

HE 5410

Differential pressure measurement transformer



Operating manual

English (original in german)

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1

Set-up

The HE 5410 Measurement Transformer should not, if possible, be set up near heat sources (environmental temperature: -10°C to 50°C , 15°F to 120°F).

Installation should be upright (vertical), with the pressure intakes pointed down. The pressure intakes should be connected, if possible, to short hoses. In doing that, the following applies: P+ larger than P-.

Check the electrical connections before use.

10 to 36 V DC can be connected to the device.
Make sure that the correct current is being used.
The device will be destroyed if the wrong current is used !

The measurement value of the differential pressure corresponds to the power intake of the device. You can use a sliding switch to do a test run, at 10mA.

The electrical connection lines must be set up technically correctly, with a screw connection, so that the device conforms with Protection Class IP65.

Sliding switch

A sliding switch can be used to switch the device into "test" mode. A signal is thus created, of 10mA, on the supply lines, in order to be able to check the signal processing. In this operational type, the light diode will light up 'red'.

Light diode

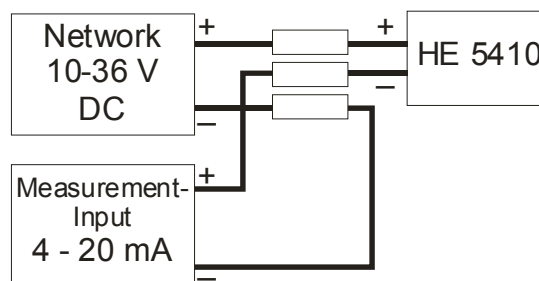
The light diode shows the mode that the device is currently in, which was set with the sliding switch:

'green' N	Normal operation	Power intake corresponds to the differential pressure
'red' T	Test operation	Power intake fixed, with 10mA, for making operational

Potentiometer

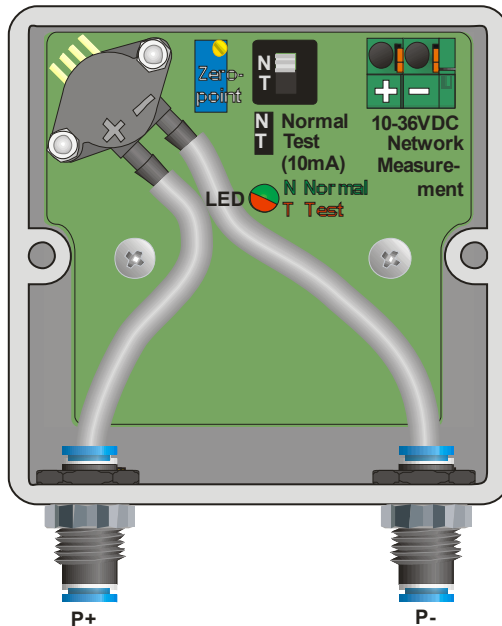
The potentiometer is used to set the zero point of the transformer to 4 mA.
The device is set at the factory to the correct value, and does not need to be changed.
If the zero point does need to be set, a warm-up runtime of 30 min must be maintained before doing so.

Connection scheme

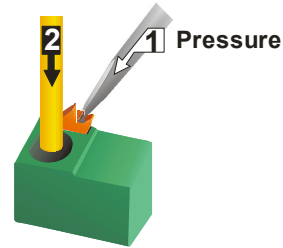


2 Connection / Ex Protection

View of the device



Connection terminal clamps



- 1 Open the clamp with pressure
- 2 Insert or remove the line

The input is uni-polar and the connection can be freely chosen

Explosion protection

This device may be operated in areas where there is a risk of explosion (Zone 22) (occasional explosive-risk atmospheres, due to the presence of electrical energy-conducting dust). The special guidelines for the Ex-area must be followed.

Special guidelines

Devices with the following designation can be used in Explosion Zone 22.

Device identification: **CE Ex II 3D T135°C IP65**

Protection Class IP65 is part of the EX identification.

The following guidelines result from that:

II	Use above ground
3D	Dust, normal safety
T135°C	Maximum surface temperature
IP65	Protection class: dust-proof, scoop-proof



When connecting lines, use the right screw connections, In order to maintain the protection type.



The device may not be operated with an open cover.



Screw connections must be checked that they do not have leaks, for example for the Δp measurement, and hoses must be checked to make sure they are clean.



Only clean the Makrolon housing using damp cleaning materials. That prevents.

3 HE 5410 Technical Data

Measurement area [mbar]: 0 ...	2,5	5	10	25	50	100	250	500	1000
Max. differential pressure [mbar]:	200		750			2000		2000	
Max. env. pressure. [mbar]:	350		1000			2000		2000	
Measuring accuracy:	± 1% of the end value								
Temperature drift	± 0.05 % / K of the end value								
Hysteresis	± 0.5 % of the end value								

- Measurement system:** Semi-conductor sensor
- Medium:** Air, as well as dry, non-aggressive gases
- Auxiliary power:** $U_b = 10 \dots 36 \text{ V DC}$
- Analog output:** 4 ... 20 mA, 2- wire technology
- Max. allowed load:** $RA \leq (U_b - 9V) / 0.02 \text{ A}$
- Pressure connection:** Hose nipple : 4 mm, 6 mm
- Environment temperature:** Operation: -20 °C ... +55 °C (-5°F to 130°F)
- Climatic application class:** KWF based on DIN 40040 ($\leq 75\%$ rel. humidity, no dewing)
- Design:** Dust-proof polystyrene housing (IP65),
Explosion protection: ATEX II 3D T135°C IP65 Zone 22
Screw connection 1 x M20
Connection: spring tension clamps for 0.2 ... 1.5 mm²,
88 x 88 x 53 mm (W x H x D)

