

Humidity and Temperature Transmitter EL-HT

1. Technical data

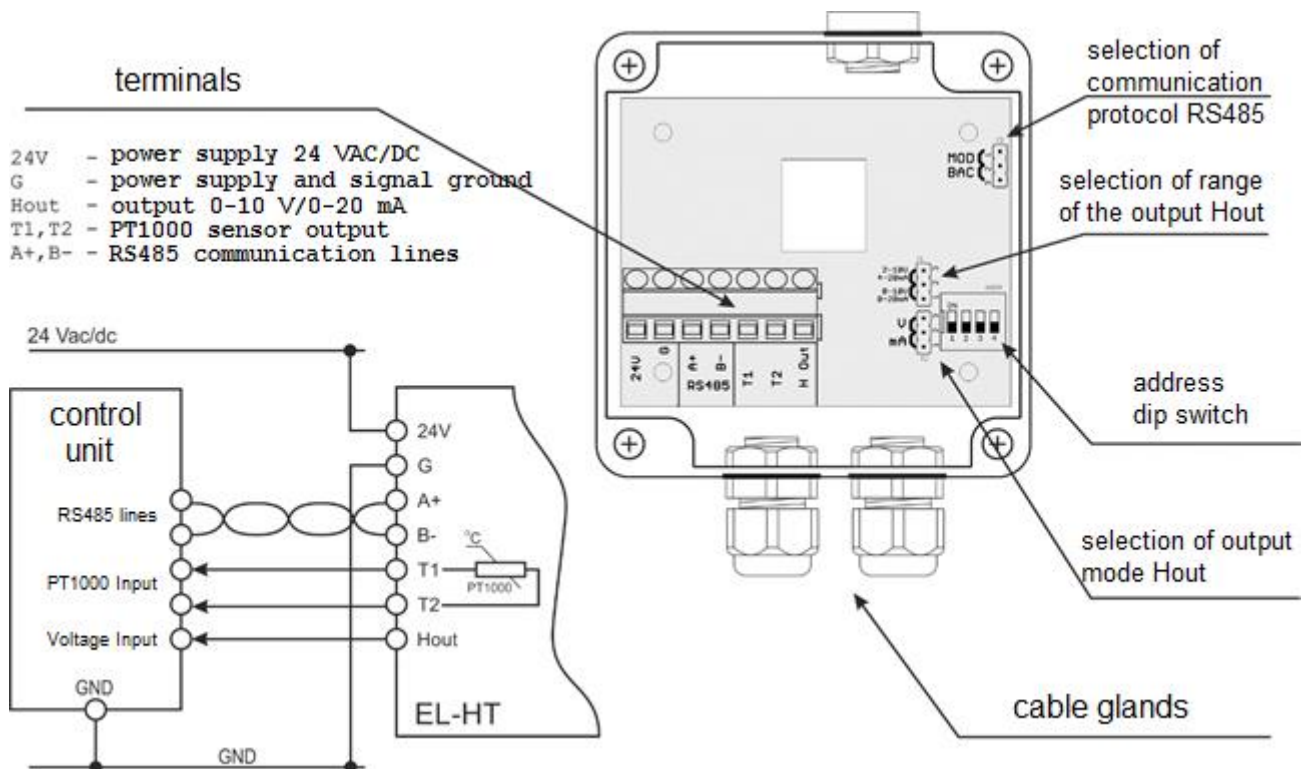


- Humidity measurement range:
0 – 100 %RH
- Temperature measurement range:
RS485: -20 ... 80 °C
T1, T2: -20 ... 80 °C
- Measurement resolution:
Humidity: max.0.04 %RH
Temp. RS-485: max. 0.01 °C
- Temperature Output T1,T2:
Sensing element PT1000
Temperature coefficient: $\alpha=3.850 \times 10^{-3} \text{ } ^\circ\text{C}^{-1}$
Sensor class: B
Max. current in the sensor circuit: 1 mA
- Humidity measurement accuracy:
typically +/- 2%RH
- Temperature measurement accuracy
(RS485): typically +/- 0.3 °C
- Humidity measurement analog output:
Configurable: 0 – 10 V; 2 – 10 V; 0 – 20 mA; 4 – 20 mA
- Power supply: 24 V AC/DC +/- 10%
- Operation temperature -20 ... 80 °C
- Storage temperature -20 ... 80 °C
- Built-in LED indicator and calibration button
- Degree of Protection: IP55
- Dimensions: 80 x 105 x 55 mm (without measuring lance)

2. Description

The compact humidity and temperature transmitter is designed for installation in ventilation ducts. Equipped with a calibrated measuring element. The device is adapted to work in digital systems via RS485 bus and analog systems with standard voltage (0-10 V, 2-10 V) and current (0-20 mA, 4-20 mA). In addition, it is equipped with independent resistive sensor PT1000.

3. Drawing



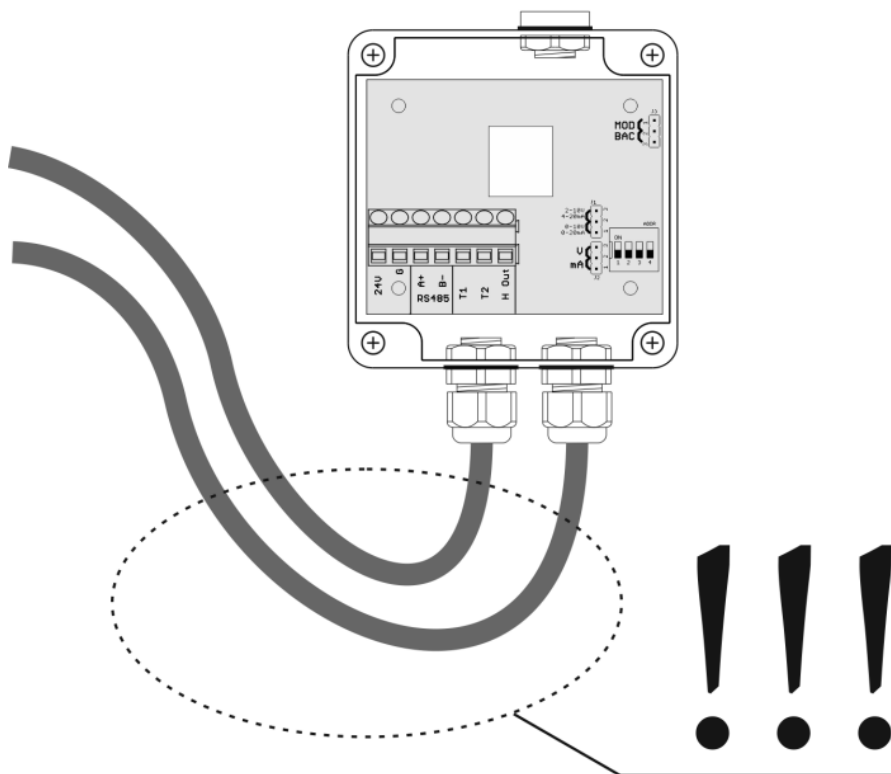
4. Operation and configuration



5. Mounting

Humidity and temperature transmitter is designed for ventilation duct mounting. To keep the declared degree of IP protection, device has to be installed with cable glands facing down and proper arrange the connection of electrical cables. The cables must be laid with the "overhang" that no water flow over the cables to the device. If you are using only one of the two cable glands, unused cable gland must be plugged by the supplied plug.

!!! THIS WAY UP !!!



6. Modbus RTU

In the transmitter EL-HT support for the Modbus RTU protocol has been implemented. Address on the bus, you can configure using DIPSWITCH switches. The other transmission parameters are 9600N1.

6.1 Registers map

Adres	Description	Numerical representation	Read / Write
Analog inputs			
0x0000	Currently measured humidity	Humidity is recorded in hundredths of %. The value of 100 means that the measured humidity is 1%	R
0x0001	Currently measured temperature	Temperature is recorded in hundredths of °C. The value of 100 means that the measured temperature is 1°C	R
Analog outputs			
0x0100	Current status of the analog output Uout	Voltage is recorded in hundredths of volts. The value of 100 means that the output voltage is 1V	R

6.2 Allowed Modbus RTU commands

Transmitter EL-HT supports only one standard Modbus RTU command:

Read multiple registers 0x03

7. BACnet MS/TP

If using BAC/MOD jumper in the communication settings BACnet protocol has been selected, transmitter is activated as a master in a BACnet MS/TP. Note that the maximum MAC address of the master in the BACnet network is 127