

Electromechanical pressure switches

OsiSense XM

For power circuits, OsiSense XMP

Presentation

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

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

Equipment fitted to the various models

Case

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

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

- 2 degrees of protection:
 - IP 54,
 - IP 65.

Decompression valve

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

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

Setting

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

Switching point on rising pressure

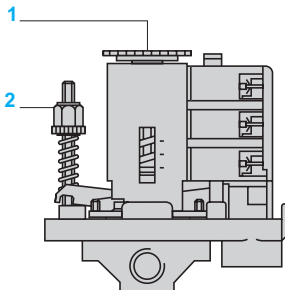
The switching point on rising pressure (PH) is set by adjusting the screw-nut or knurled knob **1**.

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

Switching point on falling pressure

The switching point on falling pressure is set by adjusting screw-nut **2**.

Tighten nut **2** to reduce the low point switching value (increase in differential).



Environment characteristics																	
Conformity to standards		CE, IEC/EN 60947-4-1															
Product certifications		EAC															
Ambient air temperature	°C	For operation: - 25...+ 70 For storage: - 40...+ 70															
Fluids controlled		Air, fresh water, sea water (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 (10...500 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															
Contact block characteristics																	
Rated insulation voltage	V	Ui = 500 conforming to IEC/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-pole 3 NC contact, snap action															
Resistance across terminals	mΩ	≤ 25 conforming to NF C 93-050 method A or IEC 255-7 category 3															
Terminal referencing		Conforming to CENELEC EN 50013															
Short-circuit protection		Cartridge fuse type Am															
Connection		Screw clamp terminals. Minimum clamping capacity: 2 x 4 mm ²															
Electrical durability		<table border="1"> <thead> <tr> <th>Power</th> <th colspan="2">Number of operating cycles</th> </tr> <tr> <th>kW</th> <th>~ 400 V, 3-phase</th> <th>~ 230 V, 3-phase</th> </tr> </thead> <tbody> <tr> <td>1.5</td> <td>1 000 000</td> <td>600 000</td> </tr> <tr> <td>2.2</td> <td>700 000</td> <td>–</td> </tr> <tr> <td>3</td> <td>500 000</td> <td>–</td> </tr> </tbody> </table>	Power	Number of operating cycles		kW	~ 400 V, 3-phase	~ 230 V, 3-phase	1.5	1 000 000	600 000	2.2	700 000	–	3	500 000	–
Power	Number of operating cycles																
kW	~ 400 V, 3-phase	~ 230 V, 3-phase															
1.5	1 000 000	600 000															
2.2	700 000	–															
3	500 000	–															
Operating rate: 600 operating cycles/hour Load factor: 0.4																	

Electromechanical pressure switches

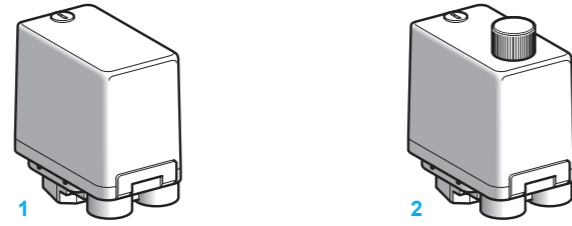
OsiSense XMP, IP 54

Size 6 bar (87 psi)

Adjustable differential, for regulation between 2 thresholds

Switches with 2-pole 2 NC or 3-pole 3 NC contact

Fluid connection | G 1/4 (female)



Adjustable range of switching point (PH) (Rising pressure)	1...6 bar (14.5...87 psi)	
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 connection

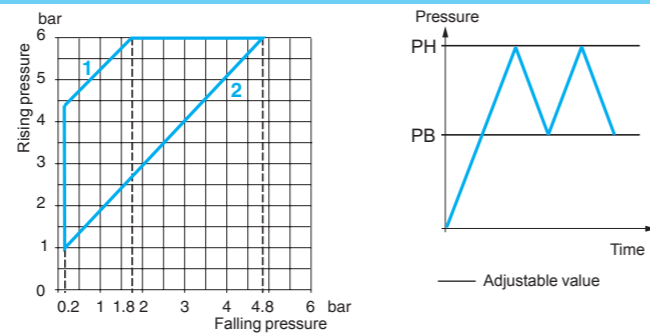
Bare case 1	XMPD06B2131	XMPD06C2131
Case with On/Off knob 2	XMPE06B2131	XMPE06C2131
Weight (kg)	0.450	

Complementary characteristics not shown under general characteristics (page 95)

Possible differential (subtract from PH to give PB)	Min. at low setting	0.8 bar (11.6 psi)
	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	

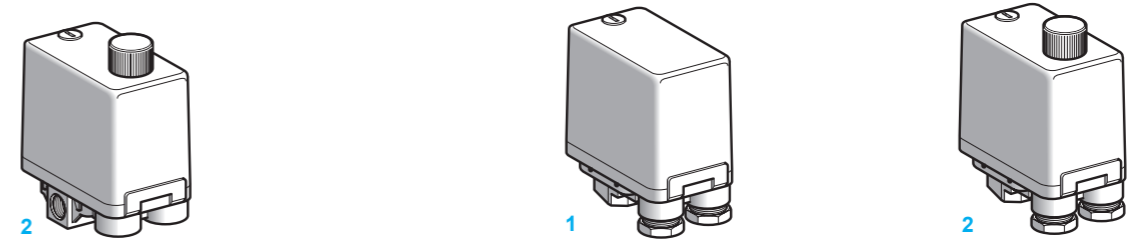
(1) References for individually packaged switches. Also available packaged in lots of 10.
To order, add the letter C to the reference selected from above. Example: reference for lot of 10 pressure switches XMPA06B2131 in one package becomes XMPA06B2131C.

Operating curves



- 1 Maximum differential
- 2 Minimum differential

4 x G 1/4 (female) | G 3/8 (female)



1...6 bar (14.5...87 psi)		
3-pole 3 NC	2-pole 2 NC	3-pole 3 NC

References

Switches without decompression valve

-	XMPA06B2242	XMPA06C2242
-	XMPB06B2242	-
-	XMPC06B2242	XMPC06C2242
-	0.430	

Switches with straight decompression valve, instant connection

-	XMPD06B2242	XMPD06C2242
XMPE06C2431	-	XMPE06C2242
0.450		

Complementary characteristics not shown under general characteristics (page 95)

0.8 bar (11.6 psi)	
1.2 bar (17.4 psi)	
4.2 bar (60.9 psi)	
30 bar (435 psi)	
1 million operating cycles	
2 entries tapped for n° 13 cable gland, conforming 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.

Terminal connections

