# Electromechanical sensors for pressure control OsiSense XM

# **Catalogue**







Simply easy!™



# **Electromechanical pressure and vacuum switches OsiSense XM**

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# **Electromechanical sensors** for pressure control OsiSense XM

Applications	Type of installation	Control circuits
	Fluids controlled	Air, water, hydraulic oils, corrosive fluids, viscous products
	Type of operation	Detection of a single threshold (fixed differential)  Regulation between 2 thresholds (adjustable differential)







Fluid characteristics	Air, fresh water, corrosive fluids, viscous products, up to 160°C Sea water, up to 30 °C, depending on model			
Sizes	- 1 bar500 bar (- 14.5 psi7250 psi)			
<b>Dimensions of case (mm)</b> Width x height x depth	35 x 68 x 75		46 x 68 x 85	
Type of contacts	1 CO single-pole, snap actio	n	2 CO single-pole, simultaneous, snap action	
Degree of protection	IP 66: switches with terminal connections IP 65: switches with connector		IP 66: switches with terminal connections	
Electrical connection	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.			
Fluid connection	G 1/4 (female) 1/4" - 18 NPTF (female) G 11/4" (female) for viscous products			
Type reference	XMLA	XMLB	XMLC	
Pages	18 to 67			
Other versions	Electromechanical pressure and vacuum switches with alternative tapped cable entries and/ or fluid entries: NPT etc. Please consult our Customer Care Centre.			

Control circuits	
Air, water, hydraulic oils, corrosive fluids, viscous products	Air, hydraulic oils, corrosive fluids
Dual stage switches Detection at each threshold (fixed differential)	Regulation between 2 thresholds (adjustable 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.	Screw terminals:  ■ 1 tapped entry M20 x 1.5 mm for ISO cable gland c  ■ 1 tapped entry for n° 13 cable gland, depending on	
G 1/4 (female) 1/4" - 18 NPTF (female) G 11/4" (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 sensors** for pressure control OsiSense XM

Type of installation 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 36	2.5 psi)
Dimensions of case (mm) Width x height x depth	57 x 78 x 97.5	
Setting of switching points	Internal screws	External 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 mode	el
Type reference	XMX	ХМА
Pages	84	85
Other versions	Electromechanical pressure switches with altern ISO, NPT, etc. Please consult our Customer Car	

Power circuits				
Water				Air, water
Detection of a single threshold (fixed differential)	Regulation between 2 thresho	olds (adjustable differential)		
	1 Source of the second			
Fresh water, sea water (0+ 70	0°C)			Air, fresh water, sea water (0+ 70°C)
4.6 bar (66.7 psi)		7 bar (101.5 psi)	10.5 bar (152.3 psi)	6 bar, 12 bar and 25 bar (87 psi, 174 psi and 362.5 psi)
73 x 73 x 102	72 x 77 x 106	72 x 73 x 102		57 x 78 x 97.5
Internal screws				
2 NC snap action				2 NC or 3 NC snap action
IP 20/IP 65				IP 54 or IP 65, depending on model
Screw terminals:  2 cable entries with grommet 2 cable entries with n° 13 cab				Screw terminals:  2 entries incorporating n° 13 cable gland or without cable gland, depending on model
G 1/4 or R 1/4 (female or male)				G 1/4, G 3/8 or 4 x G 1/4 (female), depending on model
FTG∙, FTG∙NE	FSG∙, FSG∙NE	FYG22, FYG22NE	FYG32, FYG32NE	XMP
90 to 92				96 to 103





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#### **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.).

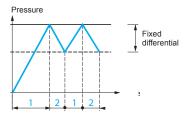
#### Switches for control circuits

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.



Example: contact schematics of XMLA

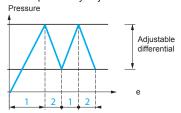
1

— Adjustable value
--- Non adjustable value

PH = High point PB = Low point

#### 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.



Example: contact schematics of XMLB

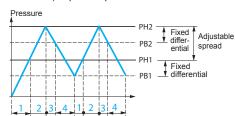
1

- Adjustable value

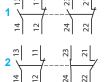
PH = High point PB = Low point

#### **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.



Example: contact schematics of XMLD



— Adjustable value

--- Non adjustable value

PH = High point PB = Low point

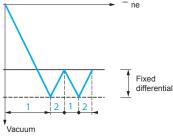


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#### Vacuum switch operating principle

#### 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.

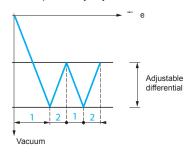


Example: contact schematics of XMLA

- Adjustable value --- Non adjustable value
- PH = High point PB = Low point

#### 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.



Example: contact schematics of XMLB

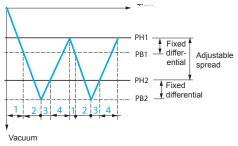
- Adjustable value

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.



Example: contact schematics of XMLD



- Adjustable value --- Non adjustable value

PH = High point PB = Low point

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#### **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).

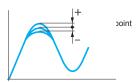
#### Differential

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)



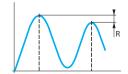
The tolerance between the point at which the switch actuates its contacts and the value indicated on the setting scale. Where very high setting accuracy is required (initial installation of the product), it is recommended to use separate measuring equipment (pressure gauge, etc.).



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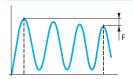
#### Terminology (continued)

#### Repeat accuracy (R)



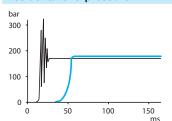
The tolerance between two consecutive switching operations.

#### Drift (F)



The tolerance of the switching point throughout the entire service life of the switch.

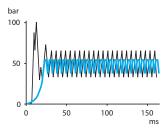
#### **Accidental overpressure**



This is an accidental pressure surge of very short duration (a few milliseconds).

If accidental overpressures occur and their duration is less than 50 milliseconds, the pressure damping device incorporated in the XML switches (sizes 10 bar and greater) will diminish the effect.

Example 1: with destructive pressure level.



Example 2: with destructive pressure level and destructive pressure oscillations.

Without damping device
With damping device

#### Maximum permissible pressure per cycle (Ps)

A pressure switch can withstand this pressure, without detrimental effect, on each cycle throughout its service life.

Its minimum value is at least equal to 1.25 times the switch size.

#### Maximum permissible accidental pressure

The maximum accidental pressure is at least equal to 2.25 times the switch size.

#### **Destruction pressure**

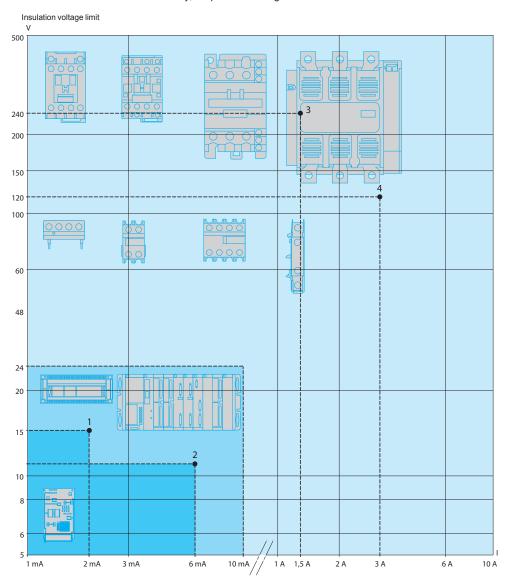
The maximum guaranteed pressure that the switch will withstand before its destruction, i.e. bursting, rupturing, component failure, etc.

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

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

On standard loads Continuous duty, frequent switching.



- 1 Standard PLC input, type 1
- 2 Standard PLC input, type 2
- 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 60947-5-1, utilisation category AC-15, DC-13 B300 120 V 3 A R300 125 V 0.22 A

PLC: Programmable Logic Controller

# Pressure switches XMLA XMLB XMLC XMLD XMX, XMA XMLG XMLK

#### 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.



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#### 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







XMLA010 •••• Differential = 0.5 bar

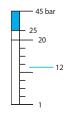
XMLA020 •••• Differential = 1 bar

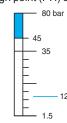
XMLA035•••• Differential = 2 bar

Select an XMLA010 ••• (the lowest size)

#### Main criterion: tolerance to overpressures

Example: for a selected high point (PH) of 12 bar





XMLA020 •••• Permissible accidental overpressure = 45 bar

XMLA035•••• Permissible accidental overpressure = 80 bar Select an XMLA035•••• (the highest size)

#### 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 ••••

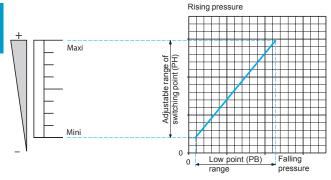
Units of pressure conversion table							
	psi	kg/cm²	bar	atm	mm Hg (Torr)	mm H <sub>2</sub> O	Pa
1 psi =	1	0.07031	0.06895	0.06805	51.71	703.7	6895
1 kg/cm <sup>2</sup> =	14.22	1	0.98066	0.96784	735.55	10 000	98 066
1 bar =	14.50	1.0197	1	0.98695	750.06	10 197	10 <sup>5</sup>
1 atm =	14.70	1.0333	1.0132	1	760.0	10 333	101 325
1 mm Hg = (Torr)	0.01934	1.360 x 10 <sup>-3</sup>	1.333 x 10 <sup>-3</sup>	1.316 x 10 <sup>-3</sup>	1	13.59	133.3
1 mm H <sub>2</sub> O =	1.421 x 10 <sup>-3</sup>	10-4	~10⁴	~10⁴	0.07361	1	∼ 9.80
1 Pa =	1.45 x 10 <sup>-4</sup>	1.0197 x 10 <sup>-5</sup>	10 <sup>-5</sup>	9.8695 x 10 <sup>-6</sup>	7.5 x 10 <sup>-3</sup>	0.10197	1
Example: 1 bar = 14.50 psi = 10 <sup>5</sup> Pa							

## Operating curves

# **Electromechanical pressure** and vacuum switches

Fixed differential switches, for detection of a single threshold



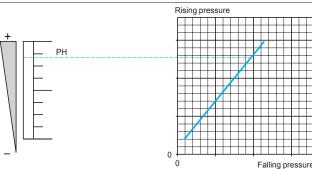


Defined by the difference between the minimum and maximum high point (PH) setting values.

For a high set point (PH), the lower point (PB) is fixed and cannot be adjusted.

For a low set point (PB1 or PB2), the higher point (PH1 or PH2) is fixed and cannot be adjusted.

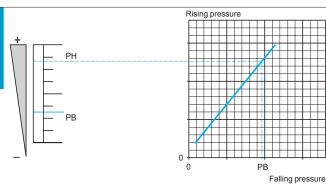
#### Switching point on rising pressure (PH)



The upper pressure setting at which the pressure or vacuum switch will actuate the contacts on rising pressure.

Adjustable throughout the range on rising pressure.

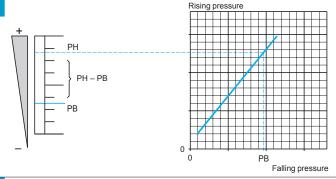
#### Switching point on falling pressure (PB)



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

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

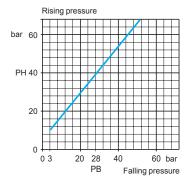
#### **Differential**



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

This point is not adjustable and therefore, the value of the differential is fixed. It is the natural differential of the switch (contact differential, friction, etc.).

#### **Example**



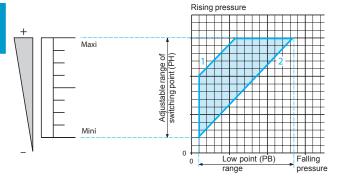
- Consider a switching point on rising pressure (PH) of 40 bar (set value at which the contact will change state on rising pressure).
- It can be seen that the switching point on falling pressure (PB) is 28 bar (fixed value at which the contact will return to its original state).

  Conclusion:

☐ the differential will be 40 - 28 = 12 bar.

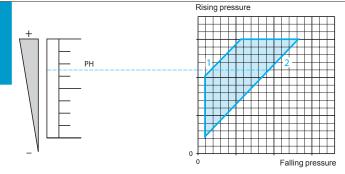
Adjustable differential switches, for regulation between 2 thresholds

Adjustment range of the high point



Defined by the difference between the minimum and maximum high point (PH) setting values.

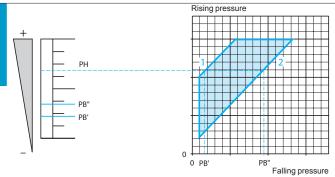
Switching point on rising pressure (PH)



The upper pressure setting at which the pressure or vacuum switch will actuate the contacts on rising pressure.

Adjustable throughout the range on rising pressure.

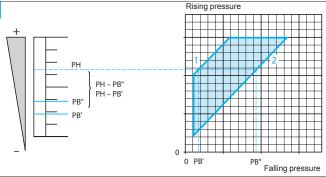
Switching point on falling pressure (PB)



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

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

**Differential** 



Maximum differential

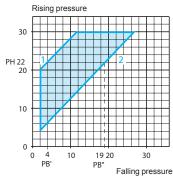
2 Minimum differential

Low point < High point PH - PB' = natural differential PH - PB" = minimum differential

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

**Note:** the low point can be set at any value between PB' and PB".

**Example** 



- Consider a switching point on rising pressure (PH) of 22 bar (set value at which the contact will change state on rising pressure).
- It can be seen that the switching point on falling pressure (PB) can be between 4 and 19 bar inclusive (set value at which the contact will return to its original state). Conclusion:

 $\Box$  the maximum differential will be: 22 - 4 = 18 bar,

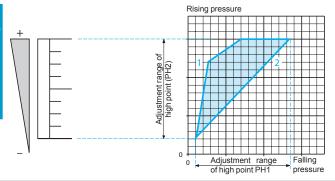
 $\Box$  the minimum differential will be: 22 - 19 = 3 bar.

# Operating curves (switching points on rising pressure)

# **Electromechanical pressure** and vacuum switches

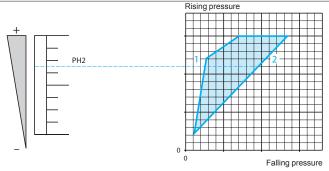
Dual stage, fixed differential switches, for detection at each threshold

Adjustment ranges of the switching points PH1 and PH2 on rising pressure



Defined by the difference between the minimum and maximum high point setting values of each stage (PH1 and PH2).

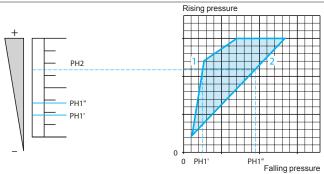
Switching point PH2 on rising pressure



The upper pressure setting at which the pressure or vacuum switch will actuate the contacts on rising pressure.

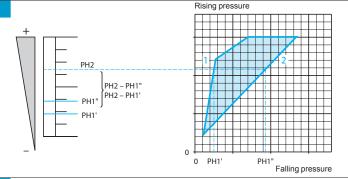
Adjustable throughout the range on rising pressure.

Switching point PH1 on rising pressure



The upper pressure setting at which the pressure or vacuum switch will actuate contact 1 on rising pressure.

Spread



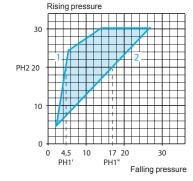
PH1 < PH2

PH2 - PH1' = maximum spread PH2 - PH1" = minimum spread

The difference between switching points PH2 and PH1 on rising pressure.

**Note:** switching point PH1 can be set at any value between PH1' and PH1".

Example:
Determining
switching
points on
rising
pressure for
the 2 stages



- Consider a 2nd stage switching point on rising pressure (PH2) of 20 bar (set value at which contact 2 will change state on rising pressure).
- It can be seen that the 1st stage switching point (PH1) can be set between 4.5 and 17 bar on rising pressure.

Conclusion:

 $\Box$  the maximum spread will be: 20 - 4.5 = 15.5 bar,

 $\Box$  the minimum spread will be: 20 - 17 = 3 bar.

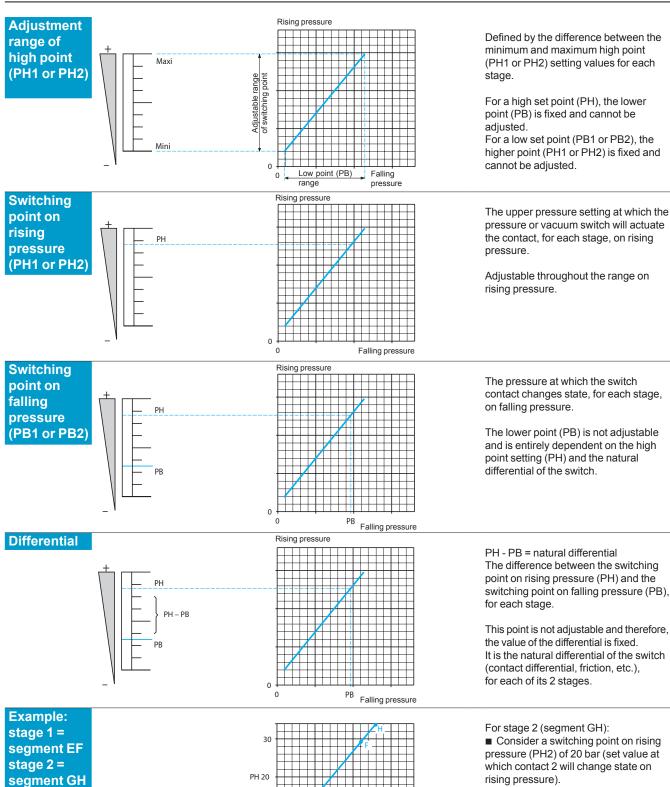
2 Minimum spread

Maximum spread

## Operating curves (switching points on falling pressure)

## **Electromechanical pressure** and vacuum switches

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



Maximum spread Minimum spread

10 Falling pressure

- pressure (PH2) of 20 bar (set value at rising pressure).
- It can be seen that the switching point on falling pressure (PB2) is 14 bar (fixed value at which contact 2 will return to its original state). Conclusion:

for stage 2, the differential will be: 20 - 14 = 6 bar.

Repeat the same procedure for stage 1 (segment EF).

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.

#### 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.).

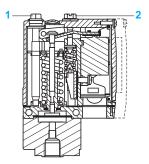
## OsiSense XMLB and XMLC pressure and vacuum switches with adjustable differential

#### 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

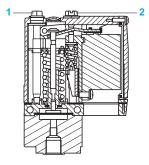
#### Switching point on rising pressure of stage 1 and stage 2

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.).





OsiSense XM

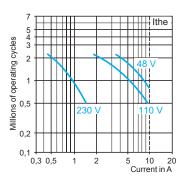
OsiSense XML for control circuits

Environment characteristics		CC   FO   FN 000   F
Conformity to standards		(€, 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 <b>XMLeL35eeee</b> , <b>XMLe001eeeee</b> and <b>XMLBM03eeeee</b> : 2 gn
Shock resistance		50 gn conforming to IEC 60068-2-27 except XML•L35•••••, XML•001••••• and XMLBM03•••••: 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, <b>XMLA010A2S12</b> becomes <b>XMLA010A2S11</b> ) 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	$\mathbf{m}\Omega$	< 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
Flactuical demakility	VMI A on	1 0 1 7

Electrical durability
Conforming to IEC/EN 60947-5-1 Appendix C
Utilisation categories AC-15 and DC-13

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

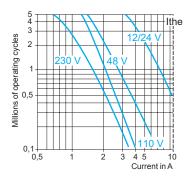
XMLA and XMLB AC supply  $\sim$  50/60 Hz m Inductive circuit, Ithe = 10 A



# DC supply ... Power broken in W

for 1 million operating cycles					
Voltage	V	24	48	120	
m	۱۸/	31	20	26	

 $\boldsymbol{XMLC}$  and  $\boldsymbol{XMLD}$ AC supply  $\sim$  50/60 Hz m Inductive circuit, Ithe = 10 A



DC supply ...
Power broken in W for 5 million operating

cycles				
Voltage	e V	24	48	120
m	W	10	7	4



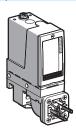
#### OsiSense XML

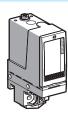
Size - 1 bar (- 14.5 psi)

Fixed differential, for detection of a single threshold Switches with 1 CO single-pole contact

#### OsiSense XMLA vacuum switches

#### With setting scale

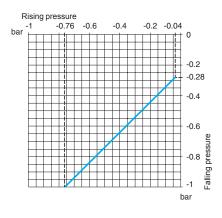


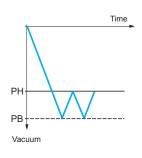


Adjustable range of switching point (PB) (Falling pressure)		- 0.28 1 bar (- 4.06 14.5 psi)		
Electrical connection		DIN connector	Terminals	
Fluid connection		G 1/4 (female)	G 1/4 (female)	1/4"-18 NPTF (female)
References (1)				
Fluids controlled (2)	Hydraulic oils, fresh water, air, up to + 70 °C	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 charac	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 <sup>6</sup> 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
Vacuum switch type		Diaphragm		

- becomes XMLAM01V2S11).
- (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



- Adjustable value
- --- Non adjustable value

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

Accessories: page 68

Other versions

Dimensions: pages 69 to 71



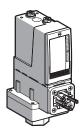
OsiSense XM, OsiSense XML

Size - 1 bar (- 14.5 psi)

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

#### OsiSense XMLB vacuum switches

#### With setting scale



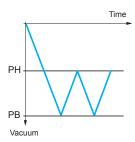


Adjustable range of switching point (PB) (Falling pressure)		- 0.14 1 bar (- 2.03 14.5 psi)			
Electrical connection		DIN connector	Terminals		
Fluid connection		G 1/4 (female)	G 1/4 (female)	1/4"-18 NPTF (female)	
References (1)					
Fluids controlled (2)	Hydraulic oils, fresh water, air, up to + 70 °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 <sup>6</sup> 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 cable gland, replace S12 with S11 (for example, XMLBM02V2S12 becomes XMLBM02V2S11).
- (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**

#### 



#### Connection

#### **Terminal model**

#### Connector model

Vacuum switch connector pin view



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

- 1 Maximum differential
- 2 Minimum differential

- Adjustable value

Other versions

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

### 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



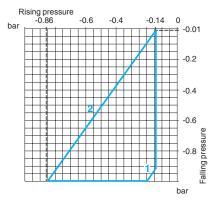
Adjustable range of switching point (PB) (Falling pressure)	- 0.14 1 bar (- 2.03 14.5 psi)
Electrical connection	Terminals
Fluid connection	G 1/4 (female)

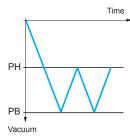
References (1)		
Fluids controlled (2)	Hydraulic oils, fresh water, air, up to + 70 °C	XMLCM02V2S12
	Hydraulic oils, fresh water, air, corrosive fluids, up to + 160 °C Sea water, up to + 30 °C	XMLCM02T2S12

Weight (kg)		1.015		
Complementary characteristics 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 <sup>6</sup> 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		

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

#### **Operating curves**







Connection

Maximum differential

Other versions

2 Minimum differential

- Adjustable value

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



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

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

# References, characteristics

## 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



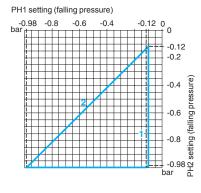
Adjustable range of each	2nd stage switching point (PB2)	- 0.12 1 bar (- 1.74 14.5 psi)		
switching point (Falling pressure)	1st stage switching point (PB1)	- 0.10 0.98 bar (- 1.45 14.21 psi)		
Spread between 2 stages (P	PB2 - PB1)	0.020.88 bar (0.2912.76 psi)		
Electrical connection		Terminals		
Fluid 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 ch	naracteristics 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 <sup>6</sup> 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		
Vacuum switch type		Diaphragm		

- (1) For 1 entry tapped for no. 13 cable gland, replace S12 with S11 (for example, XMLDM02V1S12 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).

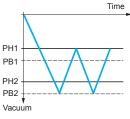
#### **Operating curves**

#### High setting tripping points of contacts 1 and 2

#### Natural differential of contacts 1 and 2



Rising pressure
-1 -0.88 -0.6 -0.4 -0.2 -0.02
bar -0.6 -0.4 -0.2 -0.02
-0.4 -0.6 -0.4 -0.6 -0.4
-0.8 bar -0.8 bar



- Adjustable value
- --- Non adjustable value

#### Connection

#### Terminal model

Contact 1 Contact 2 (stage 1) (stage 2)



- 1 Maximum differential
- 2 Minimum differential

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

Other versions

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

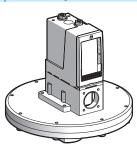
#### OsiSense XML

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



ing point (PB)	- 20 200 mbar (- 0.29 2.9 psi)			
	Terminals	Terminals		
	G 1/4 (female)	1/4"-18 NPTF (female)		
Hydraulic oils, air, up to + 160 °C	XMLBM03R2S12	XMLBM03R2S13		
	3.310	3.310		
haracteristics not sho	wn under general characteristics	(page 17)		
Min. at low setting (3)	18 mbar (0.26 psi)			
Min. at high setting (3)	18 mbar (0.26 psi)	18 mbar (0.26 psi)		
Max. at high setting	180 mbar (2.6 psi)	180 mbar (2.6 psi)		
Per cycle	1 bar (14.5 psi)	1 bar (14.5 psi)		
Accidental	2 bar (29 psi)	2 bar (29 psi)		
	3.5 bar (50.75 psi)	3.5 bar (50.75 psi)		
	3 x 10 <sup>6</sup> operating cycles			
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		
	Diaphragm	Diaphragm		
	Hydraulic oils, air, up to + 160 °C  haracteristics not sho  Min. at low setting (3)  Min. at high setting (3)  Max. at high setting  Per cycle  Accidental	Hydraulic oils, air, up to + 160 °C  Hydraulic oils, air, up to + 160 °C  3.310  haracteristics not shown under general characteristics  Min. at low setting (3) Min. at high setting (3) Max. at high setting Per cycle Accidental  180 mbar (0.26 psi) 180 mbar (0.26 psi) 190 mbar (2.6 psi) 2 bar (29 psi) 3.5 bar (50.75 psi) 3 x 10 <sup>6</sup> operating cycles 1 entry tapped M20 x 1.5 mm for ISO cable gland, clamping capacity 7 to 13 mm		

- (1) For 1 entry tapped for no. 13 cable gland, replace  $\bf S12$  with  $\bf S11$  (for example,  $\bf XMLBM03R2S12$ 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**

#### Rising pressure -182 -160 -80 -40 -20 -2 -120 0 -20 -40 -80 -120 -160 lb-Falling F

Time PH РΒ Vacuum



Connection

1 Maximum differential

2 Minimum differential

- Adjustable value

Other versions

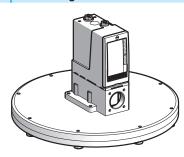
For vacuum switches with alternative tapped cable entries, such as NPT, etc. please consult our Customer Care Centre.

#### 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



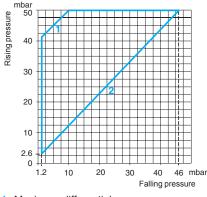
ing point (PH)	2.650 mbar (0.0380,72 psi)	
	Terminals	
	G 1/4 (female)	
Hydraulic oils, air, up to + 160 °C	XMLBL05R2S12	
Fresh water, corrosive fluids, up to + 160 °C	XMLBL05S2S12	
	2.420	
haracteristics not showr	n under general characteristics (page 17)	
Min. at low setting (3)	1.4 mbar (0.02 psi)	
Min. at high setting (4)	4 mbar (0.06 psi)	
Max. at high setting	40 mbar (0.58 psi)	
Per cycle	62.5 mbar (0.90 psi)	
Accidental	112.5 mbar (1.63 psi)	
	225 mbar (3.26 psi)	
	6 x 10 <sup>6</sup> operating cycles	
odels	1 entry tapped M20 x 1.5 mm for ISO cable gland, clamping capacity 7 to 13 mm	
	Diaphragm	
	Hydraulic oils, air, up to + 160 °C  Fresh water, corrosive fluids, up to + 160 °C  haracteristics not showr  Min. at low setting (3) Min. at high setting (4) Max. at high setting  Per cycle  Accidental	

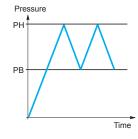
- (1) For 1 entry tapped for no. 13 cable gland, replace S12 with S11 (for example, XMLBL05R2S12 becomes XMLBL05R2S11).
- (2) For component materials of units in contact with the fluid, see pages 72 and 73.
- (3) Deviation of the differential at low setting point for switches of the same size:

   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**

# **Connection**Terminal model







- 1 Maximum differential
- 2 Minimum differential

- Adjustable value

Other versions

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.

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

#### With setting scale





Adjustable range of switching point (PH) (Rising pressure)		- 0.55 bar (- 7.2572.5 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, 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 11/4" 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)			
pressure	Accidental	11.25 bar (163.12 psi)			
Destruction pressure		23 bar (333.5 psi)			
Mechanical life		3 x 10 <sup>6</sup> 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	

Diaphragm

- (1) For 1 entry tapped for no. 13 cable gland, replace S12 with S11 (for example, XMLBM05A2S12 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**

Vacu-pressure switch type

## 5 3 2 0.5 0 -0.5 4 4.5 5 bar Falling pressure

PH1 PB1 PH2 PB2 PH3 PB3 Vacuum **Terminal model** 

#### Connector model

Connection

Vacu-pressure switch pin view



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

- Maximum differential
- 2 Minimum differential

- Adjustable value

Other versions

For vacu-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

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

#### OsiSense XMLC vacu-pressure switches

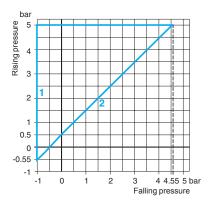
#### With setting scale

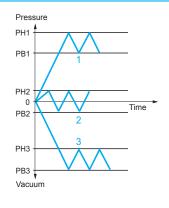


Adjustable range of switching point (PH) (Rising pressure)		- 0.555 bar (-7.9772.5 psi)		
Electrical connection		Terminals		
Fluid connection		G 1/4 (female)		
References (1)				
Fluids controlled (2)	Hydraulic oils, fresh water, air, up to + 160 °C	XMLCM05B2S12		
	Corrosive fluids, up to + 160 °C	XMLCM05C2S12		
Weight (kg)		0.685		
<b>Complementary c</b>	haracteristics not showr	n 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 <sup>6</sup> 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: ± 0.1 bar (± 1.45 psi).

#### **Operating curves**







Connection

#### Connector model Vacu-pressure switch pin view



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

- 1 Maximum differential
- Minimum differential

- Adjustable value

Other versions

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

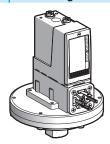
#### OsiSense XML

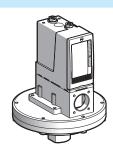
Size 350 mbar (5.07 psi)

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

#### OsiSense XMLB pressure switches

#### With setting scale

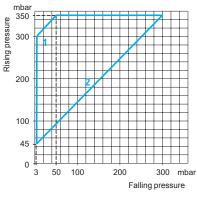




Adjustable range of switching point (PH) (Rising pressure)		45350 mbar (0.655.07 psi)			
Electrical connection		DIN connector	Terminals		
Fluid connection		G 1/4 (female)	G 1/4 (female)	1/4"-18 NPTF (female)	
References (1)					
Fluids controlled (2)	Hydraulic oils, air, up to + 160 °C	XMLBL35R2C11	XMLBL35R2S12	XMLBL35R2S13	
	Fresh water, corrosive fluids, up to + 160 °C	XMLBL35S2C11	XMLBL35S2S12	-	
	Viscous products, up to + 160 °C (G 11/4" fluid connection)	XMLBL35P2C11	XMLBL35P2S12	-	
Weight (kg)		2.590	2.575	2.575	
Complementary c	haracteristics not shown	under general charac	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			

- (1) For 1 entry tapped for no. 13 cable gland, replace S12 with S11 (for example, XMLBL35R2S12 becomes XMLBL35R2S11).
- (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:
   8 mbar, + 3 mbar (- 0.12 psi, + 0.04 psi).
- (4) Deviation of the differential at high setting point for switches of the same size: ± 8 mbar (± 0.11 psi).

#### **Operating curves**



PH PB Time

-- Adjustable value

Connector model

Connection
Terminal 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

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

09 10 7 1



## References, characteristics (continued)

# Electromechanical pressure switches

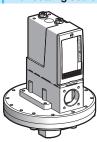
OsiSense XML

Size 350 mbar (5.07 psi)

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

#### OsiSense XMLB pressure switches

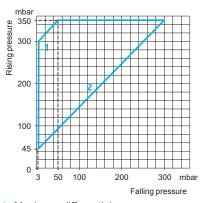
30 bar (435 psi) overpressure With setting scale



Adjustable range of switching point (PH) (Rising pressure)		42330 mbar (0.614.78 psi)
Electrical connection		Terminals
Fluid connection		G 1/4 (female)
References (1)		
Fluids controlled (2)	Hydraulic oils, air, up to + 160 °C	XMLBS35R2S12
Weight (kg)		3.500
Complementary c	haracteristics not sho	wn under general characteristics (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	Per cycle	30 bar (435 psi)
pressure	Accidental	37.5 bar (543.75 psi)
Destruction pressure		67.5 bar (978.75 psi)
Mechanical life		2 million operating cycles
Cable entry for terminal me	odels	1 entry tapped M20 x 1.5 mm for ISO cable gland, clamping capacity 7 to 13 mm
Connector type for connector models		EN 175301-803-A (ex-DIN 43650A), 4-pin male connector. For suitable female connector, see page 68
Pressure switch type		Diaphragm

- (1) For 1 entry tapped for no. 13 cable gland, replace S12 with S11 (for example, XMLBS35R1S12 becomes XMLBS35R1S11).
- (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:
- 8 mbar, + 3 mbar (- 0.12 psi, + 0.04 psi).
  (4) Deviation of the differential at high setting point for switches of the same size: ± 8 mbar (± 0.11 psi).

#### **Operating curves**



Pressure Time

#### Connection

Terminal model

#### Connector model

Pressure switch connector pin view



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

- 1 Maximum differential
- 2 Minimum differential

- Adjustable value

Other versions

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

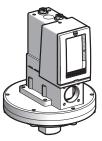
OsiSense XML

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

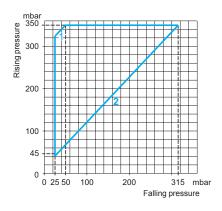


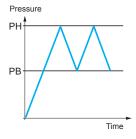


Adjustable range of switching point (PH) (Rising pressure)		45350 mbar (0.65	45350 mbar (0.655.07 psi)		42330 mbar (0.614.78 psi)	
Electrical connection		Terminals	Terminals		Terminals	
Fluid connection		G 1/4 (female)	1/4"-18 NPTF (female)	G 1/4 (female)	1/4"-18 NPTF (female)	
References (1)						
Fluids controlled (2)	Hydraulic oils, 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 c	haracteristics not show	under general d	haracteristics (p	page 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 cycles		2 million 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	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 S11 (for example, XMLCL35R2S12 becomes XMLCL35R2S11).
- (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**







Connection

1 Maximum differential 2 Minimum differential

- Adjustable value

Other versions

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

page 68

Dimensions: pages 69 to 71



# 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 (P	H2 - 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 models		1 entry tapped M20 x 1.5 mm for ISO cable gland, clamping capacity 7 to 13 mm			

Diaphragm

- (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: ± 10 mbar (± 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**

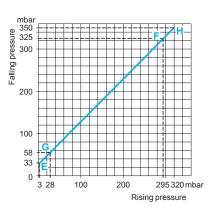
Pressure switch type

#### High setting tripping points of contacts 1 and 2

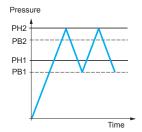
# (e) 343 343 343 300 300 300 300 325mbar PH1 setting (falling pressure)

- 1 Maximum differential
- 2 Minimum differential

#### Natural differential of contacts 1 and 2



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



- Adjustable value
- --- Non adjustable value

#### Connection

#### Terminal model

 $\begin{array}{c|cccc} \text{Contact 1 Contact 2} \\ \text{(stage 1) (stage 2)} \\ \hline \\ \text{Contact 1 Contact 2} \\ \hline \\ \text{Contact 1 Contact 2} \\ \hline \\ \text{Contact 2 Contact 2} \\ \hline \\ \text{Contact 1 Contact 2} \\ \hline \\ \text{Contact 2 Contact 2} \\ \hline \\ \text{Contact 2} \\$ 

Other versions

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

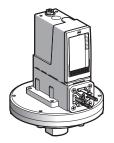
OsiSense XML

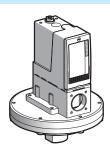
Size 1 bar (14.5 psi)

Fixed differential, for detection of a single threshold Switches with 1 CO single-pole contact

#### OsiSense XMLA pressure switches

#### With setting scale

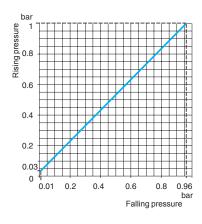


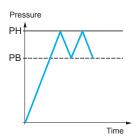


ng point (PH)	0.031 bar (0.43514.5 psi)			
Electrical connection		Terminals		
Fluid connection		G 1/4 (female)	1/4"-18 NPTF (female)	
Hydraulic oils, air, up to + 160 °C	XMLA001R2C11	XMLA001R2S12	_	
Fresh water, corrosive fluids, up to + 160 °C	XMLA001S2C11	XMLA001S2S12	XMLA001S2S13	
Weight (kg)		2.555	2.555	
aracteristics not shown	under general charac	cteristics (page 17)		
At low setting (3)	0.02 bar (0.29 psi)			
At high setting (3)	0.04 bar (0.58 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 <sup>6</sup> operating cycles			
Connection		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		
	Hydraulic oils, air, up to + 160 °C Fresh water, corrosive fluids, up to + 160 °C  aracteristics not shown At low setting (3) At high setting (3) Per cycle	DIN connector   G 1/4 (female)	DIN connector   Terminals	

- (1) For 1 entry tapped for no. 13 cable gland, replace **S12** with **S11** (for example, **XMLA001R2S12** becomes XMLA001R2S11).
- (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: ± 0.01 bar (± 0.14 psi)

#### **Operating curves**









#### Connector model

Pressure switch connector pin view



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

- 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



## References, characteristics (continued)

## Electromechanical pressure switches

#### OsiSense XML

Size 1 bar (14.5 psi)

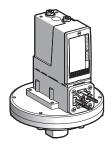
Adjustable differential, for regulation between 2 thresholds Switches with 1 CO single-pole contact

#### OsiSense XMLB pressure switches

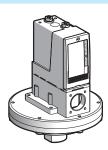
Adjustable range of switching point (PH)

(Rising pressure)

#### With setting scale



0.05...1 bar (0.72...14.5 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	XMLB001R2C11	XMLB001R2S12	XMLB001R2S13		
	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 c	haracteristics not shown	under general charac	cteristics (page 17)			
Possible differential	Min. at low setting (3)	0.04 bar (0.58 psi)				
(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 <sup>6</sup> operating cycles				
Connection		EN 175301-803-A (ex-DIN 43650A), 4-pin male connector. For suitable female connector,	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		

see page 68

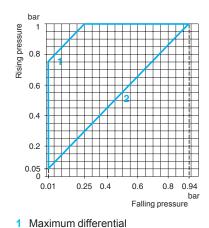
Diaphragm

- (1) For 1 entry tapped for no. 13 cable gland, replace S12 with S11 (for example, XMLB001R2S12 becomes XMLB001R2S11).
- (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:
- ± 10 mbar (± 0.14 psi).

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

#### **Operating curves**

Pressure switch type



Pressure PH: Time

#### Connection **Terminal model**

#### **Connector model**

Pressure switch connector pin view



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

 $3 \rightarrow 14$ 

2 Minimum differential

- Adjustable value

Other versions

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

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

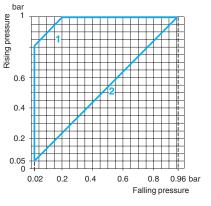
#### With setting scale



Adjustable range of switching point (PH) (Rising pressure)		0.051 bar (0.72514.5 psi)		
Electrical connection		Terminals		
Fluid connection		G 1/4 (female)	1/4"-18 NPTF (female)	
References (1)				
Fluids controlled (2)	Hydraulic oils, air, up to + 160 °C	XMLC001R2S12	XMLC001R2S13	
	Fresh water, corrosive fluids, up to + 160 °C	XMLC001S2S12	XMLC001S2S13	
Weight (kg)		2.555	2.555	
Complementary c	haracteristics not show	under general characteristics (page 17)		
Possible differential	Min. at low setting (3)	0.03 bar (0.43 psi)		
(subtract from PH	Min. at high setting (4)	0.04 bar (0.58 psi)		
to give PB)	Max. at high setting	0.8 bar (11.6 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 <sup>6</sup> 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 cal 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 **S11** (for example, **XMLC001R2S12** becomes XMLC001R2S11).
- (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**



PH-РΒ Time



1 Maximum differential

2 Minimum differential

- Adjustable value

Other versions

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

#### OsiSense XML

Size 2.5 bar (36.25 psi)

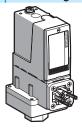
Fixed differential, for detection of a single threshold Switches with 1 CO single-pole contact

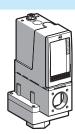
#### OsiSense XMLA pressure switches

Adjustable range of switching point (PH)

(Rising pressure)

#### With setting scale



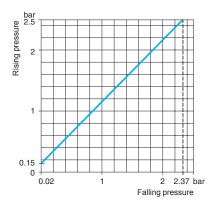


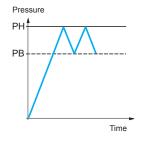
Electrical connection		DIN connector	Terminals			
Fluid connection		G 1/4 (female)	G 1/4 (female)	1/4"-18 NPTF (female)		
References (1)						
Fluids controlled (2)	Hydraulic oils, fresh water, air, up to + 70 °C	XMLA002A2C11	XMLA002A2S12	XMLA002A2S13		
	Hydraulic oils, fresh water, air, up to + 160 °C	XMLA002B2C11	XMLA002B2S12	-		
	Corrosive fluids, up to + 160 °C	XMLA002C2C11	XMLA002C2S12	-		
Weight (kg)		1.010	0.995	0.995		
Complementary cha	aracteristics 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 <sup>6</sup> 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				

0.15...2.5 bar (2.17...36.25 psi)

- (1) For 1 entry tapped for no. 13 cable gland, replace S12 with S11 (for example, XMLA002A2S12 becomes XMLA002A2S11).
- (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

#### 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.

#### 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 pressure switches	With setting scale	30 bar (435 psi) overpressure With setting scale

Adjustable range of switching point (PH) (Rising pressure)		0.32.5 bar (4.3536.25 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)
References (1)					
Fluids controlled (2)	Hydraulic oils, fresh water, air, up to + 70 °C	XMLB002A2C11	XMLB002A2S12	XMLB002A2S13	-
	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 c	haracteristics not shown	under general o	haracteristics (	page 17)	
Possible differential	Min. at low setting (3)	0.16 bar (2.32 psi)			0.1 bar (1.45 psi)
(subtract from PH to give PB)	Min. at high setting (3)	0.21 bar (3.04 psi)			0.22 bar (3.19 psi)
to 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 <sup>6</sup> operating cycles			2 x 10 <sup>6</sup> 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) For 1 entry tapped for no. 13 cable gland, replace **S12** with **S11** (for example, **XMLB002A2S12** becomes XMLB002A2S11).
  (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, +0.05 bar (-0.43 psi, +0.72 psi).

# **Operating curves** Rising pressure 5.2 2 2.29 bar Falling pressure 0.14 0.75

Pressure РΗ PB Time **Terminal model** 

Connection

#### Connector model

Pressure switch connector pin view



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

- 1 Maximum differential
- Minimum differential

--- Adjustable value

Other versions

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



#### 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

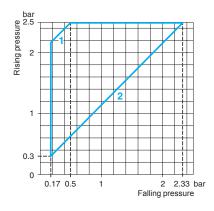




Adjustable range of switch (Rising pressure)	ing point (PH)	0.32.5 bar (4.3536.25 psi)			
Electrical connection		Terminals			
Fluid connection		G 1/4 (female)	1/4"-18 NPTF (female)	G 1/4 (female)	1/4"-18 NPTF (female)
References (1)					
Fluids controlled (2)	Hydraulic oils, fresh water, air, up to + 160 °C	XMLC002B2S12	XMLC002B2S13	XMLCS02B2S12	XMLCS02B2S13
Weight (kg)		0.995	0.995	3.500	3.500
Complementary c	haracteristics not shown	under general o	haracteristics (	page 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 <sup>6</sup> operating cycles		2 x 10 <sup>6</sup> 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	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 S11 (for example, XMLC002B2S12 becomes XMLC002B2S11).
- (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: ± 0.02 bar (± 0.29 psi)
- (4) Deviation of the differential at high setting point for switches of the same size:  $\pm 0.03 \, bar (\pm 0.43 \, psi)$

#### **Operating curves**



Pressure PH: РΒ



Connection

- 1 Maximum differential
- 2 Minimum differential

- Adjustable value

Other versions

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

#### OsiSense XML

Size 4 bar (58 psi)

Fixed differential, for detection of a single threshold Switches with 1 CO single-pole contact

#### OsiSense XMLA pressure switches

Adjustable range of switching point (PH)

(Rising pressure)

#### With setting scale

0.4...4 bar (5.8...58 psi)

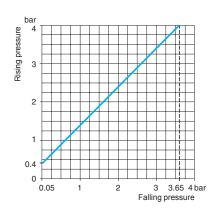


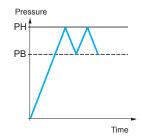


(: ::o:::g p::ooo::o)						
Electrical connection		DIN connector	Terminals			
Fluid connection		G 1/4 (female)	G 1/4 (female)	1/4"-18 NPTF (female)		
References (1)						
Fluids controlled (2)	Hydraulic oils, fresh water, air, up to + 70 °C	XMLA004A2C11	XMLA004A2S12	XMLA004A2S13		
	Hydraulic oils, fresh 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 11/4" 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	At low setting (3)	0.35 bar (5.07 psi)				
to give PB)	At high setting (3)	0.35 bar (5.07 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 <sup>6</sup> 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		Diaphragm				
		(4) = -41 - (15 40		4 (5		

- (1) For 1 entry tapped for no. 13 cable gland, replace \$12 with \$11 (for example, XMLA004A2\$12 becomes XMLA004A2S11).
  (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**









#### Connector model

Pressure switch connector pin view



 $1 \rightarrow 11$  and 13  $2 \,{\to}\, 12$ 

 $3 \rightarrow 14$ 

- 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.

page 68

Dimensions: pages 69 to 71

## References, characteristics

### Electromechanical pressure switches

#### OsiSense XML

Size 4 bar (58 psi)

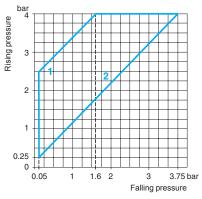
Adjustable differential, for regulation between 2 thresholds Switches with 1 CO single-pole contact

OsiSense XMLB pressure switches	With setting scale	30 bar (435 psi) overpressure With setting scale

Adjustable range of switchi (Rising pressure)	ng point (PH)	0.254 bar (3.6258 psi)			
Electrical connection		DIN connector	ector Terminals		
Fluid connection		G 1/4 (female)	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	XMLB004A2C11	XMLB004A2S12	XMLB004A2S13	-
	Hydraulic oils, fresh water, air, up to + 160 °C	XMLB004B2C11	XMLB004B2S12	-	XMLBS04B2S12
	Corrosive fluids, up to + 160 °C	XMLB004C2C11	XMLB004C2S12	-	-
Weight (kg)		1.030	1.015	1.015	3.500
Complementary ch	naracteristics not shown	under general o	haracteristics (	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)
to give PB)	Max. at high setting	2.4 bar (34.8 psi)			2.46 bar (35.67 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 <sup>6</sup> operating cycles 2 x 1		2 x 10 <sup>6</sup> 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) For 1 entry tapped for no. 13 cable gland, replace S12 with S11 (for example, XMLB004A2S12 becomes XMLB004A2S11).
- (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, + 0.05 bar (- 0.43 psi, + 0.72 psi).

#### **Operating curves**



Pressure PH PB

### Connection Terminal model

12 | 13 | 13 |

#### **Connector model**

Pressure switch connector pin view



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

- 1 Maximum differential
- 2 Minimum differential

- Adjustable value

Other versions



#### OsiSense XML

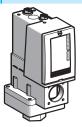
Size 4 bar (58 psi)

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

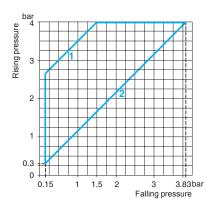


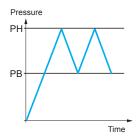


Adjustable range of switch (Rising pressure)				
Electrical connection		Terminals		
Fluid connection		G 1/4 (female)	1/4"-18 NPTF (female)	G 1/4 (female)
References (1)				
Fluids controlled (2)	Hydraulic oils, fresh water, air, up to + 160 °C	XMLC004B2S12	XMLC004B2S13	XMLCS04B2S12
	Corrosive fluids, up to + 160 °C	XMLC004C2S12	XMLC004C2S13	-
Weight (kg)		0.685	0.685	3.500
<b>Complementary c</b>	haracteristics not shown	under general chara	cteristics (page 17)	
Possible differential	Min. at low setting (3)	0.15 bar (2.18 psi)		0.1 bar (1.45 psi)
(subtract from PH	Min. at high setting (3)	0.17 bar (2.47 psi)		0.25 bar (3.62 psi)
to give PB)	Max. at high setting	2.5 bar (36.25 psi)		2.20 bar (31.9 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		8 x 10 <sup>6</sup> operating cycles		2 x 10 <sup>6</sup> 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	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, XMLC004B2S12 becomes XMLC004B2S11).
- (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**







Connection

1 Maximum differential 2 Minimum differential

- 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



Adjustable range of each

### Electromechanical pressure switches

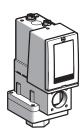
#### OsiSense XML

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



2nd stage switching point (PH2) 0.40...4 bar (5.8...58 psi)

Rising point 1st stage switching point (PH1)		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 c	haracteristics 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)

18 bar (261 psi)

8 x 10<sup>6</sup> operating cycles

1 entry tapped M20 x 1.5 mm for ISO cable gland, clamping capacity 7 to 13 mm

#### **Operating curves**

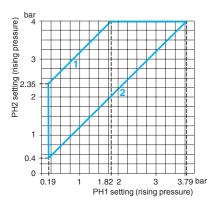
**Destruction pressure** 

Pressure switch type

Cable entry for terminal models

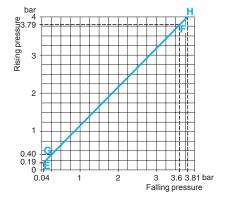
Mechanical life

#### High setting tripping points of contacts 1 and 2

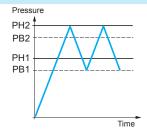


- Maximum differential
- 2 Minimum differential

#### Natural differential of contacts 1 and 2



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



— Adjustable value

### --- Non adjustable value **Connection**

#### Terminal model

Contact 2 Contact 1 (stage 2) (stage 1)

Other versions



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

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

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

#### OsiSense XML

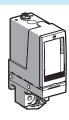
Size 10 bar (145 psi)

Fixed differential, for detection of a single threshold Switches with 1 CO single-pole contact

#### OsiSense XMLA pressure switches

#### With setting scale

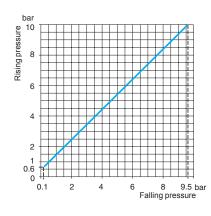




Adjustable range of switching point (PH) (Rising pressure)  0.610 bar (8.7145 psi)				
Electrical connection		DIN connector	Terminals	Terminals
Fluid connection		G 1/4 (female)	G 1/4 (female)	1/4"-18 NPTF (female)
References (1)				
Fluids controlled (2)	Hydraulic oils, fresh water, air, up to + 70 °C	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 11/4" fluid connection)	XMLA010P2C11	XMLA010P2S12	-
Weight (kg)		0.715	0.685	0.685
Complementary c	haracteristics not shown	under general charac	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 <sup>6</sup> operating cycles		
43650A), 4-pin male connector. for ISO cable gland, clamping for ca		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 **S11** (for example, **XMLA010A2S12** becomes XMLA010A2S11).
- (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  $bar\,(\pm\,0.72\,psi)$

#### **Operating curves**



Pressure PB Time

#### Connection Terminal model

#### Connector model

Pressure switch connector pin view



 $1 \rightarrow 11$  and 13  $2 \,{\to}\, 12$ 

 $3 \rightarrow 14$ 

- 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:

Dimensions: pages 69 to 71



### References, characteristics

### 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 pressure switches	With setting scale	30 bar (435 psi) overpressure With setting scale

Adjustable range of switching point (PH) (Rising pressure)		0.710 bar (10.15145 psi)			
Electrical connection		DIN connector	Terminals	Terminals	Terminals
Fluid connection		G 1/4 (female)	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	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 11/4" fluid connection)	XMLB010P2C11	XMLB010P2S12	-	-
Weight (kg)		0.735	0.705	0.705	3.500
Complementary c	haracteristics not shown	under general o	characteristics (	page 17)	
Possible differential	Min. at low setting (3)	0.57 bar (8.26 psi)			0.45 bar (6.52 psi)
(subtract from PH	Min. at high setting (4)	0.85 bar (12.32 psi)			0.85 bar (12.32 psi)
to give PB)	Max. at high setting	7.5 bar (108.75 psi)			6.25 bar (90.62 psi)
Maximum permissible	Per cycle	12.5 bar (181.25 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				2 x 10 <sup>6</sup> 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) For 1 entry tapped for no. 13 cable gland, replace S12 with S11 (for example, XMLB010A2S12 becomes XMLB010A2S11.

Connection

Terminal model

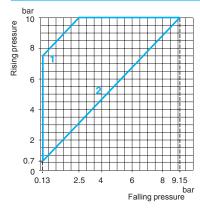
Connector model

- (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:
- ± 0.05 bar (± 0.72 psi).

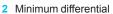
  (4) Deviation of the differential at high setting point for switches of the same size:

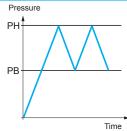
   0.1 bar, + 0.15 bar (- 1.45 psi, + 2.17 psi).

#### **Operating curves**



1 Maximum differential





#### [1 2

 $1 \rightarrow 11$  and 13

Pressure switch connector pin view

 $2 \,{\to}\, 12$ 

- Adjustable value

#### OsiSense XML

Size 10 bar (145 psi)

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

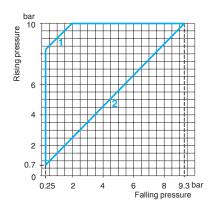
OsiSense XMLC pressure switches	With setting scale	30 bar (435 psi) overpressure With setting scale

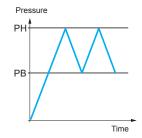
Adjustable range of switch (Rising pressure)	ning point (PH)	0.710 bar (10.15145 psi)			
Electrical connection		Terminals			
Fluid connection		G 1/4 (female)	1/4"-18 NPTF (female)	G 1/4 (female)	
References (1)					
Fluids controlled (2)	Hydraulic oils, fresh water, air, up to + 70 °C	-	-	XMLCS10A2S12	
	Hydraulic oils, fresh water, air, up to + 160 °C	XMLC010B2S12	XMLC010B2S13	-	
	Corrosive fluids, up to + 160 °C Sea water, up to + 30 °C	XMLC010C2S12	XMLC010C2S13	-	
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)	0.45 bar (6.53 psi)		0.25 bar (3.62 psi)	
(subtract from PH	Min. at high setting (4)	0.70 bar (10.15 psi)		0.65 bar (9.42 psi)	
to give PB)	Max. at high setting	8 bar (116 psi)		5.6 bar (81.2 psi)	
Maximum permissible	Per cycle	12.5 bar (181.25 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 <sup>6</sup> operating cycles		2 x 10 <sup>6</sup> 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	1 entry tapped M20 x 1.5 mm for ISO cable gland, clamping capacity 7 to 13 mm	
Pressure switch type		Diaphragm			

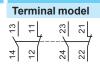
- (1) For 1 entry tapped for no. 13 cable gland, replace **S12** with **S11** (for example, **XMLC010B2S12** becomes XMLC010B2S11).
- (2) For component materials of units in contact with the fluid, see pages 72 and 73.
- (3) Deviation of the differential at low setting point for switches of the same size:
- ± 0.05 bar (± 0.72 psi)

  (4) Deviation of the differential at high setting point for switches of the same size: ± 0.01 bar (± 1.45 psi)

#### **Operating curves**







Connection

1 Maximum differential

2 Minimum differential

- Adjustable value

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

Accessories: page 68

Other versions

Dimensions: pages 69 to 71



#### 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 switching point (Rising pressure)	0 01 ( )	1.210 bar (17.4145 psi) 0.529.32 bar (7.54135.14 psi)
Spread between 2 stages (PH	l2 - PH1)	0.685.8 bar (9.8684.1 psi)
Fluid connection		G 1/4 (female)
Electrical connection		Terminals

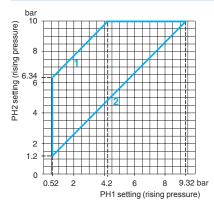
References			
Fluids controlled (1)	Hydraulic oils, fresh water, air, up to + 160 °C	XMLD010B1S11	XMLD010B1S12
	Corrosive fluids, up to + 160 °C Sea water, up to + 30 °C	XMLD010C1S11	-
Weight (kg)		0.705	0.705

0 ( 0)					
<b>Complementary c</b>	Complementary characteristics 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)	0.6 bar (8.7 psi)		
Maximum permissible pressure	Per cycle	12.5 bar (181.25 psi)	12.5 bar (181.25 psi)		
	Accidental	22.5 bar (326.25 psi)	22.5 bar (326.25 psi)		
Destruction pressure		45 bar (652.5 psi)	45 bar (652.5 psi)		
Mechanical life		5 x 10 <sup>6</sup> 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	essure switch type Diaphragm				

<sup>(1)</sup> 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)

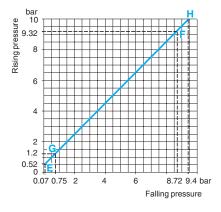
#### **Operating curves**

High setting tripping points of contacts 1 and 2

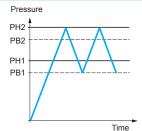


- 1 Maximum differential
- 2 Minimum differential

#### Natural differential of contacts 1 and 2



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



Adjustable valueNon adjustable value

#### Connection

#### Terminal model

Contact 2 Contact 1 (stage 2) (stage 1)

Other versions



<sup>(3)</sup> Deviation of the differential at high setting point for switches of the same size: ± 0.1 bar (± 1.45 psi)

#### OsiSense XML

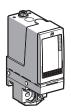
Size 20 bar (290 psi)

Fixed differential, for detection of a single threshold Switches with 1 CO single-pole contact

#### OsiSense XMLA pressure switches

#### With setting scale



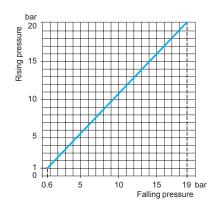


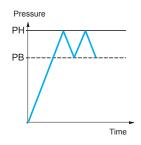
Adjustable range of switching point (PH) (Rising pressure)		120 bar (14.5290 psi)		
Electrical connection		DIN connector	Terminals	
Fluid connection		G 1/4 (female)	G 1/4 (female)	1/4"-18 NPTF (female)
References (1)				
Fluids controlled (2)	Hydraulic oils, fresh water, air, up to + 70 °C	XMLA020A2C11	XMLA020A2S12	XMLA020A2S13
	Hydraulic oils, fresh water, air, up to + 160 °C	XMLA020B2C11	XMLA020B2S12	-
	Corrosive fluids, up to + 160 °C Sea water, up to + 30 °C	XMLA020C2C11	XMLA020C2S12	-
	Viscous products, up to + 160 °C (G 11/4" fluid connection)	XMLA020P2C11	XMLA020P2S12	-
Weight (kg)		0.715	0.685	0.685
Complementary c	haracteristics not shown	under general charac	cteristics (page 17)	
Natural differential	At low setting (3)	0.4 bar (5.8 psi)		
(subtract from PH to give PB)	At high setting (3)	1 bar (14.5 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 <sup>6</sup> 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 S11 (for example, XMLA020A2S12 becomes XMLA020A2S11).
- (2) For component materials of units in contact with the fluid, see pages 72 and 73.
- (3) Deviation of the differential at high setting point for switches of the same size:
- ± 0.1 bar (± 1.45 psi)

Deviation of the differential at low setting point: ± 0.2 bar (± 2.9 psi)

#### **Operating curves**





### **Connection**Terminal model

#### Connector model

Pressure switch connector pin view



1 → 11 and 13

 $2 \rightarrow 12$ 

3 → 14

- Adjustable value

--- Non adjustable value

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

Accessories page 68

Other versions

Dimensions: pages 69 to 71

#### OsiSense XML

Size 20 bar (290 psi)

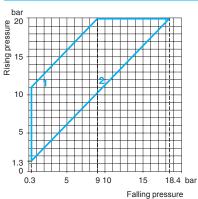
Adjustable differential, for regulation between 2 thresholds Switches with 1 CO single-pole contact

OsiSense XMLB pressure switches	With setting scale	30 bar (435 psi) overpressure With setting scale

Adjustable range of switch (Rising pressure)	ning point (PH)	1.320 bar (18.929	0 psi)		
Electrical connection		DIN connector	connector Terminals		
Fluid connection		G 1/4 (female)	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	XMLB020A2C11	XMLB020A2S12	XMLB020A2S13	XMLBS20A2S12
	Hydraulic oils, fresh water, air, up to + 160 °C	XMLB020B2C11	XMLB020B2S12	XMLB020B2S13	-
	Corrosive fluids, up to + 160 °C Sea water, up to + 30 °C	XMLB020C2C11	XMLB020C2S12	-	-
	Viscous products, up to + 160 °C (G 11/4" fluid connection)	XMLB020P2C11	XMLB020P2S12	-	-
Weight (kg)		0.735	0.705	0.705	3.500
Complementary c	haracteristics not shown	under general o	haracteristics (	page 17)	
Possible differential	Min. at low setting (3)	1 bar (14.5 psi)		0.95 bar (13.78 psi)	
(subtract from PH	Min. at high setting (3)	1.6 bar (23.20 psi)			1.45 bar (21.03 psi)
to give PB)	Max. at high setting	11 bar (159.5 psi)			12.6 bar (182.7 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 <sup>6</sup> operating cycles		2 x 10 <sup>6</sup> 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) For 1 entry tapped for no. 13 cable gland, replace S12 with S11 (for example, XMLB020A2S12 becomes XMLB020A2S11).
- (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: ± 0.25 bar (± 3.63 psi)

#### **Operating curves**



- 1 Maximum differential
- 2 Minimum differential

Other versions

## Pressure РΗ Time

Terminal model

#### **Connector model**

Connection

Pressure switch connector pin view



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

- Adjustable value



OsiSense XMLC pressure switches

### Electromechanical pressure switches

#### OsiSense XML

Size 20 bar (290 psi)

With setting scale

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

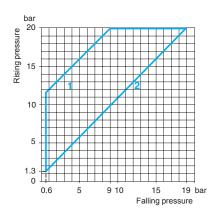


30 bar (435 psi) overpressure

Adjustable range of switching point (PH) (Rising pressure)		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 <sup>6</sup> operating cycles		2 x 10 <sup>6</sup> 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	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, XMLC020B2S12 becomes XMLC020B2S11).
- (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**



Pressure PH Time



1 Maximum differential2 Minimum differential3 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

#### 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 pressure switches

#### Without setting scale



Adjustable range of each switching point	2nd stage switching point (PH2)	2.1420 bar (31.03290 psi)		
(Rising pressure)	1st stage switching point (PH1)	0.918.76 bar (13.05272.02 psi)		
Spread between 2 stages (P	H2 - PH1)	1.249.55 bar (17.98138.48 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	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	<u> </u>	90 bar (1305 psi)		
Mechanical life		5 x 10 <sup>6</sup> 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		

- (1) For 1 entry tapped for no. 13 cable gland, replace S12 with S11 (for example, XMLD020B1S12 becomes XMLD020B1S11).
- (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: ± 0.15 bar (± 2.18 psi)
- (4) Deviation of the differential at high setting point for switches of the same size:

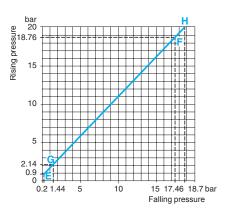
#### **Operating curves**

#### High setting tripping points of contacts 1 and 2

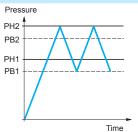
### 

- 1 Maximum differential
- 2 Minimum differential

#### Natural differential of contacts 1 and 2



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



— Adjustable value

--- Non adjustable value

### Connection model Terminal model

Contact 2 Contact 1 (stage 2) (stage 1)



Other versions



#### 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



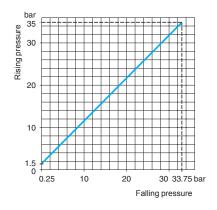


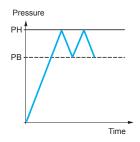
Adjustable range of switching point (PH) (Rising pressure)		1.535 bar (21.75507.5 psi)		
Electrical connection		DIN connector	Terminals	
Fluid connection		G 1/4 (female)	G 1/4 (female)	1/4"-18 NPTF (female)
References (1)				
Fluids controlled (2)	Hydraulic oils, fresh water, air, up to + 70 °C	XMLA035A2C11	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 11/4" fluid connection)	XMLA035P2C11	XMLA035P2S12	-
Weight (kg)		0.725	0.695	0.695
Complementary c	haracteristics not shown	under general charac	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 <sup>6</sup> 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 capacity 7 to 13 mm		

- (1) For 1 entry tapped for no. 13 cable gland, replace S12 with S11 (for example, XMLA035A2S12 becomes XMLA035A2S11).
- (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: ± 0.25 bar (± 3.62 psi)

#### **Operating curves**

Pressure switch type





Diaphragm



#### Connector model

Pressure switch connector pin view



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

3 → 14

- Adjustable value
- --- Non adjustable value

Other versions



#### 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

Adjustable range of switching point (PH)

(Rising pressure)
Electrical connection

#### With setting scale

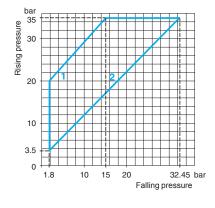


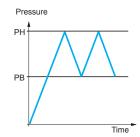


Fluid connection		G 1/4 (female)	G 1/4 (female)	1/4"-18 NPTF (female)		
References (1)						
Fluids controlled (2)	Hydraulic oils, fresh water, air, up to + 70 °C	XMLB035A2C11	XMLB035A2S12	XMLB035A2S13		
	Hydraulic oils, fresh water, air, up to + 160 °C	XMLB035B2C11	XMLB035B2S12	-		
	Corrosive fluids, up to + 160 °C Sea water, up to + 30 °C	XMLB035C2C11	XMLB035C2S12	-		
	Viscous products, up to + 160 °C (G 11/4" fluid connection)	-	XMLB035P2S12	-		
Weight (kg)		0.745	0.715	0.715		
<b>Complementary ch</b>	naracteristics not shown	under general charac	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 <sup>6</sup> 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				

3.5...35 bar (50.75...507.5 psi)

#### **Operating curves**





### Connection Terminal model



#### **Connector model**

Pressure switch connector pin view



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

 $3 \,{\to}\, 14$ 

- 1 Maximum differential
- 2 Minimum differential

- Adjustable value



<sup>(1)</sup> For 1 entry tapped for no. 13 cable gland, replace S12 with S11 (for example, XMLB035A2S12 becomes XMLB035A2S11).

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

<sup>(3)</sup> Deviation of the differential at low and high setting points for switches of the same size:
- 0.5 bar, + 0.7 bar (- 7.25 psi, + 10.15 psi).

#### 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

Adjustable range of switching point (PH)

#### With setting scale

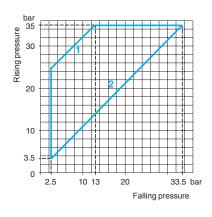


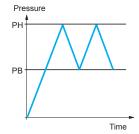
	Terminals		
	G 1/4 (female)	1/4"-18 NPTF (female)	
Hydraulic oils, fresh water, air, up to + 160 °C	XMLC035B2S12	XMLC035B2S13	
Corrosive fluids, up to + 160 °C Sea water, up to + 30 °C	XMLC035C2S12	XMLC035C2S13	
	0.695	0.695	
aracteristics not shown	under general characteristics	(page 17)	
Min. at low setting (3)	1 bar (14.5 psi)		
Min. at high setting (4)	1.5 bar (21.75 psi)		
Max. at high setting	22 bar (319 psi)		
Per cycle	45 bar (652.5 psi)		
Accidental	80 bar (1160 psi)		
	160 bar (2320 psi)		
	5 x 10 <sup>6</sup> operating cycles		
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	
	Diaphragm		
	up to + 160 °C  Corrosive fluids, up to + 160 °C  Sea water, up to + 30 °C  maracteristics not shown  Min. at low setting (3)  Min. at high setting  Per cycle	Hydraulic oils, fresh water, air, up to + 160 °C  Corrosive fluids, up to + 160 °C  Sea water, up to + 30 °C  Corsive fluids, up to + 160 °C  Sea water, up to + 30 °C  O.695  Corrosive fluids, up to + 160 °C  Sea water, up to + 30 °C  O.695  Corrosive fluids, up to + 160 °C  Sea water, up to + 30 °C  O.695  Min. at low setting (3)  I bar (14.5 psi)  Min. at high setting (4)  I.5 bar (21.75 psi)  Max. at high setting  22 bar (319 psi)  Per cycle  45 bar (652.5 psi)  Accidental  80 bar (1160 psi)  160 bar (2320 psi)  5 x 10° operating cycles  dels  1 entry tapped M20 x 1.5 mm for ISO cable gland, clamping capacity 7 to 13 mm	

3.5...35 bar (50.75...507.5 psi)

- (1) For 1 entry tapped for no. 13 cable gland, replace  $\bf S12$  with  $\bf S11$  (for example,  $\bf XMLC035B2S12$ becomes XMLC035B2S11).
  (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: ± 0.2 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**







Connection

1 Maximum differential

Minimum differential

— Adjustable value

Other versions

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

page 68

Dimensions: pages 69 to 71



#### OsiSense XML

Size 35 bar (507.5 psi)

Dual stage, fixed differential, for detection at each threshold Switches with 2 CO single-pole contacts

#### OsiSense XMLD pressure switches

#### Without setting scale

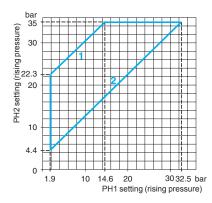


Adjustable range of each	2nd stage switching point (PH2)	4.435 bar (63.8507.5 psi)		
switching point (Rising pressure)	1st stage switching point (PH1)	1.932.5 bar (27.55471.25 psi)		
Spread between 2 stages (P	H2 - PH1)	2.520.4 bar (36.25295.8 psi)		
Electrical connection		Terminals		
Fluid connection		G 1/4 (female)		
References (1)				
Fluids controlled (2)	Hydraulic oils, fresh water, air, up to + 160 °C	XMLD035B1S12		
Weight (kg)		0.715		
<b>Complementary ch</b>	aracteristics 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 <sup>6</sup> 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, XMLD035B1S12 becomes XMLD035B1S11).
- (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)

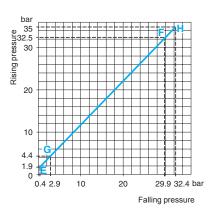
#### **Operating curves**

#### High setting tripping points of contacts 1 and 2

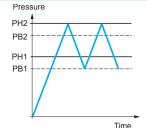


- Maximum differential
- 2 Minimum differential

#### Natural differential of contacts 1 and 2



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



- Adjustable value
  --- Non adjustable value

#### Connection

#### **Terminal model**

Contact 2 Contact 1 (stage 2) (stage 1)



Other versions



#### OsiSense XML

Size 70 bar (1015 psi)

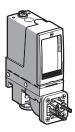
Fixed differential, for detection of a single threshold Switches with 1 CO single-pole contact

#### OsiSense XMLA pressure switches

Adjustable range of switching point (PH)

(Rising pressure)

#### With setting scale



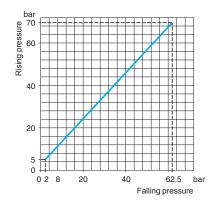


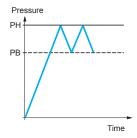
Electrical connection		DIN connector	DIN connector Terminals		
Fluid connection		G 1/4 (female)	G 1/4 (female)	1/4"-18 NPTF (female)	
References (1)					
Fluids controlled (2)	Hydraulic oils, up to + 160 °C	XMLA070D2C11	XMLA070D2S12	XMLA070D2S13	
	Fresh water, up to + 160 °C	XMLA070E2C11	XMLA070E2S12	XMLA070E2S13	
	Corrosive fluids, air, up to + 160 °C	XMLA070N2C11	XMLA070N2S12	-	
Weight (kg)		0.725	0.695	0.695	
Complementary c	haracteristics not sho	wn 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)			
Destruction pressure		320 bar (4640 psi)	320 bar (4640 psi)		
Mechanical life		6 x 10 <sup>6</sup> operating cycles			
4 F		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			

5...70 bar (72.5...1015 psi)

- (1) For 1 entry tapped for no. 13 cable gland, replace S12 with S11 (for example, XMLA070D2S12 becomes XMLA070D2S11).
- (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**





### Connection Terminal model

#### Connector model

Pressure switch connector pin view



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

 $3 \rightarrow 14$ 

- Adjustable value
- --- Non adjustable value

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

Accessories: page 68

Other versions

Dimensions: pages 69 to 71



#### 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



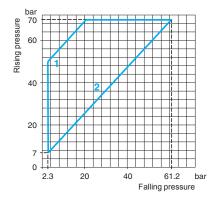


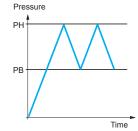
ing point (PH)	770 bar (101.51015 psi)				
Electrical connection		Terminals			
Fluid connection		G 1/4 (female)	1/4"-18 NPTF (female)		
Hydraulic oils, up to + 160 °C	XMLB070D2C11	XMLB070D2S12	XMLB070D2S13		
Fresh water, up to + 160 °C	XMLB070E2C11	XMLB070E2S12	-		
Corrosive fluids, air, up to + 160 °C	XMLB070N2C11	XMLB070N2S12	-		
Weight (kg)		0.715	0.715		
haracteristics not sho	wn under general chara	cteristics (page 17)			
Min. at low setting (3)	4.7 bar (68.15 psi)				
Min. at high setting (4)	9.5 bar (137.75 psi)	9.5 bar (137.75 psi)			
Max. at high setting	50 bar (725 psi)				
Per cycle	90 bar (1035 psi)				
Accidental	160 bar (2320 psi)	160 bar (2320 psi)			
	320 bar (4640 psi)	320 bar (4640 psi)			
Mechanical life		6 x 10 <sup>6</sup> operating cycles			
Connection		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			
	Hydraulic oils, up to + 160 °C Fresh water, up to + 160 °C Corrosive fluids, air, up to + 160 °C  haracteristics not sho Min. at low setting (3) Min. at high setting Per cycle	DIN connector   G 1/4 (female)	DIN connector   Terminals		

- (1) For 1 entry tapped for no. 13 cable gland, replace **S12** with **S11** (for example, **XMLB070D2S12** becomes XMLB070D2S11).
- (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**





#### Connection Terminal model

#### **Connector model**

Pressure switch connector pin view



 $1 \rightarrow 11$  and 13  $2 \,{\to}\, 12$ 

 $3 \rightarrow 14$ 

- Maximum differential
- 2 Minimum differential

- Adjustable value

Other versions



#### 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

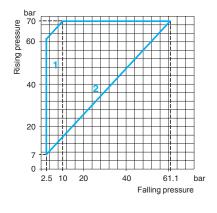
#### With setting scale

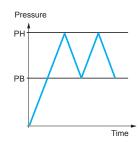


Adjustable range of switch (Rising pressure)	ching point (PH) 770 bar (101.51015 psi)				
Electrical connection		Terminals			
Fluid connection		G 1/4 (female)	1/4"-18 NPTF (female)		
References (1)					
Fluids controlled Hydraulic oils, (2) up to + 160 °C		XMLC070D2S12	XMLC070D2S13		
	Fresh water, up to + 160 °C	XMLC070E2S12	-		
	Corrosive fluids, air, up to + 160 °C	XMLC070N2S12	-		
Weight (kg)		0.695	0.695		
<b>Complementary</b> 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)	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 <sup>6</sup> operation		6 x 10 <sup>6</sup> operating cycles	x 10 <sup>6</sup> operating cycles		
Cable entry for terminal me	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			
Pressure switch type		Piston			

- (1) For 1 entry tapped for no. 13 cable gland, replace S12 with S11 (for example, XMLC070D2S12 becomes XMLC070D2S11).
   (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: ± 0.8 bar (± 11.6 psi)

#### **Operating curves**







1 Maximum differential Minimum differential

- Adjustable value

Other versions

#### 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)	9.470 bar (136.31015 psi)			
switching point (Rising pressure)	1st stage switching point (PH1)	6.667.2 bar (95.7974.4 psi)			
Spread between 2 stages (P	H2 - PH1)	2.846 bar (40.6667 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	XMLD070D1S12	XMLD070D1S13		
	Corrosive fluids, air, up to + 160 °C	XMLD070N1S12	-		
Weight (kg)		0.715	0.715		
Complementary ch	aracteristics 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 <sup>6</sup> 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			

- (1) For 1 entry tapped for no. 13 cable gland, replace **S12** with **S11** (for example, **XMLD070D1S12** becomes XMLD070D1S11).
- (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: ± 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**

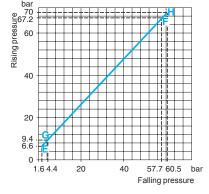
Pressure switch type

#### High setting tripping points of contacts 1 and 2

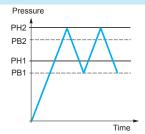
### PH2 setting (rising pressure) 60 52.6 40 0 60 67.2 bar PH1 setting (rising pressure)

- Maximum differential
- Minimum differential

#### Natural differential of contacts 1 and 2



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



- Adjustable value --- Non adjustable value

#### Connection

#### **Terminal model**

Contact 2 Contact 1 (stage 2) (stage 1)

Other versions



#### 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 switching point (PH) (Rising pressure)		10160 bar (1452320 ps	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 (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 c	haracteristics not sho	own under general char	racteristics (page 17)			
Natural differential	At low setting (3)	5.5 bar (79.75 psi)				
subtract from PH o give PB)	At high setting (4)	18 bar (261 psi)	18 bar (261 psi)			
Maximum permissible	Per cycle	200 bar (2900 psi)				
oressure	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 <sup>6</sup> operating cycles				
Connection EN 175301-803-A (ex-DIN 1 entry tapped M20 x 1.5 mm 1 entry tap			1 entry tapped 1/2"-14 NPT			

- (1) For 1 entry tapped for no. 13 cable gland, replace S12 with S11 (for example, XMLA160D2S12 becomes XMLA160D2S11).
- (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:

43650A), 4-pin male connector. for ISO cable gland, clamping

For suitable female connector, capacity 7 to 13 mm

± 1 bar (± 14.5 psi)

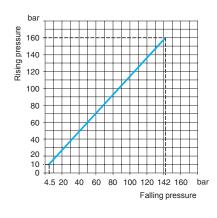
see page 68

Piston

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

#### **Operating curves**

Pressure switch type



Pressure ΡН Time

#### Connection Terminal model

#### Connector model

Pressure switch connector pin view



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

 $3 \rightarrow 14$ 

for cable gland, clamping capacity 7 to 13 mm

- 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.

page 68

Dimensions: pages 69 to 71



OsiSense XML

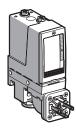
Size 160 bar (2320 psi)

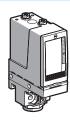
Adjustable differential, for regulation between 2 thresholds Switches with 1 CO single-pole contact

#### OsiSense XMLB pressure switches

Adjustable range of switching point (PH)

#### With setting scale



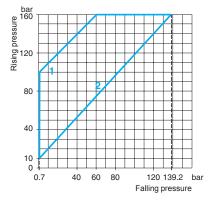


(Rising pressure)		10100 Dai (1102020 poi)					
Electrical connection		DIN connector	Terminals				
Fluid connection		G 1/4 (female)	G 1/4 (female)	1/4"-18 NPTF (female)			
References (1)							
Fluids controlled (2)	Hydraulic oils, up to + 160 °C	XMLB160D2C11	XMLB160D2S12	XMLB160D2S13			
	Fresh water, 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 chara	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)	100 bar (1450 psi)				
Maximum 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 <sup>6</sup> operating cycles	6 x 10° 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					

10...160 bar (145...2320 psi)

- (1) For 1 entry tapped for no. 13 cable gland, replace **S12** with **S11** (for example, **XMLB160D2S12** becomes XMLB160D2S11).
- (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:
  - 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**



Pressure РΗ Time

Connection **Terminal model** 

#### Connector model

Pressure switch connector pin view



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

 $3 \rightarrow 14$ 

- 1 Maximum differential
- 2 Minimum differential

Other versions

- Adjustable value



#### OsiSense XML

Size 160 bar (2320 psi)

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

#### OsiSense XMLC pressure switches

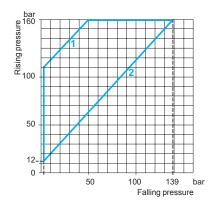
#### With setting scale



Adjustable range of switching point (PH) (Rising pressure)		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 ch	naracteristics 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)			
to give PB)	Max. at high setting	110 bar (1590 psi)			
Maximum 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 <sup>6</sup> operating cycles					
		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 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)

#### **Operating curves**



Pressure РΗ PB



1 Maximum differential Minimum differential

- Adjustable value

Other versions



#### 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)		
switching point (Rising pressure)	1st stage switching point (PH1)	oint (PH1) 10.5154 bar (152.252233 psi)		
Spread between 2 stages (P	PH2 - PH1)	683 bar (871203.5 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	XMLD160D1S12	XMLD160D1S13	
	Fresh water, up to + 160 °C	XMLD160E1S12	-	
Weight (kg)		0.750	0.750	
Complementary ch	aracteristics 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 <sup>6</sup> 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 S12 with S11 (for example, XMLD160D1S12 becomes XMLD160D1S11).
- (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: ± 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)

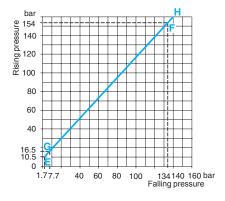
#### **Operating curves**

#### High setting tripping points of contacts 1 and 2

### bar 160 120 120 140 16.5 10 0 10.5 40 60 77 100 120 154 ban PH1 setting (rising pressure)

- 1 Maximum differential
- 2 Minimum differential

#### Natural differential of contacts 1 and 2



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



- Adjustable value

--- Non adjustable value

#### Connection

#### Terminal model

Contact 2 Contact 1 (stage 2) (stage 1)



Other versions



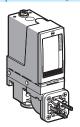
#### OsiSense XML

Size 300 bar (4350 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)		20300 bar (2904350 psi)	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)						
Fluids controlled (2) (5)	Hydraulic oils, up to + 160 °C	XMLA300D2C11	XMLA300D2S12	XMLA300D2S13		
	Fresh water, up to + 160 °C	XMLA300E2C11	XMLA300E2S12	XMLA300E2S13		
	Corrosive fluids, air, up to + 160 °C	XMLA300N2C11	XMLA300N2S12	-		
Weight (kg)		0.780	0.750	0.750		
Complementary c	haracteristics not sho	own under general chara	cteristics (page 17)			
Natural differential	At low setting (3)	16.5 bar (239.25 psi)	16.5 bar (239.25 psi)			
(subtract from PH 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)	1350 bar (19 575 psi)			
Mechanical life		3 x 10 <sup>6</sup> operating cycles	3 x 10 <sup>6</sup> 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	Piston			

- (1) For 1 entry tapped for no. 13 cable gland, replace **S12** with **S11** (for example, **XMLA300D2S12** becomes XMLA300D2S11).
- (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:
- ± 3 bar (± 43.5 psi)
- (4) Deviation of the differential at high setting point for switches of the same size:
- (5) Only for control of group 2 fluids, in accordance with directive 97/23/EEC.

#### **Operating curves**

### Rising pressure 200 100 100 265 300 Falling pressure

# Pressure Time

Connection **Terminal model** 

#### 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

Dimensions: pages 69 to 71 page 68



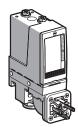
OsiSense XML

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

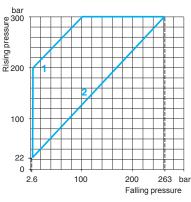




Adjustable range of switching point (PH) (Rising pressure)		22300 bar (3194350 psi)	22300 bar (3194350 psi)			
Electrical connection		DIN connector	Terminals			
Fluid connection		G 1/4 (female)	G 1/4 (female)	1/4"-18 NPTF (female)		
References (1)						
Fluids controlled (2)(5)	Hydraulic oils, up to + 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	Min. at low setting (3)	19.4 bar (281.3 psi)	19.4 bar (281.3 psi)			
(subtract from PH	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)				
Maximum permissible	Per cycle	375 bar (5437.5 psi)				
pressure	Accidental	675 bar (9787.5 psi)	675 bar (9787.5 psi)			
Destruction pressure		1350 bar (19,575 psi)	1350 bar (19,575 psi)			
Mechanical life		3 x 10 <sup>6</sup> 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	Piston			

- $(1) For 1 entry tapped for no. 13 cable gland, replace {\bf S12} \ with {\bf S11} \ (for example, {\bf XMLB300D2S12}) \ (2) \ (3)$ becomes XMLB300D2S11).
- (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:
- 1.5 bar, + 1.7 bar (- 21.75 psi, + 24.65 psi).
- (4) Deviation of the differential at high setting point for switches of the same size:
- 1 bar, + 4 bar (- 14.5 psi, + 58 psi).
- (5) Only for control of group 2 fluids, in accordance with directive 97/23/EEC.

#### **Operating curves**



Pressure РΗ РΒ Time Terminal model

Connection

#### Connector model

Pressure switch connector pin view



 $1 \rightarrow 11$  and 13  $2 \,{\to}\, 12$ 

 $3 \rightarrow 14$ 

1 Maximum differential

2 Minimum differential Other versions

- Adjustable value



OsiSense XML

Size 300 bar (4350 psi)

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

#### OsiSense XMLC pressure switches

Adjustable range of switching point (PH)

#### With setting scale



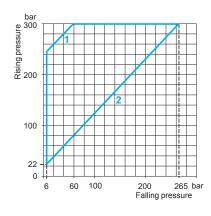
(Rising pressure)		
Electrical connection		Terminals
Fluid connection		G 1/4 (female)
References (1)		
Fluids controlled (2) (4)	Hydraulic oils, up to + 160 °C	XMLC300D2S12
	Fresh water, up to + 160 °C	XMLC300E2S12
	Corrosive fluids, air, up to + 160 °C	XMLC300N2S12
Weight (kg)		0.750
Complementary	characteristics not she	own under general characteristics (page 17)

22...300 bar (319...4350 psi)

Complementary c	haracteristics not show	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 <sup>6</sup> 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		Piston

<sup>(1)</sup> For 1 entry tapped for no. 13 cable gland, replace S12 with S11 (for example, XMLC300D2S12 becomes XMLC300D2S11).

#### **Operating curves**



Pressure PH PB Time



1 Maximum differential

2 Minimum differential Other versions - Adjustable value



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

<sup>(3)</sup> Deviation of the differential at low and high setting points for switches of the same size: ± 0.9 bar (± 13.05 psi)

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

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

Adjustable range of each

#### Without setting scale



2nd stage switching point (PH2) 36...300 bar (522...4350 psi)

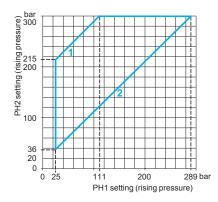
Adjustable range of cach	Zila stage switching point (i 112)	00:::000 bai (022:::4000 p3i)		
switching point (Rising pressure)	1st stage switching point (PH1)	25289 bar (362.54190.5 psi)		
Spread between 2 stages (Ph	12 - PH1)	11189 bar (159.52740.5 psi)		
Electrical connection		Terminals		
Fluid connection		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	
(2) (5)	up to + 160 °C  Fresh water, up to + 160 °C  Corrosive fluids, air,	XMLD300E1S12 XMLD300N1S12	-	

- 3 - ( 3)				
Complementary c	haracteristics not sh	own under general characteristics (page 17)		
Natural differential (subtract from PH1/PH2 to give PB1/PB2)	At low setting (3)	17 bar (246.5 psi)		
	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 <sup>6</sup> 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 S12 with S11 (for example, XMLD300D1S12 beomes XMLD300D1S11).
- (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: ± 2.5 bar (± 36.25 psi)
- (4) Deviation of the differential at high setting point for switches of the same size: ± 9 bar (± 130.5 psi)
- (5) Only for control of group 2 fluids, in accordance with directive 97/23/EEC.

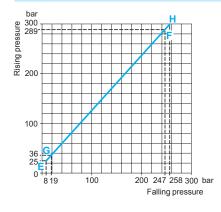
#### **Operating curves**

#### High setting tripping points of contacts 1 and 2

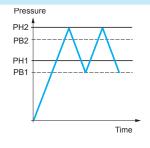


1 Maximum differential2 Minimum differential

#### Natural differential of contacts 1 and 2



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



— Adjustable value --- Non adjustable value

### **Connection**Terminal model

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Other versions

#### OsiSense XML

Size 500 bar (7250 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)		30500 bar (4357250 psi)	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	XMLA500D2C11	XMLA500D2S12	XMLA500D2S13	
	Fresh water, up to + 160 °C	XMLA500E2C11	XMLA500E2S12	XMLA500E2S13	
	Corrosive fluids, air, up to + 160 °C	XMLA500N2C11	XMLA500N2S12	-	
Weight (kg)		0.780	0.750	0.750	
Complementary c	haracteristics not sho	own under general chara	cteristics (page 17)		
Natural differential	At low setting (3)	20 bar (290 psi)	20 bar (290 psi)		
(subtract from PH to give PB)	At high setting (4)	45 bar (652.5 psi)			
Maximum permissible	Per cycle	625 bar (9062.5 psi)	625 bar (9062.5 psi)		
pressure	Accidental	1125 bar (16,312.5 psi)	1125 bar (16,312.5 psi)		
Destruction pressure		2250 bar (32,625 psi)			
Mechanical life		3 x 10 <sup>6</sup> operating cycles			
Connection		EN 175301-803-A (ex-DIN 43650A), 4-pin male connector.	1 entry tapped M20 x 1.5 mm for ISO cable gland, clamping	1 entry tapped 1/2"-14 NPT for cable gland, clamping	

- (1) For 1 entry tapped for no. 13 cable gland, replace S12 with S11 (for example, XMLA500D2S12 becomes XMLA500D2S11).
- (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: ± 6 bar (± 87 psi)

For suitable female connector, capacity 7 to 13 mm

see page 68

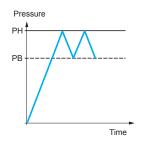
Piston

- (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**

Pressure switch type

### Rising pressure 300 200 100 300 400 455 b Falling pressure 400 455 bar



#### Connection **Terminal model**

#### **Connector model**

Pressure switch connector pin view

capacity 7 to 13 mm



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

- 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:

Dimensions: pages 69 to 71



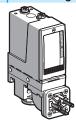
### OsiSense XML

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

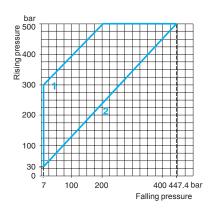




Adjustable range of switch (Rising pressure)	ing point (PH)	30500 bar (4357250 psi)	30500 bar (4357250 psi)					
Electrical connection		DIN connector	Terminals					
Fluid connection		G 1/4 (female)	G 1/4 (female)	1/4"-18 NPTF (female)				
References (1)								
Fluids controlled (2) (5)	Hydraulic oils, 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 show	wn under general chara	cteristics (page 17)					
Possible differential	Min. at low setting (3)	23 bar (333.5 psi)	23 bar (333.5 psi)					
(subtract from PH	Min. at high setting (4)	52.6 bar (762.7 psi)	52.6 bar (762.7 psi)					
to give PB)	Max. at high setting	300 bar (4350 psi)	300 bar (4350 psi)					
Maximum permissible	Per cycle	625 bar (9062.5 psi)	625 bar (9062.5 psi)					
pressure	Accidental	1125 bar (16,312.5 psi)	1125 bar (16,312.5 psi)					
Destruction pressure		2250 bar (32,625 psi)	2250 bar (32,625 psi)					
Mechanical life		3 x 10 <sup>6</sup> operating cycles	3 x 10 <sup>6</sup> operating cycles					
Connection		EN 175301-803-A (ex-DIN 43650A), 4-pin male connector. For suitable female connector, see page 68	43650A), 4-pin male connector. for ISO cable gland, clamping for cable glan For suitable female connector, capacity 7 to 13 mm capacity 7 to					
Pressure switch type		Piston	Piston					

- (1) For 1 entry tapped for no. 13 cable gland, replace **S12** with **S11** (for example, **XMLB500D2S12** becomes XMLB500D2S11).
  (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:
- 2.6 bar, + 3.8 bar (- 37.7 psi, + 55.1 psi).
- (4) Deviation of the differential at high setting point for switches of the same size:
  - 14.8 bar, + 11.2 bar (- 214.6 psi, + 162.4 psi).
- (5) Only for control of group 2 fluids, in accordance with directive 97/23/EEC.

#### **Operating curves**



### Pressure PH РΒ Time

#### Connection **Terminal model**

#### Connector model

Pressure switch connector pin view



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

 $3 \rightarrow 14$ 

- 1 Maximum differential
- 2 Minimum differential

- Adjustable value

Other versions



#### 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

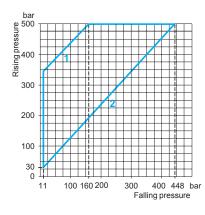


Adjustable range of switching point (PH) (Rising pressure)		30500 bar (4357250 psi)
Electrical connection		Terminals
Fluid connection		G 1/4 (female)
References (1)		
Fluids controlled (2) (4)	Hydraulic oils, up to + 160 °C	XMLC500D2S12
	Corrosive fluids, air, up to + 160 °C	XMLC500N2S12
Weight (kg)		0.750

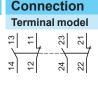
Weight (kg)		0.750				
<b>Complementary c</b>	Complementary characteristics not shown under general characteristics (page 17)					
Possible differential Min. at low setting (3)		19 bar (275.5 psi)				
(subtract from PH	Min. at high setting (3)	52 bar (754 psi)				
to give PB)	Max. at high setting	340 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 <sup>6</sup> operating cycles				
Cable entry for terminal models		1 entry tappedJe préfère acheter des.5 mm for ISO cable gland, clamping capacity 7 to 13 mm				
Pressure switch type		Piston				

<sup>(1)</sup> For 1 entry tapped for no. 13 cable gland, replace **S12** with **S11** (for example, **XMLC500D2S12** becomes XMLC500D2S11).

#### **Operating curves**



Time



1 Maximum differential

2 Minimum differential

- Adjustable value

Other versions



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

<sup>(3)</sup> Deviation of the differential at low and high setting points for switches of the same size: ± 0.9 bar (± 13.05 psi)

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

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)	25484 bar (362.57018 psi)
Spread between 2 stages (PH2 - PH1)		16244 bar (2323538 psi)
Electrical connection		Terminals
Fluid connection		G 1/4 (female)

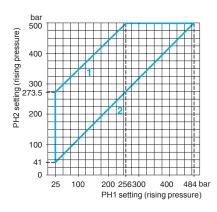
References (1)		
Fluids controlled (2) (5)	Hydraulic oils, up to + 160 °C	XMLD500D1S12
Weight (kg)		0.750

Troight (kg)		0.700			
<b>Complementary ch</b>	naracteristics 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 <sup>6</sup> 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		Piston			

- (1) For 1 entry tapped for no. 13 cable gland, replace S12 with S11 (for example, XMLD500D1S12 becomes XMLD500D1S11).
- (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: ± 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.

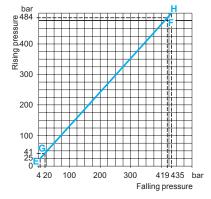
#### **Operating curves**

#### High setting tripping points of contacts 1 and 2 $\,$

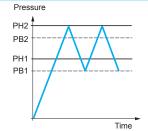


- 1 Maximum differential
- 2 Minimum differential

#### Natural differential of contacts 1 and 2



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



Adjustable value
--- Non adjustable value

#### Connection

#### Terminal model

Contact 2 Contact 1 (stage 2) (stage 1)

Other versions

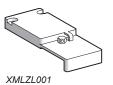


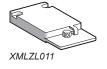
# Electromechanical pressure and vacuum switches OsiSense XMLA, XMLB, XMLC and XMLD

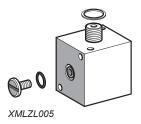
Accessories and replacement parts













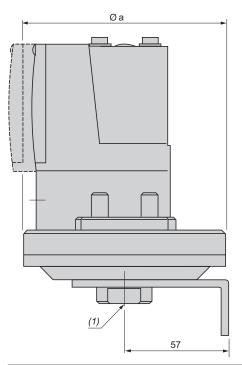


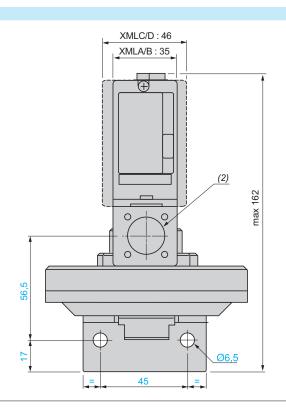
Description	Specific characteristics	For use with switches	Unit reference	Weight
Rear fixing bracket for vibrations > 2 gn	-	XML•L35 XML•001	XMLZL006	<b>kg</b> 0.23
Additional top support bracket for vibrations > 4 gn	-	XMLAM01 XML•M05 XMLA004 XML•010 XML•500	XMLZL002	0.02
Knurled adjustment knob, Ø 36 mm fits over adjustment screws to facilitate setting	-	All models	XMLZL003	0.01
Fixing plate for replacing an XMJA or XMGB switch with XML switch	_ an	XMLAM01 XML•M05 XMLA004 XML•010 XML•500	XMLZL004	0.11
Lead sealable protective cover to prevent unauthorised access to adjustme screws and fixing screw of switch cover	nt	XMLA XMLB	XMLZL001	0.03
Lead sealable protective cover to prevent unauthorised access to adjustme screws	_ nt	All types	XMLZL011	0.03
Indicator modules Without setting and associated covers, scale 2 LEDs (orange and green)	g ∼ or <del></del> 24/48 V	XMLA/B	XMLZZ024	0.09
(,gg,)	∼ 110/240 V	XMLA/B	XMLZZ120	0.09
With setting so	cale ∼ or == 24/48 V	XMLA	XMLZA024	0.09
		XMLB	XMLZB024	0.09
	~ 110/240 V	XMLA	XMLZA120	0.09
		XMLB	XMLZB120	0.09
Hydraulic block for base mounting directly onto fluid manifold	_ d	All types	XMLZL005	0.24
Female EN 175301-803-A connector (ex-DIN 43650A)	-	XML•••••C11	XZCC43FCP40B	0.03
Adaptor, G 1/4"/G 3/8" male/female	-	All types	XMLZL012	0.13
Replacement parts				
Sealing gasket (pack of 10 gaskets)	For sizes ≥ 300 bar	(XMLA/B/C/D)	XMLZL010	0.01
Diaphragms	_	XML•S35	XMLZL013	0.06
		XML∙S02	XMLZL014	0.04
		XML∙S04	XMLZL015	0.03



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

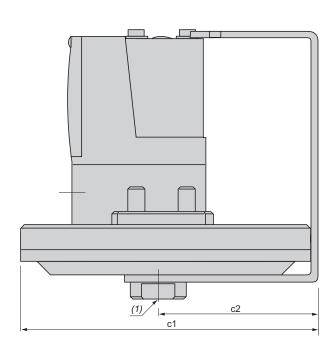
#### XMLeL35, XMLe001, XMLeS



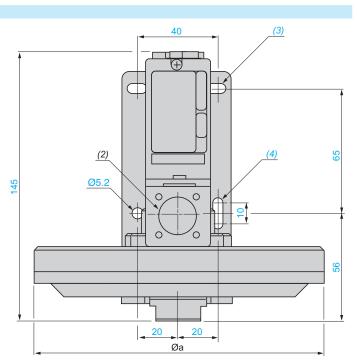


- (1) 1 fluid entry, tapped G 1/4 (female) or 1/4"-18 NPTF (female) (2) 1 electrical connections entry, tapped M20 x 1.5 mm or Pg 13.5 or 1/2"-14 NPT

#### XMLBM03, XMLBL05



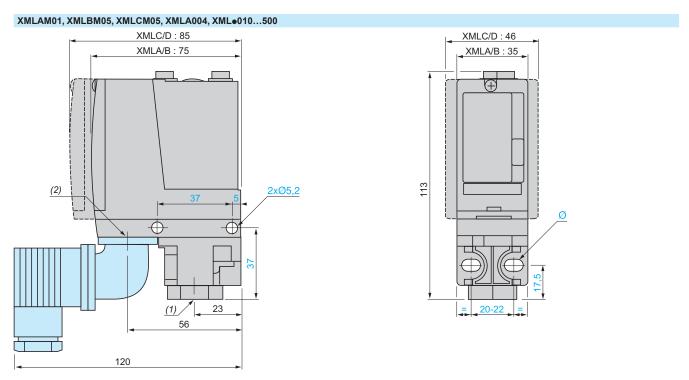
- (1) 1 fluid entry, tapped G 1/4 (female) or 1/4"-18 NPTF (female) (2) 1 electrical connections entry, tapped M20 x 1.5 mm or Pg 13.5 or 1/2"-14 NPT
- (3) 2 elongated holes Ø 10.2 x 5.2 (4) 1 elongated hole Ø 15.2 x 5.2



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

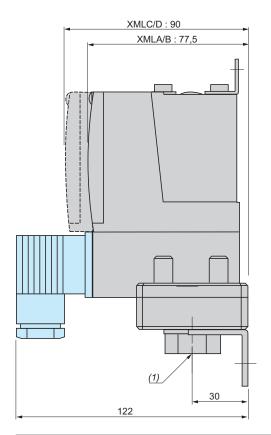
### **Electromechanical pressure** and vacuum switches

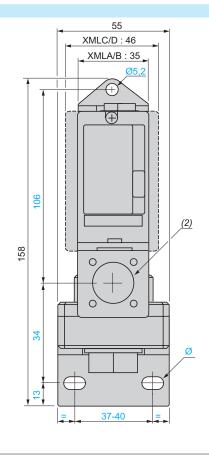
OsiSense XMLA, XMLB, XMLC and XMLD



- (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

#### XML•M02, XML•002, XMLB004, XMLC004, XMLD004





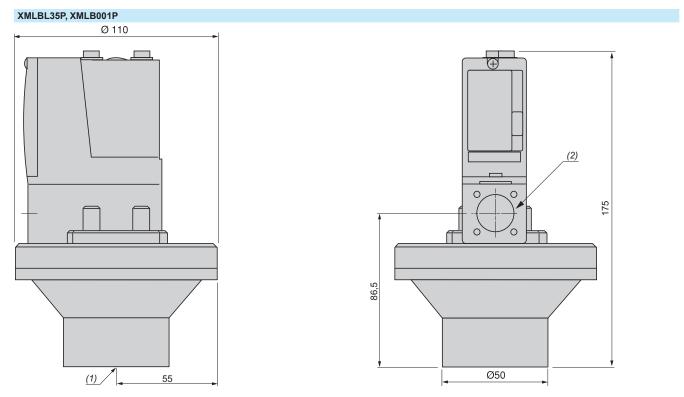
- (1) 1 fluid entry, tapped G 1/4 (female) or 1/4"-18 NPTF (female)
- (2) 1 electrical connections entry, tapped M20 x 1.5 mm or Pg 13.5 or 1/2"-14 NPT
- Ø: 2 elongated holes Ø 10.2 x 5.2

Characteristics: pages 17 to 67

References: pages 18 to 67

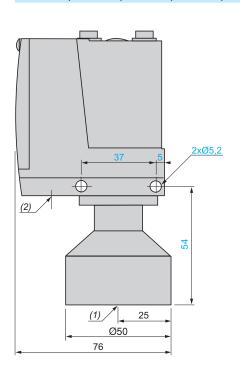
### **Electromechanical pressure** and vacuum switches

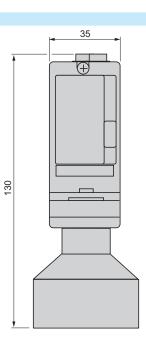
OsiSense XMLA, XMLB, XMLC and XMLD



- (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, XMLullet010P, XMLullet020P, XMLullet035P





- (1) 1 fluid entry, tapped G 11/4 (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

OsiSense XML

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
XMLAM01V••••, XML•M02V••••		(1)						
XMLAM01Teeee, XMLeM02Teeee		(2)						
XMLBM03R••••								
XMLBM03S••••		(3)						
XMLeM05Aeeee		(1)						
XMLeM05Beeee		(1)						
XMLeM05Ceeee		(1)						
XMLBM05P••••		(1)						
XMLBL05R●●●●								
XMLBL05S••••		(3)						
XMLeL35Reese, XMLeS35Reese		(1)						
XMLeL35Seeee		(3)						
XMLBL35Peeee		(1)						
XMLe001Reese		(1)						
XMLe001Seeee		(3)						
XMLB001P••••		(1)						
XMLe002Aeeee								
XMLe002Beese, XMLeS02Beese								
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

	Component materials in contact with fluid								
Pressure switch reference	Zinc alloy	Stainless steel	Brass	Steel	Nitrile	PTFE	FPM, FKM	Aluminium	
XMLB004A••••									
XMLe004Beese, XMLeS04Beese									
XMLe004Ceeee		(3)							
XMLe010Aeeee									
XMLe010Beeee									
XMLe010Ceeee		(2)							
XMLe010Peeee, XMLeS10Aeeee									
XMLe020Aeeee, XMLe035Aeeee									
XMLe020Beese, XMLe035Beese									
XMLe020Ceeee, XMLe035Ceeee		(2)							
XMLe020Peese, XMLe035Peese, XMLeS20Aesee									
XMLe070Deese, XMLe160Deese									
XMLe070Eeeee, XMLe160Eeeee		(4)							
XMLe070Neese, XMLe160Neese		(5)							
XMLe300Deeee									
XMLe300Eeeee		(4)							
XMLe300Neeee		(5)							
XMLe500Deeee									
XMLe500Eeeee									
XML•500N••••4		(5)							

Component materials in contact with fluid

<sup>(2) 1.4404 (</sup>AISI 316L) (3) 1.4305 (AISI 303) (4) 1.4404 (AISI 316L) + 1.4462 (5) 1.4404 (AISI 316L) + 1.4305 (AISI 303)

#### OsiSense XM

For control circuits. OsiSense ACW and ADW

#### **Presentation**

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.

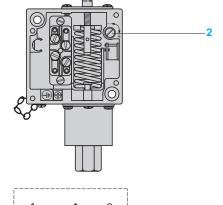
#### Setting, operating principle

#### Pressure switches OsiSense ACW

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

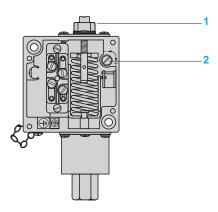
The switching point on rising pressure (high point - PH) is made by adjusting screw 2. This sets the differential between the low and high points, giving a switching point on rising pressure of the displayed low point setting plus the differential setting.

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

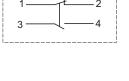
The switching point on rising pressure (high point - PH) is adjusted using screw 1.

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.



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).



For control circuits, OsiSense ACW and ADW

Environment characteristics		A COM (hallanna and said al)	ADVA (nistan angula 1)		
Pressure switch type		ACW (bellows operated)	ADW (piston operated)		
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 M20 x 1.5 mm for ISO cable gland. (for ACW  M119012, ACW  M119012, ADW  M119012 and ADW  M119012).  1 tapped entry for n° 13 (DIN Pg 13.5) cable gland (for ACW  M129012, ACW  M129012, ADW  M129012 and ADW  M129012).			
Contact block characteristics					
Rated operational current  Category AC-15		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 <sup>2</sup> Maximum clamping capacity: 2 x 2.5 mr			



References. characteristics, curves, connections

Pressure switches OsiSense ACW

#### Bellows operated



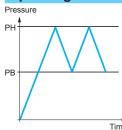


· · · · · · · · · · · · · · · · · · ·			0.071.4 bar (1.0120.3 psi)	0.075.2 bar (1.0175.4 psi)	0.077.6 bar (1.01110.2 psi)		
le-pole contac	t						
ectrical connection With one tapped entry M20 x 1.5 mm for ISO cable gland		ACW3M119012	ACW4M119012	ACW5M119012	ACW1M119012		
		ACW3M129012	ACW4M129012	ACW5M129012	ACW1M129012		
		1.750	•	1.550	1		
le-pole contac	ts						
With one tapped entry M20 x 1.5 mm for ISO cable gland		ACW23M119012	ACW24M119012	ACW25M119012	ACW21M119012		
With one tapped entry for n° 13 cable gland		ACW23M129012	ACW24M129012	ACW25M129012	ACW21M129012		
		1.750	•	1.550			
aracteristics	s not shown	under general o	characteristics (	page 75)			
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)		
? 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)		
ure		2 bar (29 psi)		7 bar (101.5 psi)	17 bar (246.5 psi)		
		Air, oils and other non corrosive fluids, from - 73 to + 125°C (1)					
		1 x 10° operating cycles (average value, depending on application)					
ACW•M119012, A	CW2•M119012			nd.			
ACW•M129012, ACW2•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				
	le-pole contact Vith one tapped en 1/20 x 1.5 mm for I Vith one tapped en 1/3 cable glar Vith one tapped en 1/20 x 1.5 mm for I Vith one tapped en 1/20 x 1.5 mm for I Vith one tapped en 1/3 cable glar Vith one tapped en 1/3 cable glar CO switches CO switches	Ile-pole contact  Vith one tapped entry  120 x 1.5 mm for ISO cable gland  Vith one tapped entry  or n° 13 cable gland  Ile-pole contacts  Vith one tapped entry  120 x 1.5 mm for ISO cable gland  Vith one tapped entry  120 x 1.5 mm for ISO cable gland  Vith one tapped entry  or n° 13 cable gland  Aracteristics not shown  CO switches  Min.  Max.  ICO switches  Min.  Max.  ICO switches  Min.  Max.	(1.0110.15 psi)   (1.011010.15 psi)   (1.0110.15 psi)   (1.011010.15 psi)   (1.0110.15 psi)   (1.011010.15 psi)   (1.0110.15	(1.0110.15 psi)   (1.0120.3 psi)   (1.	(1.0110.15 psi)   (1.0120.3 psi)   (1.0175.4 psi)   (1.		

(1) See "Component materials of units in contact with the fluid", page 75.

**Contact block connections** 

#### **Operating curve**





--- Adjustable value

Other versions

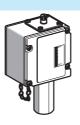
Pressure switches with alternative tapped cable entries: NPT, etc. Please consult our Customer Care Centre.

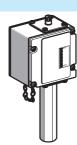
# Electromechanical pressure switches OsiSense XM For control circuits, OsiSense ACW

Sizes 0.70 to 131 bar (10.15 to 1900 psi) Adjustable differential, for regulation between 2 thresholds Fluid connection G 1/4 (female)

#### **Bellows operated**







1.412 bar (20.3174 psi)	0.718 bar (10.15261 psi)	0.721 bar (10.15304.5 psi)	5.234 bar (75.4493 psi)	1069 bar (1451000 psi)	24131 bar (3481900 psi)			
References								
Switches with 1 C	O single-pole contact							
ACW8M119012	ACW9M119012	ACW2M119012	ACW6M119012	ACW7M119012	ACW10M119012			
ACW8M129012	ACW9M129012	ACW2M129012	ACW6M129012	ACW7M129012	ACW10M129012			
1.550		2.100	2.100					
Switches with 2 C	O single-pole contacts	·						
ACW28M119012	-	ACW22M119012	ACW26M119012	-	ACW20M119012			
ACW28M129012	ACW29M129012	ACW22M129012	ACW26M129012	ACW27M129012	ACW20M129012			
1.550		2.100		I				

Complementary characteristics not shown under general characteristics (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 corrosive fluids, from - 73 to + 125°C (1)

1 x 10<sup>6</sup> operating cycles (average value, depending on application)

1 tapped entry M20 x 1.5 mm for ISO cable gland. Clamping capacity 7 to 13 mm

1 tapped entry for n° 13 cable gland, conforming to NF C 68-300 (DIN Pg 13.5). Clamping capacity 9 to 13 mm

Other versions

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

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

#### Piston operated, with drainage hole (1)



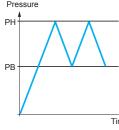
			28210 bar (4063045 psi)	38340 bar (5514930 psi)		
gle-pole contact						
		ADW3M119012	ADW4M119012	ADW7M119012		
With one tapped entry for n° 13 cable gland		ADW3M129012	ADW4M129012	ADW7M129012		
		1.880	1			
le-pole contacts	\$					
With one tapped entry for n° 13 cable gland		ADW23M129012	ADW24M129012	ADW27M129012		
		1.880				
aracteristics	not shown	under general chara	acteristics (page 75)			
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)		
sure		690 bar (10,000 psi)				
		Oils (including synthetic) only, from - 30°C to + 125°C (2) (3)				
		1 x 10 <sup>6</sup> operating cycles (average value, depending on application)				
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				
	With one tapped e M20 x 1.5 mm for l With one tapped e for n° 13 cable gla  gle-pole contacts With one tapped e for n° 13 cable gla  aracteristics 1 CO switches  2 CO switches  ADW  ADW  M119012	With one tapped entry M20 x 1.5 mm for ISO cable gland With one tapped entry for n° 13 cable gland  gle-pole contacts With one tapped entry for n° 13 cable gland  aracteristics not shown 1 CO switches Min.  Max.  2 CO switches Min.  Max.  ADW M119012  ADW M129012,	(1351000 psi)     (135	(1351000 psi)   (4063045 psi)   (4063045 psi)   (1351000 psi)   (4063045 psi)   (1351000 psi)   (4063045 psi)   (1351000		

<sup>(1)</sup> 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.

#### **Operating curve**



#### **Contact block connections**

- Adjustable value

Other versions

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

#### Pressure switches OsiSense ADW

#### Piston operated, with Quad-Ring piston seal

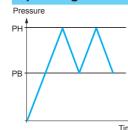


Jacobs			9.369 bar (1351000 psi)	28210 bar (4063045 psi)	38340 bar (5514930 psi)		
References							
Switches with 1 CO sing	le-pole contact						
Electrical connection	With one tapped 6 M20 x 1.5 mm for		ADW5M119012	ADW6M119012	-		
	With one tapped of for n° 13 cable gla		ADW5M129012	ADW6M129012	ADW7S1M129012		
Weight (kg)			1.880				
Switches with 2 CO sing	le-pole contact	s					
Electrical connection	With one tapped entry for n° 13 cable gland		ADW25M129012	ADW26M129012	-		
Weight (kg)			1.880	1	,		
Complementary ch	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 <sup>6</sup> 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••M12901	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				
				of units in contact with the fluid			

(1) See "Component materials of units in contact with the fluid", page 75.

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

#### **Operating curve**



#### **Contact block connections**



- Adjustable value

Other versions

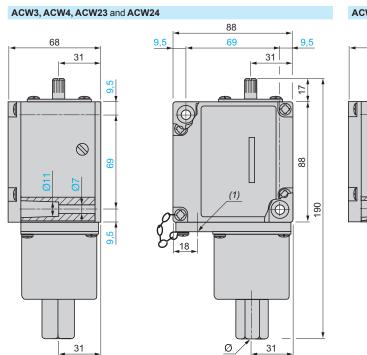
Pressure switches with alternative tapped cable entries: NPT, etc. Please consult our Customer Care Centre.

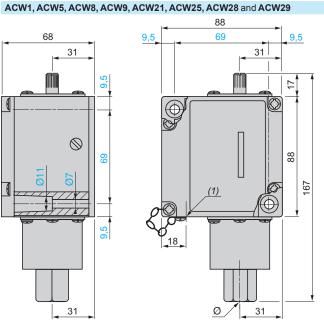
page 81



OsiSense XM

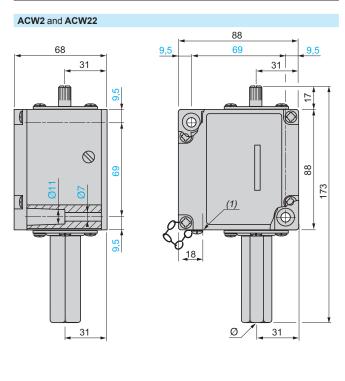
For control circuits, OsiSense ACW

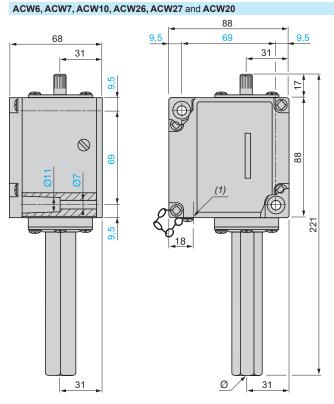




(1) Tapped entry for  $n^{\circ}$  13 or ISO M20 cable gland, depending on model Ø: G 1/4 (female)

(1) Tapped entry for  $n^{\circ}$  13 or ISO M20 cable gland, depending on model Ø: G 1/4 (female)





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

(1) Tapped entry for  $n^{\circ}$  13 or ISO M20 cable gland, depending on model Ø: G 1/4 (female)

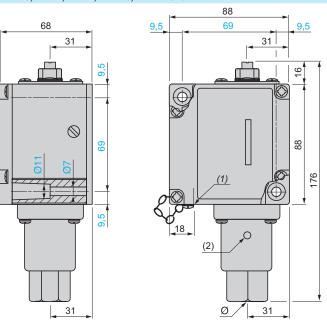
Characteristics: pages 75 to 77

References: pages 76 and 77



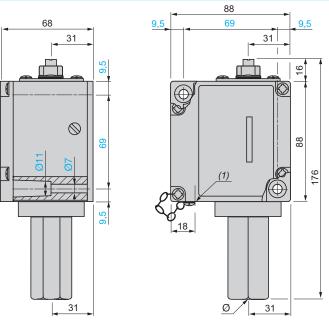
For control circuits, OsiSense ADW

#### 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)

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.

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

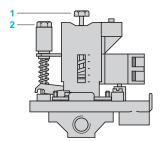
When setting pressure switches XMX or XMA, adjust the switching point on rising pressure (PH) first and then the switching point on falling pressure (PB).

#### 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.





For control circuits, OsiSense XMX and XMA

Environment characteristics		CC 150/51/00045 5 4
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 cove 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 characteristics		
Rated operational characteristics		~ 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 voltage	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 mm² Maximum clamping capacity: 2 x 2.5 mm²
Electrical durability		AC supply 50/60Hz, Ith = 10 A Inductive circuit, utilisation category AC-15, 3 A/240 V: 1 million operating cycles







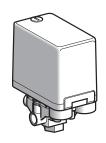
OsiSense XMX for control circuits

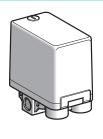
Sizes 6 to 25 bar (87 to 362.5 psi)

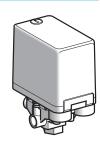
Adjustable differential, for regulation between 2 thresholds Switches with 1 CO single-pole contact

#### Pressure switches OsiSense XMX (internal setting screw)







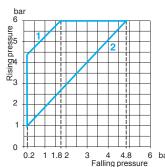


Adjustable range of s (Rising pressure)	witching point (PH)	16 bar (14.587 psi)	1.312 bar (18.85174 psi)	3.525 bar (50.75362.5 psi)	16 bar (14.587 psi)	1.312 bar (18.85174 psi)	3.525 bar (50.75362.5 psi)
Fluid connection		G 1/4 (female)			4 x G 1/4 (female	*)	
References							
Switches with bla	ck opaque 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 gener	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 <sup>6</sup> operating o	cycles				
Cable entry		2 entries tapped fo	or n° 13 cable gland	, conforming to NF (	C 68-300 (DIN Pg	13.5)	
Pressure switch type	1	Diaphragm					

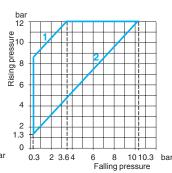
(1) Component materials of units in contact with the fluid, see page 83.

#### **Operating curves**

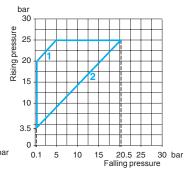
XMXA06

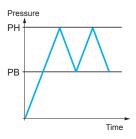






#### XMXA25





--- Adjustable value

- 1 Maximum differential
- 2 Minimum differential
- 1 Maximum differential
- 2 Minimum differential
- 1 Maximum differential
- 2 Minimum differential

## Connections

Other versions

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

Accessories page 86

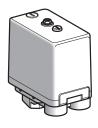
ories: Dimensions: 6 page 87

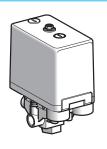


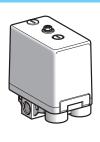
## **Electromechanical pressure switches**OsiSense XMA for control circuits

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)







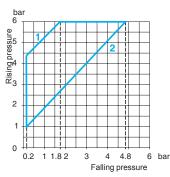


Adjustable range of s	witching point (PH)	16 bar	1.312 bar	3.525 bar	16 bar	1.312 bar	3.525 bar
(Rising pressure)	3,111,7	(14.587 psi)	(18.85174 psi)	(50.75362.5 psi)	(14.587 psi)	(18.85174 psi)	(50.75362.5 psi)
Fluid connection		G 1/4 (female)			4 x G 1/4 (female	)	
References							
Switches with blac	k opaque cover						
Fluids controlled	Air, fresh water, sea water (1)	XMAH06L2135	XMAH12L2135	XMAH25L2135	XMAH06L2435	XMAH12L2435	XMAH25L2435
Switches with trans	sparent cover						
Fluids controlled	Air, fresh water, sea water (1)	XMAV06L2135	XMAV12L2135	XMAV25L2135	XMAV06L2435	XMAV12L2435	XMAV25L2435
Weight (kg)		0.430		0.650	0.430		0.650
Complementar	y characteristic	s not shown เ	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 <sup>6</sup> operating c	ycles				
Cable entry		2 entries tapped fo	r n° 13 cable gland	, conforming to NF	C 68-300 (DIN Pg	13.5)	
Pressure switch type		Diaphragm					

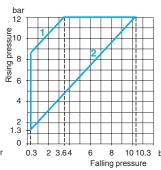
(1) Component materials of units in contact with the fluid, see page 83.

#### **Operating curves**

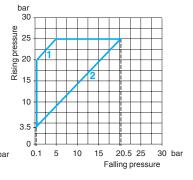
XMA•06••••

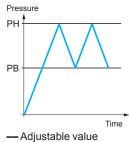


XMA•12••••



#### XMA•25••••





**Connections** 

- 1 Maximum differential
- 2 Minimum differential
- 1 Maximum differential
- 2 Minimum differential
- Maximum differential
- 2 Minimum differential

Other versions

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



## **Electromechanical pressure switches**OsiSense XMX and XMA for control circuits

Accessories and replacement parts











XMPZ3●

References	5		
Description		Reference	Weight kg
Fixing bracket		XMAZL001	0.035
	nent knob, Ø 36 mm nt screws to facilitate setting	XMLZL003	0.010
13P cable gland	With anti pull-out ring (for cable Ø 69 mm)	DE9PM1201	0.005
	Without anti pull-out ring (for cable Ø 69 mm)	DE9PM1202	0.005
	With anti pull-out ring (for cable Ø 912.5 mm)	DE9PM1203	0.005

Description	For pressure switch	Reference	Weight kg
Diaphragms	Size 6 bar	XMPZ31	0.005
	Size 25 bar	XMPZ33	0.005

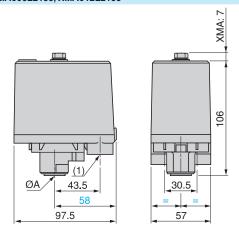
OsiSense XM

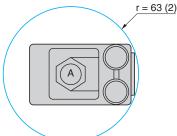
For control circuits, OsiSense XMX and XMA

Accessories and replacement parts



XMXA06L2135, XMXA12L2135 XMA•06L2135, XMA•12L2135



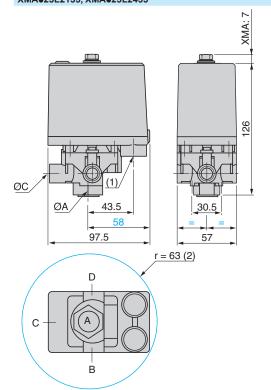


ØA = G 1/4 (female)

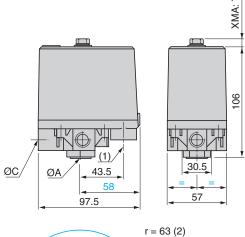
(1) 2 tapped entries for n° 13 cable gland

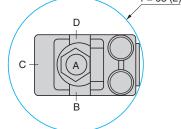
(2) Minimum clearance zone for screwing-on pressure switch at point A

XMXA25L2135, XMXA25L2435 XMAe25L2135, XMAe25L2435



XMXA06L2435, XMXA12L2435 XMA•06L2435, XMA•12L2435



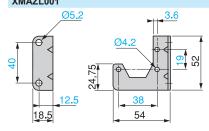


 $\emptyset A = \emptyset B = \emptyset C = \emptyset D = G 1/4 \text{ (female)}$ 

(1) 2 tapped entries for n° 13 cable gland

(2) Minimum clearance zone for screwing-on pressure switch at point A

## Fixing bracket XMAZL001



**XM**●•25L2135: ØA only = G 1/4 (female)

XM••25L2435: ØA = ØB = ØC = ØD = G 1/4 (female)

(1) 2 tapped entries for n° 13 cable gland

(2) Minimum clearance zone for screwing-on pressure switch at point A



#### 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 **FoGoNE**.

#### Setting

#### Pressure switches with fixed differential (FTG)

Only the switching point on rising pressure is adjustable.

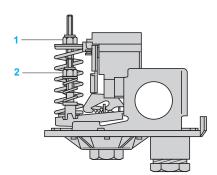
#### Switching point on rising pressure

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.



For power circuits, OsiSense FTG, FSG and FYG

Post of the Control o			ETO		F00	
Pressure switch type			FTGeNE		FSGe and FYGe FSGeNE and FYG	GeNE
Conformity to standards			C€, IEC/EN 60730			
Protective treatment			Standard version: '	'TC"		
Ambient air temperature		°C	For operation: 0+ 45. For storage: - 30+ 80			
Fluids controlled			Fresh water, sea w	rater (0+ 70°C)		
Materials				resistant to mechanic als in contact with fluid		ed steel nitrile
Operating position			·			
Operating position			All positions			
Electric shock protection			Class I conforming	to IEC 536		
Degree of protection FTGe, FSGe and conforming to IEC/EN 60529 FYGe			IP 20			
	FTGeNE, FSGeNE and FYGeNE		IP 65			
Operating rate			600			
Repeat accuracy	Repeat accuracy					
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) o	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)			.5)
Contact block characteris	tics					
Rated operational characteristics			Ie = 10 A, Ue = $\sim$ 2	250 V conforming to El	N 60730-1	
Power ratings of controlled motors	Voltage		$\sim$ 2-pole 1-phase	∼ 2-pole 3-phase	∼ 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 mm², max: 2 x 2 mm²			
Electrical durability at an operating rate of 600 operating cycles/hour		Op.	40 000		100 000	

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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

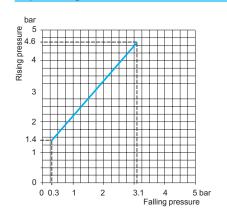
Fluid connection	G 1/4 (female)	R 1/4 (male)	G 1/4 (female)	R 1/4 (male)

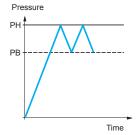
Adjustable range of switch (Rising pressure)	ole range of switching point (PH) ressure)		1.44.6 bar (20.366.7 psi)		
Degree of protection conforming to IEC/EN 60529	)	IP 20		IP 65	
References					
Fluids controlled	Fresh water, sea water, from 0°C to + 70°C (1)	FTG2	FTG9	FTG2NE	FTG9NE
Weight (kg)		0.340			

weight (kg)		0.340		
Complementary cha	aracteristics not show	n under general characterist	ics (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 <sup>5</sup> operating cycles		
Cable entry		2 cable entries, with grommet	2 entries with 13P cable gland (DIN Pg 13.5)	
Clamping capacity	Clamping capacity		9 to 13 mm	
Pressure switch type		Diaphragm		

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

Operating curves Connections







- Adjustable value
- ---- Non adjustable value

## 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

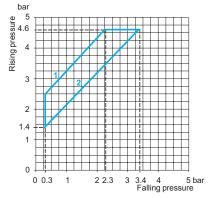
Fluid connection	G 1/4 (female)	R 1/4 (male)	G 1/4 (female)	R 1/4 (male)

Adjustable range of switching point (PH) (Rising pressure)		1.44.6 bar (20.3.	66.7 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)	FSG2	FSG9		FSG2NE (2)	FSG9NE
Weight (kg)		0.340	*			•

· · · · · · · · · · · · · · · · · · ·		vn under general characteris	(page 69)		
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)	2.2 bar (31.9 psi)		
	Max. at high setting	2.3 bar (33.35 psi)	2.3 bar (33.35 psi)		
	Min. at low setting	1 bar (14.5 psi)	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)	1.2 bar (17.4 psi)		
Maximum permissible pressure	Per cycle	5.75 bar (83.38 psi)	5.75 bar (83.38 psi)		
	Accidental	8 bar (116 psi)	8 bar (116 psi)		
Destruction pressure		20 bar (290 psi)			
Mechanical life		1 x 10 <sup>6</sup> operating cycles	1 x 10 <sup>6</sup> operating cycles		
Cable entry		2 cable entries, with grommet	2 entries with 13P cable gland (DIN Pg 13.5)		
Clamping capacity		-	9 to 13 mm		
Pressure switch type		Diaphragm			

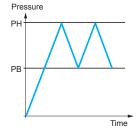
<sup>(1)</sup> Component materials of units in contact with the fluid, see page 89.

#### Operating curves Connections





2 Minimum differential



- Adjustable value





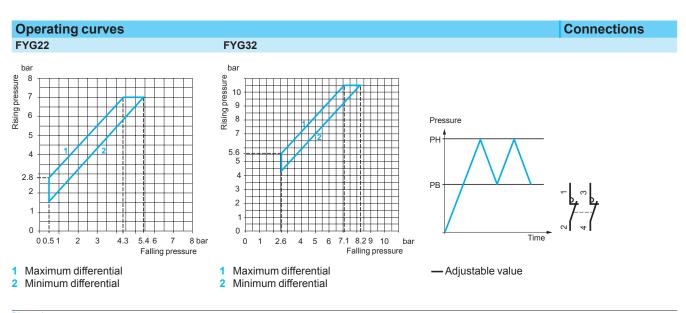
<sup>(2)</sup> Variant: for a G 3/8 female fluid entry that pivots throughout 360°, select the **FSG2NEG**.

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

Fluid connection		G 1/4 (female)			
Adjustable range of switching (Rising pressure)	g point (PH)	2.87 bar (40.6101	.5 psi)	5.610.5 bar (81.2	152.3 psi)
Degree of protection conforming to EN/IEC 60529		IP 20	IP 65	IP 20	IP 65
References					
Fluids controlled	Fresh water, sea water, from 0°C to + 70°C (1)	FYG22 (2)	FYG22NE	FYG32 (3)	FYG32NE
Weight (kg)		0.340			
Complementary cha	racteristics not shown	under general o	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 <sup>6</sup> operating cycle	S	•	
Cable entry		2 cable entries, with gr	ommet		

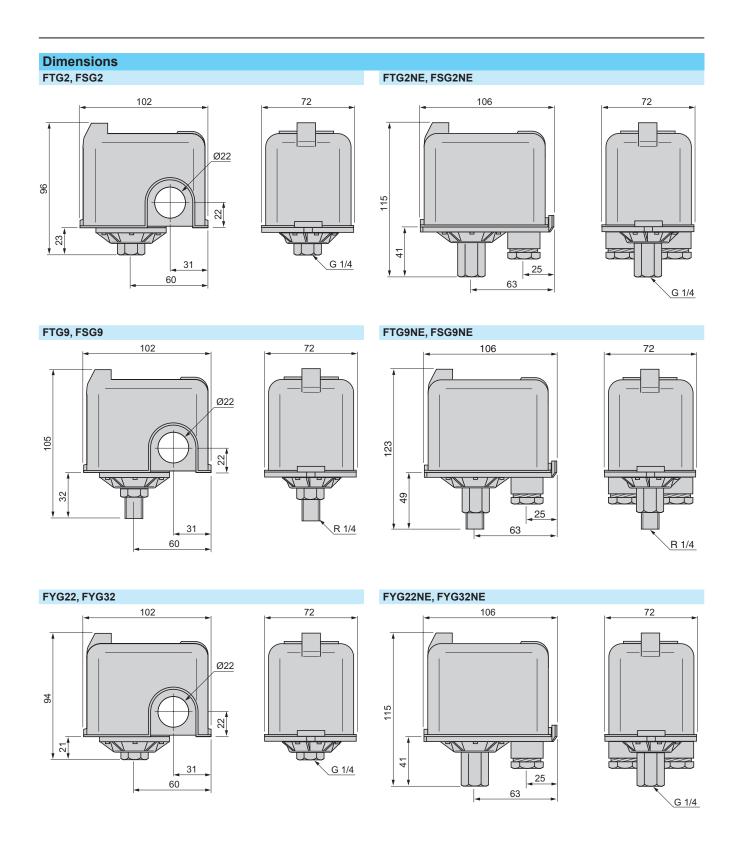
- (1) Component materials of units in contact with the fluid, see page 89.
- $(2) \ \textit{Variant: for a 2.8 to 7 bar, IP 20, pressure switch with R 1/4 (male) fluid entry, select the \textbf{FYG29.} }$
- (3) Variant: for a 5.6 to 10.5 bar, IP 20, pressure switch with R 1/4 (male) fluid entry, select the FYG39.



Diaphragm

Pressure switch type

For power circuits, OsiSense FTG, FSG and FYG



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:

- $\blacksquare$  Straight, instant connection, decompression valve (connection by Ø 6 mm plastic tube).
- $\blacksquare$  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

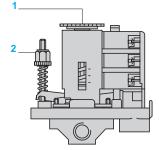
The switching point on rising pressure (PH) is set by adjusting the screw-nut or knurled knob 1.

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).



OsiSense XM For power circuits, OsiSense XMP

Environment characteristics				
Conformity to standards		C€, 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	r (0+ 70°C)	
Materials		Case: polyamide impregnated with fibreglass Component materials in contact with fluid: chromated zinc alloy (fluid entry) canvas covered nitrile (diaphragm)		
Operating position		All positions		
Vibration resistance		3 gn (10500 Hz) conforming to IEC 60068-2-6		
Shock resistance		50 gn, conforming to IEC 60068-2-27		
Electric shock protection		Class I conforming to IEC 60536		
Degree of protection		IP 54 conforming to IEC/EN 60529 or IP 65 for universal 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 228		
Electrical connection		2 tapped entries for n° 13	(DIN Pg 13.5) cable gland	I
Contact block characteristics				
Rated insulation voltage	V	Ui = 500 conforming to IE	C/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	n
Resistance across terminals	mΩ	≤ 25 conforming to NF C	93-050 method A or IEC 2	55-7 category 3
Terminal referencing		Conforming to CENELEC	EN 50013	
Short-circuit protection		Cartridge fuse type Am		
Connection		Screw clamp terminals. N	linimum clamping capacit	y: 2 x 4 mm²
			Number of energting ave	loo
Electrical durability		Power	Number of operating cyc	162
Electrical durability Operating rate: 600 operating cycles/hour		Power kW	$\sim$ 400 V, 3-phase	~ 230 V, 3-phase
Electrical durability			$\sim$ 400 V, 3-phase	
Electrical durability Operating rate: 600 operating cycles/hour		kW		$\sim$ 230 V, 3-phase

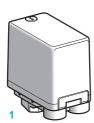


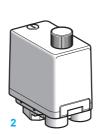
OsiSense XMP, IP 54

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 point (PH)	16 bar (14.587 psi)	
(Rising pressure)		
Type of contact	2-pole 2 NC	3-pole 3 NC

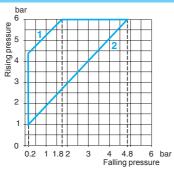
References (1)		
Switches without decompression valve		
Bare case 1	XMPA06B2131	XMPA06C2131
Case with reset knob 2	XMPB06B2131	-
Case with On/Off knob 2	XMPC06B2131	XMPC06C2131
Weight (kg)	0.430	
Switches with straight decompression valve, instant of	connection	
Bare case 1	XMPD06B2131	XMPD06C2131
Case with On/Off knob 2	XMPE06B2131	XMPE06C2131
Weight (kg)	0.450	

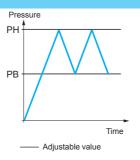
Complementary cha	racteristics not shown	under general characteristics (page 95)
Possible differential	Min. at low setting	0.8 bar (11.6 psi)
(subtract from PH to give PB)	Min. at high setting	1.2 bar (17.4 psi)
	Max. at high setting	4.2 bar (60.9 psi)
Destruction pressure		30 bar (435 psi)
Mechanical life		1 million operating cycles
Cable entry		2 entries tapped for n° 13 cable gland, conforming to NF C 68-300 (DIN Pg 13.5)
Pressure switch type		Diaphragm

<sup>(1)</sup> References for individually packaged switches. Also available packaged in lots of 10.

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

#### **Operating curves**

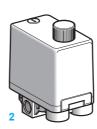


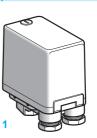


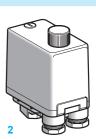
- 1 Maximum differential
- 2 Minimum differential

4 x G 1/4 (female)

#### G 3/8 (female)







16 bar (14.587 psi)	16	bar	(14.5	87	(iza	
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2-pole 2 NC 3-pole 3 NC 3-pole 3 NC

References		
Switches without decompression valve		
-	XMPA06B2242	XMPA06C2242
-	XMPB06B2242	-
-	XMPC06B2242	XMPC06C2242
-	0.430	
Switches with straight decompression valve, ins	stant connection	
-	XMPD06B2242	XMPD06C2242
XMPE06C2431	-	XMPE06C2242
0.450		

Complementary characteristics not shown under g	cheral characteristics (page 95)	
0.8 har (11.6 nsi)		

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 to NF C 68-300 (DIN Pg 13.5) 2 entries incorporating n° 13 plastic cable gland (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.

XMPeeeCeee

#### **Terminal connections**

XMPeeeBeeee





### References. characteristics (continued)

Adjustable range of switching point (PH)

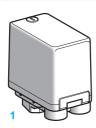
## **Electromechanical pressure switches**

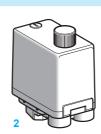
OsiSense XMP, IP 54

Size 12 bar (174 psi)

Adjustable differential, for regulation between 2 thresholds Switches with 2-pole 2 NC or 3-pole 3 NC contact

G 1/4 (female) Fluid connection





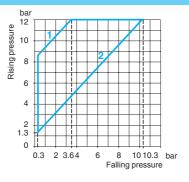
(Namy pressure)			
Type of contact	2-pole 2 NC	3-pole 3 NC	
References (1)			
Switches without decompression valve			
Bare case 1	XMPA12B2131	XMPA12C2131	
Case with reset knob 2	XMPB12B2131	-	
Case with On/Off knob 2	XMPC12B2131	XMPC12C2131	
Weight (kg)	0.430		
Switches with straight decompression valve	, instant connection		
Bare case 1	XMPD12B2131	XMPD12C2131	
Case with On/Off knob 2	XMPE12B2131	XMPE12C2131	
Weight (kg)	0.450		
Switches with straight decompression valve	, olive connection		
Case with On/Off knob 2	XMPR12B2131	XMPR12C2131	

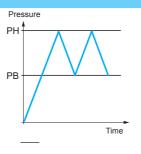
1.3...12 bar (18.85...174 psi)

Weight (kg)		0.450		
Complementary cha	aracteristics not shown	under general characteristics (	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)		
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		

(1) References for individually packaged switches. Also available packaged in lots of 10. To order, add the letter C to the reference selected from above. Example: reference for lot of 10 pressure switches XMPA12B2131 in one package becomes XMPA12B2131C.

#### Operating curves

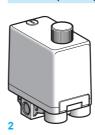


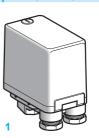


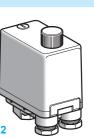
- 1 Maximum differential
- 2 Minimum differential

4 x G 1/4 (female)

#### G 3/8 (female)







1.3...12 bar (18.85...174 psi)

2-pole 2 NC 3-pole 3 NC 2-pole 2 NC 3-pole 3 NC

References			
Switches without decomposition	ression valve		
-		XMPA12B2242	XMPA12C2242
-		XMPB12B2242	-
XMPC12B2431	-	XMPC12B2242	XMPC12C2242
0.430			

Switches with straight decompression valve, instant connection						
-	XMPD12C2431	XMPD12B2242	XMPD12C2242			
XMPE12B2431	XMPE12C2431	XMPE12B2242	XMPE12C2242			

Switches with straight decompression valve, olive connection

Complementary characteristics not shown under general characteristics (page 95) 1 bar (14.5 psi)

1.7 bar (24.6 psi) 8.4 bar (121.8 psi)

30 bar (435 psi) 1 million operating cycles

2 entries incorporating n° 13 plastic cable gland (DIN Pg 13.5) Clamping capacity 9 to 13 mm 2 entries tapped for n° 13 cable gland, conforming to NF C 68-300 (DIN Pg 13.5)

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** 

XMP
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page 105

### References, characteristics (continued)

## **Electromechanical pressure switches**

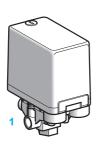
OsiSense XMP, IP 54

Size 25 bar (362.5 psi)

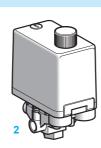
Adjustable differential, for regulation between 2 thresholds Switches with 2-pole 2 NC or 3-pole 3 NC contact

Fluid connection

Adjustable range of switching point (PH)



G 1/4 (female)



(Rising pressure)	
Type of contact	2-pole 2 NC
References	
Switches without decompression 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 decompression valve, olive co	nnection

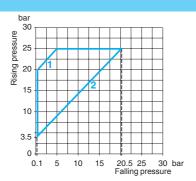
3.5...25 bar (50.75...362.5 psi)

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		

Diaphragm

#### **Operating curves**

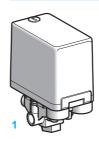
Cable entry Pressure switch type

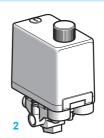


2 entries tapped for n° 13 cable gland, conforming to NF C 68-300 (DIN Pg 13.5)

- 1 Maximum differential
- 2 Minimum differential

G 1/4 (female)





3.5...25 bar (50.75...362.5 psi)

3-pole 3 NC

#### References

Switches without decompression valve

XMPA25C2131

#### XMPC25C2131

Switches with straight decompression valve, olive connection

XMPR25C2131

#### Complementary characteristics not shown under general characteristics (page 95)

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 NF C 68-300 (DIN Pg 13.5)

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**

XMP•••B••••

XMPeeeCeeee



OsiSense XMP, IP 65

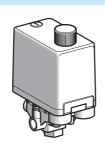
Sizes 6 to 25 bar (87 to 362.5 psi)

Adjustable differential, for regulation between 2 thresholds Switches with 2-pole 2 NC or 3-pole 3 NC contact

#### G 1/4 (female) Fluid connection





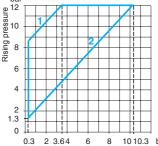


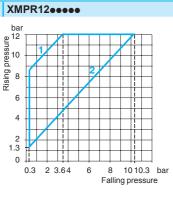
Adjustable range of switching point (PH) (Rising pressure)		16 bar (14.58	16 bar (14.587 psi)		1.312 bar (18.85174 psi)		3.525 bar (50.75362.5 psi)	
Type of contact		2-pole 2 NC	3-pole 3 NC	2-pole 2 NC	3-pole 3 NC	2-pole 2 NC	3-pole 3 NC	
References								
Switches with str	aight decompression	on valve, olive co	nnection					
Case with On/Off knd	b	XMPR06B2133	XMPR06C2133	XMPR12B2133	XMPR12C2133	XMPR25B2133	XMPR25C2133	
Weight (kg)		0.450			0.670			
Complementa	ry characteristi	cs not shown	under gene	ral 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						

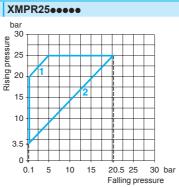
### **Operating curves**

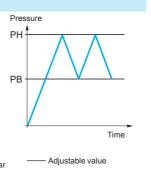
### XMPR06

# 0.2 1 1.8 2 3 4 4.8 6 bar Falling pressure



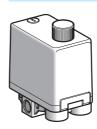


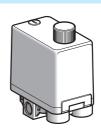


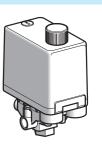


- 1 Maximum differential
- 2 Minimum differential
- 1 Maximum differential 2 Minimum differential
- 1 Maximum differential 2 Minimum differential

#### 4 x G 1/4 (female)







16 bar (14.587 psi)		1.312 bar (18.85	1.312 bar (18.85174 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	ht decompression valve, ol	live connection				
XMPR06B2433	XMPR06C2433	XMPR12B2433	XMPR12C2433	XMPR25B2433	XMPR25C2433	
0.450			•	0.670	•	
Complementary	characteristics not sh	nown under genera	al characteristic	<b>S</b> (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		8.4 bar (121.8 psi)	(121.8 psi) 20 bar (290 psi)			
30 bar (435 psi)				100 bar (1450 psi)		
1 million operating cycles						
2 entries tapped for n° 13	cable gland, conforming to NF C	68-300 (DIN Pg 13.5)				

Diaphragm Other versions

By screw-nut

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

#### **Terminal connections**

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Dimension page 105

For power circuits, OsiSense XMP Accessories and replacement parts











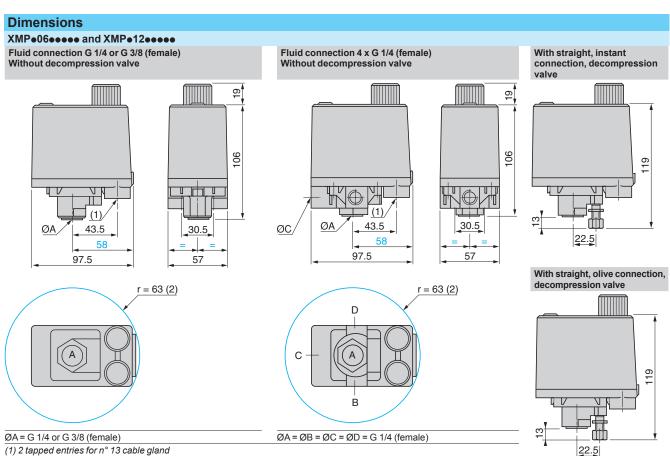
XMPZ3●

References			
Description		Reference	Weight kg
Fixing bracket		XMAZL001	0.035
Knurled adjustment knifits over adjustment scree		XMPMDR01	0.010
13P cable gland	With anti pull-out ring (for cable Ø 6…9 mm)	DE9PM1201	0.005
	Without anti pull-out ring (for cable Ø 69 mm)	DE9PM1202	0.005
	With anti pull-out ring (for cable Ø 912.5 mm)	DE9PM1203	0.005

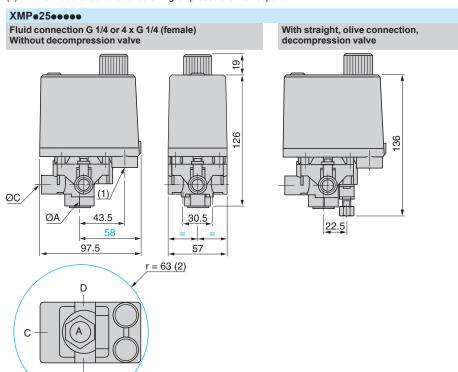
Description	For pressure switch	Sold in lots of	Unit reference	Weight kg
Diaphragms	Size 6 bar	50	XMPZ31	0.005
	Size 25 bar	50	XMPZ33	0.005

OsiSense XM

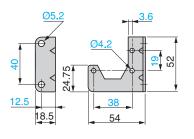
For power circuits, OsiSense XMP Accessories and replacement parts



(2) Minimum clearance zone for screwing-on pressure switch at point A



#### Fixing bracket XMAZL001



XMP•25•21••: ØA only = G 1/4 (female)

 $XMP \bullet 25 \bullet 24 \bullet \bullet$ :  $\emptyset A = \emptyset B = \emptyset C = \emptyset D = G 1/4 (female)$ 

(1) 2 tapped entries for n° 13 cable gland

(2) Minimum clearance zone for screwing-on pressure switch at point A

## **Product reference index**

Α		FSG2NE	91	XMLA020C2S12	44	XMLB004A2C11	37	XMLB500N2S12	6
ACW1M119012	76	FSG9	91	XMLA020P2C11	44	XMLB004A2S12	37	XMLBL05R2S12	2
ACW1M129012	76	FSG9NE	91	XMLA020P2S12	44	XMLB004A2S13	37	XMLBL05S2S12	2
ACW2M119012	77	FTG2	90	XMLA035A2C11	48	XMLB004B2C11	37	XMLBL35P2C11	2
ACW2M129012	77	FTG2NE	90	XMLA035A2S12	48	XMLB004B2S12	37	XMLBL35P2S12	2
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ACW4M129012	76	FYG22NE	92	XMLA035D2312	48	XMLB010A2S12	41	XMLBL35S2C11	2
ACW5M119012	76	FYG32	92	XMLA035C2C11	48	XMLB010A2S12 XMLB010A2S13	41	XMLBL35S2S12	2
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ACW10M129012 ACW20M119012	77 77	XMAV12L2135	85	XMLA160D2C11	56	XMLB020A2S13	45	XMLBM05A2S13	2
	77	XMAV12L2135 XMAV12L2435	85	XMLA160D2S12	56	XMLB020B2C11	45	XMLBM05B2C11	2
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