

Pressure switch

Model DM 600 series

Switzer data sheet PS-DM600

Applications

- Hydraulics
- Pneumatics
- Fire fighting
- Pumps control
- Compressors control
- Power
- Special purpose machine

Special features

- Stainless steel diaphragm
- High repeatability
- Weatherproof enclosure
- Very compact
- Tamperproof range setting

This compact version of Switzer 600 series pressure switches using components of high reliability is specifically designed for OEMs such as Fire fighting, boilers, power plants, Special Purpose Machines.

The sensing element stainless steel diaphragm is welded to a stainless steel housing mounted external to the weatherproof instrument housing.

The mechanical movements are restricted to absolute minimum using a diaphragm which ensures long term stability.



Pressure switch, model DM 600

The instrument is in pressure die cast aluminium housing which is best suited for harsh and outdoor installations.

The sensing element and wetted part of stainless steel is compatible for use in process applications with air, gas, water, steam, oil and other chemicals.

Standard version

Switch enclosure

W1: Aluminium pressure die cast weatherproof as per IS/IEC 60529

Repeatability of the setpoint (Note 1)

±1% FSR (Standard)

Permissible ambient temperature

-10°C ... +60°C

Permissible medium temperature (Note 8)

170°C

Process connection

1/4" NPT(F) or 1/2 " NPT(F) standard.

Measuring element

316L SS diaphragm standard

Wetted parts

316 SS

Ranges

Refer Ordering Matrix (Note 2 & 3)

Range setting

External with lock

Switching contacts with microswitch

1 x SPDT or 2 x SPDT (single pole double throw)

Switching function (notes 6)

Instrument quality snap acting microswitch

Switch Rating

- AC Rating – 15A, 125 / 250V
- DC Rating – Resistive : 0.5A 110V / 0.25A 220V / 8A 24V
Inductive : 0.2A 110V / 0.10A 220V / 7A 24V

On-off differential

Fixed

- 1 x SPDT (Notes 4 & 5): within 6 – 10% of FSR
- 2 x SPDT (Notes 4, 5 & 6): within 10 – 15% of FSR

Adjustable (applicable for Range Codes B032 & B033 only)

- 1 x SPDT (Notes 4 & 5): between 15 & 30% of FSR
- 2 x SPDT (Notes 4, 5 & 6): between 20 & 35% of FSR

Maximum working pressure

60 bar (all ranges)

Electrical connection

1/2" NPTF Nylon Cable gland suitable for 8mm OD cable

Ingress protection

IP66

Scale accuracy (note 6)

± 5% FSR

Mounting

On-line / Wall / Panel

Conformity

BS 6134

Weight

600 Gms. approx.

Options

- Repeatability ±0.5% FSR for range code B032 and B033 only
- Adaptors for other process connection
- Single line tag plate of size 0.5 mm thick; 15 mm × 70 mm

Range table

Range code		Range (in bar)	Maximum working pressure (in bar)
In bar	In Kg/Cm ²		
B026	K107	0.2 ... 1.6	60
B030	K093	0.4 ... 4	60
B032	K102	0.7 ... 7	60
B033	K095	1 ... 10	60
B035	K096	1.6 ... 16	60

Ordering matrix

Switch enclosure						
Aluminium pressure die cast, weatherproof to IP66	_____	DM				
On-off differential						
Fixed	_____		601			
Narrowband Adjustable (applicable for Range Codes 'B032' & 'B033' only)	_____		602			
Range code						
Refer Range Table	_____			□		
Process connection						
1/4" NPTF	_____				S1	
1/2" NPTF	_____				S2	
Others through adaptors	_____				S3	
Switch code						
1 × SPDT	_____					3
2 × SPDT	_____					33
Electrical entry (single)						
1/2" NPTF	_____					A
7 PIN Connector	_____					C
3/4" NPTF through adaptor	_____					L
Options						
CE conformity	_____					CE

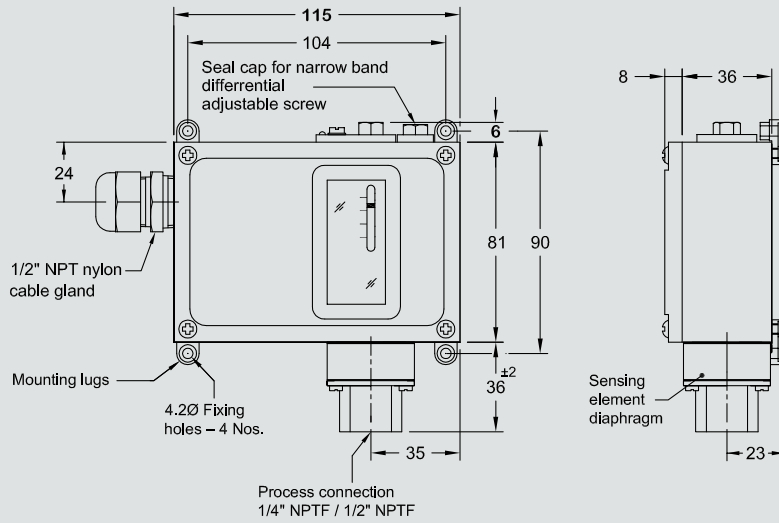
Notes

- Accuracy and repeatability are same for a pressure switch, which is a switching device and not a measuring instrument.
- Select working range of the instrument such that the set pressure lies between 35% to 70% of span.
- On and off settings should not exceed the upper or lower range value.
- Switching differentials are at midscale and will vary with range setting and operating conditions.
- A pressure switch is a switching device and not a measuring instrument— eventhough 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.
- DPDT action is achieved by 2 × SPDT switches synchronised to practical limits i.e., ±2% of FSR.
- Contact life of microswitches are 5×10^5 switching cycles for nominal load. To quench DC sparks, use diode in parallel with inductance, ensuring polarity. A 'R-C' network is also recommended with 'R' value in Ohms equal to coil resistance and 'C' value in micro Farads equal to holding current in Amps.
- Higher process temperatures can be brought down by using longer pressure piping. Ask for piping nomogram #441184-4.
- Ensure that impulse pipework applies no stress on sensing element housing and use spanners to hold pressure port/housing when connections are made.
- DM 600 is weatherproof only if all entries and joint faces are properly sealed.
- More versatile and wide range of pressure and differential pressure switches are available in Series PS01, 200, 020, 300 and S20 Series upto 700 bar.
- Accuracy figures are exclusive of test equipment tolerance on the claimed values.

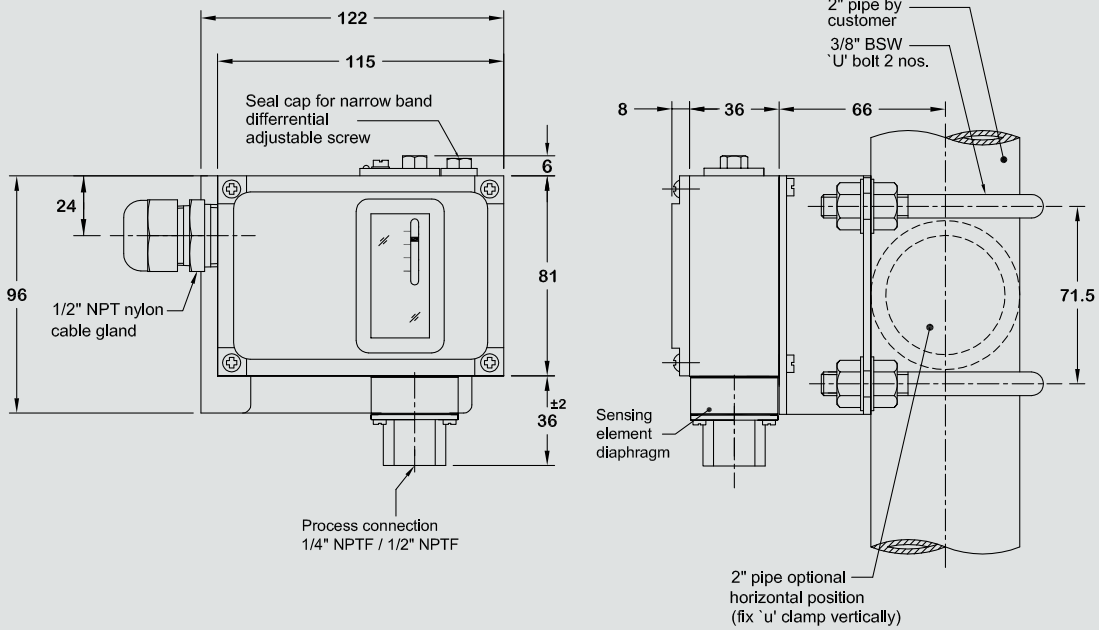
Dimensions in mm

Model : Fixed -Diff. / Narrow band - Differential adjustable type

Wall / panel mounting



2" pipe mounting



Ordering information

Switch enclosure / On-off differential / Range code / Process connection / Switch code / Electrical entry / Options

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Switzer Process Instruments Pvt. Ltd.
128 SIDCO North Phase, Ambattur Estates,
Chennai 600 050
Tel. +91 44 2625 2017 / 2018 / 4991 / 4324
sales@switzerprocess.co.in
www.switzerprocess.co.in