

XMLR100M1P25

Electronic pressure sensors, Pressure sensors XM, XMLR 100 bar, G 1/4, 24 VDC, 4...20 mA, PNP, M12



Main

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| 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 | 100 bar 9997.40 kPa |
| Maximum permissible accidental pressure | 300 bar 29992.19 kPa 30 MPa |
| Destruction pressure | 600 bar 60 MPa 59984.39 kPa |
| Controlled fluid | Fresh water (0...80 °C) Air (-20...80 °C) Hydraulic oil (-20...80 °C) 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

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| Current consumption | <= 50 mA |
| Electrical connection | Male connector M12, 4 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, NO/NC programmable |
| Maximum switching current | 250 mA |
| Contacts type and composition | NO/NC programmable |
| Scale type | Fixed differential |
| Maximum voltage drop | 2 V |

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| Adjustable range of switching point on rising pressure | 799.79...9997.40 kPa 0.8...10 MPa 8...100 bar |
| Adjustable range of switching point on falling pressure | 5...97 bar 499.87...9700.92 kPa 0.5...9.7 MPa |
| Minimum differential travel | 299.92 kPa 3 bar 0.3 MPa |
| Materials in contact with fluid | 316L stainless steel |
| Front material | Polyester |
| Housing material | Polyacrylamide 316L stainless steel |
| Operating position | Any position, but disposals can falsified the measurement in case of upside down mounting |
| Protection type | Short-circuit protection Reverse polarity Overload protection Overvoltage protection |
| Response time on output | <= 10 ms for analog output <= 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 Normal 200 ms 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 | 88 mm |
| Width | 41 mm |
| Net weight | 0.186 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 Immunity to conducted RF disturbances: 10 V 0.15...80 MHz conforming to EN/IEC 61000-4-6 Surge immunity test: 1 kV conforming to EN/IEC 61000-4-5 Electrical fast transient/burst immunity test: 2 kV conforming to EN/IEC 61000-4-4 Electrostatic discharge immunity test: 8 kV air, 4 kV contact conforming to EN/IEC 61000-4-2 |

Environment

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| Marking | CE |
| Product certifications | EAC CULus |
| Standards | EN/IEC 61326-2-3 UL 61010-1 |
| 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 IP67 conforming to EN/IEC 60529 |
| Vibration resistance | 20 gn (f= 10...2000 Hz) conforming to EN/IEC 60068-2-6 |

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| Shock resistance | 50 gn conforming to EN/IEC 60068-2-27 |
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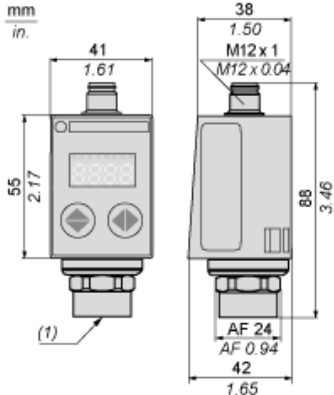
Packing Units

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|------------------------------|---------|
| Unit Type of Package 1 | PCE |
| Number of Units in Package 1 | 1 |
| Package 1 Weight | 184 g |
| Package 1 Height | 6.5 cm |
| Package 1 width | 7.5 cm |
| Package 1 Length | 13 cm |
| Unit Type of Package 2 | S02 |
| Number of Units in Package 2 | 20 |
| Package 2 Weight | 4.02 kg |
| Package 2 Height | 15 cm |
| Package 2 width | 30 cm |
| Package 2 Length | 40 cm |

Offer Sustainability

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| RECh Regulation | RECh Declaration |
| RECh free of SVHC | Yes |
| EU RoHS Directive | Pro-active compliance (Product out of EU RoHS legal scope) EU RoHS Declaration |
| Mercury free | Yes |
| RoHS exemption information | Yes |
| 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 www.P65Warnings.ca.gov |

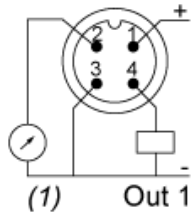
Dimensions



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

Connections and Schema

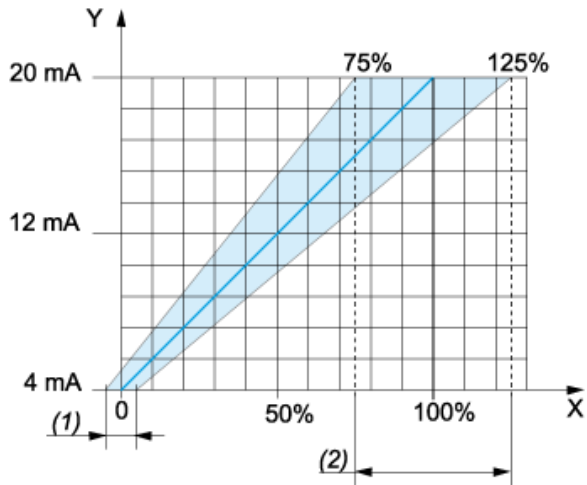
Connector Wiring



(1) I Out or V Out

Analogue Output Description

Analogue Output Signal



X : Pressure

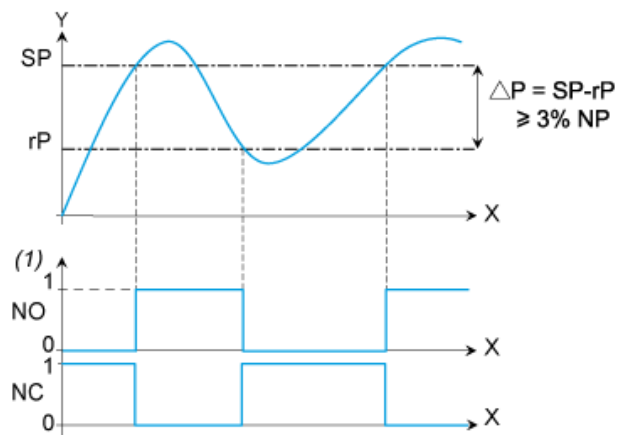
Y : Analogue output signal

(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

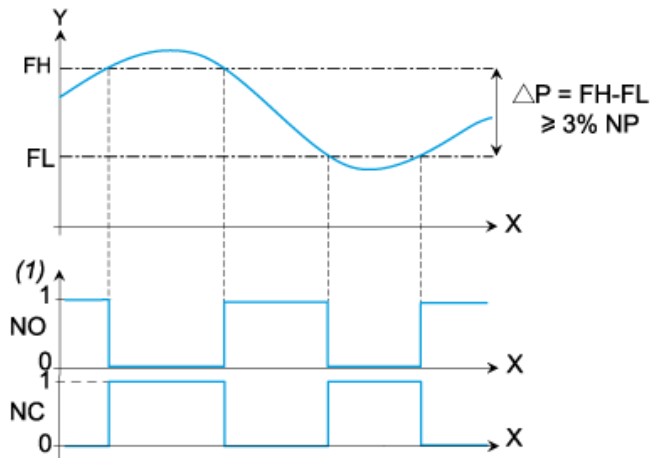
The hysteresis switching mode is typically used for the “pumping and/or emptying applications”.



- 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