Electronic sensors for pressure control OsiSense XM

Catalogue

Simply easy!™

Telemecanique Sensors

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Electronic pressure sensors
OsiSense XM

Electronic pressure sensors
OsiSense XM

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		Devices without display			
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Sizes		0…25 bar (0…362 psi)	0... 300 psi (0... 20.7 bar)	- 1…400 bar (- 14.5 psi…5800 psi)	
Fluids or products controlled		Air, fresh water (0...+ 80°C)		Fresh water (0…+ 125°C) Air, hydraulic oils, corrosive fluids (- 15…+ 125°C)	
Fluid connection		G 1/4 A DIN 3852-E male *(2)*	1/4"-18 NPT male *(2)*	G 1/4 A DIN 3852-E male or 1/4"-18 NPT male *(2)*	
Rated supply voltage		12/24 V ⎓ (4…20 mA), 24 V ⎓ (0…10 V)		12/24 V ⎓ (4…20 mA) 24 V ⎓ (0…10 V)	12/24 V ⎓
Voltage limits		8…33 V ⎓ (4…20 mA), 16.2…33 V ⎓ (0…10 V)		8…33 V ⎓ (4…20 mA) 11.4…33 V ⎓ (0…10 V)	8…33 V ⎓
Current consumption		< 20 mA (4…20 mA), < 6 mA (0…10 V)		< 20 mA	< 4 mA
Electrical connection		M12, EN 175301-803-A (ex-DIN 43650A) or Packard Metri-Pack 150 connector *(1)*		M12 connector *(1)* or integrated quick connection *(4)*	
Type of output		Analogue, 4…20 mA or 0…10 V		Analogue, 4…20 mA or 0…10 V	Solid-state, NPN or PNP, NC 150 mA, 12/24 V ⎓
Materials in contact with fluid		Ceramic Al_2O_3, stainless steel type AISI 303, nitrile (NBR)		Ceramic Al_2O_3, stainless steel type AISI 303, FPM (Viton) PPS (Leakage protection for P > 40 bar)	
Output response time		< 2 ms		< 2 ms	
Precision including linearity, hysteresis, repeat accuracy		± 1% of the measuring range		± 0.3% of the measuring range	
Service life		> 10 million operating cycles		> 10 million operating cycles	
Dimensions of case (mm)	Width x height x depth	Ø 36 x 67.5		Ø 22.8 x 58.1 (with M12 connector) Ø 22.8 x 66.1 (with quick connection)	
Conforming to standards		CE, ROHS, EN/IEC 61326-2-3		CE, ROHS, EN/IEC 61326-2-3	
Product certifications		UL, CSA conforming to UL 508 and CSA-22.2 no. 14		UL, CSA conforming to UL 508 and CSA-22.2 no. 14	
Ambient air temperature for operation		0...+ 80°C		- 15…+ 85°C	
Degree of protection		IP 65 conforming to EN/IEC 60529, NEMA Type 4 conforming to UL/CSA		IP 66, IP 67 conforming to EN/IEC 60529, NEMA Type 4 conforming to UL/CSA	
Vibration resistance		20 gn (9…2000 Hz) conforming to EN/IEC 60068-2-6		20 gn (9…2000 Hz) conforming to EN/IEC 60068-2-6	
Shock resistance		25 gn (half sine wave 11 ms) conforming to EN/IEC 60068-2-27		25 gn (half sine wave 11 ms) conforming to EN/IEC 60068-2-27	
Type reference		**XMLK●●●B2C●●, XMLK●●●B2C●●TQ** *(3)* **XMLK●●●B2D●●, XMLK●●●B2D●●TQ** *(3)* **XMLK●●●P2C●●, XMLK●●●P2C●●TQ** *(3)* **XMLK●●●P2D●●, XMLK●●●P2D●●TQ** *(3)* **XMLK●●●P2P●●, XMLK●●●P2P●●TQ** *(3)*		**XMLG●●●D21, XMLG●●●D71** **XMLG●●●D21TQ** *(3)* **XMLG●●●D71TQ** *(3)* **XMLG●●●Q21TQ** *(3)* **XMLG●●●Q71TQ** *(3)*	**XMLG●●●D31TQ** *(3)* **XMLG●●●D41TQ** *(3)* **XMLG●●●Q31TQ** *(3)* **XMLG●●●Q41TQ** *(3)*
Pages		11 and 12		15 to 18	

Applications	Type of installation	**Control circuits**	
		Devices without display	
	Type of sensor and features	**Pressure transmitters Analogue output, 4…20 mA, 0...10 V or ratiometric output, 0.5...4.5 V.**	
			
Sizes		- 1…9 bar (- 14.5…130 psi), 0…600 bar (0…8700 psi), 0…10,000 psi (0 bar…690 bar)	
Fluids or products controlled		Fresh water (0…+ 120°C) Air, hydraulic oils, refrigeration fluids (- 20…+ 120°C)	
Fluid connection		G 1/4 A DIN 3852 E male (≤ 40 bar), G 1/4 A DIN 3852 A male (≥ 100 bar) SAE 7/16-20 UNF-2A male, SAE 7/16-20 UNF-2B female or 1/4"-18 NPT male	
Rated supply voltage		12/24 V ⎓ (4…20 mA), 24 V ⎓ (0…10 V), 5 V ⎓ (0.5……4,5 V)	
Voltage limits		8…30 V ⎓ (4…20 mA), 14…30 V ⎓ (0…10 V), 4.75…5.25 V ⎓ (0.5……4.5 V)	
Current consumption		< 20 mA (4…20 mA), < 10 mA (0…10 V), < 5 mA (0.5……4.5 V)	
Electrical connection		M12, EN 175301-803-A (ex-DIN 43650A) or Packard Metri-Pack 150 connector	
Type of output		Analogue, 4…20 mA , 0…10 V or 0.5…4.5 V	
Materials in contact with fluid		17-4PH stainless steel, stainless steel type AISI 304, FKM fluorocarbon (Viton)	
Output response time		< 5 ms at 90% of maximum deviation	
Precision including linearity, hysteresis, repeat accuracy		± 0.5% of the measuring range	
Service life		> 10 million operating cycles	
Dimensions of case (mm)	Width x height x depth	Ø 30 x 26 (with M12 connector) Ø 30 x 25 (with EN 175301-803-A connector) Ø 30 x 37 (with Packard Metri-Pack 150 connector)	
Conforming to standards		CE, ROHS, EN/IEC 61326-1	
Product certifications		cULus conforming to UL 61010-1 and CSA-C22.2 no. 61010-1	
Ambient air temperature for operation		- 30…+ 120°C	
Degree of protection		IP 65 or IP 67 conforming to EN/IEC 60529 IP 69K conforming to DIN 40050 (versions with M12 connector)	
Vibration resistance		20 gn (10…2000 Hz) conforming to EN/IEC 60068-2-64	
Shock resistance		25 gn (half sine wave 11 ms) conforming to EN/IEC 60068-2-27	
Type reference		**XMLP●●●B●●1V** **XMLP●●●B●●●** **XMLP●●●P●●3**	**XMLP●●●B●●1VQ** *(5)* **XMLP●●●B●●●Q** *(5)* **XMLP●●●P●●3Q** *(5)*
Pages		21 to 26	

Other versions

(1) For other electrical connections, please consult our Customer Care Centre.
(2) For other fluid connections, please consult our Customer Care Centre.
(3) Sold in lots of 25, minimum order quantity 50.
(4) Phoenix Contact "Quickon" integrated connection.
(5) Sold in lots of 40.

Electronic pressure sensors
OsiSense XM

Applications	Type of installation	**Control circuits**	
	Type reference and features	**Switches with 4-digit display**	
		- With an analogue output, 4…20 mA and a switching output, PNP or NPN type - With two PNP or NPN switching outputs	
			
Sizes		–	
Fluids or products controlled		–	
Fluid connection		–	
Display		7 segment/4-digit display. Pressure units in bar, psi or pascal. 27 display ranges can be selected, from -14.5 to 6000	
Rated supply voltage		24 V ⎓	
Voltage limits		17…33 V ⎓	
Current consumption		⩽ 50 mA	
Electrical connection		M12, 4-pin connector	
Type of output		■ Analogue, 4…20 mA + one switching output, PNP or NPN, 200 mA	■ 2 switching outputs, PNP or NPN, 200 mA
Materials in contact with fluid		–	
Output response time		⩽ 3 ms	
Precision including linearity, hysteresis, repeat accuracy		± 1% of the measuring range	
Service life		> 10 million operating cycles	
Dimensions of case (mm)	Width x height x depth	41 x 77 x 42	
Conforming to standards		CE, ROHS, EN/IEC 61000-6-2, EN/IEC 61000-6-4	
Product certifications		cULus conforming to UL 508 and CSA-C22.2 no. 14	
Ambient air temperature for operation		- 25...+ 70°C	
Degree of protection		IP 65 or IP 67 conforming to EN/IEC 60529, IP 69K conforming to DIN 40050	
Vibration resistance		5 gn (10…2000 Hz) conforming to EN/IEC 60068-2-6	
Shock resistance		25 gn conforming to EN/IEC 60068-2-27	
Type reference		**ZMLPA1●2S●**	**ZMLPA2●0SH**
Pages		10 to 12	
Other versions		*(1) For other fluid connections, please consult our Customer Care Centre.*	

Control circuits		
Pressure transmitters with 4-digit display	**Pressure and vacuum switches with 4-digit display**	
- With one analogue output, 4…20 mA or 0...10 V and one input for diagnosis	**- With one analogue output, 4…20 mA or 0…10 V and one switching output, PNP or NPN type - With two switching outputs, PNP or NPN type - With one analogue output, 4…20 mA, and two switching outputs, PNP or NPN type**	
		
- 1…600 bar (- 14.5 psi…8700 psi)		
Fresh water (0…+ 80°C). Air, hydraulic oils, refrigeration fluids (- 20…+ 80°C)		
G 1/4 A DIN3852-Y female, 1/4"-18 NPT female or SAE 7/16-20 UNF female *(1)*		
7-segment/4-digit display. Pressure units in bar, psi or pascal. Signalling LED for the pressure unit and output state.		
24 V ⎓		
17…33 V ⎓		
⩽ 50 mA		
M12, 4-pin connector	M12, 4 or 5-pin connector	
■ Analogue, 4…20 mA or 0…10 V	■ Analogue, 4…20 mA or 0…10 V + one switching output, PNP or NPN, 250 mA ■ Two switching outputs, PNP or NPN, 250 mA ■ Analogue, 4...20 mA + two switching outputs, PNP or NPN, 250 mA	
⩽ 40 bar: Ceramic, stainless steel 316L, FKM fluorocarbon (Viton) ⩾ 100 bar: Stainless steel 316L, FKM fluorocarbon (Viton)		
⩽ 10 ms	⩽ 10 ms (analogue output) ⩽ 5 ms (switching output)	
± 1% of the measuring range		
> 10 million operating cycles		
41 x 93 x 42		
CE, ROHS, EN/IEC 61326-2-3		
cULus conforming to UL 61010-1 and CSA-C22.2 no. 61010-1		
- 20…+ 80°C		
IP 66, IP 67 conforming to EN/IEC 60529		
20 gn (10…2000 Hz) conforming to EN/IEC 60068-2-6		
50 gn conforming to EN/IEC 60068-2-27		
XMLR●●●G0●●●, XMLR●●●M0●●●	**XMLR●●●G1●●●, XMLR●●●G2●●●, XMLR●●●M1●●●, XMLR●●●M2●●●**	
20 to 26		

Electronic pressure sensors
OsiSense XM
For control circuits

Functions

Electronic pressure sensors

The function of electronic pressure sensors is the control and measurement of pressure or vacuum levels in hydraulic or pneumatic systems.
Being electronic, the sensors have no mechanical moving parts.

Pressure transmitters

Pressure transmitters convert the pressure into an electrical signal which is proportional to the applied pressure.
Their high precision makes them suitable for all industrial applications requiring pressure/vacuum display, control or regulation.

Being very robust, they are equally suitable for applications involving high operating rates.

Pressure and vacuum switches

Electronic pressure switches and vacuum switches convert a change in pressure into a digital electrical signal when the switching points which have been set are reached.
They are distinguished from electromechanical pressure switches and vacuum switches by their very wide switching adjustment ranges.

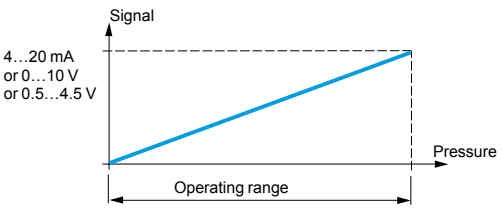
Their robustness, together with their excellent adherence to the set values over a period of time, make them ideal for applications involving high operating rates.
In addition, the high repeat accuracy and fast response time of these sensors make them equally suitable for applications requiring accurate pressure regulation and monitoring.

Note: Some sensors in the OsiSense XM ranges have both one analogue output and one or two digital outputs.

Operating principle

Pressure transmitters

These devices provide an analogue output which has a signal proportional to the pressure applied to the sensor. Depending on the model, this signal can be 4…20 mA, 0…10 V or ratiometric (0.5…4.5 V).



Pressure and vacuum switches

These devices have one or two digital outputs depending on the model. The status of these outputs is defined by high (SP) and low (rP) switching points which can usually be independently adjusted.

Pressure switches and vacuum switches can have 2 different switching modes:
- Hysteresis mode, particularly suited to pumping applications (filling/emptying).
- Window mode, more suitable for applications where the pressure is regulated.

The switching outputs can usually be configured as normally open (NO) or normally closed (NC).

In addition, for the OsiSense XMLR range *(1)*, output switching can be delayed for between 1 and 50 seconds, both on the pressure rising edge and falling edge.

(1) See pages 30 to 37.

Electronic pressure sensors
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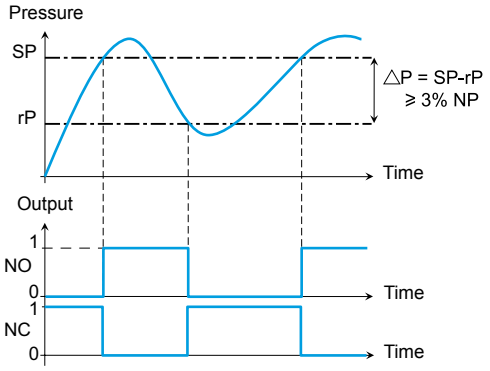
For control circuits

Operating principle (continued)
Pressure and vacuum switches (continued)
Switching output: hysteresis mode

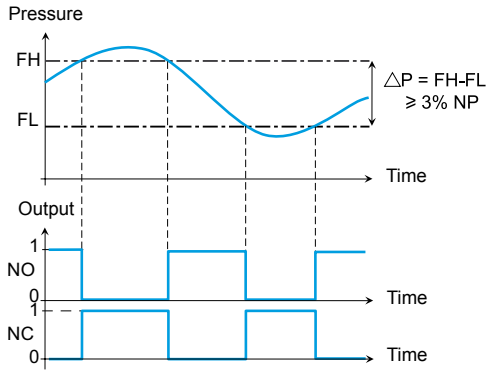
Hysteresis mode is generally used for pumping and/or emptying applications.



SP: High switching point
rP: Low switching point
NP: Nominal pressure

Switching output: Window mode

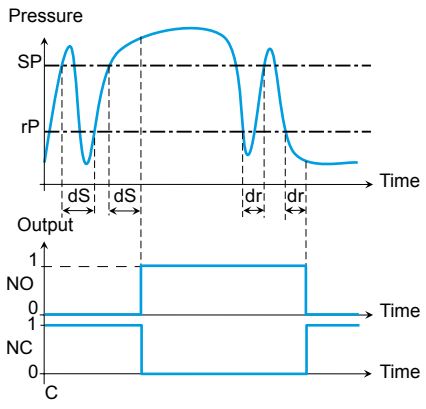
Window mode is generally used for pressure regulation applications.



FH: High switching point
FL: Low switching point
NP: Nominal pressure

Switching output: time delay mode

Time delay mode is generally used to filter fast transient pressures. The output only switches after a “dS” and “dr” time period which can be set between 0 and 50 seconds.



FH: High switching point
FL: Low switching point
NP: Nominal pressure

Electronic pressure sensors
OsiSense XM
For control circuits

Terminology

Nominal pressure NP or size
The nominal pressure is the maximum pressure or vacuum which can be measured by the sensor.

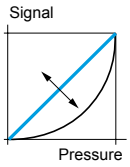
Maximum permissible accidental pressure
This is the maximum pressure, excluding pressure surges, to which the pressure sensor can occasionally be subjected without being damaged.

Destruction pressure
The pressure value which if exceeded is likely to cause serious damage to the sensor i.e. leaking, bursting, component failure, etc.

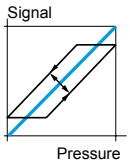
High switching point (SP)
This is the upper pressure setting selected on the pressure or vacuum switch at which the electrical output changes state when this pressure value is reached.

Low switching point (rP)
This is the lower pressure setting selected on the pressure or vacuum switch at which the electrical output changes state when this pressure value is reached.

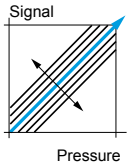
Precision
The sensor's overall precision is the result of several error sources linked to linearity, hysteresis, repeat accuracy and setting tolerances. It is expressed as a % of the nominal pressure.



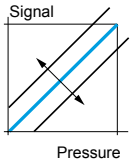
The linearity is the maximum deviation between the actual transmitter curve and the nominal curve.

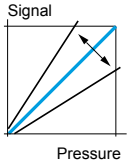


The hysteresis is the maximum deviation between the rising pressure curve and the falling pressure curve.



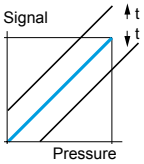
The repeat accuracy is the maximum drift encountered after several successive pressure variation cycles.



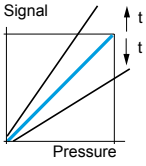


The setting tolerances are the calibration tolerances regarding the zero point and sensitivity set during sensor manufacture (gradient of output signal curve from the pressure transmitter).

Temperature drift
Although the pressure sensor is compensated electronically, its accuracy is still slightly influenced by the temperature to which it is subjected.



Zero point drift
This is proportional to the temperature and is expressed as % NP/°C.



Sensitivity drift
This is proportional to the temperature and is expressed as % NP/°C.

(NP: Nominal pressure)

Electronic pressure sensors
OsiSense XM
For control circuits

Main criteria for selecting an electronic pressure sensor

The fluid or gas to be controlled

Our products, including the materials used, are compatible with the majority of fluids or gases encountered in industrial applications.

However some particularly corrosive fluids (sea water, for example) can affect product operation sooner or later.
The fluid temperature can also be an aggravating factor.

The materials in contact with the fluid are described in the technical data sheets which can be found on our website, www.tesensors.com.
If in doubt about compatibility, contact our Customer Care Centre.

The maximum pressure of the fluid to be controlled

The maximum pressure of the fluid to be controlled will determine the nominal pressure (or size) of the product to be used.
Our product ranges include a number of sizes which cover a pressure range from -1 to 600 bar.

It is advisable to choose a size just above the maximum pressure to be controlled, in order to have the best possible accuracy.

However, sometimes it is necessary to take account of transient pressure surges caused by the system operation (for example: the phenomenon of water hammer) and choose a size well above the maximum pressure to be controlled.

The fluid entry

There are a number of formats for the fluid and pneumatic connections.
Our ranges have the 3 most common types of fluid entry:
- G 1/4
- 1/4" - 18 NPT
- SAE 7/16-20UNF

The type and configuration of the electrical output(s)

Depending on the product range, each sensor reference has one, two or three outputs which may be analogue or digital.

It is important to clearly identify the function(s) the pressure sensor has to fulfil in the control system, in order to select the correct product.

The electrical connection

All products in the OsiSense XM ranges offer connection via an M12 x 1, 4 or 5-pin male cylindrical connector.

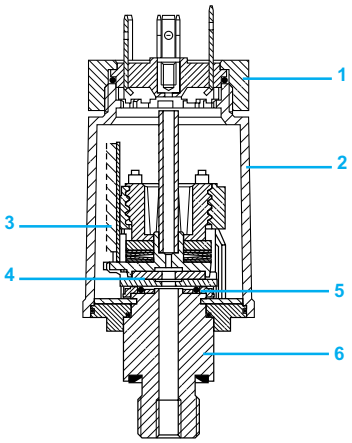
Some pressure transmitters also have an EN 175301-803-A or Packard Metri-Pack 150 connector.

We recommend connecting our pressure sensors by means of our OsiSense XZ cabling accessories.

Electronic pressure sensors

OsiSense XM

XMLK pressure transmitters
Plastic body, stainless steel 303 fluid entry.
With analogue output



Presentation

XMLK pressure transmitters are characterised by their ceramic pressure measuring cell.
The deformation caused by the pressure is transmitted to the resistors of a Wheatstone bridge screen-printed on the ceramic.
The change in resistance is then processed by the integrated electronics, giving an analogue output signal.

The stainless steel AISI 303 fluid entry and the ceramic cell combined with a nitrile gasket make these transmitters particularly suitable for fluids such as air and fresh water, for temperatures between 0 and + 80°C.

Depending on the model, these devices are supplied:
- With 12 or 24 V ⎓ nominal and operate from 8 to 33 V ⎓ for transmitters with 4…20 mA output
- With 24 V ⎓ nominal and operate from 11.4 to 33 V ⎓ for transmitters with a 0…10 V output

These products have IP 67 and Nema type 4 degree of protection.

In addition to their plastic case and the pressure ratings available, they constitute the optimised solution for water pumping applications.

Description

1 Electrical connection: M12 male, EN 175301-803-A or Packard Metri-Pack 150.
2 Plastic case.
3 Electronics: 4…20 mA or 0…10 V analogue output.
4 Ceramic pressure measuring cell.
5 Nitrile gasket.
6 Fluid entry: G 1/4 male or 1/4" - 18 NPT male.

Functions

Versions with an M12 electrical connector and 4…20 mA analogue output (XMLK●●●●2D2●) can be used with switches with ZMLP 4-digit display *(1)*.

The pressure ranges available are:
- 0...6 bar to 0...25 bar
- 0...100 psi to 0...300 psi

The selling in lots option offers an excellent price/performance ratio (sold individually or in lots of 25).
XMLK electronic pressure sensors are, therefore, mainly intended for machine manufacturers.

(1) See pages 28 and 29.

Electronic pressure sensors

OsiSense XM

XMLK pressure transmitters
Plastic body, stainless steel 303 fluid entry.
With analogue output. Sizes in bar

XMLK●●●B2D●1

XMLK●●●B2C●1

0 to 6 bar (0 to 87 psi)

Maximum permissible accidental pressure: 12 bar, destruction pressure: 18 bar

Analogue output type	Electrical connection	Reference *(1)*	Weight kg
G 1/4 A (male) fluid connection			
4…20 mA	M12	**XMLK006B2D21** *(2)*	0.110
	EN 175301-803-A	**XMLK006B2C21** *(2)*	0.110
0…10 V	M12	**XMLK006B2D71**	0.110
	EN 175301-803-A	**XMLK006B2C71**	0.110

0 to 10 bar (0 to 145 psi)

Maximum permissible accidental pressure: 20 bar, destruction pressure: 30 bar

Analogue output type	Electrical connection	Reference *(1)*	Weight kg
G 1/4 A (male) fluid connection			
4…20 mA	M12	**XMLK010B2D21** *(2)*	0.110
	EN 175301-803-A	**XMLK010B2C21** *(2)*	0.110
0…10 V	M12	**XMLK010B2D71**	0.110
	EN 175301-803-A	**XMLK010B2C71**	0.110

0 to 16 bar (0 to 232 psi)

Maximum permissible accidental pressure: 32 bar, destruction pressure: 48 bar

Analogue output type	Electrical connection	Reference *(1)*	Weight kg
G 1/4 A (male) fluid connection			
4…20 mA	M12	**XMLK016B2D21** *(2)*	0.110
	EN 175301-803-A	**XMLK016B2C21** *(2)*	0.110
0…10 V	M12	**XMLK016B2D71**	0.110
	EN 175301-803-A	**XMLK016B2C71**	0.110

0 to 25 bar (0 to 362.5 psi)

Maximum permissible accidental pressure: 50 bar, destruction pressure: 75 bar

Analogue output type	Electrical connection	Reference *(1)*	Weight kg
G 1/4 A (male) fluid connection			
4…20 mA	M12	**XMLK025B2D21** *(2)*	0.110
	EN 175301-803-A	**XMLK025B2C21** *(2)*	0.110
0…10 V	M12	**XMLK025B2D71**	0.110

(1) For other electrical or fluid connections, or types of output, please consult our Customer Care Centre.

(2) Sold in lots of 25. Add TQ to the end of the reference selected.
*Example: **XMLK006B2C21** becomes **XMLK006B2C21TQ**. Minimum quantity 50.*

Electronic pressure sensors

OsiSense XM

XMLK pressure transmitters
Plastic body, stainless steel 303 fluid entry.
With analogue output. Sizes in psi

XMLK●●0P2D●3

XMLK●●0P2C●3

XMLK●●0P2P●3

0 to 100 psi (0 to 6.9 bar)

Maximum permissible accidental pressure: 200 psi, destruction pressure: 300 psi

Analogue output type	Electrical connection	Reference *(1)*	Weight kg
1/4"- 18 NPT (male) fluid connection			
4…20 mA	M12	**XMLK100P2D23** *(2)*	0.110
	EN 175301-803-A	**XMLK100P2C23** *(2)*	0.110
	Packard Metri-Pack 150	**XMLK100P2P23** *(2)*	0.110
0…10 V	M12	**XMLK100P2D73**	0.110
	EN 175301-803-A	**XMLK100P2C73**	0.110

0 to 150 psi (0 to 10.3 bar)

Maximum permissible accidental pressure: 300 psi, destruction pressure: 450 psi

Analogue output type	Electrical connection	Reference *(1)*	Weight kg
1/4"- 18 NPT (male) fluid connection			
4…20 mA	M12	**XMLK150P2D23** *(2)*	0.110
	EN 175301-803-A	**XMLK150P2C23** *(2)*	0.110
	Packard Metri-Pack 150	**XMLK150P2P23** *(2)*	0.110
0…10 V	M12	**XMLK150P2D73**	0.110
	EN 175301-803-A	**XMLK150P2C73**	0.110

0 to 200 psi (0 to 13.8 bar)

Maximum permissible accidental pressure: 400 psi, destruction pressure: 600 psi

Analogue output type	Electrical connection	Reference *(1)*	Weight kg
1/4"- 18 NPT (male) fluid connection			
4…20 mA	M12	**XMLK200P2D23** *(2)*	0.110
	EN 175301-803-A	**XMLK200P2C23** *(2)*	0.110
	Packard Metri-Pack 150	**XMLK200P2P23** *(2)*	0.110
0…10 V	M12	**XMLK200P2D73**	0.110
	EN 175301-803-A	**XMLK200P2C73**	0.110

0 to 300 psi (0 to 20.7 bar)

Maximum permissible accidental pressure: 600 psi, destruction pressure: 900 psi

Analogue output type	Electrical connection	Reference *(1)*	Weight kg
1/4"- 18 NPT (male) fluid connection			
4…20 mA	M12	**XMLK300P2D23** *(2)*	0.110
	EN 175301-803-A	**XMLK300P2C23** *(2)*	0.110
	Packard Metri-Pack 150	**XMLK300P2P23** *(2)*	0.110
0…10 V	M12	**XMLK300P2D73**	0.110
	EN 175301-803-A	**XMLK300P2C73**	0.110

(1) For other electrical or fluid connections, or types of output, please consult our Customer Care Centre.

(2) Sold in lots of 25. Add TQ to the end of the reference selected.
*Example: **XMLK200P2D23** becomes **XMLK200P2D23TQ**. Minimum quantity 50.*

Electronic pressure sensors

OsiSense XM
XMLK pressure transmitters
Accessories

XZCC12FDM40B

XZCC12FCM40B

XZCC43FCP40B

XZCP1141L10

XZCP1241L5

Connection accessories

Description	Type	Reference	Weight kg
M12 female connector metal clamping ring *(1)*	Straight	**XZCC12FDM40B**	0.020
	Elbowed	**XZCC12FCM40B**	0.020
Female connector EN 175301-803-A *(1)*	–	**XZCC43FCP40B**	0.035

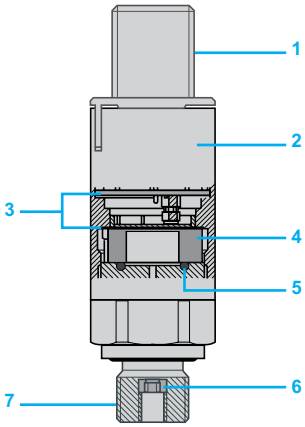
Description	Length of cable	Reference	Weight kg
Pre-wired M12, straight, female connectors	2 m	**XZCP1141L2**	0.090
	5 m	**XZCP1141L5**	0.190
	10 m	**XZCP1141L10**	0.370
Pre-wired M12, elbowed, female connectors	2 m	**XZCP1241L2**	0.090
	5 m	**XZCP1241L5**	0.190
	10 m	**XZCP1241L10**	0.370

(1) Connector with screw terminal connections.

Electronic pressure sensors

OsiSense XM

XMLG pressure transmitters, pressure and vacuum switches. Metal body, stainless steel 303 fluid entry. With analogue or solid-state output.



Presentation

XMLG pressure transmitters and pressure switches are characterised by their ceramic pressure measuring cell.
The deformation caused by the pressure is transmitted to the resistors of a Wheatstone bridge screen-printed on the ceramic.

The change in resistance is then processed by the integrated electronics, giving either a digital or analogue output signal.

The stainless steel AISI 303 body and the ceramic cell combined with a viton gasket make these products compatible with industrial fluids such as:
- Air
- Fresh water
- Hydraulic oils

XMLG pressure sensors can control fluids from -15 to + 125°C.

Depending on the model, these sensors are supplied:
- With 12 or 24 V ⎓ nominal and operate from 8 to 33 V ⎓ for transmitters with 4…20 mA output, pressure and vacuum switches;
- With 24 V ⎓ nominal and operate from 11.4 to 33 V ⎓ for transmitters with a 0…10 V output.

Offered with IP 67 and Nema type 4 degree of protection, these compact products, which offer excellent EMC characteristics and typical precision better than 0,3 %, are particularly suitable for the most demanding industrial applications.

Description

1 Electrical connection: M12 male or quick connection for cable.
2 Metal case made of stainless steel 303.
3 Electronics with EMC protection.
4 Ceramic pressure measuring cell.
5 FPM (Viton) gasket.
6 Leakage protection (on sizes ≥ 40 bar).
7 Fluid entry: G 1/4 male or 1/4" - 18 NPT male.

Functions

Pressure transmitters have an 4…20 mA or 0…10 V analogue output, which is proportional to the measuring range.
Versions with an M12 electrical connector and 4…20 mA analogue output (XMLG●●●D2●) can be used with switches with a 4-digit ZMLP display *(1)*.

Pressure and vacuum switches have a solid-state NPN or PNP normally closed (NC) output. The upper and lower switching points can only be adjusted during manufacture. Neither the customer nor the end user can adjust them.
This makes the product extremely reliable during operation and avoids the product losing its settings throughout its operating life.

The pressure ranges offered are:
- - 1…0 bar
- 0…400 bar

An anti-leakage system integrated in products for pressures ≥ 40 bar, prevents fluid leakage in the event of the measuring cell destruction pressure being exceeded.

Important ordering requirement

XMLG pressure transmitters are sold individually or in lots of 50. Pressure switches and vacuum switches are only sold in lots of 50.

Since the product is factory-set, please consult our Customer Care Centre before ordering, to specify the desired switching points.

(1) See pages 28 and 29.

Electronic pressure sensors

OsiSense XM

XMLG pressure transmitters
Metal body, stainless steel 303 fluid entry.
With analogue output. Sizes in bar

XMLG●●●D●●●

-1 to 0 bar (-14.5 to 0 psi)

Maximum permissible accidental pressure: 2.7 bar, destruction pressure: 3 bar

Analogue output type	Electrical connection	Reference *(1)*	Weight kg
G 1/4 A (male) fluid connection			
4…20 mA	M12	**XMLGM01D21** *(2)*	0.095
0…10 V	M12	**XMLGM01D71**	0.095
1/4"- 18 NPT (male) fluid connection			
4…20 mA	M12	**XMLGM01D23** *(2)*	0.095
0…10 V	M12	**XMLGM01D73TQ** *(3)*	0.095

0 to 1 bar (0 to 14.5 psi)

Maximum permissible accidental pressure: 2.7 bar, destruction pressure: 3 bar

Analogue output type	Electrical connection	Reference *(1)*	Weight kg
G 1/4 A (male) fluid connection			
4…20 mA	M12	**XMLG001D21** *(2)*	0.095
0…10 V	M12	**XMLG001D71** *(2)*	0.095
Fluid connection 1/4"- 18 NPT (male)			
4…20 mA	M12	**XMLG001D23** *(2)*	0.095
0…10 V	M12	**XMLG001D73TQ** *(3)*	0.095

0 to 6 bar (0 to 87 psi)

Maximum permissible accidental pressure: 17.6 bar, destruction pressure: 20 bar

Analogue output type	Electrical connection	Reference	Weight kg
G 1/4 A (male) fluid connection			
4…20 mA	M12	**XMLG006D21**	0.095
0…10 V	M12	**XMLG006D71**	0.095
1/4"- 18 NPT (male) fluid connection			
4…20 mA	M12	**XMLG006D23**	0.095
0…10 V	M12	**XMLG006D73TQ** *(3)*	0.095

(1) For other electrical or fluid connections, or types of output, please contact our Customer Care Centre.

*(2) Sold in lots of 25. Minimum quantity 50. Add TQ to the end of the reference selected. Example: **XMLG001D21** becomes **XMLG001D21TQ**.*

(3) Sold only in lots of 25. Minimum quantity 50.

Electronic pressure sensors

OsiSense XM

XMLG pressure transmitters
Metal body, stainless steel 303 fluid entry.
With analogue output. Sizes in bar

XMLG●●●D●●●

XMLG●●●Q●●●

0 to 10 bar (0 to 145 psi)

Maximum permissible accidental pressure: 22 bar, destruction pressure: 25 bar

Analogue output type	Electrical connection	Reference *(1)*	Weight kg
G 1/4 A (male) fluid connection			
4…20 mA	M12	**XMLG010D21** *(2)*	0.095
	Integrated connection *(4)*	**XMLG010Q21TQ** *(3)*	0.095
0…10 V	M12	**XMLG010D71** *(2)*	0.095
	Integrated connection *(4)*	**XMLG010Q71TQ** *(3)*	0.095
1/4"- 18 NPT (male) fluid connection			
4…20 mA	M12	**XMLG010D23** *(2)*	0.095
0…10 V	M12	**XMLG010D73**	0.095

0 to 16 bar (0 to 232 psi)

Maximum permissible accidental pressure: 35.2 bar, destruction pressure: 40 bar

Analogue output type	Electrical connection	Reference *(1)*	Weight kg
G 1/4 A (male) fluid connection			
4…20 mA	M12	**XMLG016D21** *(2)*	0.095
0…10 V	M12	**XMLG016D71**	0.095
1/4"- 18 NPT (male) fluid connection			
4…20 mA	M12	**XMLG016D23**	0.095
0…10 V	M12	**XMLG010D73TQ** *(3)*	0.095

0 to 25 bar (0 to 362.5 psi)

Maximum permissible accidental pressure: 56 bar, destruction pressure: 62.5 bar

Analogue output type	Electrical connection	Reference *(1)*	Weight kg
G 1/4 A (male) fluid connection			
4…20 mA	M12	**XMLG025D21** *(2)*	0.095
	Integrated connection *(4)*	**XMLG025Q21TQ** *(3)*	0.095
0…10 V	M12	**XMLG025D71** *(2)*	0.095
1/4"- 18 NPT (male) fluid connection			
4…20 mA	M12	**XMLG025D23** *(2)*	0.095
0…10 V	M12	**XMLG025D73TQ** *(3)*	0.095

(1) For other electrical or fluid connections, or types of output, please consult our Customer Care Centre.
*(2) Sold in lots of 25. Minimum quantity 50. Add TQ to the end of the reference selected. Example: **XMLG001D21** becomes **XMLG001D21TQ**.*
(3) Sold only in lots of 25. Minimum quantity 50.
(4) Phoenix Contact "Quickon" type integrated quick connection.

Electronic pressure sensors

OsiSense XM

XMLG pressure transmitters
Metal body, stainless steel 303 fluid entry.
With solid-state output. Sizes in bar

XMLG●●●D●●●

XMLG●●●Q●●●

0 to 100 bar (0 to 1450 psi)

Maximum permissible accidental pressure: 225 bar, destruction pressure: 250 bar

Analogue output type *(1)*	Electrical connection	Reference *(1)*	Weight kg
G 1/4 A (male) fluid connection			
4…20 mA	M12	**XMLG100D21**	0.095
	Integrated connection *(4)*	**XMLG100Q21TQ** *(3)*	0.095
0…10 V	M12	**XMLG100D71** *(2)*	0.095
1/4"- 18 NPT (male) fluid connection			
4…20 mA	M12	**XMLG100D23** *(2)*	0.095
0…10 V	M12	**XMLG100D73TQ** *(3)*	0.095

0 to 250 bar (0 to 3625 psi)

Maximum permissible accidental pressure: 560 bar, destruction pressure: 625 bar

Analogue output type	Electrical connection	Reference *(1)*	Weight kg
G 1/4 A (male) fluid connection			
4…20 mA	M12	**XMLG250D21** *(2)*	0.095
0…10 V	M12	**XMLG250D71** *(2)*	0.095
1/4"- 18 NPT (male) fluid connection			
4…20 mA	M12	**XMLG250D23**	0.095
0…10 V	M12	**XMLG250D73TQ** *(3)*	0.095

0 to 400 bar (0 to 5800 psi)

Maximum permissible accidental pressure: 800 bar, destruction pressure: 900 bar

Analogue output type	Electrical connection	Reference *(1)*	Weight kg
G 1/4 A (male) fluid connection			
4…20 mA	M12	**XMLG400D21** *(2)*	0.095
0…10 V	M12	**XMLG400D71** *(2)*	0.095
1/4"- 18 NPT (male) fluid connection			
4…20 mA	M12	**XMLG400D23**	0.095
0…10 V	M12	**XMLG400D73TQ** *(3)*	0.095

(1) For other electrical or fluid connections, or types of output, please consult our Customer Care Centre.
*(2) Sold in lots of 25. Minimum quantity 50. Add TQ to the end of the reference selected. Example: **XMLG001D21** becomes **XMLG001D21TQ**.*
(3) Sold only in lots of 25. Minimum quantity 50.
(4) Phoenix Contact "Quickon" type integrated quick connection.

Electronic pressure sensors

OsiSense XM

XMLG pressure and vacuum switches
Metal body, stainless steel 303 fluid entry.
With solid-state output. Sizes in bar

XMLG●●●D●1TQ

-1 to -0.08 bar (-14.5 to -1.16 psi)

Maximum permissible accidental pressure: 2.7 bar, destruction pressure: 3 bar

Analogue output type	Electrical connection	Reference	Weight kg
G 1/4 A (male) fluid connection			
NPN	M12	**XMLGM01D31TQ** *(1)*	0.095
PNP	M12	**XMLGM01D41TQ** *(1)*	0.095

0.08 to 1 bar (1.16 to 14.5 psi)

Maximum permissible accidental pressure: 2.7 bar, destruction pressure: 3 bar

Analogue output type	Electrical connection	Reference	Weight kg
G 1/4 A (male) fluid connection			
NPN	M12	**XMLG001D31TQ** *(1)*	0.095
PNP	M12	**XMLG001D41TQ** *(1)*	0.095

0.8 to 10 bar (11.6 to 145 psi)

Maximum permissible accidental pressure: 22 bar, destruction pressure: 25 bar

Analogue output type	Electrical connection	Reference	Weight kg
G 1/4 A (male) fluid connection			
NPN	M12	**XMLG010D31TQ** *(1)*	0.095
PNP	M12	**XMLG010D41TQ** *(1)*	0.095

2 to 25 bar (29 to 362.5 psi)

Maximum permissible accidental pressure: 56 bar, destruction pressure: 62.5 bar

Analogue output type	Electrical connection	Reference	Weight kg
G 1/4 A (male) fluid connection			
NPN	M12	**XMLG025D31TQ** *(1)*	0.095
PNP	M12	**XMLG025D41TQ** *(1)*	0.095

8 to 100 bar (116 to 1450 psi)

Maximum permissible accidental pressure: 225 bar, destruction pressure: 250 bar

Analogue output type	Electrical connection	Reference	Weight kg
G 1/4 A (male) fluid connection			
NPN	M12	**XMLG100D31TQ** *(1)*	0.095
PNP	M12	**XMLG100D41TQ** *(1)*	0.095

20 to 250 bar (290 to 3625 psi)

Maximum permissible accidental pressure: 560 bar, destruction pressure: 625 bar

Analogue output type	Electrical connection	Reference	Weight kg
G 1/4 A (male) fluid connection			
NPN	M12	**XMLG250D31TQ** *(1)*	0.095
PNP	M12	**XMLG250D41TQ** *(1)*	0.095

32 to 400 bar (464 to 5800 psi)

Maximum permissible accidental pressure: 800 bar, destruction pressure: 900 bar

Analogue output type	Electrical connection	Reference	Weight kg
G 1/4 A (male) fluid connection			
NPN	M12	**XMLG400D31TQ** *(1)*	0.095
PNP	M12	**XMLG400D41TQ** *(1)*	0.095

(1) Sold only in lots of 25. Minimum quantity 50.

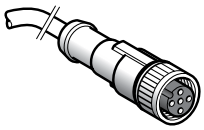
***Note**: Since the product is factory-set, please consult our Customer Care Centre before ordering, to specify the desired switching points.*

Electronic pressure sensors

OsiSense XM

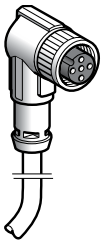
XMLG pressure transmitters, pressure and vacuum switches.
Accessories and replacement parts

563352



XZCP1141L●

503360



XZCP1241L●

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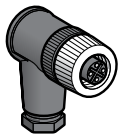


XZCC12FCM40B

532715

XMLGZ001

Connection accessories

Description		Length of cable m	Reference	Weight kg
M12 female connector, metal clamping ring *(1)*	Straight	–	**XZCC12FDM40B**	0.020
	Elbowed	–	**XZCC12FCM40B**	0.020
Pre-wired M12 female connectors	Straight	2	**XZCP1141L2**	0.090
		5	**XZCP1141L5**	0.190
		10	**XZCP1141L10**	0.370
	Elbowed	2	**XZCP1241L2**	0.090
		5	**XZCP1241L5**	0.190
		10	**XZCP1241L10**	0.370

Replacement part

Description	Sold in lots of	Unit reference	Weight kg
Quick connection *(2)*	10	**XMLGZ001**	0.025

(1) Connector with screw terminal connections.
(2) Phoenix Contact "Quickon" type connection.

Electronic pressure sensors

OsiSense XM

XMLP pressure transmitters
Compact metal body, stainless steel 304 fluid entry.
With analogue output

Presentation

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

- No gasket comes into contact with the fluid
- Compatibility with a large number of fluids:
  - Hydraulic oils
  - Air
  - Fresh water
  - Refrigeration fluids
  - All fluids or gases compatible with stainless steel AISI 304

XMLP pressure transmitters can control fluids from -30 to 120°C.

Their power supply depends on the type of analogue output:

- 5 V +/- 5% for the 0.5…4.5 V ratiometric output
- 12 or 24 V (nominal), operating from 8 to 30 V for the 4…20 mA output
- 24 V (nominal), operating from 14 to 30 V for the 0…10 V output

Made of 304 stainless steel, XMLP pressure transmitters are compact and rugged. Their degree of protection varies according to the type of connector:

- IP 65 for versions with connector EN 175301-803-A
- IP 65 and IP 67 for Packard Metri-Pack connector versions
- IP 65, IP 67 and IP 69K for M12 connector versions

With typical precision better than 0.5% of the rating, these transmitters are particularly suitable for industrial applications such as:

- Machine tools
- Moulding presses
- Stamping presses
- Lifting gear
- Air-conditioning systems (HVAC)

Functions

XMLP pressure transmitters have an analogue output which delivers a signal proportional to the measured pressure. This output can be one of the following types:

- 4…20 mA
- 0…10 V
- 0.5…4.5 V

The pressure ranges available are:

- 0…10 bar to 0…600 bar or
- 0…100 psi to 0…10,000 psi

The XMLP offer is available in three types of electrical connection:

- M12, 4-pin connector
- EN 175301-803-A connector (ex-DIN 43650)
- Packard Metri-Pack 150 connector

Several types of fluid connection are available:

- G1/4 A male
- SAE 7/16-20UNF-2A male
- SAE 7/16-20UNF-2B female (with Schrader pin)
- 1/4”-18 NPT male

XMLP transmitters are sold individually or in lots of 40.

Electronic pressure sensors

OsiSense XM

XMLP pressure transmitters
Compact metal body, stainless steel 304 fluid entry.
With analogue output. Sizes in bar

XMLP●●●BD●1V

XMLP●●●BC●1V

XMLP●●●BD●7

XMLP●●●BC●7

XMLP●●●BD●9

XMLP●●●BC●9

-1 to 9 bar (-14.5 to 130 psi)

Maximum permissible accidental pressure: 20 bar, destruction pressure: 100 bar

Analogue output type	Electrical connection	Reference	Weight kg
G 1/4 A DIN 3852-E (male) fluid connection			
4…20 mA	M12	**XMLPM09BD21V** *(1)*	0.050
	EN 175301-803-A	**XMLPM09BC21V** *(1)*	0.050
0…10 V	M12	**XMLPM09BD71V** *(1)*	0.050
	EN 175301-803-A	**XMLPM09BC71V** *(1)*	0.050
0.5…4.5 V ratiometric	M12	**XMLPM09BD11V** *(1)*	0.050
	EN 175301-803-A	**XMLPM09BC11V** *(1)*	0.050

0 to 10 bar (0 to 145 psi)

Maximum permissible accidental pressure: 20 bar, destruction pressure: 100 bar

Analogue output type	Electrical connection	Reference	Weight kg
G 1/4 A DIN 3852-E (male) fluid connection			
4…20 mA	M12	**XMLP010BD21V** *(1)*	0.050
	EN 175301-803-A	**XMLP010BC21V** *(1)*	0.050
0…10 V	M12	**XMLP010BD71V** *(1)*	0.050
	EN 175301-803-A	**XMLP010BC71V** *(1)*	0.050
0.5…4.5 V ratiometric	M12	**XMLP010BD11V** *(1)*	0.050
	EN 175301-803-A	**XMLP010BC11V** *(1)*	0.050
SAE 7/16-20UNF-2A (male) fluid connection			
4…20 mA	M12	**XMLP010BD27** *(1)*	0.050
	EN 175301-803-A	**XMLP010BC27** *(1)*	0.050
SAE 7/16-20UNF-2B (female with Schrader pin) fluid connection			
4…20 mA	M12	**XMLP010BD29** *(1)*	0.050
	EN 175301-803-A	**XMLP010BC29** *(1)*	0.050
0…10 V	M12	**XMLP010BD79** *(1)*	0.050
	EN 175301-803-A	**XMLP010BC79**	0.050
0.5…4.5 V ratiometric	M12	**XMLP010BD19**	0.050

0 to 16 bar (0 to 232 psi)

Maximum permissible accidental pressure: 32 bar, destruction pressure: 160 bar

Analogue output type	Electrical connection	Reference	Weight kg
G 1/4 DIN 3852-E (male) fluid connection			
4…20 mA	M12	**XMLP016BD21V** *(1)*	0.050
	EN 175301-803-A	**XMLP016BC21V** *(1)*	0.050
0…10 V	M12	**XMLP016BD71V** *(1)*	0.050
	EN 175301-803-A	**XMLP016BC71V** *(1)*	0.050
0.5…4.5 V ratiometric	M12	**XMLP016BD11V** *(1)*	0.050
	EN 175301-803-A	**XMLP016BC11V** *(1)*	0.050
SAE 7/16-20UNF-2A (male) fluid connection			
4…20 mA	M12	**XMLP016BD27** *(1)*	0.050
	EN 175301-803-A	**XMLP016BC27** *(1)*	0.050
SAE 7/16-20UNF-2B (female with Schrader pin) fluid connection			
4…20 mA	M12	**XMLP016BD29** *(1)*	0.050
	EN 175301-803-A	**XMLP016BC29** *(1)*	0.050
0…10 V	M12	**XMLP016BD79** *(1)*	0.050
0.5…4.5 V ratiometric	M12	**XMLP016BD19**	0.050

(1) Sold in lots of 40: Add the letter Q to the end of the reference selected.
*Example: **XMLP016BD21V** becomes **XMLP016BD21VQ**.*

Electronic pressure sensors

OsiSense XM

XMLP pressure transmitters
Compact metal body, stainless steel 304 fluid entry.
With analogue output. Sizes in bar

XMLP●●●BD●1V

XMLP●●●BC●1V

XMLP●●●BD●7

XMLP●●●BC●7

XMLP●●●BD●9

XMLP●●●BC●9

0 to 25 bar (0 to 362.5 psi)

Maximum permissible accidental pressure: 50 bar, destruction pressure: 200 bar

Analogue output type	Electrical connection	Reference	Weight kg
G 1/4 A DIN 3852-E (male) fluid connection			
4…20 mA	M12	**XMLP025BD21V** *(1)*	0.050
	EN 175301-803-A	**XMLP025BC21V** *(1)*	0.050
0…10 V	M12	**XMLP025BD71V** *(1)*	0.050
	EN 175301-803-A	**XMLP025BC71V** *(1)*	0.050
0.5…4.5 V ratiometric	M12	**XMLP025BD11V** *(1)*	0.050
	EN 175301-803-A	**XMLP025BC11V** *(1)*	0.050
SAE 7/16-20UNF-2A (male) fluid connection			
4…20 mA	M12	**XMLP025BD27** *(1)*	0.050
	EN 175301-803-A	**XMLP025BC27** *(1)*	0.050
0…10 V	M12	**XMLP025BD77**	0.050
SAE 7/16-20UNF-2B (female with Schrader pin) fluid connection			
4…20 mA	M12	**XMLP025BD29** *(1)*	0.050
	EN 175301-803-A	**XMLP025BC29** *(1)*	0.050
0…10 V	M12	**XMLP025BD79** *(1)*	0.050

0 to 40 bar (0 to 580 psi)

Maximum permissible accidental pressure: 80 bar, destruction pressure: 320 bar

Analogue output type	Electrical connection	Reference	Weight kg
G 1/4 A DIN 3852-E (male) fluid connection			
4…20 mA	M12	**XMLP040BD21V** *(1)*	0.050
	EN 175301-803-A	**XMLP040BC21V** *(1)*	0.050
0…10 V	M12	**XMLP040BD71V** *(1)*	0.050
	EN 175301-803-A	**XMLP040BC71V** *(1)*	0.050
0.5…4.5 V ratiometric	M12	**XMLP040BD11V** *(1)*	0.050
	EN 175301-803-A	**XMLP040BC11V** *(1)*	0.050
SAE 7/16-20UNF-2A (male) fluid connection			
4…20 mA	M12	**XMLP040BD27** *(1)*	0.050
	EN 175301-803-A	**XMLP040BC27** *(1)*	0.050
SAE 7/16-20UNF-2B (female with Schrader pin) fluid connection			
4…20 mA	M12	**XMLP040BD29** *(1)*	0.050
	EN 175301-803-A	**XMLP040BC29** *(1)*	0.050
0…10 V	M12	**XMLP040BD79** *(1)*	0.050
0.5…4.5 V ratiometric	M12	**XMLP040BD19**	0.050

(1) Sold in lots of 40: Add the letter Q to the end of the reference selected.
*Example: **XMLP040BD21V** becomes **XMLP040BD21VQ**.*

Electronic pressure sensors

OsiSense XM

XMLP pressure transmitters

Compact metal body, stainless steel 304 fluid entry.

With analogue output. Sizes in bar

XMLP060BD●1V
XMLP100BD●2

XMLP060BC●1V
XMLP100BC●2

XMLP060BD●7

XMLP060BC●7

XMLP060BD●9

XMLP060BC●9

0 to 60 bar (0 to 870 psi)

Maximum permissible accidental pressure: 120 bar, destruction pressure: 480 bar

Analogue output type	Electrical connection	Reference	Weight kg
G 1/4 A DIN 3852-E (male) fluid connection			
4…20 mA	M12	**XMLP060BD21V** *(1)*	0.050
	EN 175301-803-A	**XMLP060BC21V** *(1)*	0.050
0…10 V	M12	**XMLP060BD71V** *(1)*	0.050
	EN 175301-803-A	**XMLP060BC71V** *(1)*	0.050
0.5…4.5 V ratiometric	M12	**XMLP060BD11V** *(1)*	0.050
	EN 175301-803-A	**XMLP060BC11V** *(1)*	0.050
SAE 7/16-20UNF-2A (male) fluid connection			
4…20 mA	M12	**XMLP060BD27** *(1)*	0.050
	EN 175301-803-A	**XMLP060BC27** *(1)*	0.050
SAE 7/16-20UNF-2B (female with Schrader pin) fluid connection			
4…20 mA	M12	**XMLP060BD29** *(1)*	0.050
	EN 175301-803-A	**XMLP060BC29** *(1)*	0.050
0…10 V	M12	**XMLP060BD79** *(1)*	0.050

0 to 100 bar (0 to 1450 psi)

Maximum permissible accidental pressure: 200 bar, destruction pressure: 600 bar

Analogue output type	Electrical connection	Reference	Weight kg
G 1/4 A DIN 3852-A (male) fluid connection			
4…20 mA	M12	**XMLP100BD22** *(1)*	0.050
	EN 175301-803-A	**XMLP100BC22** *(1)*	0.050
0…10 V	M12	**XMLP100BD72** *(1)*	0.050
	EN 175301-803-A	**XMLP100BC72** *(1)*	0.050
0.5…4.5 V ratiometric	M12	**XMLP100BD12** *(1)*	0.050
	EN 175301-803-A	**XMLP100BC12** *(1)*	0.050

(1) Sold in lots of 40: Add the letter Q to the end of the reference selected.
*Example: **XMLP060BD21V** becomes **XMLP060BD21VQ**.*

Electronic pressure sensors

OsiSense XM

XMLP pressure transmitters
Compact metal body, stainless steel 304 fluid entry.
With analogue output. Sizes in bar

XMLP●●0BD●2

XMLP●●0BC●2

0 to 160 bar (0 to 2320 psi)

Maximum permissible accidental pressure: 320 bar, destruction pressure: 960 bar

Analogue output type	Electrical connection	Reference	Weight kg
G 1/4 A DIN 3852-A (male) fluid connection			
4…20 mA	M12	**XMLP160BD22** *(1)*	0.050
	EN 175301-803-A	**XMLP160BC22** *(1)*	0.050
0…10 V	M12	**XMLP160BD72** *(1)*	0.050
	EN 175301-803-A	**XMLP160BC72** *(1)*	0.050
0.5…4.5 V ratiometric	M12	**XMLP160BD12** *(1)*	0.050
	EN 175301-803-A	**XMLP160BC12** *(1)*	0.050

0 to 250 bar (0 to 3625 psi)

Maximum permissible accidental pressure: 500 bar, destruction pressure: 1000 bar

Analogue output type	Electrical connection	Reference	Weight kg
G 1/4 A DIN 3852-A (male) fluid connection			
4…20 mA	M12	**XMLP250BD22** *(1)*	0.050
	EN 175301-803-A	**XMLP250BC22** *(1)*	0.050
0…10 V	M12	**XMLP250BD72** *(1)*	0.050
	EN 175301-803-A	**XMLP250BC72** *(1)*	0.050
0.5…4.5 V ratiometric	M12	**XMLP250BD12** *(1)*	0.050
	EN 175301-803-A	**XMLP250BC12** *(1)*	0.050

0 to 400 bar (0 to 5800 psi)

Maximum permissible accidental pressure: 800 bar, destruction pressure: 1600 bar

Analogue output type	Electrical connection	Reference	Weight kg
G 1/4 A DIN 3852-A (male) fluid connection			
4…20 mA	M12	**XMLP400BD22** *(1)*	0.050
	EN 175301-803-A	**XMLP400BC22** *(1)*	0.050
0…10 V	M12	**XMLP400BD72** *(1)*	0.050
	EN 175301-803-A	**XMLP400BC72** *(1)*	0.050
0.5…4.5 V ratiometric	M12	**XMLP400BD12** *(1)*	0.050
	EN 175301-803-A	**XMLP400BC12** *(1)*	0.050

0 to 600 bar (0 to 8700 psi)

Maximum permissible accidental pressure: 1200 bar, destruction pressure: 2400 bar

Analogue output type	Electrical connection	Reference	Weight kg
G 1/4 A DIN 3852-A (male) fluid connection			
4…20 mA	M12	**XMLP600BD22** *(1)*	0.050
	EN 175301-803-A	**XMLP600BC22** *(1)*	0.050
0…10 V	M12	**XMLP600BD72** *(1)*	0.050
	EN 175301-803-A	**XMLP600BC72** *(1)*	0.050
0.5…4.5 V ratiometric	M12	**XMLP600BD12** *(1)*	0.050
	EN 175301-803-A	**XMLP600BC12** *(1)*	0.050

(1) Sold in lots of 40: Add the letter Q to the end of the reference selected.
*Example: **XMLP160BD22** becomes **XMLP160BD22Q**.*

Electronic pressure sensors

OsiSense XM

XMLP pressure transmitters
Compact metal body, stainless steel 304 fluid entry.
With analogue output. Sizes in psi

XMLP●●●PD●3

XMLP●●●PP●3

0 to 100 psi (0 to 6.9 bar)

Maximum permissible accidental pressure: 200 psi, destruction pressure: 1000 psi

Analogue output type	Electrical connection	Reference	Weight kg
1/4"- 18 NPT (male) fluid connection			
4…20 mA	M12	**XMLP100PD23** *(1)*	0.050
	Packard Metri-Pack 150	**XMLP100PP23** *(1)*	0.050
0…10 V	M12	**XMLP100PD73** *(1)*	0.050
	Packard Metri-Pack 150	**XMLP100PP73** *(1)*	0.050
0.5…4.5 V ratiometric	M12	**XMLP100PD13** *(1)*	0.050
	Packard Metri-Pack 150	**XMLP100PP13** *(1)*	0.050

0 to 150 psi (0 to 10.3 bar)

Maximum permissible accidental pressure: 300 psi, destruction pressure: 1500 psi

Analogue output type	Electrical connection	Reference	Weight kg
1/4"- 18 NPT (male) fluid connection			
4…20 mA	M12	**XMLP150PD23** *(1)*	0.050
	Packard Metri-Pack 150	**XMLP150PP23** *(1)*	0.050
0…10 V	M12	**XMLP150PD73** *(1)*	0.050
	Packard Metri-Pack 150	**XMLP150PP73** *(1)*	0.050
0.5…4.5 V ratiometric	M12	**XMLP150PD13** *(1)*	0.050
	Packard Metri-Pack 150	**XMLP150PP13** *(1)*	0.050

0 to 200 psi (0 to 13.8 bar)

Maximum permissible accidental pressure: 400 psi, destruction pressure: 2000 psi

Analogue output type	Electrical connection	Reference	Weight kg
1/4"- 18 NPT (male) fluid connection			
4…20 mA	M12	**XMLP200PD23** *(1)*	0.050
	Packard Metri-Pack 150	**XMLP200PP23** *(1)*	0.050
0…10 V	M12	**XMLP200PD73** *(1)*	0.050
	Packard Metri-Pack 150	**XMLP200PP73** *(1)*	0.050
0.5…4.5 V ratiometric	M12	**XMLP200PD13** *(1)*	0.050
	Packard Metri-Pack 150	**XMLP200PP13** *(1)*	0.050

0 to 300 psi (0 to 20.7 bar)

Maximum permissible accidental pressure: 600 psi, destruction pressure: 2400 psi

Analogue output type	Electrical connection	Reference	Weight kg
1/4"- 18 NPT (male) fluid connection			
4…20 mA	M12	**XMLP300PD23** *(1)*	0.050
	Packard Metri-Pack 150	**XMLP300PP23** *(1)*	0.050
0…10 V	M12	**XMLP300PD73** *(1)*	0.050
	Packard Metri-Pack 150	**XMLP300PP73** *(1)*	0.050
0.5…4.5 V ratiometric	M12	**XMLP300PD13** *(1)*	0.050
	Packard Metri-Pack 150	**XMLP300PP13** *(1)*	0.050

0 to 600 psi (0 to 41.4 bar)

Maximum permissible accidental pressure: 1200 psi, destruction pressure: 4800 psi

Analogue output type	Electrical connection	Reference	Weight kg
1/4"- 18 NPT (male) fluid connection			
4…20 mA	M12	**XMLP600PD23** *(1)*	0.050
	Packard Metri-Pack 150	**XMLP600PP23** *(1)*	0.050
0…10 V	M12	**XMLP600PD73** *(1)*	0.050
	Packard Metri-Pack 150	**XMLP600PP73** *(1)*	0.050
0.5…4.5 V ratiometric	M12	**XMLP600PD13** *(1)*	0.050
	Packard Metri-Pack 150	**XMLP600PP13** *(1)*	0.050

(1) Sold in lots of 40: Add the letter Q to the end of the reference selected.
*Example: **XMLP150PD23** becomes **XMLP150PD23Q**.*

Electronic pressure sensors

OsiSense XM

XMLP pressure transmitters
Compact metal body, stainless steel 304 fluid entry.
With analogue output. Sizes in psi

XMLP●●●PD●3

XMLP●●●PP●3

0 to 1000 psi (0 to 69 bar)

Maximum permissible accidental pressure: 2000 psi, destruction pressure: 6000 psi

Analogue output type	Electrical connection	Reference	Weight kg
1/4"- 18 NPT (male) fluid connection			
4…20 mA	M12	**XMLP1K0PD23** *(1)*	0.050
	Packard Metri-Pack 150	**XMLP1K0PP23** *(1)*	0.050
0…10 V	M12	**XMLP1K0PD73** *(1)*	0.050
	Packard Metri-Pack 150	**XMLP1K0PP73** *(1)*	0.050
0.5…4.5 V ratiometric	M12	**XMLP1K0PD13** *(1)*	0.050
	Packard Metri-Pack 150	**XMLP1K0PP13** *(1)*	0.050

0 to 2000 psi (0 to 138 bar)

Maximum permissible accidental pressure: 4000 psi, destruction pressure: 12,000 psi

Analogue output type	Electrical connection	Reference	Weight kg
1/4"- 18 NPT (male) fluid connection			
4…20 mA	M12	**XMLP2K0PD23** *(1)*	0.050
	Packard Metri-Pack 150	**XMLP2K0PP23** *(1)*	0.050
0…10 V	M12	**XMLP2K0PD73** *(1)*	0.050
	Packard Metri-Pack 150	**XMLP2K0PP73** *(1)*	0.050
0.5…4.5 V ratiometric	M12	**XMLP2K0PD13** *(1)*	0.050
	Packard Metri-Pack 150	**XMLP2K0PP13** *(1)*	0.050

0 to 3000 psi (0 to 207 bar)

Maximum permissible accidental pressure: 6000 psi, destruction pressure: 12,000 psi

Analogue output type	Electrical connection	Reference	Weight kg
1/4"- 18 NPT (male) fluid connection			
4…20 mA	M12	**XMLP3K0PD23** *(1)*	0.050
	Packard Metri-Pack 150	**XMLP3K0PP23** *(1)*	0.050
0…10 V	M12	**XMLP3K0PD73** *(1)*	0.050
	Packard Metri-Pack 150	**XMLP3K0PP73** *(1)*	0.050
0.5…4.5 V ratiometric	M12	**XMLP3K0PD13** *(1)*	0.050
	Packard Metri-Pack 150	**XMLP3K0PP13** *(1)*	0.050

0 to 6000 psi (0 to 414 bar)

Maximum permissible accidental pressure: 11,600 psi, destruction pressure: 24,000 psi

Analogue output type	Electrical connection	Reference	Weight kg
1/4"- 18 NPT (male) fluid connection			
4…20 mA	M12	**XMLP6K0PD23** *(1)*	0.050
	Packard Metri-Pack 150	**XMLP6K0PP23** *(1)*	0.050
0…10 V	M12	**XMLP6K0PD73** *(1)*	0.050
	Packard Metri-Pack 150	**XMLP6K0PP73** *(1)*	0.050
0.5…4.5 V ratiometric	M12	**XMLP6K0PD13** *(1)*	0.050
	Packard Metri-Pack 150	**XMLP6K0PP13** *(1)*	0.050

0 to 10,000 psi (0 to 690 bar)

Maximum permissible accidental pressure: 17,400 psi, destruction pressure: 40,000 psi

Analogue output type	Electrical connection	Reference	Weight kg
1/4"- 18 NPT (male) fluid connection			
4…20 mA	M12	**XMLP10KPD23** *(1)*	0.050
	Packard Metri-Pack 150	**XMLP10KPP23** *(1)*	0.050
0…10 V	M12	**XMLP10KPD73** *(1)*	0.050
	Packard Metri-Pack 150	**XMLP10KPP73** *(1)*	0.050
0.5…4.5 V ratiometric	M12	**XMLP10KPD13** *(1)*	0.050
	Packard Metri-Pack 150	**XMLP10KPP13** *(1)*	0.050

(1) Sold in lots of 40: Add the letter Q to the end of the reference selected.
*Example: **XMLP1K0PD23** becomes **XMLP1K0PD23Q**.*

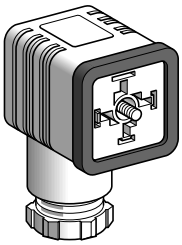
Electronic pressure sensors

OsiSense XM
XMLP pressure transmitters
Accessories

XMLZL016

XZCC12FCM40B

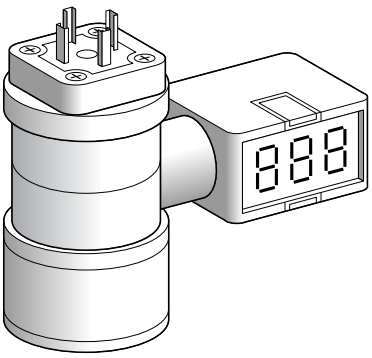
XZCC12FDM40B



XZCC43FCP40B

XZCP1241L5

XZCP1141L10



XMLEZ●●●

Accessories

Description	Type	Reference	Weight kg
Seal (Pack of 10 seals)	–	**XMLZL016**	0.025
M12 female connector metal clamping ring *(1)*	Straight	**XZCC12FDM40B**	0.020
	Elbowed	**XZCC12FCM40B**	0.020
Female connector EN 175301-803-A *(1)*	–	**XZCC43FCP40B**	0.035

Description	Length of cable	Cable material	Reference	Weight kg
Pre-wired M12, straight, female connectors	2 m	PUR	**XZCP1141L2**	0.090
		PVC	**XZCPV1141L2**	0.110
	5 m	PUR	**XZCP1141L5**	0.190
		PVC	**XZCPV1141L5**	0.210
	10 m	PUR	**XZCP1141L10**	0.370
		PVC	**XZCPV1141L10**	0.390
Pre-wired M12, elbowed, female connectors	2 m	PUR	**XZCP1241L2**	0.090
		PVC	**XZCPV1241L2**	0.110
	5 m	PUR	**XZCP1241L5**	0.190
		PVC	**XZCPV1241L5**	0.210
	10 m	PUR	**XZCP1241L10**	0.370
		PVC	**XZCPV1241L10**	0.390

Description	For use with	Sensor size	Reference	Weight
		bar		kg
Digital displays for pressure transmitters	XMLP010BC2●●	0…10	**XMLEZ010**	0.100
	XMLP025BC2●●	0…25	**XMLEZ025**	0.100
	XMLP060BC2●●	0…60	**XMLEZ060**	0.100
	XMLP100BC2●●	0…100	**XMLEZ100**	0.100
	XMLP250BC2●●	0…250	**XMLEZ250**	0.100
	XMLP600BC2●●	0…600	**XMLEZ600**	0.100

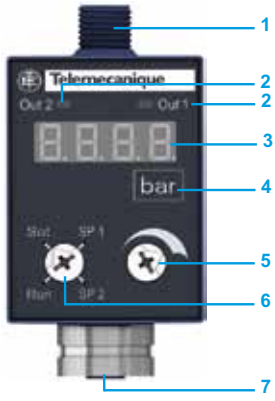
(1) Connector with screw terminal connections.

***Note**: For other connection accessories, please refer to our "OsiSense XZ cabling accessories" catalogue.*

Electronic pressure sensors
OsiSense XM
ZMLP switches with 4-digit display

Example of direct mounting on the pressure transmitter.

Example of remote mounting (with jumper cable and fixing bracket).



Presentation

Combined with a pressure transmitter, the ZMLP switch with display converts an analogue signal into one or two switching outputs with adjustable thresholds.
It can also be used to display the measured pressure. One of 27 display ranges, from -14.5 to 6000, can be selected for this purpose, meaning the switch can adapt to the majority of pressure transmitters, whether calibrated in bar,psi or pascal.

Depending on the model, ZMLP switches with display are available with different output configurations:
- One 4…20 mA analogue output and one switching output, PNP or NPN type, hysteresis or window switching mode.
- Two switching outputs, PNP or NPN type, hysteresis switching mode (fixed hysteresis).

Compact and robust:
Its compact housing made of Valox™ PBT and polyester front face provide it with IP65, IP67 and IP69K degrees of protection, making it suitable for the harshest environments. These products are for a nominal supply voltage of 24 V ⎓ and have a 17 to 33 V ⎓ operating range.

Simplicity of setup:
These products must be connected to an electronic pressure transmitter with 4…20 mA analogue output and 4-pin M12 connector.

They can be mounted:
- Directly on the pressure transmitter. The product body can then pivot through 300°, enabling optimum orientation of the display and settings.
- Or mounted remotely, up to 20 metres from the transmitter, using a simple jumper cable. In this case, clever design accessories allow the product to be fixed in place quickly, horizontally, vertically or even directly on the pressure inlet pipe.

Description

1 4-pin male M12 output connector, for connection to an automation platform.
2 Indicator LEDs displaying the output status (LED lit when the output has been activated).
3 7-segment/4-digit display.
4 Pressure unit indication, bar by default, psi, kPa or Mpa by the addition of an adhesive label supplied with the product.
5 Potentiometer for selecting the display size and adjusting the switching threshold values.
6 4-position rotary switch for selecting the parameter to be configured.
7 4-pin female M12 connector, for connection to the pressure transmitter.

Functions

Configurable functions

For the display:
- Pressure unit (bar, psi, kPa and MPa)
- 27 display ranges can be selected, from -14.5 to 6000

For the solid-state output(s):
- NO or NC contact

Locking/unlocking:
- In order to avoid losing the product settings accidentally, the product can be locked.The settings cannot then be changed

Fast diagnostic function

- Illumination of all the display segments on each power-up, enabling checking of their operation

Electronic pressure sensors
OsiSense XM
ZMLP switches with 4-digit display

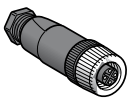
ZMLPA1●2SH

ZMLPA1●2SW

ZMLPA2●0SH

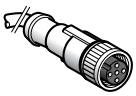
XMLPZLH01

XMLPZLV01

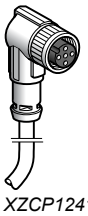


XZCC12FDM40B

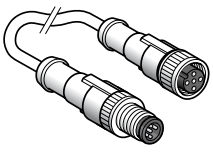
XZCC12MCM40B



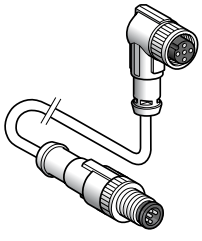
XZCP1141L●



XZCP1241L●



XZCR1511040A●



XZCR1512040A●

Switches with a display for OsiSense XMLP pressure sensors *(1)*

Analogue output type	Solid-state output type	Switching mode	Reference	Weight kg
4…20 mA	1 x PNP	Hysteresis	**ZMLPA1P2SH**	0.104
		Window	**ZMLPA1P2SW**	0.104
	1 x NPN	Hysteresis	**ZMLPA1N2SH**	0.104
		Window	**ZMLPA1N2SW**	0.104
–	2 x PNP	Hysteresis	**ZMLPA2P0SH**	0.104
–	2 x NPN	Hysteresis	**ZMLPA2N0SH**	0.104

Fixing brackets for ZMLP switches with display

Description	Reference	Weight kg
Metal bracket for fixing horizontally	**XMLPZLH01**	0.012
Metal bracket for fixing vertically or on an inlet pipe	**XMLPZLV01**	0.024

Cabling accessories

Type	Length of cable	Reference	Weight
	m		kg
4-pin M12 connectors, for connection on screw terminals *(2)*			
Straight female connector	–	**XZCC12FDM40B**	0.020
Elbowed female connector	–	**XZCC12FCM40B**	0.020
Straight male connector	–	**XZCC12MDM40B**	0.025
Elbowed male connector	–	**XZCC12MCM40B**	0.025
Pre-wired M12, 4-pin connectors (PUR cable)			
Straight female connector	2	**XZCP1141L2**	0.090
	5	**XZCP1141L5**	0.190
	10	**XZCP1141L10**	0.370
	15	**XZCP1141L15**	0.500
	20	**XZCP1141L20**	0.750
Elbowed female connector	2	**XZCP1241L2**	0.090
	5	**XZCP1241L5**	0.190
	10	**XZCP1241L10**	0.370
	15	**XZCP1241L15**	0.500
	20	**XZCP1241L20**	0.750
M12-M12, 3-pin jumper cables (PUR cable) *(2)*			
Straight male and female connectors	1	**XZCR1511040A1**	0.065
	2	**XZCR1511040A2**	0.095
Straight male connector, elbowed female connector	1	**XZCR1512040A1**	0.065
	2	**XZCR1512040A2**	0.095

*(1) For **XMLP●●●●D2●** pressure transmitters (see pages 22 to 27).*
*Switches with display are also compatible with **XMLK●●●●2D2●** and **XMLG●●●D2●** pressure transmitters (see pages 10 to 19).*
(2) For connecting the pressure transmitter to the switch with display, in the case of remote mounting.

Electronic pressure sensors
OsiSense XM
XMLR pressure sensors with 4-digit display

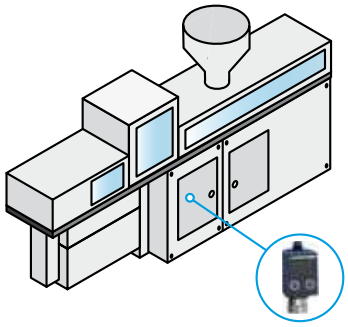
OsiSense XMLR

Electronic pressure sensors are used to control and measure pressure or vacuum levels in hydraulic or pneumatic systems.
They convert the pressure into an electrical signal. They then produce an analogue output which is proportional to the measured pressure and/or one or two switching outputs on which the switching point is adjustable.

The high precision and performance of OsiSense XMLR pressure sensors makes them suitable for numerous industrial applications requiring display, control or regulation of pressure/vacuum levels.

Easy to mount

XMLR pressure sensors minimise installation time and effort. Their compact-sized, rotating body and “flip over display” function make mounting easy and flexible.



With its compact size, the OsiSense XMLR pressure sensor is easily integrated into the machine

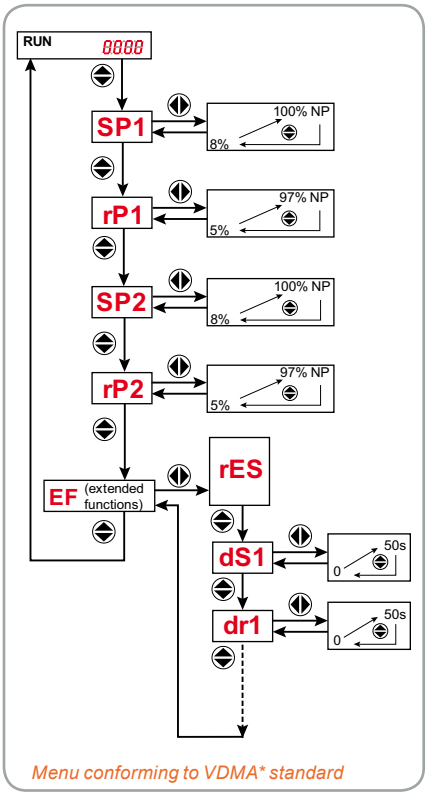
Compact format

> With a height of just 88 to 100 mm depending on the pressure range and the fluid entry type, OsiSense XMLR is one of the most compact pressure switches on the market.

Rotating body

> The body of the OsiSense XMLR pressure sensor can be rotated 300°, thus enabling the user to orientate the front face of the product as required following connection to the pressure inlet pipe.

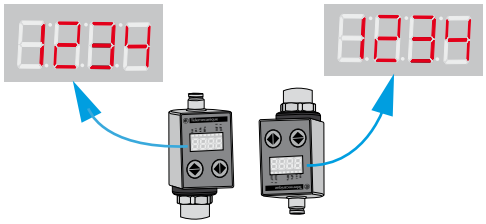
Electronic pressure sensors
OsiSense XM
XMLR pressure sensors with 4-digit display



Menu conforming to VDMA standard*

Easy to mount *(continued)*

Flip over display function.
> The display can be inverted vertically to adapt to the sensor's installation position.



Easy to set up

Menu naming and structure based on the VDMA* standard
> The ergonomic design of OsiSense XMLR sets a new standard for ease of configuration.

Navigation using just two pushbuttons
> Two simple pushbuttons are all that is needed to navigate through an intuitive menu structured according to the VDMA* 24574-1 standard.

1 Pushbutton to display a value or parameter or to save a selected value or parameter and return to the menu.
2 Pushbutton to scroll from one menu to another or to increase a value or change a parameter.

Easy to maintain

At each device start up, all segments of the display light up briefly to confirm that it is operating correctly.

The device can be tested using a diagnostic function which checks the whole electronic signal processing chain. This function is accessible via the "Dia" menu and the result of the test is indicated on the display (DONE or ERR).
For transmitters, this function can also be remotely activated by connecting the Test input to an automation platform, thus enabling automatic verification without the need for intervention by an operator.

In this instance, the self-test also generates an analogue output signal which is equivalent to 50% of the sensor size (12 mA or 5 V) which, in turn, can be verified by the automation platform.
The pressure sensor can be considered as defective if the difference between the signal transmitted and the standard theoretical value is too great.

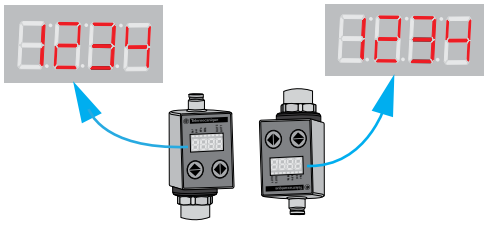
OsiSense XMLR pressure sensors also include a recording of the high and low pressure values measured since the last reset.
These values can be displayed via the Hi and Lo menus.

** VDMA: Verband Deutscher Maschinen und Anlagenbau e.V.*

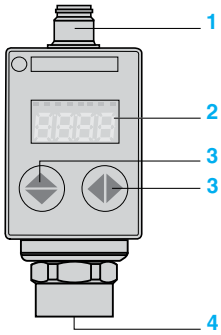
Electronic pressure sensors

OsiSense XM

XMLR pressure sensors with 4-digit display.
Compact plastic body, stainless steel 316L fluid entry.
With analogue and solid-state outputs.



"Flip over display" function.



Presentation

XMLR electronic pressure sensors are used for pressure control of hydraulic oils, fresh water, air and refrigeration fluids, between -1 and 600 bar.
Depending on the model, XMLR sensors are available with different output configurations in order to meet the highest number of requirements:

- One analogue output, 4…20 mA or 0…10 V, proportional to the measuring range
- One analogue output and one switching output, PNP or NPN type
- Two switching outputs, PNP or NPN type
- One 4…20 mA analogue output and two switching outputs, PNP or NPN type

Compact and robust:
The stainless steel 316L fluid entry and fibreglass impregnated polyacrylamide body provide the XMLR pressure sensors with excellent mechanical resistance, improved corrosion resistance and an P65/IP67 degree of protection. Compact in size (88 mm to 100 mm overall, depending on model), these products are for a nominal supply voltage of 24 V ⎓ and have a 17 to 33 V ⎓ operating range.

They are particularly suitable for:

- Moulding and thermoforming presses
- Injection machines
- Pneumatic systems and assembly machinery
- Hydraulic systems of lifting and handling equipment
- Pumping and fresh water treatment

Simplicity of setting-up
The body of the OsiSense XMLR pressure sensor can be turned through 300°, thus enabling the front face of the product to be orientated as required following connection to the pressure inlet pipe.
In addition, the "flip over display" function simplifies reading in the event of upside down mounting (fluid entry from above).

Description

1 M12 male connector, 4 or 5-pin depending on model.
2 4-digit, 7-segment display and LED indicator for pressure and output state (LED lit when the output has been activated).
3 Navigation keys for setting and configuring the menus (conforming to VDMA 24574).
4 Fluid entry: G 1/4 female, 1/4"-18 NPT female or SAE 7/16-20UNF female, depending on model.

Functions

Configurable functions

For the display:

- Pressure unit of measurement (bar, psi, kPa or MPa)
- Display refresh time: fast (50 ms), normal (200 ms), slow (600 ms)
- 180° flip over display
- Display off, power saving mode

For the analogue output (4…20 mA or 0…10 V)**:**

- Compensation offset in the range of ±5% of the units size
- Adjustment of pressure between 75 and 125% of the nominal pressure

For each solid-state output:

- NO or NC contact
- Switching mode of outputs: Hysteresis (pumping) or Window (control)
- Time delay both on trip and on reset (adjustable from 0 to 50 s, in steps of 1 s)

Locking/unlocking:

- In order to avoid losing the product settings accidentally, the product can be locked.The settings cannot then be changed

Fast diagnostic functions

- Illumination of all the display segments on each power-up, enabling checking of their operation
- Diagnostic function for checking correct operation of the sensor
- Saving of min. and max. pressures measured by the sensor, up to 125% of the nominal pressure, and their subsequent display

Electronic pressure sensors

OsiSense XM

XMLR pressure sensors with 4-digit display.
Compact plastic body, stainless steel 316L fluid entry.
With analogue and solid-state outputs.

XMLR●●●G●●●5

XMLR●●●G●●●6

-1 to 0 bar (-14.5 to 0 psi)

Maximum permissible accidental pressure: 3 bar, destruction pressure: 3 bar

Analogue output type	Solid-state output type	Reference	Weight kg
G 1/4 DIN 3852-Y (female) fluid connection			
4…20 mA	–	**XMLRM01G0T25**	0.190
0…10 V	–	**XMLRM01G0T75**	0.190
4…20 mA	1 x PNP	**XMLRM01G1P25**	0.190
4…20 mA	1 x NPN	**XMLRM01G1N25**	0.190
0…10 V	1 x PNP	**XMLRM01G1P75**	0.190
0…10 V	1 x NPN	**XMLRM01G1N75**	0.190
–	2 x PNP	**XMLRM01G2P05**	0.190
–	2 x NPN	**XMLRM01G2N05**	0.190
4…20 mA	2 x PNP	**XMLRM01G2P25**	0.190
4…20 mA	2 x NPN	**XMLRM01G2N25**	0.190
1/4"- 18 NPT (female) fluid connection			
4…20 mA	–	**XMLRM01G0T26**	0.212
4…20 mA	1 x PNP	**XMLRM01G1P26**	0.212
4…20 mA	1 x NPN	**XMLRM01G1N26**	0.212
–	2 x PNP	**XMLRM01G2P06**	0.212
–	2 x NPN	**XMLRM01G2N06**	0.212
4…20 mA	2 x PNP	**XMLRM01G2P26**	0.212
4…20 mA	2 x NPN	**XMLRM01G2N26**	0.212

0 to 1 bar (0 to 14.5 psi)

Maximum permissible accidental pressure: 7 bar, destruction pressure: 7 bar

Analogue output type	Solid-state output type	Reference	Weight kg
G 1/4 DIN 3852-Y (female) fluid connection			
4…20 mA	–	**XMLR001G0T25**	0.190
0…10 V	–	**XMLR001G0T75**	0.190
4…20 mA	1 x PNP	**XMLR001G1P25**	0.190
4…20 mA	1 x NPN	**XMLR001G1N25**	0.190
0…10 V	1 x PNP	**XMLR001G1P75**	0.190
0…10 V	1 x NPN	**XMLR001G1N75**	0.190
–	2 x PNP	**XMLR001G2P05**	0.190
–	2 x NPN	**XMLR001G2N05**	0.190
1/4"- 18 NPT (female) fluid connection			
4…20 mA	–	**XMLR001G0T26**	0.212
0…10 V	–	**XMLR001G0T76**	0.212
4…20 mA	1 x PNP	**XMLR001G1P26**	0.212
4…20 mA	1 x NPN	**XMLR001G1N26**	0.212
–	2 x PNP	**XMLR001G2P06**	0.212
–	2 x NPN	**XMLR001G2N06**	0.212

0 to 2.5 bar (0 to 36.2 psi)

Maximum permissible accidental pressure: 12 bar, destruction pressure: 12 bar

Analogue output type	Solid-state output type	Reference	Weight kg
G 1/4 DIN 3852-Y (female) fluid connection			
4…20 mA	–	**XMLR2D5G0T25**	0.190
0…10 V	–	**XMLR2D5G0T75**	0.190
4…20 mA	1 x PNP	**XMLR2D5G1P25**	0.190
4…20 mA	1 x NPN	**XMLR2D5G1N25**	0.190
0…10 V	1 x PNP	**XMLR2D5G1P75**	0.190
0…10 V	1 x NPN	**XMLR2D5G1N75**	0.190
–	2 x PNP	**XMLR2D5G2P05**	0.190
–	2 x NPN	**XMLR2D5G2N05**	0.190
1/4"- 18 NPT (female) fluid connection			
4…20 mA	1 x PNP	**XMLR2D5G1P26**	0.212
4…20 mA	1 x NPN	**XMLR2D5G1N26**	0.212
–	2 x PNP	**XMLR2D5G2P06**	0.212
–	2 x NPN	**XMLR2D5G2N06**	0.212

Electronic pressure sensors

OsiSense XM

XMLR pressure sensors with 4-digit display.
Compact plastic body, stainless steel 316L fluid entry.
With analogue and solid-state outputs.

XMLR●●●G●●●5

XMLR●●●G●●●6
XMLR●●●G●●●9

0 to 10 bar (0 to 145 psi)

Maximum permissible accidental pressure: 40 bar, destruction pressure: 40 bar

Analogue output type	Solid-state output type	Reference	Weight kg
G 1/4 DIN 3852-Y (female) fluid connection			
4…20 mA	–	**XMLR010G0T25**	0.190
0…10 V	–	**XMLR010G0T75**	0.190
4…20 mA	1 x PNP	**XMLR010G1P25**	0.190
4…20 mA	1 x NPN	**XMLR010G1N25**	0.190
0…10 V	1 x PNP	**XMLR010G1P75**	0.190
0…10 V	1 x NPN	**XMLR010G1N75**	0.190
–	2 x PNP	**XMLR010G2P05**	0.190
–	2 x NPN	**XMLR010G2N05**	0.190
4…20 mA	2 x PNP	**XMLR010G2P25**	0.190
4…20 mA	2 x NPN	**XMLR010G2N25**	0.190
1/4”- 18 NPT (female) fluid connection			
4…20 mA	–	**XMLR010G0T26**	0.212
0…10 V	–	**XMLR010G0T76**	0.212
4…20 mA	1 x PNP	**XMLR010G1P26**	0.212
4…20 mA	1 x NPN	**XMLR010G1N26**	0.212
0…10 V	1 x PNP	**XMLR010G1P76**	0.212
0…10 V	1 x NPN	**XMLR010G1N76**	0.212
–	2 x PNP	**XMLR010G2P06**	0.212
–	2 x NPN	**XMLR010G2N06**	0.212
4…20 mA	2 x PNP	**XMLR010G2P26**	0.212
4…20 mA	2 x NPN	**XMLR010G2N26**	0.212
SAE 7/16-20UNF-2B (female) fluid connection			
–	2 x PNP	**XMLR010G2P09**	0.210
–	2 x NPN	**XMLR010G2N09**	0.210

0 to 16 bar (0 to 232 psi)

Maximum permissible accidental pressure: 62 bar, destruction pressure: 62 bar

Analogue output type	Solid-state output type	Reference	Weight kg
G 1/4 DIN 3852-Y (female) fluid connection			
4…20 mA	–	**XMLR016G0T25**	0.190
0…10 V	–	**XMLR016G0T75**	0.190
4…20 mA	1 x PNP	**XMLR016G1P25**	0.190
4…20 mA	1 x NPN	**XMLR016G1N25**	0.190
0…10 V	1 x PNP	**XMLR016G1P75**	0.190
–	2 x PNP	**XMLR016G2P05**	0.190
1/4”- 18 NPT (female) fluid connection			
4…20 mA	–	**XMLR016G0T26**	0.212
4…20 mA	1 x PNP	**XMLR016G1P26**	0.212
4…20 mA	1 x NPN	**XMLR016G1N26**	0.212
–	2 x PNP	**XMLR016G2P06**	0.212
–	2 x NPN	**XMLR016G2N06**	0.212

0 to 25 bar (0 to 362 psi)

Maximum permissible accidental pressure: 100 bar, destruction pressure: 100 bar

Analogue output type	Solid-state output type	Reference	Weight kg
G 1/4 DIN 3852-Y (female) fluid connection			
4…20 mA	–	**XMLR025G0T25**	0.190
0…10 V	–	**XMLR025G0T75**	0.190
4…20 mA	1 x PNP	**XMLR025G1P25**	0.190
4…20 mA	1 x NPN	**XMLR025G1N25**	0.190
0…10 V	1 x PNP	**XMLR025G1P75**	0.190
0…10 V	1 x NPN	**XMLR025G1N75**	0.190
–	2 x PNP	**XMLR025G2P05**	0.190
–	2 x NPN	**XMLR025G2N05**	0.190
1/4”- 18 NPT (female) fluid connection			
4…20 mA	–	**XMLR025G0T26**	0.212
4…20 mA	1 x PNP	**XMLR025G1P26**	0.212
4…20 mA	1 x NPN	**XMLR025G1N26**	0.212
–	2 x PNP	**XMLR025G2P06**	0.212
–	2 x NPN	**XMLR025G2N06**	0.212

Electronic pressure sensors

OsiSense XM

XMLR pressure sensors with 4-digit display.
Compact plastic body, stainless steel 316L fluid entry.
With analogue and solid-state outputs.

XMLR●●●G●●●5

XMLR●●●G●●●6

XMLR●●●M●●●5
XMLR●●●M●●●6

XMLR●●●M●●●9

0 to 40 bar (0 to 580 psi)

Maximum permissible accidental pressure: 150 bar, destruction pressure: 150 bar

Analogue output type	Solid-state output type	Reference	Weight kg
G 1/4 DIN 3852-Y (female) fluid connection			
4…20 mA	–	**XMLR040G0T25**	0.190
0…10 V	–	**XMLR040G0T75**	0.190
4…20 mA	1 x PNP	**XMLR040G1P25**	0.190
4…20 mA	1 x NPN	**XMLR040G1N25**	0.190
0…10 V	1 x PNP	**XMLR040G1P75**	0.190
0…10 V	1 x NPN	**XMLR040G1N75**	0.190
–	2 x PNP	**XMLR040G2P05**	0.190
–	2 x NPN	**XMLR040G2N05**	0.190
4…20 mA	2 x PNP	**XMLR040G2P25**	0.190
4…20 mA	2 x NPN	**XMLR040G2N25**	0.190
1/4”- 18 NPT (female) fluid connection			
4…20 mA	–	**XMLR040G0T26**	0.212
4…20 mA	1 x PNP	**XMLR040G1P26**	0.212
4…20 mA	1 x NPN	**XMLR040G1N26**	0.212
–	2 x PNP	**XMLR040G2P06**	0.212
–	2 x NPN	**XMLR040G2N06**	0.212

0 to 100 bar (0 to 1450 psi)

Maximum permissible accidental pressure: 300 bar, destruction pressure: 600 bar

Analogue output type	Solid-state output type	Reference	Weight kg
G 1/4 DIN 3852-Y (female) fluid connection			
4…20 mA	–	**XMLR100M0T25**	0.186
0…10 V	–	**XMLR100M0T75**	0.186
4…20 mA	1 x PNP	**XMLR100M1P25**	0.186
4…20 mA	1 x NPN	**XMLR100M1N25**	0.186
0…10 V	1 x PNP	**XMLR100M1P75**	0.186
0…10 V	1 x NPN	**XMLR100M1N75**	0.186
–	2 x PNP	**XMLR100M2P05**	0.186
–	2 x NPN	**XMLR100M2N05**	0.186
1/4”- 18 NPT (female) fluid connection			
4…20 mA	–	**XMLR100M0T26**	0.186
4…20 mA	1 x PNP	**XMLR100M1P26**	0.186
4…20 mA	1 x NPN	**XMLR100M1N26**	0.186
–	2 x PNP	**XMLR100M2P06**	0.186
–	2 x NPN	**XMLR100M2N06**	0.186

0 to 160 bar (0 to 2320 psi)

Maximum permissible accidental pressure: 480 bar, destruction pressure: 960 bar

Analogue output type	Solid-state output type	Reference	Weight kg
G 1/4 DIN 3852-Y (female) fluid connection			
4…20 mA	–	**XMLR160M0T25**	0.186
0…10 V	–	**XMLR160M0T75**	0.186
4…20 mA	1 x PNP	**XMLR160M1P25**	0.186
4…20 mA	1 x NPN	**XMLR160M1N25**	0.186
0…10 V	1 x PNP	**XMLR160M1P75**	0.186
0…10 V	1 x NPN	**XMLR160M1N75**	0.186
–	2 x PNP	**XMLR160M2P05**	0.186
–	2 x NPN	**XMLR160M2N05**	0.186
SAE 7/16-20UNF-2B (female) fluid connection			
–	2 x PNP	**XMLR160M2P09**	0.212
–	2 x NPN	**XMLR160M2N09**	0.212

Electronic pressure sensors

OsiSense XM

XMLR pressure sensors with 4-digit display.
Compact plastic body, stainless steel 316L fluid entry.
With analogue and solid-state outputs.

XMLR●●●M●●●5
XMLR●●●M●●●6

XMLR●●●M●●●9

0 to 250 bar (0 to 3625 psi)

Maximum permissible accidental pressure: 750 bar, destruction pressure: 1500 bar

Analogue output type	Solid-state output type	Reference	Weight kg
G 1/4 DIN 3852-Y (female) fluid connection			
4…20 mA	–	**XMLR250M0T25**	0.186
0…10 V	–	**XMLR250M0T75**	0.186
4…20 mA	1 x PNP	**XMLR250M1P25**	0.186
4…20 mA	1 x NPN	**XMLR250M1N25**	0.186
0…10 V	1 x PNP	**XMLR250M1P75**	0.186
0…10 V	1 x NPN	**XMLR250M1N75**	0.186
–	2 x PNP	**XMLR250M2P05**	0.186
–	2 x NPN	**XMLR250M2N05**	0.186
4…20 mA	2 x PNP	**XMLR250M2P25**	0.186
4…20 mA	2 x NPN	**XMLR250M2N25**	0.186
1/4”- 18 NPT (female) fluid connection			
4…20 mA	–	**XMLR250M0T26**	0.186
4…20 mA	1 x PNP	**XMLR250M1P26**	0.186
4…20 mA	1 x NPN	**XMLR250M1N26**	0.186
0…10 V	1 x PNP	**XMLR250M1P76**	0.186
–	2 x PNP	**XMLR250M2P06**	0.186
–	2 x NPN	**XMLR250M2N06**	0.186
SAE 7/16-20UNF-2B (female) fluid connection			
–	2 x PNP	**XMLR250M2P09**	0.212
–	2 x NPN	**XMLR250M2N09**	0.212

0 to 400 bar (0 to 5800 psi)

Maximum permissible accidental pressure: 1200 bar, destruction pressure: 2400 bar

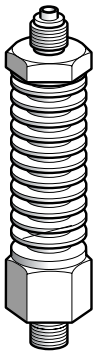
Analogue output type	Solid-state output type	Reference	Weight kg
G 1/4 DIN 3852-Y (female) fluid connection			
4…20 mA	–	**XMLR400M0T25**	0.186
0…10 V	–	**XMLR400M0T75**	0.186
4…20 mA	1 x PNP	**XMLR400M1P25**	0.186
4…20 mA	1 x NPN	**XMLR400M1N25**	0.186
0…10 V	1 x PNP	**XMLR400M1P75**	0.186
0…10 V	1 x NPN	**XMLR400M1N75**	0.186
–	2 x PNP	**XMLR400M2P05**	0.186
–	2 x NPN	**XMLR400M2N05**	0.186
4…20 mA	2 x PNP	**XMLR400M2P25**	0.186
4…20 mA	2 x NPN	**XMLR400M2N25**	0.186
1/4”- 18 NPT (female) fluid connection			
4…20 mA	–	**XMLR400M0T26**	0.186
4…20 mA	1 x PNP	**XMLR400M1P26**	0.186
4…20 mA	1 x NPN	**XMLR400M1N26**	0.186
–	2 x PNP	**XMLR400M2P06**	0.186
–	2 x NPN	**XMLR400M2N06**	0.186

0 to 600 bar (0 to 8700 psi)

Maximum permissible accidental pressure: 1500 bar, minimum destruction pressure: 2500 bar

Analogue output type	Solid-state output type	Reference	Weight kg
Fluid connection G 1/4 (female)			
4…20 mA	–	**XMLR600M0T25**	0.186
0…10 V	–	**XMLR600M0T75**	0.186
4…20 mA	1 x PNP	**XMLR600M1P25**	0.186
0…10 V	1 x PNP	**XMLR600M1P75**	0.186
–	2 x PNP	**XMLR600M2P05**	0.186

Electronic pressure sensors
OsiSense XM
XMLR pressure sensors with 4-digit display
Accessories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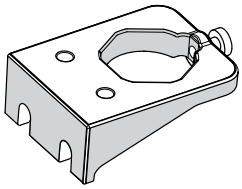
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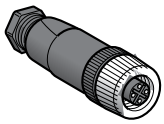
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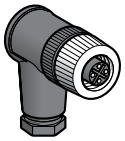
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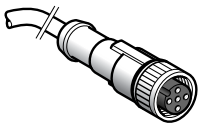
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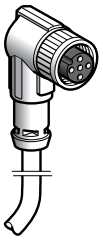
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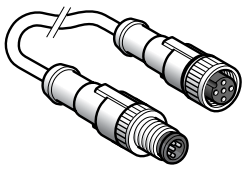
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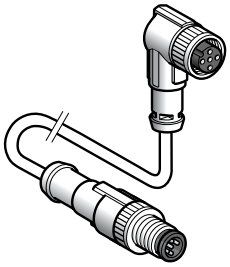
XZCR15120●●●●

Accessories

Description	For use with	Reference	Weight kg
Cooler with G 1/4 A (male) connections Usage temperature: 150°C max. for the fluid, 50°C for the ambient air	**XMLR●●●●●●●5**	**XMLZL009**	0.370
Fixing bracket aluminium	**XMLR●●●**	**XMLZL017**	0.029

Connectors

Description	For use with	Type	Reference	Weight kg
M12 female connector, 4-pin Metal clamping ring	**XMLR●●●●0T●● XMLR●●●●1P●● XMLR●●●●1N●● XMLR●●●●2P0● XMLR●●●●2N0●**	Straight	**XZCC12FDM40B**	0.020
		Elbowed	**XZCC12FCM40B**	0.020
M12 female connector, 5-pin Metal clamping ring	**XMLR●●●●2P2● XMLR●●●●2N2●**	Straight	**XZCC12FDM50B**	0.020
		Elbowed	**XZCC12FCM50B**	0.020

Pre-wired connectors and jumper cables

Description	For use with	Type	Length of cable	Reference	Weight
			m		kg
Pre-wired M12, 4-pin connectors Metal clamping ring PUR cable	**XMLR●●●●0T●● XMLR●●●●1●●● XMLR●●●●2P0● XMLR●●●●2N0●**	Straight	2	**XZCP1141L2**	0.090
			5	**XZCP1141L5**	0.190
			10	**XZCP1141L10**	0.370
		Elbowed	2	**XZCP1241L2**	0.090
			5	**XZCP1241L5**	0.190
			10	**XZCP1241L10**	0.370
Pre-wired M12, 5-pin connectors PVC cable	**XMLR●●●●2P2● XMLR●●●●2N2●**	Straight female connector	2	**XZCPV11V12L2**	0.100
			5	**XZCPV11V12L5**	0.200
			10	**XZCPV11V12L10**	0.400
		Elbowed female connector	2	**XZCPV12V12L2**	0.100
			5	**XZCPV12V12L5**	0.200
			10	**XZCPV12V12L10**	0.400
M12-M12 4-pin jumper cables PUR cable	**XMLR●●●●0T●● XMLR●●●●1●●● XMLR●●●●2P0● XMLR●●●●2N0●**	Straight female connector	1	**XZCR1511041C1**	0.100
			2	**XZCR1511041C2**	0.100
		Elbowed female connector	1	**XZCR1512041C1**	0.100
			2	**XZCR1512041C2**	0.100
M12-M12 5-pin jumper cables PUR cable	**XMLR●●●●2P2● XMLR●●●●2N2●**	Straight female connector	1	**XZCR1511064D1**	0.100
			2	**XZCR1511064D2**	0.100
		Elbowed female connector	1	**XZCR1512064D1**	0.100
			2	**XZCR1512064D2**	0.100

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