› Operating instructions

Pressure sensor | Type DS01

intelligent electronics | FSM®

FSM Elektronik GmbH | Scheffelstraße 49 | D-79199 Kirchzarten
Telefon +49 (0) 7661. 98 55-0 | Telefax +49 (0) 7661. 98 55-11
info@fsm-elektronik.de | **www.fsm-elektronik.de**

The microprocessor-controlled pressure transducers of the DS01 type series are suitable for the detection of excess pressure, low pressure or differential pressure of non-aggressive gases. Pressure measurement is carried out by means of a piezo-resistive pressure sensor. The temperature drift of the sensors is compensated individually. The measurement range and the delay of each sensor can be adjusted individually by means of DIP switches.

Safety instructions

- Read the operating instructions carefully before installing and commissioning this device
- Do not blow into the pressure connections
- Do not apply the nominal voltage to the output terminals
- Please follow the general provisions and safety regulations for electric, weak and heavy current installations, in particular the country-specific provisions (e.g. VDE 0100).

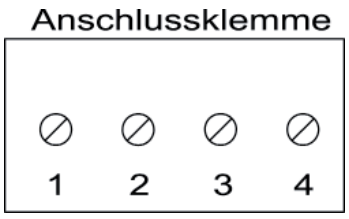
Commissioning

Prior to commissioning, remove the housing cover of the sensor. Use the DIP switches S1 and S2 to set the measurement range and the DIP switches S3 and S4 to set the desired response time. Connect the sensor according to the above terminal diagram via the terminals 1 – 4. (supply voltage and output signal). Apply the supply voltage. Apply the positive pressure to the „+“ input of the sensor and the pressure to be measured to the “-“ input of the sensor.

The applied pressure must be within the specifications of the product. Otherwise, the sensor may be damaged permanently.

Terminal diagram

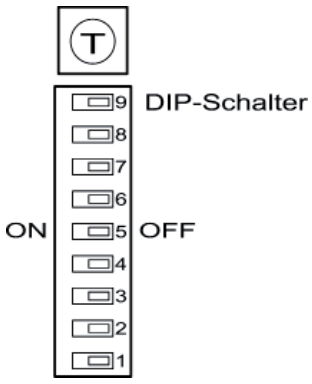
Number of terminal	Designation of connectionk
1	Output: 0 - 10 V / 0 - 20 mA / 4 - 20 mA
2	GND
3	VCC: 14 - 38 VDC / 14 - 31 VAC
4	GND



Setting the measurement range

The measurement ranges can be set with the help of the DIP switches S1 and S2. The detailed setting possibilities are listed in the following table::

S 1	S 2	Measurement range
ON	ON	100 hPa/ 10 hPa
OFF	ON	75 hPa/ 7,5 hPa
ON	OFF	50 hPa/ 5 hPa
OFF	OFF	25 hPa/ 2,5 hPa



Setting the response times

In case of strongly varying pressures, different response times for damping can be set via the switches S3 and S4. The individual functions are listed in the following table::

S 3	S 4	Response time
OFF	OFF	10 ms
OFF	ON	0,5 s
ON	OFF	2 s
ON	ON	4 s

Setting the output signal

S 6	S 7	S 8	S 9	Output
OFF	OFF	OFF	OFF	----------
OFF	OFF	OFF	ON	0 - 10V
OFF	ON	ON	OFF	0 - 20mA
ON	ON	ON	OFF	4 - 20mA

Setting the zero point

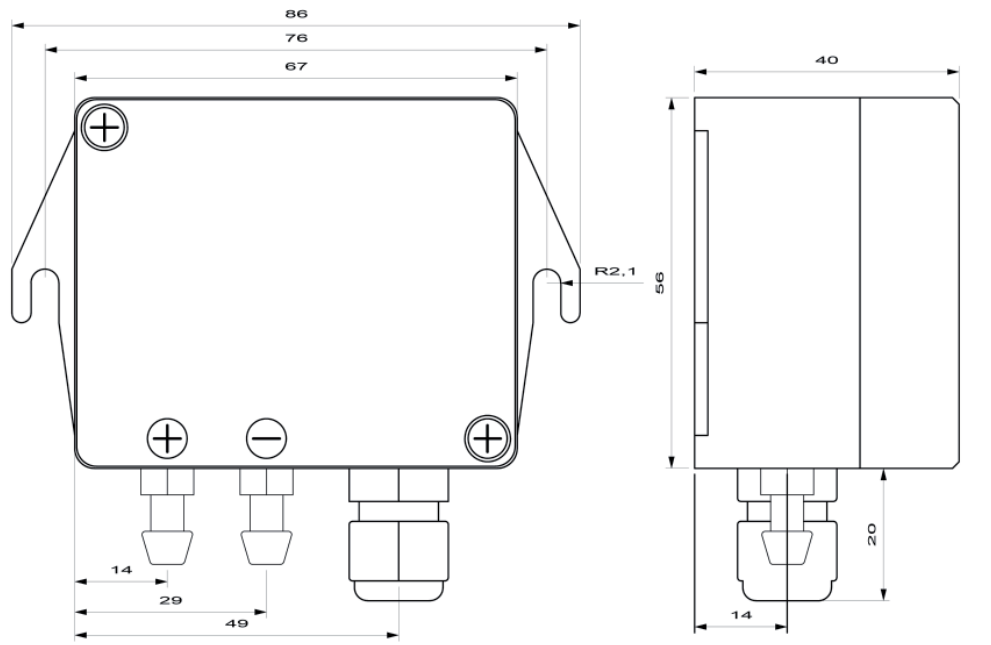
In order to balance the zero point, no pressure must be applied to the pressure connections (zero pressure). Open the housing cover and set the DIP switch S5 to OFF. After that, actuate the calliper. The adjusted measurement range is set to zero.

Setting the amplitude

Set the DIP switch S5 to ON. After applying the nominal pressure, actuate the calliper. After that, set the switch S5 back to OFF.

Dimensions

-



-

Note: Commissioning may only be performed by reliable, trained or qualified personnel.