

Electronic pressure sensors, Pressure sensors
XM, XMLR 160 bar, G 1/4, 24 VDC, 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 switch with 2 switching outputs
Device short name	XMLR
Pressure rating	15995.8 KPa 160 bar
Maximum permissible accidental pressure	47987.5 KPa 480 Bar 48 MPa
Destruction pressure	95975.02 KPa 960 Bar 96 MPa
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

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	1282.4...15995.8 KPa 1.28...16 MPa 12.8...160 bar
Adjustable range of switching point on falling pressure	0.8...15.5 MPa 8...155 Bar 799.8...15513.2 kPa
Minimum differential travel	0.48 MPa 479.9 KPa 4.8 bar
Materials in contact with fluid	316L stainless steel
Front material	Polyester
Housing material	316L stainless steel Polyacrylamide
Operating position	Any position, but disposals can falsify the measurement in case of upside down mounting
Protection type	Reverse polarity Overvoltage protection Overload protection Short-circuit protection
Response time on 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	2 LEDs (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
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 IEC 61000-4-3 Immunity to conducted RF disturbances: 10 V 0.15...80 MHz conforming to IEC 61000-4-6 Surge immunity test: 1 kV conforming to IEC 61000-4-5 Electrical fast transient/burst immunity test: 2 kV conforming to IEC 61000-4-4 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 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 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	6.600 cm
Package 1 Width	7.200 cm
Package 1 Length	12.800 cm
Package 1 Weight	186.000 g
Unit Type of Package 2	S02
Number of Units in Package 2	20
Package 2 Height	15 cm
Package 2 Width	30 cm
Package 2 Length	40 cm
Package 2 Weight	4.020 kg

Offer Sustainability

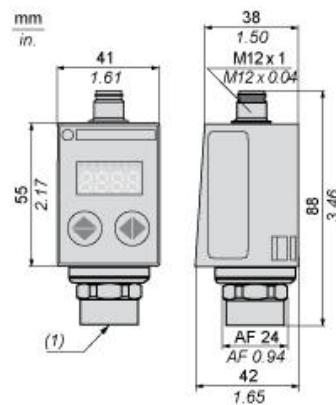
California proposition 65

WARNING: This product can expose you to chemicals including: Diisobutyl 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

For all Reach Rohs enquiries contact us at

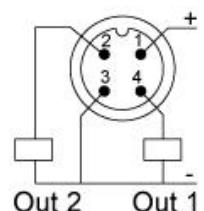
sustainability@tesensors.com

Dimensions



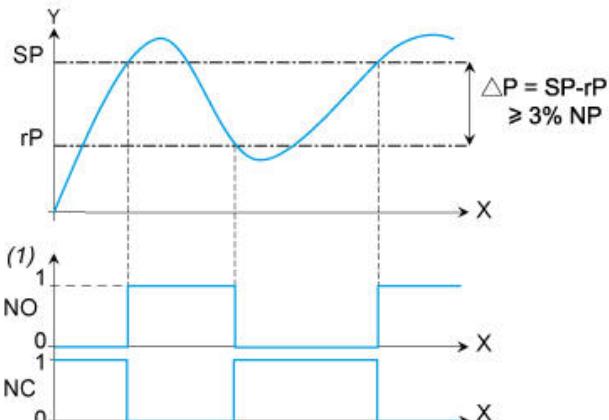
Connections and Schema

Connector Wiring



Switching Output Description. Hysteresis Mode

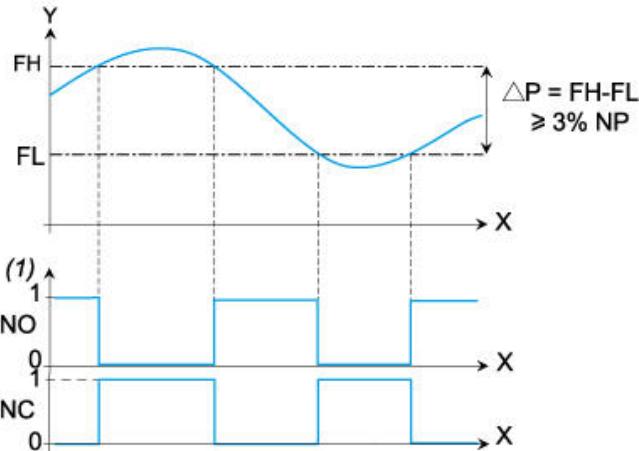
The hysteresis switching mode is typically used for the “pumping and/or emptying applications”.



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

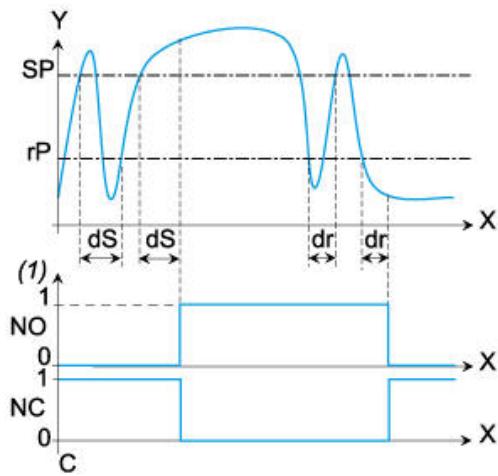
The window switching mode is typically used for the “pressure regulation applications”



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