



instrumentación
para fluidos

Transmitter HALLTEC TEH II

Series

M-21 and ADT-15

Instructions Manual

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1. INTRODUCTION

The Halltec II is a position transducer, with a control system based on advanced microprocessor technologies. The instrument uses the Hall effect to capture the field of a magnet. This signal, after the micro-controller processing, is converted to a 4-20 mA signal proportional to the flow rate.

NOTE: Do not unscrew or remove the magnet or the circuit board, because it could affect the calibration.

2. INSTALLATION INSTRUCTIONS

2.1. Wiring

For the electrical installation, the Halltec II is provided with a four terminal connector. The instrument works in a 2-wire system, that is, the supply and signal line is the same. A twisted pair wiring should be used to avoid electrical interferences in the 4-20 mA loop. In some instances, shielded cable may be necessary.

Before starting the electrical installation, make sure that the cable gland of the connector is the right size for the cable to be used. This will guarantee that the instrument is perfectly sealed (it is recommended the use of shielded pair wiring with an exterior diameter between 4 and 7.5 mm. The section of the cables inside will be 0,25 or 0,5 mm²).

It is recommended to connect the shield of the cable to an earth point, to avoid interferences in the 4-20 mA loop.

Before wiring, disassemble the connector, removing the head, and unscrewing the cable gland. Remove the rubber seal and the washer.

After that, slide the cable through the cable gland nut, through the washer, through the rubber seal and finally through the connector head.

Strip the outside insulation of each conductor to free the inner wires. Solder the wires as shown in **figure 1** (it is recommended to tin the ends of the wires to avoid loose ends).

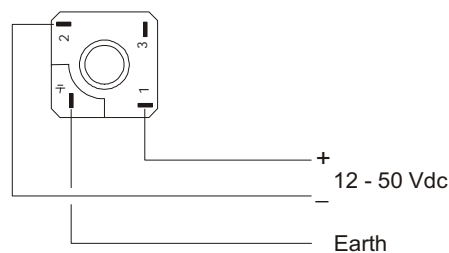


Figure 1

Before assembling the connector, make sure that the position is as indicated in the **figure 2**. (so that the cable comes out at the bottom). After that, screw the cable gland to tighten the cable. Make sure that the cable gland closes over the outer covering of the cable, in order to give a good seal.

In some instruments such as some models of ADT-15, instead of having a connector, there is a cable gland with a cable with three colours (brown, blue and green/yellow). In this case the connections should be made as follows:

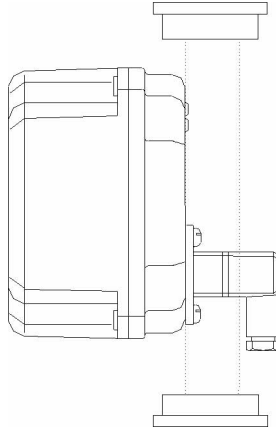


Figura 2

Green/yellow = Earth
 Brown = +
 Blue = -

Before connecting the power supply, you must be sure that the supply voltage is the correct for the installation (12 - 50 V dc depending on the load in the loop).

3. ANALOG OUTPUT

The analog output is passive, that is, it needs a power supply from a separate unit. This power supply in the loop, provides the necessary voltage to the rest of the circuit.

The current output is proportional to volumetric flow rate. The output range is from 4 to 20 mA. At zero flow rate the output is 4 mA and at full scale the output is 20 mA.

It is recommended that the load in the 4-20 mA loop is lower than the specified in the technical characteristics.

4. TECHNICAL CHARACTERISTICS

4.1. Power supply

Minimum voltage: $0.02 Z + 10$ (Volts) (Z is the load in the loop)
 Maximum voltage: 50 Vdc
 Power consumption: 20 mA maximum

4.2. Outputs

Analog output: 4 - 20 mA, factory calibrated
 Maximum load in the 4-20 mA loop: $2 \text{ k}\Omega$ (at 50 V dc supply voltage)

4.3. General characteristics

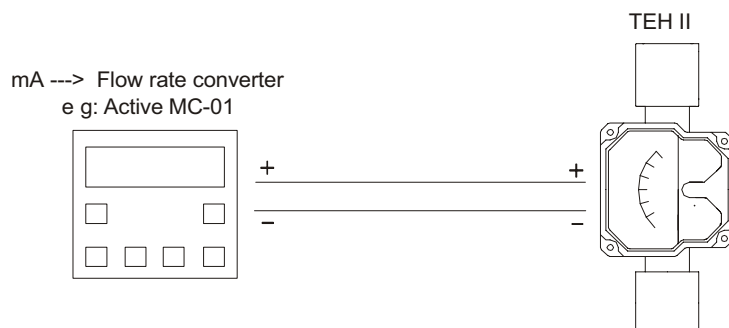
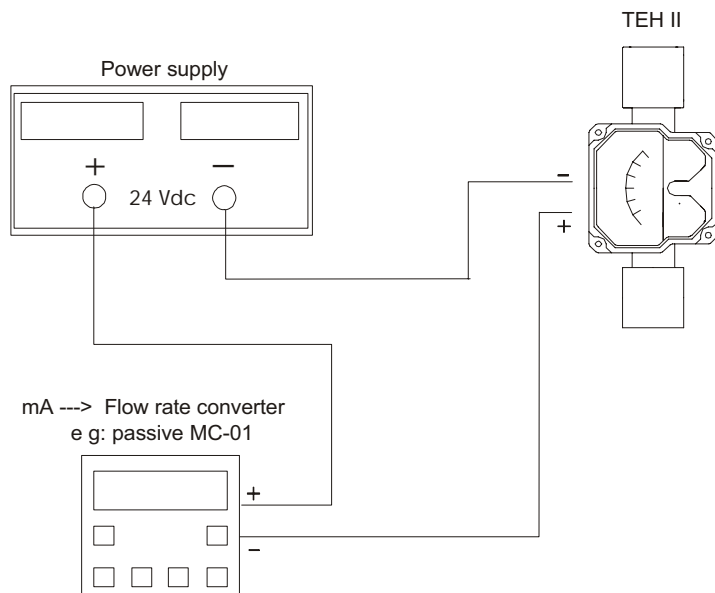
Protection: IP-65
 Ambient temperature range: $-5 - +70 \text{ }^\circ\text{C}$
 Precision (analog output respect the magnet position): $< 0.6 \%$

The TEH II complies with the following norms:

EN 50081-1
 EN 50082-2



5. APLICATIONS



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