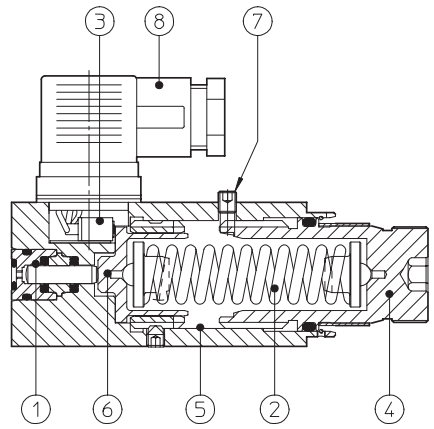
Pressure switches type WMAP

with fixed differential



① Servo-piston
② Spring
③ Microswitch
④ Control knob
⑤ Body
⑥ Switch actuator
⑦ Control knob setscrew
⑧ Electric connector

WMAP are pressure switches when open or close an electrical contact when the pressure in the hydrau-lic circuit reaches a given setting.

The original condition of the electrical contact is reset when the pressure in the hydraulic circuit has dropped of a fix valve below the setting.

The fluid pressure in the circuit operates a piston ① flitted with adjustable spring bias ②; once the pressure setting is reached, the piston is urged forward so as to actuate a microswitch ③ opening or closing its contacts.

The pressure setting is selected by turning a graduated control knob ④.

Clockwise rotation increases the setting pressure.

Pressure switches are designed to operate in hydraulic systems with hydraulic mineral oil or synthetic fluid having similar lubricating characteristics.

Max pressure = 350 bar

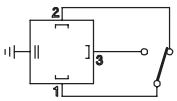
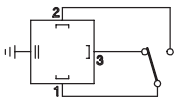
1 MODEL CODE

WMAP	-	160	06	**	/PE
Fixed differential pressure switch		Pressure range: **40** = 3 ÷ 40 bar **80** = 4 ÷ 80 bar **160** = 8 ÷ 160 bar **320** =16 ÷ 320 bar	See section 6 for available adaptors	Design number	Synthetic fluids: **PE** = phosphate ester

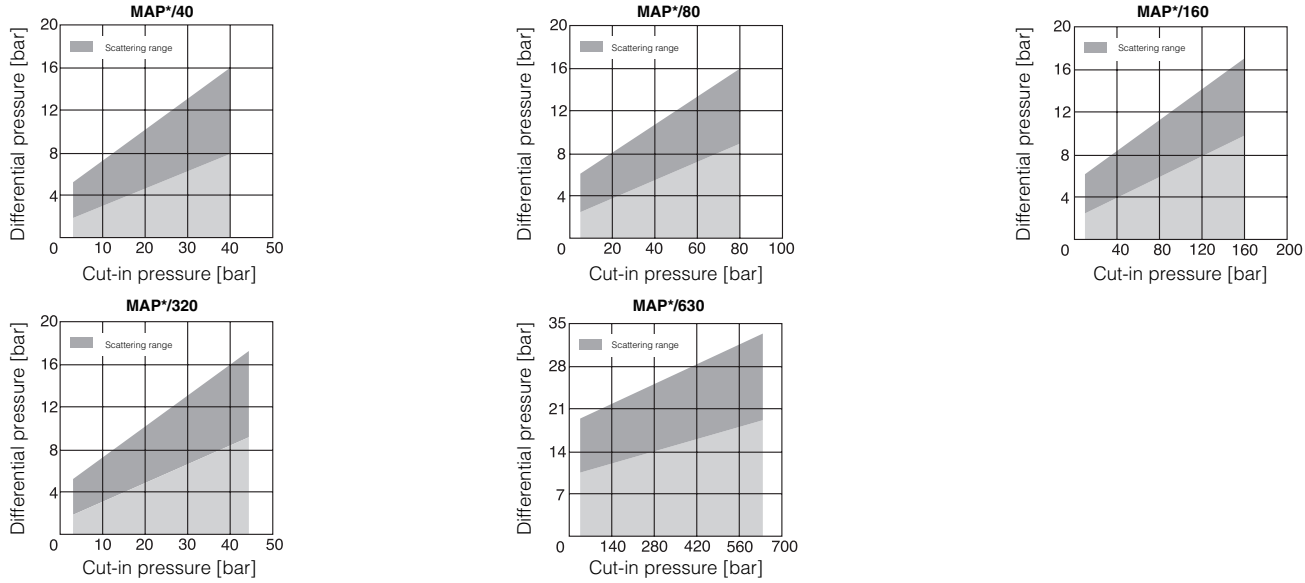
2 MAIN CHARACTERISTICS OF PRESSURE SWITCHES TYPE WMAP

Assembly position / location	Any position
Subplate surface finishing	Roughness index $\sqrt{}^{0.4}$ flatness ratio 0,01/100 (ISO 1101)
Ambient temperature	from -20°C to +70°C
Fluid	Hydraulic oil as per DIN 51524 .... 535; for other fluids see section 1
Recommended viscosity	15 ÷ 100 mm²/s at 40°C (ISO VG 15 ÷ 100)
Fluid contamination class	ISO 19/16, achieved with in line filters at 25 µ value and $\beta_{25} \geq 75$ (recommended)
Fluid temperature	T ≤ 80°C; if T ≥ 60°C select /PE seals

3 MAIN CHARACTERISTICS AND WIRING OF INTERNAL MICROSWITCH

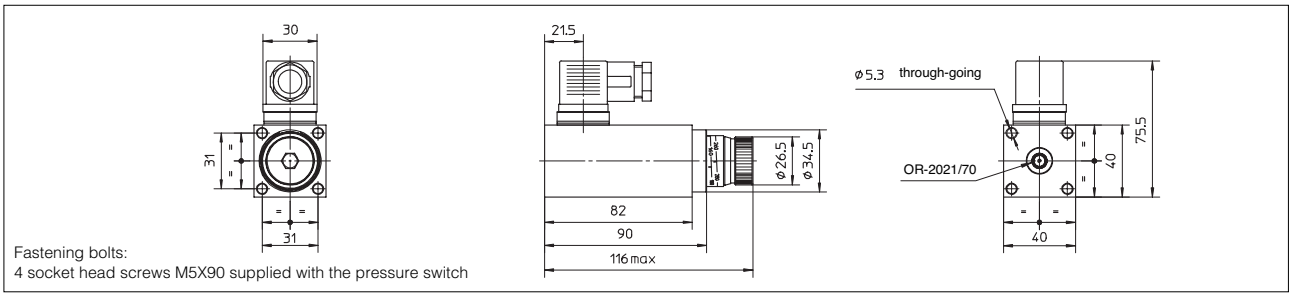
	Supply voltage [V]				Resting position	Pressure operated position
	125 AC	250 AC	30 DC	250 DC		
Max current [A] - resistive load -	7	5	5	0,2		
Max current [A] - inductive load (Cos φ = 0,4) -	4	2	3	0,02		
Insulating resistance	≥ 100 MΩ					
Contact resistance	≈ 15 mΩ					
Electrical life-expectancy	≥ 1.000.000 switchings					
Mechanical life-expectancy	≥ 10.000.000 switchings					

4 DIAGRAMS



The graphs show, according to the set cut-in pressure, the pressure difference between the insert and the resting positions of the pressure switch electric contacts.

5 DIMENSIONS OF MAP WITHOUT ADAPTORS [mm]



Fastening bolts:
4 socket head screws M5X90 supplied with the pressure switch

6 MODEL CODE FOR ADAPTORS (SUPPLIED SEPARATELY)

BHM – **

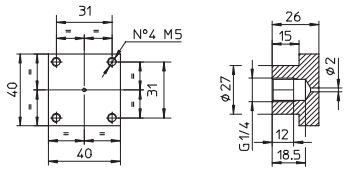
Type of adaptor
BMF = female
BHM = ISO 4401 size 06
BKM = ISO 4401 size 10

BMF threaded connection, see section 7
06 = G 1/4"

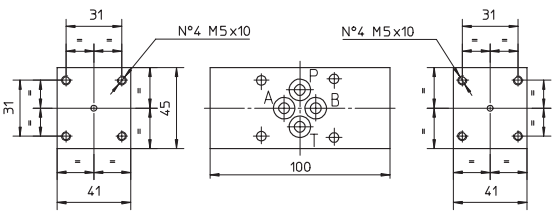
Port to serve for **BHM** and **BKM** adaptors, see section 7
11 = port P
12 = port A and B
13 = port A
14 = port B
17 = port P and A
18 = port P and B

7 DIMENSIONS OF ADAPTORS [mm]

BMF - Female fittings:

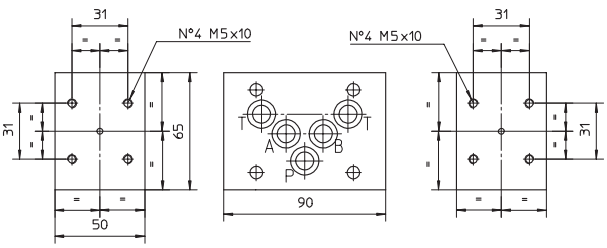


BHM - Modular mounting surface ISO 4401-AB-03-4 size 06



Weight: 1,2 Kg

BKM - Modular mounting surface ISO 4401-AC-05-4 size 10



Weight: 2 Kg

For versions 11 and 13 the pressure switch is mounted on side of port A. For version 14 the pressure switch is mounted on side of port B. For versions 12, 17, 18 the pressure switch is mounted on both sides.