

Electronic pressure switch and Differential pressure switch Model 711

Switzer data sheet EPS-711-R&D

Applications

- Hydraulics
- Pneumatics
- Pump control
- Compressor control
- Water treatment plant
- Special purpose machines

Special features

- Stainless steel sensor
- Large display with backlight
- High accuracy
- Analog output
- Two and four setpoint relay output
- Multiple unit selection choice
- Fully configurable internal and external push switches

Switzer Electronic Pressure Switch Model 711 is ideal for precise process pressure measurement. This instrument is built with high accurate piezo-resistive pressure sensor with 316SS diaphragm which is suitable for media like non-corrosive liquids and air.

A wide range of pressure readings with optimum resolution are indicated through a large LCD display with back light. Two or Four independent setpoint is provided with SPDT relay output for on-off control function.

In addition, this instrument provides 4–20 mA DC analog current output. The output current range is programmable within the instrument calibrated range.

Operational settings are done through 3 push switches accessible upon removal of cover or on the front through membrane keypad.

The entire circuitry is housed in a cast aluminium, IP65 compliant weatherproof enclosure suitable for surface / wall (or) pipe mounting.



Fig. top: Electronic pressure switch, model 711-R for two setpoints

Fig. Middle: Electronic pressure switch, model 711-R for four setpoints

Fig. Bottom: Electronic differential pressure switch, model 711-D for two setpoints

Standard version

Pressure switch

Range

- Standard (0~700 mbar, 0~350 bar)
- Flush mount (0~700 mbar, 0~35 bar)
- Triclover (0~700 mbar, 0~10 bar)

Pressure sensor

Piezo-resistive 316 SS sensor

Maximum working pressure

Refer range table.

Accuracy (inclusive of linearity, hysteresis and repeatability)

±0.30% FSR

Electrical connection (Power, Relay & Analog output)

- 2 setpoint: 10 position screw clamp terminals through PVC cable gland suitable for 4 to 8 mm OD cable, 2 Nos.
- 4 setpoint: 16 position screw clamp terminals through PVC cable gland suitable for 4 to 8 mm OD cable, 4 Nos.

Differential pressure switch

Range

Standard (0~3500 mmWC) differential

Pressure sensor

Piezo-resistive 316L SS sensor

Media compatibility

Liquids and gases compatible to 316 SS

Maximum working pressure

- High port: 7000 mmWC
- Low port: 3500 mmWC

Accuracy (inclusive of linearity, hysteresis and repeatability)

±0.5% FSR

Electrical connection (Power, Relay & Analog output)

- 2 setpoint: 10 position screw clamp terminals through PVC cable gland suitable for 4 to 8 mm OD cable, 2 Nos.

Pressure and Differential switch

Power supply

- 100V to 240V AC
- 18V to 36V DC

Display

1 x 8 dot matrix LCD with yellow green back light

Display character height

10.7 mm

Process value

4 digits, 9999 counts maximum

Decimal point

Automatically selected based on range

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Display units option

8 units (cmWC, mbar, mmWC, psi, bar, Kg/cm², KPa, MPa)

Analog output

Current: 4 to 20 mA

Analog output range

Any range programmable within the instrument calibrated range.

Analog output load capacity

400 ohms

Set points

- 2 (Two)
- 4 (Four)

Set point range

Any value within instrument range

Relay contact rating

- 2 setpoint: 2 independent relay contacts, each with 5A at 250V AC / 28 VDC
- 4 setpoint: 4 independent relay contacts, each with 5A at 250V AC / 28 VDC

Time delay

0 to 250 secs continuously selectable

Relay status

Relay ON indication by red LEDs for each setpoint

Dead band

Configurable through Relay ON and OFF setting

Enclosure protection

Die-cast Aluminium Weatherproof to IP65, IEC 60529

Process connection

Refer ordering matrix

Process connection material

316 SS

Wetted parts

316 SS with Viton® 'O' ring

Mounting

Direct on line or 2" pipe

Overall dimension

Refer mounting dimensions

Process temperature limits

- Standard process connection
 - 0°C to 85°C without Heat Sink
 - upto 125°C with Heat Sink
- Flush mount or Triclover process connection
 - 0°C to 60°C

Ambient temperature limits

0 to 60°C

Ambient relative humidity

95%

Ordering matrix

Basic model number for model, relative pressure	711-R							
Basic model number for model, differential pressure	711-D							
Range								
Select code from range table		□						
Number of setpoint								
Two								2
Four								4
Power supply								
100 to 240V AC								L
18 to 36V DC								P
Process connection								
<i>For 711-R (Relative pressure)</i>								
Standard: 1/2" NPTM and 1/4" NPTF								F
Flush mount: 3/4" BSPM								G
1" 316 SS Triclover clamp with fittings								L
1/2" BSPM and 1/4" BSPF								S02
<i>For 711-D (Differential pressure)</i>								
2 x 1/4" NPTF high, low								S01
Process temperature								
Below 60°C (only flush mount process connection)								I
Below 85°C without Heat sink (only standard process connection)								N
Above 85°C below 125°C with Heat sink, 316 SS (only standard process connection)								H
Mounting								
On-line								Z
Wall								W
2" Pipe								2
Special mounting plate (only for external terminal type, 4 set point)								S
Mounting material								
Not applicable								0
Powder coated mild steel								C
316 Stainless steel								2
Electrical terminal arrangement								
Internal terminal								Z
External terminal plug-in type								V

Range table

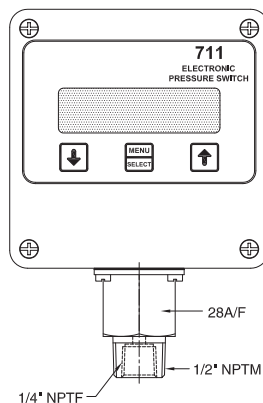
Range Code	Range	Maximum working pressure
Relative pressure (model 711-R)		
M023	0 ... 200 mbar	400 mbar
M033	0 ... 700 mbar	1400 mbar
B004	0 ... 1 bar	2 bar
B006	0 ... 2 bar	4 bar
B008	0 ... 3.5 bar	7 bar
B011	0 ... 10 bar	20 bar
B012 ★	0 ... 20 bar	40 bar
B013 ★	0 ... 35 bar	70 bar
B016 §	0 ... 100 bar	150 bar
B017 §	0 ... 200 bar	300 bar
B018 §	0 ... 350 bar	500 bar
B019 §	0 ... 400 bar	600 bar
Differential pressure (model 711-D)		
M026	0 ... 350 mbar	700 mbar

★ Not available in Triclover option

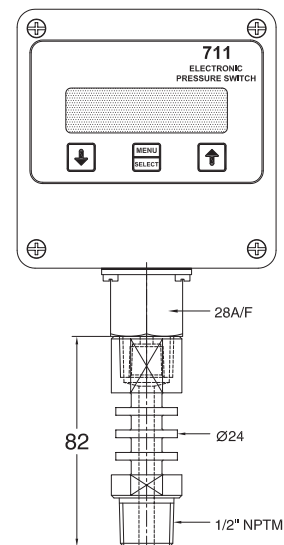
§ Not available in flush mount and triclover option

Heat sink (for code 'H')

Instrument without Heat sink

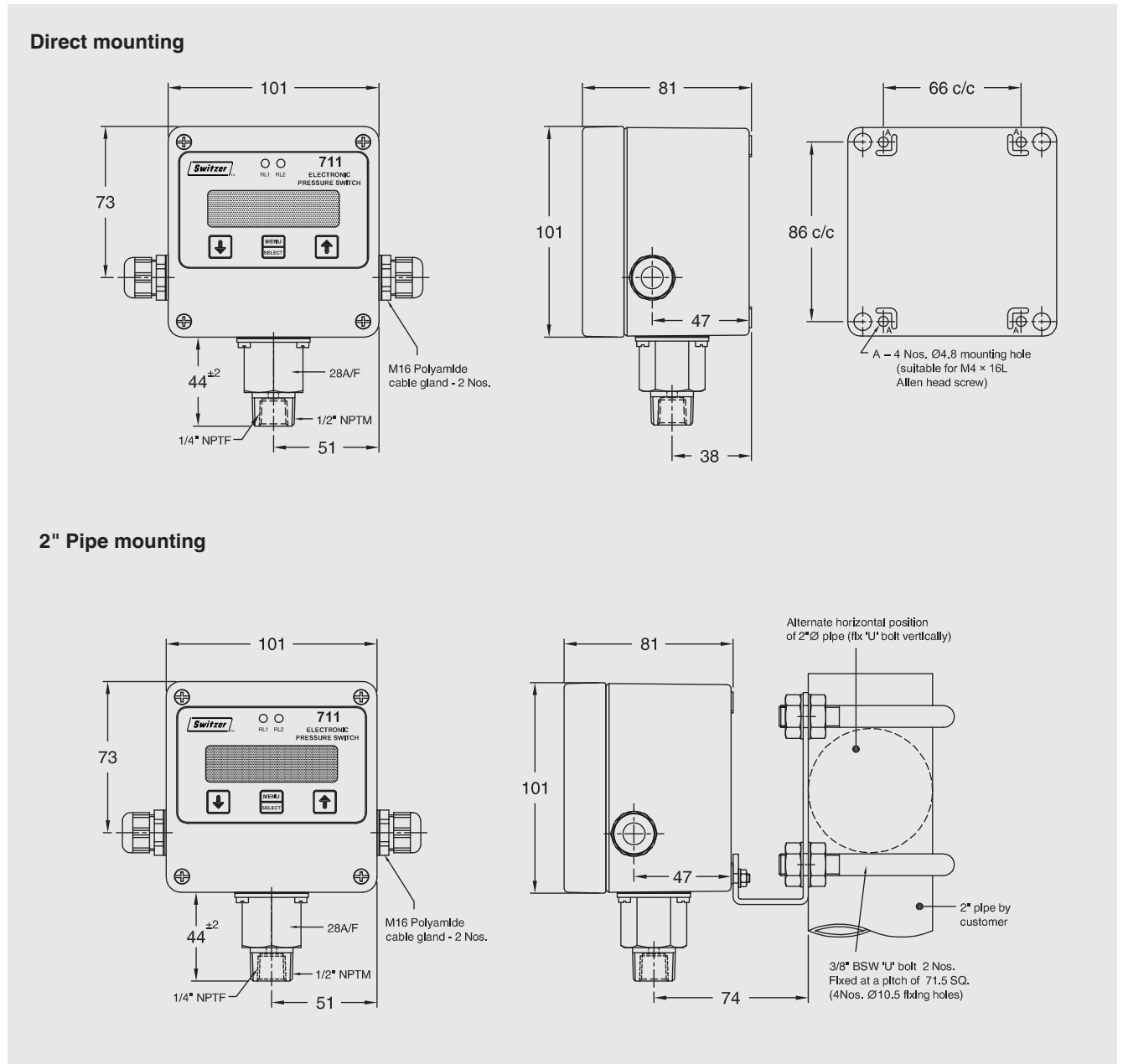


Instrument with Heat sink



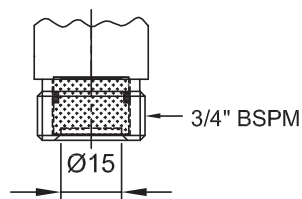
Dimensions in mm

Relative pressure two setpoint

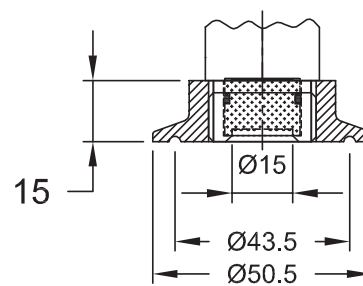


Optional Process Connection for Two and Four setpoint

Flush mount



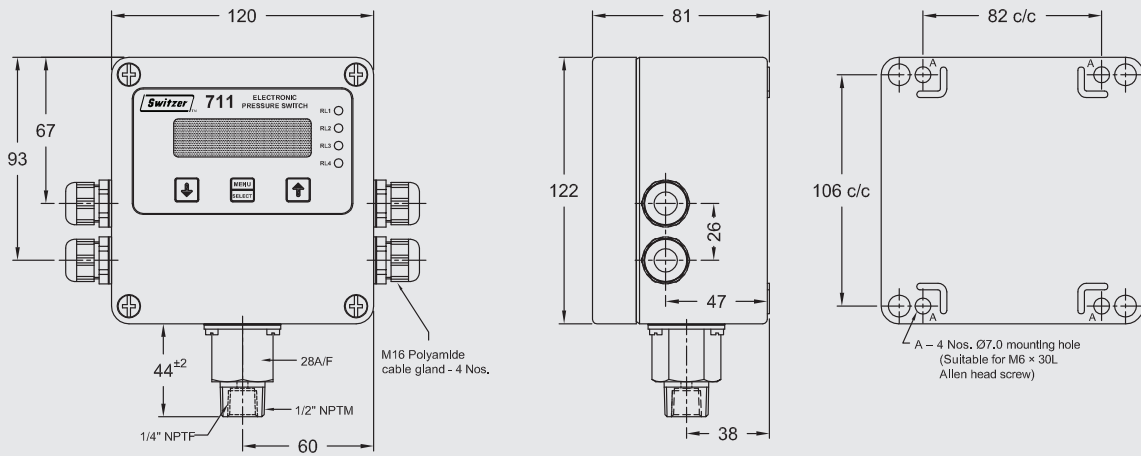
Triclover



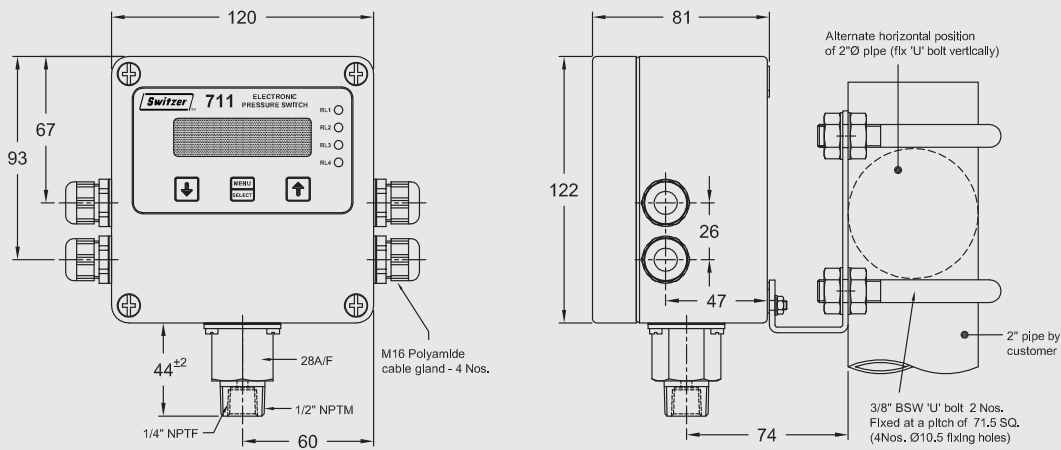
Dimensions in mm contd...

Relative pressure four setpoint

Direct mounting



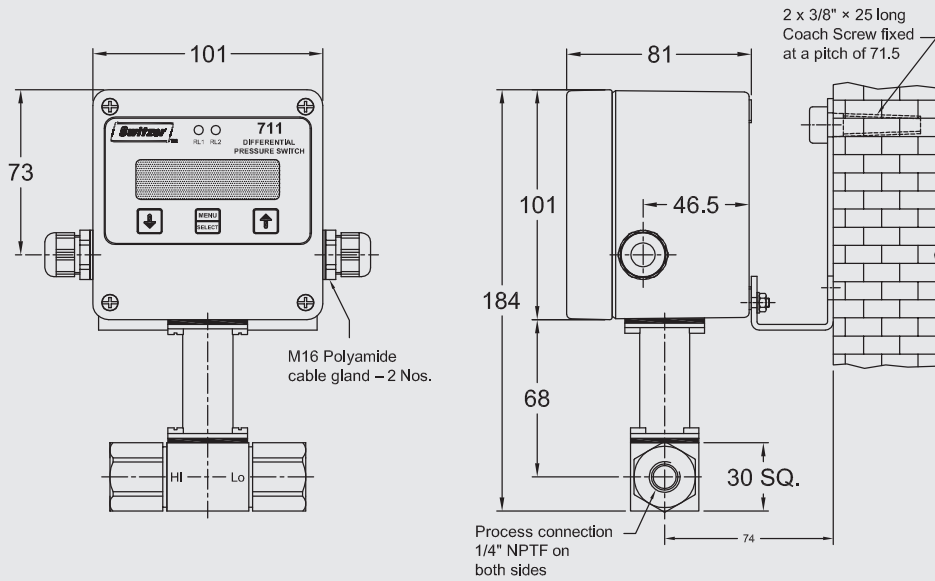
2" Pipe mounting



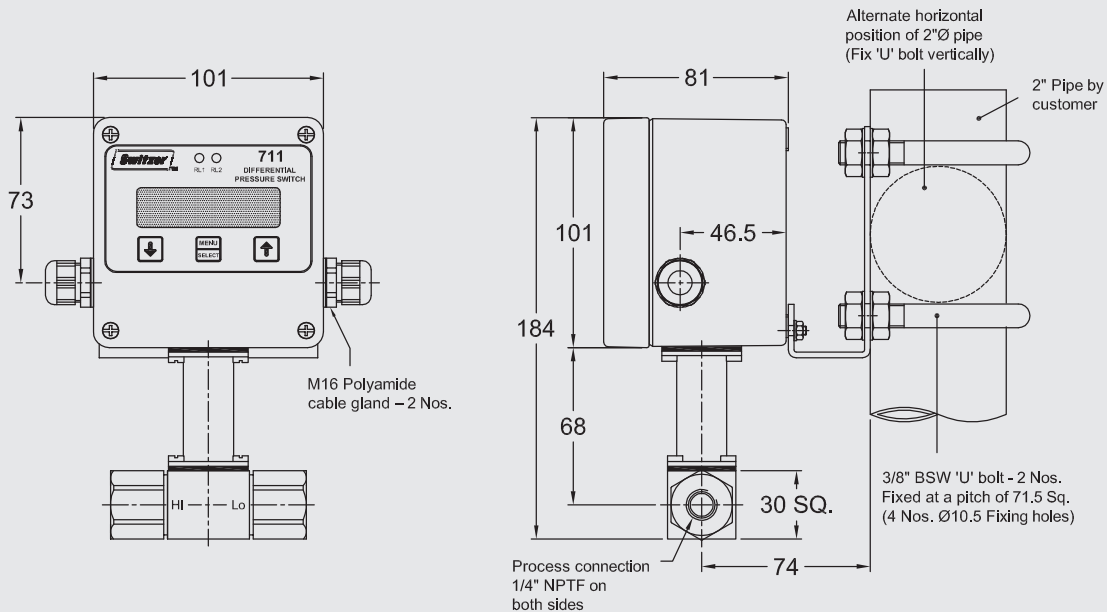
Dimensions in mm contd...

Differential pressure two setpoint

Wall mounting



2" Pipe mounting



Ordering information

Basic model number / Range / Number of setpoint / Power supply / Process connection / Process temperature / Mounting / Mounting material / Electrical terminal arrangement

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