

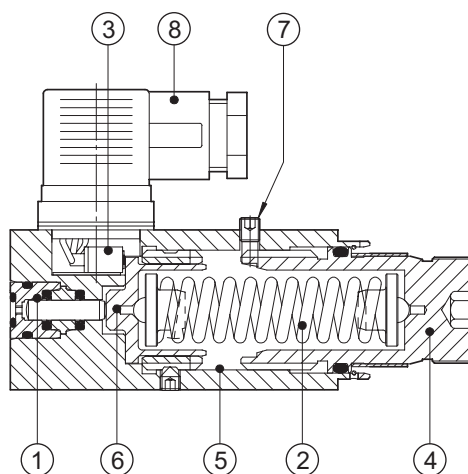
WMAP

Pressure switches with fixed differential



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|--|---|----------|
| <ul style="list-style-type: none"> • WMAP are pressure switches when open or close an electrical contact when the pressure in the hydraulic 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 flitted with adjustable spring bias ; once the pressure setting is reached, the piston is urged forward so as to actuate a microswitch opening or closing its contacts. • The pressure setting is selected by turning a graduated control knob . • 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 | Introduction | 1 |
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Symbol



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

Modal code

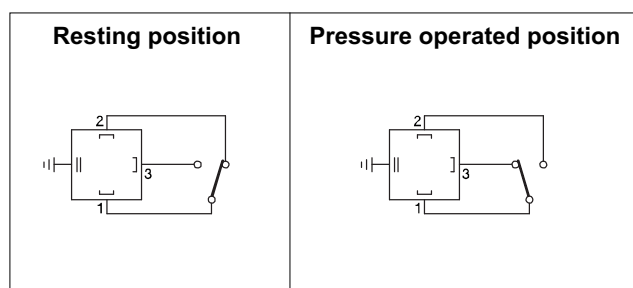
| | | | | | | | |
|------------------------------------|-------------|---|------------|-----------|-----------|---|-----------|
| | WMAP | - | 160 | 06 | ** | / | PE |
| Fixed differential pressure switch | | | | | | | |
| Pressure range: | | | | | | | |
| 3 ÷ 40 bar | | | = 40 | | | | |
| 4 ÷ 80 bar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

• **Main characteristics of pressure switches type wmap**

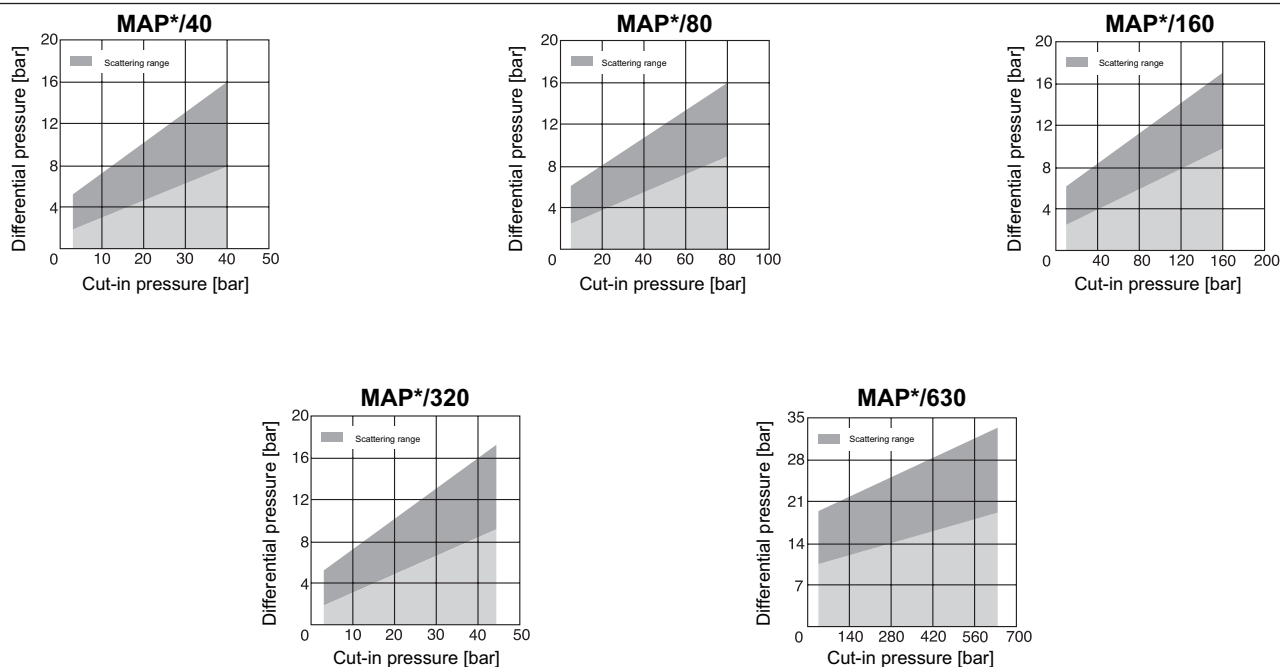
| | |
|------------------------------|---|
| Assembly position / location | Any position |
| Subplate surface finishing | Roughness index $\sqrt{0.4}$ flatness ratio 0,01/100 (ISO 1101) |
| Ambient temperature | from -20°C to +70°C |
| Fluid | Hydraulic oil as per DIN 51524 535; for other fluids see section |
| Recommended viscosity | 15 ÷ 100 mm ² /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 |

• **Main characteristics and wiring of internal microswitch**

| | Supply voltage [V] | | | |
|--|------------------------------------|--------|-------|--------|
| | 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 | 00,2 |
| Insulating resistance | ≥ 100 M Ω | | | |
| Contact resistance | ≥ 15 M Ω | | | |
| Electrical life-expectancy | ≥ 1.000.000 M Ω switchings | | | |
| Mechanical life-expectancy | ≥ 10.000.000 M Ω switchings | | | |

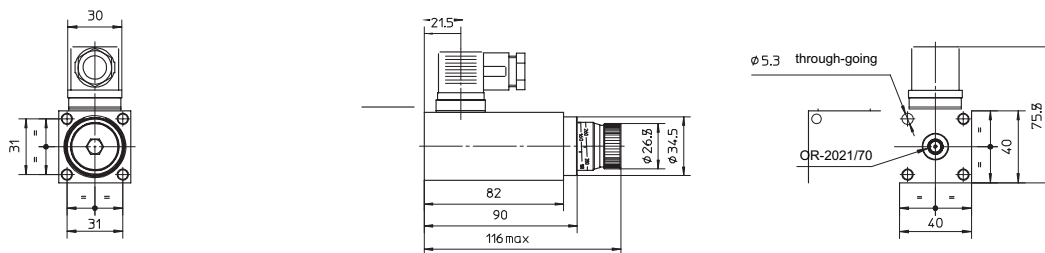


Diagrams



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.

Dimensions of map without adaptors [mm]



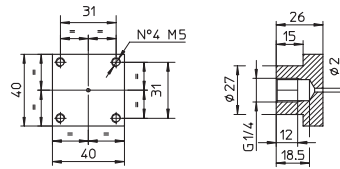
Fastening bolts:
4 socket head screws M5X90 supplied with the pressure switch

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, 11 = port P 14 = port B 12 = port A and B 17 = port P and A 13 = port A 18 = port P and B |

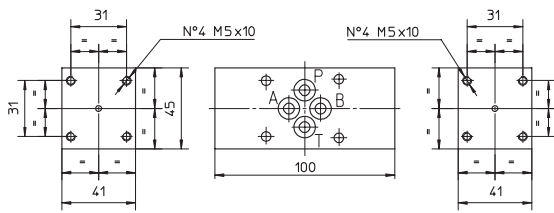
Model code for adaptors (supplied separately)

BMF - Female fittings:



BHM

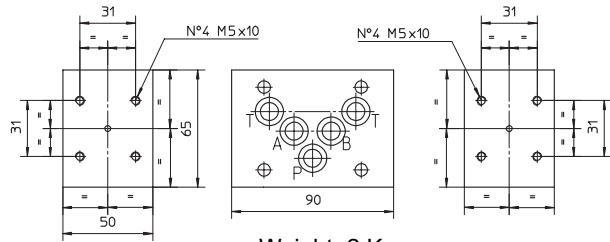
Modular mounting surface ISO 4401-AB-03-4 size 06



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

