverse Polarity Protection	yes
Protection Class	III
Mechanical Data	
Setting Method	IO-Link
Sensor element	Stainless steel diaphragm
Housing Material	1.4404
Material in contact with media	1.4404; 1.4548; FKM
Degree of Protection	IP68/IP69K *
Connection	M12 × 1; 4-pin
Process Connection	G 1/4"
{Dichtungsmaterial}	FKM
Safety-relevant Data	
MTTFd (EN ISO 13849-1)	1157,11 a
Analog Output	●
IO-Link	●
Connection Diagram No.	139
Suitable Connection Equipment No.	2
Suitable Mounting Technology No.	919

* Not UL certified
** Sensors suitable up to 125 °C media temperature. During installation, please ensure that the sensor housing is adequately cooled by the surroundings.

All dimensions in mm (1 mm = 0.03937 Inch)

139

| PNP |
| NPN |
| PUSH-PULL |
| NO/NC |
| 4...20mA |
| 0...10V |

1 → +
4 → A1/⟳
2 → A2/O
3 → −

Legend

+	Supply Voltage +
−	Supply Voltage 0 V
~	Supply Voltage (AC Voltage)
A	Switching Output (NO)
Ā	Switching Output (NC)
V	Contamination/Error Output (NO)
V̄	Contamination/Error Output (NC)
E	Input (analog or digital)
T	Teach Input
Z	Time Delay (activation)
S	Shielding
RxD	Interface Receive Path
TxD	Interface Send Path
RDY	Ready
GND	Ground
CL	Clock
E/A	Output/Input programmable
⟳	IO-Link
PoE	Power over Ethernet
IN	Safety Input
OSSD	Safety Output
Signal	Signal Output
BI_D+/−	Ethernet Gigabit bidirect. data line (A-D)
EN0RS422	Encoder 0-pulse 0-0̄ (TTL)

PT	Platinum measuring resistor
nc	not connected
U	Test Input
Ū	Test Input inverted
W	Trigger Input
W−	Ground for the Trigger Input
O	Analog Output
O−	Ground for the Analog Output
BZ	Block Discharge
AMW	Valve Output
a	Valve Control Output +
b	Valve Control Output 0 V
SY	Synchronization
SY−	Ground for the Synchronization
E+	Receiver-Line
S+	Emitter-Line
⏚	Grounding
SnR	Switching Distance Reduction
Rx+/−	Ethernet Receive Path
Tx+/−	Ethernet Send Path
Bus	Interfaces-Bus A(+)/B(−)
La	Emitted Light disengageable
Mag	Magnet activation
RES	Input confirmation
EDM	Contactor Monitoring

ENARS422	Encoder A/Ā (TTL)
ENBRS422	Encoder B/B̄ (TTL)
ENA	Encoder A
ENB	Encoder B
AMIN	Digital output MIN
AMAX	Digital output MAX
AOK	Digital output OK
SY In	Synchronization In
SY OUT	Synchronization OUT
OLT	Brightness output
M	Maintenance
rsv	reserved

Wire Colors according to IEC 60757

BK	Black
BN	Brown
RD	Red
OG	Orange
YE	Yellow
GN	Green
BU	Blue
VT	Violet
GY	Grey
WH	White
PK	Pink
GNYE	Green/Yellow