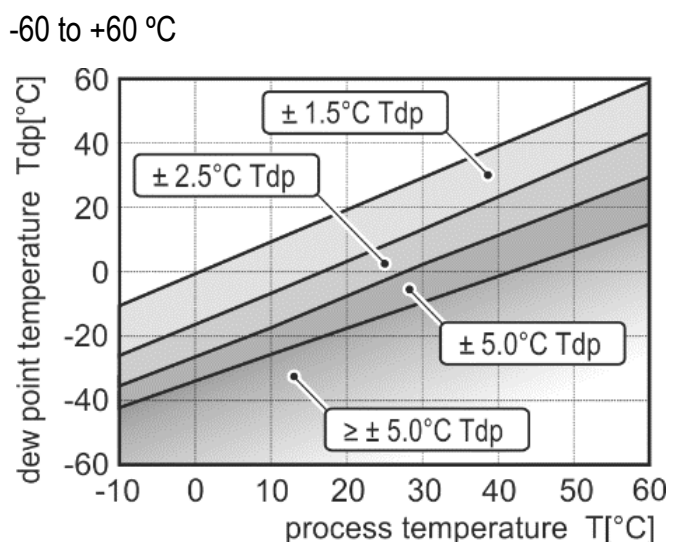# DigiS/E-xx humidity-temperature probe

PRODUCT DESCRIPTION

DigiS/M-x probe with the I²C output is designed to measure air temperature and relative humidity in chemically non-aggressive environments. It is designed for connection to inputs of devices **COMET** series **Uxxxx, Wx7xx** and **Wx8xx**. The probe is interchangeable (calibration constants are saved in the probe).

The probes are supplied in several variants depending on the cable length (last two digits of the probe name indicate the cable length). Device is suitable for stationary or portable applications with required fast response time.
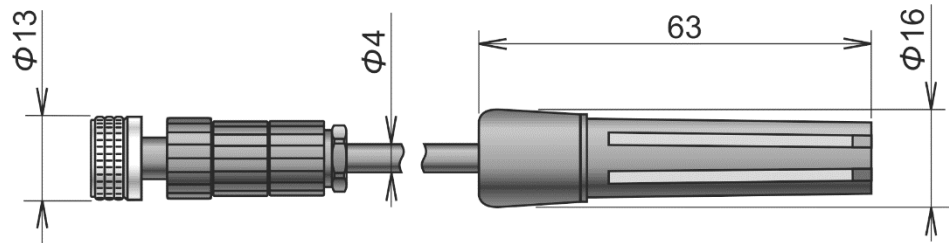
TECHNICAL PARAMETERS

- Temperature
  - Range: -10 to +60 ºC
  - Accuracy: ± 0.4 ºC
  - Response time: t90 < 1 min (temperature step 20 ºC, air flow 1 m/s)

- Relative humidity
  - Range: 0 to 100% RH (without condensation)
  - Accuracy of the humidity sensor: ±1.8 %RH in the range of 0 to 90 %RH at 23 ºC
  - Hysteresis: < ±1 %RH
  - Linearity error: < ±1 %RH
  - Response time: t90 < 4 s (humidity step 60% RH, constant temperature)

- Calculated humidity quantities

  - 1/ Dew point temperature
    - Range: -60 to +60 ºC
    - Accuracy:

2/ Absolute humidity
      Range: 0 to 130 g/m^3
      Accuracy: ±1.5 g/m^3 for ambient temperature T < 25 ºC

3/ Specific humidity
      Range: 0 to 130 g/kg
      Accuracy: ±2 g/kg for ambient temperature T < 35 ºC and atmospheric pressure of 1013 hPa

4/ Mixing ratio
      Range: 0 to 150 g/kg
      Accuracy: ±2 g/kg for ambient temperature T < 35 ºC and atmospheric pressure of 1013 hPa

5/ Specific enthalpy
      Range: 0 to 450 kJ/kg
      Accuracy: ±5 kJ/kg for ambient temperature T < 35 ºC and atmospheric pressure of 1013 hPa

- Operating temperature range: -10 to +60 ºC
  Operating relative humidity range: 0 to 100% RH (without condensation)

- Power: 2.7 to 5.5 V
  Current consumption: 50 µA @ 5 V

- Recommended calibration interval: 1 year

- Storage temperature: -10 to +60 ºC
  Storage relative humidity: 0 to 100% RH (without condensation)

- Electromagnetic compatibility: EN 61326-1 (tested with device)
                                            Emission: EN 55011, class B
                                            Immunity: EN 61000-4-2, 4 kV/8 kV, class A
                                                            EN 61000-4-3, 3 V/m, class A
                                                            EN 61000-4-4, 0.5 kV/ 1 kV, class A
                                                             EN 61000-4-6, 3 V, class A

- Protection: IP30
  Working position: without restriction
  Cable length: 1m, 2m, 5m, 10m, 15m
  Weight (with cable):   45g / 1m, 70g / 2m, 145g / 5m, 265g / 10m, 385g / 15m
  Material: ABS

DIMENSIONS

INSTALLATION

The probe place to area of measurement and connect it to the device.

The probe does not require any special service or maintenance. We recommend you periodically to verify the accuracy of measurement by calibration.

TECHNICAL SUPPORT AND SERVICE

Technical support and service is provided by distributor. For contact see warranty certificate.

If needed, you can also use the discussion forum at http://www.forum.cometsystem.cz/.

WARNING

• It is not recommended to use the probe for long time in a dusty environment.

• It is not recommended to use the probe for long time under condensation conditions.

• Don´t connect or disconnect the probe cable while the device is turned on - incorrect values could be recorded to the device memory.

• The probe contains electronic components, it needs to liquidate them according to legal requirements.

Warranty certificate

This product has three years warranty since the date of sale to the end user. Defects due defective materials, defective manufacturing or design will be repaired free of charge by the manufacturer. The location of repair is at manufacturer´s. No warranty is given to products operated in conditions not matching the conditions specified by the manufacturer in instruction manual. Also no warranty is given to products which were modified by the user, products with broken seal, products which were connected to power or input signals not matching the technical specification (Instruction manual). No warranty is given to consumables, e.g. batteries, fuses and eventual changes of parameters created by wear (influence of aggressive environment etc.).

Serial number:

Sale date:

DISTRIBUTOR