

Electronic pressure sensors

OsiSense XM, type XML P

For control circuits



Presentation

Pressure transmitters XML P are characterised by their “thin film” technology. The stainless steel pressure sensing capsule is directly welded onto the stainless steel body of the transmitter, which provides the following advantages:

- no gasket in contact with the fluid required,
- compatibility with all types of fluid.

Designed in stainless steel 304, they are compact and robust.

These transmitters are therefore specially suited to applications such as:

- hydraulic circuits on all types of machine,
- refrigeration (HVAC).

Functions

Pressure sensors XML P have an analogue output signal:

- 4...20 mA,
- 0...10 V,
- 0.5...4.5 V,

proportional to the pressure ranges available (10 to 600 bar).

The XML P offer is available in two types of electrical connection:

- M12, 4-pin connector,
- DIN 43650 connector.

Several types of fluid connection are available:

- G1/4 A male,
- 7/16-20 UNF-2A male,
- 7/16-20 UNF-2B female.

XML P sensors are sold in lots of 40 or individually.

Other versions

Electrical connection: GSD 207 INDUSTRIAL STANDARD (9.4 mm).
Please consult our Customer Care Centre.

Environment characteristics													
Conformity to standards			CE, ROHS, EN 61326										
Rated supply voltage	Transmitters 4...20 mA	V	--- 12/24										
	Transmitters 0...10 V	V	--- 24										
	Transmitters 0.5...4.5 V ratiometric	V	--- 5										
Voltage limits	Transmitters 4...20 mA	V	--- 8...30										
	Transmitters 0...10 V	V	--- 14...30										
	Transmitters 0.5...4.5 V ratiometric	V	--- 5 (± 5%)										
Current consumption		mA	< 25										
Protective treatment			Standard version "TC"										
Ambient air temperature	For operation	°C	- 30...+ 100 - 15...+ 85 for M12 connector versions										
	For storage	°C	- 30...+ 100										
Fluids or products controlled			Hydraulic oils, air, fresh water, sea water, gas, refrigeration fluids										
Temperature of fluids controlled		°C	- 30...+ 120										
Component materials in contact with fluid	Fluid connection		Stainless steel 304										
	Sensing element		Stainless steel 17-4PH										
	External gasket		Depending on model: no gasket or fluorocarbon FKM (Viton) gasket										
Operating position			All positions										
Vibration resistance			20 gn (10...2000 Hz) conforming to IEC 60068-2-64										
Shock resistance			25 gn (half sine wave 11 ms) conforming to IEC 60068-2-27										
Rated impulse withstand voltage			Uimp = 0.5 kV										
Resistance to electromagnetic interference	Electrostatic discharges		± 8 kV in air, 4 kV on contact, conforming to EN 61000-4-2										
	Radiated electromagnetic fields		10 V/m from 80 to 1000 MHz, 3 V/m from 1400 to 2000 MHz, conforming to EN 61000-4-3										
	Fast transients		± 1 kV, conforming to IEC 61000-4-4										
	Surges		± 1 kV, conforming to IEC 61000-4-5										
	Conducted disturbances, induced by radio frequency fields		3 V from 0.15 to 80 MHz, conforming to IEC 61000-4-6										
	Magnetic fields		30 A/m, 50 Hz, conforming to EN 61000-4-8										
Electrical protection			Protected against reverse polarity and short-circuit										
Degree of protection			IP 65 (DIN connector version) IP 65 and IP 67 (M12 connector version), conforming to IEC 60529										
Output response time		ms	< 5										
Precision			<p>Precision (% of size)</p> <table border="1"> <caption>Precision (% of size) vs Temperature (°C)</caption> <thead> <tr> <th>Temperature (°C)</th> <th>Precision (% of size)</th> </tr> </thead> <tbody> <tr> <td>-30</td> <td>±3.0</td> </tr> <tr> <td>0</td> <td>±1.0</td> </tr> <tr> <td>80</td> <td>±1.0</td> </tr> <tr> <td>100</td> <td>±3.0</td> </tr> </tbody> </table>	Temperature (°C)	Precision (% of size)	-30	±3.0	0	±1.0	80	±1.0	100	±3.0
Temperature (°C)	Precision (% of size)												
-30	±3.0												
0	±1.0												
80	±1.0												
100	±3.0												
Service life			> 10 million operating cycles										
Fluid connection			G1/4 A (male) DIN 3852-E, G1/4 (male) DIN 3852-A, 7/16-20 UNF-2B (female), 7/16-20 UNF-2A (male).										
Electrical connection			M12, 4-pin connector or DIN 43650 175301-803 A (18 mm)										

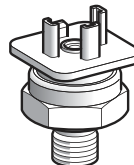
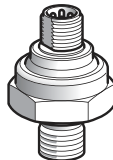
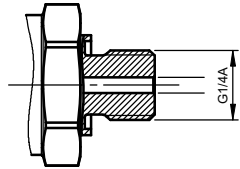
Sizes 10 to 60 bar (145 to 870 psi)

Units with analogue output

M12 connector

DIN 43650

G 1/4 A (male) DIN 3852-E



Pressure range	0... 10 (145 psi)	0... 16 (232 psi)	0... 25 (362.5 psi)	0... 40 (580 psi)	0... 60 (870 psi)
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References of pressure transmitters with 4...20 mA output

M12 connector

Sold in packs of:	1	XML P010BD21V	XML P016BD21V	XML P025BD21V	XML P040BD21V	XML P060BD21V
	bulk (1)	XML P010BD21VQ (1)	XML P016BD21VQ (1)	XML P025BD21VQ (1)	XML P040BD21VQ (1)	XML P060BD21VQ (1)

DIN 43650 175301-803A

Sold in packs of:	1	XML P010BC21V	XML P016BC21V	XML P025BC21V	XML P040BC21V	XML P060BC21V
	bulk (1)	XML P010BC21VQ (1)	XML P016BC21VQ (1)	XML P025BC21VQ (1)	XML P040BC21VQ (1)	XML P060BC21VQ (1)

References of pressure transmitters with 0...10 V output

M12 connector

Sold in packs of:	1	XML P010BD71V	XML P016BD71V	XML P025BD71V	XML P040BD71V	XML P060BD71V
	bulk (1)	XML P010BD71VQ (1)	XML P016BD71VQ (1)	XML P025BD71VQ (1)	XML P040BD71VQ (1)	XML P060BD71VQ (1)

DIN 43650 175301-803A

Sold in packs of:	1	XML P010BC71V	XML P016BC71V	XML P025BC71V	XML P040BC71V	XML P060BC71V
	bulk (1)	XML P010BC71VQ (1)	XML P016BC71VQ (1)	XML P025BC71VQ (1)	XML P040BC71VQ (1)	XML P060BC71VQ (1)

References of pressure transmitters with 0.5...4.5 V ratiometric output

M12 connector

Sold in packs of:	1	XML P010BD11V	XML P016BD11V	XML P025BD11V	XML P040BD11V	XML P060BD11V
	bulk (1)	XML P010BD11VQ (1)	XML P016BD11VQ (1)	XML P025BD11VQ (1)	XML P040BD11VQ (1)	XML P060BD11VQ (1)

DIN 43650 175301-803A

Sold in packs of:	1	XML P010BC11V	XML P016BC11V	XML P025BC11V	XML P040BC11V	XML P060BC11V
	bulk (1)	XML P010BC11VQ (1)	XML P016BC11VQ (1)	XML P025BC11VQ (1)	XML P040BC11VQ (1)	XML P060BC11VQ (1)

Weight (kg)	0.050	0.050	0.050	0.050	0.050
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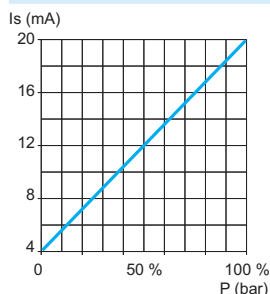
(1) Sold in lots of 40, minimum quantity 40.

Complementary characteristics not shown under general characteristics

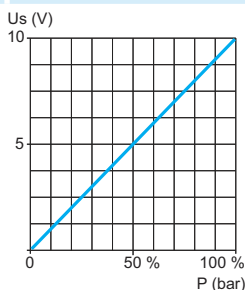
External gasket	Fluorocarbon (Viton)				
Maximum permissible accidental pressure	20 bar (290 psi)	32 bar (464 psi)	50 bar (725 psi)	80 bar (1160 psi)	120 bar (1740 psi)
Destruction pressure	30 bar (435 psi)	48 bar (696 psi)	75 bar (1087,5 psi)	120 bar (1740 psi)	180 bar (2610 psi)

Output curves

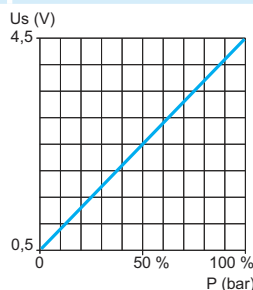
XML P 4...20 mA



XML P 0...10 V



XML P 0.5...4.5 V

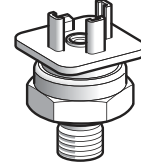
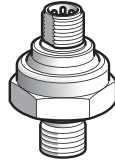
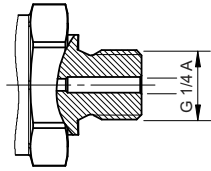


Other versions:

Electrical connection: GSD 207 INDUSTRIAL STANDARD (9.4 mm).
Please consult our Customer Care Centre.

Sizes 100 to 600 bar (1450 to 8700 psi)

Units with analogue output G 1/4 A (male) DIN 3852-A	M12 connector	DIN 43650
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Pressure range	0... 100 (1450 psi)	0... 160 (2320 psi)	0... 250 (3625 psi)	0... 400 (5800 psi)	0... 600 (8700 psi)
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References of pressure transmitters with 4...20 mA output

M12 connector Sold in packs of:	1	XML P100BD22	XML P160BD22	XML P250BD22	XML P400BD22	XML P600BD22
	bulk (1)	XML P100BD22Q (1)	XML P160BD22Q (1)	XML P250BD22Q (1)	XML P400BD22Q (1)	XML P600BD22Q (1)

DIN 43650 175301-803A

Sold in packs of:	1	XML P100BC22	XML P160BC22	XML P250BC22	XML P400BC22	XML P600BC22
	bulk (1)	XML P100BC22Q (1)	XML P160BC22Q (1)	XML P250BC22Q (1)	XML P400BC22Q (1)	XML P600BC22Q (1)

References of pressure transmitters with 0...10 V output

M12 connector Sold in packs of:	1	XML P100BD72	XML P160BD72	XML P250BD72	XML P400BD72	XML P600BD72
	bulk (1)	XML P100BD72Q (1)	XML P160BD72Q (1)	XML P250BD72Q (1)	XML P400BD72Q (1)	XML P600BD72Q (1)

DIN 43650 175301-803A

Sold in packs of:	1	XML P100BC72	XML P160BC72	XML P250BC72	XML P400BC72	XML P600BC72
	bulk (1)	XML P100BC72Q (1)	XML P160BC72Q (1)	XML P250BC72Q (1)	XML P400BC72Q (1)	XML P600BC72Q (1)

References of pressure transmitters with 0.5...4.5 V ratiometric output

M12 connector Sold in packs of:	1	XML P100BD12	XML P160BD12	XML P250BD12	XML P400BD12	XML P600BD12
	bulk (1)	XML P100BD12Q (1)	XML P160BD12Q (1)	XML P250BD12Q (1)	XML P400BD12Q (1)	XML P600BD12Q (1)

DIN 43650 175301-803A

Sold in packs of:	1	XML P100BC12	XML P160BC12	XML P250BC12	XML P400BC12	XML P600BC12
	bulk (1)	XML P100BC12Q (1)	XML P160BC12Q (1)	XML P250BC12Q (1)	XML P400BC12Q (1)	XML P600BC12Q (1)

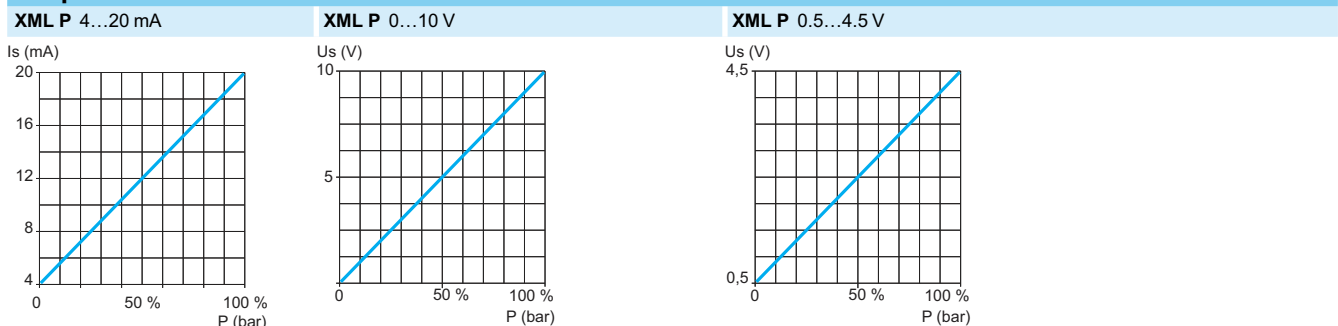
Weight (kg)	0.050	0.050	0.050	0.050	0.050
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(1) Sold in lots of 40, minimum quantity 40.

Complementary characteristics not shown under general characteristics

External gasket	None. Aluminium or copper gasket possible, please consult our Customer Care Centre.				
Maximum permissible accidental pressure	200 bar (2900 psi)	320 bar (4640 psi)	375 bar (5437,5 psi)	600 bar (8700 psi)	900 bar (13 050 psi)
Destruction pressure	300 bar (4350 psi)	400 bar (5800 psi)	500 bar (7250 psi)	800 bar (11 600 psi)	1200 bar (17 400 psi)

Output curves

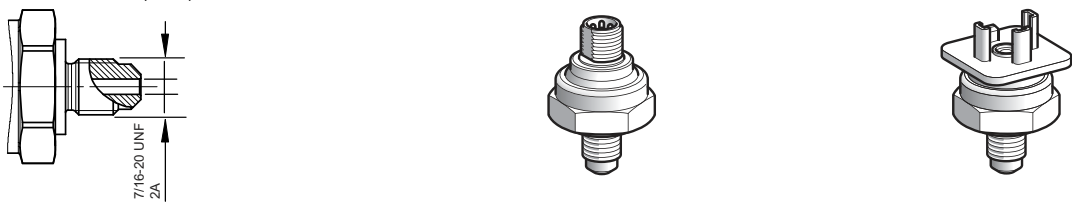


Other versions:

Electrical connection: GSD 207 INDUSTRIAL STANDARD (9.4 mm).
Please consult our Customer Care Centre.

Sizes 10 to 60 bar (145 to 870 psi)

Units with analogue output 7/16-20 UNF-2A (male)	M12 connector	DIN 43650
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Pressure range	0... 10 (145 psi)	0... 16 (232 psi)	0... 25 (362.5 psi)	0... 40 (580 psi)	0... 60 (870 psi)
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References of pressure transmitters with 4...20 mA output

Sold in packs of:	1	XML P010BD27	XML P016BD27	XML P025BD27	XML P040BD27	XML P060BD27
	bulk (1)	XML P010BD27Q (1)	XML P016BD27Q (1)	XML P025BD27Q (1)	XML P040BD27Q (1)	XML P060BD27Q (1)

DIN 43650 175301-803A

Sold in packs of:	1	XML P010BC27	XML P016BC27	XML P025BC27	XML P040BC27	XML P060BC27
	bulk (1)	XML P010BC27Q (1)	XML P016BC27Q (1)	XML P025BC27Q (1)	XML P040BC27Q (1)	XML P060BC27Q (1)

References of pressure transmitters with 0...10 V output

M12 connector

Sold in packs of:	1	XML P010BD77	XML P016BD77	XML P025BD77	XML P040BD77	XML P060BD77
	bulk (1)	XML P010BD77Q (1)	XML P016BD77Q (1)	XML P025BD77Q (1)	XML P040BD77Q (1)	XML P060BD77Q (1)

DIN 43650 175301-803A

Sold in packs of:	1	XML P010BC77	XML P016BC77	XML P025BC77	XML P040BC77	XML P060BC77
	bulk (1)	XML P010BC77Q (1)	XML P016BC77Q (1)	XML P025BC77Q (1)	XML P040BC77Q (1)	XML P060BC77Q (1)

References of pressure transmitters with 0.5...4.5 V ratiometric output

M12 connector

Sold in packs of:	1	XML P010BD17	XML P016BD17	XML P025BD17	XML P040BD17	XML P060BD17
	bulk (1)	XML P010BD17Q (1)	XML P016BD17Q (1)	XML P025BD17Q (1)	XML P040BD17Q (1)	XML P060BD17Q (1)

DIN 43650 175301-803A

Sold in packs of:	1	XML P010BC17	XML P016BC17	XML P025BC17	XML P040BC17	XML P060BC17
	bulk (1)	XML P010BC17Q (1)	XML P016BC17Q (1)	XML P025BC17Q (1)	XML P040BC17Q (1)	XML P060BC17Q (1)

Weight (kg)	0.050	0.050	0.050	0.050	0.050
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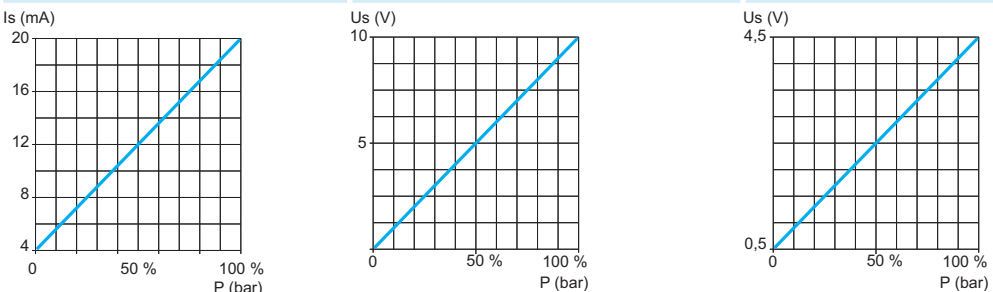
(1) Sold in lots of 40, minimum quantity 40.

Complementary characteristics not shown under general characteristics

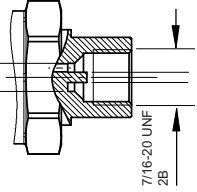
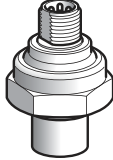
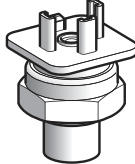
External gasket	None				
Maximum permissible accidental pressure	20 bar (290 psi)	32 bar (464 psi)	50 bar (725 psi)	80 bar (1160 psi)	120 bar (1740 psi)
Destruction pressure	30 bar (435 psi)	48 bar (696 psi)	75 bar (1087,5 psi)	120 bar (1740 psi)	180 bar (2610 psi)

Output curves

XML P 4...20 mA	XML P 0...10 V	XML P 0.5...4.5 V
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Other versions:
Electrical connection: GSD 207 INDUSTRIAL STANDARD (9.4 mm).
Please consult our Customer Care Centre.

Sizes 10 to 60 bar (145 to 870 psi)					
Units with analogue output		M12 connector	DIN 43650		
7/16-20 UNF-2B (female)					
					

Pressure range	0... 10 (145 psi)	0... 16 (232 psi)	0... 25 (362.5 psi)	0... 40 (580 psi)	0... 60 (870 psi)
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References of pressure transmitters with 4...20 mA output

M12 connector						
Sold in packs of:	1	XML P010BD29	XML P016BD29	XML P025BD29	XML P040BD29	XML P060BD29
	bulk (1)	XML P010BD29Q (1)	XML P016BD29Q (1)	XML P025BD29Q (1)	XML P040BD29Q (1)	XML P060BD29Q (1)

DIN 43650 175301-803A						
Sold in packs of:	1	XML P010BC29	XML P016BC29	XML P025BC29	XML P040BC29	XML P060BC29
	bulk (1)	XML P010BC29Q (1)	XML P016BC29Q (1)	XML P025BC29Q (1)	XML P040BC29Q (1)	XML P060BC29Q (1)

References of pressure transmitters with 0...10 V output

M12 connector						
Sold in packs of:	1	XML P010BD79	XML P016BD79	XML P025BD79	XML P040BD79	XML P060BD79
	bulk (1)	XML P010BD79Q (1)	XML P016BD79Q (1)	XML P025BD79Q (1)	XML P040BD79Q (1)	XML P060BD79Q (1)

DIN 43650 175301-803A						
Sold in packs of:	1	XML P010BC79	XML P016BC79	XML P025BC79	XML P040BC79	XML P060BC79
	bulk (1)	XML P010BC79Q (1)	XML P016BC79Q (1)	XML P025BC79Q (1)	XML P040BC79Q (1)	XML P060BC79Q (1)

References of pressure transmitters with 0.5...4.5 V ratiometric output

M12 connector						
Sold in packs of:	1	XML P010BD19	XML P016BD19	XML P025BD19	XML P040BD19	XML P060BD19
	bulk (1)	XML P010BD19Q (1)	XML P016BD19Q (1)	XML P025BD19Q (1)	XML P040BD19Q (1)	XML P060BD19Q (1)

DIN 43650 175301-803A						
Sold in packs of:	1	XML P010BC19	XML P016BC19	XML P025BC19	XML P040BC19	XML P060BC19
	bulk (1)	XML P010BC19Q (1)	XML P016BC19Q (1)	XML P025BC19Q (1)	XML P040BC19Q (1)	XML P060BC19Q (1)

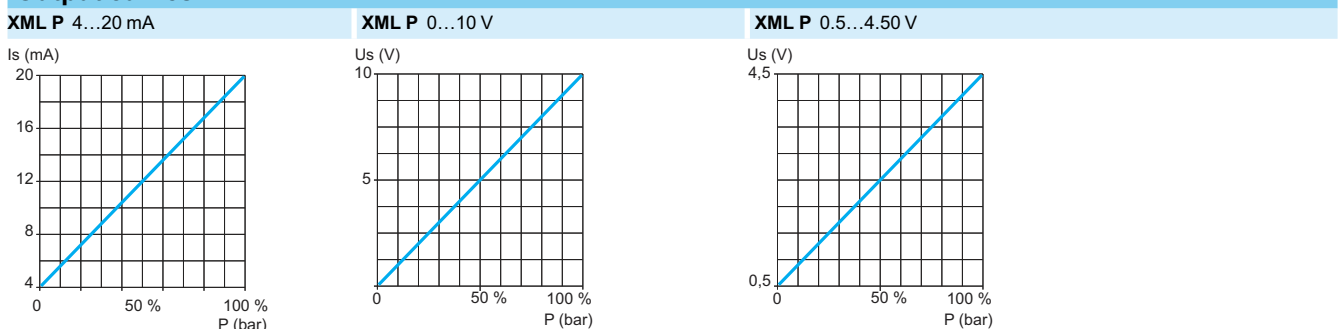
Weight (kg)	0.050	0.050	0.050	0.050	0.050
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(1) Sold in lots of 40, minimum quantity 40.

Complementary characteristics not shown under general characteristics

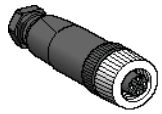
External gasket	None				
Maximum permissible accidental pressure	20 bar (290 psi)	32 bar (464 psi)	50 bar (725 psi)	80 bar (1160 psi)	120 bar (1740 psi)
Destruction pressure	30 bar (435 psi)	48 bar (696 psi)	75 bar (1087,5 psi)	120 bar (1740 psi)	180 bar (2610 psi)

Output curves

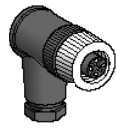


Other versions:

Electrical connection: GSD 207 INDUSTRIAL STANDARD (9.4 mm).
Please consult our Customer Care Centre.



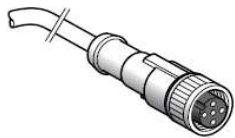
XZ CC12FDM40B



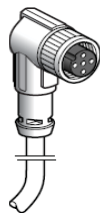
XZ CC12FCM40B



XZ CC43FCP40B



XZ CP1141L10



XZ CP1241L5

Connection accessories

Description	Type	Reference	Weight kg
M12 female connector, metal clamping ring (1)	Straight	XZ CC12FDM40B	0.020
	Elbowed	XZ CC12FCM40B	0.020
DIN 43650 female connector (1)		XZ CC43FCP40B	0.035

Description	Length of cable	Reference	Weight kg
Pre-wired M12, straight, female connectors	2 m	XZ CP1141L2	0.090
	5 m	XZ CP1141L5	0.190
	10 m	XZ CP1141L10	0.370
Pre-wired M12, elbowed, female connectors	2 m	XZ CP1241L2	0.090
	5 m	XZ CP1241L5	0.190
	10 m	XZ CP1241L10	0.370

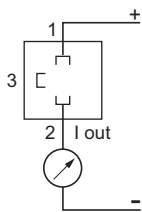
(1) Connector with screw terminal connections.

Note: For other cabling accessories, please refer to our "Detection for automation solutions OsiSense" catalogue.

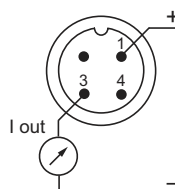
Connector schemes (pressure sensor connector pin view)

2-wire technique (4-20 mA)

DIN

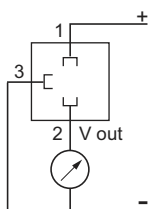


M12

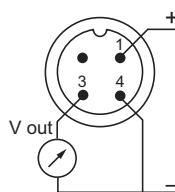


3-wire technique (0-10 V or 0.5-4.5 V)

DIN



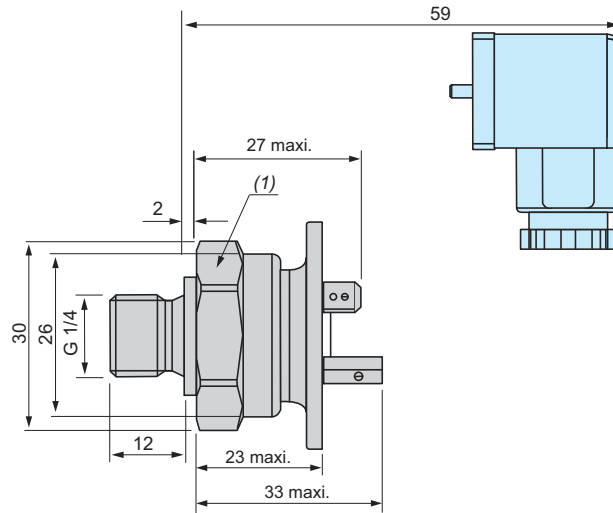
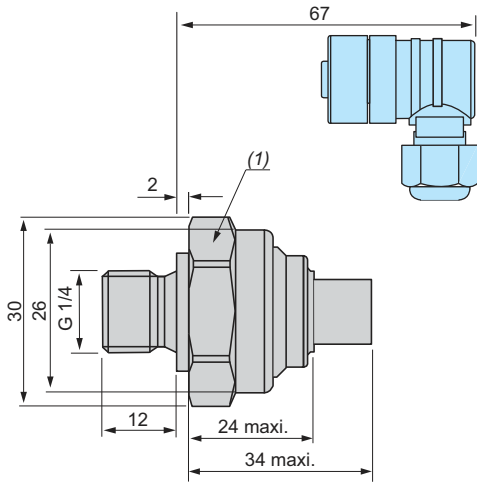
M12



Dimensions

XML P, M12 connector

XML P, DIN 43650 175301-803A

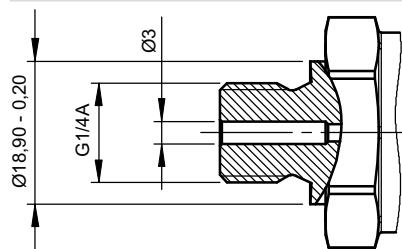
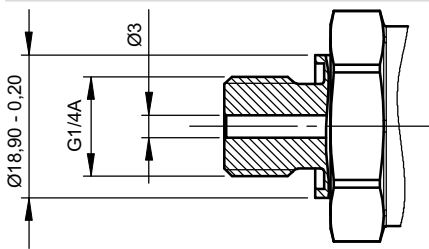


(1) 27 - 0.3 HEX 15

Fluid connection

G1/4 A (male) DIN 3852-E

G1/4 A (male) DIN 3852-A



7/16-20UNF-2A (male)

7/16-20UNF-2B (female)

