



## 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 sensor size                    | -14.5 psi (-99.97 kPa)<br>-14.50 psi (-1 bar)                                                                                                                        |
| Maximum permissible accidental pressure | 43.51 psi (3 bar)<br>43 psi (296.47 kPa)<br>43.51 psi (300 kPa)                                                                                                      |
| Destruction pressure                    | 43 psi (296.47 kPa)<br>43.51 psi (300 kPa)<br>43.51 psi (3 bar)                                                                                                      |
| 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                   | G 1/4 (female) DIN 3852-Y                                                                                                                                            |
| [Us] rated supply voltage               | 24 V DC SELV 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 | -14.5...-1.16 psi (-99.97...-8.00 kPa)<br>-14.50...-1.16 psi (-1...-0.08 bar) |

|                                                         |                                                                                                                                                                                                                                                                                                                                                                  |
|---------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                         | -14.50...-1.16 psi (-100...-8 kPa)                                                                                                                                                                                                                                                                                                                               |
| Adjustable range of switching point on falling pressure | -14.1...-0.73 psi (-97.22...-5.03 kPa)<br>-14.07...-0.73 psi (-0.97...-0.05 bar)<br>-14.07...0.73 psi (-97...5 kPa)                                                                                                                                                                                                                                              |
| Minimum differential travel                             | 0.44 psi (3 kPa)<br>0.43 psi (2.96 kPa)<br>0.44 psi (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                                                                                                                                                                                                                                                                        |
| Protection type                                         | Overload protection<br>Reverse polarity<br>Overvoltage protection<br>Short-circuit protection                                                                                                                                                                                                                                                                    |
| Response time on output                                 | <= 10 ms analog output<br><= 5 ms discrete output                                                                                                                                                                                                                                                                                                                |
| Switching output time delay                             | 0...50 s in steps of 1 second                                                                                                                                                                                                                                                                                                                                    |
| Display type                                            | 4 digits 7 segments                                                                                                                                                                                                                                                                                                                                              |
| Local signalling                                        | Light ON when switch is actuated 1 LED 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                                                                                                                                                                                                                                                                                                                                    |
| 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                                                   | 1.65 in (42 mm)                                                                                                                                                                                                                                                                                                                                                  |
| Height                                                  | 3.66 in (93 mm)                                                                                                                                                                                                                                                                                                                                                  |
| Width                                                   | 1.61 in (41 mm)                                                                                                                                                                                                                                                                                                                                                  |
| Net weight                                              | 0.42 lb(US) (0.19 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                             | UL 61010-1<br>EN/IEC 61326-2-3                       |
| 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 EN/IEC 60529 |
| Vibration resistance                  | 20 gn 10...2000 Hz)EN/IEC 60068-2-6                  |

|                  |                         |
|------------------|-------------------------|
| Shock resistance | 50 gn EN/IEC 60068-2-27 |
|------------------|-------------------------|

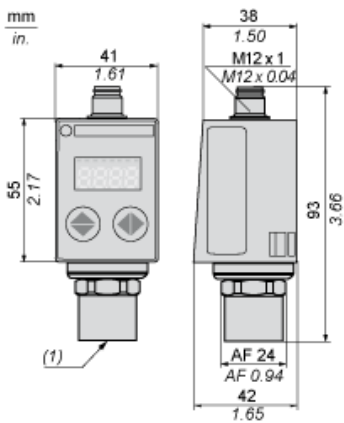
## Packing Units

|                              |                   |
|------------------------------|-------------------|
| Unit Type of Package 1       | PCE               |
| Number of Units in Package 1 | 1                 |
| Package 1 Weight             | 6.38 oz (181 g)   |
| 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

|                            |                                                                                                   |
|----------------------------|---------------------------------------------------------------------------------------------------|
| RECh Regulation            | <a href="#">RECh Declaration</a>                                                                  |
| RECh free of SVHC          | Yes                                                                                               |
| EU RoHS Directive          | Pro-active compliance (Product out of EU RoHS legal scope)<br><a href="#">EU RoHS Declaration</a> |
| Mercury free               | Yes                                                                                               |
| RoHS exemption information | <a href="#">Yes</a>                                                                               |

Dimensions



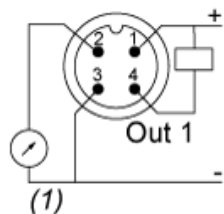
(1) Fluid entry: G 1/4 A female

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Connections and Schema

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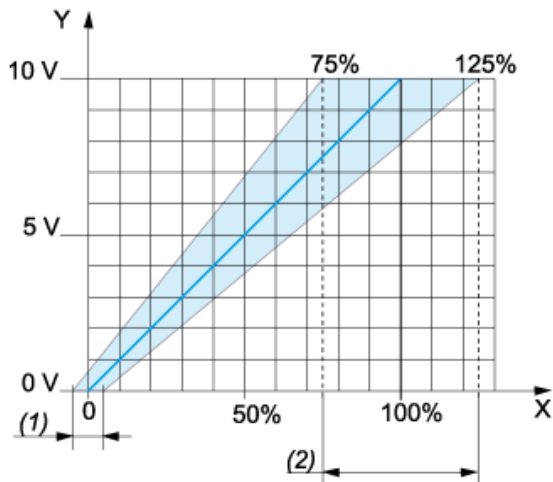
Connector Wiring



(1) I Out or V Out

Analogue Output Description

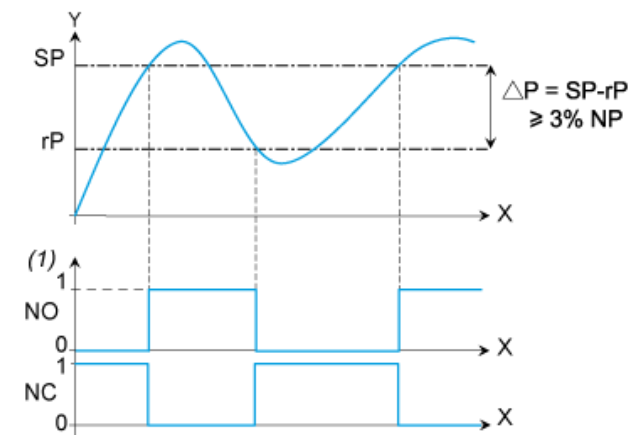
Analogue Output Signal



- 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

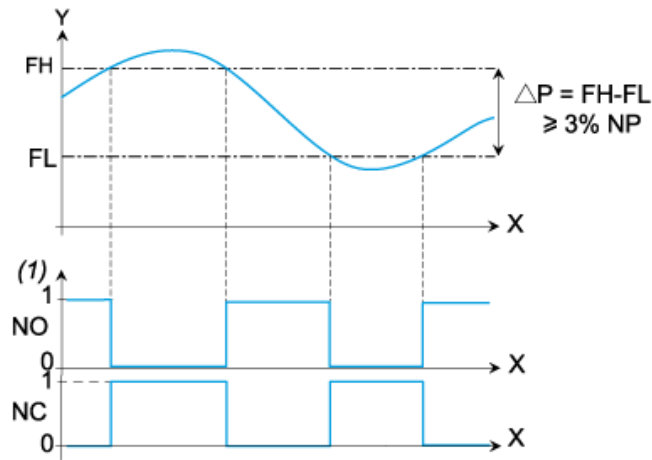
The hysteresis switching mode is typically used for the “pumping and/or emptying applications”.



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

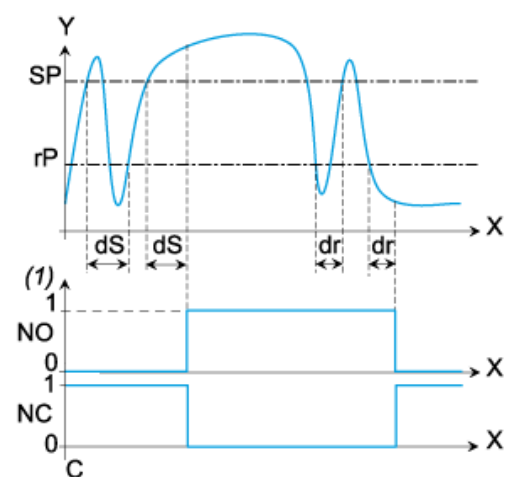
The window switching mode is typically used for the “pressure regulation applications”



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