# USER GUIDE

## EE040 – Miniature Humidity and Temperature Transmitter

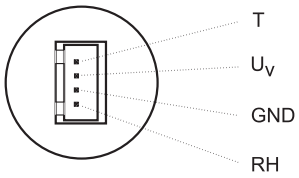
### SCOPE OF SUPPLY

EE040 according to the ordered type number, with mounting flange included.

### CAUTION

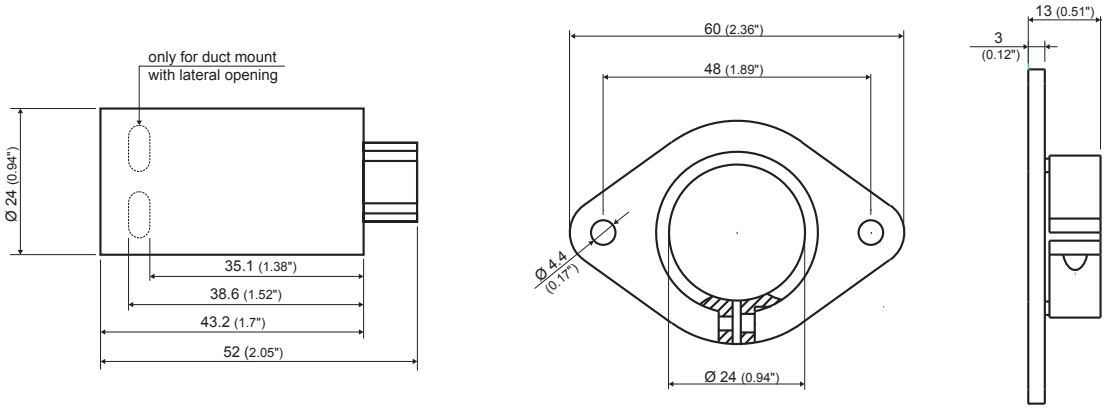
- Avoid strong mechanical stress onto the device and mainly onto its front-end (filter side).
- Do not attempt to open the EE040 enclosure.
- For accurate measurement it is of paramount importance to avoid temperature gradients along the device. This is particularly relevant when installing the device into a separation wall between zones with different temperature. In such a case make sure to thermally isolate the back-end (connector side) of the device looking out of the wall.

### CONNECTION DIAGRAM




Optional connecting cable:
- 2 m (6.6 ft) (HA010305)
- 5 m (16.4 ft) (HA010306)

### DIMENSIONS in mm (inch)




### MAINTENANCE

A clogged filter leads to long response time.

Periodical check of filter is recommended, especially in case of installation in polluted environment.

If cleaning of filter is necessary, plug off the device and clean the filter with soft brush.
Do not clean the filter with pressurized water.

## TECHNICAL DATA

### Measurands

#### Relative Humidity

| | | |
|---|---|---|
| Working range | 0...100 % RH | |
| Accuracy[1] at 20 °C (68 °F) | ± 3 % RH (30...70 % RH) | ± 5 % RH (0...95 % RH) |
| Output signal (0...100 %) | 0 - 2.5 V | |
| Output load | ≥ 5 kΩ | |
| Response time $\tau_{63}$ | < 45 s duct mount<br>< 30 s duct mount with lateral openings | |

#### Temperature

| | |
|---|---|
| Output signal | 0 - 2.5 V |
| Output load | ≥ 5 kΩ |
| Accuracy[1] at 20 °C (68 °F) | ± 0.3 °C (0.54 °F) |

### General Data

| | |
|---|---|
| Supply voltage $U_V$ | 5 V DC ±10% |
| Current consumption | typical 2 mA without load<br>< 3.5 mA at 5 kΩ load |
| Start up time | typ. 4 sec. |
| Electrical connection | appropriate for Molex 6471 (4 pins) and female crimp contacts 4809 555L |
| Housing material | PPO – GF20, UL94HB approved |
| Protection class | connector side: IP30<br>front side: IP50 (duct mount)<br>IP20 (duct mount with lateral openings) |
| CE compatibility according[2] | EN61326-1 EN61326-2-3<br>Industrial environment |
| Working conditions | T = -40…+85 °C (-40...185 °F)<br>RH = 0…100 % (non condensing) |
| Storage conditions | T = -40…+60 °C (-40...140 °F)<br>RH = 0…95 % (non condensing) |

1) Traceable to intern. standards, administrated by NIST, PTB, BEV... . The accuracy statement includes the uncertainty of the factory calibration with an enhancement factor k=2 (2-times standard deviation). The accuracy was calculated in accordance with EA-4/02 and with regard to GUM (Guide to the Expression of Uncertainty in Measurement).
2) EE040 is not protected against surge

### EMC note USA (FCC):

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

### EMC note Canada (ICES-003):

CAN ICES-3 (A) / NMB-3 (A)

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