

# Electrical Differential Pressure Switches Type 738 Type 5335-5 and Type 5335-6



## Application

Limit value monitoring of differential pressure, pressure and vacuum (draught).

Type 738: Designed for liquids, gases and steams as well as differential pressure, pressure and vacuum setpoints from 25 to 400 mbar, operating pressures up to 10 bar.

Type 5335: Designed for air with differential pressure, pressure and vacuum setpoints from 0.2 to 10 mbar, operating pressures up to 50 mbar.



The differential pressure switches are limit switches which issue an electrical limit signal whenever a certain limit value of a differential pressure, pressure or vacuum is exceeded. This signal is used to control an audible or visual alarm, signal processing and closed or open-loop control equipment.

**Type 738** Differential Pressure Switch is used, for example in heating plants utilizing hot-water priority circuit and has a unilateral overrange limit up to 10 bar. The maximum permissible temperature of the process medium is 80°C.

**Type 5335-5/-6** Differential Pressure Switches are especially suitable for monitoring flow rates, differential pressure, pressure and vacuum (draught) in air ducts of ventilation and air-conditioning systems. They have a unilateral overrange limit up to 50 mbar. The maximum permissible temperature of the process medium is 50°C.

## Versions

**Type 738** Differential Pressure Switch (Fig. 1) - Differential pressure switches with adjustable limit values from  $\Delta p = 25 \dots 160$  mbar or  $160 \dots 400$  mbar.

**Type 5335-5** Differential Pressure Switch (Fig. 2) - Differential pressure switches with adjustable limit values from  $\Delta p = 0.2 \dots 2$  mbar.

**Type 5335-6** Differential Pressure Switches with adjustable limit values from  $\Delta p = 1 \dots 10$  mbar.

## Ordering text

Electric Differential Pressure Switch Type ...

Setting range ... to ... mbar

Operating pressure ... bar

Safety pressure limiter, see SAMSOMATIC T 758-4 EN.

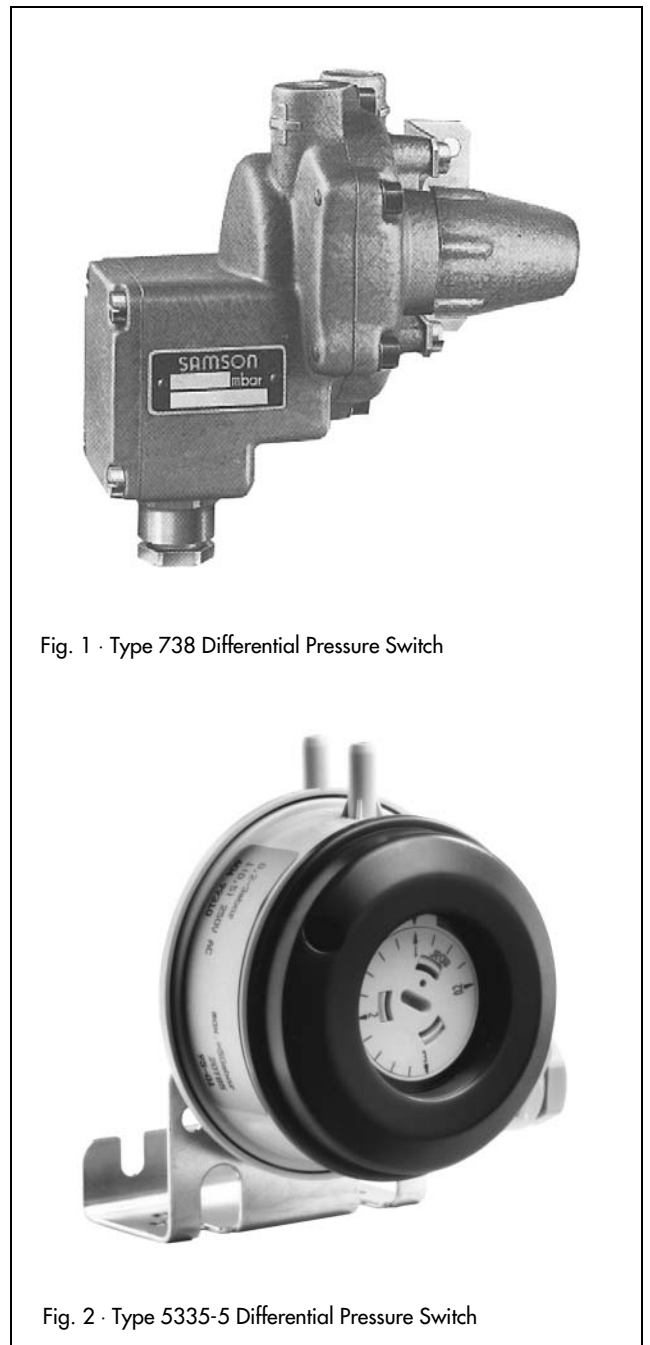


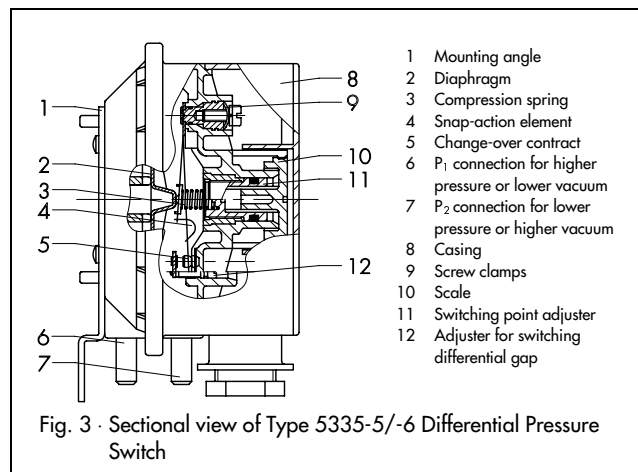
Fig. 1 · Type 738 Differential Pressure Switch

Fig. 2 · Type 5335-5 Differential Pressure Switch

## Principle of operation

The differential pressure switches are equipped with a differential pressure cell containing spring-loaded measuring diaphragm.

The differential pressure, pressure or vacuum produce a force acting on the diaphragm which is balanced by the measuring spring. If the force produced on the diaphragm exceeds the spring compression, a changeover of the built-in switch occurs, i.e., the measuring spring compression determines the limit value of the differential pressure switch.



## Technical data · All pressures in bar (gauge)

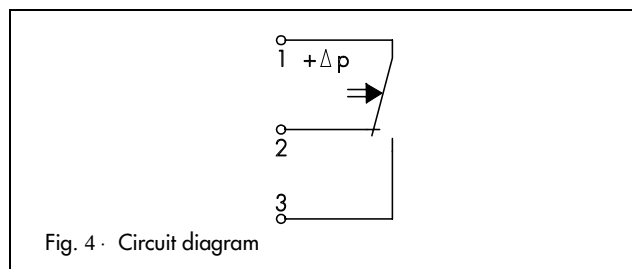
Differential pressure switch	Type 738	Type 5335-5	Type 5335-6
Limit value	Continuously adjustable		
Differential pressure ( $\Delta p$ )	25...160 mbar or 160...400 mbar	0.2...2 mbar	1...10 mbar
Maximum differential gap	For limit values up to 100 mbar: 10 mbar For limit values above 100 mbar: 15 mbar	0.4 mbar	1.0 mbar
Max. permissible operating pressure	10 bar, short-term overload up to 16 bar	50 mbar	50 mbar
Unilateral overrange limit max.	10 bar	50 mbar	50 mbar
Permissible temperature of the process medium max.	80 °C	50 °C	
Materials touching the medium	Case: GD AlSi12 Diaphragm: Perbunan	Case: Plastic Diaphragm: Buna N with aluminium plate	
Switch capacity	250 V DC, 5 A with resistive load	250 V DC, 1 A with resistive load	
Ambient temperature	Max. 50 °C	Max. 65 °C	
Degree of protection	IP 54	IP 54	
Weight	Approx. 1 kg	Approx. 0.5 kg	

## Installation

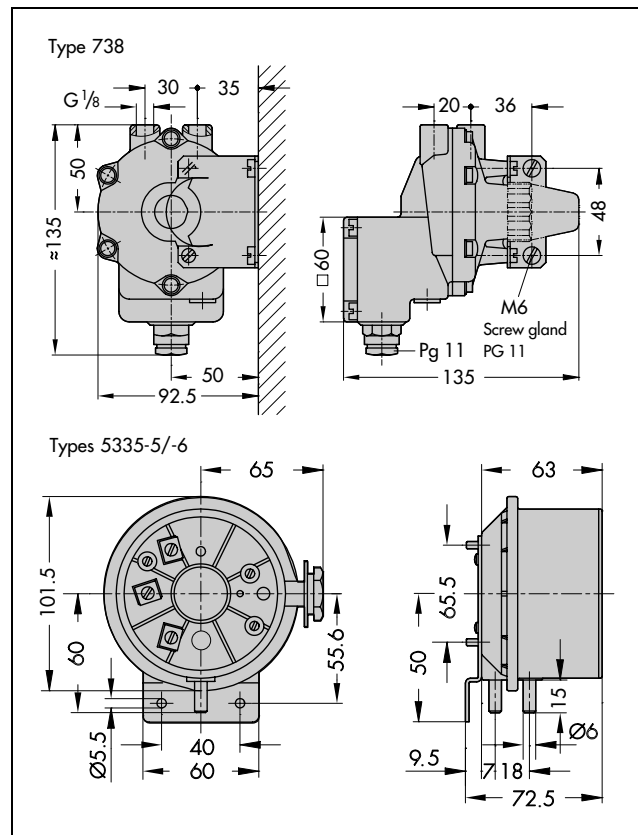
The differential pressure switches must be installed according to the dimensional drawing. Type 738 Differential Pressure Switch has pressure connections located at the top, electrical connections at the bottom.

For Type 5335-5/6 Differential Pressure Switches, the pressure connection are located at the bottom, electrical connections at the top. The differential pressure is measured upstream and downstream of the restriction (e.g. vent, orifice plate assembly, orifice or heating battery). The upstream pressure of the restriction must be connected to the positive (+) connection of the differential pressure switch, the downstream pressure must be connected with the negative (-) connection.

To monitor the pressure, only the positive (+) connection (negative connection (-) open) is connected to the measuring point. To monitor the vacuum (draught) only the negative connection (-) (positive (+) connection open) is connected to the measuring point. The electrical connection is to be wired according to the circuit diagram and the signal or control equipment to be connected.



## Dimensions in mm



Specifications subject to change without notice.



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