

# XMLRM01G2P25

Electronic pressure sensors, Pressure sensors  
XM, XMLR -1 bar, G 1/4, 24 VDC, 4...20 mA,  
2xPNP, M12



## Main

|                                         |                                                                                                                  |
|-----------------------------------------|------------------------------------------------------------------------------------------------------------------|
| Range of product                        | Telemecanique Pressure sensors XM                                                                                |
| Product or component type               | Electronic pressure sensors                                                                                      |
| Pressure sensor type                    | Pressure transmitter                                                                                             |
| Pressure switch type of operation       | Pressure transmitter with 2 switching outputs                                                                    |
| 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, 5 pins                                                                |
| Analogue output function                                | 4...20 mA                                                                                 |
| Type of output signal                                   | Analogue + discrete                                                                       |
| Analogue output function                                | 4...20 mA                                                                                 |
| 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  | -99.97...-8.00 KPa<br>-100...-8 KPa<br>-1...-0.08 bar                                     |
| Adjustable range of switching point on falling pressure | -97...5 KPa<br>-97.22...-5.03 KPa<br>-0.97...-0.05 bar                                    |
| Minimum differential travel                             | 2.96 KPa<br>0.03 Bar<br>3 kPa                                                             |
| Materials in contact with fluid                         | Fluorocarbon FKM (Viton)<br>316L stainless steel<br>Ceramic                               |
| 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 |

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|                                          |                                                                                                                                                                                                                                                                                                                                                                                                                              |
|------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Protection type                          | Overload protection<br>Short-circuit protection<br>Overvoltage protection<br>Reverse polarity                                                                                                                                                                                                                                                                                                                                |
| 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                         | 2 LEDs (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 IEC 61000-4-3<br>Immunity to conducted RF disturbances: 10 V 0.15...80 MHz conforming to IEC 61000-4-6<br>Surge immunity test: 1 kV conforming to IEC 61000-4-5<br>Electrical fast transient/burst immunity test: 2 kV conforming to IEC 61000-4-4<br>Electrostatic discharge immunity test: 8 kV air, 4 kV contact conforming to IEC 61000-4-2 |

## Environment

|                                       |                                                              |
|---------------------------------------|--------------------------------------------------------------|
| Marking                               | CE                                                           |
| Product certifications                | cULus                                                        |
| Standards                             | UL 61010-1<br>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 IEC 60529<br>IP67 conforming to IEC 60529 |
| Vibration resistance                  | 20 gn (f= 10...2000 Hz) conforming to IEC 60068-2-6          |
| Shock resistance                      | 50 gn conforming to IEC 60068-2-27                           |

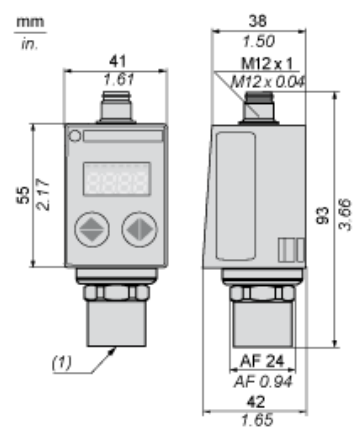
## Packing Units

|                              |         |
|------------------------------|---------|
| Unit Type of Package 1       | PCE     |
| Number of Units in Package 1 | 1       |
| Package 1 Height             | 6.5 cm  |
| Package 1 Width              | 7.5 cm  |
| Package 1 Length             | 12.7 cm |
| Package 1 Weight             | 181.0 g |

## 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> |
| For all Reach Rohs enquiries contact us at | <a href="mailto:sustainability@tesensors.com">sustainability@tesensors.com</a>                                                                                                                                                                                                                                                                                                    |

## Dimensions

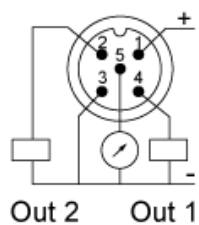


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## Connections and Schema

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### Connector Wiring



## 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