

Differential pressure switch mechanical

Model DPSM-550

Switzer data sheet DPSM-550

Applications

- Pumps
- Compressors
- Filters
- Evaporators
- Hydraulic systems
- Marine equipment
- Turbines

Special features

- Wide adjustable range
- Adjustable on-off differential
- Sturdy snap action switch
- High repeatability
- Dough mould compound (DMC) enclosure
- Weatherproof to IP67



Differential pressure switch mechanical,
model DPSM-550

Description

DPSM-550 series of differential pressure control utilise seamless bellows as the sensing element. Simplicity of design and ease of installation has been stressed for reliable use, even in applications where shock and vibrations are present. The sensing element is suitable for a variety of process fluids.

DPSM-550 series have an excellent record for more than five decades backed by our responsive manufacturing facility.

Applications include pumps, compressors, filters, evaporators, heat exchangers, lubrication systems, hydraulic systems, marine equipment, heating and air conditioning equipment, turbines, etc.

Ordering matrix

Range (bar)	Adjustable differential		Maximum test pressure (bar)	
	Contact system / 1 SPDT microswitch	DPDT microswitch	Bellow	
			Copper alloy	Stainless steel
0.1 ... 1.5	0.15 ... 1.4	0.3 ... 1.7	15	25
0.2 ... 4	.3 ... 1.7	0.5 ... 2.1	15	25
1 ... 6	0.5 ... 2.8	0.8 ... 3.0	25	45

Notes:

- For Ammonia service sensing shall be 316 SS bellows with treated steel wetted parts.
- Process connection : G 3/8" B standard. Others through adaptor.

Sensing element

Copper alloy (PB) Bellows with brass wetted Parts – standard
 304 SS Bellows with brass wetted parts
 316 SS Bellows with 316 SS wetted parts

Switching element

Electrical rating for 1 SPDT contact system

Current consumption ¹⁾	Voltage	Current
Resistive load AC-1	AC 230 V, 5/60 Hz	10 A
Inductive load AC-15	AC 230 V, 50/60 Hz	4 A
Direct load DC-13	DC 230V	12W

1) Low port, falling pressure and High port, rising pressure

ONE SPDT Microswitch – 15A 250 VAC

0.5A 110V / 0.25A 220V / 8A 24V - Res

0.2A 110V / 0.10A 220V / 7A 24V - Ind.

DPDT Microswitch – 10A 125 / 250 VAC, 2A 480V AC

DC Rating : 2A 400V AC, 0.25A 250V DC

Enclosure

DMC Enclosure, weatherproof to IP:67 as per IS/IEC:60529-2001 – Std.

Die cast Aluminium housing, weatherproof to IP:67 as per IS/IEC:60529-2001

Notes:

- Maximum process temperature: 70°C for copper alloy bellows; 170°C for SS bellows
- Ambient temperature : –40°C to 70°C
- Repeatability : ± 1% FSR
- Mounting : Back Panel / Wall / Pipe
- Conformity : Generally to BS : 6134 : 1991

Model Number to be ordered as below



Range: 0.1 ... 1.5 bar

304 SS Bellows with brass wetted parts

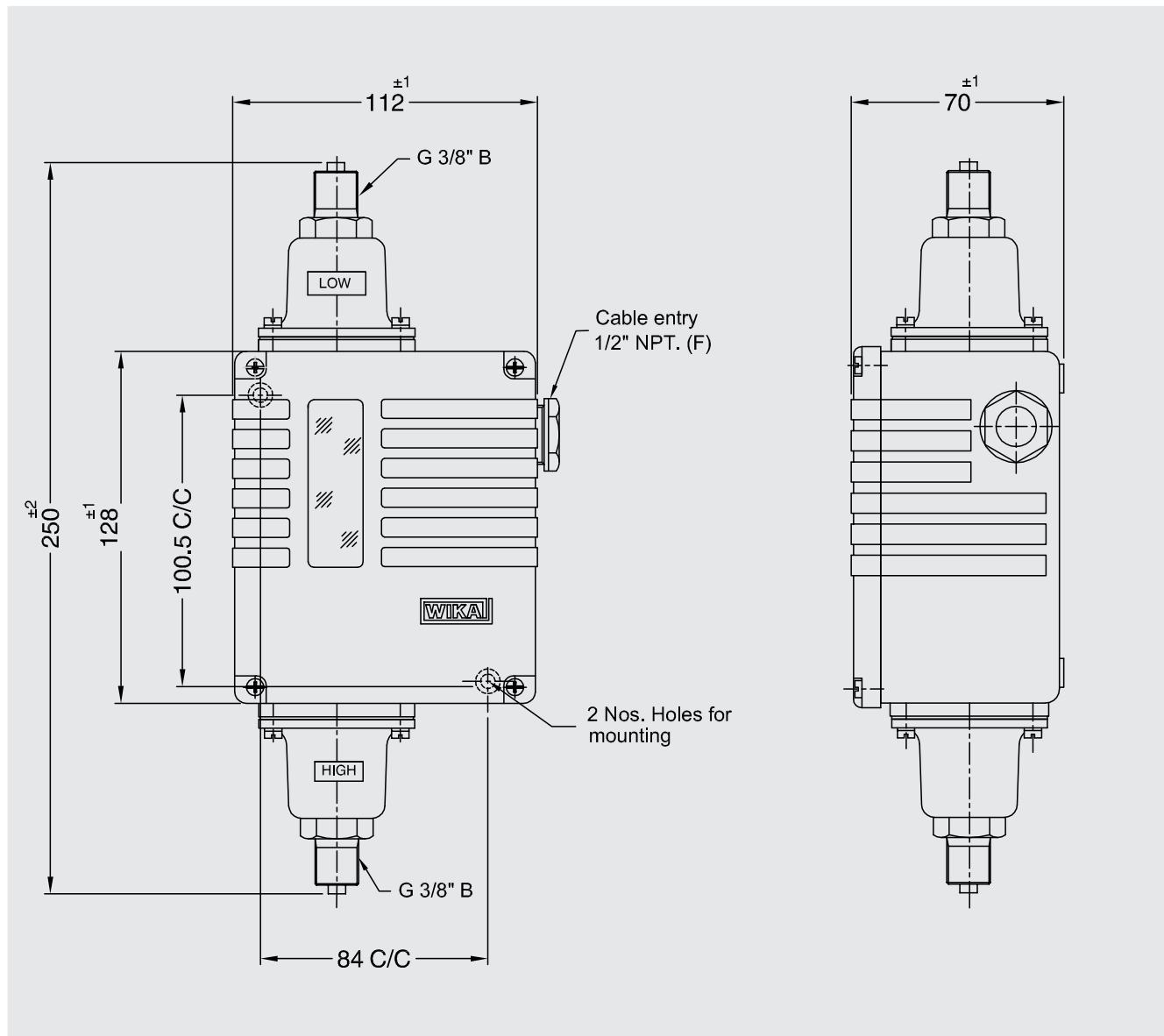
1 SPDT contact system

Polyester (DMC) housing, weatherproof to IP:67 as per IEC:60529-2001

Notes

1. Accuracy & Repeatability denote the same for all blind pressure switches. A shift of $\pm 2\%$ may be observed in setpoint when pressure falls from full static pressure. Settings will also shift with varying temperature.
2. The instrument is calibrated in the mounting position depicted in the drawing. Mounting in any other direction will cause a minor range shift, especially in low and compound ranges. Ranges above 1 bar will not experience this shift.
3. A pressure switch is a switching device and not a measuring instrument — even though it has a scale to assist setting. For this reason, Test Certificates will not contain individual ON-OFF switching values at different scale readings. Maximum differential obtained alone will be declared, besides other specifications.
4. Select working range of the instrument such that the set value lies in the mid 35% of the range i.e., between 35% and 70% of range span.
5. On and off settings should not exceed the upper or lower range value.
6. Fluid Temperature: A pressure switch when connected to the process is not subjected to a through flow and therefore is not fully exposed to the fluid temperature. Use of adequate length of impulse piping will greatly reduce excessive heating of the sensing element. For e.g., connection of 7.5 cm of 12 mm dia impulse piping will reduce water temperature of 100°C to 65°C at an ambient temperature of 50°C . Ask factory for temperature nomogram for different temperatures.
7. Ensure that impulse pipework applies no stress on sensing element housing and use spanners to hold pressure port / housing when connections are made.
8. Accuracy figures are exclusive of test equipment tolerance on the claimed values.
9. All performance data are guaranteed to $\pm 5\%$.

Dimensions in mm



Ordering information

Range / Sensing element / Switch element / Enclosure

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The specifications given in this document represent the state of engineering at the time of publishing.
We reserve the right to make modifications to the specifications and materials.

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