

Pressure switch, heavy-duty version TPST Model PSM-530

WIKA data sheet PV 35.02

Applications

- Compressors

Special features

- Setting ranges 1 ... 4 to 7 ... 15 bar
[0.1 ... 0.4 to 0.7 ... 1.5 MPa]
- Electrical rating up to AC 440 V, 9 A
- Including On/Off switch to turn off the compressor manually
- Integrated relief valve to ensure a smooth restart of the compressor



Fig. left: Model PSM-530, standard version
Fig. right: Model PSM-530 with relief valve

Description

The model PSM-530 is used in industrial control, monitoring and alarm applications. The switch point can be specified by the customer on site.

The instrument can switch electrical loads of up to AC 440 V, 9 A.

The integrated relief valve (option) is used for depressurising the pressure chamber of the compression piston before starting the compressor.

With the manual On/Off switch, the contact system can be locked in the open position, irrespective of the process pressure.

Specifications

Unit	Setting range ¹⁾	Permissible switch point on rising pressure	Adjustable switch differential ²⁾	Max. working pressure
bar	1 ... 4	1.7 ... 4	0.7 ... 3	8
	2.5 ... 9.5	4.3 ... 9.5	1.8 ... 7	20
	7 ... 15	9.3 ... 15	2.3 ... 7	20
MPa	0.1 ... 0.4	0.17 ... 0.4	0.07 ... 0.3	0.8
	0.25 ... 0.95	0.43 ... 0.95	0.18 ... 0.7	2
	0.7 ... 1.5	0.93 ... 1.5	0.23 ... 0.7	2

1) Switch point and reset point have to be within the setting range

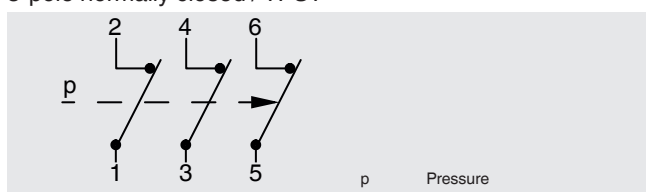
2) The difference between the switch point and the reset point is also known as switch hysteresis

Non-repeatability of the switch point

≤ 2 % of span

Switch contact

3-pole normally closed / TPST



Also usable as 2-pole normally closed / DPST or 1-pole normally closed / SPST.

Manual On/Off switch (optional without)

For locking the contact system in the open position

Off: Switch contact is positively opened by hand

On: Switch contact is opened/closed per switch point setting

Electrical rating

Current consumption ³⁾	Voltage	Current
Inductive load AC-15	AC 230 V/ AC 440 V	9 A

3) per DIN EN 60947-1

Depending on the load characteristics, additional protective measures, e.g. for motor protection, may be required.

Operating conditions

Permissible temperature ranges

Ambient: -40 ... +70 °C [-40 ... +158 °F]

Medium: -20 ... +70 °C [-4 ... +158 °F]

Storage: -20 ... +80 °C [-4 ... +176 °F]

Reference conditions

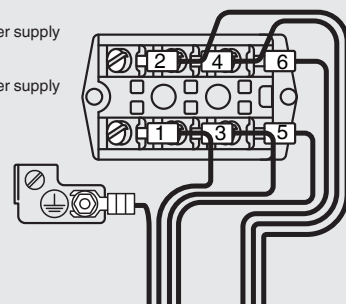
Relative humidity per BS 6134

< 50 % r. h. at 40 °C [104 °F]

< 90 % r. h. at 20 °C [68 °F]

Terminal assignment

- 1 NC Normally closed 1, power supply
- 2 NC Normally closed 1, load
- 3 NC Normally closed 2, power supply
- 4 NC Normally closed 2, load
- 5 NC Normally closed 3, power supply
- 6 NC Normally closed 3, load
- ⊕ GND Ground connection



Electrical connection

2x rubber grommet for cables Ø 6 ... 14 mm
[Ø 0.24 ... 0.55 in]

Ingress protection per IEC/EN 60529

IP44

Relief valve (option)

¼ NPT, flare port

Process connections

Process connection per	Thread size
ISO 228-1	G ¼ female
	G ½ female

Materials

Wetted parts

Diaphragm: NBR

Process connection: Aluminium die-casting

Approvals

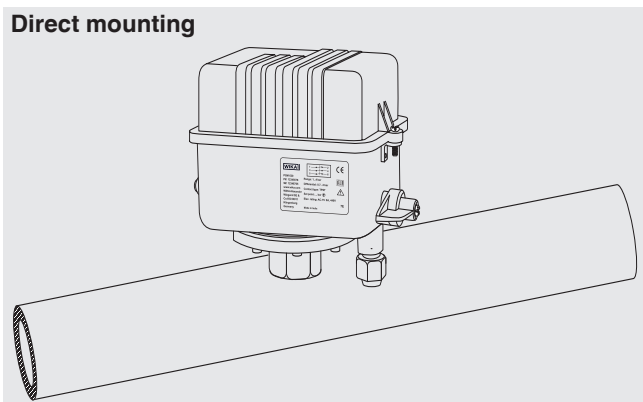
Logo	Description	Country
CE	EU declaration of conformity <ul style="list-style-type: none">■ Low voltage directive■ RoHS directive	European Union

Approvals and certificates, see website

Mounting

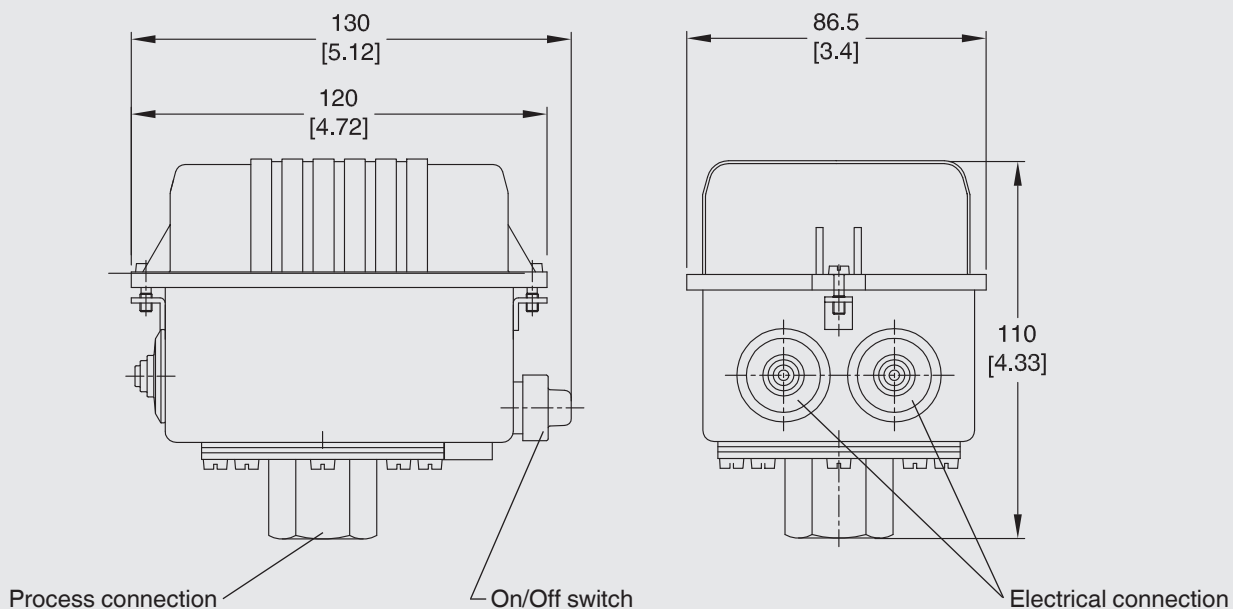
Mounting option

Direct mounting



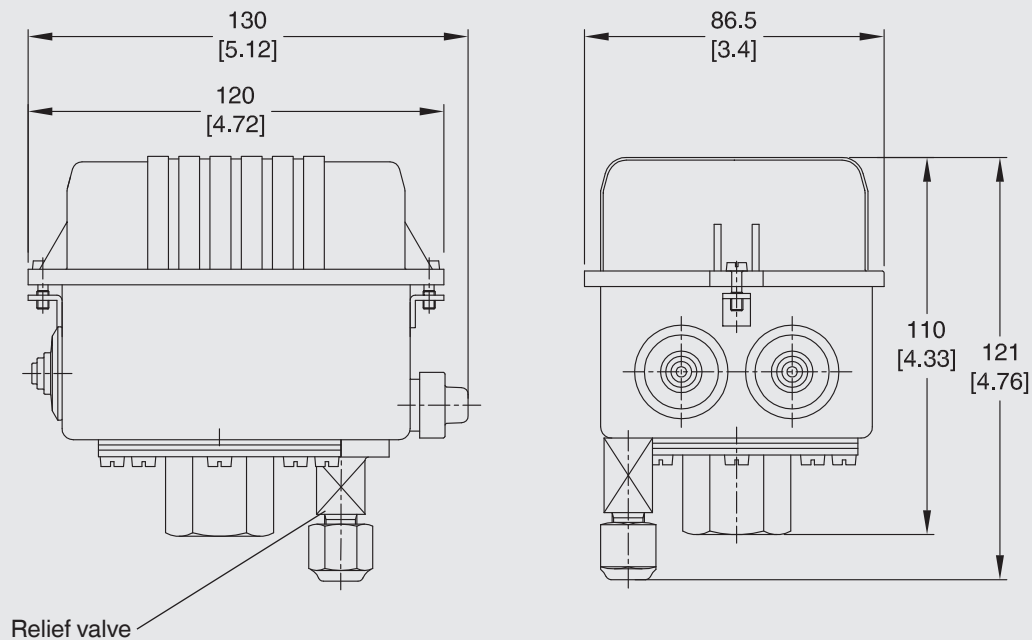
Dimensions in mm [in]

Standard version



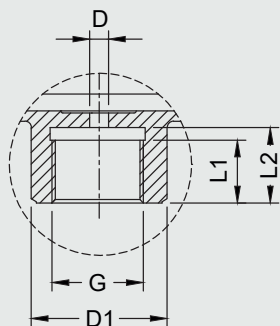
Weight: approx. 938 g [33 oz]

Version with relief valve (option)



Process connections

Thread per ISO 228-1

**Dimensions in mm [in]**

G	D	D1 ¹⁾	L1	L2
G ¼ female	Ø 4.5 [0.178]	SW 30 [1.18]	15 [0.59]	18 [0.71]
G ½ female				

1) SW = spanner width

Ordering information

Model / Relief valve / Manual On/Off switch / Setting range / Process connection

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