Электромеханические датчики для контроля давления OsiSense XM

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| Product reference index | pages 106 and 10 |



Selection guide

Electromechanical sensors for pressure control OsiSense XM

| Applications | Type of installation | Control circuits | | |
|-------------------------|------------------------|---|---|--|
| | Fluids controlled | Air, water, hydraulic oils, | corrosive fluids, viscous pro | oducts |
| | Type of operation | Detection of a single threshold (fixed differential) | Regulation between 2 three | esholds (adjustable differential) |
| | | | | |
| Fluid characteristics | | Air, fresh water, corrosive f Sea water, up to 30 °C, de | fluids, viscous products, up to 1 pending on model | 60°C |
| Sizes | | - 1 bar500 bar (- 14.5 ps | i7250 psi) | |
| Dimensions of case (mm) | Width x height x depth | 35 x 68 x 75 | | 46 x 68 x 85 |
| Type of contacts | | 1 CO single-pole, snap act | ion | 2 CO single-pole, simultaneous, snap action |
| Degree of protection | | IP 66: switches with termin IP 65: switches with conne | | IP 66: switches with terminal connections |
| Electrical connection | | Connector : EN 175301-803-A (ex-E Screw terminals: 1 tapped entry M20 x 1. 1 tapped entry 1/2"-14 N | DIN 43650A), 4-pin male. 5 mm for ISO cable gland or NPT for cable gland, depending | on model. |
| Fluid connection | | G 1/4 (female) 1/4" - 18 NPTF (female) G 1¼" (female) for viscous | products | |
| Type reference | | XMLA | XMLB | XMLC |
| Pages | | 18 to 67 | | |
| Other versions | | Electromechanical pressure | e and vacuum switches with alte | ernative tapped cable entries and/ |

Control circuits Air, water, hydraulic oils, corrosive fluids, viscous products Air, hydraulic oils, corrosive fluids Dual stage switches Detection at each threshold (fixed differential)





| Air, fresh water, corrosive fluids, viscous products, up to 160°C Sea water, up to 30 °C, depending on model | Air, oils and other non corrosive fluids (- 73+ 125°C) | Oils and other fluids (- 25+ 120 °C) Only oils, including synthetic oils, (- 30+ 125 °C), depending on model | |
|--|---|--|--|
| - 1 bar500 bar (- 14.5 psi7250 psi) | 0.7 bar131 bar (10.15 psi1900 psi) | 69 bar340 bar (1000 psi4930 psi) | |
| 45 x 68 x 85 | 88 x 88 x 68 | | |
| 2 CO single-pole, staggered, snap action | 1 CO or 2 CO single-pole, snap action | | |
| IIP 66: switches with terminal connections | IP 65 | | |
| Connector : EN 175301-803-A (ex-DIN 43650A), 4-pin male. Screw terminals: 1 tapped entry M20 x 1.5 mm for ISO cable gland or 1 tapped entry 1/2"-14 NPT for cable gland, depending on model. | 1 tapped entry for n° 13 cable gland, depending on model | | |
| G 1/4 (female) 1/4" - 18 NPTF (female) G 1¼" (female) for viscous products | G 1/4 (femelle) | G 3/8 (female) | |
| XMLD | ACW | ADW | |
| 18 to 67 | 76 and 77 | 78 and 79 | |

Electromechanical pressure and vacuum switches with alternative tapped cable entries and/ or fluid entries: NPT etc. Please consult our Customer Care Centre.



2

Telemecaníque Sensors

Regulation between 2 thresholds (adjustable differential)



| G 3/8 (female) |
|----------------|
| |
| ADW |

Selection guide (continued)

Electromechanical sensors for pressure control OsiSense XM

Type of installation Applications **Control circuits** Fluids controlled Air, water Type of operation Regulation between 2 thresholds (adjustable differential) Fluid characteristics Air, fresh water, sea water (0...+ 70°C) Sizes 6 bar, 12 bar and 25 bar (87 psi, 174 psi and 362.5 psi) **Dimensions of case (mm)** Width x height x depth 57 x 78 x 97.5 External screws Setting of switching points Internal screws Type of contacts 1 CO single-pole, snap action Degree of protection IP 54 **Electrical connection** Screw terminals: 2 entries tapped for n° 13 cable gland,
one fitted with n° 13 cable gland,
one fitted with blanking plug. Fluid connection G 1/4 or 4 x G 1/4 (female), depending on model XMA Type reference XMX 85 84 Pages Electromechanical pressure switches with alternative tapped cable entries and/or fluid entries: ISO, NPT, etc. Please consult our Customer Care Centre. Other versions



| | 1300,1300NL | 11022, 1102 |
|--|---------------|-------------------|
| FTG●, FTG●NE | FSG●, FSG●NE | FYG22, FYG2 |
| G 1/4 or R 1/4 (female or male) | | |
| | | |
| 2 cable entries with grommet 2 cable entries with n° 13 cab | | |
| Screw terminals: | | |
| IP 20/IP 65 | | |
| | | |
| 2 NC snap action | | |
| | | |
| Internal screws | | |
| | | |
| 73 x 73 x 102 | 72 x 77 x 106 | 72 x 73 x 102 |
| | | |
| 4.6 bar (66.7 psi) | | 7 bar (101.5 psi) |
| | | |

(E) Telemecanique



Telemecanique

Electromechanical pressure and vacuum switches

OsiSense XM

Function

The function of pressure and vacuum switches is the control or regulation of pressure or vacuum levels in hydraulic or pneumatic systems. They transform the pressure change into a digital electrical signal when the preset switching points are reached.

Switches for power circuits

Switches with power electrical contacts, either 2-pole or 3-pole, designed for direct switching of single-phase or 3-phase motors (pumps, compressors, etc.).

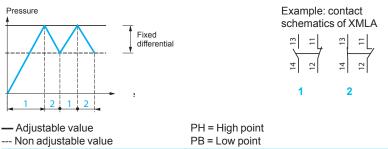
Switches for control circuits

Switches with standard electrical contacts, designed for control of contactors, relays, power valves, PLC inputs, etc.

Pressure switch operating principle

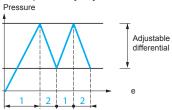
Detection of a single threshold

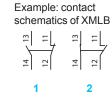
The switches for detection of a single threshold (fixed differential) have a single adjustable setting point (PH). The differential between the high and low points (PH - PB) depends upon the natural characteristics of the switch. It is not adjustable.



Regulation between 2 thresholds

The switches for regulation between 2 thresholds (adjustable differential) have both a high point setting (PH) and a low point setting (PB). Both of these points can be independently adjusted.



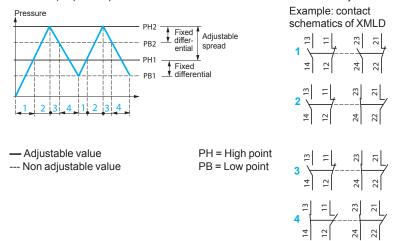


- Adjustable value

PH = High point PB = Low point

Detection of 2 thresholds

The dual stage switches, for detection at each threshold, have an adjustable high point setting for each stage (PH1 and PH2). Both of these points can be independently adjusted. For both stages, the differential between the high point and the low point (PH1 - PB1 and PH2 - PB2) depends upon the natural characteristics of the switch. It is not adjustable.



General (continued)

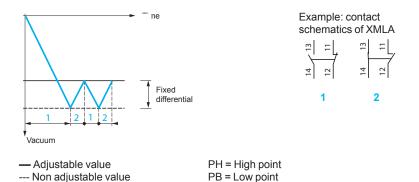
Electromechanical pressure and vacuum switches

OsiSense XM

Vacuum switch operating principle

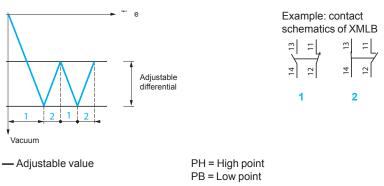
Detection of a single threshold

The switches for detection of a single threshold (fixed differential) have a single adjustable setting point (PH). The differential between the high and low points (PH - PB) depends upon the natural characteristics of the switch. It is not adjustable.



Regulation between 2 thresholds

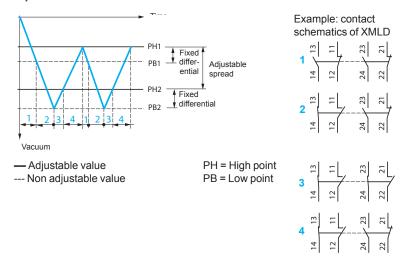
The switches for regulation between 2 thresholds (adjustable differential) have both a high point setting (PH) and a low point setting (PB). Both of these points can be independently adjusted.



Detection of 2 thresholds

The dual stage switches, for detection at each threshold, have an adjustable high point setting for each stage (PH1 and PH2). Both of these points can be independently adjusted.

For both stages, the differential between the high point and the low point (PH1 - PB1 and PH2 - PB2) depends upon the natural characteristics of the switch. It is not adjustable.





Electromechanical pressure and vacuum switches

OsiSense XM

Terminology

Operating range

The difference between the minimum low point (PB) and the maximum high point (PH) setting values.

Size

Pressure switches and vacuum-pressure switches (vacu-pressure switches) Maximum value of the operating range.

Vacuum switches

Minimum value of the operating range.

Switching point on rising pressure (PH)

Pressure switches The upper pressure setting at which the pressure switch will actuate the contacts on rising pressure.

Vacuum switches

The lower vacuum setting at which the vacuum switch will reset the contacts on rising pressure.

Switching point on falling pressure (PB)

The pressure at which the switch output changes state on falling pressure.

Switches with fixed differential

The lower point (PB) is not adjustable and is entirely dependent on the high point setting (PH) and the natural differential of the switch.

Switches with adjustable differential

The adjustable differential enables the independent setting of the lower point (PB).

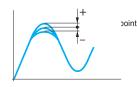
Differential

The difference between the switching point on rising pressure (PH) and the switching point on falling pressure (PB).

Spread

For dual stage switches, the spread indicates the difference between the 2 switching points on rising pressure (PH2 and PH1) and, for vacuum switches, the difference between the 2 switching points on falling pressure (PB2 and PB1).

Accuracy (switches with setting scale)

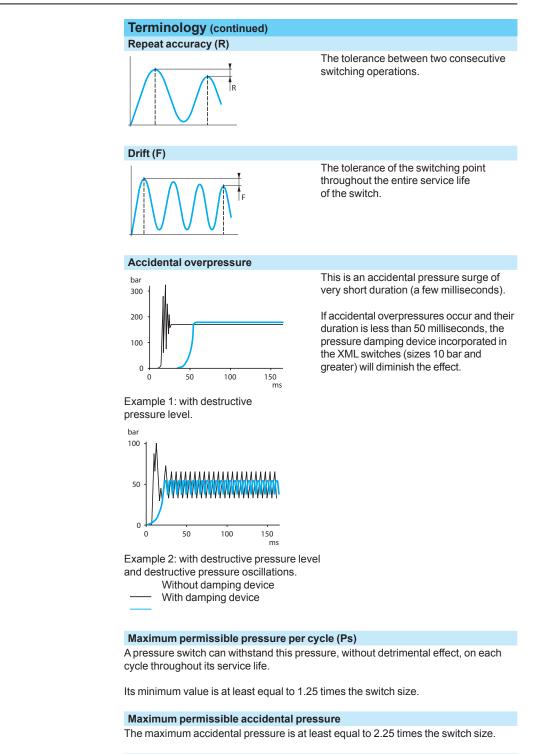


The tolerance between the point at which the switch actuates its contacts and the value indicated on the setting scale. Where very high setting accuracy is required (initial installation of the product), it is recommended to use separate measuring equipment (pressure gauge, etc.).

General (continued)

Electromechanical pressure and vacuum switches

OsiSense XM



Destruction pressure

The maximum guaranteed pressure that the switch will withstand before its destruction, i.e. bursting, rupturing, component failure, etc.

Its value is at least equal to 4.5 times the switch size.

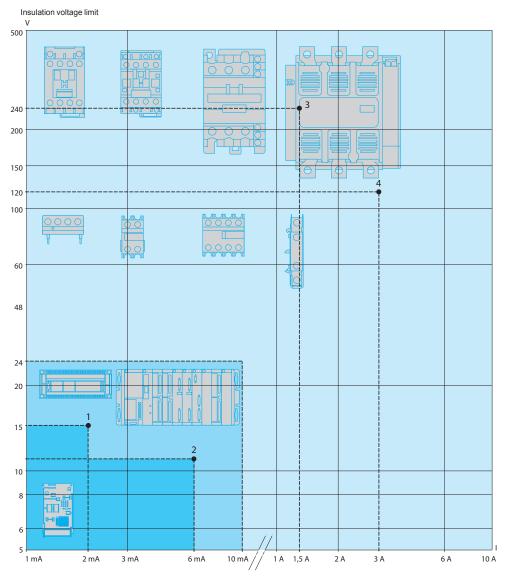


Electromechanical pressure and vacuum switches OsiSense XM

Application range of pressure and vacuum switches XML, XMA and XMX, for control circuits

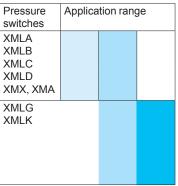
On standard loads

Continuous duty, frequent switching.





- 3 Switching capacity conforming to IEC 60947-5-1, utilisation category AC-15, DC-13 B300 240 V 1.5 A R300 250 V 0.1 A
 4 Switching capacity conforming to IEC 60047.5.1
- to IEC 60947-5-1, utilisation category AC-15, DC-13 B300 120 V 3 A R300 125 V 0.22 A PLC: Programmable Logic Controller



On small loads

The use of electromechanical pressure and vacuum switches with programmable logic controllers is becoming more predominant.

On small loads, the reliability of the switches maintain a failure rate of less than 1 for 100 million operating cycles.

Electromechanical pressure and vacuum switches

OsiSense XM

Selection of switch size

After establishing the type of switch required for the application (single threshold detection or regulation between 2 thresholds), the selection of its size will depend on the following criteria:

- □ the differential: difference between the high point (PH) and the low point (PB),
- □ the maximum pressure permissible per cycle,
- □ repeat accuracy, precision and minimum drift.

Examples of a fixed differential pressure switch selection, for detection of a single threshold

Main criterion: minimum differential

Example: for a selected high point (PH) of 7 bar





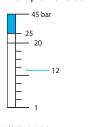


XMLA020 •••• Differential = 1 bar 35 bar 1.5

XMLA035 Differential = 2 bar

XMLA010 Differential = 0.5 bar Select an XMLA010 •••• (the lowest size)

Main criterion: tolerance to overpressures Example: for a selected high point (PH) of 12 bar



- 80 bar 45 35 12 1.5

XMLA020 ••••• Permissible accidental overpressure = 45 bar Select an XMLA035 •••• (the highest size)

XMLA035 ••••• Permissible accidental overpressure = 80 bar

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Main criterion: repeat accuracy, precision and minimum drift Example: for a selected high point (PH) of 18 bar





As a general rule, working at the upper or lower limits of the operating range should be avoided.

XMLA020

XMLA035 ••••• Adjustable from 1 to 20 bar Adjustable from 1.5 to 35 bar Select an XMLA035 ••••

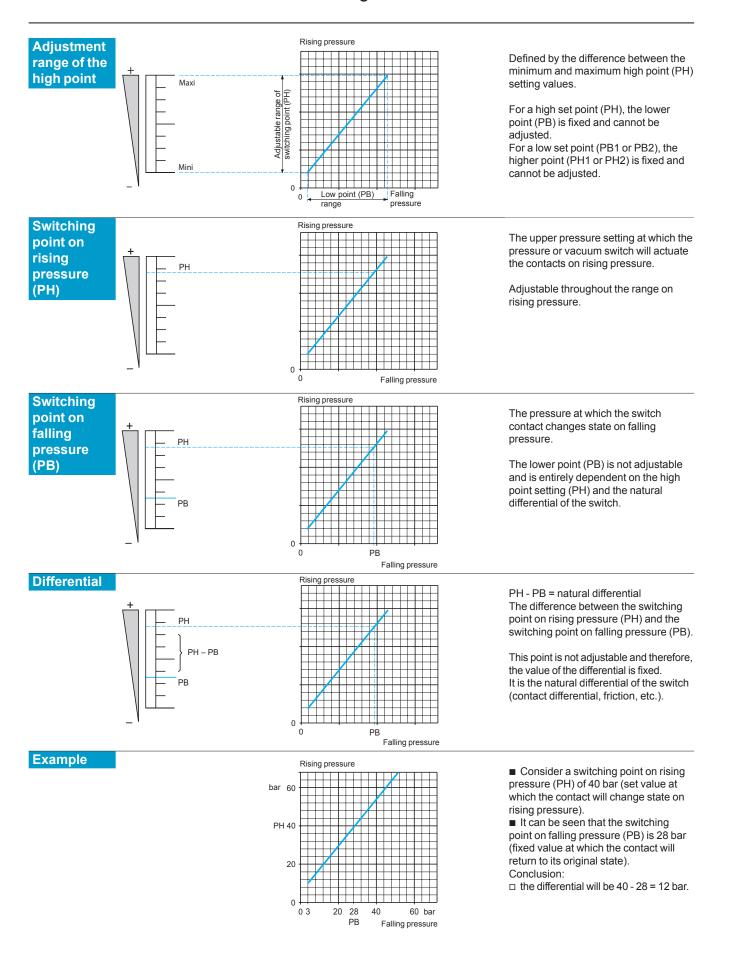
| Units of pressure conversion table | | | | | | | |
|---|--------------------------|---------------------------|--------------------------|---------------------------|------------------------|---------------------|-------------|
| | psi | kg/cm ² | bar | atm | mm Hg (Torr) | mm H ₂ O | Ра |
| 1 psi = | 1 | 0.07031 | 0.06895 | 0.06805 | 51.71 | 703.7 | 6895 |
| 1 kg/cm ² = | 14.22 | 1 | 0.98066 | 0.96784 | 735.55 | 10 000 | 98 066 |
| 1 bar = | 14.50 | 1.0197 | 1 | 0.98695 | 750.06 | 10 197 | 105 |
| 1 atm = | 14.70 | 1.0333 | 1.0132 | 1 | 760.0 | 10 333 | 101 325 |
| 1 mm Hg = (Torr) | 0.01934 | 1.360 x 10 ⁻³ | 1.333 x 10 ⁻³ | 1.316 x 10 ⁻³ | 1 | 13.59 | 133.3 |
| $1 \text{ mm H}_2\text{O} =$ | 1.421 x 10 ⁻³ | 10-4 | \sim 10 ⁻⁴ | \sim 10 ⁻⁴ | 0.07361 | 1 | \sim 9.80 |
| 1 Pa = | 1.45 x 10 ⁻⁴ | 1.0197 x 10 ⁻⁵ | 10-5 | 9.8695 x 10 ⁻⁶ | 7.5 x 10 ⁻³ | 0.10197 | 1 |
| Example: 1 bar = 14.50 psi = 10 ⁵ Pa | | | | | | | |

mpie. i 4.50 psi



Electromechanical pressure and vacuum switches

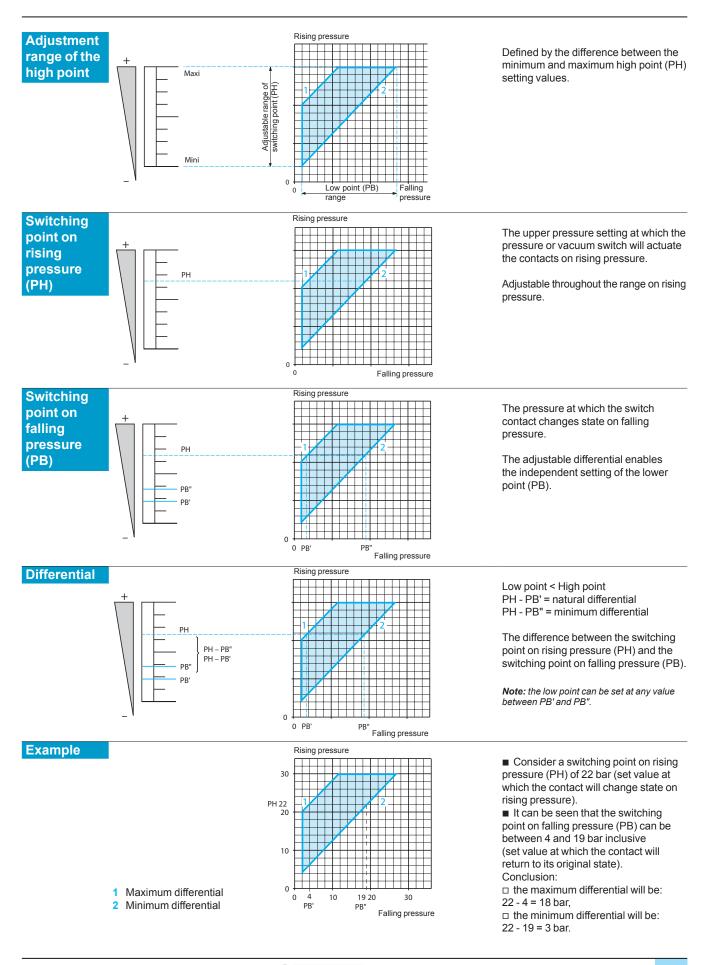
Fixed differential switches, for detection of a single threshold



Operating curves

Electromechanical pressure and vacuum switches

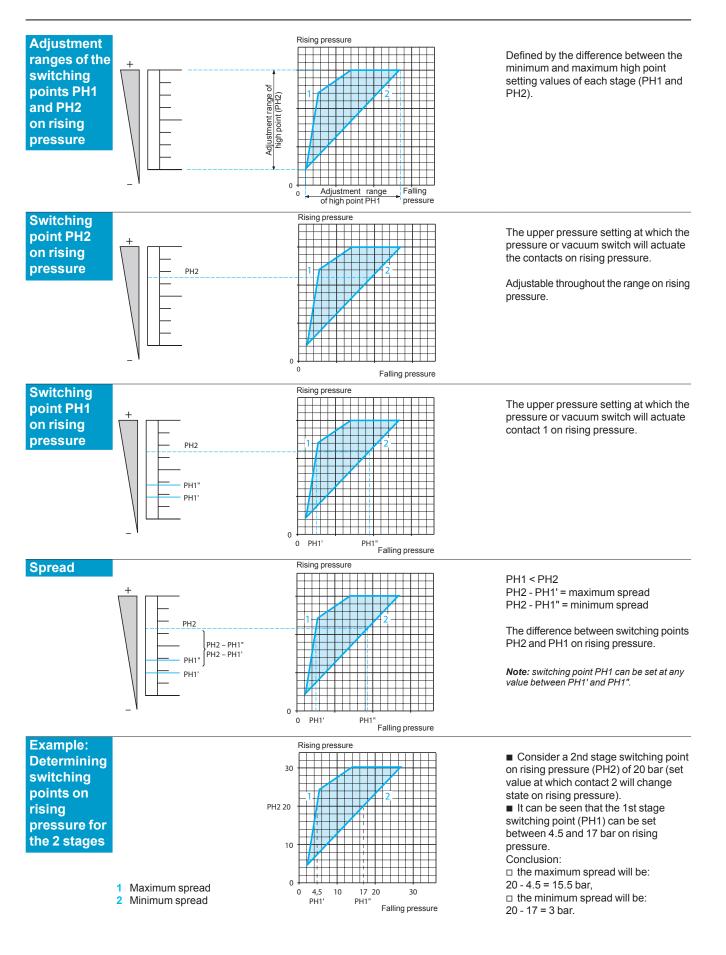
Adjustable differential switches, for regulation between 2 thresholds



Operating curves (switching points on rising pressure)

Electromechanical pressure and vacuum switches

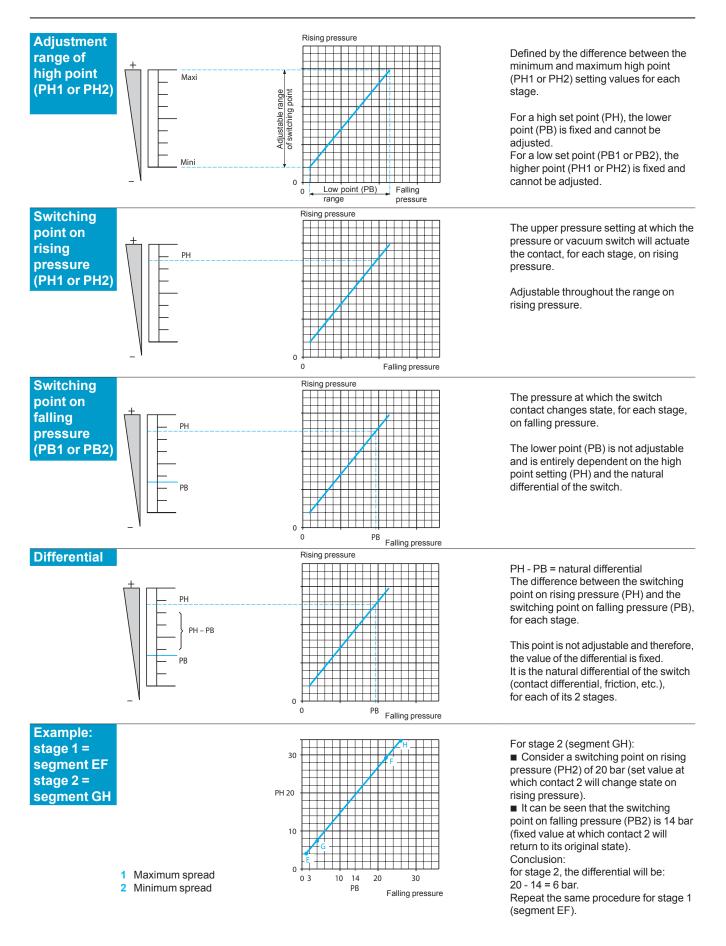
Dual stage, fixed differential switches, for detection at each threshold



Operating curves (switching points on falling pressure)

Electromechanical pressure and vacuum switches

Dual stage, fixed differential switches, for detection at each threshold





Presentation

Electromechanical pressure and vacuum switches

OsiSense XM OsiSense XML for control circuits

Presentation

OsiSense **XML** pressure and vacuum switches are designed for use in control circuits.

They are used to control the pressure of hydraulic oils, fresh water, sea water, air, steam, corrosive fluids or viscous products, up to 500 bar.

OsiSense **XMLA** pressure and vacuum switches have a fixed differential and are used for detection of a single threshold. They incorporate 1 CO single-pole contact. OsiSense **XMLB** pressure and vacuum switches have an adjustable differential and are used for regulation between 2 thresholds. They incorporate 1 CO single-pole contact.

OsiSense **XMLC** pressure and vacuum switches have an adjustable differential and are used for regulation between 2 thresholds. They incorporate 2 CO single-pole contacts.

OsiSense **XMLD** pressure and vacuum switches are dual stage switches, each stage with a fixed differential, and are used for detection at each threshold. They incorporate 2 CO single-pole contacts (one per stage).

Setting

When setting OsiSense XML pressure and vacuum switches, adjust the switching point on rising pressure (PH) first and then the switching point on falling pressure (PB).

OsiSense XMLA pressure and vacuum switches with fixed differential

Switching point on rising pressure The switching point on rising pressure (PH) is set by adjusting the red screw 1.

The switching point of hong pressure (111) is set by adjusting the res

Switching point on falling pressure

The switching point on falling pressure (PB) is not adjustable. The difference between the tripping and resetting points of the contact is the natural differential of the switch (contact differential, friction, etc.).

OsiSense XMLB and XMLC pressure and vacuum switches with adjustable differential

Switching point on rising pressure

The switching point on rising pressure (PH) is set by adjusting the red screw 1.

Switching point on falling pressure

The switching point on falling pressure (PB) is set by adjusting the green screw 2.

OsiSense XMLD dual stage pressure and vacuum switches with fixed differential for each threshold

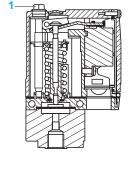
Switching point on rising pressure of stage 1 and stage 2

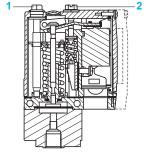
The first stage switching point on rising pressure (PH1) is set by adjusting the red screw 1.

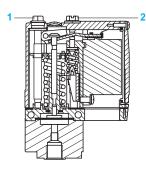
The second stage switching point on rising pressure (PH2) is set by adjusting the blue screw 2.

Switching point on falling pressure

The switching points on falling pressure (PB1 and PB2) are not adjustable. The difference between the tripping and resetting points of each contact is the natural differential of the switch (contact differential, friction, etc.).









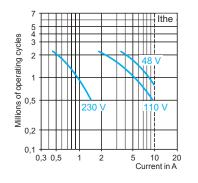
Characteristics

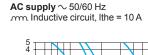
Electromechanical pressure and vacuum switches

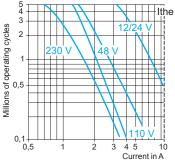
OsiSense XM OsiSense XML for control circuits

| Environment characteristics | | | |
|--|-----------------------|--|--|
| Conformity to standards | | C€, IEC/EN 60947-5-1, UL 508, CSA C22-2 no. 14 | |
| Product certifications | | All products: UL, CSA, EAC | |
| | | XMLA and XMLB: CCC, BV, LROS | |
| Protective treatment | | Standard version "TC". Special version "TH" | |
| Ambient air temperature | °C | For operation: -25+70. For storage: -40+70 | |
| Fluids or products controlled | | Hydraulic oils, air, fresh water, sea water | |
| · · · · · · · · · · · · · · · · · · · | | Steam, corrosive fluids, viscous products, depending on model | |
| Materials | | Case: zinc alloy | |
| | | Component materials in contact with fluid: see pages 72 and 73 | |
| Operating position | | All positions | |
| Vibration resistance | | 4 gn (30500 Hz) conforming to IEC 60068-2-6 except XMLeL35eeee, XMLe001eeeee and XMLBM03eeeee: 2 gn | |
| Shock resistance | | 50 gn conforming to IEC 60068-2-27 except XMLeL35eeeee, XMLe001eeeee and XMLBM03eeeee: 30 gn | |
| Electric shock protection | | Class I conforming to IEC 1140, IEC 536 and NF C 20-030 | |
| Degree of protection | | Screw terminal models: IP 66 conforming to IEC/EN 60529 Connector models: IP 65 conforming to IEC/EN 60529 | |
| Operating rate | Op. cycles/ min | Piston version switches: ≤ 60 (for temperatures > 0 °C) Diaphragm version switches: ≤ 120 (for temperatures > 0 °C) | |
| Repeat accuracy | | <2% | |
| Fluid connection | | G 1/4 (BSP female) conforming to NF E 03-005, ISO 228 or 1/4"-18 NPTF | |
| | | For sizes ≥ 300 bar, use the gasket supplied with the product. This gasket is also available as a separate part, reference XMLZL010 . | |
| Electrical connection | | Screw terminal models: ISO M20 x 1.5 or 1/2" NPT tapped entry For an entry tapped for no.13 (DIN Pg 13.5) cable gland, replace the last number of the reference with 1 (for example, XMLA010A2S12 becomes XMLA010A2S11) Connector models: EN 175301-803-A (ex-DIN 43650) connector | |
| Contact block characteristics | | | |
| Rated operational characteristics | | \sim AC-15, B300 (Ue = 240 V, Ie = 1.5 A; Ue = 120 V, Ie = 3 A) = DC-13; R300 (Ue = 250 V, Ie = 0.1 A), conforming to IEC 60947-5-1 Appendix A, EN 60947-5-1 | |
| Rated insulation voltage | | Ui = 500 V conforming to IEC/EN 60947-1 Ui = 300 V conforming to UL 508, CSA C22-2 no. 14 | |
| Rated impulse withstand voltage | | U imp = 6 kV conforming to IEC/EN 60947-1 | |
| Type of contacts | | Silver tipped contacts XMLA and XMLB: 1 CO single-pole contact (4 terminals), snap action XMLC: 2 CO single-pole contacts (8 terminals), simultaneous, snap action XMLD: 2 CO single-pole contacts (8 terminals), staggered, snap action | |
| Resistance across terminals | mΩ | < 25 conforming to NF C 93-050 method A or IEC 255-7 category 3 | |
| Terminal referencing | | Conforming to CENELEC EN 50013 | |
| Short-circuit protection | | 10 A cartridge fuse type gG (gl) | |
| Connection | | Screw clamp terminals. Minimum clamping capacity: 1 x 0.5 mm²/AWG 20 Maximum clamping capacity: 2 x 2.5 mm²/AWG 14 | |
| Electrical durability Conforming to IEC/EN 60947-5-1 Appendix C Utilisation categories AC-15 and DC-13 | | d XMLB XMLC and XMLD Iy ~ 50/60 Hz AC supply ~ 50/60 Hz ctive circuit, Ithe = 10 A mm Inductive circuit, Ithe = 10 A | |

Operating rate: 3600 operating cycles/hour Load factor: 0.5







DC supply Power broken in W

| | non op | erating cy | 000 | |
|---------|--------|------------|-----|-----|
| Voltage | ν | 24 | 48 | 120 |
| m | W | 31 | 29 | 26 |

DC supply ---Power broken in W for 5 million operating cycles

| Voltage | V | 24 | 48 | 120 |
|---------|---|----|----|-----|
| m | W | 10 | 7 | 4 |

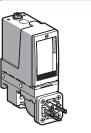


Electromechanical vacuum switches OsiSense XML

Size - 1 bar (- 14.5 psi) Fixed differential, for detection of a single threshold Switches with 1 CO single-pole contact

OsiSense XMLA vacuum switches

With setting scale



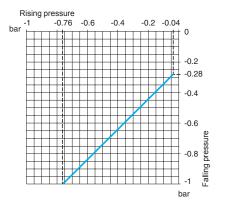


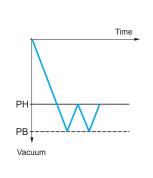
| Adjustable range of switching point (PB) (Falling pressure) | | - 0.28 1 bar (- 4.06 14.5 psi) | | | | |
|--|---|--|---|--|--|--|
| Electrical connection | | DIN connector T | Terminals | | | |
| Fluid connection | | G 1/4 (female) | G 1/4 (female) | 1/4"-18 NPTF (female) | | |
| References (1) | | | | | | |
| Fluids controlled (2) | Hydraulic oils, fresh water, air, up to + 70 °C | XMLAM01V2C11 | XMLAM01V2S12 | XMLAM01V2S13 | | |
| | Hydraulic oils, fresh water, air, corrosive fluids, up to + 160 °C Sea water, up to + 30 °C | XMLAM01T2C11 | XMLAM01T2S12 | - | | |
| Weight (kg) | | 0.685 | 0.715 | 0.715 | | |
| Complementary c | haracteristics not shown | under general chara | cteristics (page 17) | | | |
| Natural differential | At low setting (3) | 0.24 bar (3.48 psi) | | | | |
| (add to PB to give PH) | At high setting (3) | 0.24 bar (3.48 psi) | | | | |
| Maximum permissible | Per cycle | 5 bar (72.5 psi) | | | | |
| pressure | Accidental | 9 bar (130.5 psi) | | | | |
| Destruction pressure | | 18 bar (261 psi) | | | | |
| Mechanical life | | 3 x 10 ⁶ operating cycles | | | | |
| Connection | | EN 175301-803-A (ex-DIN 43650A), 4-pin male connector. For suitable female connector, see page 68 | 1 entry tapped M20 x 1.5 mm for ISO cable gland, clamping capacity 7 to 13 mm | 1 entry tapped 1/2"-14 NPT for cable gland, clamping capacity 7 to 13 mm | | |
| Vacuum switch type | | Diaphragm | | | | |
| | | (1) For 1 entry tapped for no. 13 (becomes XMLAM01V2S11). | cable gland, replace S12 with S1 | | | |

(2) For component materials of units in contact with the fluid, see pages 72 and 73.

(3) Deviation of the differential at low and high setting points for switches of the same size: ± 0.05 bar (± 0.72 psi).

Operating curves





Connection Terminal model

Connector model

Vacuum switch connector pin view

| ÷ | |
|-------------------|--|
| ⊥ [1_2] _3_ | |

 $\begin{array}{c} 1 \rightarrow 11 \text{ and } 13 \\ 2 \rightarrow 12 \\ 3 \rightarrow 14 \end{array}$

- Adjustable value

--- Non adjustable value

Other versions

For vacuum switches with alternative tapped cable entries, such as NPT, etc. please consult our Customer Care Centre.

Accessories: page 68

18

Dimensions: pages 69 to 71

Telemecanique Sensors

OsiSense XMLB vacuum switches

Electromechanical vacuum switches

OsiSense XM, OsiSense XML Size - 1 bar (- 14.5 psi) Adjustable differential, for regulation between 2 thresholds Switches with 1 CO single-pole contact

| Adjustable range of switch (Falling pressure) | hing point (PB) | - 0.14 1 bar (- 2.03 14.5 p | osi) | | |
|--|---|--|---|--|--|
| Electrical connection | | DIN connector | Terminals | | |
| Fluid connection | | G 1/4 (female) | G 1/4 (female) | 1/4"-18 NPTF (female) | |
| References (1) | | | | | |
| Fluids controlled (2) | Hydraulic oils, fresh water, air, up to + 70 °C | XMLBM02V2C11 | XMLBM02V2S12 | XMLBM02V2S13 | |
| | Hydraulic oils, fresh water, air, corrosive fluids, up to + 160 °C Sea water, up to + 30 °C | XMLBM02T2C11 | XMLBM02T2S12 | XMLBM02T2S13 | |
| Weight (kg) | | 1.015 | 1.030 | 1.030 | |
| Complementary c | haracteristics not shown | under general chara | cteristics (page 17) | | |
| Possible differential | Min. at low setting (3) | 0.13 bar (1.88 psi) | | | |
| (add to PB | Min. at high setting (3) | 0.13 bar (1.88 psi) | | | |
| to give PH) | Max. at high setting | 0.8 bar (11.6 psi) | | | |
| Maximum permissible | Per cycle | 5 bar (72.5 psi) | | | |
| pressure | Accidental | 9 bar (130.5 psi) | | | |
| Destruction pressure | | 18 bar (261 psi) | | | |
| Mechanical life | | 3 x 10 ⁶ operating cycles | | | |
| Connection | | EN 175301-803-A (ex-DIN 43650A), 4-pin male connector. For suitable female connector, see page 68 | 1 entry tapped M20 x 1.5 mm for ISO cable gland, clamping capacity 7 to 13 mm | 1 entry tapped 1/2"-14 NPT for cable gland, clamping capacity 7 to 13 mm | |
| Vacuum switch type | | Diaphragm | cable gland, replace S12 with S11 | (for example YMI BM02\/2S1 | |

With setting scale

(1) For 1 entry tapped for no. 13 cable gland, replace S12 with S11 (for example, XMLBM02V2S12 becomes XMLBM02V2S11).

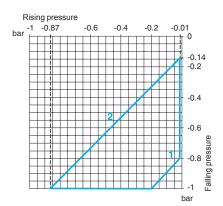
Time

(2) For component materials of units in contact with the fluid, see pages 72 and 73.

(3) Deviation of the differential at low and high setting points for switches of the same size:

± 0.02 bar (± 0.29 psi).

Operating curves



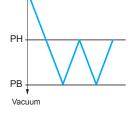
1 Maximum differential

2 Minimum differential

Other versions

- Adjustable value

For vacuum switches with alternative tapped cable entries, such as NPT, etc. please consult our Customer Care Centre.



Connection **Terminal model** 11 13 ₹ 12

Connector model Vacuum switch connector pin view Ŧ $1 \rightarrow 11 \text{ and } 13$



 $2 \rightarrow 12$ $3 \rightarrow 14$

() Telemecanique Sensors

References, characteristics (continued)

Electromechanical vacuum switches

OsiSense XML Size - 1 bar (- 14.5 psi) Adjustable differential, for regulation between 2 thresholds Switches with 2 CO single-pole contacts

| OsiSense XMLC vacuum switches | With setting scale |
|-------------------------------|--------------------|
| | |
| | |

......

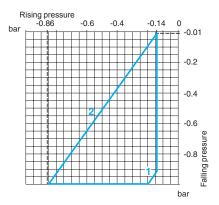
| Adjustable range of switching point (PB) (Falling pressure) | | - 0.14 1 bar (- 2.03 14.5 psi) | |
|--|---|--|--|
| Electrical connection | | Terminals | |
| Fluid connection | | G 1/4 (female) | |
| References (1) | | | |
| Fluids controlled (2) | Hydraulic oils, fresh water, air, up to + 70 °C | XMLCM02V2S12 | |
| | Hydraulic oils, fresh water, air, corrosive fluids, up to + 160 °C Sea water, up to + 30 °C | XMLCM02T2S12 | |
| Weight (kg) | | 1.015 | |
| Complementary c | haracteristics not shown | under general characteristics (page 17) | |
| Possible differential | Min. at low setting (3) | 0.13 bar (1.89 psi) | |
| (add to PB | Min. at high setting (3) | 0.14 bar (2.03 psi) | |
| to give PH) | Max. at high setting | 0.8 bar (11.6 psi) | |
| Maximum permissible | Per cycle | 5 bar (72.5 psi) | |
| pressure | Accidental | 9 bar (130.5 psi) | |
| Destruction pressure | | 18 bar (261 psi) | |
| Mechanical life | | 3 x 10 ⁶ operating cycles | |
| Cable entry for terminal models | | 1 entry tapped M20 x 1.5 mm for ISO cable gland, clamping capacity 7 to 13 mm | |
| Vacuum switch type | | Diaphragm | |
| | | (1) For 1 entry tapped for no. 13 cable gland, replace S12 with S11 (for example, XMLCM02V2S1) | |

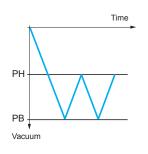
(1) For 1 entry tapped for no. 13 cable gland, replace S12 with S11 (for example, XMLCM02V2S12 becomes XMLCM02V2S11).

(2) For component materials of units in contact with the fluid, see pages 72 and 73.

(3) Deviation of the differential at low and high setting points for switches of the same size: ± 0.02 bar (± 0.29 psi).

Operating curves





- Adjustable value

| Terminal model | | | | | |
|----------------|----|----|----|--|--|
| 5 3 | ₽Ļ | 23 | 54 | | |
| 4 | 12 | 24 | 22 | | |

Connection

1 Maximum differential

2 Minimum differential Other versions

For vacuum switches with alternative tapped cable entries, such as NPT, etc. please consult our Customer Care Centre.

Dimensions: pages 69 to 71

Telemecanique

Sensors

Electromechanical vacuum switches

OsiSense XML

Size - 1 bar (- 14.5 psi) Dual stage, fixed differential, for detection at each threshold Switches with 2 CO single-pole contacts

OsiSense XMLD vacuum switches Without setting scale



| Adjustable range of each | 2nd stage switching point (PB2) | - 0.12 1 bar (- 1.74 14.5 psi) | |
|-------------------------------------|---|---|--|
| switching point | 1st stage switching point (PB1) | - 0.10 0.98 bar (- 1.45 14.21 psi) | |
| (Falling pressure) | | | |
| Spread between 2 stages (| PB2 - PB1) | 0.02…0.88 bar (0.29…12.76 psi) | |
| Electrical connection | | Terminals | |
| Fluid connection | | G 1/4 (female) | |
| References (1) | | | |
| Fluids controlled (2) | Hydraulic oils, fresh water, air, up to + 70 °C | XMLDM02V1S12 | |
| | Hydraulic oils, fresh water, air, corrosive fluids, up to + 160 °C Sea water, up to + 30 °C | XMLDM02T1S12 | |
| Weight (kg) | | 1.015 | |
| Complementary c | haracteristics not shown | under general characteristics (page 17) | |
| Natural differential | At low setting (3) | 0.1 bar (1.45 psi) | |
| (add to PB1/PB2 to give PH1/PH2) | At high setting (4) | 0.1 bar (1.45 psi) | |
| Maximum permissible | Per cycle | 5 bar (72.5 psi) | |
| pressure | Accidental | 9 bar (130.5 psi) | |
| Destruction pressure | | 18 bar (261 psi) | |
| Mechanical life | | 3 x 10 ⁶ operating cycles | |
| Cable entry for terminal mo | odels | 1 entry tapped M20 x 1.5 mm for ISO cable gland, clamping capacity 7 to 13 mm | |
| Vacuum switch type | | Diaphragm | |
| | | (1) For 1 entry tapped for no. 13 cable gland, replace S12 with S11 (for example, XMLDM02V1S1 | |

becomes XMLDM02V1S11).

(2) For component materials of units in contact with the fluid, see pages 72 and 73. (3) Deviation of the differential at low setting point for switches of the same size: ± 0.035 bar (± 0.51 psi)

(4) Deviation of the differential at high setting point for switches of the same size: ± 0.02 bar (± 0.29 psi).

Natural differential of contacts 1 and 2

-0.4

-0.2

Rising pressure

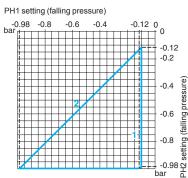
-0.88

bai

-0.6

Operating curves

High setting tripping points of contacts 1 and 2



1 Maximum differential

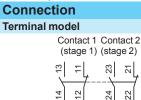
Minimum differential 2

Other versions

-0.2 PH1 PB1 -0.4 PH2 Ealling pressure PB2 Vacuum - Adjustable value --- Non adjustable value Connection bar

-0.02

EF Contact 1 (stage 1) GH Contact 2 (stage 2)



Time

For vacuum switches with alternative tapped cable entries, such as NPT, etc. please consult our Customer Care Centre.



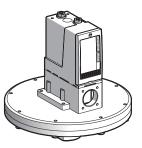
Electromechanical vacuum switches

OsiSense XML

Size - 200 mbar (- 2.9 psi) Adjustable differential, for regulation between 2 thresholds Switches with 1 CO single-pole contact

| OsiSense XMLB | vacuum switches |
|---------------|-----------------|
|---------------|-----------------|

With setting scale



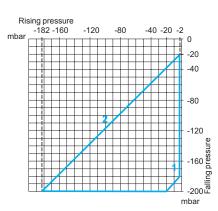
| Adjustable range of switching point (PB) (Falling pressure) | | - 20 200 mbar (- 0.29 2.9 psi) | - 20 200 mbar (- 0.29 2.9 psi) | | |
|--|--|---|--|--|--|
| Electrical connection | | Terminals | Terminals | | |
| Fluid connection | | G 1/4 (female) | 1/4"-18 NPTF (female) | | |
| References (1) | | | | | |
| Fluids controlled (2) | Hydraulic oils, air, up to + 160 °C | XMLBM03R2S12 | XMLBM03R2S13 | | |
| Weight (kg) | | 3.310 | 3.310 | | |
| Complementary c | haracteristics not sho | wn under general characteristics | (page 17) | | |
| ossible differential Min. at low setting (3) | | 18 mbar (0.26 psi) | 18 mbar (0.26 psi) | | |
| add to PB | Min. at high setting (3) | 18 mbar (0.26 psi) | 18 mbar (0.26 psi) | | |
| to give PH) | Max. at high setting | 180 mbar (2.6 psi) | 180 mbar (2.6 psi) | | |
| Maximum permissible | Per cycle | 1 bar (14.5 psi) | | | |
| pressure | Accidental | 2 bar (29 psi) | 2 bar (29 psi) | | |
| Destruction pressure | | 3.5 bar (50.75 psi) | 3.5 bar (50.75 psi) | | |
| Mechanical life | | 3 x 10 ⁶ operating cycles | | | |
| Cable entry for terminal models Vacuum switch type | | 1 entry tapped M20 x 1.5 mm for ISO cable gland, clamping capacity 7 to 13 mm | 1 entry tapped 1/2"-14 NPT for cable gland, clamping capacity 7 to 13 mm | | |
| | | Diaphragm | Diaphragm | | |
| | | (1) For 1 entry tapped for no. 13 cable gland, re | eplace S12 with S11 (for example, XMLBM03R2 | | |

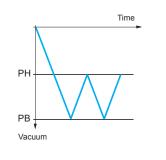
(1) For 1 entry tapped for no. 13 cable gland, replace S12 with S11 (for example, XMLBM03R2S12 becomes XMLBM03R2S11).

(2) For component materials of units in contact with the fluid, see pages 72 and 73.
 (3) Deviation of the differential at low and high setting points for switches of the same size:

± 2 mbar (± 0.29 psi).

Operating curves





- Adjustable value



1 Maximum differential

2 Minimum differential

Other versions

For vacuum switches with alternative tapped cable entries, such as NPT, etc. please consult our Customer Care Centre.

| Accessories: page 68 | | Dimensions: pages 69 to 71 | |
|-------------------------|--|-------------------------------|--|
| 22 | | Telemecanique | |

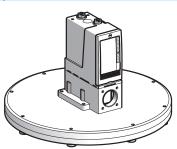
Sensors

Electromechanical pressure switches

OsiSense XML Size 50 mbar (0.72 psi)

Adjustable differential, for regulation between 2 thresholds Switches with 1 CO single-pole contact

With setting scale



| Adjustable range of switching point (PH) (Rising pressure) | | 2.650 mbar (0.0380,72 psi) | |
|---|--|--|--|
| Electrical connection | | Terminals | |
| Fluid connection | | G 1/4 (female) | |
| References (1) | | | |
| Fluids controlled (2) | Hydraulic oils, air, up to + 160 °C | XMLBL05R2S12 | |
| | Fresh water, corrosive fluids, up to + 160 °C | XMLBL05S2S12 | |
| Weight (kg) | | 2.420 | |
| Complementary c | haracteristics not shown | n under general characteristics (page 17) | |
| Possible differential | Min. at low setting (3) | 1.4 mbar (0.02 psi) | |
| subtract from PH o give PB) | Min. at high setting (4) | 4 mbar (0.06 psi) | |
| | Max. at high setting | 40 mbar (0.58 psi) | |
| Maximum permissible | Per cycle | 62.5 mbar (0.90 psi) | |
| pressure | Accidental | 112.5 mbar (1.63 psi) | |
| Destruction pressure | | 225 mbar (3.26 psi) | |
| Mechanical life | | 6 x 10 ⁶ operating cycles | |
| Cable entry for terminal models | | 1 entry tapped M20 x 1.5 mm for ISO cable gland, clamping capacity 7 to 13 mm | |
| Pressure switch type | | Diaphragm | |
| | | (1) For 1 entry tapped for no. 13 cable gland, replace S12 with S11 (for example, XMLBL05R2S12 becomes XMLBL05R2S11). | |

omes **XMLBL05R2S1**1

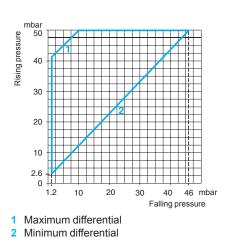
(2) For component materials of units in contact with the fluid, see pages 72 and 73. (3) Deviation of the differential at low setting point for switches of the same size:

- 0.8 mbar, + 1.1 mbar (- 0.01 psi, + 0.02 psi).

(4) Deviation of the differential at high setting point for switches of the same size: ± 1.4 mbar, (+ 0.02 psi).

Operating curves

Other versions



Pressure PH PB Time

12 13

Connection **Terminal model**

- Adjustable value

For pressure switches with EN 175301-803-A (ex-DIN 43650A) connector or with alternative tapped cable entries, such as NPT, etc. please consult our Customer Care Centre.

Electromechanical vacu-pressure switches

OsiSense XML. Size 5 bar (72.5 psi) Adjustable differential, for regulation between 2 thresholds Switches with 1 CO single-pole contact

OsiSense XMLB vacu-pressure switches W







| Adjustable range of switching point (PH) (Rising pressure) Electrical connection | | - 0.5…5 bar (- 7.25…72.5 psi) | | | |
|--|--|--|---|---|--|
| | | DIN connector | Terminals | | |
| Fluid connection | | G 1/4 (female) | G 1/4 (female) | 1/4"-18 NPTF (female) | |
| References (1) | | | | | |
| Fluids controlled (2) | Hydraulic oils, fresh water, air, up to + 70 °C | XMLBM05A2C11 | XMLBM05A2S12 | XMLBM05A2S13 | |
| | Hydraulic oils, fresh water, air, up to + 160 °C | XMLBM05B2C11 | XMLBM05B2S12 | - | |
| | Corrosive fluids, up to + 160 °C | XMLBM05C2C11 | XMLBM05C2S12 | - | |
| | Viscous products, up to + 160 °C (G 1 ¹ ⁄ ₄ " fluid connection) | XMLBM05P2C11 | XMLBM05P2S12 | - | |
| Weight (kg) | | 0.715 | 0.685 | 0.685 | |
| Complementary c | haracteristics not shown | under general charac | cteristics (page 17) | | |
| Possible differential | Min. at low setting (3) | 0.5 bar (7.25 psi) | | | |
| subtract from PH | Min. at high setting (3) | 0.5 bar (7.25 psi) | | | |
| to give PB) | Max. at high setting | 6 bar (87 psi) | | | |
| Maximum permissible | Per cycle | 6.25 bar (90.62 psi) | | | |
| oressure | Accidental | 11.25 bar (163.12 psi) | | | |
| Destruction pressure | | 23 bar (333.5 psi) | | | |
| Mechanical life | | 3 x 10 ⁶ operating cycles | | | |
| Connection | | EN 175301-803-A (ex-DIN 43650A), 4-pin male connector. For suitable female connector, see page 68 | 1 entry tapped M20 x 1.5 mm for ISO cable gland, clamping capacity 7 to 13 mm | 1 entry tapped 1/2"-14 NP for cable gland, clamping capacity 7 to 13 mm | |
| | | | | | |

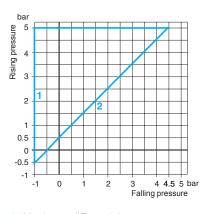
becomes XMLBM05A2S11).

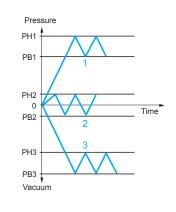
(2) For component materials of units in contact with the fluid, see pages 72 and 73.

(3) Deviation of the differential at low and high setting points for switches of the same size:

± 0.05 bar (± 0.72 psi).

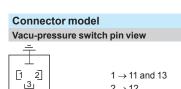
Operating curves





Adjustable value

Connection Terminal model 안 두 우





1 Maximum differential

2 Minimum differential

Other versions

For vacu-pressure switches with alternative tapped cable entries, such as NPT, etc. please consult our Customer Care Centre.

Dimensions: pages 69 to 71

24

Accessories: page 68

Electromechanical vacu-pressure switches

OsiSense XML. Size 5 bar (72.5 psi) Adjustable differential, for regulation between 2 thresholds Switches with 2 CO single-pole contacts

With setting scale OsiSense XMLC vacu-pressure switches



| Adjustable range of switching point (PH) (Rising pressure) | | - 0.55…5 bar (- 7.97…72.5 psi) | |
|---|---|--|--|
| Electrical connection | | Terminals | |
| Fluid connection | | G 1/4 (female) | |
| References (1) | | | |
| Fluids controlled (2) | Hydraulic oils, fresh water, air, up to + 160 °C | XMLCM05B2S12 | |
| | Corrosive fluids, up to + 160 °C | XMLCM05C2S12 | |
| Weight (kg) | | 0.685 | |
| Complementary c | haracteristics not shown | under general characteristics (page 17) | |
| Possible differential | Min. at low setting (3) | 0.45 bar (6.52 psi) | |
| (subtract from PH | Min. at high setting (3) | 0.45 bar (6.52 psi) | |
| to give PB) | Max. at high setting | 6 bar (87 psi) | |
| Maximum permissible | Per cycle | 6.25 bar (90.62 psi) | |
| pressure | Accidental | 11.25 bar (163.12 psi) | |
| Destruction pressure | | 23 bar (333.5 psi) | |
| Mechanical life | | 3 x 10 ⁶ operating cycles | |
| Cable entry for terminal models | | 1 entry tapped M20 x 1.5 mm for ISO cable gland, clamping capacity 7 to 13 mm | |
| Vacu-pressure switch type | | Diaphragm | |
| | | (1) For 1 entry tapped for no. 13 cable gland, replace S12 with S11 (for example, XMLCM05B2S12 | |

becomes XMLCM05B2S11). (2) For component materials of units in contact with the fluid, see pages 72 and 73.

(3) Deviation of the differential at low and high setting points for switches of the same size:

Time

± 0.1 bar (± 1.45 psi).

Pressure

PH1

PB1

PH2

PB2

PH3

РВЗ 🛔

Vacuum

- Adjustable value

4 4.55 5 bar

Falling pressure

0

| С | Connection | | | |
|-----------|------------|-------|-----|--|
| Те | rmin | al mo | del | |
| <u>,</u> | ₽Ļ | 23 | 5[| |
| <u></u> 4 | 12 | 54 | 22 | |

| Connect | tor model |
|-----------|---------------------------|
| Vacu-pres | ssure switch pin view |
| <u></u> | |
| | $1 \rightarrow 11$ and 13 |
| [1 2] | $2 \rightarrow 12$ |
| <u>3</u> | 3 -> 14 |



1 Maximum differential

Operating curves

bar

4

3

1 0.5

0

-1

-1 0 1 2 3

-0.55

1 2

Rising pressure 5

2 Minimum differential

Other versions

For vacu-pressure switches with alternative tapped cable entries, such as NPT, etc. please consult our Customer Care Centre.



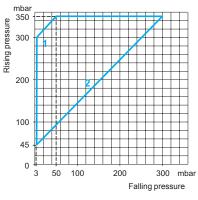
Sensors

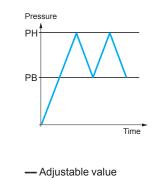
Electromechanical pressure switches OsiSense XML

Size 350 mbar (5.07 psi) Adjustable differential, for regulation between 2 thresholds Switches with 1 CO single-pole contact

| 0.10 | | 14/24 | | | |
|---|--|---|--|--|--|
| OsiSense XMLB press | ure switches | With setting scale | | | |
| | | | | | |
| Adjustable range of switch (Rising pressure) | ing point (PH) | 45350 mbar (0.655.07 ps | i) | | |
| Electrical connection | | DIN connector | Terminals | | |
| Fluid connection | | G 1/4 (female) | G 1/4 (female) | 1/4"-18 NPTF (female) | |
| References (1) | | | | | |
| Fluids controlled (2) | Hydraulic oils, air, up to + 160 °C | XMLBL35R2C11 | XMLBL35R2S12 | XMLBL35R2S13 | |
| | Fresh water, corrosive fluids, up to + 160 °C | XMLBL35S2C11 | XMLBL35S2S12 | - | |
| | Viscous products, up to + 160 °C (G 1¼" fluid connection) | XMLBL35P2C11 | XMLBL35P2S12 | - | |
| Weight (kg) | | 2.590 | 2.575 | 2.575 | |
| Complementary cl | haracteristics not shown | under general chara | cteristics (page 17) | | |
| Possible differential | Min. at low setting (3) | 42 mbar (0.60 psi) | | | |
| (subtract from PH | Min. at high setting (4) | 50 mbar (0.72 psi) | | | |
| to give PB) | Max. at high setting | 300 mbar (4.35 psi) | | | |
| Maximum permissible | Per cycle | 1.25 bar (18.12 psi) | | | |
| pressure | Accidental | 2.25 bar (32.62 psi) | | | |
| Destruction pressure | | 4.5 bar (65.25 psi) | | | |
| Mechanical life | | 4 million operating cycles | | | |
| Connection | | EN 175301-803-A (ex-DIN 43650A), 4-pin male connector. For suitable female connector, see page 68 | 1 entry tapped M20 x 1.5 mm for ISO cable gland, clamping capacity 7 to 13 mm | 1 entry tapped 1/2"-14 NPT for cable gland, clamping capacity 7 to 13 mm | |
| Pressure switch type | | Diaphragm | | | |
| | | | cable gland, replace S12 with S1 | I (for example, XMLBL35R2S12 | |
| | | (2) For component materials of (3) Deviation of the differential a - 8 mbar, + 3 mbar (- 0.12 ps) | units in contact with the fluid, see t low setting point for switches of i, + 0.04 psi). at high setting point for switches o | the same size: | |
| Operating curves | | _ 0 moor (_ 0. 11 poly. | Connecti | | |

Operating curves





Connection

Terminal model

Connector model

Pressure switch connector pin view



 $1 \rightarrow 11 \text{ and } 13$ $2 \rightarrow 12$ $3 \rightarrow 14$

1 Maximum differential

2 Minimum differential

Other versions

Accessories: page 68

26

For pressure switches with alternative tapped cable entries, such as NPT, etc. please consult our Customer Care Centre.

Dimensions: pages 69 to 71

() Telemecanique Sensors

References, characteristics (continued)

Electromechanical pressure switches OsiSense XML

Size 350 mbar (5.07 psi) Adjustable differential, for regulation between 2 thresholds Switches with 1 CO single-pole contact

| OsiSense XMLB pressu | re switches | 30 bar (435 psi) overpressure With setting scale | | | |
|--|--|--|---|--|--|
| | | | | | |
| Adjustable range of switchin (Rising pressure) | g point (PH) | 42330 mbar (0.614.78 psi) | | | |
| Electrical connection | | Terminals | | | |
| Fluid connection | | G 1/4 (female) | | | |
| References (1) | | | | | |
| Fluids controlled | Hydraulic oils, air, up to + 160 °C | XMLBS35R2S12 | | | |
| Weight (kg) | | 3.500 | | | |
| | aracteristics not show | wn under general characteris | stics (page 17) | | |
| Possible differential | Min. at low setting (3) | 33 mbar (0.48 psi) | | | |
| (subtract from PH | Min. at high setting (4) | 58 mbar (0.84 psi) | | | |
| to give PB) | Max. at high setting | 250 mbar (3.62 psi) | | | |
| Maximum permissible pressure | Per cycle | 30 bar (435 psi) | | | |
| | Accidental | 37.5 bar (543.75 psi) | | | |
| Destruction pressure Mechanical life | | 67.5 bar (978.75 psi) 2 million operating cycles | | | |
| Cable entry for terminal mod | els | | able gland, clamping capacity 7 to 13 mm | | |
| Connector type for connecto | | EN 175301-803-A (ex-DIN 43650A), 4-pin male connector. For suitable female connector, | | | |
| | | see page 68 | • | | |
| | | becomes XMLBS35R1S11). (2) For component materials of units in (3) Deviation of the differential at low se - 8 mbar, + 3 mbar (- 0.12 psi, + 0.04 | and, replace S12 with S11 (for example, XMLBS35R1S1 contact with the fluid, see pages 72 and 73. titing point for switches of the same size: 4 psi). etting point for switches of the same size: | | |
| Operating curves | | | Connection | | |
| | | | Terminal model | | |
| mbar 350 300 300 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 | | Pressure PH | | | |
| | | РВ | Connector model | | |
| 200 | | | Pressure switch connector pin view | | |
| | 0 300 mbar | Time | $ \begin{array}{c} $ | | |
| 1 Maximum differential | Falling pressure | — Adjustable value | | | |
| 2 Minimum differential Other versions | | - | apped cable entries, such as NPT, etc. please consult | | |
| | | | | | |

Electromechanical pressure switches OsiSense XML

Size 350 mbar (5.07 psi) Adjustable differential, for regulation between 2 thresholds

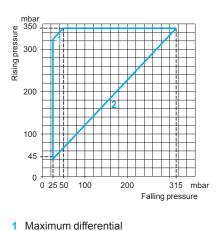
Switches with 2 CO single-pole contacts

| OsiSense XMLC pressure switches | | With setting scale | | 30 bar (435 psi) overpressure With setting scale | |
|---|---|--|---|--|---|
| | | | | |) |
| Adjustable range of switchin (Rising pressure) | ng point (PH) | 45350 mbar (0.65 | 5.07 psi) | 42330 mbar (0.61 | 4.78 psi) |
| Electrical connection | | Terminals | | Terminals | |
| Fluid connection | Fluid connection | | 1/4"-18 NPTF (female) | G 1/4 (female) | 1/4"-18 NPTF (female) |
| References (1) | | | | | , |
| Fluids controlled (2) | Hydraulic oils, air, up to + 160 °C | XMLCL35R2S12 | - | XMLCS35R2S12 | XMLCS35R2S13 |
| | Fresh water, corrosive fluids, up to + 160 °C | XMLCL35S2S12 | XMLCL35S2S13 | - | - |
| Weight (kg) | | 2.575 | 2.575 | 3.500 | 3.500 |
| Complementary ch | aracteristics not shown | n under general o | haracteristics (p | bage 17) | |
| Possible differential | Min. at low setting (3) | 20 mbar (0.29 psi) | | 40 mbar (0.58 psi) | |
| (subtract from PH | Min. at high setting (3) | 35 mbar (0.51 psi) | | 88 mbar (1.27 psi) | |
| to give PB) | Max. at high setting | 300 mbar (4.35 psi) | | 230 mbar (3.33 psi) | |
| Maximum permissible | Per cycle | 1.25 bar (18.12 psi) | | 30 bar (435 psi) | |
| pressure | Accidental | 2.25 bar (32.62 psi) | | 37.5 bar (543.75 psi) | |
| Destruction pressure | | 4.5 bar (65.25 psi) | | 67.5 bar (978.75 psi) | |
| Mechanical life | | 4 million operating cycl | es | 2 million operating cycl | es |
| Cable entry for terminal models | | 1 entry tapped M20 x 1.5 mm for ISO cable gland, clamping capacity 7 to 13 mm | 1 entry tapped 1/2"-14 NPT for cable gland, clamping capacity 7 to 13 mm | 1 entry tapped M20 x 1.5 mm for ISO cable gland, clamping capacity 7 to 13 mm | 1 entry tapped 1/2"-14 NPT for cable gland, clamping capacity 7 to 13 mm |
| Pressure switch type | | Diaphragm | | | |
| | | becomes XMLCL35 | | | ample, XMLCL35R2S12 |

(2) For component materials of units in contact with the fluid, see pages 72 and 73.

(3) Deviation of the differential at low setting point for switches of the same size: ± 20 mbar (± 0.29 psi).

Operating curves



Pressure PH PΒ Time

Connection **Terminal model** 13 7 23 7 72 24

- Adjustable value

2 Minimum differential

Other versions

For pressure switches with alternative tapped cable entries, such as NPT, etc. please consult our Customer Care Centre.

Dimensions: pages 69 to 71

() Telemecanique Sensors

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Accessories: page 68

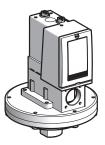
References, characteristics (continued)

Electromechanical pressure switches

OsiSense XML Size 350 mbar (5.07 psi) Dual stage, fixed differential, for detection at each threshold Switches with 2 CO single-pole contacts

OsiSense XMLD pressure switches

Without setting scale



| Adjustable range of each | 2nd stage switching point (PH2) | 58350 mbar (0.845.07 psi) | | | | |
|---|--|--|--|--|--|--|
| switching point (Rising pressure) | 1st stage switching point (PH1) | 33325 mbar (0.484.71 psi) | | | | |
| Spread between 2 stages (PH2 - PH1) | | 25310 mbar (0.364.50 psi) | | | | |
| Electrical connection | | Terminals | | | | |
| Fluid connection | | G 1/4 (female) | | | | |
| References (1) | | | | | | |
| Fluids controlled (2) | Hydraulic oils, air, up to + 160 °C | XMLDL35R1S12 | | | | |
| Weight (kg) | | 2.575 | | | | |
| Complementary ch | aracteristics not shown | under general characteristics (page 17) | | | | |
| Natural differential | At low setting (3) | 30 mbar (0.44 psi) | | | | |
| (subtract from PH1/PH2 to give PB1/PB2) | At high setting (4) | 30 mbar (0.44 psi) | | | | |
| Maximum permissible | Per cycle | 1.25 bar (18.12 psi) | | | | |
| pressure | Accidental | 2.25 bar (32.62 psi) | | | | |
| Destruction pressure | | 4.5 bar (65.25 psi) | | | | |
| Mechanical life | | 4 million operating cycles | | | | |
| Cable entry for terminal mo | dels | 1 entry tapped M20 x 1.5 mm for ISO cable gland, clamping capacity 7 to 13 mm | | | | |
| Pressure switch type | | Diaphragm | | | | |
| | | (1) For 1 entry tapped for no. 13 cable gland, replace S12 with S11 (for example, XMI DI 35R1S1) | | | | |

(1) For 1 entry tapped for no. 13 cable gland, replace S12 with S11 (for example, XMLDL35R1S12 becomes XMLDL35R1S11).

(2) For component materials of units in contact with the fluid, see pages 72 and 73.
 (3) Deviation of the differential at low setting point for switches of the same size:

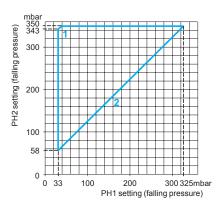
 \pm 10 mbar (\pm 0.15 psi).

(4) Deviation of the differential at high setting point for switches of the same size: ± 8 mbar (± 0.11 psi).

Operating curves

High setting tripping points of contacts 1 and 2

Natural differential of contacts 1 and 2

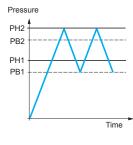


1 Maximum differential

2 Minimum differential

Other versions

58 33 0 3 28 100 200 295 320 mbar Rising pressure EF Contact 1 (stage 1) GH Contact 2 (stage 2)



--- Adjustable value

Connection

Terminal model



For pressure switches with alternative tapped cable entries, such as NPT, etc. please consult our Customer Care Centre.

Falling pressure 522 300 200

200

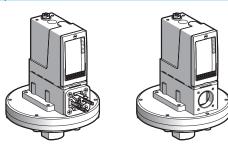
100

Electromechanical pressure switches OsiSense XML

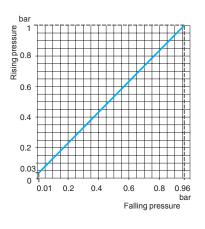
Size 1 bar (14.5 psi) Fixed differential, for detection of a single threshold Switches with 1 CO single-pole contact

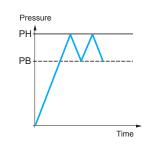
OsiSense XMLA pressure switches

With setting scale



| Adjustable range of switching point (PH) (Rising pressure) | | 0.031 bar (0.43514.5 psi) | | | | | |
|---|---|--|---|-----------------------|--|--|--|
| Electrical connection | | DIN connector | Terminals | | | | |
| Fluid connection | | G 1/4 (female) | G 1/4 (female) | 1/4"-18 NPTF (female) | | | |
| References (1) | | | | | | | |
| Fluids controlled (2) | Hydraulic oils, air, up to + 160 °C | XMLA001R2C11 | XMLA001R2S12 | - | | | |
| | Fresh water, corrosive fluids, up to + 160 °C | XMLA001S2C11 | XMLA001S2S12 | XMLA001S2S13 | | | |
| Weight (kg) | Weight (kg) | | 2.555 | 2.555 | | | |
| Complementary c | haracteristics not show | n under general chara | cteristics (page 17) | | | | |
| Natural differential | At low setting (3) | 0.02 bar (0.29 psi) | | | | | |
| (subtract from PH to give PB) | (subtract from PH At high setting (3) | | 0.04 bar (0.58 psi) | | | | |
| Maximum permissible | Per cycle | 1.25 bar (18.12 psi) | | | | | |
| pressure | Accidental | 2.25 bar (32.62 psi) | | | | | |
| Destruction pressure | | 4.5 bar (65.25 psi) | | | | | |
| Mechanical life | | 4 x 10 ⁶ operating cycles | | | | | |
| Connection | | EN 175301-803-A (ex-DIN 43650A), 4-pin male connector. For suitable female connector, see page 68 | 1 entry tapped M20 x 1.5 mm for ISO cable gland, clamping capacity 7 to 13 mm | | | | |
| Pressure switch type | | Diaphragm | | | | | |
| | | (1) For 1 entry tapped for no. 13 becomes XMLA001R2S11). (2) For component materials of (3) Deviation of the differential a ± 0.01 bar (± 0.14 psi) | units in contact with the fluid, se | | | | |
| Operating curves | | | Connec | tion | | | |





Terminal model 13 7

42 4

[1

Connector model

Pressure switch connector pin view



 $1 \rightarrow 11 \text{ and } 13$ $2 \rightarrow 12$ $3 \rightarrow 14$

- Adjustable value --- Non adjustable value

Other versions

For pressure switches with alternative tapped cable entries, such as NPT, etc. please consult our Customer Care Centre.

Accessories: page 68

Dimensions: pages 69 to 71

() Telemecanique Sensors

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References, characteristics (continued)

Electromechanical pressure switches

OsiSense XML Size 1 bar (14.5 psi) Adjustable differential, for regulation between 2 thresholds Switches with 1 CO single-pole contact

| OsiSense XMLB pressure switches | | With setting scale | | | | |
|--|--|---|--|--|--|--|
| | | | | | | |
| Adjustable range of switchin (Rising pressure) | ng point (PH) | 0.051 bar (0.7214.5 psi) | | | | |
| Electrical connection | | DIN connector | Terminals | | | |
| Fluid connection | | G 1/4 (female) | G 1/4 (female) | | 1/4"-18 NPTF (female) | |
| References (1) | | | | | | |
| Fluids controlled | Hydraulic oils, air, | XMLB001R2C11 | XMLB001R2S12 | | XMLB001R2S13 | |
| (2) | up to + 160 °C Fresh water, corrosive fluids, up to + 160 °C | XMLB001S2C11 | XMLB001S2S12 | | XMLB001S2S13 | |
| | Viscous products, up to + 160 °C (G 11/4" fluid connection) | - | XMLB001P2S12 | | - | |
| Weight (kg) | | 2.590 | 2.575 | | 2.575 | |
| Complementary ch | aracteristics not shown | under general chara | cteristics (page | e 17) | | |
| Possible differential | Min. at low setting (3) | 0.04 bar (0.58 psi) | (page | ,, | | |
| subtract from PH | Min. at high setting (4) | 0.06 bar (0.87 psi) | | | | |
| to give PB) | Max. at high setting | 0.75 bar (10.87 psi) | | | | |
| Maximum permissible | Per cycle | 1.25 bar (18.12 psi) | | | | |
| pressure | Accidental | 2.25 bar (32.62 psi) | | | | |
| Destruction pressure | | 4.5 bar (65.25 psi) | | | | |
| Mechanical life | | 4 x 10 ⁶ operating cycles | | | | |
| Connection | | EN 175301-803-A (ex-DIN 43650A), 4-pin male connector. For suitable female connector, see page 68 | for ISO cable gland, clamping for cable gland, | | 1 entry tapped 1/2"-14 NPT for cable gland, clamping capacity 7 to 13 mm | |
| Pressure switch type | | Diaphragm | | | | |
| | | For 1 entry tapped for no. 13 d becomes XMLB001R2S11). For component materials of 0 (3) Deviation of the differential a ± 10 mbar (± 0.14 psi). Deviation of the differential a ± 20 mbar (± 0.29 psi). | units in contact with the total time to the term of te | he fluid, see switches of r switches o | pages 72 and 73. the same size: f the same size: | |
| Operating curves | | | | onnecti | | |
| | | 2 | Те | erminal mo | odel | |
| bar 1 0.8 0.8 | | Pressure PH | 14 13 | 12 11 | | |
| 0.6 | | РВ | | nnector n | nodel ch connector pin view | |
| 0.4 | | | | ÷ | | |
| 0.4 | 0.2 | | · · · · · · · · · · · · · · · · · · · | | | |
| | | Time | [1 | 2] _3 | $1 \rightarrow 11 \text{ and } 13$ $2 \rightarrow 12$ $3 \rightarrow 14$ | |
| 0.2 0.05 0.01 0.25 0.4 0. | bar | Time | | | $2 \rightarrow 12$ | |
| 0.2 0.05 0.01 0.25 0.4 0. | | Time — Adjustable value | | | $2 \rightarrow 12$ | |

Telemecanique Sensors

Electromechanical pressure switches

OsiSense XML Size 1 bar (14.5 psi) Adjustable differential, for regulation between 2 thresholds Switches with 2 CO single-pole contacts

OsiSense XMLC pressure switches

With setting scale

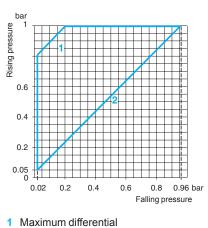


| ing point (PH) | 0.05…1 bar (0.725…14.5 psi) | | | |
|--|--|--|--|--|
| | Terminals | | | |
| | G 1/4 (female) | 1/4"-18 NPTF (female) | | |
| | | | | |
| Hydraulic oils, air, up to + 160 °C | XMLC001R2S12 | XMLC001R2S13 | | |
| Fresh water, corrosive fluids, up to + 160 °C | XMLC001S2S12 | XMLC001S2S13 | | |
| | 2.555 | 2.555 | | |
| naracteristics not show | under general characteristics (page 17) | | | |
| Min. at low setting (3) | 0.03 bar (0.43 psi) | | | |
| Min. at high setting (4) | 0.04 bar (0.58 psi) | | | |
| Max. at high setting | 0.8 bar (11.6 psi) | | | |
| Per cycle | 1.25 bar (18.12 psi) | | | |
| Accidental | 2.25 bar (32.62 psi) | | | |
| | 4.5 bar (65.25 psi) | | | |
| | 4 x 10 ⁶ operating cycles | | | |
| odels | 1 entry tapped M20 x 1.5 mm for ISO cable gland, clamping capacity 7 to 13 mm clamping capacity 7 to 13 mm | | | |
| | Diaphragm | | | |
| | Hydraulic oils, air, up to + 160 °C Fresh water, corrosive fluids, up to + 160 °C naracteristics not show Min. at low setting (3) Min. at high setting (4) Max. at high setting Per cycle Accidental | Hydraulic oils, air, up to + 160 °C C Fresh water, corrosive fluids, up to + 160 °C XMLC001R2S12 Fresh water, corrosive fluids, up to + 160 °C XMLC001S2S12 2.555 2.555 naracteristics not shown under general characteristics Min. at low setting (3) 0.03 bar (0.43 psi) Min. at high setting (4) 0.04 bar (0.58 psi) Max. at high setting 0.8 bar (11.6 psi) Per cycle 1.25 bar (82.62 psi) Accidental 2.25 bar (82.62 psi) 4 x 10 ⁶ operating cycles 1 entry tapped M20 x 1.5 mm for ISO cable gland, clamping capacity 7 to 13 mm | | |

 (2) For component materials of units in contact with the fluid, see pages 72 and 73.
 (3) Deviation of the differential at low setting point for switches of the same size: ± 0.01 bar (± 0.14 psi)

(4) Deviation of the differential at high setting point for switches of the same size: ± 0.03 bar (± 0.43 psi)

Operating curves



Pressure PH PB Time

Connection **Terminal model** 13 7 23 5 7 12 24

- Adjustable value

2 Minimum differential

Other versions

For pressure switches with alternative tapped cable entries, such as NPT, etc. please consult our Customer Care Centre.

() Telemecanique Sensors

Electromechanical pressure switches

OsiSense XML Size 2.5 bar (36.25 psi) Fixed differential, for detection of a single threshold Switches with 1 CO single-pole contact

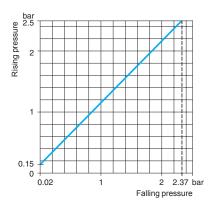
| Osidense AmicA pres | ssure switches | With setting scale | | |
|--|---|---|-----------------------|------------------------------------|
| | | | | |
| | | | | |
| | ching point (PH) | 0.152.5 bar (2.1736. | .25 psi) | |
| (Rising pressure) | ching point (PH) | 0.152.5 bar (2.1736. | .25 psi) Terminals | |
| Adjustable range of swite (Rising pressure) Electrical connection Fluid connection | ching point (PH) | | | 1/4"-18 NPTF (female) |
| (Rising pressure) Electrical connection | ching point (PH) | DIN connector | Terminals | 1/4"-18 NPTF (female) |
| Rising pressure) Electrical connection Fluid connection | ching point (PH) Hydraulic oils, fresh water, air, up to + 70 °C | DIN connector | Terminals | 1/4"-18 NPTF (female) XMLA002A2S13 |
| (Rising pressure) Electrical connection Fluid connection References (1) Fluids controlled | Hydraulic oils, fresh water, air, | DIN connector G 1/4 (female) | G 1/4 (female) | |
| Rising pressure) Electrical connection Fluid connection References (1) Fluids controlled | Hydraulic oils, fresh water, air, up to + 70 °C Hydraulic oils, fresh water, air, | DIN connector G 1/4 (female) XMLA002A2C11 | G 1/4 (female) | XMLA002A2S13 |

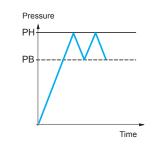
| Complementary c | haracteristics not shown | under general charac | cteristics (page 17) | | | |
|---|--------------------------|--------------------------------------|----------------------|---|--|--|
| Natural differential | At low setting (3) | 0.13 bar (1.88 psi) | | | | |
| (subtract from PH to give PB) | At high setting (3) | 0.13 bar (1.88 psi) | | | | |
| Maximum permissible | Per cycle | 5 bar (72.5 psi) | | | | |
| pressure | Accidental | 9 bar (130.5 psi) | | | | |
| Destruction pressure 18 bar (261 psi) | | | | | | |
| Mechanical life | | 8 x 10 ⁶ operating cycles | | | | |
| Connection EX 175 301-803-A (ex-DIN 43650A), 4-pin male connector, For suitable female connector, see page 68 1 entry tapped M20 x 1.5 mm for ISO cable gland, clamping capacity 7 to 13 mm 1 entry tapped 1/2"-14 N for cable gland, clamping capacity 7 to 13 mm | | | | | | |
| Pressure switch type | | Diaphragm | • | • | | |

(1) For 1 entry tapped for no. 13 cable gland, replace S12 with S11 (for example, XMLA002A2S12 (2) For component materials of units in contact with the fluid, see pages 72 and 73.

(3) Deviation of the differential at low and high setting points for switches of the same size: ± 0.03 bar (± 0.43 psi).

Operating curves





Connection

Terminal model 13 7

42 4

Connector model

Pressure switch connector pin view



 $1 \rightarrow 11$ and 13 $2 \rightarrow 12$ $3 \rightarrow 14$

- Adjustable value

--- Non adjustable value

Other versions

For pressure switches with alternative tapped cable entries, such as NPT, etc. please consult our Customer Care Centre.



Electromechanical pressure switches

OsiSense XML Size 2.5 bar (36.25 psi) Adjustable differential, for regulation between 2 thresholds Switches with 1 CO single-pole contact

| OsiSense XMLB pressu | ire switches | With setting scale | | | 30 bar (435 psi) overpressure With setting scale |
|---|---|--|---|---|--|
| | | | | | |
| Adjustable range of switchi (Rising pressure) | ng point (PH) | 0.32.5 bar (4.353 | 6.25 psi) | | |
| Electrical connection | | DIN connector | Terminals | | |
| Fluid connection | | G 1/4 (female) | G 1/4 (female) | 1/4"-18 NPTF (female) |) G 1/4 (female) |
| Poforoncos (1) | | | | | |
| References (1) Fluids controlled | Hydraulic oils, fresh water, air, | XMLB002A2C11 | XMLB002A2S12 | XMLB002A2S13 | - |
| (2) | up to + 70 °C | | | | |
| | Hydraulic oils, fresh water, air, up to + 160 °C | XMLB002B2C11 | XMLB002B2S12 | - | XMLBS02B2S12 |
| | Corrosive fluids, up to + 160 °C | XMLB002C2C11 | XMLB002C2S12 | - | - |
| Weight (kg) | · · · · · · · · · · · · · · · · · · · | 1.030 | 1.015 | 1.015 | 3.500 |
| Complementary ch | naracteristics not showr | under general o | characteristics (| page 17) | |
| ossible differential | Min. at low setting (3) | 0.16 bar (2.32 psi) | , | , , | 0.1 bar (1.45 psi) |
| subtract from PH | Min. at high setting (3) | 0.21 bar (3.04 psi) | | | 0.22 bar (3.19 psi) |
| o give PB) | Max. at high setting | 1.75 bar (25.37 psi) | | | 1.45 bar (21 psi) |
| Maximum permissible | Per cycle | 5 bar (72.5 psi) | | | 30 bar (435 psi) |
| pressure | Accidental | 9 bar (130.5 psi) | | | 37.5 bar (543.75 psi) |
| Destruction pressure | | 18 bar (261 psi) | | | 67.5 bar (978.75 psi) |
| Mechanical life | | 8 x 10 ⁶ operating cycles | | | 2 x 10 ⁶ operating cycles |
| Connection | | EN 175301-803-A (ex-DIN 43650A), 4-pin male connector. For suitable female connector, see page 68 | 1 entry tapped M20 x 1.5 mm for ISO cable gland, clamping capacity 7 to 13 mm | 1 entry tapped 1/2"-14 NPT for cable gland, clamping capacity 7 to 13 mm | 1 entry tapped M20 x 1.5 mm for ISO cable gland, clamping capacity 7 to 13 mm |
| Pressure switch type | | Diaphragm | 1 | J | |
| Operating output | | becomes XMLB002 (2) For component mat (3) Deviation of the diff | or no. 13 cable gland, rep 2 A2S11). erials of units in contact erential at low and high s ar (- 0.43 psi, + 0.72 psi). | with the fluid, see pages | 72 and 73. |
| Operating curves | | Pressure | | Terminal model | |
| bar v 2.5 | | PH | | | |
| Dar 2.5 2.5 2.5 1 1 1 1 1 1 1 1 1 1 1 1 1 | | РВ | | 12 13 | |
| | | | - _ | Connector model Pressure switch con | nector pin view |
| 0.3 | 2 2.29 bar Falling pressure | | Time | | $1 \rightarrow 11 \text{ and } 13$ $2 \rightarrow 12$ $3 \rightarrow 14$ |
| 1 Maximum differential | | Adjustable value | | | |
| 2 Minimum differential | | | | | |

Telemecanique Sensors

Electromechanical pressure switches

OsiSense XML Size 2.5 bar (36.25 psi) Adjustable differential, for regulation between 2 thresholds Switches with 2 CO single-pole contacts

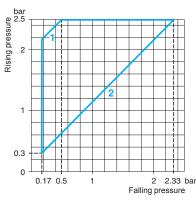
| OsiSense XMLC pressure switches | | With setting scale | | 30 bar (435 psi) overpressure With setting scale | |
|--|--|--|---|--|---|
| | | | | | |
| Adjustable range of switch (Rising pressure) | ing point (PH) | 0.32.5 bar (4.3536 | 6.25 psi) | | |
| Electrical connection | | Terminals | | | |
| Fluid connection | | G 1/4 (female) | 1/4"-18 NPTF (female) | G 1/4 (female) | 1/4"-18 NPTF (female) |
| References (1) | | | | | |
| Fluids controlled (2) | Hydraulic oils, fresh water, air, up to + 160 °C | XMLC002B2S12 | XMLC002B2S13 | XMLCS02B2S12 | XMLCS02B2S13 |
| Weight (kg) | | 0.995 | 0.995 | 3.500 | 3.500 |
| Complementary cl | haracteristics not shown | under general o | haracteristics (| bage 17) | |
| Possible differential | Min. at low setting (3) | 0.13 bar (1.89 psi) | | 0.1 bar (1.45 psi) | |
| (subtract from PH | Min. at high setting (4) | 0.17 bar (2.47 psi) | | 0.18 bar (2.61 psi) | |
| to give PB) | Max. at high setting | 2 bar (29 psi) | | 1.25 bar (18.12 psi) | |
| Maximum permissible | Per cycle | 5 bar (72.5 psi) | | 30 bar (435 psi) | |
| pressure | Accidental | 9 bar (130.5 psi) | | 37.5 bar (543.75 psi) | |
| Destruction pressure | | 18 bar (261 psi) | | 67.5 bar (978.75 psi) | |
| Mechanical life | | 8 x 10 ⁶ operating cycle | S | 2 x 10 ⁶ operating cycles | S |
| Cable entry for terminal models | | 1 entry tapped M20 x 1.5 mm for ISO cable gland, clamping capacity 7 to 13 mm | 1 entry tapped 1/2"-14 NPT for cable gland, clamping capacity 7 to 13 mm | 1 entry tapped M20 x 1.5 mm for ISO cable gland, clamping capacity 7 to 13 mm | 1 entry tapped 1/2"-14 NPT for cable gland, clamping capacity 7 to 13 mm |
| Pressure switch type | | Diaphragm | | | |
| | | (2) For component mate | B2S11). erials of units in contact v | ace S12 with S11 (for exa vith the fluid, see pages 7 nt for switches of the sam | 72 and 73. |

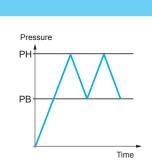
(3) Deviation of the differential at low setting point for switches of the same size:

± 0.02 bar (± 0.29 psi)

 (4) Deviation of the differential at high setting point for switches of the same size: ± 0.03 bar (± 0.43 psi)

Operating curves





- Adjustable value

1 Maximum differential

2 Minimum differential

Other versions

For pressure switches with alternative tapped cable entries, such as NPT, etc. please consult our Customer Care Centre.

OsiSense XMLA pressure switches

Electromechanical pressure switches

OsiSense XML

With setting scale

Size 4 bar (58 psi) Fixed differential, for detection of a single threshold Switches with 1 CO single-pole contact

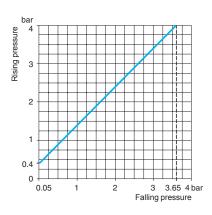
| Adjustable range of switch (Rising pressure) | ning point (PH) | 0.4…4 bar (5.8…58 psi) | | | | |
|--|--|--|---|--|--|--|
| Electrical connection | | DIN connector | Terminals | | | |
| Fluid connection | | G 1/4 (female) | G 1/4 (female) | 1/4"-18 NPTF (female) | | |
| References (1) | | | | 1 | | |
| Fluids controlled (2) | Hydraulic oils, fresh water, air, up to + 70 °C | XMLA004A2C11 | XMLA004A2S12 | XMLA004A2S13 | | |
| | Hydraulic oils, fresh water, air, up to + 160 °C | XMLA004B2C11 | XMLA004B2S12 | - | | |
| | Corrosive fluids, up to + 160 °C Sea water, up to + 30 °C | XMLA004C2C11 | XMLA004C2S12 | - | | |
| | Viscous products, up to + 160 °C (G 1¼" fluid connection) | XMLA004P2C11 | XMLA004P2S12 | - | | |
| Weight (kg) | | 0.715 | 0.685 | 0.685 | | |
| Complementary c | haracteristics not shown | under general charac | cteristics (page 17) | | | |
| Natural differential (subtract from PH to give PB) | At low setting (3) | 0.35 bar (5.07 psi) | | | | |
| | At high setting (3) | 0.35 bar (5.07 psi) | | | | |
| Maximum permissible pressure | Per cycle | 5 bar (72.5 psi) | | | | |
| | Accidental | 9 bar (130.5 psi) | | | | |
| Destruction pressure | | 18 bar (261 psi) | | | | |
| Mechanical life | | 8 x 10 ⁶ operating cycles | | | | |
| Connection | | EN 175301-803-A (ex-DIN 43650A), 4-pin male connector. For suitable female connector, see page 68 | 1 entry tapped M20 x 1.5 mm for ISO cable gland, clamping capacity 7 to 13 mm | 1 entry tapped 1/2"-14 NPT for cable gland, clamping capacity 7 to 13 mm | | |
| Pressure switch type | | Diaphragm | | | | |
| | | (1) For 1 entry tapped for no. 13 (| cable gland, replace S12 with S1 ? | 1 (for example, XMLA004A2S12 | | |

(1) For reflay tapped to no. Is capted grand, replace \$12 with \$11 (to example, AmLA004A251) becomes XMLA004A2511).
 (2) For component materials of units in contact with the fluid, see pages 72 and 73.

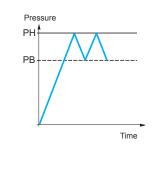
(3) Deviation of the differential at low and high setting points for switches of the same size:

± 0.03 bar (± 0.43 psi)

Operating curves

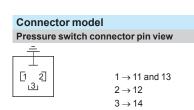


Dimensions: pages 69 to 71



Connection

Terminal model



Adjustable value

--- Non adjustable value

Other versions

For pressure switches with alternative tapped cable entries, such as NPT, etc. please consult our Customer Care Centre.

Accessories: page 68

Telemecanique

36

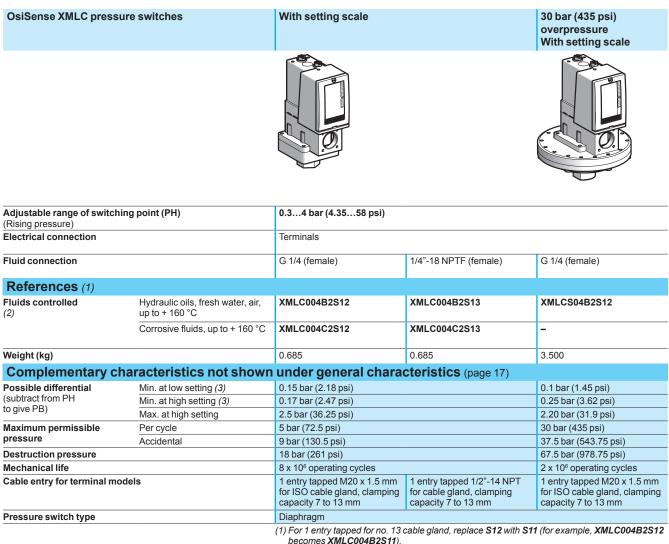
Electromechanical pressure switches OsiSense XML Size 4 bar (58 psi) Adjustable differential, for regulation between 2 thresholds Switches with 1 CO single-pole contact

| OsiSense XMLB pressure switches | | With setting scale | | | 30 bar (435 psi) overpressure With setting scale | | |
|--|--|---|--|---|--|--|--|
| | | | 0 | | | | |
| Adjustable range of switchi (Rising pressure) | ing point (PH) | 0.254 bar (3.6258 | psi) | | | | |
| Electrical connection | | DIN connector | Terminals | | | | |
| Fluid connection | | G 1/4 (fomalo) | G 1/4 (fomale) | 1/4"-18 NPTF | G 1/4 | | |
| References (1) | | (female) | (female) | (female) | (female) | | |
| Fluids controlled | Hydraulic oils, fresh water, air, | XMLB004A2C11 | XMLB004A2S12 | XMLB004A2S13 | - | | |
| (2) | up to + 70 °C Hydraulic oils, fresh water, air, | XMLB004B2C11 | XMLB004B2S12 | - | XMLBS04B2S12 | | |
| | up to + 160 °C | | | | | | |
| | Corrosive fluids, up to + 160 °C | XMLB004C2C11 | XMLB004C2S12 | - | - | | |
| Weight (kg) | | 1.030 | 1.015 | 1.015 | 3.500 | | |
| Complementary ch | naracteristics not shown | n under general o | characteristics (| page 17) | | | |
| Possible differential | Min. at low setting (3) | 0.2 bar (2.9 psi) 0.15 bar (2.18 psi) | | | | | |
| subtract from PH Min. at high setting (4) | | 0.25 bar (3.62 psi) | | 0.34 bar (4.93 psi) | | | |
| | Max. at high setting | 2.4 bar (34.8 psi) | | | 2.46 bar (35.67 psi) | | |
| Maximum permissible pressure | Per cycle Accidental | 5 bar (72.5 psi) | | | 30 bar (435 psi) 37.5 bar (543.75 psi) | | |
| | | | 9 bar (130.5 psi) | | | | |
| Destruction pressure Mechanical life | | | 18 bar (261 psi) 8 x 10 ⁶ operating cycles | | | | |
| Connection | | EN 175301-803-A (ex-DIN 43650A), 4-pin male connector. For suitable female connector, see page 68 | 1 entry tapped M20 x 1.5 mm for ISO cable gland, clamping capacity 7 to 13 mm | 1 entry tapped 1/2"-14 NPT for cable gland, clamping capacity 7 to 13 mm | 1 entry tapped M20 x 1.5 mm for ISO cable gland, clamping capacity 7 to 13 mm | | |
| Pressure switch type | | becomes XMLB004. (2) For component mate (3) Deviation of the diffe ± 0.01 bar (± 0.14 ps (4) Deviation of the diffe | A2S11). erials of units in contact to erential at low setting poi si). | lace S12 with S11 (for ex with the fluid, see pages nt for switches of the sai wint for switches of the sa | 72 and 73. ne size: | | |
| Operating curves | | Pressure Terminal model | | Terminal model | | | |
| anssad Guisiz | | | | | | | |
| | | | | Connector model Pressure switch connector pin view | | | |
| | 3 3.75 bar Falling pressure | / | Time | | $1 \rightarrow 11 \text{ and } 13$ $2 \rightarrow 12$ $3 \rightarrow 14$ | | |
| Maximum differential Minimum differential Other versions | | - Adjustable value For pressure switches with alternative tapped cable entries, such as NPT, etc. please co | | | T etc. please consult | | |
| Other versions | | our Customer Care Centre. | | | | | |
| Other versions | | | | | r, etc. piease consult | | |

Electromechanical pressure switches

OsiSense XML

Size 4 bar (58 psi) Adjustable differential, for regulation between 2 thresholds Switches with 2 CO single-pole contacts



(2) For component materials of units in contact with the fluid, see pages 72 and 73.
 (3) Deviation of the differential at low and high setting points for switches of the same size:

Connection **Terminal model**

> 3 3

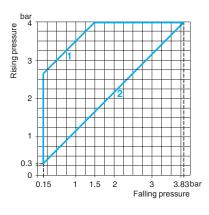
± 0.02 bar (± 0.29 psi).

Pressure

PH

PB

Operating curves



1 Maximum differential

Minimum differential 2

Other versions

- Adjustable value

Time

For pressure switches with alternative tapped cable entries, such as NPT, etc. please consult our Customer Care Centre.

E Telemecanique Sensors

Accessories

Electromechanical pressure switches

OsiSense XML

Size 4 bar (58 psi) Dual stage, fixed differential, for detection at each threshold Switches with 2 CO single-pole contacts

OsiSense XMLD pressure switches

Without setting scale



| Adjustable range of each | 2nd stage switching point (PH2) | 0.404 bar (5.858 psi) |
|--|--|--|
| Rising pressure) | | 0.193.79 bar (2.7654.96 psi) |
| Spread between 2 stages (PH2 - PH1) | | 0.212.18 bar (3.0531.61 psi) |
| Electrical connection | | Terminals |
| Fluid connection | | G 1/4 (female) |
| References (1) | | |
| Fluids controlled (2) | Hydraulic oils, fresh water, air, up to + 160 °C | XMLD004B1S12 |
| Weight (kg) | | 1.015 |
| Complementary ch | aracteristics not shown | under general characteristics (page 17) |
| Natural differential | At low setting (3) | 0.15 bar (2.18 psi) |
| (subtract from PH1/PH2 to give PB1/PB2) | At high setting (3) | 0.19 bar (2.76 psi) |
| Maximum permissible | Per cycle | 5 bar (72.5 psi) |
| pressure | Accidental | 9 bar (130.5 psi) |
| Destruction pressure | | 18 bar (261 psi) |
| Mechanical life | | 8 x 10 ⁶ operating cycles |
| Cable entry for terminal mod | dels | 1 entry tapped M20 x 1.5 mm for ISO cable gland, clamping capacity 7 to 13 mm |
| Pressure switch type | | Diaphragm |
| - | | (1) For 1 entry tapped for no. 13 cable gland, replace S12 with S11 (for example, XMLD004B1S12 |

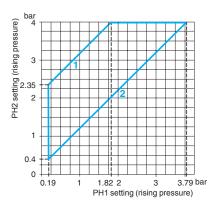
(1) For 1 entry tapped for no. 13 cable gland, replace S12 with S11 (for example, XMLD004B1S12 becomes XMLD004B1S11).

(2) For component materials of units in contact with the fluid, see pages 72 and 73.(3) Deviation of the differential at low and high setting points for switches of the same size:

 ± 0.03 bar (± 0.43 psi).

Operating curves

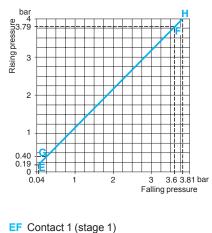
High setting tripping points of contacts 1 and 2

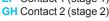


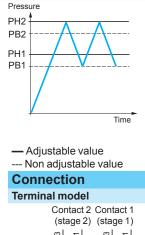
- 1 Maximum differential
- 2 Minimum differential

Other versions

Natural differential of contacts 1 and 2









Electromechanical pressure switches

OsiSense XML

Size 10 bar (145 psi) Fixed differential, for detection of a single threshold Switches with 1 CO single-pole contact

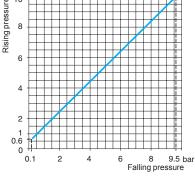
OsiSense XMLA pressure switches

With setting scale

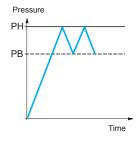




| Adjustable range of switch (Rising pressure) | ning point (PH) | 0.610 bar (8.7145 psi) | | | |
|--|--|--|---|-----------------------|--|
| Electrical connection | | DIN connector | Terminals | Terminals | |
| Fluid connection | | G 1/4 (female) | G 1/4 (female) | 1/4"-18 NPTF (female) | |
| References (1) | | | | | |
| Fluids controlled (2) | Hydraulic oils, fresh water, air, up to + 70 °C | XMLA010A2C11 | XMLA010A2S12 | XMLA010A2S13 | |
| | Hydraulic oils, fresh water, air, up to + 160 °C | XMLA010B2C11 | XMLA010B2S12 | - | |
| | Corrosive fluids, up to + 160 °C Sea water, up to + 30 °C | XMLA010C2C11 | XMLA010C2S12 | XMLA010C2S13 | |
| | Viscous products, up to + 160 °C (G 1¼" fluid connection) | XMLA010P2C11 | XMLA010P2S12 | - | |
| Weight (kg) | | 0.715 | 0.685 | 0.685 | |
| Complementary c | haracteristics not shown | under general chara | cteristics (page 17) | | |
| Natural differential At low setting (3) | | 0.5 bar (7.25 psi) | | | |
| (subtract from PH to give PB) | At high setting (3) | 0.5 bar (7.25 psi) | | | |
| Maximum permissible | Per cycle | 12.5 bar (181.25 psi) | | | |
| pressure | Accidental | 22.5 bar (326.25 psi) | | | |
| Destruction pressure | | 45 bar (652.5 psi) | | | |
| Mechanical life | | 5 x 10 ⁶ operating cycles | | | |
| Connection | | EN 175301-803-A (ex-DIN 43650A), 4-pin male connector. For suitable female connector, see page 68 | 1 entry tapped M20 x 1.5 mm for ISO cable gland, clamping capacity 7 to 13 mm | | |
| Pressure switch type | | Diaphragm | | | |
| | | For 1 entry tapped for no. 13 (becomes XMLA010A2S11). For component materials of (3) Deviation of the differential a bar (± 0.72 psi) | units in contact with the fluid, se | ee pages 72 and 73. | |
| Operating curves | | | Connec | tion | |
| | | | Terminal r | nodel | |
| bar 9 10 | | Pressure | | | |



Dimensions: pages 69 to 71



12 14

Connector model

Pressure switch connector pin view



 $1 \rightarrow 11$ and 13 $2 \rightarrow 12$ $3 \rightarrow 14$

- Adjustable value

--- Non adjustable value

For pressure switches with alternative tapped cable entries, such as NPT, etc. please consult our Customer Care Centre.

Other versions

Accessories: page 68

Elemecanique Sensors

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Electromechanical pressure switches

OsiSense XML Size 10 bar (145 psi) Adjustable differential, for regulation between 2 thresholds Switches with 1 CO single-pole contact

| OsiSense XMLB pressur | re switches | With setting scale | | | 30 bar (435 psi) overpressure With setting scale |
|--|--|---|--|---|--|
| | | | | | |
| Adjustable range of switchin | g point (PH) | 0.710 bar (10.151 | 45 psi) | | |
| (Rising pressure) Electrical connection | | DIN connector | Terminals | Terminals | Terminals |
| Fluid connection | | G 1/4 | G 1/4 | 1/4"-18 NPTF | G 1/4 |
| r luid connection | | (female) | (female) | (female) | (female) |
| References (1) | | | | | |
| Fluids controlled (2) | Hydraulic oils, fresh water, air, up to + 70 °C | XMLB010A2C11 | XMLB010A2S12 | XMLB010A2S13 | XMLBS10A2S12 |
| | Hydraulic oils, fresh water, air, up to + 160 °C | XMLB010B2C11 | XMLB010B2S12 | XMLB010B2S13 | - |
| | Corrosive fluids, up to + 160 °C Sea water, up to + 30 °C | XMLB010C2C11 | XMLB010C2S12 | XMLB010C2S13 | - |
| | Viscous products, up to + 160 °C (G 1 ¹ / ₄ " fluid connection) | XMLB010P2C11 | XMLB010P2S12 | - | - |
| Weight (kg) | | 0.735 | 0.705 | 0.705 | 3.500 |
| | aracteristics not shown | under general o | characteristics (| page 17) | |
| Possible differential (subtract from PH | Min. at low setting (3) | 0.57 bar (8.26 psi) | | | 0.45 bar (6.52 psi) |
| to give PB) | Min. at high setting (4) Max. at high setting | 0.85 bar (12.32 psi) 7.5 bar (108.75 psi) | | | 0.85 bar (12.32 psi) |
| Maximum permissible | Per cycle | 12.5 bar (181.25 psi) | | | 6.25 bar (90.62 psi) 30 bar (435 psi) |
| pressure | Accidental | 22.5 bar (326.25 psi) | | | 37.5 bar (543.75 psi) |
| Destruction pressure | | 45 bar (652.5 psi) | | 67.5 bar (978.75 psi) | |
| Mechanical life | | 5 x 10 ⁶ operating cycles | | | 2 x 10 ⁶ operating cycles |
| Connection | | EN 175301-803-A (ex-DIN 43650A), 4-pin male connector. For suitable female connector, see page 68 | 1 entry tapped M20 x 1.5 mm for ISO cable gland, clamping capacity 7 to 13 mm | 1 entry tapped 1/2"-14 NPT for cable gland, clamping capacity 7 to 13 mm | 1 entry tapped M20 x 1.5 mm for ISO cable gland, clamping capacity 7 to 13 mm |
| Pressure switch type | | Diaphragm | | | |
| | | becomes XMLB010, (2) For component mate (3) Deviation of the diffe ± 0.05 bar (± 0.72 ps (4) Deviation of the diffe | A2S11. erials of units in contact v rential at low setting poil si). | vith the fluid, see pages nt for switches of the san int for switches of the sa | ne size: |
| Operating curves | | | | Connection | |
| bar 10 8 8 | | Pressure PH | \ | Terminal model E E E E | |
| | | | Time | Connector model Pressure switch cor | |
| 0.7 0.13 1 Maximum differential | 8 9.15 bar alling pressure | — Adjustable value | | | 3 → 14 |
| 2 Minimum differential | | | | | |

References, characteristics (continued)

Electromechanical pressure switches

OsiSense XML

Size 10 bar (145 psi) Adjustable differential, for regulation between 2 thresholds Switches with 2 CO single-pole contacts

| | | _ | | _ |
|--|--|---|--|---|
| OsiSense XMLC pressu | ure switches | With setting scale | | 30 bar (435 psi) overpressure With setting scale |
| | | | | |
| Adjustable range of switchi (Rising pressure) | ing point (PH) | 0.7…10 bar (10.15…145 psi) | | |
| Electrical connection | | Terminals | | |
| Fluid connection | | G 1/4 (female) | 1/4"-18 NPTF (female) | G 1/4 (female) |
| | | | | (/ |
| References (1) | Hydraulic oils, fresh water, air, | _ | _ | XMLCS10A2S12 |
| (2) | up to + 70 °C | - | - | AWILOG TUAZO IZ |
| | Hydraulic oils, fresh water, air, up to + 160 °C | XMLC010B2S12 | XMLC010B2S13 | - |
| | Corrosive fluids, up to + 160 °C | XMLC010C2S12 | XMLC010C2S13 | - |
| | Sea water, up to + 30 °C | 0.005 | 0.685 | 2 500 |
| Weight (kg) | | | | 3.500 |
| Complementary characteristics not shown | | | | |
| Possible differential (subtract from PH | Min. at low setting (3) | 0.45 bar (6.53 psi) | | 0.25 bar (3.62 psi) |
| o give PB) | Min. at high setting (4) | 0.70 bar (10.15 psi) | | 0.65 bar (9.42 psi) |
| | Max. at high setting | 8 bar (116 psi) | | 5.6 bar (81.2 psi) |
| Maximum permissible pressure | Per cycle | 12.5 bar (181.25 psi) | | 30 bar (435 psi) |
| | Accidental | 22.5 bar (326.25 psi) | | 37.5 bar (543.75 psi) |
| Destruction pressure | | 45 bar (652.5 psi) | | 67.5 bar (978.75 psi) |
| Mechanical life | | 5 x 10 ⁶ operating cycles | | 2 x 10 ⁶ operating cycles |
| Cable entry for terminal mo | dels | 1 entry tapped M20 x 1.5 mm for ISO cable gland, clamping capacity 7 to 13 mm | 1 entry tapped 1/2"-14 NPT for cable gland, clamping capacity 7 to 13 mm | 1 entry tapped M20 x 1.5 mm for ISO cable gland, clamping capacity 7 to 13 mm |
| Pressure switch type | | Diaphragm | | |
| | | For 1 entry tapped for no. 13 becomes XMLC010B2S11). For component materials of (3) Deviation of the differential a ± 0.05 bar (± 0.72 psi) Deviation of the differential a ± 0.01 bar (± 1.45 psi) | units in contact with the fluid, se t low setting point for switches (| of the same size: |
| Operating curves | | | Connec | tion |
| | | | Terminal n | nodel |
| bar a 10 | | Pressure | € [] 5 | 2 24 |
| anssat duise 6 4 0.7 0 | 6 8 9.3 bar Falling pressure | PH PB Time | 4 2 2 | |

1 Maximum differential

2 Minimum differential

Other versions

Adjustable value

For pressure switches with alternative tapped cable entries, such as NPT, etc. please consult our Customer Care Centre.

Dimensions: pages 69 to 71

E Telemecanique

Sensors

Accessories: page 68

Electromechanical pressure switches

OsiSense XML

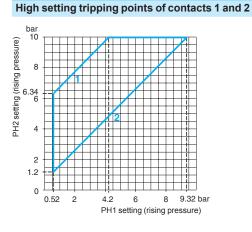
Size 10 bar (145 psi) Dual stage, fixed differential, for detection at each threshold Switches with 2 CO single-pole contacts

OsiSense XMLD pressure switches Without setting scale



| Adjustable range of each | 2nd stage switching point (PH2) | 1.2…10 bar (17.4…145 psi) | | |
|--|--|--|---|--|
| switching point (Rising pressure) | 1st stage switching point (PH1) | 0.529.32 bar (7.54135.14 psi) | | |
| Spread between 2 stages (PH2 - PH1) | | 0.68…5.8 bar (9.86…84.1 psi) | | |
| Fluid connection | | G 1/4 (female) | | |
| Electrical connection | | Terminals | | |
| References | | | | |
| Fluids controlled (1) | Hydraulic oils, fresh water, air, up to + 160 °C | XMLD010B1S11 | XMLD010B1S12 | |
| | Corrosive fluids, up to + 160 °C Sea water, up to + 30 °C | XMLD010C1S11 | - | |
| Weight (kg) | | 0.705 | 0.705 | |
| Complementary ch | aracteristics not shown | under general characteristics | (page 17) | |
| Natural differential | At low setting (2) | 0.45 bar (6.53 psi) | | |
| (subtract from PH1/PH2 to give PB1/PB2) | At high setting (3) | 0.6 bar (8.7 psi) | | |
| Maximum permissible | Per cycle | 12.5 bar (181.25 psi) | | |
| pressure | Accidental | 22.5 bar (326.25 psi) | | |
| Destruction pressure | | 45 bar (652.5 psi) | | |
| Mechanical life | | 5 x 10 ⁶ operating cycles | | |
| Cable entry for terminal models | | 1 entry tapped for no. 13 cable gland | 1 entry tapped M20 x 1.5 mm for ISO cable gland, clamping capacity 7 to 13 mm | |
| Pressure switch type | | Diaphragm | | |
| | | (1) For component materials of units in contact with the fluid, see pages 72 and 73. (2) Deviation of the differential at low setting point for switches of the same size: ± 0.05 bar (± 0.72 psi) (3) Deviation of the differential at high setting point for switches of the same size: ± 0.1 bar (± 1.45 psi) | | |

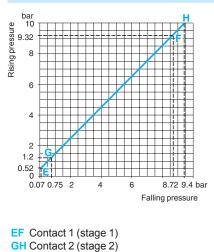
Operating curves



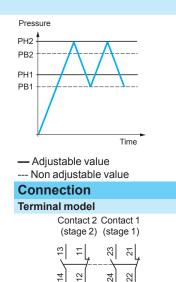
1 Maximum differential

2 Minimum differential

Other versions



Natural differential of contacts 1 and 2



Electromechanical pressure switches OsiSense XML Size 20 bar (290 psi) Fixed differential, for detection of a single threshold Switches with 1 CO single-pole contact

| OsiSense XMLA pressure | e switches | With setting scale | | |
|---|--|---|---|--|
| | | | | |
| Adjustable range of switching (Rising pressure) | g point (PH) | 120 bar (14.5290 psi) | | |
| Electrical connection | | DIN connector | Terminals | |
| Fluid connection | | G 1/4 (female) | G 1/4 (female) | 1/4"-18 NPTF (female) |
| References (1) | | | | |
| Fluids controlled | Hydraulic oils, fresh water, air, | XMLA020A2C11 | XMLA020A2S12 | XMLA020A2S13 |
| (2) | up to + 70 °C Hydraulic oils, fresh water, air, | XMLA020B2C11 | XMLA020B2S12 | - |
| | up to + 160 °C | | | |
| | Corrosive fluids, up to + 160 °C Sea water, up to + 30 °C | XMLA020C2C11 | XMLA020C2S12 | - |
| | Viscous products, up to + 160 °C | XMLA020P2C11 | XMLA020P2S12 | - |
| Weight (kg) | (G 1¼" fluid connection) | 0.715 | 0.685 | 0.685 |
| | racteristics not shown | under general chara | cteristics (page 17) | |
| Natural differential | At low setting (3) | 0.4 bar (5.8 psi) | (10) | |
| (subtract from PH to give PB) | At high setting (3) | 1 bar (14.5 psi) | | |
| Maximum permissible pressure | Per cycle | 25 bar (362.5 psi) | | |
| Destruction pressure | Accidental | 45 bar (652.5 psi) 90 bar (1305 psi) | | |
| Mechanical life | | 5 x 10 ⁶ operating cycles | | |
| Connection | | EN 175301-803-A (ex-DIN 43650A), 4-pin male connector. For suitable female connector, see page 68 | 1 entry tapped M20 x 1.5 mm for ISO cable gland, clamping capacity 7 to 13 mm | 1 entry tapped 1/2"-14 NPT for cable gland, clamping capacity 7 to 13 mm |
| Pressure switch type | | Diaphragm | | |
| | | (1) For 1 entry tapped for no. 13 d becomes XMLA020A2S11). (2) For component materials of 0 (3) Deviation of the differential a ± 0.1 bar (± 1.45 psi) Deviation of the differential a | units in contact with the fluid, see | e pages 72 and 73. of the same size: |
| Operating curves | | | Connect | ion |
| | | | Terminal m | odel |
| bar 20 15 | | Pressure PH PB | 12 13 | |
| ž | | | | |
| 10 | | | Connector | |
| | | <u> </u> | | tch connector pin view |
| 5 1 0 0.6 5 10 Fa | 15 19 bar alling pressure | Time | | $1 \rightarrow 11 \text{ and } 13$ $2 \rightarrow 12$ $3 \rightarrow 14$ |
| | | — Adjustable value | | |
| Other versions | | For pressure switches with alter our Customer Care Centre. | native tapped cable entries, suc | h as NPT, etc. please consult |
| Accessories: page 68 | Dimensions: pages 69 to 71 | | | |
| 44 | Ē | Telemecanique Sensors | | |

Electromechanical pressure switches OsiSense XML Size 20 bar (290 psi) Adjustable differential, for regulation between 2 thresholds Switches with 1 CO single-pole contact

| | ure switches | With setting scale | | | 30 bar (435 psi) overpressure With setting sca |
|--|--|--|--|---|--|
| | | | | | |
| Adjustable range of switch Rising pressure) | ing point (PH) | 1.320 bar (18.929 | 0 psi) | | \cup |
| Electrical connection | | DIN connector | Terminals | | |
| luid connection | | G 1/4 (female) | G 1/4 (female) | 1/4"-18 NPTF (female) | G 1/4 (female) |
| References (1) | | (leffidie) | (lendle) | (leffidie) | (iemaie) |
| luids controlled | Hydraulic oils, fresh water, air, | XMLB020A2C11 | XMLB020A2S12 | XMLB020A2S13 | XMLBS20A2S12 |
| 2) | up to + 70 °C Hydraulic oils, fresh water, air, | XMLB020B2C11 | XMLB020B2S12 | XMLB020B2S13 | - |
| | up to + 160 °C Corrosive fluids, up to + 160 °C | XMLB020C2C11 | XMLB020C2S12 | _ | _ |
| | Sea water, up to + 30 °C | | | | |
| | Viscous products, up to + 160 °C (G 1¼" fluid connection) | XMLB020P2C11 | XMLB020P2S12 | - | - |
| /eight (kg) | | 0.735 | 0.705 | 0.705 | 3.500 |
| Complementary cl | haracteristics not shown | under general o | haracteristics (| bage 17) | |
| ossible differential | Min. at low setting (3) | 1 bar (14.5 psi) | , | , | 0.95 bar (13.78 psi |
| ubtract from PH | Min. at high setting (3) | 1.6 bar (23.20 psi) | | | 1.45 bar (21.03 psi) |
| give PB) | Max. at high setting | 11 bar (159.5 psi) | | | 12.6 bar (182.7 psi |
| aximum permissible | Per cycle | 25 bar (362.5 psi) | | | 30 bar (435 psi) |
| ressure | Accidental | 45 bar (652.5 psi) | | | 37.5 bar (543.75 ps |
| estruction pressure lechanical life | | 90 bar (1305 psi) 5 x 10 ⁶ operating cycle | S | | 67.5 bar (978.75 ps 2 x 10 ⁶ operating cycles |
| Connection | | EN 175301-803-A (ex-DIN 43650A), 4-pin male connector. For suitable female connector, see page 68 | 1 entry tapped M20 x 1.5 mm for ISO cable gland, clamping capacity 7 to 13 mm | 1 entry tapped 1/2"-14 NPT for cable gland, clamping capacity 7 to 13 mm | 1 entry tapped M20 1.5 mm for ISO cab gland, clamping capacity 7 to 13 mm |
| ressure switch type Operating curves | | becomes XMLB020 (2) For component mate | erials of units in contact w erential at low and high s | vith the fluid, see pages etting points for switches Connection | 72 and 73. |
| bar 20 | | 4 | | Terminal model | |
| 20 20 215 | | РН | | 12 13 | |
| 10 | | | | Connector model Pressure switch con | nector pin view |
| 5 | 15 18.4 bar | γ | Time | | $1 \rightarrow 11 \text{ and } 13$ $2 \rightarrow 12$ $3 \rightarrow 14$ |
| 0.3 5 910 | Falling pressure | | | | |
| | Falling pressure | — Adjustable value | | | |
| 0.3 5 910 Maximum differential | Falling pressure | | vith alternative tapped ca | able entries, such as NP | T, etc. please consult |

Electromechanical pressure switches

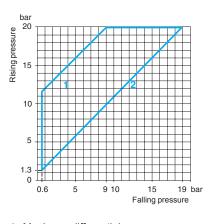
OsiSense XML

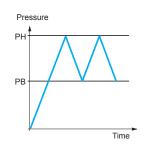
Size 20 bar (290 psi) Adjustable differential, for regulation between 2 thresholds Switches with 2 CO single-pole contacts

| OsiSense XMLC press | ure switches | With setting scale | | 30 bar (435 psi) overpressure With setting scale |
|---|--|---|--|---|
| | | | | |
| Adjustable range of switch (Rising pressure) | ing point (PH) | 1.320 bar (18.85290 psi) | | |
| Electrical connection | | Terminals | | |
| Fluid connection | | G 1/4 (female) | 1/4"-18 NPTF (female) | G 1/4 (female) |
| References (1) | | | , | |
| Fluids controlled (2) | Hydraulic oils, fresh water, air, up to + 70 °C | - | - | XMLCS20A2S12 |
| | Hydraulic oils, fresh water, air, up to + 160 °C | XMLC020B2S12 | XMLC020B2S13 | - |
| | Corrosive fluids, up to + 160 °C Sea water, up to + 30 °C | XMLC020C2S12 | XMLC020C2S13 | - |
| Weight (kg) | | 0.685 | 0.685 | 3.500 |
| Complementary c | haracteristics not shown | under general chara | cteristics (page 17) | |
| Possible differential | Min. at low setting (3) | 0.7 bar (10.15 psi) | | 0.7 bar (10.15 psi) |
| (subtract from PH | Min. at high setting (3) | 1 bar (14.5 psi) | | 1.15 bar (16.67 psi) |
| to give PB) | Max. at high setting | 11 bar (159.5 psi) | | 11.70 bar (169.6 psi) |
| Maximum permissible | Per cycle | 25 bar (362.5 psi) | | 30 bar (435 psi) |
| pressure | Accidental | 45 bar (652.5 psi) | | 37.5 bar (543.75 psi) |
| Destruction pressure | | 90 bar (1305 psi) | | 67.5 bar (978.75 psi) |
| Mechanical life | | 5 x 10 ⁶ operating cycles | | 2 x 10 ⁶ operating cycles |
| Cable entry for terminal mo | odels | 1 entry tapped M20 x 1.5 mm for ISO cable gland, clamping capacity 7 to 13 mm | 1 entry tapped 1/2"-14 NPT for cable gland, clamping capacity 7 to 13 mm | 1 entry tapped M20 x 1.5 mm for ISO cable gland, clamping capacity 7 to 13 mm |
| Pressure switch type | | Diaphragm | | |
| | | becomes XMLC020B2S11). (2) For component materials of | 0 / 1 | |

 (2) For component materials of units in contact with the fluid, see pages 72 and 73.
 (3) Deviation of the differential at low and high setting points for switches of the same size: ± 0.2 bar (± 2.9 psi)

Operating curves





Connection Terminal model 5

1 Maximum differential

2 Minimum differential Other versions - Adjustable value

For pressure switches with alternative tapped cable entries, such as NPT, etc. please consult our Customer Care Centre.

Dimensions: pages 69 to 71

Accessories: page 68

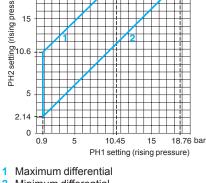
Telemecanique

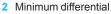
Electromechanical pressure switches

OsiSense XML

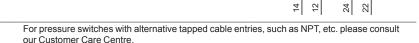
Size 20 bar (290 psi) Dual stage, fixed differential, for detection at each threshold Switches with 2 CO single-pole contacts

| OsiSense XMLD pressu | re switches | Without setting scale | |
|--|--|---|---|
| | | | |
| Adjustable range of each | 2nd stage | 2.1420 bar (31.03290 psi) | |
| switching point (Rising pressure) | switching point (PH2) 1st stage | 0.9…18.76 bar (13.05…272.02 psi) | |
| Spread between 2 stages (P | switching point (PH1) | 1.249.55 bar (17.98138.48 psi) | |
| Electrical connection | 112 - 1 111) | Terminals | |
| | | | |
| Fluid connection | | G 1/4 (female) | 1/4"-18 NPTF (female) |
| References (1) | | | |
| Fluids controlled (2) | Hydraulic oils, fresh water, air, up to + 160 °C | XMLD020B1S12 | XMLD020B1S13 |
| | Corrosive fluids, up to + 160 °C Sea water, up to + 30 °C | XMLD020C1S12 | - |
| Weight (kg) | | 0.705 | 0.705 |
| Complementary ch | aracteristics not shown | under general characteristics (| page 17) |
| Natural differential | At low setting (3) | 0.7 bar (10.15 psi) | |
| (subtract from PH1/PH2 to give PB1/PB2) | At high setting (4) | 1.3 bar (18.85 psi) | |
| Maximum permissible | Per cycle | 25 bar (362.5 psi) | |
| pressure | Accidental | 45 bar (652.5 psi) | |
| Destruction pressure | | 90 bar (1305 psi) | |
| Mechanical life | | 5 x 10 ⁶ operating cycles | |
| Cable entry for terminal mod | dels | 1 entry tapped M20 x 1.5 mm for ISO cable gland, clamping capacity 7 to 13 mm | 1 entry tapped 1/2"-14 NPT for cable gland, clamping capacity 7 to 13 mm |
| Pressure switch type | | Diaphragm | |
| | | (1) For 1 entry tapped for no. 13 cable gland, repl becomes XMLD020B1S11). | lace S12 with S11 (for example, XMLD020B1S12 |
| | | (2) For component materials of units in contact w (3) Deviation of the differential at low setting poin ± 0.15 bar (± 2.18 psi) (4) Deviation of the differential at high setting point | int for switches of the same size: |
| Onereting | | ± 0.3 bar (± 4.35 psi) | |
| Operating curves | | | |
| High setting tripping po | ints of contacts 1 and 2 | Natural differential of contacts 1 and 2 | |
| enssed 15 | | bar 18.76 15 15 | Pressure PH2 PB2 PH1 PB1 PB1 |





Other versions



15 17.46 18.7 bar

Falling pressure

10

5

2.14 0.9 0

0.2 1.44

EF Contact 1 (stage 1)

GH Contact 2 (stage 2)

5

10

Time

- Adjustable value

Terminal model

1 13

--- Non adjustable value

Connection model

Contact 2 Contact 1

(stage 2) (stage 1)

23

Electromechanical pressure switches

OsiSense XML

Size 35 bar (507.5 psi) Fixed differential, for detection of a single threshold Switches with 1 CO single-pole contact

OsiSense XMLA pressure switches

With setting scale





| Adjustable range of switch (Rising pressure) | hing point (PH) | 1.535 bar (21.75507.5 psi) | | | |
|---|--|--|---|--|--|
| Electrical connection | | DIN connector | Terminals | | |
| Fluid connection | | G 1/4 (female) | G 1/4 (female) | 1/4"-18 NPTF (female) | |
| References (1) | | | | 1 | |
| Fluids controlled (2) | Hydraulic oils, fresh water, air, up to + 70 °C | XMLA035A2C11 | XMLA035A2S12 | XMLA035A2S13 | |
| | Hydraulic oils, fresh water, air, up to + 160 °C | XMLA035B2C11 | XMLA035B2S12 | - | |
| | Corrosive fluids, up to + 160 °C Sea water, up to + 30 °C | XMLA035C2C11 | XMLA035C2S12 | - | |
| | Viscous products, up to + 160 °C (G 1¼" fluid connection) | XMLA035P2C11 | XMLA035P2S12 | - | |
| Weight (kg) | | 0.725 | 0.695 | 0.695 | |
| Complementary of | haracteristics not shown | under general chara | cteristics (page 17) | | |
| Natural differential At low setting (3) | | 1.25 bar (18.12 psi) | | | |
| (subtract from PH to give PB) | At high setting (3) | 1.25 bar (18.12 psi) | | | |
| Maximum permissible Per cycle | | 45 bar (652.5 psi) | | | |
| pressure | Accidental | 80 bar (1160 psi) | | | |
| Destruction pressure | | 160 bar (2320 psi) | | | |
| Mechanical life | | 5 x 10 ⁶ operating cycles | | | |
| Connection | | EN 175301-803-A (ex-DIN 43650A), 4-pin male connector. For suitable female connector, see page 68 | 1 entry tapped M20 x 1.5 mm for ISO cable gland, clamping capacity 7 to 13 mm | 1 entry tapped 1/2"-14 NPT for cable gland, clamping capacity 7 to 13 mm | |
| Pressure switch type | | Diaphragm | | | |
| | | For 1 entry tapped for no. 13 d becomes XMLA035A2S11). For component materials of u (3) Deviation of the differential a ± 0.25 bar (± 3.62 psi) | units in contact with the fluid, see | e pages 72 and 73. | |
| Operating curves | | | Connect | ion | |
| | | | Terminal m | odel | |
| bar 35 30 20 20 | | Pressure PH PB | 12 14 13 | | |
| | | | Connector | model | |
| | -+ + + + + + + + + + + + + + + + + + + | | - | | |

Pressure switch connector pin view



 $\begin{array}{l} 1 \rightarrow 11 \text{ and } 13 \\ 2 \rightarrow 12 \\ 3 \rightarrow 14 \end{array}$

— Adjustable value

Time

--- Non adjustable value

Other versions

0.25

10

20

30 33.75 bar Falling pressure

> For pressure switches with alternative tapped cable entries, such as NPT, etc. please consult our Customer Care Centre.

Telemecanique

10

1.5 0

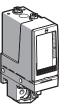
Electromechanical pressure switches

OsiSense XML Size 35 bar (507.5 psi) Adjustable differential, for regulation between 2 thresholds Switches with 1 CO single-pole contact

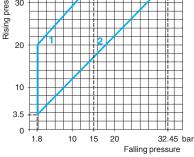
OsiSense XMLB pressure switches

With setting scale





| Adjustable range of switching point (PH) (Rising pressure) | | 3.535 bar (50.75507.5 psi) | | | | |
|---|--|---|---|--|--|--|
| Electrical connection | | DIN connector | Terminals | | | |
| Fluid connection | | G 1/4 (female) | G 1/4 (female) | 1/4"-18 NPTF (female) | | |
| References (1) | | 1 | 1 | 1 | | |
| Fluids controlled (2) | Hydraulic oils, fresh water, air, up to + 70 °C | XMLB035A2C11 | XMLB035A2S12 | XMLB035A2S13 | | |
| | Hydraulic oils, fresh water, air, up to + 160 °C | XMLB035B2C11 | XMLB035B2S12 | - | | |
| | Corrosive fluids, up to + 160 °C Sea water, up to + 30 °C | XMLB035C2C11 | XMLB035C2S12 | - | | |
| | Viscous products, up to + 160 °C (G 1¼" fluid connection) | - | XMLB035P2S12 | - | | |
| Weight (kg) | | 0.745 | 0.715 | 0.715 | | |
| Complementary of | haracteristics not shown | under general chara | cteristics (page 17) | | | |
| Possible differential | Min. at low setting (3) | 1.7 bar (24.65 psi) | | | | |
| (subtract from PH | Min. at high setting (3) | 2.55 bar (36.97 psi) | | | | |
| to give PB) | Max. at high setting | 20 bar (290 psi) | | | | |
| Maximum permissible | Per cycle | 45 bar (652.5 psi) | | | | |
| pressure | Accidental | 80 bar (1160 psi) | | | | |
| Destruction pressure | | 160 bar (2320 psi) | | | | |
| Mechanical life | | 5 x 10 ⁶ operating cycles | | | | |
| Connection | | EN 175301-803-A connector (ex-DIN 43650A), 4-pin male. For suitable female connector, see page 68 | 1 entry tapped M20 x 1.5 mm for ISO cable gland, clamping capacity 7 to 13 mm | 1 entry tapped 1/2"-14 NPT for cable gland, clamping capacity 7 to 13 mm | | |
| Pressure switch type | | Diaphragm | | | | |
| | | For 1 entry tapped for no. 13 becomes XMLB035A2S11). For component materials of (3) Deviation of the differential a - 0.5 bar, + 0.7 bar (- 7.25 ps) | units in contact with the fluid, see t low and high setting points for | | | |
| Operating curves | | | Connect | ion | | |
| | | | Terminal m | odel | | |
| a bar 35 35 30 4 4 4 4 4 4 5 5 5 5 5 5 5 5 5 5 5 5 5 | | Pressure | | | | |



PH PH PB Time

Connector model Pressure switch connector pin view



 $1 \rightarrow 11 \text{ and } 13$ $2 \rightarrow 12$ $3 \rightarrow 14$

1 Maximum differential

2 Minimum differential

Other versions

- Adjustable value



Electromechanical pressure switches

OsiSense XML

Size 35 bar (507.5 psi) Adjustable differential, for regulation between 2 thresholds Switches with 2 CO single-pole contacts

OsiSense XMLC pressure switches

With setting scale



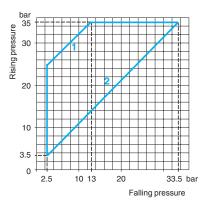
| Adjustable range of switching point (PH) (Rising pressure) | | 3.535 bar (50.75507.5 psi) | | |
|---|--|---|--|--|
| Electrical connection | | Terminals | | |
| Fluid connection | | G 1/4 (female) | 1/4"-18 NPTF (female) | |
| References (1) | | | | |
| Fluids controlled (2) | Hydraulic oils, fresh water, air, up to + 160 °C | XMLC035B2S12 | XMLC035B2S13 | |
| | Corrosive fluids, up to + 160 °C Sea water, up to + 30 °C | XMLC035C2S12 | XMLC035C2S13 | |
| Weight (kg) | | 0.695 | 0.695 | |
| Complementary characteristics not shown | | under general characteristics (page 17) | | |
| Possible differential | Min. at low setting (3) | 1 bar (14.5 psi) | | |
| (subtract from PH | Min. at high setting (4) | 1.5 bar (21.75 psi) | | |
| to give PB) | Max. at high setting | 22 bar (319 psi) | | |
| Maximum permissible | Per cycle | 45 bar (652.5 psi) | | |
| pressure | Accidental | 80 bar (1160 psi) | | |
| Destruction pressure | | 160 bar (2320 psi) | | |
| Mechanical life | | 5 x 10 ⁶ operating cycles | | |
| Cable entry for terminal models | | 1 entry tapped M20 x 1.5 mm for ISO cable gland, clamping capacity 7 to 13 mm | 1 entry tapped 1/2"-14 NPT for cable gland clamping capacity 7 to 13 mm | |
| Pressure switch type | | Diaphragm | , | |

For component materials of units in contact with the fluid, see pages 72 and 73. (3) Deviation of the differential at low setting point for switches of the same size:

± 0.2 bar (± 2.9 psi)

(4) Deviation of the differential at high setting point for switches of the same size: ± 0.5 bar (± 7.25 psi)

Operating curves



Pressure PH PB Time



- Adjustable value

1 Maximum differential Minimum differential 2

Other versions

For pressure switches with alternative tapped cable entries, such as NPT, etc. please consult our Customer Care Centre.

() Telemecanique

Sensors

Accessories:

Electromechanical pressure switches

OsiSense XML Size 35 bar (507.5 psi) Dual stage, fixed differential, for detection at each threshold Switches with 2 CO single-pole contacts





| Adjustable range of each | 2nd stage switching point (PH2) | 4.435 bar (63.8507.5 psi) | | |
|---|--|--|--|--|
| switching point 1st stage switching point (PH1) (Rising pressure) 1st stage switching point (PH1) | | 1.932.5 bar (27.55471.25 psi) | | |
| Spread between 2 stages (P | 'H2 - PH1) | 2.520.4 bar (36.25295.8 psi) | | |
| Electrical connection | | Terminals | | |
| Fluid connection | | G 1/4 (female) | | |
| References (1) | | | | |
| Fluids controlled (2) | Hydraulic oils, fresh water, air, up to + 160 °C | XMLD035B1S12 | | |
| Weight (kg) | | 0.715 | | |
| Complementary ch | naracteristics not shown | under general characteristics (page 17) | | |
| Natural differential | At low setting (3) | 1.5 bar (21.75 psi) | | |
| (subtract from PH1/PH2 to give PB1/PB2) | At high setting (4) | 2.6 bar (37.7 psi) | | |
| Maximum permissible | Per cycle | 45 bar (652.5 psi) | | |
| pressure | Accidental | 80 bar (1160 psi) | | |
| Destruction pressure | | 160 bar (2320 psi) | | |
| Mechanical life | | 5 x 10 ⁶ operating cycles | | |
| Cable entry for terminal models | | 1 entry tapped M20 x 1.5 mm for ISO cable gland, clamping capacity 7 to 13 mm | | |
| Pressure switch type | | Diaphragm | | |
| | | (1) For 1 entry tapped for no. 13 cable gland, replace S12 with S11 (for example, XMLD035B1S12 becomes XMLD035B1S11). | | |
| | | (2) For component materials of units in contact with the fluid, see pages 72 and 73. | | |

(2) For component materials of units in contact with the fluid, see pages 72 and 73(3) Deviation of the differential at low setting point for switches of the same size:

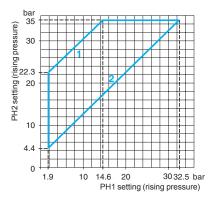
 ± 0.3 bar (± 4.35 psi)

(4) Deviation of the differential at high setting point for switches of the same size:

± 0.7 bar (± 10.15 psi)

Operating curves

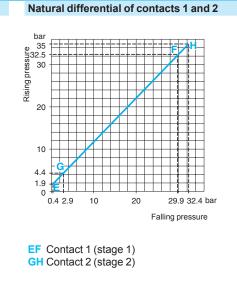
High setting tripping points of contacts 1 and 2

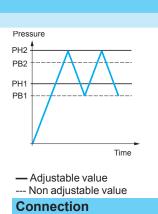


1 Maximum differential

2 Minimum differential

Other versions





Terminal model Contact 2 Contact 1



Electromechanical pressure switches

OsiSense XML

Size 70 bar (1015 psi) Fixed differential, for detection of a single threshold Switches with 1 CO single-pole contact

OsiSense XMLA pressure switches

With setting scale



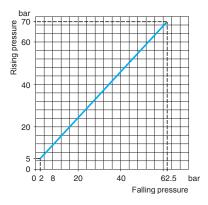


| Adjustable range of switching point (PH) (Rising pressure) | | 570 bar (72.51015 psi) | 570 bar (72.51015 psi) | | | |
|---|--|--|--|--|--|--|
| Electrical connection | | DIN connector | Terminals | | | |
| Fluid connection | | G 1/4 (female) | G 1/4 (female) | 1/4"-18 NPTF (female) | | |
| References (1) | | | | | | |
| Fluids controlled (2) | Hydraulic oils, up to + 160 °C | XMLA070D2C11 | XMLA070D2S12 | XMLA070D2S13 | | |
| | Fresh water, up to + 160 °C | XMLA070E2C11 | XMLA070E2S12 | XMLA070E2S13 | | |
| | Corrosive fluids, air, up to + 160 °C | XMLA070N2C11 | XMLA070N2S12 | - | | |
| Weight (kg) | | 0.725 | 0.695 | 0.695 | | |
| Complementary c | haracteristics not she | own under general chara | cteristics (page 17) | | | |
| Natural differential | At low setting (3) | 3 bar (43.5 psi) | 3 bar (43.5 psi) | | | |
| (subtract from PH to give PB) | At high setting (3) | 9.5 bar (137.75 psi) | | | | |
| Maximum permissible | Per cycle | 90 bar (1035 psi) | | | | |
| pressure | Accidental | 160 bar (2320 psi) | 160 bar (2320 psi) | | | |
| Destruction pressure | | 320 bar (4640 psi) | 320 bar (4640 psi) | | | |
| Mechanical life | | 6 x 10 ⁶ operating cycles | 6 x 10 ⁶ operating cycles | | | |
| Connection | | EN 175301-803-A (ex-DIN 43650A), 4-pin male connector. For suitable female connector, see page 68 | 1 entry tapped M20 x 1.5 mm for ISO cable gland, clamping capacity 7 to 13 mm | 1 entry tapped 1/2"-14 NPT for cable gland, clamping capacity 7 to 13 mm | | |
| Pressure switch type | | Piston | | | | |
| | | (1) For 1 entry tapped for no. 13 (becomes XMLA070D2S11). | | | | |
| | | (2) For component materials of (| (2) For component materials of units in contact with the fluid, see pages 72 and 73. | | | |

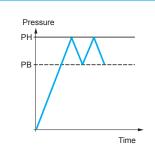
(2) For component materials of units in contact with the fluid, see pages 72 and 73.
 (3) Deviation of the differential at low and high setting points for switches of the same size: ± 1

bar (± 14.5 psi)

Operating curves



Dimensions: pages 69 to 71



Connection

₹) 0

Connector model Pressure switch connector pin view



 $1 \rightarrow 11 \text{ and } 13$ $2 \rightarrow 12$ $3 \rightarrow 14$

- Adjustable value

--- Non adjustable value

Other versions

For pressure switches with alternative tapped cable entries, such as NPT, etc. please consult our Customer Care Centre.

Accessories: page 68

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E Telemecanique

Sensors

Electromechanical pressure switches

OsiSense XML Size 70 bar (1015 psi) Adjustable differential, for regulation between 2 thresholds Switches with 1 CO single-pole contact

OsiSense XMLB pressure switches

With setting scale





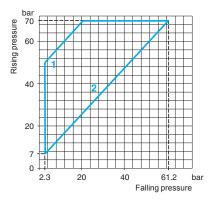
| Adjustable range of switching point (PH) (Rising pressure) | | 770 bar (101.51015 psi) | 770 bar (101.51015 psi) | | |
|---|--|--|---|--|--|
| Electrical connection | | DIN connector | Terminals | | |
| Fluid connection | | G 1/4 (female) | G 1/4 (female) | 1/4"-18 NPTF (female) | |
| References (1) | | | | | |
| Fluids controlled (2) | Hydraulic oils, up to + 160 °C | XMLB070D2C11 | XMLB070D2S12 | XMLB070D2S13 | |
| | Fresh water, up to + 160 °C | XMLB070E2C11 | XMLB070E2S12 | - | |
| | Corrosive fluids, air, up to + 160 °C | XMLB070N2C11 | XMLB070N2S12 | - | |
| Weight (kg) | | 0.745 | 0.715 | 0.715 | |
| Complementary c | haracteristics not sho | wn under general chara | cteristics (page 17) | | |
| Possible differential | Min. at low setting (3) | 4.7 bar (68.15 psi) | | | |
| (subtract from PH | Min. at high setting (4) | 9.5 bar (137.75 psi) | | | |
| to give PB) | Max. at high setting | 50 bar (725 psi) | | | |
| Maximum permissible | Per cycle | 90 bar (1035 psi) | | | |
| pressure | Accidental | 160 bar (2320 psi) | | | |
| Destruction pressure | | 320 bar (4640 psi) | 320 bar (4640 psi) | | |
| Mechanical life | | 6 x 10 ⁶ operating cycles | 6 x 10 ⁶ operating cycles | | |
| Connection | | EN 175301-803-A connector (ex-DIN 43650A), 4-pin male connector. For suitable female connector, see page 68 | 1 entry tapped M20 x 1.5 mm for ISO cable gland, clamping capacity 7 to 13 mm | 1 entry tapped 1/2"-14 NPT for cable gland, clamping capacity 7 to 13 mm | |
| Pressure switch type | | Piston | | | |
| | | (1) For 1 entry tapped for no. 13 (becomes XMLB070D2S11). (2) For component materials of t | 0, 1 | | |

(2) For component materials of units in contact with the fluid, see pages 72 and 73.

(3) Deviation of the differential at low setting point for switches of the same size:

- 0.4 bar, + 0.7 bar (- 5.8 psi, + 10.15 psi).
(4) Deviation of the differential at high setting point for switches of the same size:
- 0.6 bar, + 0.8 bar (- 8.7 psi, + 11.6 psi).

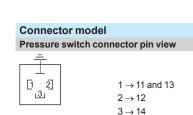
Operating curves



Pressure PH PΒ Time

Connection Terminal model 33 7

12 4



Maximum differential 1

2 Minimum differential

Other versions

- Adjustable value



Electromechanical pressure switches

OsiSense XML

Size 70 bar (1015 psi) Adjustable differential, for regulation between 2 thresholds Switches with 2 CO single-pole contacts

| OsiSense XMLC | pressure switches |
|---------------|-------------------|
|---------------|-------------------|

With setting scale

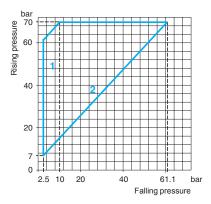


| Adjustable range of switching point (PH) (Rising pressure) | | 7…70 bar (101.5…1015 psi) | 770 bar (101.51015 psi) | | |
|---|--|--|--|--|--|
| Electrical connection | | Terminals | | | |
| Fluid connection | | G 1/4 (female) | 1/4"-18 NPTF (female) | | |
| References (1) | | | | | |
| Fluids controlled (2) | Hydraulic oils, up to + 160 °C | XMLC070D2S12 | XMLC070D2S13 | | |
| | Fresh water, up to + 160 °C | XMLC070E2S12 | - | | |
| | Corrosive fluids, air, up to + 160 °C | XMLC070N2S12 | - | | |
| Weight (kg) | | 0.695 | 0.695 | | |
| Complementary c | haracteristics not sho | wn under general characteristics | (page 17) | | |
| Possible differential | Min. at low setting (3) | 4.5 bar (65.25 psi) | | | |
| (subtract from PH | Min. at high setting (3) | 9.5 bar (137.75 psi) | | | |
| to give PB) | Max. at high setting | 60 bar (870 psi) | | | |
| Maximum permissible | Per cycle | 90 bar (1035 psi) | 90 bar (1035 psi) | | |
| pressure | Accidental | 160 bar (2320 psi) | 160 bar (2320 psi) | | |
| Destruction pressure | | 320 bar (4640 psi) | 320 bar (4640 psi) | | |
| Mechanical life | | 6 x 10 ⁶ operating cycles | 6 x 10 ⁶ operating cycles | | |
| Cable entry for terminal models | | 1 entry tapped M20 x 1.5 mm for ISO cable gland, clamping capacity 7 to 13 mm | 1 entry tapped 1/2"-14 NPT for cable gland, clamping capacity 7 to 13 mm | | |
| Pressure switch type | | Piston | Piston | | |
| *• | | (1) For 1 entry tapped for no. 13 cable gland, replace S12 with S11 (for example, XMLC070D2S | | | |

 For 1 entry tapped for no. 13 cable gland, replace S12 with S11 (ror example, Aw becomes XMLC070D2S11).
 For component materials of units in contact with the fluid, see pages 72 and 73. ble gland, replace S12 with S11 (for example, XMLC070D2S12

(3) Deviation of the differential at low and high setting points for switches of the same size: ± 0.8 bar (± 11.6 psi)

Operating curves



Pressure РН PB Time

| C | Connection | | | | | |
|----------------|------------|----|----|--|--|--|
| Terminal model | | | | | | |
| 13 | ₽Ļ | 23 | 50 | | | |
| 4 | 12 | 54 | 52 | | | |

- Adjustable value

1 Maximum differential Minimum differential 2

Other versions

For pressure switches with alternative tapped cable entries, such as NPT, etc. please consult our Customer Care Centre.

() Telemecanique Sensors

Accessories: page 68

Electromechanical pressure switches

OsiSense XML

Size 70 bar (1015 psi) Dual stage, fixed differential, for detection at each threshold Switches with 2 CO single-pole contacts

OsiSense XMLD pressure switches

Without setting scale



| Adjustable range of each | 2nd stage switching point (PH2) | 9.4…70 bar (136.3…1015 psi) | | |
|--|--|---|--|--|
| switching point 1st stage switching poin (Rising pressure) 1st stage switching point | | 6.6…67.2 bar (95.7…974.4 psi) | | |
| Spread between 2 stages (F | PH2 - PH1) | 2.8…46 bar (40.6…667 psi) | | |
| Electrical connection | | Terminals | | |
| Fluid connection | | G 1/4 (female) 1/4"-18 NPTF (female) | | |
| References (1) | | | 1 | |
| Fluids controlled (2) | Hydraulic oils, up to + 160 °C | XMLD070D1S12 | XMLD070D1S13 | |
| | Corrosive fluids, air, up to + 160 °C | XMLD070N1S12 | - | |
| Weight (kg) | | 0.715 | 0.715 | |
| Complementary cl | naracteristics not shown | under general characteristics | (page 17) | |
| Natural differential | At low setting (3) | 5 bar (72.5 psi) | | |
| (subtract from PH1/PH2 to give PB1/PB2) | At high setting (4) | 9.5 bar (137.75 psi) | | |
| Maximum permissible | Per cycle | 90 bar (1035 psi) | | |
| pressure | Accidental | 160 bar (2320 psi) | | |
| Destruction pressure | | 320 bar (4640 psi) | | |
| Mechanical life | | 6 x 10 ⁶ operating cycles | | |
| Cable entry for terminal models | | 1 entry tapped M20 x 1.5 mm for ISO cable gland, clamping capacity 7 to 13 mm | 1 entry tapped 1/2"-14 NPT for cable gland clamping capacity 7 to 13 mm | |
| Pressure switch type | | Piston | | |

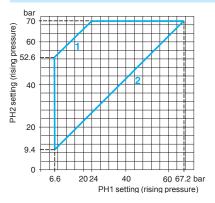
 (1) For 1 entry tapped for no. 13 cable gland, replace \$12 with \$11 (for example, XMLD070D1\$1) becomes XMLD070D1\$11).
 (2) For component materials of units in contact with the fluid, see pages 72 and 73.

 (2) For component materials of and in contact with the hald, see pages 12 and 13
 (3) Deviation of the differential at low setting point for switches of the same size: ± 1.5 bar (± 21.75 psi)

 (4) Deviation of the differential at high setting point for switches of the same size: ± 2 bar (± 29 psi)

Operating curves

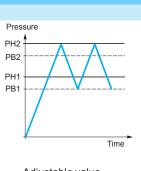
High setting tripping points of contacts 1 and 2



- 1 Maximum differential
- 2 Minimum differential

Other versions

Natural differential of contacts 1 and 2



Adjustable value
 Non adjustable value

Connection

Terminal model

| | | 2 Cont | |
|----|----|--------|----|
| 13 | | 53 | í |
| 4 | 12 | 5 | 53 |

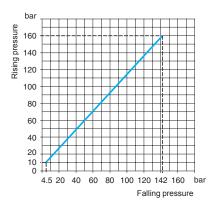


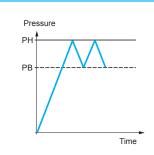
Electromechanical pressure switches

OsiSense XML Size 160 bar (2320 psi) Fixed differential, for detection of a single threshold Switches with 1 CO single-pole contact

| OsiSense XMLA pressure switches | | With setting scale | | | |
|--|--|--|--|--|--|
| | | | | | |
| Adjustable range of switch | ing point (PH) | 10160 bar (1452320 psi) | | | |
| (Rising pressure) Electrical connection | | DIN connector | Terminals | | |
| Fluid connection | | G 1/4 (female) | G 1/4 (female) | 1/4"-18 NPTF (female) | |
| References (1) | | | | | |
| Fluids controlled (2) | Hydraulic oils, up to + 160 °C | XMLA160D2C11 | XMLA160D2S12 | XMLA160D2S13 | |
| | Fresh water, up to + 160 °C | XMLA160E2C11 | XMLA160E2S12 | XMLA160E2S13 | |
| | Corrosive fluids, air, up to + 160 °C | XMLA160N2C11 | XMLA160N2S12 | - | |
| Weight (kg) | | 0.780 | 0.750 | 0.750 | |
| Complementary cl | haracteristics not show | vn under general chara | cteristics (page 17) | | |
| Natural differential | At low setting (3) | 5.5 bar (79.75 psi) | | | |
| (subtract from PH to give PB) | At high setting (4) | 18 bar (261 psi) | | | |
| Maximum permissible | Per cycle | 200 bar (2900 psi) | | | |
| pressure | Accidental | 360 bar (5220 psi) | | | |
| Destruction pressure | | 720 bar (10,440 psi) | | | |
| Mechanical life | | 6 x 10 ⁶ operating cycles | 6 x 10 ⁶ operating cycles | | |
| Connection | | EN 175301-803-A (ex-DIN 43650A), 4-pin male connector. For suitable female connector, see page 68 | | 1 entry tapped 1/2"-14 NPT for cable gland, clamping capacity 7 to 13 mm | |
| Pressure switch type | | Piston | | | |
| | | becomes XMLA160D2S11). (2) For component materials of (3) Deviation of the differential a ± 1 bar (± 14.5 psi) | cable gland, replace S12 with S1 : units in contact with the fluid, see t low setting point for switches o at high setting point for switches | f the same size: | |

Operating curves





Connection **Terminal model** 13 1 12 7

Connector model

Pressure switch connector pin view



 $1 \rightarrow 11 \text{ and } 13$ $2 \rightarrow 12$ $3 \rightarrow 14$

- Adjustable value

--- Non adjustable value

Other versions

For pressure switches with alternative tapped cable entries, such as NPT, etc. please consult our Customer Care Centre.

Accessories: page 68 Dimensions: pages 69 to 71 Elemecanique

Sensors

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Electromechanical pressure switches

OsiSense XML Size 160 bar (2320 psi) Adjustable differential, for regulation between 2 thresholds Switches with 1 CO single-pole contact

OsiSense XMLB pressure switches

With setting scale





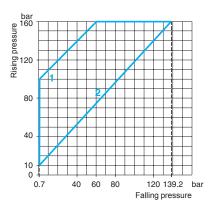
| Adjustable range of switching point (PH) (Rising pressure) | | 10…160 bar (145…2320 psi) | 10160 bar (1452320 psi) | | | |
|---|--|--|---|--|--|--|
| Electrical connection | | DIN connector | Terminals | | | |
| Fluid connection | | G 1/4 (female) | G 1/4 (female) | 1/4"-18 NPTF (female) | | |
| References (1) | | | | | | |
| Fluids controlled | Hydraulic oils, up to + 160 °C | XMLB160D2C11 | XMLB160D2S12 | XMLB160D2S13 | | |
| | Fresh water, up to + 160 °C | XMLB160E2C11 | XMLB160E2S12 | - | | |
| | Corrosive fluids, air, up to + 160 °C | XMLB160N2C11 | XMLB160N2S12 | - | | |
| Weight (kg) | | 0.780 | 0.750 | 0.750 | | |
| Complementary c | haracteristics not sho | wn under general charad | cteristics (page 17) | | | |
| Possible differential | Min. at low setting (3) | 9.3 bar (134.85 psi) | 9.3 bar (134.85 psi) | | | |
| (subtract from PH | Min. at high setting (4) | 20.8 bar (301.6 psi) | 20.8 bar (301.6 psi) | | | |
| to give PB) | Max. at high setting | 100 bar (1450 psi) | | | | |
| Maximum permissible | Per cycle | 200 bar (2900 psi) | 200 bar (2900 psi) | | | |
| pressure | Accidental | 360 bar (5220 psi) | 360 bar (5220 psi) | | | |
| Destruction pressure | | 720 bar (10,440 psi) | 720 bar (10,440 psi) | | | |
| Mechanical life | | 6 x 10 ⁶ operating cycles | 6 x 10 ⁶ operating cycles | | | |
| Connection | | EN 175301-803-A (ex-DIN 43650A), 4-pin male connector. For suitable female connector, see page 68 | 1 entry tapped M20 x 1.5 mm for ISO cable gland, clamping capacity 7 to 13 mm | 1 entry tapped 1/2"-14 NPT for cable gland, clamping capacity 7 to 13 mm | | |
| Pressure switch type | | Piston | | | | |
| | | (1) For 1 entry tapped for no. 13 of becomes XMLB160D2S11). | 0 , 1 | | | |
| | | (2) For component materials of ι | units in contact with the fluid, see | e pages 72 and 73. | | |

(3) Deviation of the differential at low setting point for switches of the same size:

- 1.8 bar, + 1.5 bar (- 26.1 psi, + 21.75 psi).

(4) Deviation of the differential at high setting point for switches of the same size: - 1.9 bar, + 1.6 bar (- 27.55 psi, + 23.2 psi).

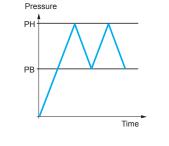
Operating curves



1 Maximum differential

2 Minimum differential

Other versions





12 4

Connector model Pressure switch connector pin view



 $1 \rightarrow 11 \text{ and } 13$ $2 \rightarrow 12$

 $3 \rightarrow 14$

- Adjustable value



OsiSense XMLC pressure switches

Electromechanical pressure switches

OsiSense XML

With setting scale

Size 160 bar (2320 psi) Adjustable differential, for regulation between 2 thresholds Switches with 2 CO single-pole contacts

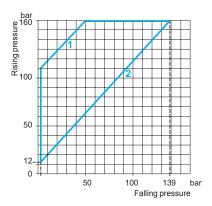
| | | 2 | | |
|--|--|---|---|--|
| | | | | |
| Adjustable range of switch Rising pressure) | ning point (PH) | 12160 bar (1742320 psi) | | |
| Electrical connection | | Terminals | | |
| Fluid connection | | G 1/4 (female) | 1/4"-18 NPTF (female) | |
| References (1) | | | | |
| Fluids controlled (2) | Hydraulic oils, up to + 160 °C | XMLC160D2S12 | XMLC160D2S13 | |
| | Fresh water, up to + 160 °C | XMLC160E2S12 | - | |
| | Corrosive fluids, air, up to + 160 °C | XMLC160N2S12 | - | |
| Weight (kg) | | 0.750 | 0.750 | |
| Complementary c | haracteristics not sho | wn under general characteristics | (page 17) | |
| Possible differential | Min. at low setting (3) | 9 bar (130.5 psi) | | |
| subtract from PH | Min. at high setting (3) | 21 bar (304.5 psi) | | |
| o give PB) | Max. at high setting | 110 bar (1590 psi) | | |
| laximum permissible | Per cycle | 200 bar (2900 psi) | | |
| pressure | Accidental | 360 bar (5220 psi) | | |
| Destruction pressure | | 720 bar (10 440 psi) | 720 bar (10 440 psi) | |
| Mechanical life | | 6 x 10 ⁶ operating cycles | 6 x 10 ⁶ operating cycles | |
| Cable entry for terminal models | | 1 entry tapped M20 x 1.5 mm for ISO cable gland, clamping capacity 7 to 13 mm | 1 entry tapped 1/2"-14 NPT for cable gland, clamping capacity 7 to 13 mm | |
| Pressure switch type | | Piston | | |
| | | (1) For 1 entry tapped for no. 13 cable gland, re | place S12 with S11 (for example, XMLC160D2 | |

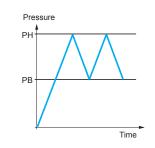
(1) For 1 entry tapped for no. 13 cable gland, replace S12 with S11 (for example, XMLC160D2S12 becomes XMLC160D2S11).

(2) For component materials of units in contact with the fluid, see pages 72 and 73.
(3) Deviation of the differential at low and high setting points for switches of the same size: ± 0.9 bar (± 13.05 psi)

± 0.9 bar (± 15.05 psi)

Operating curves







- Adjustable value

Maximum differential Minimum differential

Other versions

For pressure switches with alternative tapped cable entries, such as NPT, etc. please consult our Customer Care Centre.

(E) Telemecanique

Sensors

Electromechanical pressure switches

OsiSense XML

Size 160 bar (2320 psi) Dual stage, fixed differential, for detection at each threshold Switches with 2 CO single-pole contacts

OsiSense XMLD pressure switches Without setting scale



| Adjustable range of each | 2nd stage switching point (PH2) | 16.5160 bar (239.252320 psi) 10.5154 bar (152.252233 psi) | | |
|--|---------------------------------|---|--|--|
| switching point (Rising pressure) | 1st stage switching point (PH1) | | | |
| Spread between 2 stages (I | PH2 - PH1) | 683 bar (871203.5 psi) | | |
| Electrical connection | | Terminals | | |
| Fluid connection | | G 1/4 (female) | 1/4"-18 NPTF (female) | |
| References (1) | | | 1 | |
| Fluids controlled (2) | Hydraulic oils, up to + 160 °C | XMLD160D1S12 | XMLD160D1S13 | |
| | Fresh water, up to + 160 °C | XMLD160E1S12 | - | |
| Weight (kg) | | 0.750 | 0.750 | |
| Complementary cl | naracteristics not shown | under general characteristics | (page 17) | |
| Natural differential | At low setting (3) | 8.8 bar (127.6 psi) | | |
| (subtract from PH1/PH2 to give PB1/PB2) | At high setting (4) | 20 bar (290 psi) | | |
| Maximum permissible | Per cycle | 200 bar (2900 psi) | | |
| pressure | Accidental | 360 bar (5220 psi) | | |
| Destruction pressure | | 720 bar (10,440 psi) | | |
| Mechanical life | | 6 x 10 ⁶ operating cycles | | |
| Cable entry for terminal models | | 1 entry tapped M20 x 1.5 mm for ISO cable gland, clamping capacity 7 to 13 mm | 1 entry tapped 1/2"-14 NPT for cable gland, clamping capacity 7 to 13 mm | |
| Pressure switch type | | Piston | | |

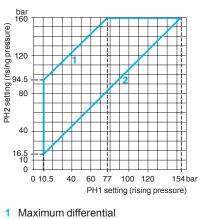
(1) For 1 entry tapped for no. 13 cable gland, replace \$12 with \$11 (for example, XMLD160D13) becomes XMLD160D1\$11).
 (2) For component materials of units in contact with the fluid, see pages 72 and 73.

 (2) For component materials of units in contact with the huld, see pages 72 and 73
 (3) Deviation of the differential at low setting point for switches of the same size: ± 1.5 bar (± 21.75 psi)

 (4) Deviation of the differential at high setting point for switches of the same size: ± 7 bar (± 101.5 psi)

Operating curves

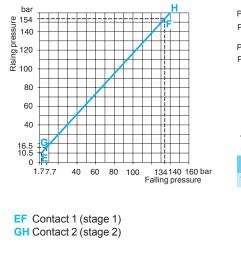
High setting tripping points of contacts 1 and 2

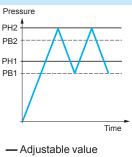


2 Minimum differential

Other versions

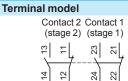
Natural differential of contacts 1 and 2





--- Non adjustable value

Connection



Electromechanical pressure switches OsiSense XML

Size 300 bar (4350 psi) Fixed differential, for detection of a single threshold Switches with 1 CO single-pole contact

| OsiSense XMLA press | ure switches | With setting scale | | | |
|--|--|--|--|--|--|
| | | | | | |
| Adjustable range of switch (Rising pressure) | ning point (PH) | 20300 bar (2904350 psi) | | | |
| Electrical connection | | DIN connector | Terminals | | |
| Fluid connection | | G 1/4 (female) | G 1/4 (female) | 1/4"-18 NPTF (female) | |
| References (1) | | | 1 | 1 | |
| Fluids controlled | Hydraulic oils, | XMLA300D2C11 | XMLA300D2S12 | XMLA300D2S13 | |
| (2) (5) | up to + 160 °C Fresh water, | XMLA300E2C11 | XMLA300E2S12 | XMLA300E2S13 | |
| | up to + 160 °C | XMLA300N2C11 | XMLA300N2S12 | - | |
| | Corrosive fluids, air, up to + 160 °C | | | | |
| Weight (kg) | | 0.780 | 0.750 | 0.750 | |
| | | own under general chara | cteristics (page 17) | | |
| Natural differential subtract from PH | At low setting (3) | 16.5 bar (239.25 psi) | | | |
| to give PB) | At high setting (4) | 35 bar (507.5 psi) | | | |
| Maximum permissible | Per cycle | 375 bar (5437.5 psi) | | | |
| pressure | Accidental | 675 bar (9787.5 psi) | | | |
| Destruction pressure | | 1350 bar (19 575 psi) | | | |
| Mechanical life | | 3 x 10 ⁶ operating cycles | | | |
| Connection | | EN 175301-803-A (ex-DIN 43650A), 4-pin male connector, For suitable female connector, see page 68 | | 1 entry tapped 1/2"-14 NPT for cable gland, clamping capacity 7 to 13 mm | |
| Pressure switch type | | Piston | | | |
| | | becomes XMLA300D2S11). (2) For component materials of (3) Deviation of the differential a ± 3 bar (± 43.5 psi) (4) Deviation of the differential a ± 6 bar (± 87 psi) | cable gland, replace S12 with S1 units in contact with the fluid, see at low setting point for switches of at high setting point for switches uids, in accordance with directive | pages 72 and 73. the same size: of the same size: | |
| Operating curves | | | Connect | ion | |
| | | | Terminal m | | |
| bar 9393300 60 87 | | Pressure PH PB | | | |
| 200 | | | Connector | model | |
| | | | | tch connector pin view | |
| | 0 265 300 bar Falling pressure | Time | | 1 → 11 and 13 2 → 12 3 → 14 | |
| | | — Adjustable value Non adjustable value | | | |
| Other versions | | For pressure switches with alter | mative tapped cable entries, suc | h as NPT, etc. please consul | |

Other versions

For pressure switches with alternative tapped cable entries, such as NPT, etc. please consult our Customer Care Centre.

Accessories: page 68

Telemecanique

Sensors

Electromechanical pressure switches OsiSense XML

Size 300 bar (4350 psi) Adjustable differential, for regulation between 2 thresholds Switches with 1 CO single-pole contact

OsiSense XMLB pressure switches

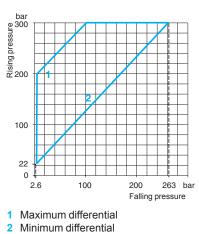
With setting scale



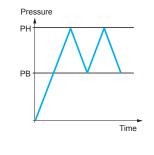


| Adjustable range of switching point (PH) (Rising pressure) | | 22300 bar (3194350 psi) | 22300 bar (3194350 psi) | | | |
|---|--|--|---|--|--|--|
| Electrical connection | | DIN connector | Terminals | | | |
| Fluid connection | | G 1/4 (female) | G 1/4 (female) | 1/4"-18 NPTF (female) | | |
| References (1) | | I | 1 | 1 | | |
| Fluids controlled (2)(5) | Hydraulic oils, up to + 160 °C | XMLB300D2C11 | XMLB300D2S12 | XMLB300D2S13 | | |
| | Fresh water, up to + 160 °C | XMLB300E2C11 | XMLB300E2S12 | - | | |
| | Corrosive fluids, air, up to + 160 °C | XMLB300N2C11 | XMLB300N2S12 | - | | |
| Weight (kg) | | 0.780 | 0.750 | 0.750 | | |
| Complementary c | haracteristics not sho | wn under general chara | cteristics (page 17) | | | |
| Possible differential (subtract from PH | Min. at low setting (3) | 19.4 bar (281.3 psi) | 19.4 bar (281.3 psi) | | | |
| | Min. at high setting (4) | 37 bar (536.5 psi) | 37 bar (536.5 psi) | | | |
| to give PB) | Max. at high setting | 200 bar (2900 psi) | 200 bar (2900 psi) | | | |
| Maximum permissible | Per cycle | 375 bar (5437.5 psi) | | | | |
| pressure | Accidental | 675 bar (9787.5 psi) | | | | |
| Destruction pressure | | 1350 bar (19,575 psi) | | | | |
| Mechanical life | | 3 x 10 ⁶ operating cycles | | | | |
| Connection | | EN 175301-803-A (ex-DIN 43650A), 4-pin male connector. For suitable female connector, see page 68 | | 1 entry tapped 1/2"-14 NPT for cable gland, clamping capacity 7 to 13 mm | | |
| Pressure switch type | | Piston | | | | |
| | | becomes XMLB300D2S11). (2) For component materials of | cable gland, replace S12 with S1 units in contact with the fluid, see It low setting point for switches o | | | |
| | | - 1.5 bar, + 1.7 bar (- 21.75 p | | a the staffe size. | | |
| | | (4) Deviation of the differential a - 1 bar, + 4 bar (- 14.5 psi, + 5 | t high setting point for switches (58 psi). | | | |
| | | | vide in coordonce with directive | | | |

Operating curves



Other versions



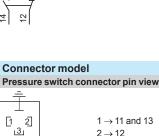
Connection **Terminal model** 7

 $\overline{\mathbf{c}}$

4

[1

(5) Only for control of group 2 fluids, in accordance with directive 97/23/EEC.





- Adjustable value



Electromechanical pressure switches OsiSense XML

Size 300 bar (4350 psi) Adjustable differential, for regulation between 2 thresholds Switches with 2 CO single-pole contacts





| Adjustable range of switch (Rising pressure) | ning point (PH) | 22300 bar (3194350 psi) |
|---|--|--|
| Electrical connection | | Terminals |
| Fluid connection | | G 1/4 (female) |
| References (1) | | |
| Fluids controlled (2) (4) | Hydraulic oils, up to + 160 °C | XMLC300D2S12 |
| | Fresh water, up to + 160 °C | XMLC300E2S12 |
| | Corrosive fluids, air, up to + 160 °C | XMLC300N2S12 |
| Weight (kg) | | 0.750 |
| Complementary c | haracteristics not sho | wn under general characteristics (page 17) |
| Possible differential | Min. at low setting (3) | 16 bar (232 psi) |
| (subtract from PH | Min. at high setting (3) | 35 bar (507.5 psi) |
| to give PB) | Max. at high setting | 240 bar (3480 psi) |
| Maximum permissible | Per cycle | 375 bar (5437.5 psi) |
| pressure | Accidental | 675 bar (9787.5 psi) |
| Destruction pressure | | 1350 bar (19 575 psi) |
| Mechanical life | | 3 x 10 ⁶ operating cycles |
| Cable entry for terminal m | odels | 1 entry tapped M20 x 1.5 mm for ISO cable gland, clamping capacity 7 to 13 mm |
| Pressure switch type | | Piston |
| | | (1) For 1 entry tapped for no. 13 cable gland, replace S12 with S11 (for example, XMLC300D2S12 |

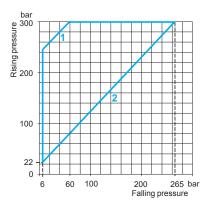
becomes XMLC300D2S11).

(2) For component materials of units in contact with the fluid, see pages 72 and 73.

(3) Deviation of the differential at low and high setting points for switches of the same size: \pm 0.9 bar (\pm 13.05 psi)

(4) Only for control of group 2 fluids, in accordance with directive 97/23/EEC.

Operating curves



Pressure PH PB Time

| Те | rmi | nal mo | del |
|----------|-----|--------|-----|
| <u>5</u> | ÷Ļ | 23 | 21 |
| 4 | 12 | 24 | 22 |

Connection

- Adjustable value

2 Minimum differential

Maximum differential

Other versions

1

For pressure switches with alternative tapped cable entries, such as NPT, etc. please consult our Customer Care Centre.

Telemecanique Sensors

Electromechanical pressure switches OsiSense XML

Size 300 bar (4350 psi) Dual stage, fixed differential, for detection at each threshold Switches with 2 CO single-pole contacts

OsiSense XMLD pressure switches Without setting scale

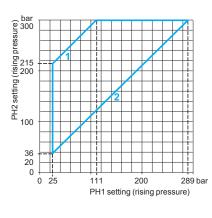


| Adjustable range of each | 2nd stage switching point (PH2) | 36…300 bar (522…4350 psi) | | |
|--|--|--|---|--|
| switching point (Rising pressure) | 1st stage switching point (PH1) | 25289 bar (362.54190.5 psi) | | |
| Spread between 2 stages (P | 'H2 - PH1) | 11189 bar (159.52740.5 psi) | | |
| Electrical connection | | Terminals | | |
| Fluid connection | | G 1/4 (female) | 1/4"-18 NPTF (female) | |
| References (1) | | | | |
| Fluids controlled (2) (5) | Hydraulic oils, up to + 160 °C | XMLD300D1S12 | XMLD300D1S13 | |
| | Fresh water, up to + 160 °C | XMLD300E1S12 | - | |
| | Corrosive fluids, air, up to + 160 °C | XMLD300N1S12 | - | |
| Weight (kg) | | 0.750 | 0.750 | |
| Complementary ch | aracteristics not shown | under general characteristics | (page 17) | |
| Natural differential | At low setting (3) | 17 bar (246.5 psi) | | |
| (subtract from PH1/PH2 to give PB1/PB2) | At high setting (4) | 42 bar (609 psi) | | |
| Maximum permissible | Per cycle | 375 bar (5437.5 psi) | | |
| pressure | Accidental | 675 bar (9787.5 psi) | | |
| Destruction pressure | | 1350 bar (19,575 psi) | | |
| Mechanical life | | 3 x 10 ⁶ operating cycles | | |
| Cable entry for terminal mo | dels | 1 entry tapped M20 x 1.5 mm for ISO cable gland, clamping capacity 7 to 13 mm | 1 entry tapped 1/2"-14 NPT for cable gland, clamping capacity 7 to 13 mm | |
| Pressure switch type | | Piston | | |
| | | For 1 entry tapped for no. 13 cable gland, repeated becomes XMLD300D1S11). | place S12 with S11 (for example, XMLD300D1S12 | |
| | | (2) For component materials of units in contact (3) Deviation of the differential at low setting po ± 2.5 bar (± 36.25 psi) | | |
| | | (4) Deviation of the differential at high setting p ± 9 bar (± 130.5 psi) | oint for switches of the same size: | |

(5) Only for control of group 2 fluids, in accordance with directive 97/23/EEC.

Operating curves

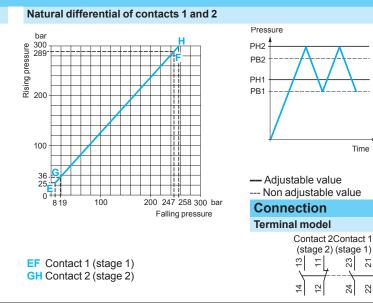
High setting tripping points of contacts 1 and 2



1 Maximum differential

2 Minimum differential

Other versions



For pressure switches with alternative tapped cable entries, such as NPT, etc. please consult our Customer Care Centre.



21

22

OsiSense XMLA pressure switches

Electromechanical pressure switches OsiSense XML

Size 500 bar (7250 psi) Fixed differential, for detection of a single threshold Switches with 1 CO single-pole contact

| Adjustable range of switch | ing point (PH) | 30500 bar (4357250 | psi) | | | |
|--|--|---|--|---|--|--|
| (Rising pressure) Electrical connection | | DIN connector | Terminals | | | |
| Fluid connection | | G 1/4 (female) | G 1/4 (female) | | 1/4"-18 NPTF (female) | |
| References (1) | | | , , | | × , | |
| Fluids controlled (2) (5) | Hydraulic oils, up to + 160 °C | XMLA500D2C11 | XMLA500D2S | 12 | XMLA500D2S13 | |
| | Fresh water, up to + 160 °C | XMLA500E2C11 | XMLA500E2S | | XMLA500E2S13 | |
| | Corrosive fluids, air, up to + 160 °C | XMLA500N2C11 | XMLA500N2S | 512 | - | |
| Weight (kg) | | 0.780 | 0.750 | | 0.750 | |
| | | own under general ch | aracteristics (| page 17) | | |
| Natural differential (subtract from PH | At low setting (3) | 20 bar (290 psi) | | | | |
| to give PB) | At high setting (4) | 45 bar (652.5 psi) | | | | |
| Maximum permissible pressure | Per cycle | 625 bar (9062.5 psi) | | | | |
| Destruction pressure | Accidental | 1125 bar (16,312.5 psi) 2250 bar (32,625 psi) | | | | |
| Mechanical life | | | 3 x 10 ⁶ operating cycles | | | |
| Connection | | EN 175301-803-A (ex-DIN 43650A), 4-pin male conn For suitable female conne see page 68 Piston | ector. for ISO cable of | M20 x 1.5 mm Jland, clamping 3 mm | 1 entry tapped 1/2"-14 NPT for cable gland, clamping capacity 7 to 13 mm | |
| Pressure switch type | | | S11). als of units in contact v ntial at low setting poi ntial at high setting po | vith the fluid, see nt for switches o int for switches o | f the same size: of the same size: | |
| Operating curves | | (-), | r =, | Connect | | |
| operating earres | | | | Terminal m | | |
| bar 9 500 6 400 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 | | Pressure PH PB | | 12 [4 13 13 13 13 13 13 13 13 13 13 13 13 13 | | |
| 300 200 100 30 10 10 10 100 200 30 | 0 400 455 bar Falling pressure | Tir | ne | Connector Pressure sw [1 2] 3 | model itch connector pin view $1 \rightarrow 11 \text{ and } 13$ $2 \rightarrow 12$ $3 \rightarrow 14$ | |
| Other versions | | — Adjustable value | | | h as NPT etc. please consult | |

With setting scale

r

Other versions

64

For pressure switches with alternative tapped cable entries, such as NPT, etc. please consult our Customer Care Centre.

Accessories: page 68

Dimensions: pages 69 to 71

Telemecanique

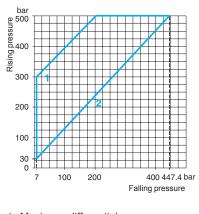
Sensors

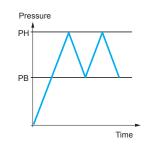
Electromechanical pressure switches

OsiSense XML Size 500 bar (7250 psi) Adjustable differential, for regulation between 2 thresholds Switches with 1 CO single-pole contact

| OsiSense XMLB pressure switches | | With setting scale | | | |
|--|---|---|--|--|--|
| | | | | | |
| Adjustable range of switch (Rising pressure) | ing point (PH) | 30500 bar (4357250 psi) | | | |
| Electrical connection | | DIN connector | Terminals | | |
| Fluid connection | | G 1/4 (female) | G 1/4 (female) | 1/4"-18 NPTF (female) | |
| References (1) | | | , | , | |
| Fluids controlled (2) (5) | Hydraulic oils, up to + 160 °C | XMLB500D2C11 | XMLB500D2S12 | XMLB500D2S13 | |
| | Fresh water, up to + 160 °C | XMLB500E2C11 | XMLB500E2S12 | - | |
| | Corrosive fluids, air, up to + 160 °C | XMLB500N2C11 | XMLB500N2S12 | - | |
| Weight (kg) | | 0.780 | 0.750 | 0.750 | |
| Complementary c | haracteristics not shov | vn under general chara | cteristics (page 17) | | |
| Possible differential (subtract from PH | Min. at low setting (3) Min. at high setting (4) | 23 bar (333.5 psi) 52.6 bar (762.7 psi) | | | |
| to give PB) | Max. at high setting (4) | 300 bar (4350 psi) | | | |
| Maximum permissible | Per cycle | 625 bar (9062.5 psi) | | | |
| pressure | Accidental | 1125 bar (16,312.5 psi) | | | |
| Destruction pressure | | 2250 bar (32,625 psi) | | | |
| Mechanical life | | 3 x 10 ⁶ operating cycles | 3 x 10 ⁶ operating cycles | | |
| Connection | | EN 175301-803-A (ex-DIN 43650A), 4-pin male connector. For suitable female connector, see page 68 | 1 entry tapped M20 x 1.5 mm for ISO cable gland, clamping capacity 7 to 13 mm | 1 entry tapped 1/2"-14 NPT for cable gland, clamping capacity 7 to 13 mm | |
| Pressure switch type | | Piston | Piston | | |
| | | becomes XMLB500D2S11). (2) For component materials of ((3) Deviation of the differential a - 2.6 bar, + 3.8 bar (- 37.7 psi (4) Deviation of the differential a - 14.8 bar, + 11.2 bar (- 214.6 | units in contact with the fluid, see t low setting point for switches of ; + 55.1 psi). t high setting point for switches o | the same size: of the same size: | |

Operating curves





- Adjustable value



12 14





 $1 \rightarrow 11 \text{ and } 13$ $2 \rightarrow 12$ $3 \rightarrow 14$

Maximum differential
 Minimum differential

Other versions

Electromechanical pressure switches

OsiSense XML

Size 500 bar (7250 psi) Adjustable differential, for regulation between 2 thresholds Switches with 2 CO single-pole contacts

| OsiSense XMLC pressure switches | |
|---------------------------------|--|
|---------------------------------|--|

With setting scale



| Adjustable range of switch (Rising pressure) | ning point (PH) | 30500 bar (4357250 psi) |
|---|--|--|
| Electrical connection | | Terminals |
| Fluid connection | | G 1/4 (female) |
| References (1) | | |
| Fluids controlled (2) (4) | Hydraulic oils, up to + 160 °C | XMLC500D2S12 |
| | Corrosive fluids, air, up to + 160 °C | XMLC500N2S12 |
| Weight (kg) | | 0.750 |
| Complementary c | haracteristics not sho | wn under general characteristics (page 17) |
| Possible differential | Min. at low setting (3) | 19 bar (275.5 psi) |
| (subtract from PH | Min. at high setting (3) | 52 bar (754 psi) |
| to give PB) | Max. at high setting | 340 bar (4930 psi) |
| Maximum permissible | Per cycle | 625 bar (9062.5 psi) |
| pressure | Accidental | 1125 bar (16 312.5 psi) |
| Destruction pressure | | 2250 bar (32 625 psi) |
| Mechanical life | | 3 x 10 ⁶ operating cycles |
| Cable entry for terminal me | odels | 1 entry tappedJe préfère acheter des.5 mm for ISO cable gland, clamping capacity 7 to 13 mm |
| Pressure switch type | | Piston |
| | | (1) For 1 entry tapped for no. 13 cable gland, replace S12 with S11 (for example, XMLC500D2S12 becomes XMLC500D2S11) |

becomes XMLC500D2S11).

Time

(2) For component materials of units in contact with the fluid, see pages 72 and 73.

(3) Deviation of the differential at low and high setting points for switches of the same size: ± 0.9 bar (± 13.05 psi)
(4) Only for control of group 2 fluids, in accordance with directive 97/23/EEC.

- Adjustable value

For pressure switches with alternative tapped cable entries, such as NPT, etc. please consult our Customer Care Centre.

200

100 30 0

11

100 160 200

1 Maximum differential

2 Minimum differential Other versions

300

400 448 bar

Falling pressure

Telemecanique Sensors

Electromechanical pressure switches

OsiSense XML Size 500 bar (7250 psi) Dual stage, fixed differential, for detection at each threshold Switches with 2 CO single-pole contacts

OsiSense XMLD pressure switches Without setting scale



| Adjustable range of each | 2nd stage switching point (PH2) | 41500 bar (594.57250 psi) |
|--|---------------------------------|--|
| switching point (Rising pressure) | 1st stage switching point (PH1) | 25…484 bar (362.5…7018 psi) |
| Spread between 2 stages (P | H2 - PH1) | 16244 bar (2323538 psi) |
| Electrical connection | | Terminals |
| Fluid connection | | G 1/4 (female) |
| References (1) | | |
| Fluids controlled (2) (5) | Hydraulic oils, up to + 160 °C | XMLD500D1S12 |
| Weight (kg) | | 0.750 |
| Complementary ch | aracteristics not shown | under general characteristics (page 17) |
| Natural differential | At low setting (3) | 21 bar (304.5 psi) |
| (subtract from PH1/PH2 to give PB1/PB2) | At high setting (4) | 65 bar (942.5 psi) |
| Maximum permissible | Per cycle | 625 bar (9062.5 psi) |
| pressure | Accidental | 1125 bar (16,312.5 psi) |
| Destruction pressure | | 2250 bar (32,625 psi) |
| Mechanical life | | 3 x 10 ⁶ operating cycles |
| Cable entry for terminal mod | dels | 1 entry tapped M20 x 1.5 mm for ISO cable gland, clamping capacity 7 to 13 mm |
| Pressure switch type | | Piston |
| | | (1) For 1 entry tapped for no. 13 cable gland, replace S12 with S11 (for example, XMLD500D1S12 becomes XMLD500D1S14) |

For 1 entry tapped for no. 13 cable gland, replace S12 with S11 (for example, XMLD500D1 becomes XMLD500D1S11).
 For component materials of units in contact with the fluid, see pages 72 and 73.

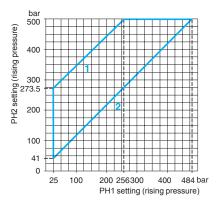
 (3) Deviation of the differential at low setting point for switches of the same size: ± 3 bar (± 43.5 psi)

 (4) Deviation of the differential at high setting point for switches of the same size: ± 10 bar (± 145 psi)

(5) Only for control of group 2 fluids, in accordance with directive 97/23/EEC.

Operating curves

High setting tripping points of contacts 1 and 2

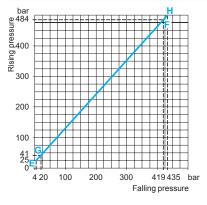




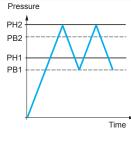
2 Minimum differential

Other versions

Natural differential of contacts 1 and 2

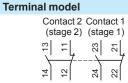


EF Contact 1 (stage 1) GH Contact 2 (stage 2)



— Adjustable value --- Non adjustable value



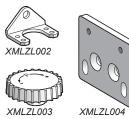




Electromechanical pressure and vacuum switches OsiSense XMLA, XMLB, XMLC and XMLD

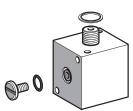
Accessories and replacement parts





5 R XMLZL001





XMLZL005



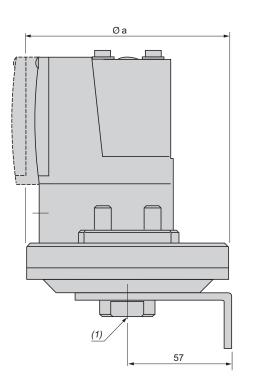


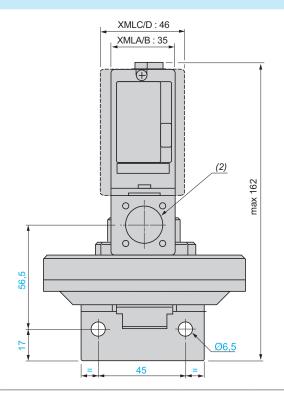
| Accessories for p | ressure swite | ches and vacu | um switches | | |
|--|-----------------------|-----------------------------|---|----------------|--------------|
| Description | | Specific characteristics | For use with switches | Unit reference | Weight kg |
| Rear fixing bracket for vibrations > 2 gn | | - | XMLeL35 XMLe001 | XMLZL006 | 0.230 |
| Additional top support bra for vibrations > 4 gn | ncket | - | XMLAM01 XML•M05 XMLA004 XML•010 XML•500 | XMLZL002 | 0.020 |
| Knurled adjustment knob, fits over adjustment screws to facilitate setting | Ø 36 mm | - | All models | XMLZL003 | 0.010 |
| Fixing plate for replacing an XMJA or XM XML switch | IGB switch with an | - | XMLAM01 XML•M05 XMLA004 XML•010 XML•500 | XMLZL004 | 0.110 |
| Lead sealable protective of to prevent unauthorised acc screws and fixing screw of s | ess to adjustment | - | XMLA XMLB | XMLZL001 | 0.035 |
| Lead sealable protective of to prevent unauthorised acc screws | ess to adjustment | - | All types | XMLZL011 | 0.030 |
| | Without setting scale | \sim or $=$ 24/48 V | XMLA/B | XMLZZ024 | 0.090 |
| | | \sim 110/240 V | XMLA/B | XMLZZ120 | 0.090 |
| | With setting scale | \sim or == 24/48 V | XMLA | XMLZA024 | 0.090 |
| | | | XMLB | XMLZB024 | 0.090 |
| | | \sim 110/240 V | XMLA | XMLZA120 | 0.090 |
| | | | XMLB | XMLZB120 | 0.090 |
| Hydraulic block for base mounting directly of | nto fluid manifold | - | All types | XMLZL005 | 0.240 |
| Female EN 175301-803-A ((ex-DIN 43650A) | connector | - | XML •••••C11 | XZCC43FCP40B | 0.035 |
| Adaptor, G 1/4"/G 3/8" mal | e/female | - | All types | XMLZL012 | 0.130 |
| Replacement part | S | | | | |
| Sealing gasket (pack of 10 gaskets) | | For sizes ≥ 300 bar (| XMLA/B/C/D) | XMLZL010 | 0.015 |
| Diaphragms | | - | XML•S35 | XMLZL013 | 0.060 |
| | | | XML•S02 | XMLZL014 | 0.040 |
| | | | XML•S04 | XMLZL015 | 0.030 |
| | | | | | |

Dimensions

XMLeL35, XMLe001, XMLeS

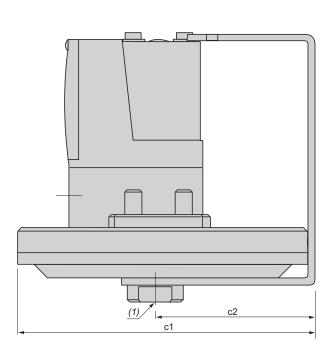
Electromechanical pressure and vacuum switches OsiSense XMLA, XMLB, XMLC and XMLD





(1) 1 fluid entry, tapped G 1/4 (female) or 1/4"-18 NPTF (female)
(2) 1 electrical connections entry, tapped M20 x 1.5 mm or Pg 13.5 or 1/2"-14 NPT

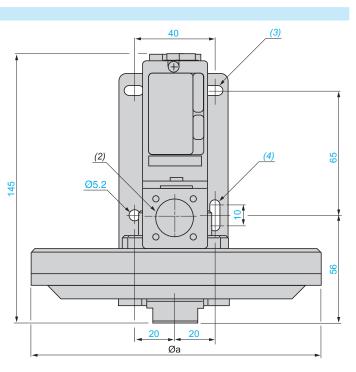
XMLBM03, XMLBL05



(1) 1 fluid entry, tapped G 1/4 (female) or 1/4"-18 NPTF (female) (2) 1 electrical connections entry, tapped M20 x 1.5 mm or Pg 13.5

or 1/2"-14 NPT

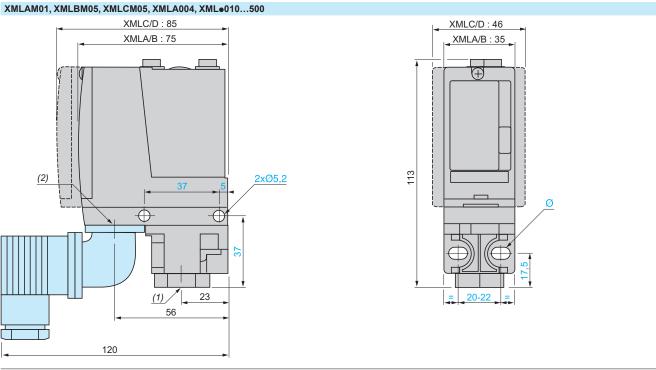
(3) 2 elongated holes Ø 10.2 x 5.2 (4) 1 elongated hole Ø 15.2 x 5.2



| XML | Øa | c1 | c2 | |
|------------------|-----|-------|------|--|
| BM03 | 150 | 155.5 | 80.5 | |
| BL05 | 200 | 204 | 104 | |
| ●L35, ●001 | 110 | _ | - | |
| ●S35, ●S02, ●S04 | 110 | _ | _ | |
| ●S10, ●S20 | 86 | _ | - | |

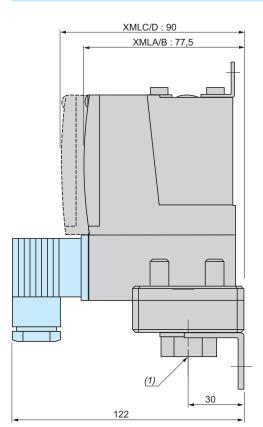
Electromechanical pressure and vacuum switches

OsiSense XMLA, XMLB, XMLC and XMLD



(1) 1 fluid entry, tapped G 1/4 (female) or 1/4"-18 NPTF (female) (2) 1 electrical connections entry, tapped M20 x 1.5 mm or Pg 13.5 or 1/2"-14 NPT Ø: 2 elongated holes Ø 5.2 x 6.7

XMLeM02, XMLe002, XMLB004, XMLC004, XMLD004



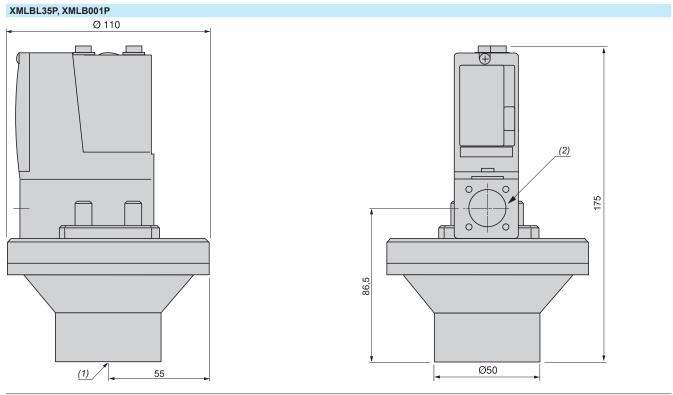
XMLC/D : 46 XMLA/B : 35 Ø5,2 Æ $(\widehat{+})$ 106 (2) 158 0 С С 0 34 ø $\left(+ \right)$ <u></u> <u>37-40</u>

55

(1) 1 fluid entry, tapped G 1/4 (female) or 1/4"-18 NPTF (female)
(2) 1 electrical connections entry, tapped M20 x 1.5 mm or Pg 13.5 or 1/2"-14 NPT
(2) 2 elongated holes Ø 10.2 x 5.2

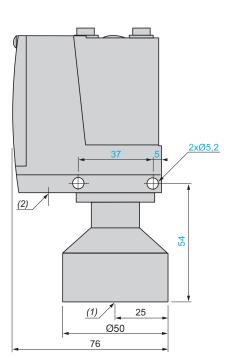
Electromechanical pressure and vacuum switches

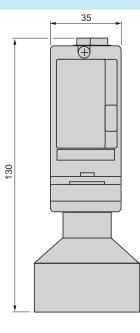
OsiSense XMLA, XMLB, XMLC and XMLD



(1) 1 fluid entry, tapped G 1¼ (female) (2) 1 electrical connections entry, tapped M20 x 1.5 mm or Pg 13.5

XMLBM05P, XMLA004P, XMLe010P, XMLe020P, XMLe035P





(1) 1 fluid entry, tapped G 1¼ (female)

(2) 1 electrical connections entry, tapped M20 x 1.5 mm or Pg 13.5

Component materials of units in contact with fluid

Electromechanical pressure and vacuum switches

This information will assist in checking the corrosion resistance of the pressure or vacuum switches in relation to the fluids controlled

| | Component materials in contact with fluid | | | | | | | | |
|-------------------------------------|---|-----------------|-------|-------|---------|------|----------|-----------|--|
| Pressure or vacuum switch reference | Zinc alloy | Stainless steel | Brass | Steel | Nitrile | PTFE | FPM, FKM | Aluminium | |
| XMLAM01Veeee, XMLeM02Veeee | | (1) | | | | | | | |
| XMLAM01Teeee, XMLeM02Teeee | | (2) | | | | | | | |
| XMLBM03Reeee | | | | | | | | | |
| XMLBM03S++++ | | (3) | | | | | | | |
| XMLeM05Aeeee | | (1) | | | | | | | |
| XMLeM05Beeee | | (1) | | | | | | | |
| XMLeM05Ceeee | | (1) | | | | | | | |
| XMLBM05Peeee | | (1) | | | | | | | |
| XMLBL05Reeee | | | | | | | | | |
| XMLBL05S | | (3) | | | | | | | |
| XMLeL35Reese, XMLeS35Reese | | (1) | | | | | | | |
| XMLeL35Seeee | | (3) | | | | | | | |
| XMLBL35Peeee | | (1) | | | | | | | |
| XMLe001Reese | | (1) | | | | | | | |
| XMLe001Seeee | | (3) | | | | | | | |
| XMLB001Peeee | | (1) | | | | | | | |
| XMLe002Aeeee | | | | | | | | | |
| XMLe002Beeee, XMLeS02Beeee | | | | | | | | | |
| XMLe002Ceeee | | (3) | | | | | | | |
| XMLA004A | | | | | | | | | |
| XMLA004B. | | | | | | | | | |
| XMLA004C | | (2) | | | | | | | |
| XMLA004P | | | | | | | | | |

Component materials in contact with fluid

(1) 1.4307 (AISI 304L) (2) 1.4404 (AISI 316L) (3) 1.4305 (AISI 303)

Component materials of units in contact with fluid

Electromechanical pressure and vacuum switches

OsiSense XML

This information will assist in checking the corrosion resistance of the pressure or vacuum switches in relation to the fluids controlled

| Pressure switch reference | Compone | Component materials in contact with fluid | | | | | | | | |
|--|------------|---|-------|-------|---------|------|----------|-----------|--|--|
| | Zinc alloy | Stainless steel | Brass | Steel | Nitrile | PTFE | FPM, FKM | Aluminium | | |
| XMLB004A | | | | | | | | | | |
| XMLe004Beeee, XMLeS04Beeee | | | | | | | | | | |
| XMLe004Ceeee | | (3) | | | | | | | | |
| XMLe010Aeeee | | | | | | | | | | |
| XMLe010Beeee | | | | | | | | | | |
| XMLe010Ceeee | | (2) | | | | | | | | |
| XMLe010Peeee, XMLeS10Aeeee | | | | | | | | | | |
| XMLe020Aeeee, XMLe035Aeeee | | | | | | | | | | |
| XMLe020Beeee, XMLe035Beeee | | | | | | | | | | |
| XMLe020Ceeee, XMLe035Ceeee | | (2) | | | | | | | | |
| XMLe020Peeee, XMLe035Peeee, XMLeS20Aeeee | | | | | | | | | | |
| XMLe070Deeee, XMLe160Deeee | | | | | | | | | | |
| XMLe070Eeeee, XMLe160Eeeee | | (4) | | | | | | | | |
| XML+070N++++, XML+160N++++ | | (5) | | | | | | | | |
| XML+300D++++ | | | | | | | | | | |
| XML•300E•••• | | (4) | | | | | | | | |
| XML•300N•••• | | (5) | | | | | | | | |
| XML•500D•••• | | | | | | | | | | |
| XML•500E•••• | | | | | | | | | | |
| XML•500N••••4 | | (5) | | | | | | | | |

Component materials in contact with fluid

(2) 1.4404 (AISI 316L) (3) 1.4305 (AISI 303) (4) 1.4404 (AISI 316L) + 1.4462 (5) 1.4404 (AISI 316L) + 1.4305 (AISI 303)

Electromechanical pressure switches

OsiSense XM For control circuits, OsiSense ACW and ADW

Presentation

 $\label{eq:pressure} Pressure \ switches \ OsiSense \ ACW \ and \ ADW \ are \ switches \ for \ control \ circuits, \ with \ an \ adjustable \ differential.$

Pressure switches OsiSense ACW are used to control the pressure of air, oils and other non corrosive fluids, up to 131 bar.

Pressure switches OsiSense ADW are used to control the pressure of oils (including synthetic), up to 340 bar.

Setting, operating principle

Pressure switches OsiSense ACW

The switching point on falling pressure (low point - PB) is adjusted using screw 1.

The switching point on rising pressure (high point - PH) is made by adjusting screw 2. This sets the differential between the low and high points, giving a switching point on rising pressure of the displayed low point setting plus the differential setting.

The two adjustments are completely independent.

Contact block operation

When the rising pressure reaches the high point setting (low point setting + differential setting), contact B (1-2) opens and contact A (3-4) closes. The contacts remain actuated until the pressure falls back to the low point setting.

Pressure switches OsiSense ADW

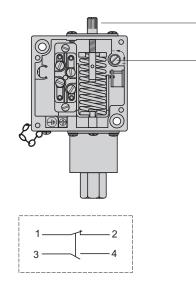
The switching point on rising pressure (high point - PH) is adjusted using screw 1.

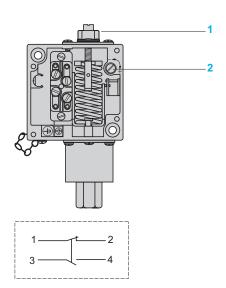
The switching point on falling pressure (low point - PB) is made by adjusting screw 2. This sets the differential between the high and low points, giving a switching point on falling pressure of the displayed high point setting minus the differential setting.

The two adjustments are completely independent.

Contact block operation

When the rising pressure reaches the high point setting, contact B (1-2) opens and contact A (3-4) closes. The contacts remain actuated until the pressure falls back to the low point setting (high point setting - differential setting).





Characteristics

Electromechanical pressure switches OsiSense XM

OsiSense XM For control circuits, OsiSense ACW and ADW

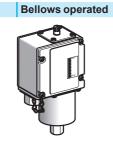
| Environment characteristics Pressure switch type | | ACW (bellows operated) | ADW (piston operated) |
|--|----|---|---|
| | | , | (r · · · · · · · / |
| Conformity to standards | | CE, IEC/EN 60947-5-1 | |
| Product certifications | | CSA, UL (Recognized), EAC | |
| Protective treatment | | "TC" | |
| Materials | | Zinc alloy case Phosphor bronze bellows | Zinc alloy case Pressure switches with drainage hole: Buna N diaphragm, steel piston, cast iron cylinder Pressure switches with Quad-Ring pistor seal: Buna N diaphragm, Teflon and Vitor seal, stainless steel piston and cylinder |
| Ambient air temperature (for operation) | °C | - 56+ 85 | - 30+ 85 |
| Fluids controlled | | Air, oils and other non corrosive fluids, from - 73 to + 125°C | Oils and other fluids, from - 25 to + 120°C (for ADW5, ADW6, ADW7S1, ADW25 and ADW26) Oils (including synthetic) only, from - 30 to + 125°C (for ADW3, ADW4, ADW7 ADW23, ADW24 and ADW27) |
| Degree of protection | | IP 65 conforming to IEC/EN 60529 | - |
| Fluid connection | | G 1/4 (BSP female) conforming to NF E 03-005, ISO 228 | G 3/8 (BSP female) conforming to NF E 03-005, ISO 228 |
| Electrical connection Terminals | | 1 tapped entry for n° 13 (DIN Pg 13.5) c | ADW•M119012 and ADW••M119012). |
| Contact block characteristics | | | |
| Rated operational current Category AC-15 | | 1 CO sing pressure Ue 24 V Ie 110 V 5 A 220 V 5 A 500 V 3 A 1.4 A | |
| Category DC-13 | | Ue Ie 24 V 5 A 110 V 0.5 A 220 V 0.25 A 500 V 0.10 A 600 V 0.06 A | le 1.5 A 0.25 A - - - |
| Short-circuit protection | | 10 A cartridge fuse type gG | |
| Connection | | Screw terminals Minimum clamping capacity: 1 x 1 mm ² Maximum clamping capacity: 2 x 2.5 mr | n² |

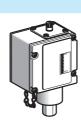


References, characteristics, curves, connections

Electromechanical pressure switches OsiSense XM For control circuits, OsiSense ACW Sizes 0.70 to 131 bar (10.15 to 1900 psi) Adjustable differential, for regulation between 2 thresholds Fluid connection G 1/4 (female)

Pressure switches OsiSense ACW





| Adjustable range of switching point (PB) (Falling pressure) | | | 0.070.70 bar (1.0110.15 psi) | 0.071.4 bar (1.0120.3 psi) | 0.075.2 bar (1.0175.4 psi) | 0.077.6 bar (1.01110.2 psi) | | |
|--|---|--------------|--|-------------------------------|-------------------------------|--------------------------------|--|--|
| References | | | | | | | | |
| Switches with 1 CO s | ingle-pole contac | rt | | | | | | |
| Electrical connection | With one tapped e M20 x 1.5 mm for | | ACW3M119012 | ACW4M119012 | ACW5M119012 | ACW1M119012 | | |
| | With one tapped e for n° 13 cable gla | | ACW3M129012 | ACW4M129012 | ACW5M129012 | ACW1M129012 | | |
| Weight (kg) | | | 1.750 | 1 | 1.550 | | | |
| Switches with 2 CO s | ingle-pole contac | cts | | | | | | |
| Electrical connection | With one tapped e M20 x 1.5 mm for | | ACW23M119012 | ACW24M119012 | ACW25M119012 | ACW21M119012 | | |
| | With one tapped entry for n° 13 cable gland | | ACW23M129012 | ACW24M129012 | ACW25M129012 | ACW21M129012 | | |
| Weight (kg) | | | 1.750 | • | 1.550 | 1.550 | | |
| Complementary | characteristic | s not shown | under general | characteristics | (page 75) | | | |
| Possible differential (add to PB to give PH) | 1 CO switches | Min. | 0.04 bar (0.58 psi) | 0.10 bar (1.45 psi) | 0.30 bar (4.35 psi) | 0.50 bar (7.25 psi) | | |
| | | Max. | 0.34 bar (4.93 psi) | 0.40 bar (5.8 psi) | 1 bar (14.5 psi) | 2 bar (29 psi) | | |
| | 2 CO switches | Min. | 0.05 bar (0.73 psi) | 0.14 bar (2.03 psi) | 0.41 bar (5.95 psi) | 0.9 bar (13.05 psi) | | |
| | | Max. | 0.48 bar (6.96 psi) | 0.70 bar (10.15 psi) | 1.4 bar (20.3 psi) | 2.8 bar (40.6 psi) | | |
| Maximum permissible p | ressure | | 2 bar (29 psi) | | 7 bar (101.5 psi) | 17 bar (246.5 psi) | | |
| Fluids controlled | | | Air, oils and other non corrosive fluids, from - 73 to + 125°C (1) | | | | | |
| Mechanical life | | | 1 x 10 ⁶ operating cycles (average value, depending on application) | | | | | |
| Cable entry, screw terminals | ACW•M119012, / | ACW2•M119012 | 1 tapped entry M20 x 1.5 mm for ISO cable gland. Clamping capacity 7 to 13 mm | | | | | |
| ACW•M129012, ACW2•M | | | 1 tapped entry for n° 13 cable gland, conforming to NF C 68-300 (DIN Pg 13.5). Clamping capacity 9 to 13 mm | | | | | |
| | | | (1) See "Component n | naterials of units in conta | ct with the fluid", page 7 | 5. | | |

Operating curve Pressure PH PB

Time

Contact block connections 4 0

--- Adjustable value

Other versions

Pressure switches with alternative tapped cable entries: NPT, etc. Please consult our Customer Care Centre.



| 1.4…12 bar (20.3…174 psi) | 0.718 bar (10.15261 psi) | 0.721 bar (10.15304.5 psi) | 5.234 bar (75.4493 psi) | 10…69 bar (145…1000 psi) | 24131 bar (3481900 psi) |
|--------------------------------------|--------------------------------|-----------------------------------|------------------------------|------------------------------|----------------------------|
| References | | | | | |
| Switches with 1 CC |) single-pole contact | | | | |
| ACW8M119012 | ACW9M119012 | ACW2M119012 | ACW6M119012 | ACW7M119012 | ACW10M119012 |
| ACW8M129012 | ACW9M129012 | ACW2M129012 | ACW6M129012 | ACW7M129012 | ACW10M129012 |
| 1.550 | | 2.100 | | | |
| Switches with 2 CC | single-pole contacts | | | | |
| ACW28M119012 | - | ACW22M119012 | ACW26M119012 | - | ACW20M119012 |
| ACW28M129012 | ACW29M129012 | ACW22M129012 | ACW26M129012 | ACW27M129012 | ACW20M129012 |
| 1.550 | | 2.100 | | | |
| Complementar | y characteristics | not shown under g | general characteri | stics (page 75) | |
| 0.70 bar (10.15 psi) | 1 bar (14.5 psi) | 1.7 bar (24.7 psi) | 3.4 bar (49.3 psi) | 5.9 bar (85.6 psi) | 11 bar (159.5 psi) |
| 2 bar (29 psi) | 1.7 bar (24.7 psi) | 8.6 bar (124.7 psi) | 8.3 bar (120.4 psi) | 10 bar (145 psi) | 21 bar (304.5 psi) |
| 1 bar (14.5 psi) | 1.6 bar (23.2 psi) | 2.4 bar (34.8 psi) | 5.9 bar (85.6 psi) | 9.3 bar (134.9 psi) | 17 bar (246.5 psi) |
| 2.8 bar (40.6 psi) | 2.4 bar (34.8 psi) | 10 bar (145 psi) | 11 bar (159.5 psi) | 14 bar (203 psi) | 24 bar (348 psi) |
| 17 bar (246.5 psi) | 20 bar (290 psi) | 41 bar (549.5 psi) | 140 bar (2030 psi) | 140 bar (2030 psi) | 175 bar (2538 psi) |
| Air, oils and other non o | corrosive fluids, from - 73 to |) + 125°C <i>(1)</i> | | | I |
| 1 x 10 ⁶ operating cycles | s (average value, dependir | g on application) | | | |
| 1 tapped entry M20 x 1 | 5 mm for ISO cable gland. | Clamping capacity 7 to 13 r | nm | | |
| 1 tapped entry for n° 13 | 3 cable gland, conforming t | o NF C 68-300 (DIN Pg 13.8 | 5). Clamping capacity 9 to 1 | 3 mm | |
| Other versions | | Pressure switches with Centre. | alternative tapped cable e | ntries: NPT, etc. Please con | nsult our Customer Care |

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(E) Telemecanique

Dimensions page 80



References. characteristics

Electromechanical pressure switches OsiSense XM For control circuits, OsiSense ADW Sizes 69 to 340 bar (1000 to 4930 psi) Adjustable differential, for regulation between 2 thresholds Fluid connection G 3/8 (female)

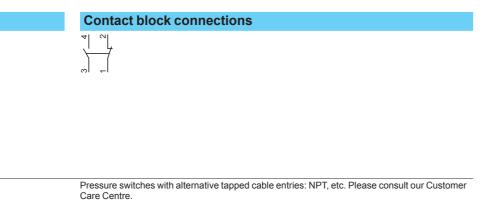
Pressure switches OsiSense ADW



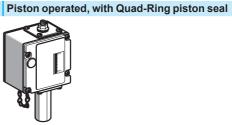
| Adjustable range of switching point (PH) (Rising pressure) | | | 9.3…69 bar (135…1000 psi) | 28210 bar (4063045 psi) | 38340 bar (5514930 psi) | | |
|---|---|-----------|--|----------------------------|----------------------------|--|--|
| References | | | | | | | |
| Switches with 1 CO sing | gle-pole contact | | | | | | |
| Electrical connection | With one tapped e M20 x 1.5 mm for | | ADW3M119012 | ADW4M119012 | ADW7M119012 | | |
| | With one tapped entry for n° 13 cable gland | | ADW3M129012 | ADW4M129012 | ADW7M129012 | | |
| Weight (kg) | | | 1.880 | | 1 | | |
| Switches with 2 CO sing | gle-pole contacts | 5 | | | | | |
| Electrical connection | With one tapped entry for n° 13 cable gland | | ADW23M129012 | ADW24M129012 | ADW27M129012 | | |
| Weight (kg) | | | 1.880 | | | | |
| Complementary ch | aracteristics | not shown | under general char | acteristics (page 75) | | | |
| Possible differential (subtract from PH to give PB) | 1 CO switches | Min. | 2.4 bar (34.8 psi) | 6.9 bar (100 psi) | 8.6 bar (124.7 psi) | | |
| | | Max. | 9.3 bar (135 psi) | 28 bar (406 psi) | 38 bar (551 psi) | | |
| | 2 CO switches | Min. | 3.1 bar (45 psi) | 8.6 bar (124.7 psi) | 14 bar (203 psi) | | |
| | | Max. | 14 bar (203 psi) | 34 bar (493 psi) | 41 bar (594.5 psi) | | |
| Maximum permissible press | sure | | 690 bar (10,000 psi) | | | | |
| Fluids controlled | | | Oils (including synthetic) only, from - 30°C to + 125°C (2) (3) | | | | |
| Mechanical life | | | 1 x 10 ⁶ operating cycles (average value, depending on application) | | | | |
| Cable entry, screw terminals | ADW•M119012 | | 1 tapped entry M20 x 1.5 mm for ISO cable gland. Clamping capacity 7 to 13 mm | | | | |
| | ADW•M129012, ADW2••M129012 | 2 | 1 tapped entry for n° 13 cable gland, conforming to NF C 68-300 (DIN Pg 13.5). Clamping capacity 9 to 13 mm | | | | |

(1) Since it is normal for piston type pressure switches (not incorporating a piston seal) to have a slight oil leakage past the piston, a drain hole through the cylinder wall is incorporated.
To avoid back pressure, this hole should never be plugged. If for any reason this oil leakage is undesirable, use pressure switches incorporating a Quad-Ring piston seal.
(2) See "Component materials of units in contact with the fluid", page 75.

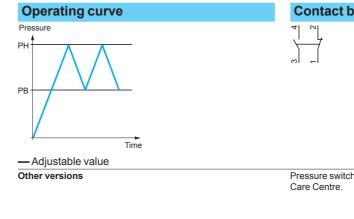
(3) Only for control of group 2 fluids, in accordance with directive 97/23/EEC.



Pressure switches OsiSense ADW



| | | | 9.3…69 bar (135…1000 psi) | 28…210 bar (406…3045 psi) | 38340 bar (5514930 psi) | | |
|--|--|------------------------------|--|------------------------------|-----------------------------|--|--|
| References | | | | | | | |
| Switches with 1 CO sing | le-pole contact | | | | | | |
| Electrical connection | With one tapped e M20 x 1.5 mm for | | ADW5M119012 | ADW6M119012 | - | | |
| | With one tapped e for n° 13 cable gla | | ADW5M129012 | ADW6M129012 | ADW7S1M129012 | | |
| Weight (kg) | | | 1.880 | 1 | - 1 | | |
| Switches with 2 CO sing | le-pole contacts | S | | | | | |
| Electrical connection | With one tapped entry for n° 13 cable gland | | ADW25M129012 | ADW26M129012 | - | | |
| Weight (kg) | | | 1.880 | • | • | | |
| Complementary cha | aracteristics | not shown | under general chara | acteristics (page 75) | | | |
| Possible differential (subtract from PH to give PB) | 1 CO switches | Min./max. at low setting | 4.8/6.9 bar (69.6/100 psi) | 14/21 bar (203/304.5 psi) | 19/25 bar (275.5/362.5 psi) | | |
| | | Min./max. at low setting | 8.6/10 bar (124.7/145 psi) | 28/34 bar (406/493 psi) | 38/45 bar (551/652.5 psi) | | |
| | 2 CO switches | Min./max. at low setting | 6.2/7.9 bar (89.9/114.6 psi) | 17/24 bar (246.5/348 psi) | 22/28 bar (319/406 psi) | | |
| | | Min./max. at high setting | 10/12 bar (145/174 psi) | 34/39 bar (493/565.5 psi) | 44/50 bar (638/725 psi) | | |
| Maximum permissible press | ure | | 690 bar (10,000 psi) | | | | |
| Fluids controlled | | | Oils and other fluids, from - 25°C to + 120°C (1) (2) | | | | |
| Mechanical life | | | 1 x 10 ⁶ operating cycles (average value, depending on application) | | | | |
| Cable entry, screw terminals | ADW•M119012 | | 1 tapped entry M20 x 1.5 mm for ISO cable gland. Clamping capacity 7 to 13 mm | | | | |
| | ADW•M129012, ADW2••M129012 | | 1 tapped entry for n° 13 cable gland, conforming to NF C 68-300 (DIN Pg 13.5). Clamping capacity 9 to 13 mm | | | | |



bage 81

- Adjustable value

Other versions

Operating curve

Time

Pressure

PH

PB





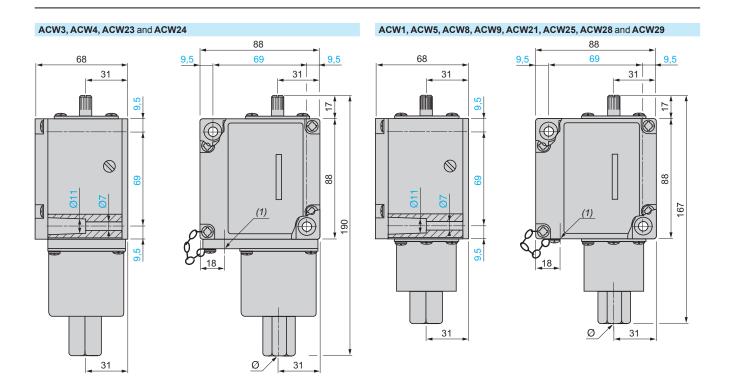
page 81

Contact block connections

Pressure switches with alternative tapped cable entries: NPT, etc. Please consult our Customer

Electromechanical pressure switches

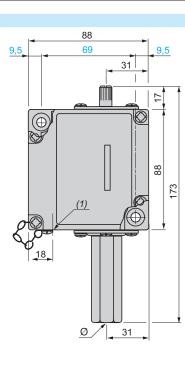
OsiSense XM For control circuits, OsiSense ACW



(1) Tapped entry for n° 13 or ISO M20 cable gland, depending on model Ø: G 1/4 (female)

ACW2 and ACW22



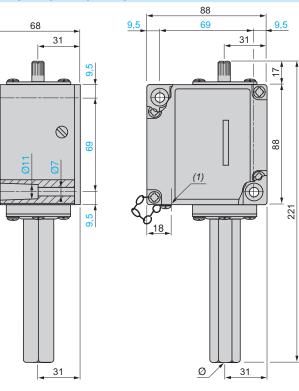


(1) Tapped entry for n° 13 or ISO M20 cable gland, depending on model Ø: G 1/4 (female)

> References: pages 76 and 77

(1) Tapped entry for n° 13 or ISO M20 cable gland, depending on model Ø: G 1/4 (female)

ACW6, ACW7, ACW10, ACW26, ACW27 and ACW20



(1) Tapped entry for n° 13 or ISO M20 cable gland, depending on model Ø: G 1/4 (female)

Characteristics: pages 75 to 77

Telemecanique Sensors

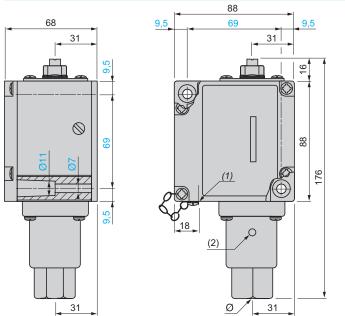
80



Electromechanical pressure switches OsiSense XM

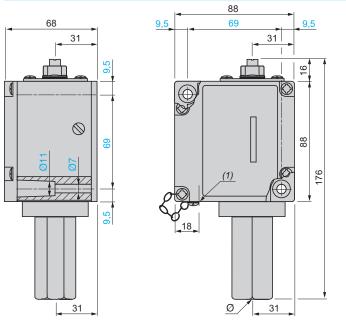
For control circuits, OsiSense ADW

ADW3, ADW4, ADW7, ADW23, ADW24 and ADW27



(1) Tapped entry for n° 13 or ISO M20 cable gland, depending on model
(2) Drainage hole, tapped G 1/8 (female)
Ø: G 3/8 (female)

ADW5, ADW6, ADW7S1, ADW25 and ADW26



(1) Tapped entry for n° 13 or ISO M20 cable gland, depending on model Ø: G 3/8 (female)

Characteristics pages 75 to 79



Electromechanical pressure switches

OsiSense XM For control circuits, OsiSense XMX and XMA

Presentation

Pressure switches OsiSense XMX and XMA are switches for control circuits, with an adjustable differential.

They are used to control the pressure of water and air, up to 25 bar.

Equipment fitted to the various models

Location of setting screw

Pressure switches OsiSense XMX have an internal setting screw that is only accessible after removing the cover.

 $\ensuremath{\mathsf{Pressure}}$ switches OsiSense XMA have an external setting screw that is accessible without removing the cover.

Case

Pressure switches OsiSense XMX have a black opaque case.

Pressure switches OsiSense XMA can have a transparent case or a black opaque case.

Setting

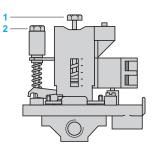
When setting pressure switches XMX or XMA, adjust the switching point on rising pressure (PH) first and then the switching point on falling pressure (PB).

Switching point on rising pressure

The switching point on rising pressure (PH) is set by adjusting screw-nut 1.

Switching point on falling pressure

The switching point on falling pressure (PB) is set by adjusting screw-nut 2.



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Dimensions: page 87

Telemecanique Sensors

Characteristics

Electromechanical pressure switches OsiSense XM

For control circuits, OsiSense XMX and XMA

| Environment charac | teristics | | |
|-------------------------------|---------------|-----------------|---|
| Conformity to standards | | | C€, IEC/EN 60947-5-1 |
| Product certifications | | | UL, CSA, CCC, EAC |
| Protective treatment | | | "TC" |
| Ambient air temperature | For operation | °C | - 25+ 70 for 6 and 25 bar versions - 25+ 55 for 12 bar version |
| | For storage | | - 40+ 70 |
| Fluids controlled | | °C | Air, fresh water, sea water: 0+ 70°C for 6 and 25 bar versions 0+ 55°C for 12 bar version |
| Materials | | | Case: polycarbonate impregnated with Lexan 500R fibreglass (black opaque cover) or polycarbonate impregnated with Lexan 123 fibreglass (transparent cover) Component materials in contact with fluid: chromated zinc alloy (fluid entry), canvas covered nitrile (diaphragm) |
| Operating position | | | All positions |
| Electric shock protection | | | Class I conforming to IEC 536 |
| Degree of protection | | | IP 54 conforming to IEC/EN 60529 |
| Operating rate | | Op. cycles/h | 600 |
| Repeat accuracy | | | < 3.5% |
| Fluid connection | | | G 1/4 or 4 x G 1/4 (BSP female) conforming to NF E 03-005, ISO 228 |
| Electrical connection | | | Terminals 2 tapped entries for n° 13 (DIN Pg 13.5) cable gland |
| Contact block chara | cteristics | | |
| Rated operational characteris | tics | | ∼ AC-15, B300 (Ue = 240 V, Ie = 1.5 A; Ue = 120 V, Ie = 3 A) DC-13, R300 (Ue = 250 V, Ie = 0.1 A) |
| Rated insulation voltage | | v | Ui = 500 conforming to IEC/EN 60947-1 |
| Rated impulse withstand volta | ige | kV | U imp = 6 conforming to IEC/EN 60947-1 |
| Type of contacts | | | 1 CO single-pole contact, snap action |
| Terminal referencing | | | Conforming to CENELEC EN 50013 |
| Short-circuit protection | | | 10 A cartridge fuse type gG (gl) |
| Connection | | | Screw clamp terminals Minimum clamping capacity: 1 x 1 mm ² Maximum clamping capacity: 2 x 2.5 mm ² |
| Electrical durability | | | AC supply 50/60Hz, Ith = 10 A Inductive circuit, utilisation category AC-15, 3 A/240 V: 1 million operating cycles |

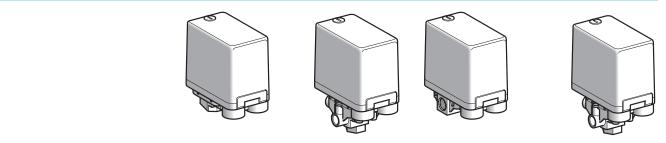


References, characteristics

Electromechanical pressure switches OsiSense XMX for control circuits

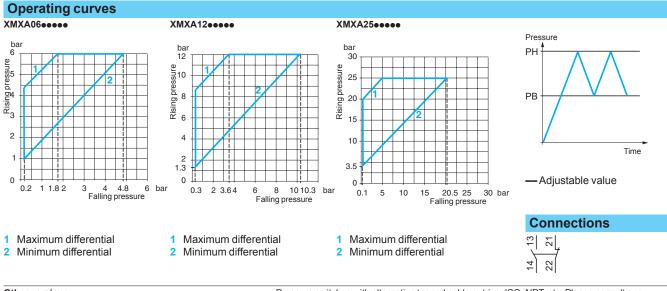
OsiSense XMX for control circuits Sizes 6 to 25 bar (87 to 362.5 psi) Adjustable differential, for regulation between 2 thresholds Switches with 1 CO single-pole contact

Pressure switches OsiSense XMX (internal setting screw)



| Adjustable range of switching point (PH) (Rising pressure) | | | | | 16 bar (14.587 psi) | 1.312 bar (18.85174 psi) | 3.525 bar (50.75362.5 psi) | |
|---|---------------------------------|--------------------------------------|--|--------------------------|-------------------------|-----------------------------|-------------------------------|--|
| Fluid connection | | G 1/4 (female) | (| (| 4 x G 1/4 (female | | (p, | |
| References | | | | | | | | |
| Switches with bla | ck opaque cover | | | | | | | |
| Fluids controlled | Air, fresh water, sea water (1) | XMXA06L2135 | XMXA12L2135 | XMXA25L2135 | XMXA06L2435 | XMXA12L2435 | XMXA25L2435 | |
| Weight (kg) | | 0.430 | | 0.650 | 0.430 | | 0.650 | |
| Complementa | ry characteristic | s not shown | under genera | al characteris | stics (page 83) | | | |
| Possible differential (subtract from PH | Min. at low setting | 0.8 bar (11.6 psi) | 1 bar (14.5 psi) | 3.4 bar (49.3 psi) | 0.8 bar (11.6 psi) | 1 bar (14.5 psi) | 3.4 bar (49.3 psi) | |
| to give PB) | Min. at high setting | 1.2 bar (17.4 psi) | 1.7 bar (24.6 psi) | 4.5 bar (65.2 psi) | 1.2 bar (17.4 psi) | 1.7 bar (24.6 psi) | 4.5 bar (65.2 psi) | |
| | Max. at high setting | 4.2 bar (60.9 psi) | 8.4 bar (121.8 psi) | 20 bar (290 psi) | 4.2 bar (60.9 psi) | 8.4 bar (121.8 psi) | 20 bar (290 psi) | |
| Maximum permissible pressure | Per cycle | 7.5 bar (108.7 psi) | 15 bar (217.5 psi) | 31.25 bar (453.1 psi) | 7.5 bar (108.7 psi) | 15 bar (217.5 psi) | 31.25 bar (453.1 psi) | |
| | Accidental | 13.5 bar (195.7 psi) | 27 bar (391.5 psi) | 56.25 bar (815.6 psi) | 13.5 bar (195.7 psi) | 27 bar (391.5 psi) | 56.25 bar (815.6 psi) | |
| Destruction pressure | | 30 bar (435 psi) | | 100 bar (1450 psi) | 30 bar (435 psi) | | 100 bar (1450 psi) | |
| Mechanical life | | 1 x 10 ⁶ operating cycles | | | | | | |
| Cable entry 2 entries tapp | | | ntries tapped for n° 13 cable gland, conforming to NF C 68-300 (DIN Pg 13.5) | | | | | |
| Pressure switch type | | Diaphragm | | | | | | |

(1) Component materials of units in contact with the fluid, see page 83.



Other versions

Pressure switches with alternative tapped cable entries: ISO, NPT, etc. Please consult our Customer Care Centre.

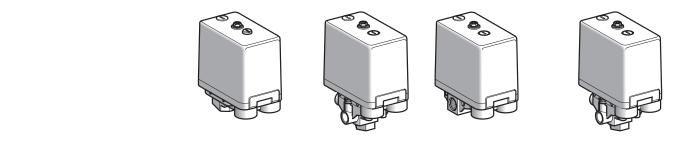
| Access page 8 | |
|------------------|----------------------------|
| 84 | E Telemecanique Sensors |

References, characteristics

Electromechanical pressure switches OsiSense XMA for control circuits

Sizes 6 to 25 bar (87 to 362.5 psi) Adjustable differential, for regulation between 2 thresholds Switches with 1 CO single-pole contact

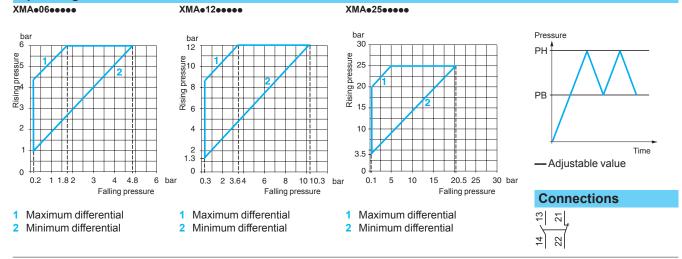
Pressure switches OsiSense XMA (external setting screw)



| Adjustable range of switching point (PH) | | 16 bar | 1.312 bar | 3.525 bar | 16 bar | 1.312 bar | 3.525 bar | |
|--|--|---|------------------------|--------------------------|-------------------------|------------------------|--------------------------|--|
| (Rising pressure) | | | | (50.75362.5 psi) | | | (50.75362.5 psi) | |
| Fluid connection | | G 1/4 (female) | | | 4 x G 1/4 (female |) | | |
| References | | | | | | | | |
| Switches with blac | k opaque cover | | | | | | | |
| Fluids controlled | Air, fresh water, sea water (1) | XMAH06L2135 | XMAH12L2135 | XMAH25L2135 | XMAH06L2435 | XMAH12L2435 | XMAH25L2435 | |
| Switches with tran | sparent cover | | | | | | | |
| Fluids controlled | Air, fresh water, sea water <i>(1)</i> | XMAV06L2135 | XMAV12L2135 | XMAV25L2135 | XMAV06L2435 | XMAV12L2435 | XMAV25L2435 | |
| Weight (kg) | | 0.430 | | 0.650 | 0.430 | | 0.650 | |
| Complementar | y characteristic | s not shown u | under genera | al characteris | stics (page 83) | | | |
| Possible differential (subtract from PH | Min. at low setting | 0.8 bar (11.6 psi) | 1 bar (14.5 psi) | 3.4 bar (49.3 psi) | 0.8 bar (11.6 psi) | 1 bar (14.5 psi) | 3.4 bar (49.3 psi) | |
| to give PB) | Min. at high setting | 1.2 bar (17.4 psi) | 1.7 bar (24.6 psi) | 4.5 bar (65.2 psi) | 1.2 bar (17.4 psi) | 1.7 bar (24.6 psi) | 4.5 bar (65.2 psi) | |
| | Max. at high setting | 4.2 bar (60.9 psi) | 8.4 bar (121.8 psi) | 20 bar (290 psi) | 4.2 bar (60.9 psi) | 8.4 bar (121.8 psi) | 20 bar (290 psi) | |
| Maximum permissible pressure | Per cycle | 7.5 bar (108.7 psi) | 15 bar (217.5 psi) | 31.25 bar (453.1 psi) | 7.5 bar (108.7 psi) | 15 bar (217.5 psi) | 31.25 bar (453.1 psi) | |
| | Accidental | 13.5 bar (195.7 psi) | 27 bar (391.5 psi) | 56.25 bar (815.6 psi) | 13.5 bar (195.7 psi) | 27 bar (391.5 psi) | 56.25 bar (815.6 psi) | |
| Destruction pressure | | 30 bar (435 psi) | | 100 bar (1450 psi) | 30 bar (435 psi) | | 100 bar (1450 psi) | |
| Mechanical life | | 1 x 10 ⁶ operating cycles | | | | | | |
| Cable entry | | 2 entries tapped for n° 13 cable gland, conforming to NF C 68-300 (DIN Pg 13.5) | | | | | | |
| Pressure switch type | • | Diaphragm | | | | | | |
| | | (1) Component mat | terials of units in co | ntact with the fluid, s | see page 83. | | | |

erials of units in contact with the fluid, see page 83

Operating curves



Other versions

Pressure switches with alternative tapped cable entries: ISO, NPT, etc. Please consult our Customer Care Centre.

| Accessories: page 86 | Dimensions: page 87 | | |
|-------------------------|------------------------|-------------------------|----|
| | | Elemecanique Sensors | 85 |



Electromechanical pressure switches OsiSense XMX and XMA for control circuits

Accessories and replacement parts

| | References | 5 | | |
|--|-----------------|--|-----------|--------------|
| | Description | | Reference | Weight kg |
| | Fixing bracket | | XMAZL001 | 0.035 |
| XMAZL001 | | nent knob, Ø 36 mm nt screws to facilitate setting | XMLZL003 | 0.010 |
| XMLZL003 | 13P cable gland | With anti pull-out ring (for cable Ø 69 mm) | DE9PM1201 | 0.005 |
| Real of the second seco | | Without anti pull-out ring (for cable \emptyset 69 mm) | DE9PM1202 | 0.005 |
| DE9PM1201 | | With anti pull-out ring (for cable Ø 912.5 mm) | DE9PM1203 | 0.005 |
| | Description | For pressure switch | Reference | Weight kg |
| DE9PM1202 | Diaphragms | Size 6 bar | XMPZ31 | 0.005 |
| | | Size 25 bar | XMPZ33 | 0.005 |

XMPZ3•

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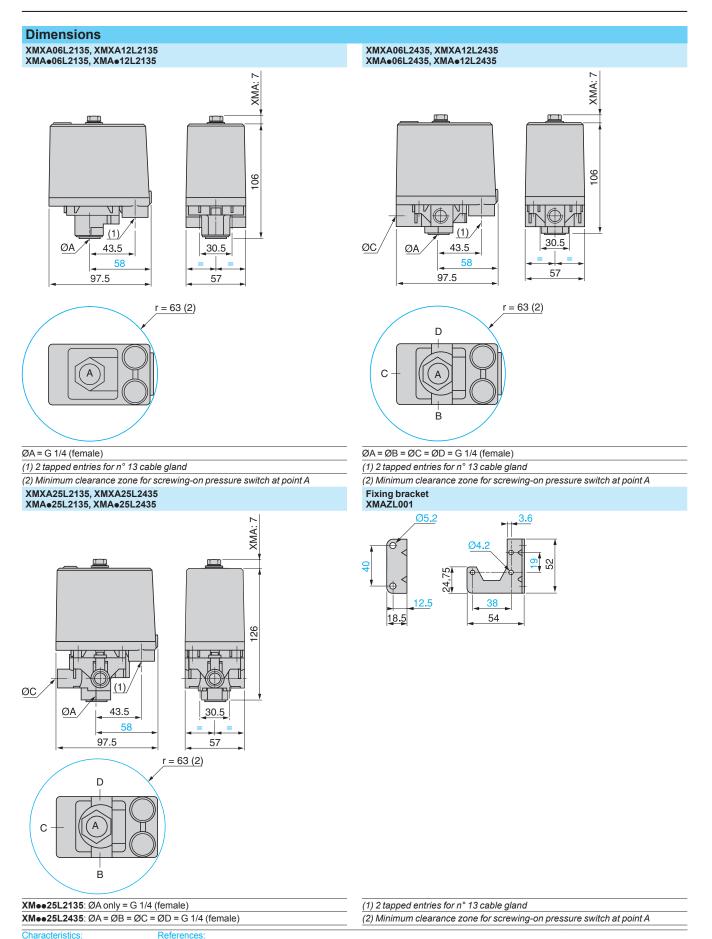
page 84

Electromechanical pressure switches

OsiSense XM

For control circuits, OsiSense XMX and XMA

Accessories and replacement parts





Electromechanical pressure switches

OsiSense XM For power circuits, OsiSense FTG, FSG and FYG

Presentation

Pressure switches OsiSense FTG, FSG and FYG are switches for power circuits. They are used to control the pressure of water, up to 10.5 bar.

2 types of product are available:

- pressure switches OsiSense FTG with fixed differential, for detection of a single threshold,

- pressure switches OsiSense FSG and FYG with an adjustable differential, for regulation between 2 thresholds.

For specific needs, these 2 types of product can be supplied in IP 65 versions, thus ensuring a higher degree of protection. They feature 2 cable entries, fitted with cable gland, and are referenced F.G.NE.

Setting

Pressure switches with fixed differential (FTG)

Only the switching point on rising pressure is adjustable.

Switching point on rising pressure

The switching point on rising pressure (PH) is set by adjusting screw-nut 1.

Switching point on falling pressure

The switching point on falling pressure (PB) is not adjustable. The difference between the tripping and resetting points of the contact is the natural differential of the switch (contact differential, friction, etc.).

Pressure switches with adjustable differential (FSG and FYG)

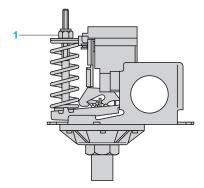
When setting the pressure switch, adjust the switching point on rising pressure (PH) first and then the switching point on falling pressure (PB).

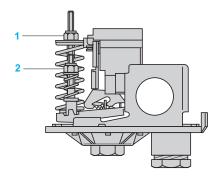
Switching point on rising pressure

The switching point on rising pressure (PH) is set by adjusting screw-nut 1.

Switching point on falling pressure

The switching point on falling pressure (PB) is set by adjusting screw-nut 2.





Dimensions: page 93

E Telemecanique

Sensors

Characteristics

Electromechanical pressure switches OsiSense XM

OsiSense XM For power circuits, OsiSense FTG, FSG and FYG

| | cs | 1 | | | | | |
|---|------------------------------|----|---|--|---------------------------------|--------------------------|--|
| Pressure switch type | | | FTGe FTGeNE | | FSGe and FYGe FSGeNE and FYG | BeNE | |
| Conformity to standards | | | CE, IEC/EN 60730 | | roome and ro | | |
| Protective treatment | | | Standard version: ' | "TC" | | | |
| Ambient air temperature | | | For operation: 0+ | - 45. For storage: - 30. | + 80 | | |
| Fluids controlled | | | Fresh water, sea w | rater (0+ 70°C) | | | |
| Naterials | | | | resistant to mechanic als in contact with fluid | | ed steel, nitrile | |
| Operating position | | | All positions | | | | |
| Electric shock protection | | | Class I conforming | to IEC 536 | | | |
| Degree of protection conforming to IEC/EN 60529 | FTG●, FSG● and FYG● | | IP 20 | | | | |
| - | FTG•NE, FSG•NE and FYG•NE | | IP 65 | | | | |
| Operating rate | | | 600 | | | | |
| Repeat accuracy | | | < 2% | | | | |
| Fluid connection | F●G 2, FYG●2 | | G 1/4 (BSP female) conforming to NF E 03-005, ISO 228 | | | | |
| | F●G 9 | | R 1/4 (BSP male) conforming to NF E 03-004, ISO 7 | | | | |
| Electrical connection | FTG●, FSG● and FYG● | | Terminals. 2 cable | entries, with grommet | | | |
| | FTG●NE, FSG●NE and FYG●NE | | Terminals. 2 entries incorporating 13P cable gland (DIN Pg 13.5) | | | | |
| Contact block characteris | tics | | | | | | |
| Rated operational characteristics | | | le = 10 A, Ue = \sim 2 | 250 V conforming to El | N 60730-1 | | |
| Power ratings of controlled motors | Voltage | | \sim 2-pole 1-phase | \sim 2-pole 3-phase | \sim 2-pole 1-phase | \sim 2-pole 3-phase | |
| | 110 V | | 0.75 kW (1 HP) | 1.1 kW (1.5 HP) | 0.75 kW (1 HP) | 1.1 kW (1.5 HP) | |
| | 230 V | | 1.1 kW (1.5 HP) | 1.5 kW (2 HP) | 1.5 kW (2 HP) | 2.2 kW (3 HP) | |
| | 400 V | | 1.5 kW (2 HP) | 1.5 kW (2 HP) | 1.5 kW (2 HP) | 2.2 kW (3 HP) | |
| Rated insulation voltage conforming to IEC/EN 60947-1 | | v | Ui = 500 | | | | |
| Rated impulse withstand voltage conforming to IEC/EN 60947-1 | | kV | U imp = 6 | | | | |
| Type of contacts | | | 1 2-pole 2 NC (4 terminal) contact, snap action | | | | |
| Short-circuit protection | | | 20 A cartridge fuse type gG | | | | |
| Connection | | | Screw clamp terminals. Minimum clamping capacity: 1 x 1 mm ² , max: 2 x 2 mm ² | | | | |
| Electrical durability at an operating rate of | | | Minimum clamping capacity: 1 x 1 mm², max: 2 x 2 mm² 40 000 100 000 | | | | |



References, characteristics

Electromechanical pressure switches

OsiSense XM

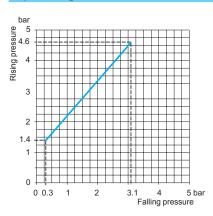
For power circuits, OsiSense FTG Size 4.6 bar (66.7 psi), fixed differential, for detection

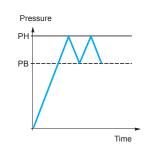
of a single threshold. Switches with 2-pole 2 NC contact. Degree of protection IP 20 or IP 65

| Fluid connection | | G 1/4 (female) | R 1/4 (male) | G 1/4 (female) | R 1/4 (male) |
|---|--|--------------------------------------|------------------|---|--------------|
| | | | | | |
| Adjustable range of switching (Rising pressure) | point (PH) | 1.44.6 bar (20.366 | 5.7 psi) | | |
| Degree of protection conforming to IEC/EN 60529 | | IP 20 | | IP 65 | |
| References | | | | · | |
| Fluids controlled | Fresh water, sea water, from 0°C to + 70°C (1) | FTG2 | FTG9 | FTG2NE | FTG9NE |
| Weight (kg) | | 0.340 | | | · |
| Complementary cha | racteristics not shown | under general o | haracteristics (| page 89) | |
| Natural differential (subtract from PH to give PB) | At low setting | 1.1 bar (15.95 psi) | | | |
| | At middle setting | 1.3 bar (18.85 psi) | | | |
| | At high setting | 1.5 bar (21.75 psi) | | | |
| Maximum permissible pressure | Per cycle | 5.75 bar (83.38 psi) | | | |
| | Accidental | 8 bar (116 psi) | | | |
| Destruction pressure | | 20 bar (290 psi) | | | |
| Mechanical life | | 4 x 10 ⁵ operating cycles | 5 | | |
| Cable entry | | 2 cable entries, with gro | ommet | 2 entries with 13P cable (DIN Pg 13.5) | e gland |
| Clamping capacity | | - | | 9 to 13 mm | |
| Pressure switch type | | Diaphragm | | | |

(1) Component materials of units in contact with the fluid, see page 89.

Operating curves





— Adjustable value



Connections

Dimensions: page 93

References, characteristics

Electromechanical pressure switches

OsiSense XM

For power circuits, OsiSense FSG

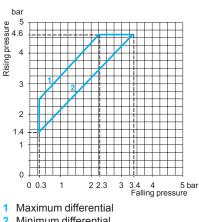
Size 4.6 bar (66.7 psi), adjustable differential, for regulation between 2 thresholds. Switches with 2-pole 2 NC contact. Degree protection IP 20 or IP 65

| Fluid connection | | G 1/4 (female) | R 1/4 (male) | G 1/4 (female) | R 1/4 (male) | |
|--|---|-------------------------------------|-------------------|--|--------------|--|
| | | | | | | |
| Adjustable range of switching (Rising pressure) | g point (PH) | 1.44.6 bar (20.366 | 6.7 psi) | | | |
| Degree of protection conforming to IEC/EN 60529 | | IP 20 | | IP 65 | | |
| References | | | | | | |
| Fluids controlled | Fresh water, sea water, from 0°C to + 70°C <i>(1)</i> | FSG2 | FSG9 | FSG2NE (2) | FSG9NE | |
| Weight (kg) | | 0.340 | <u>^</u> | | | |
| Complementary cha | racteristics not shown | under general o | characteristics (| page 89) | | |
| Possible differential (subtract from PH to give PB) | Max. at low setting | 2.1 bar (30.45 psi) | | | | |
| | Max. at middle setting | 2.2 bar (31.9 psi) | | | | |
| | Max. at high setting | 2.3 bar (33.35 psi) | | | | |
| | Min. at low setting | 1 bar (14.5 psi) | | | | |
| | Min. at middle setting | 1.1 bar (15.95 psi) | | | | |
| | Min. at high setting | 1.2 bar (17.4 psi) | | | | |
| Maximum permissible pressure | Per cycle | 5.75 bar (83.38 psi) | | | | |
| | Accidental | 8 bar (116 psi) | | | | |
| Destruction pressure | | 20 bar (290 psi) | | | | |
| Mechanical life | | 1 x 10 ⁶ operating cycle | S | | | |
| Cable entry | | 2 cable entries, with gro | ommet | 2 entries with 13P cabl (DIN Pg 13.5) | e gland | |
| Clamping capacity | | - | | 9 to 13 mm | | |
| Pressure switch type | | Diaphragm | | · · · · · · · · · · · · · · · · · · · | | |
| (1) Component materials of unit | s in contact with the fluid see page | 80 | | | | |

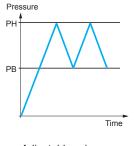
(1) Component materials of units in contact with the fluid, see page 89.

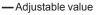
(2) Variant: for a G 3/8 female fluid entry that pivots throughout 360°, select the FSG2NEG.

Operating curves



2 Minimum differential







Connections





References, characteristics

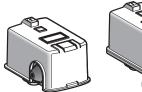
Electromechanical pressure switches

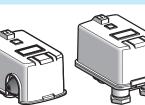
OsiSense XM

For power circuits, OsiSense FYG Sizes 7 and 10.5 bar (101.5 and 152.3 psi), adjustable differential, for regulation between 2 thresholds. Switches with 2-pole 2 NC contact. Degree of protection IP 20 or IP 65

| FI | u | id | co | nn | ec | ti | ioi | า |
|----|---|----|----|----|----|----|-----|---|
| | | | | | | | | |

G 1/4 (female)





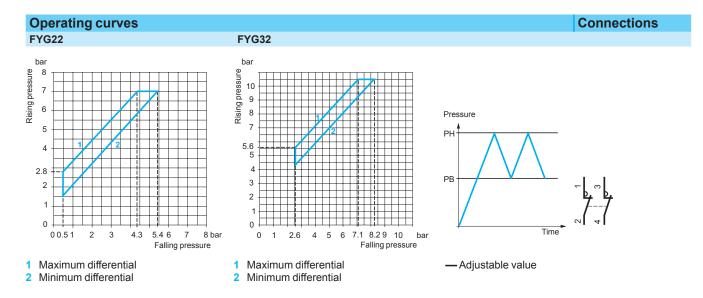
| | | | - | | - |
|--|--|----------------|------------|-----------------------------|----------------|
| Adjustable range of swite (Rising pressure) | ching point (PH) | 2.87 bar (40.6 | 101.5 psi) | 5.610.5 bar (8 ⁻ | 1.2…152.3 psi) |
| Degree of protection conforming to EN/IEC 605 | 29 | IP 20 | IP 65 | IP 20 | IP 65 |
| References | | | | | |
| Fluids controlled | Fresh water, sea water, from 0°C to + 70°C <i>(1)</i> | FYG22 (2) | FYG22NE | FYG32 (3) | FYG32NE |
| Weight (kg) | | 0.340 | | | |

| Complementary cha | aracteristics not shown | under general characteristics (| page 89) |
|---|-------------------------|--------------------------------------|---------------------|
| Possible differential (subtract from PH to give PB) | Max. at low setting | 2.3 bar (33.35 psi) | 3 bar (43.5 psi) |
| | Max. at middle setting | 2.5 bar (36.25 psi) | 3.2 bar (46.4 psi) |
| | Max. at high setting | 2.7 bar (39.15 psi) | 3.4 bar (49.3 psi) |
| | Min. at low setting | 1.2 bar (17.4 psi) | 1.9 bar (27.55 psi) |
| | Min. at middle setting | 1.4 bar (20.3 psi) | 2.1 bar (30.45 psi) |
| | Min. at high setting | 1.6 bar (23.2 psi) | 2.3 bar (33.35 psi) |
| Maximum permissible pressure | Per cycle | 8.75 bar (126.9 psi) | 13 bar (188.5 psi) |
| | Accidental | 15 bar (217.5 psi) | 15 bar (217.5 psi) |
| Destruction pressure | | 20 bar (290 psi) | 20 bar (290 psi) |
| Mechanical life | | 1 x 10 ⁶ operating cycles | · |
| Cable entry | | 2 cable entries, with grommet | |
| Pressure switch type | | Diaphragm | |

(1) Component materials of units in contact with the fluid, see page 89.

(2) Variant: for a 2.8 to 7 bar, IP 20, pressure switch with R 1/4 (male) fluid entry, select the FYG29.

(3) Variant: for a 5.6 to 10.5 bar, IP 20, pressure switch with R 1/4 (male) fluid entry, select the FYG39.

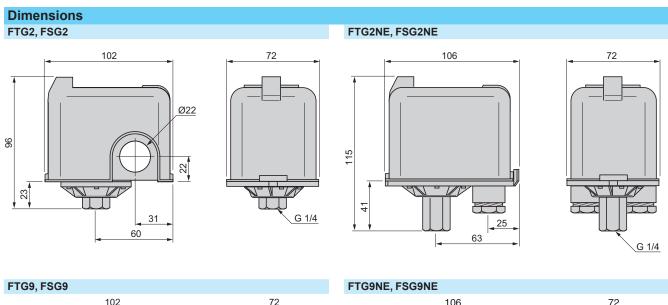


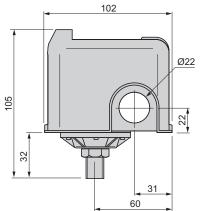
Dimensions: page 93

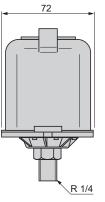
Telemecanique

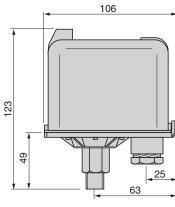
Electromechanical pressure switches OsiSense XM

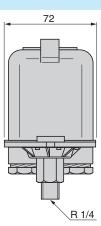
For power circuits, OsiSense FTG, FSG and FYG



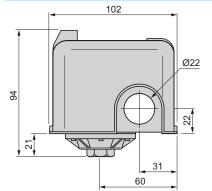


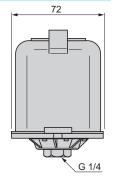




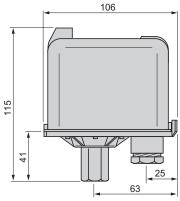


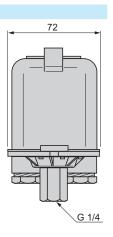
FYG22, FYG32





FYG22NE, FYG32NE





| Characteristics: page 89 | References: pages 90 to 92 | | |
|--------------------------|-------------------------------|---------------|--|
| | | Telemecanique | |

Sensors

Presentation

Electromechanical pressure switches

OsiSense XM For power circuits, OsiSense XMP

Presentation

Pressure switches OsiSense XMP are switches for power circuits (direct switching), with an adjustable differential.

They are used to control the pressure of water and air, up to 25 bar.

Equipment fitted to the various models

Case

Pressure switches OsiSense XMP, depending on the model, include:

- 3 types of case:
- bare case,
- □ case with On/Off knob (black): used as a switch for starting and stopping the installation,
- case with reset knob (yellow): necessary when the safety requirements of the system include tripping in the event of overpressure. Resetting is not automatic on return to normal pressure, and it can only be achieved by manually turning the "Reset" knob.
- 2 degrees of protection:
- □ IP 54,
- □ IP 65.

Decompression valve

Depending on the model, 2 types of decompression valve can be fitted to pressure switches OsiSense XMP:

■ Straight, instant connection, decompression valve (connection by Ø 6 mm plastic tube).

Straight, olive connection, decompression valve (connection by Ø 6 mm plastic or metal tube).

Setting

When setting XMP pressure switches, adjust the switching point on rising pressure (PH) first and then the switching point on falling pressure (PB).

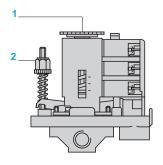
Switching point on rising pressure

The switching point on rising pressure (PH) is set by adjusting the screw-nut or knurled knob 1.

Tighten either the nut or knurled knob 1 to increase the high point switching value.

Switching point on falling pressure

The switching point on falling pressure is set by adjusting screw-nut 2. Tighten nut 2 to reduce the low point switching value (increase in differential).



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Elemecanique

Characteristics

Electromechanical pressure switches OsiSense XM

OsiSense XM For power circuits, OsiSense XMP

| Conformity to standards | | CE, IEC/EN 60947-4-1 | | |
|---|--------------|---|-----------------------------|----------------------------|
| Product certifications | | EAC | | |
| Ambient air temperature | °C | For operation: - 25+ 70 For storage: - 40+ 70 | | |
| Fluids controlled | | Air, fresh water, sea wate | er (0+ 70°C) | |
| Materials | | Case: polyamide impregr Component materials in o canvas covered nitrile (di | contact with fluid: chromat | ted zinc alloy (fluid entr |
| Operating position | | All positions | | |
| Vibration resistance | | 3 gn (10500 Hz) confor | rming to IEC 60068-2-6 | |
| Shock resistance | | 50 gn, conforming to IEC | 60068-2-27 | |
| Electric shock protection | | Class I conforming to IEC | 060536 | |
| Degree of protection | | IP 54 conforming to IEC/I | EN 60529 or IP 65 for univ | versal model |
| Operating rate | Op. cycles/h | ≤ 600 | | |
| Repeat accuracy | | < 3.5% | | |
| Fluid connection | | G 1/4, 4 x G 1/4 or G 3/8 | (BSP female) conforming | to NF E 03-005, ISO 2 |
| Electrical connection | | 2 tapped entries for n° 13 | (DIN Pg 13.5) cable glan | d |
| Contact block characteristics | | | | |
| Rated insulation voltage | v | Ui = 500 conforming to IE | EC/EN 60947-1 | |
| Rated impulse withstand voltage | v | U imp = 6 kV conforming | to IEC/EN 60947-1 | |
| Type of contacts | | One 2-pole 2 NC or 3-pol | e 3 NC contact, snap action | on |
| Resistance across terminals | mΩ | ≤ 25 conforming to NF C | 93-050 method A or IEC 2 | 255-7 category 3 |
| Terminal referencing | | Conforming to CENELEC | C EN 50013 | |
| Short-circuit protection | | Cartridge fuse type Am | | |
| Connection | | Screw clamp terminals. | Ainimum clamping capaci | ty: 2 x 4 mm ² |
| Electrical durability | | Power | Number of operating cyc | cles |
| Operating rate: 600 operating cycles/hour | | kW | \sim 400 V, 3-phase | \sim 230 V, 3-phase |
| Load factor: 0.4 | | 1.5 | 1 000 000 | 600 000 |
| | | 2.2 | 700 000 | - |
| | | 3 | 500 000 | _ |



References, characteristics

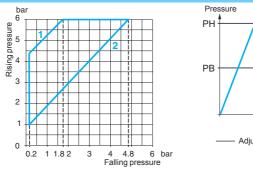
Electromechanical pressure switches OsiSense XMP, IP 54

Size 6 bar (87 psi) Adjustable differential, for regulation between 2 thresholds Switches with 2-pole 2 NC or 3-pole 3 NC contact

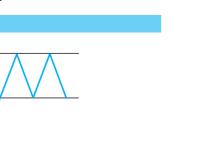
| Fluid connection | | G 1/4 (female) | | | |
|--|--------------------------|--|---|--|--|
| | | | | | |
| Adjustable range of switching (Rising pressure) | g point (PH) | 16 bar (14.587 psi) | | | |
| Type of contact | | 2-pole 2 NC | 3-pole 3 NC | | |
| References (1) | | | | | |
| Switches without decom | pression valve | | | | |
| Bare case 1 | | XMPA06B2131 | XMPA06C2131 | | |
| Case with reset knob 2 | | XMPB06B2131 | - | | |
| Case with On/Off knob 2 | | XMPC06B2131 | XMPC06C2131 | | |
| Weight (kg) | | 0.430 | | | |
| Switches with straight de | ecompression valve, inst | ant connection | | | |
| Bare case 1 | | XMPD06B2131 | XMPD06C2131 | | |
| Case with On/Off knob 2 | | XMPE06B2131 | XMPE06C2131 | | |
| Weight (kg) | | 0.450 | | | |
| Complementary cha | aracteristics not sho | own under general charact | eristics (page 95) | | |
| Possible differential | Min. at low setting | 0.8 bar (11.6 psi) | | | |
| (subtract from PH to give PB) | Min. at high setting | 1.2 bar (17.4 psi) | | | |
| | Max. at high setting | 4.2 bar (60.9 psi) | | | |
| Destruction pressure | | 30 bar (435 psi) | | | |
| Mechanical life | | 1 million operating cycles | 1 million operating cycles | | |
| Cable entry | | 2 entries tapped for n° 13 cable g | 2 entries tapped for n° 13 cable gland, conforming to NF C 68-300 (DIN Pg 13.5) | | |
| Pressure switch type | | Diaphragm | | | |
| | | (1) References for individually pac To order, add the letter C to the | kaged switches. Also available packaged in lots of 10. reference selected from above. Example: reference for lot | | |

To order, add the letter C to the reference selected from above. Example: reference for of 10 pressure switches XMPA06B2131 in one package becomes XMPA06B2131C.

Operating curves



1 Maximum differential 2 Minimum differential





| 4 x G 1/4 (female) | G 3/8 (female) |
|---|--|
| | |
| 16 bar (14.587 psi) | |
| 3-pole 3 NC | 2-pole 2 NC |
| References | |
| Switches without decompression valve | |
| - | XMPA06B2242 |
| - | XMPB06B2242 |
| - | XMPC06B2242 |
| - | 0.430 |
| Switches with straight decompression va | alve, instant connection |
| - | XMPD06B2242 |
| XMPE06C2431 | - |
| 0.450 | |
| Complementary characteristics r | not shown under gene |
| 0.8 bar (11.6 psi) | J. J |
| 1.2 bar (17.4 psi) | |
| 4.2 bar (60.9 psi) | |
| 30 bar (435 psi) | |

| Complementary characteristics not sho | own under general characteristics (page 95) |
|--|--|
| 0.8 bar (11.6 psi) | |
| 1.2 bar (17.4 psi) | |
| 4.2 bar (60.9 psi) | |
| | |
| 30 bar (435 psi) | |
| 1 million operating cycles | |
| 2 entries tapped for n° 13 cable gland, conforming | 2 entries incorporating n° 13 plastic cable gland (DIN Pg 13.5) |
| to NF C 68-300 (DIN Pg 13.5) | Clamping capacity 9 to 13 mm |
| Diaphragm | |
| Other versions | Pressure switches not listed above, comprising the equipment proposed for the choice of reference. Please consult our Customer Care Centre. |

Terminal connections

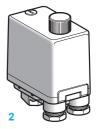
Accessories: page 104

Dimension page 105

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| Accesso page 10 | |
|--------------------|-------------------------|
| 96 | Elemecanique Sensors |





| | 3-pole 3 NC | |
|---|-------------|--|
| | | |
| | | |
| 2 | XMPA06C2242 | |
| 2 | - | |
| 2 | XMPC06C2242 | |
| | | |
| | | |
| 2 | XMPD06C2242 | |
| | XMPE06C2242 | |



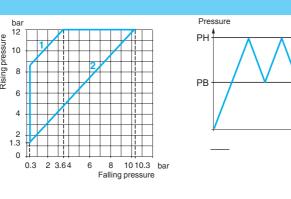
References. characteristics (continued)

Electromechanical pressure switches

OsiSense XMP, IP 54 Size 12 bar (174 psi) Adjustable differential, for regulation between 2 thresholds Switches with 2-pole 2 NC or 3-pole 3 NC contact

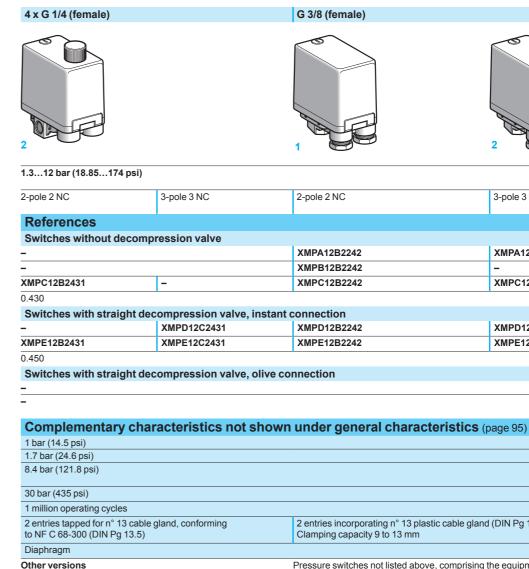
| Fluid connection | | G 1/4 (female) | | | |
|---|-------------------------|------------------------------------|---|--|--|
| | | | | | |
| Adjustable range of switching Rising pressure) | g point (PH) | 1.312 bar (18.85174 psi) | | | |
| Type of contact | | 2-pole 2 NC | 3-pole 3 NC | | |
| References (1) | | | · · · · · · · · · · · · · · · · · · · | | |
| Switches without decom | pression valve | | | | |
| Bare case 1 | | XMPA12B2131 | XMPA12C2131 | | |
| Case with reset knob 2 | | XMPB12B2131 | - | | |
| Case with On/Off knob 2 | | XMPC12B2131 | XMPC12C2131 | | |
| Weight (kg) | | 0.430 | | | |
| Switches with straight de | compression valve, ins | tant connection | | | |
| Bare case 1 | | XMPD12B2131 | XMPD12C2131 | | |
| Case with On/Off knob 2 | | XMPE12B2131 | XMPE12C2131 | | |
| Weight (kg) | | 0.450 | | | |
| Switches with straight de | compression valve, oliv | ve connection | | | |
| Case with On/Off knob 2 | | XMPR12B2131 | XMPR12C2131 | | |
| Weight (kg) | | 0.450 | 0.450 | | |
| Complementary cha | racteristics not she | own under general charact | eristics (page 95) | | |
| Possible differential | Min. at low setting | 1 bar (14.5 psi) | | | |
| (subtract from PH to give PB) | Min. at high setting | 1.7 bar (24.6 psi) | | | |
| | Max. at high setting | 8.4 bar (121.8 psi) | | | |
| Destruction pressure | | 30 bar (435 psi) | 30 bar (435 psi) | | |
| Mechanical life | | 1 million operating cycles | | | |
| Cable entry | | 2 entries tapped for n° 13 cable g | 2 entries tapped for n° 13 cable gland, conforming to NF C 68-300 (DIN Pg 13.5) | | |
| Pressure switch type | | Diaphragm | | | |
| | | To order, add the letter C to the | kaged switches. Also available packaged in lots of 10. reference selected from above. Example: reference for lot 12B2131 in one package becomes XMPA12B2131C. | | |

Operating curves



Time

1 Maximum differential 2 Minimum differential

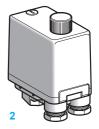


Terminal connections



| ccesso ige 10 | Dimensions: page 105 | |
|------------------|-------------------------|--------------------------|
| 98 | | Telemecanique Sensors |

Accessories Dim page 104 page 105



| | 3-pole 3 NC |
|----|-------------|
| | 3-pole 3 NC |
| | |
| | |
| 42 | XMPA12C2242 |
| 42 | - |
| 42 | XMPC12C2242 |
| | |
| | |
| 42 | XMPD12C2242 |
| 42 | XMPE12C2242 |
| | |
| | |

2 entries incorporating n° 13 plastic cable gland (DIN Pg 13.5) Clamping capacity 9 to 13 mm

Pressure switches not listed above, comprising the equipment proposed for the choice of reference. Please consult our Customer Care Centre.



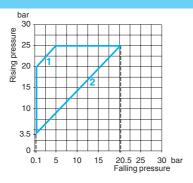


References, characteristics (continued)

Electromechanical pressure switches OsiSense XMP, IP 54 Size 25 bar (362.5 psi) Adjustable differential, for regulation between 2 thresholds Switches with 2-pole 2 NC or 3-pole 3 NC contact

| Fluid connection | | G 1/4 (female) | | |
|--|-----------------------------|---|--|--|
| | | | | |
| Adjustable range of switching (Rising pressure) | g point (PH) | 3.525 bar (50.75362.5 psi) | | |
| Type of contact | | 2-pole 2 NC | | |
| References | | | | |
| Switches without decom | pression valve | | | |
| Bare case 1 | - | XMPA25B2131 | | |
| Case with reset knob 2 | | XMPB25B2131 | | |
| Case with On/Off knob 2 | | XMPC25B2131 | | |
| Weight (kg) | | 0.650 | | |
| Switches with straight de | compression valve, olive co | nnection | | |
| Case with On/Off knob 2 | | XMPR25B2131 | | |
| Weight (kg) | | 0.670 | | |
| Complementary cha | aracteristics not shown | under general characteristics (page 95) | | |
| Possible differential | Min. at low setting | 3.4 bar (49.3 psi) | | |
| (subtract from PH to give PB) | Min. at high setting | 4.5 bar (65.2 psi) | | |
| | Max. at high setting | 20 bar (290 psi) | | |
| Destruction pressure | | 100 bar (1450 psi) | | |
| Mechanical life | | 1 million operating cycles | | |
| Cable entry | | 2 entries tapped for n° 13 cable gland, conforming to NF C 68-300 (DIN Pg 13.5) | | |
| Pressure switch type | | Diaphragm | | |

Operating curves



1 Maximum differential 2 Minimum differential

| G 1/4 (female) | |
|--|--------------------------|
| 3.525 bar (50.75362.5 psi) 3-pole 3 NC References Switches without decompression valve XMPA25C2131 - XMPC25C2131 | 2 |
| B-pole 3 NC References Switches without decompression valve (MPA25C2131 (MPC25C2131 | |
| References Switches without decompression valve XMPA25C2131 - XMPC25C2131 | |
| Switches without decompression valve KMPA25C2131 - KMPC25C2131 | |
| KMPA25C2131 - | |
| KMPA25C2131 - | |
| | |
| | |
| .650 | |
| | |
| Switches with straight decompression valve | , olive connection |
| (MPR25C2131 | |
| 0.670 | |
| Complementary characteristics not | shown under gen |
| 3.4 bar (49.3 psi) | |
| 4.5 bar (65.2 psi) | |
| 20 bar (290 psi) | |
| 100 bar (1450 psi) | |
| 1 million operating cycles | |
| 2 entries tapped for n° 13 cable gland, conforming to N | F C 68-300 (DIN Pa 13 5) |
| Diaphragm | |
| | (B g 10.0) |
| Other versions | Pressure switche |

Terminal connections



| ccesso age 104 | Dimensions: page 105 | |
|-------------------|-------------------------|--------------------------|
| 100 | Ē | Telemecanique Sensors |

| eneral characteristics (page 95) |
|----------------------------------|
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hes not listed above, comprising the equipment proposed for the choice lease consult our Customer Care Centre.

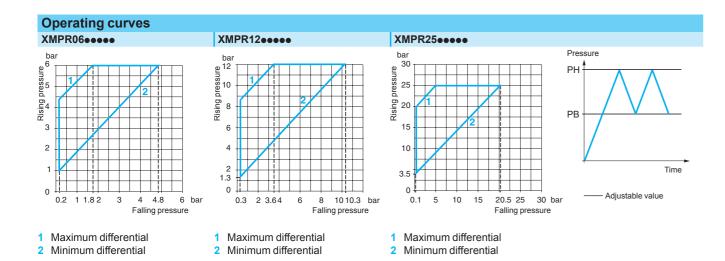


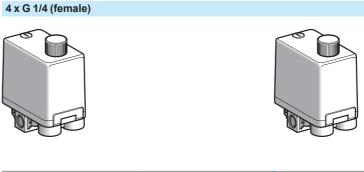
References. characteristics (continued)

Electromechanical pressure switches

OsiSense XMP, IP 65 Sizes 6 to 25 bar (87 to 362.5 psi) Adjustable differential, for regulation between 2 thresholds Switches with 2-pole 2 NC or 3-pole 3 NC contact

| Fluid connection | | G 1/4 (female) | | | | | |
|---|----------------------|---|-------------|--------------------------|-----------------|----------------------------|-------------|
| | | | | | | | |
| Adjustable range of switching point (PH) (Rising pressure) | | 16 bar (14.587 psi) | | 1.312 bar (18.85174 psi) | | 3.525 bar (50.75362.5 psi) | |
| Type of contact | | 2-pole 2 NC | 3-pole 3 NC | 2-pole 2 NC | 3-pole 3 NC | 2-pole 2 NC | 3-pole 3 NC |
| References | | I | | 1 | | 1 | |
| Switches with stra | aight decompressio | n valve, olive co | nnection | | | | |
| Case with On/Off kno | b | XMPR06B2133 | XMPR06C2133 | XMPR12B2133 | XMPR12C2133 | XMPR25B2133 | XMPR25C2133 |
| Weight (kg) | | 0.450 | | 0.670 | | | |
| Complementa | ry characteristic | s not shown | under gener | al characteri | stics (page 95) | | |
| Possible differential | Min. at low setting | 0.8 bar (11.6 psi) | | 1 bar (14.5 psi) | | 3.4 bar (49.3 psi) | |
| (subtract from PH | Min. at high setting | 1.2 bar (17.4 psi) | | 1.7 bar (24.6 psi) | | 4.5 bar (65.2 psi) | |
| to give PB) | Max. at high setting | 4.2 bar (60.9 psi) | | 8.4 bar (121.8 psi) | | 20 bar (290 psi) | |
| Destruction pressure |) | 30 bar (435 psi) 100 bar (1450 psi) | | | | | |
| Mechanical life | | 1 million operating cycles | | | | | |
| Cable entry | | 2 entries tapped for n° 13 cable gland, conforming to NF C 68-300 (DIN Pg 13.5) | | | | | |
| Adjustment of high setting point (PH) | | By screw-nut | | | | | |
| Pressure switch type | | Diaphragm | | | | | |





| 16 bar (14.587 psi) | | 1.312 bar (18.85 | 1.3…12 bar (18.85…174 psi) | | 3.525 bar (50.75362.5 psi) | |
|---------------------------|-----------------------------------|----------------------|----------------------------|--------------------|----------------------------|--|
| 2-pole 2 NC | 3-pole 3 NC | 2-pole 2 NC | 3-pole 3 NC | 2-pole 2 NC | 3-pole 3 NC | |
| References | | | | | | |
| Switches with straig | ght decompression valve, ol | live connection | | | | |
| XMPR06B2433 | XMPR06C2433 | XMPR12B2433 | XMPR12C2433 | XMPR25B2433 | XMPR25C2433 | |
| 0.450 | • | | | 0.670 | · | |
| Complementary | y characteristics not sh | nown under genera | al characteristics | s (page 95) | | |
| 0.8 bar (11.6 psi) | | 1 bar (14.5 psi) | | 3.4 bar (49.3 psi) | | |
| 1.2 bar (17.4 psi) | | 1.7 bar (24.6 psi) | | 4.5 bar (65.2 psi) | | |
| 4.2 bar (60.9 psi) | | 8.4 bar (121.8 psi) | | 20 bar (290 psi) | | |
| 30 bar (435 psi) | | | | 100 bar (1450 psi) | | |
| 1 million operating cycle | es | | | | | |
| 2 entries tapped for n° 1 | 3 cable gland, conforming to NF C | 68-300 (DIN Pg 13.5) | | | | |
| By screw-nut | | | | | | |
| Diaphragm | | | | | | |
| | | D | | | | |

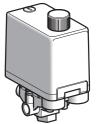
Other versions

Terminal connections



| Acce | essor | Dimensions: |
|------|-------|-------------------------|
| page | e 104 | page 105 |
| 10 |)2 | Elemecanique Sensors |





Pressure switches not listed above, comprising the equipment proposed for the choice of reference. Please consult our Customer Care Centre.

XMPeeeCeeee



Electromechanical pressure switches OsiSense XM

OsiSense XM For power circuits, OsiSense XMP Accessories and replacement parts

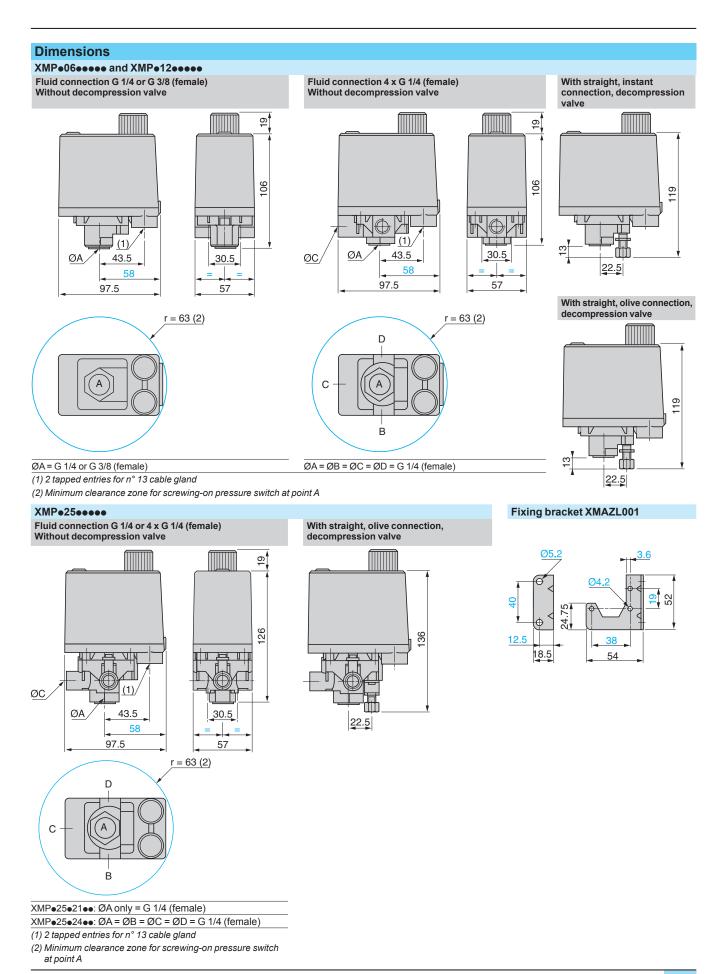
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|----|---|---|-----------------------|-------------------|--------------|
| | Description | | | Reference | Weight kg |
| 0 | Fixing bracket | | | XMAZL001 | 0.03 |
| | Knurled adjustment known fits over adjustment screw | ob, Ø 36 mm ws to facilitate setting | | XMPMDR01 | 0.010 |
| 11 | | | | | |
| | 13P cable gland | With anti pull-o (for cable Ø 6 | ut ring .9 mm) | DE9PM1201 | 0.005 |
| | | Without anti pu (for cable Ø 6 | ll-out ring .9 mm) | DE9PM1202 | 0.005 |
| | | With anti pull-o (for cable Ø 9 | ut ring .12.5 mm) | DE9PM1203 | 0.00 |
| | Description | For pressure switch | Sold in lots of | Unit reference | Weight kg |
| | Diaphragms | Size 6 bar | 50 | XMPZ31 | 0.005 |
| | | Size 25 bar | 50 | XMPZ33 | 0.005 |



Electromechanical pressure switches

OsiSense XM

For power circuits, OsiSense XMP Accessories and replacement parts



Telemecanique Sensors

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| XMLCM05C2S12 | 25 | XMPC06B2131 | 96 | |
| XMLCS02B2S12 | 35 | XMPC06B2242 | 97 | |
| XMLCS02B2S13 | 35 | XMPC06C2131 | 96 | |
| XMLCS04B2S12 | 38 | XMPC06C2242 | 97 | |
| XMLCS10A2S12 | 42 | XMPC12B2131 | 98 | |
| XMLCS20A2S12 | 46 | XMPC12B2131 | 99 | |
| XMLCS35R2S12 | 28 | XMPC12B2431 | 99 | |
| XMLCS35R2S13 | 28 | XMPC12C2131 | 98 | |
| XMLD004B1S12 | 39 | XMPC12C2242 | 99 | |
| XMLD010B1S11 | 43 | XMPC25B2131 | 100 | |
| XMLD010B1S12 | 43 | XMPC25C2131 | 100 | |
| XMLD010C1S11 | 43 | XMPD06B2131 | 96 | |
| XMLD020B1S12 | 47 | XMPD06B2242 | 97 | |
| XMLD020B1S13 | 47 | XMPD06C2131 | 96 | |
| XMLD020C1S12 | 47 | XMPD06C2242 | 97 | |
| XMLD035B1S12 | 51 | XMPD12B2131 | 98 | |
| XMLD070D1S12 | 55 | XMPD12B2242 | 99 | |
| XMLD070D1S13 | 55 | XMPD12C2131 | 98 | |
| XMLD070N1S12 | 55 | XMPD12C2242 | 99 | |
| XMLD160D1S12 | 59 | XMPD12C2431 | 99 | |
| XMLD160D1S13 | 59 | XMPE06B2131 | 96 | |
| XMLD160E1S12 | 59 | XMPE06C2131 | 96 | |
| XMLD300D1S12 | 63 | XMPE06C2242 | 97 | |
| XMLD300D1S13 | 63 | XMPE06C2431 | 97 | |
| XMLD300E1S12 | 63 | XMPE12B2131 | 98 | |
| XMLD300N1S12 | 63 | XMPE12B2242 | 99 | |
| XMLD500D1S12 | 67 | XMPE12B2431 | 99 | |
| XMLDL35R1S12 | 29 | XMPE12C2131 | 98 | |
| XMLDM02T1S12 | 21 | XMPE12C2242 | 99 | |
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| XMLZB120 | 68 | XMPR06C2133 | 102 | |
| XMLZL001 | 68 | XMPR06C2433 | 103 | |
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| XMLZL003 | 68 86 | XMPR12B2133 | 102 | |
| XMLZL004 | 68 | XMPR12B2433 | 103 | |
| XMLZL005 | 68 | XMPR12C2131 | 98 | |
| XMLZL006 | 68 | XMPR12C2133 | 102 | |
| XMLZL010 | 68 | XMPR12C2433 | 103 | |
| XMLZL011 | 68 | XMPR25B2131 | 100 | |
| XMLZL012 | 68 | XMPR25B2133 | 102 | |
| XMLZL013 | 68 | XMPR25B2433 | 103 | |
| XMLZL014 | 68 | XMPR25C2131 | 101 | |
| XMLZL015 | 68 | XMPR25C2133 | 102 | |
| XMLZZ024 | 68 | XMPR25C2433 | 103 | |
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| XMPA06B2131 | 96 | XMPZ33 | 86 | |
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| XMPA06C2242 | 97 | XMXA06L2435 | 84 | |
| | 98 | | 84 | |

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