

# XMLRM01G1N75

Electronic pressure sensors, Pressure sensors XM, XMLR -1 bar, G 1/4, 24 VDC, 0...10 V, NPN, 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 transmitter with 1 switching output   |
| Device short name                       | XMLR   |
| Pressure rating                         | -99.97 KPa<br>-1 bar   |
| Maximum permissible accidental pressure | 3 Bar<br>296.47 KPa<br>300 kPa   |
| Destruction pressure                    | 296.47 KPa<br>300 KPa<br>3 bar   |
| Controlled fluid                        | Fresh water (0...80 °C)<br>Air (-20...80 °C)<br>Hydraulic oil (-20...80 °C)<br>Refrigeration fluid (-20...80 °C) |
| Fluid connection type                   | G 1/4 (female) conforming to DIN 3852-Y  |
| [Us] rated supply voltage               | 24 V DC SELV (voltage limits: 17...33 V)   |

## Complementary

|   |   |
|---|---|
| Current consumption                                     | <= 50 mA  |
| Electrical connection                                   | Male connector M12, 4 pins  |
| Analogue output function                                | 0...10 V  |
| Type of output signal                                   | Analogue + discrete   |
| Analogue output function                                | 0...10 V  |
| Discrete output type                                    | Solid state NPN, NO/NC programmable   |
| Maximum switching current                               | 250 mA  |
| Contacts type and composition                           | NO/NC programmable  |
| Scale type  | Fixed differential  |
| Maximum voltage drop                                    | 2 V   |
| Adjustable range of switching point on rising pressure  | -99.97...-8.00 KPa<br>-1...-0.08 Bar<br>-100...-8 kPa                                     |
| Adjustable range of switching point on falling pressure | -97.22...-5.03 KPa<br>-0.97...-0.05 Bar<br>-97...5 kPa                                    |
| Minimum differential travel                             | 3 KPa<br>2.96 KPa<br>0.03 bar   |
| Materials in contact with fluid                         | Fluorocarbon FKM (Viton)<br>Ceramic<br>316L stainless steel                               |
| Front material  | Polyester   |
| Housing material  | 316L stainless steel<br>Polyacrylamide  |
| Operating position                                      | Any position, but disposals can falsified the measurement in case of upside down mounting |

The information provided in this documentation contains general descriptions and/or technical characteristics of the performance of the products contained herein. This documentation is not intended as a substitute for and is not to be used for determining suitability or reliability of these products for specific user applications. It is the duty of any such user or integrator to perform the appropriate and complete risk analysis, evaluation and testing of the products with respect to the relevant specific application or use thereof. Neither Schneider Electric Industries SAS nor any of its affiliates or subsidiaries shall be responsible or liable for misuse of the information contained herein.

|  |   |
|--|---|
| Protection type                          | Overload protection<br>Reverse polarity<br>Overvoltage protection<br>Short-circuit protection   |
| Response time on output                  | <= 10 ms for analog output<br><= 5 ms for discrete output   |
| Switching output time delay              | 0...50 s in steps of 1 second   |
| Display type                             | 4 digits 7 segments   |
| Local signalling                         | 1 LED (yellow) for light ON when switch is actuated   |
| 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   |
| Linearity error on analogue output       | <= 0.5 % of the measuring range   |
| Hysteresis on analogue output            | <= 0.2 % 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                                    | 42 mm   |
| Height                                   | 93 mm   |
| Width                                    | 41 mm   |
| Net weight                               | 0.19 kg   |
| [Uimp] rated impulse withstand voltage   | 0.5 kV DC   |
| Electromagnetic compatibility            | Susceptibility to electromagnetic fields: 10 V/m 80...2000 MHz conforming to EN/IEC 61000-4-3<br>Immunity to conducted RF disturbances: 10 V 0.15...80 MHz conforming to EN/IEC 61000-4-6<br>Surge immunity test: 1 kV conforming to EN/IEC 61000-4-5<br>Electrical fast transient/burst immunity test: 2 kV conforming to EN/IEC 61000-4-4<br>Electrostatic discharge immunity test: 8 kV air, 4 kV contact conforming to EN/IEC 61000-4-2 |

## Environment

|                                       |  |
|---------------------------------------|--|
| Marking                               | CE   |
| Product certifications                | EAC<br>CULus   |
| Standards                             | UL 61010-1<br>EN/IEC 61326-2-3                                     |
| Ambient air temperature for operation | -20...80 °C  |
| Ambient air temperature for storage   | -40...80 °C  |
| IP degree of protection               | IP65 conforming to EN/IEC 60529<br>IP67 conforming to EN/IEC 60529 |
| Vibration resistance                  | 20 gn (f= 10...2000 Hz) conforming to EN/IEC 60068-2-6             |
| Shock resistance                      | 50 gn conforming to EN/IEC 60068-2-27                              |

## Packing Units

|                              |         |
|------------------------------|---------|
| Unit Type of Package 1       | PCE     |
| Number of Units in Package 1 | 1       |
| Package 1 Weight             | 181 g   |
| Package 1 Height             | 6.5 cm  |
| Package 1 width              | 7.5 cm  |
| Package 1 Length             | 12.7 cm |

## Offer Sustainability

|                            |  |
|----------------------------|--|
| 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



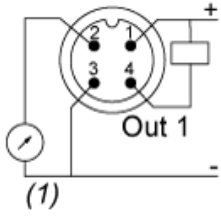
(1) Fluid entry: G 1/4 A female

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Connections and Schema

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Connector Wiring



(1) I Out or V Out

### Analogue Output Description

Analogue Output Signal



X : Pressure

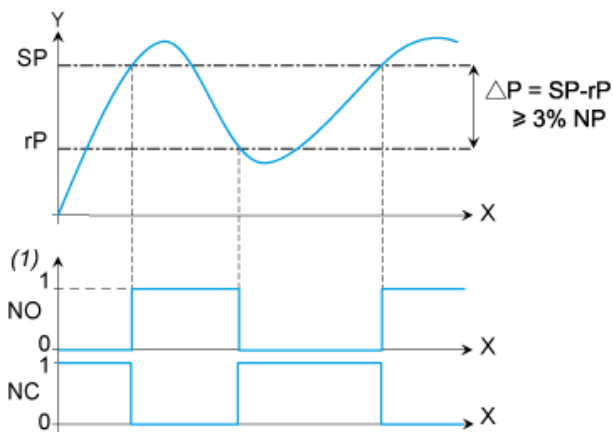
Y : Analogue output signal

(1) An offset of +/-5% of nominal pressure can be compensated (with Cof Configuration menu. Cof: Offset Compensation)

(2) The Analogue curve can be adjusted from -25% to +25% of nominal pressure (with AEP Configuration menu. AEP: analogue end point).

### 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