

# XMLR010G2P09

Electronic pressure sensors, Pressure sensors  
XM, XMLR 10 bar, SAE 7/16 20UNF 2 B, 24  
VDC, 2xPNP, M12



## Main

|                                         |                                                                                                                                                                      |
|-----------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Range of product                        | OsiSense XM                                                                                                                                                          |
| Product or Component Type               | Electronic pressure sensors                                                                                                                                          |
| Pressure sensor type                    | Pressure transmitter                                                                                                                                                 |
| Pressure switch type of operation       | Pressure switch with 2 switching outputs                                                                                                                             |
| Device short name                       | XMLR                                                                                                                                                                 |
| Pressure Rating                         | 145 Psi (999.74 kPa)<br>145.04 psi (10 bar)                                                                                                                          |
| Maximum permissible accidental pressure | 580.15 Psi (40 bar)<br>4 MPa<br>580 psi (3998.96 kPa)                                                                                                                |
| Destruction pressure                    | 580 Psi (3998.96 kPa)<br>580.15 Psi (40 bar)<br>4 MPa                                                                                                                |
| Controlled fluid                        | Fresh water 32...176 °F (0...80 °C))<br>Air -4...176 °F (-20...80 °C))<br>Hydraulic oil -4...176 °F (-20...80 °C))<br>Refrigeration fluid -4...176 °F (-20...80 °C)) |
| Fluid connection type                   | SAE 7/16-20UNF-2B (female)                                                                                                                                           |
| [Us] rated supply voltage               | 24 V DC SELV 17...33 V)                                                                                                                                              |

## Complementary

|                                                         |                                                                                               |
|---------------------------------------------------------|-----------------------------------------------------------------------------------------------|
| Current Consumption                                     | <= 50 mA                                                                                      |
| Electrical connection                                   | Male connector M12, 4 pins                                                                    |
| Type of output signal                                   | Discrete                                                                                      |
| Discrete output type                                    | Solid state PNP, 2 NO/NC programmable                                                         |
| Maximum switching current                               | 250 mA                                                                                        |
| Contacts type and composition                           | 2 NO/NC programmable                                                                          |
| Scale type                                              | Fixed differential                                                                            |
| Maximum voltage drop                                    | 2 V                                                                                           |
| Adjustable range of switching point on rising pressure  | 0.08...1 MPa<br>11.60...145.04 Psi (0.8...10 bar)<br>11.6...145 psi (79.98...999.74 kPa)      |
| Adjustable range of switching point on falling pressure | 7.25...140.69 Psi (0.5...9.7 bar)<br>7.25...141 Psi (49.99...972.16 kPa)<br>0.05...0.97 MPa   |
| Minimum differential travel                             | 4.35 Psi (29.99 kPa)<br>4.35 Psi (30 kPa)<br>4.35 psi (0.3 bar)                               |
| Materials in contact with fluid                         | Fluorocarbon FKM (Viton)<br>Ceramic<br>316L stainless steel                                   |
| Front material                                          | Polyester                                                                                     |
| Housing material                                        | Polyacrylamide<br>316L stainless steel                                                        |
| Operating position                                      | Any position, but disposals can falsified the measurement in case of upside down mounting     |
| Protection Type                                         | Overvoltage protection<br>Short-circuit protection<br>Reverse polarity<br>Overload protection |

|                                          |                                                                                                                                                                                                                                                                                                                                                                  |
|------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Response time on output                  | <= 5 ms discrete output                                                                                                                                                                                                                                                                                                                                          |
| Switching output time delay              | 0...50 s in steps of 1 second                                                                                                                                                                                                                                                                                                                                    |
| Display Type                             | 4 digits 7 segments                                                                                                                                                                                                                                                                                                                                              |
| Local signalling                         | For light ON when switch is actuated 2 LEDs (yellow)                                                                                                                                                                                                                                                                                                             |
| Display response time type               | Fast 50 ms<br>Normal 200 ms<br>Slow 600 ms                                                                                                                                                                                                                                                                                                                       |
| Maximum delay first up                   | 300 ms                                                                                                                                                                                                                                                                                                                                                           |
| Overall accuracy                         | <= 1 % of the measuring range                                                                                                                                                                                                                                                                                                                                    |
| Measurement accuracy on switching output | <= 0.6 % of the measuring range                                                                                                                                                                                                                                                                                                                                  |
| Repeat accuracy                          | <= 0.2 % of the measuring range                                                                                                                                                                                                                                                                                                                                  |
| Drift of the sensitivity                 | +/- 0.03 % of measuring range/°C                                                                                                                                                                                                                                                                                                                                 |
| Drift of the zero point                  | +/- 0.1 % of measuring range/°C                                                                                                                                                                                                                                                                                                                                  |
| Display Accuracy                         | <= 1 % of the measuring range                                                                                                                                                                                                                                                                                                                                    |
| Mechanical durability                    | 10000000 cycles                                                                                                                                                                                                                                                                                                                                                  |
| Depth                                    | 1.65 in (42 mm)                                                                                                                                                                                                                                                                                                                                                  |
| Height                                   | 3.94 in (100 mm)                                                                                                                                                                                                                                                                                                                                                 |
| Width                                    | 1.61 in (41 mm)                                                                                                                                                                                                                                                                                                                                                  |
| Product Weight                           | 0.46 lb(US) (0.21 kg)                                                                                                                                                                                                                                                                                                                                            |
| [Uimp] rated impulse withstand voltage   | 0.5 kV DC                                                                                                                                                                                                                                                                                                                                                        |
| Electromagnetic compatibility            | Susceptibility to electromagnetic fields 10 V/m 80...2000 MHz EN/IEC 61000-4-3<br>Immunity to conducted RF disturbances 10 V 0.15...80 MHz EN/IEC 61000-4-6<br>Surge immunity test 1 kV EN/IEC 61000-4-5<br>Electrical fast transient/burst immunity test 2 kV EN/IEC 61000-4-4<br>Electrostatic discharge immunity test 8 kV air, 4 kV contact EN/IEC 61000-4-2 |

## Environment

|                                       |                                                                    |
|---------------------------------------|--------------------------------------------------------------------|
| Marking                               | CE                                                                 |
| Product Certifications                | EAC<br>cULus                                                       |
| Standards                             | EN/IEC 61326-2-3<br>UL 61010-1                                     |
| Ambient Air Temperature for Operation | -4...176 °F (-20...80 °C)                                          |
| Ambient Air Temperature for Storage   | -40...176 °F (-40...80 °C)                                         |
| IP degree of protection               | IP65 conforming to EN/IEC 60529<br>IP67 conforming to EN/IEC 60529 |
| Vibration resistance                  | 20 gn 10...2000 Hz)EN/IEC 60068-2-6                                |
| Shock resistance                      | 50 gn EN/IEC 60068-2-27                                            |

## Ordering and shipping details

|                       |                                         |
|-----------------------|-----------------------------------------|
| Category              | 21551 - XMLF,XMLF,XMLG PRESSURE SENSORS |
| Discount Schedule     | DS2                                     |
| GTIN                  | 3389119610704                           |
| Nbr. of units in pkg. | 1                                       |
| Package weight(Lbs)   | 6.38 oz (181 g)                         |
| Returnability         | No                                      |
| Country of origin     | CH                                      |

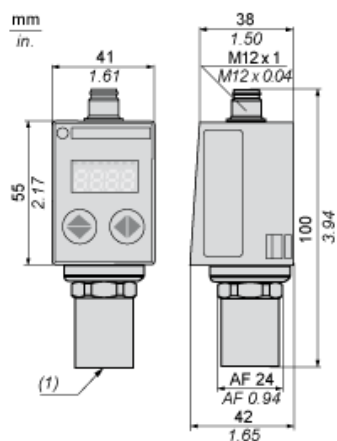
## Packing Units

|                        |                   |
|------------------------|-------------------|
| Unit Type of Package 1 | PCE               |
| Package 1 Height       | 2.56 in (6.5 cm)  |
| Package 1 width        | 2.95 in (7.5 cm)  |
| Package 1 Length       | 5.00 in (12.7 cm) |

## Offer Sustainability

|                            |                                                                                                                                                                                                                                                                                                                                                                                   |
|----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| California proposition 65  | WARNING: This product can expose you to chemicals including: Diisononyl phthalate (DINP), which is known to the State of California to cause cancer, and Di-isodecyl phthalate (DIDP), which is known to the State of California to cause birth defects or other reproductive harm. For more information go to <a href="http://www.P65Warnings.ca.gov">www.P65Warnings.ca.gov</a> |
| REACH Regulation           | <a href="#">REACH Declaration</a>                                                                                                                                                                                                                                                                                                                                                 |
| REACH free of SVHC         | Yes                                                                                                                                                                                                                                                                                                                                                                               |
| EU RoHS Directive          | Pro-active compliance (Product out of EU RoHS legal scope) <a href="#">EU RoHS Declaration</a>                                                                                                                                                                                                                                                                                    |
| Mercury free               | Yes                                                                                                                                                                                                                                                                                                                                                                               |
| RoHS exemption information | <a href="#">Yes</a>                                                                                                                                                                                                                                                                                                                                                               |

## Dimensions



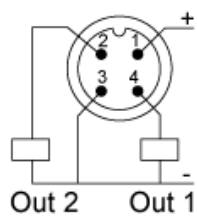
(1) Fluid entry: SAE 7/16-20UNF female

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Connections and Schema

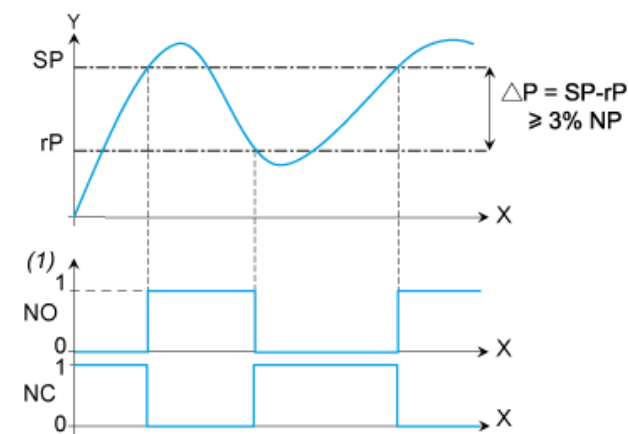
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Connector Wiring



### Switching Output Description. Hysteresis Mode

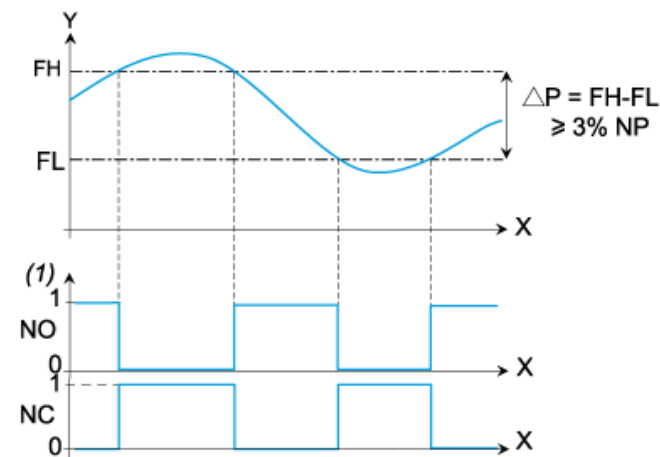
The hysteresis switching mode is typically used for the “pumping and/or emptying applications”.



X : Time  
Y : Pressure  
(1) Output  
NP : Nominal Pressure  
SP : Set point (adjustable from 8 % to 100 % NP)  
rP : Reset point (adjustable from 5 % to 97 % NP)

### Switching Output Description. Window Mode

The window switching mode is typically used for the “pressure regulation applications”

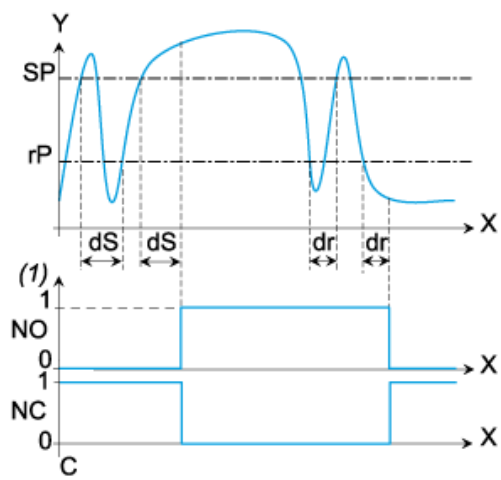


X : Time  
Y : Pressure  
(1) Output  
NP : Nominal pressure  
FH : High switching point (adjustable from 8 % to 100 % NP)  
FL : Low switching point (adjustable from 5 % to 97 % NP)

### Switching Output Description. Time Delay

The Time Delay is typically used to filter out the fast pressure transients.

The output only switches after a time “dS” and “dR” adjustable from 0 to 50 seconds.



X : Time  
 Y : Pressure  
 (1) Output  
 SP : Set point  
 rP : Reset point  
 dS : Time delay on the set point  
 dr : Time delay on the reset point

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