Pressure Sensor with IO-Link

FX5P002

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 $\pm 0.5\%$. 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.



weFlux² InoxSens

Technical Data

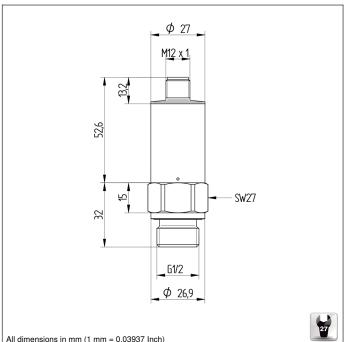
Sensor-specific dataMeasuring Range-110 barMeasurement TyperelativeMaximum overload pressure20 barBursting pressure30 barMediumLiquids, gasesResponse time (190) Temp<1 sPressure Response Time (190)<10 msMeasuring error0,5 %Hysteresis<±0,1 %Linearity Deviation<±0,2 %Zero-Point Error<±0,1 %Repeat Accuracy<±0,1 %Temperature Coefficient Zero-Point<±0,2 %/10KTemperature Coefficient Range±0.2 %/10KEnvironmental conditions-1080 °CStorage temperature-1080 °CStorage temperature10080 °CStorage temperature1002000 Hz)EMCDIN EN 61326-2-3Shock resistance per DIN IEC 680-2-2750 g / 11 msVibration resistance per DIN IEC 680-2-2750 g / 11 msVibration resistance per DIN IEC 680-2-2610 g (102000 Hz)Electrical Data2Switching Output Soutputs2Switching Output Voltage1.5 VAnalog Outputs1Analog Output Load Resistance<500 OhmInterfaceIO-Link V1.1Shord resist PotectionyesProtection ClassIIIMumber of Switching CurrentViesSwitching Output Load Resistance<500 OhmInterfaceIO-Link V1.1Shord resist PotectionyesProtection ClassIIIHuerradeIO-Link				
Measurement TyperelativeMaximum overload pressure20 barBursting pressure30 barMediumLiquids, gasesResponse time (t90) Temp< 1 sPressure Response Time (t90)< 10 msMeasuring error0,5 %Hysteresis< ± 0,1 %Linearity Deviation< ± 0,2 %Zero-Point Error< ± 0,1 %Repeat Accuracy< ± 0,1 %Temperature Coefficient Zero-Point< ± 0,1 %Temperature Coefficient Range< ± 0,2 %/10KEnvironmental conditionsTemperature of medium-10125 °C**Ambient temperature-1080 °CStorage temperature-1080 °CENCDIN EN 61326-2-3Shock resistance per DIN IEC 68-2-2750 g / 11 msVibration resistance per DIN IEC 68068-2-610 g (102000 Hz)Electrical DataSupply Voltage1232 V DCCurrent Consumption (Ub = 24 V)< 15 mANumber of Switching Outputs2Switching Output Voltage Drop< 1,5 VAnalog Output420 mA/010 VResolution> 11 bitCurrent Output Load Resistance< 500 OhmInterfaceIO-Link V1.1Short Circuit ProtectionyesProtection ClassIIIMeasuring Output Sensor elementCeramic diaphragmHousing Material1.4404Muterial in contact with media1.4404Material in contact with media1.4404ProtectionIP65 *	Sensor-specific data			
Maximum overload pressure20 barBursting pressure30 barHediumLiquids, gasesResponse time (190) Temp< 1 s	Measuring Range	-110 bar		
Bursting pressure30 barMediumLiquids, gasesResponse time (190) Temp<1 s	Measurement Type	relative		
MediumLiquids, gasesResponse time (190) Temp<1 s	Maximum overload pressure	20 bar		
Response time (t90) Temp< 1 sPressure Response Time (t90)< 10 ms	Bursting pressure	30 bar		
Pressure Response Time (t90)< 10 ms	Medium	Liquids, gases		
Measuring error $0,5 \%$ Hysteresis $<\pm 0,1 \%$ Linearity Deviation $<\pm 0,2 \%$ Zero-Point Error $<\pm 0,1 \%$ Repeat Accuracy $<\pm 0,1 \%$ Temperature Coefficient Zero-Point $<\pm 0,1 \%$ Temperature Coefficient Range $<\pm 0,2\% /10 K$ Environmental conditions $<\pm 0,2\% /10 K$ Temperature of medium $-10125 \circ C^{**}$ Ambient temperature $-1080 \circ C$ Storage temperature $-1080 \circ C$ EMCDIN EN 61326-2-3Shock resistance per DIN IEC 68-2-27 $50 g / 11 ms$ Vibration resistance per DIN IEC 60068-2-6 $10 g (102000 Hz)$ Electrical Data $=$ Supply Voltage $1232 \vee DC$ 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 Output $420 mA/010 V$ Resolution $> 11 bit$ Current Output Load Resistance $<500 Ohm$ InterfaceIO-Link V1.1Short Circuit ProtectionyesReverse Polarity ProtectionyesProtection ClassIIIMechanical DataIO-LinkSensor elementCeramic diaphragmHousing Material 1.4404 Material in contact with media 1.4404 Material in contact with media 1.4404	Response time (t90) Temp	< 1 s		
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Linearity Deviation $< \pm 0.2 \%$ Zero-Point Error $< \pm 0.1 \%$ Repeat Accuracy $< \pm 0.1 \%$ Temperature Coefficient Zero-Point $< \pm 0.15\% / 10K$ Temperature Coefficient Range $< \pm 0.2\% / 10K$ Environmental conditions $< \pm 0.2\% / 10K$ Temperature of medium $-10125 °C^{**}$ Ambient temperature $-1080 °C$ Storage temperature $-1080 °C$ EMCDIN EN 61326-2-3Shock resistance per DIN IEC 68-2-27 $50 g / 11 ms$ Vibration resistance per DIN IEC 60068-2-6 $10 g (102000 Hz)$ Electrical Data 2 Supply Voltage $1232 V DC$ 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 Output $420 mA/010 V$ Resolution $> 11 bit$ Current Output Load Resistance $10-Link V1.1$ Short Circuit ProtectionyesProtection ClassIIIMechanical DataI0-Link V1.1Setting MethodI0-LinkSensor elementCeramic diaphragmHousing Material 1.4404 Material in contact with media 1.4404 Material in contact with media 1.4404 InterlaceIP65 *ConnectionM12 × 1; 4-pin	Measuring error	0,5 %		
Zero-Point Error $< \pm 0,1 \%$ Repeat Accuracy $< \pm 0,1 \%$ Temperature Coefficient Zero-Point $<\pm 0,1 \%$ Temperature Coefficient Range $<\pm 0,2\% /10 K$ Environmental conditions $<\pm 0,2\% /10 K$ Environmental conditions $-10125 \ ^{\circ}C^{**}$ Ambient temperature $-1080 \ ^{\circ}C$ Storage temperature $-1080 \ ^{\circ}C$ EMCDIN EN 61326-2-3Shock resistance per DIN IEC 68-2-27 $50 \ g / 11 \ ms$ Vibration resistance per DIN IEC 60068-2-6 $10 \ g (102000 \ Hz)$ Electrical Data 2 Supply Voltage $1232 \ V DC$ 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 Output $420 \ mA/010 \ V$ Resolution $> 11 \ bit$ Current Output Load Resistance $< 500 \ Ohm$ InterfaceIO-Link V1.1Short Circuit ProtectionyesProtection ClassIIIMechanical DataIO-LinkSetting MethodIO-LinkSetting MethodIO-LinkGensor elementCeramic diaphragmHousing Material 1.4404 Material in contact with media 1.4404 Material in contact with media 1.4404 InterfacionIP65 *ConnectionM12 × 1; 4-pin	Hysteresis	< ± 0,1 %		
Repeat Accuracy< $\pm 0,1 \%$ Temperature Coefficient Zero-Point $\pm 0,15\%/10K$ Temperature Coefficient Range $\pm 0,2\%/10K$ Environmental conditions $\pm 0,2\%/10K$ Environmental conditions $-10125 °C^{**}$ Ambient temperature $-1080 °C$ Storage temperature $-1080 °C$ EMCDIN EN 61326-2-3Shock resistance per DIN IEC 68-2-27 $50 g/11 ms$ Vibration resistance per DIN IEC 60068-2-6 $10 g (102000 Hz)$ Electrical Data 2 Supply Voltage $1232 V DC$ 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 Output $420 mA/010 V$ Resolution $> 11 bit$ Current Output Load Resistance $< 500 Ohm$ InterfaceIO-Link V1.1Short Circuit ProtectionyesProtection ClassIIIMechanical DataIO-LinkSetting MethodIO-LinkSetting MethodIO-LinkGensor elementCeramic diaphragmHousing Material 1.4404 Material in contact with media 1.4404	Linearity Deviation	< ± 0,2 %		
Temperature Coefficient Zero-Point<± 0,15%/10KTemperature Coefficient Range<± 0,2%/10K	Zero-Point Error	< ± 0,1 %		
Temperature Coefficient Range<± 0,2% /10KEnvironmental conditionsTemperature of medium-10125 °C**Ambient temperature-1080 °CStorage temperature-1080 °CEMCDIN EN 61326-2-3Shock resistance per DIN IEC 68-2-2750 g / 11 msVibration resistance per DIN IEC 60068-2-610 g (102000 Hz)Electrical DataSupply Voltage1232 V DCCurrent Consumption (Ub = 24 V)< 15 mA	Repeat Accuracy	< ± 0,1 %		
Environmental conditionsTemperature of medium-10125 °C**Ambient temperature-1080 °CStorage temperature-1080 °CEMCDIN EN 61326-2-3Shock resistance per DIN IEC 68-2-2750 g / 11 msVibration resistance per DIN IEC 60068-2-610 g (102000 Hz)Electrical Data	Temperature Coefficient Zero-Point	<± 0,15% /10K		
Temperature of medium-10125 °C**Ambient temperature-1080 °CStorage temperature-1080 °CEMCDIN EN 61326-2-3Shock resistance per DIN IEC 68-2-2750 g / 11 msVibration resistance per DIN IEC 60068-2-610 g (102000 Hz)Electrical Data	Temperature Coefficient Range	<± 0,2% /10K		
Ambient temperature-1080 °CStorage temperature-1080 °CEMCDIN EN 61326-2-3Shock resistance per DIN IEC 68-2-2750 g / 11 msVibration resistance per DIN IEC 60068-2-610 g (102000 Hz)Electrical Data	Environmental conditions			
Storage temperature-1080 °CEMCDIN EN 61326-2-3Shock resistance per DIN IEC 68-2-2750 g / 11 msVibration resistance per DIN IEC 60068-2-610 g (102000 Hz)Electrical Data1232 V DCSupply Voltage1232 V DCCurrent Consumption (Ub = 24 V)< 15 mA	Temperature of medium	-10125 °C**		
EMCDIN EN 61326-2-3Shock resistance per DIN IEC 68-2-2750 g / 11 msVibration resistance per DIN IEC 60068-2-610 g (102000 Hz)Electrical Data1232 V DCSupply Voltage1232 V DCCurrent Consumption (Ub = 24 V)< 15 mA	Ambient temperature	-1080 °C		
Shock resistance per DIN IEC 68-2-2750 g / 11 msVibration resistance per DIN IEC 60068-2-610 g (102000 Hz)Electrical Data1232 V DCSupply Voltage1232 V DCCurrent Consumption (Ub = 24 V)< 15 mA		-1080 °C		
Vibration resistance per DIN IEC 60068-2-610 g (102000 Hz)Electrical Data1232 V DCSupply Voltage1232 V DCCurrent Consumption (Ub = 24 V)< 15 mA	EMC	DIN EN 61326-2-3		
Electrical DataSupply Voltage1232 V DCCurrent Consumption (Ub = 24 V)< 15 mA	Shock resistance per DIN IEC 68-2-27	50 g / 11 ms		
Supply Voltage1232 V DCCurrent Consumption (Ub = 24 V)< 15 mA	Vibration resistance per DIN IEC 60068-2-6	10 g (102000 Hz)		
Current Consumption (Ub = 24 V)< 15 mANumber of Switching Outputs2Switching Output/Switching Current100 mASwitching Output Voltage Drop< 1,5 V	Electrical Data			
Number of Switching Outputs2Switching Output/Switching Current100 mASwitching Output Voltage Drop< 1,5 V	Supply Voltage	1232 V DC		
Switching Output/Switching Current100 mASwitching Output Voltage Drop< 1,5 V	Current Consumption (Ub = 24 V)	< 15 mA		
Switching Output/Switching Current100 mASwitching Output Voltage Drop< 1,5 V	Number of Switching Outputs			
Analog Outputs1Analog Outputs420 mA/010 VResolution> 11 bitCurrent Output Load Resistance< 500 Ohm	Switching Output/Switching Current	_		
Analog Outputs1Analog Output420 mA/010 VResolution> 11 bitCurrent Output Load Resistance< 500 Ohm	Switching Output Voltage Drop			
Resolution> 11 bitCurrent Output Load Resistance< 500 Ohm	Analog Outputs			
Current Output Load Resistance< 500 Ohm		420 mA/010 V		
InterfaceIO-Link V1.1Short Circuit ProtectionyesReverse Polarity ProtectionyesProtection ClassIIIMechanical DataIIISetting MethodIO-LinkSensor elementCeramic diaphragmHousing Material1.4404Material in contact with media1.4404; FKM; CeramicDegree of ProtectionIP65 *ConnectionM12 × 1; 4-pin		> 11 bit		
InterfaceIO-Link V1.1Short Circuit ProtectionyesReverse Polarity ProtectionyesProtection ClassIIIMechanical DataIO-LinkSetting MethodIO-LinkSensor elementCeramic diaphragmHousing Material1.4404Material in contact with media1.4404; FKM; CeramicDegree of ProtectionIP65 *ConnectionM12 × 1; 4-pin	Current Output Load Resistance	< 500 Ohm		
Reverse Polarity ProtectionyesProtection ClassIIIMechanical DataIO-LinkSetting MethodIO-LinkSensor elementCeramic diaphragmHousing Material1.4404Material in contact with media1.4404; FKM; CeramicDegree of ProtectionIP65 *ConnectionM12 × 1; 4-pin	·	IO-Link V1.1		
Reverse Polarity ProtectionyesProtection ClassIIIMechanical DataIO-LinkSetting MethodIO-LinkSensor elementCeramic diaphragmHousing Material1.4404Material in contact with media1.4404; FKM; CeramicDegree of ProtectionIP65 *ConnectionM12 × 1; 4-pin	Short Circuit Protection	yes		
Mechanical DataSetting MethodIO-LinkSensor elementCeramic diaphragmHousing Material1.4404Material in contact with media1.4404; FKM; CeramicDegree of ProtectionIP65 *ConnectionM12 × 1; 4-pin	Reverse Polarity Protection	-		
Setting MethodIO-LinkSensor elementCeramic diaphragmHousing Material1.4404Material in contact with media1.4404; FKM; CeramicDegree of ProtectionIP65 *ConnectionM12 × 1; 4-pin	Protection Class	, 		
Sensor elementCeramic diaphragmHousing Material1.4404Material in contact with media1.4404; FKM; CeramicDegree of ProtectionIP65 *ConnectionM12 × 1; 4-pin	Mechanical Data			
Housing Material1.4404Material in contact with media1.4404; FKM; CeramicDegree of ProtectionIP65 *ConnectionM12 × 1; 4-pin	Setting Method	IO-Link		
Material in contact with media1.4404; FKM; CeramicDegree of ProtectionIP65 *ConnectionM12 × 1; 4-pin	Sensor element	Ceramic diaphragm		
Material in contact with media1.4404; FKM; CeramicDegree of ProtectionIP65 *ConnectionM12 × 1; 4-pin	Housing Material	1.4404		
Degree of Protection IP65 * Connection M12 × 1; 4-pin	-	1.4404; FKM; Ceramic		
Connection M12 × 1; 4-pin	Dearee of Protection			
	-			
	Process Connection	G 1/2"		
Analog Output				
	-			
Connection Diagram No. 139	Suitable Connection Equipment No.	2		

* Tested by wenglor

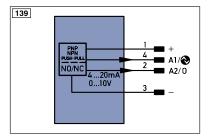
* Sensors suitable up to 125 °C media temperature. During installation, please ensure that the sensor housing is adequately cooled by the surroundings.

Fluid Sensors





All dimensions in mm (1 mm = 0.03937 Inch)



Legen	ıd		PT	Platinum measuring resistor	ENARS	2 Encoder A/Ā (TTL)
+	Supply Voltage +		nc	not connected		Encoder B/B (TTL)
-	Supply Voltage 0 V		U	Test Input	ENA	Encoder A
~	Supply Voltage (AC Voltage)		Ū	Test Input inverted	ENв	Encoder B
А	Switching Output (NO)		W	Trigger Input	AMIN	Digital output MIN
Ā	Switching Output (NC)		W -	Ground for the Trigger Input	Амах	Digital output MAX
V	Contamination/Error Output (NO)		0	Analog Output	Аок	Digital output OK
V	Contamination/Error Output (NC)		0-	Ground for the Analog Output	SY In	Synchronization In
E	Input (analog or digital)		ΒZ	Block Discharge	SY OU	Synchronization OUT
Т	Teach Input		Awv	Valve Output	OLT	Brightness output
Z	Time Delay (activation)		а	Valve Control Output +	м	Maintenance
S	Shielding		b	Valve Control Output 0 V	rsv	reserved
RxD	Interface Receive Path		SY	Synchronization	Wire C	olors according to DIN IEC 757
TxD	Interface Send Path		SY-	Ground for the Synchronization	BK	Black
RDY	Ready		E+	Receiver-Line	BN	Brown
GND	Ground		S+	Emitter-Line	RD	Red
CL	Clock		÷	Grounding	OG	Orange
E/A	Output/Input programmable		SnR	Switching Distance Reduction	YE	Yellow
0	IO-Link		Rx+/-	Ethernet Receive Path	GN	Green
PoE	Power over Ethernet		Tx+/-	Ethernet Send Path	BU	Blue
IN	Safety Input		Bus	Interfaces-Bus A(+)/B(-)	VT	Violet
OSSD	Safety Output		La	Emitted Light disengageable	GY	Grey
Signal	Signal Output		Mag	Magnet activation	WH	White
BI_D+/-	Ethernet Gigabit bidirect. data line (A	-D)	RES	Input confirmation	PK	Pink
EN0 RS42	Encoder 0-pulse 0-0 (TTL)		EDM	Contactor Monitoring	GNYE	Green/Yellow

