# Room humidity transmitter design 4-20 mA

**Article number: 801110 6022**


Our room humidity transmitter design with a current output of 4-20 mA and the Frija1 housing can be easily mounted using screws. This device measures the humidity and optionally the temperature. The Design 4-20 mA room humidity transmitter is ideal for the precise measurement of humidity and temperature in indoor spaces such as offices, supermarkets and schools.

| **Supply and output** | |
|---|---|
| Output | 4 - 20 mA |
| Power consumption | < 1,1 VA / 24 V DC |
| Voltage supply | 15 - 36 V DC |
| Connection type | See connection diagrams |

| **General information** | |
|---|---|
| Load | Ra (Ohm) = (Ub -14 V) / 0,02 A |
| Sensors | Digital humidity sensor, optionally with integrated temperature sensor |

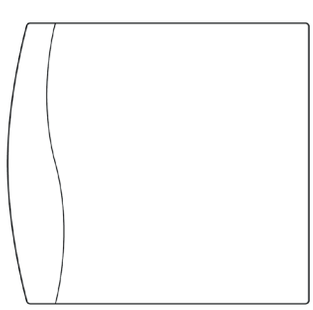
| **Humidity** | |
|---|---|
| Measuring element humidity | Digital humidity sensor (low hysteresis, high long-term stability) |
| Measuring range humidity | 0 % RH to 100 % RH |
| Output humidity | 4-20 mA |
| Accuracy humidity | ± 2.0 % (20 % RH to 80 % RH) at +25 °C, otherwise ± 3.0 % |
| Long-term stability | ± 1 % / year |

| **Temperature** | |
|---|---|
| Measuring element Temperature | Pt1000, DIN EN 60751, Class B |
| Measuring range temperature | 0 °C to +50 °C |
| Output temperature | 4 - 20 mA |
| Accuracy temperature | typically ± 0.2 K at +25 °C |

| **Ambient conditions** | |
|---|---|
| Storage temperature | -25 °C to +50 °C |
| Operating temperature | -5 °C to +55 °C |
| Permissible air humidity | 0 % RH to 95 % RH (without condensation) |

| **Certifications / Standards** | |
|---|---|
| Protection class | III (according to EN 60 730) |
| Protection type | IP 30 according to EN 60 529 |
| Standards | CE conformity<br>electromagnetic compatibility according to EN 61326<br>according to EMC Directive 2014/ 30/ EU |

**Configurable options**
M - Measured variable



MW / KS / 05.09.2024

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Please find our whole temperature probe and transmitter portfolio in our webshop at: www.testo-sensor.shop

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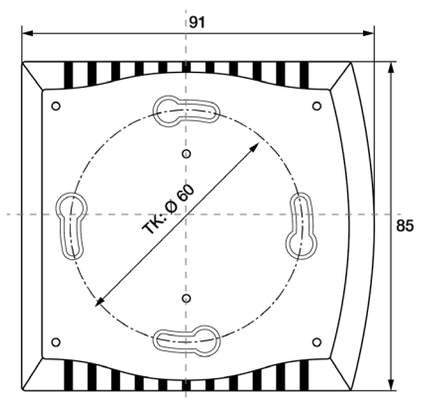
| Housing | |
|---|---|
| Material | not specified<br>Material ABS |
| Dimensions (L/W/H) (mm) | 91 x 85 x 27 |
| Color | not specified |
| Electrical connection | 0.14 - 1.5 mm², via screw terminals on circuit board |

**Drilling template**

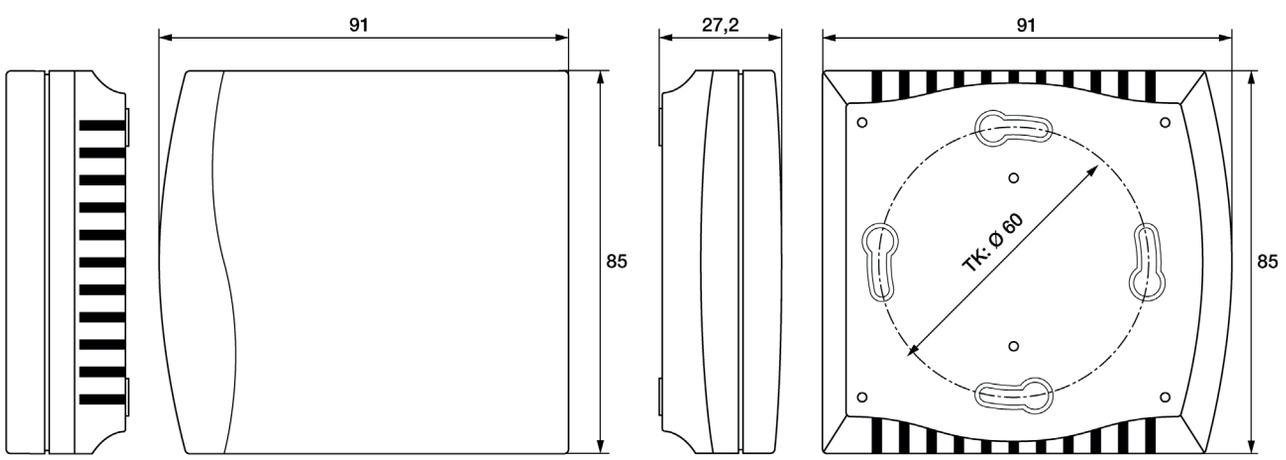



| Your order code | | M - Measured variable | | Delivery and Packing | |
|---|---|---|---|---|---|
| **Article number** | **Measured variable** | **code** | **Measured variable** | | |
| 801110 6022 | ____ | M1 | % RH (Relative humidity) | Packing | individually packed in cardboard box |
| | | M2 | °C + % RH (Temperature and relative humidity) | Delivery | Transmitter, Operating instructions |

**Technical drawing**

**Configurable options**
M - Measured variable

All dimensions in mm

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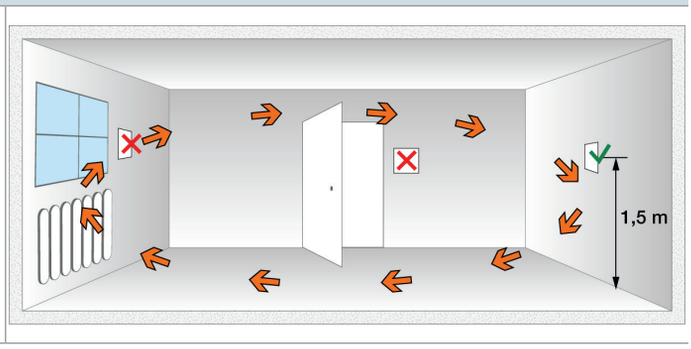
## Important assembly instructions

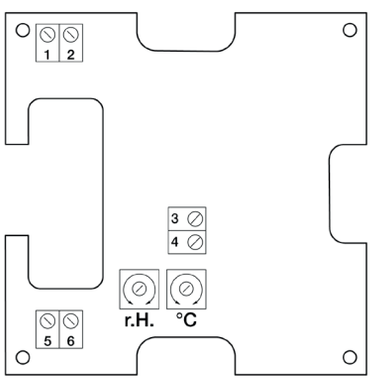
For precise measurement of room temperature and humidity, it is crucial to take into account both the temperature dynamics and the humidity dynamics in the room. Air circulation should only take place through the openings in the housing cover. Therefore, the transmitter should be installed away from objects or obstacles that could block air movement. Also avoid uncontrolled air currents (draughts) by installing the transmitter near doors or windows. The transmitter should also not be installed on the colder outside wall to prevent measurement inaccuracies.

The device should only be used in pollutant-free, non-condensing air (< 95 % RH).




## Circuit diagrams and assignment (Please also read the operating instructions before connecting the transmitter)

### Wiring diagram




| Assignment % RH |
|---|
| 1 = +UB 24V DC |
| 2 = Output Humidity 4-20mA |
| 3 = free |
| 4 = UB GND |

| Assignment °C + % RH |
|---|
| 1 = +UB 24V DC |
| 2 = Output Humidity 4-20mA |
| 3 = Output temperature 4 -20mA |
| 4 = UB GND |
| 5 = free |
| 6 = free |

The humidity path must be connected for the current version! Please refer to the operating instructions for the correct connection.

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