

# DPSL200, DPSL1000

## DIFFERENTIAL PRESSURE SWITCH (LIQUID & GAS)

### PRODUCT DATA



### APPLICATION

Differential pressure, vacuum, and overpressure switches suitable for monitoring neutral and slightly aggressive liquids and non-flammable gases. Suitable for pump status, flow, and filter condition monitoring. It can also be used as a flow switch if fitted across an orifice plate.

### FEATURES

- **Switching element isolated from medium**
- **10 bar overpressure safety margin**
- **Rugged construction**
- **360° adjustable mounting bracket**
- **IP54 rating**
- **Easy to adjust switching point**

### TECHNICAL DATA

#### Mechanical

Medium	liquids (neutral and slightly aggressive), gases
Active pressure range	DPSL200: 40 to 200 mbar DPSL1000: 150 to 1000 mbar
Accuracy of switching*	deviation: $\leq \pm 15\%$ of setpoint drift: $\leq \pm 15\%$ of setpoint
Maximum pressure	10 bar
Pressure connections	G1/8" (brass)
Materials	case: brass, chrome, stainless steel membrane: EPDM rubber
Weight	0.8 kg (1.76 lb)
Dimensions	see page 3

#### Electrical

Switching arrangement	single pole changeover
Contact rating (max)	250 Vac 6 A (resistive) 1.5 A (inductive)
Contact life (typical)	> 1 million switching cycles
Connection type	female power connector EN 175301-803 Form A
Cable entry	compression gland
Cable conductor size	0.34 - 1.5 mm <sup>2</sup> (22 - 16 AWG)
Cable outside diameter	6 - 8 mm

#### Environmental

Medium temperature	-10 to +80°C (14 to 176°F)
Ambient temperature	-10 to +80°C (14 to 176°F)
Protection	IP54
Approvals	CE Low Voltage Directive CE RoHS directive

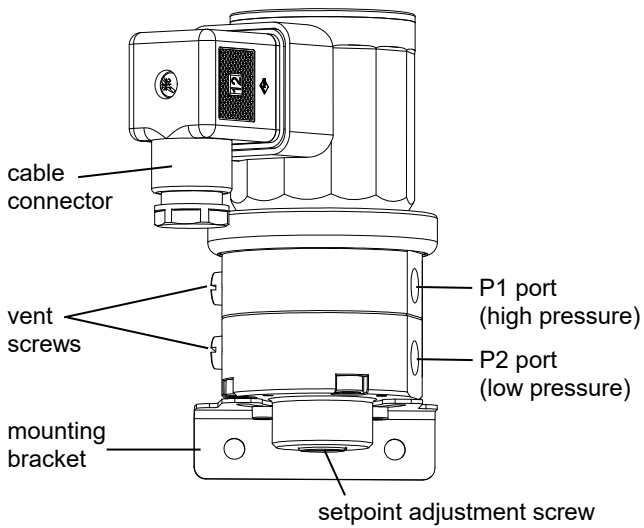
\*Accuracy specifications according to EN 60770 based on the pressure measurement at 23°C (73.4°F)

### ORDER CODES

<b>DPSL200</b>	Liquid Differential Pressure Switch, single pole changeover, 40 to 200 mbar
<b>DPSL1000</b>	Liquid Differential Pressure Switch, single pole changeover, 150 to 1000 mbar

## FUNCTION

When the pressure applied to P1 (high) exceeds that applied to P2 (low) by the required setpoint, a switch is operated. A setpoint adjustment screw is provided to enable setting of the switching pressure. A vent screw is provided for both pressure ports to allow bleeding when used with liquids.



In addition to operating as a differential pressure switch, the DPSL can be used to detect over pressure or under pressure conditions by leaving P2 or P1 disconnected respectively.

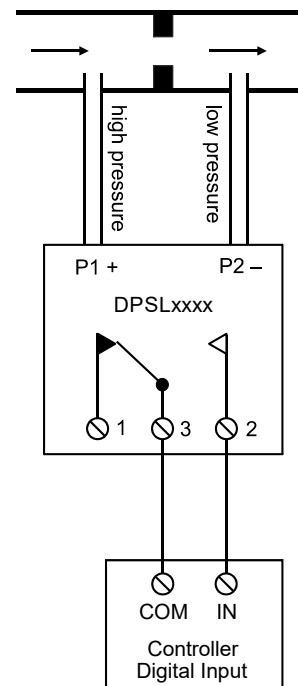
## ELECTRICAL CONNECTION

Electrical connection is via a removable EN 175301-803 Form A plug with integral screw terminals, with both the plug and cover being secured by an M3 screw.

The plug cover can be repositioned in 90° steps if required to suit the mounting location. Cable entry is through a compression type cable gland. This must be securely tightened to maintain the stated IP protection.

DPSL switches offer a volt-free single pole changeover switching arrangement, suitable for use with most types of controllers or I/O modules, and can be wired to universal inputs (configured for digital operation) or dedicated digital inputs.

An example application for differential pressure measurement:



## INSTALLATION

The DPSL is designed to be secured to a flat (non-vibrating) surface using the integral mounting bracket. The mounting bracket can be fitted in one of four positions (at 90° intervals) with a swivel adjustment of  $\pm 70^\circ$  in each position, allowing the switch body to be rotated through 360° relative to the bracket.

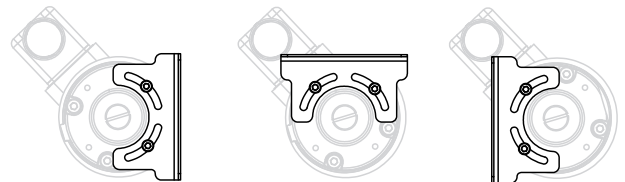
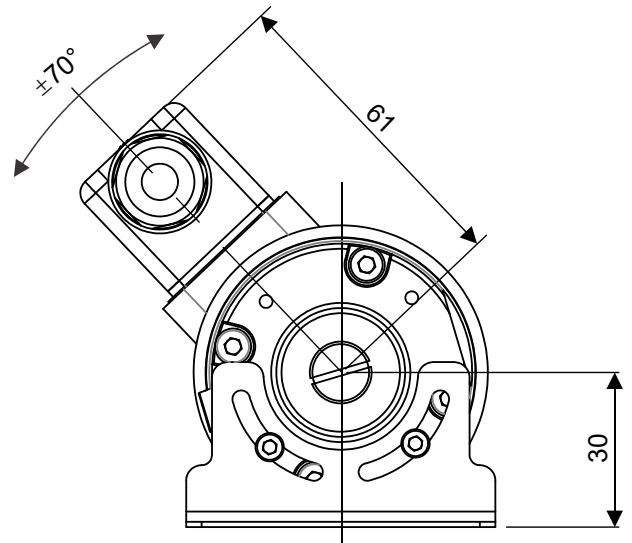
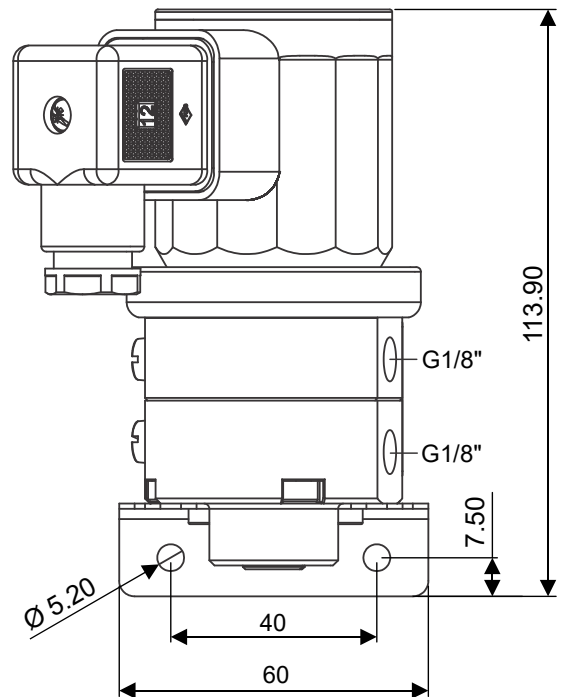
Pressure connections are made via standard G1/8" female threads, enabling a choice of compatible pipe/hose fittings. The system pressure (maximum of P1 and P2 above ambient pressure) must be less than the limit stated in the specification. Also, the maximum overload pressure on either side (P1 or P2) must not exceed the specified limit.

In summary, the installation procedure involves:


- Choosing a suitable location
- Mounting the switch
- Making the electrical connection to the controller input
- Connecting the pressure pipes/hoses
- Adjust the required setpoint
- Configuring the controller input channel
- Testing for correct operation

The full installation procedure is covered in the DPSL200, DPSL1000 Installation Instructions (EN1B-0651GE51). A printed copy of these instructions is supplied with the switch.

## DIMENSIONS



## DISPOSAL



**WEEE Directive:**

At the end of their useful life the packaging and product should be disposed of by a suitable recycling centre.

Do not dispose of with normal household waste.  
Do not burn.