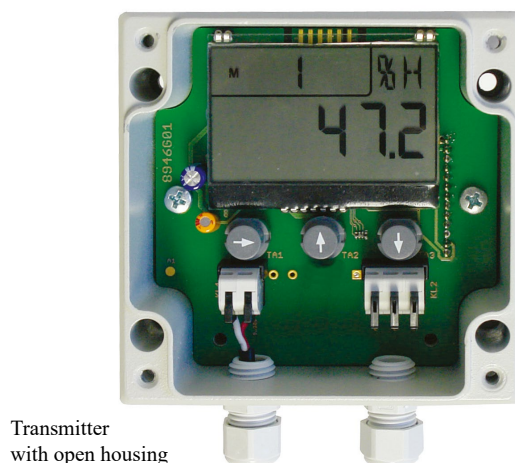
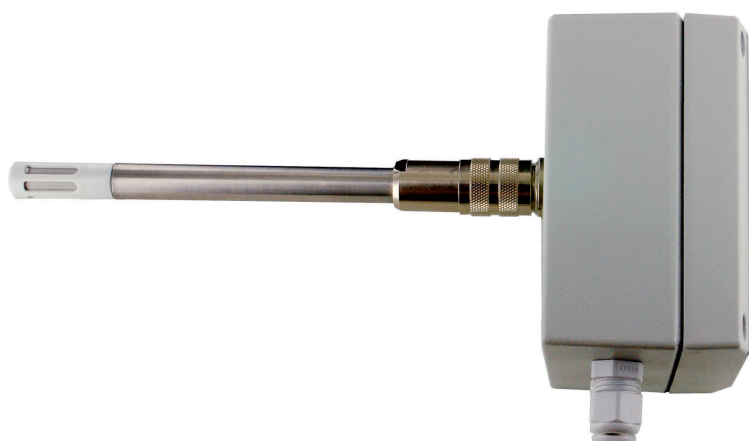


Air humidity

Digital temperature / humidity transmitter MH8D46C with double analog output V or mA



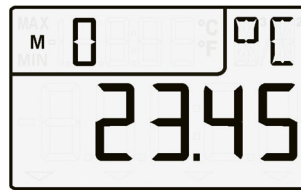
Transmitter with open housing

- Digital sensor element for humidity, temperature, air pressure. All key sensor characteristics, settings, and adjustment data are saved in the sensor element itself.
- Plug-in sensor element: Spare elements are inexpensive; a replacement can be fitted on site quickly and easily by virtually anyone; it will be fully accurate straight away needing no special adjustment.
- Digital transfer of measured values from the sensor element to the transmitter
- Four climate variables can be measured: Double analog output for temperature and one humidity variable relative humidity / dewpoint / mixture ratio. The air pressure dependent humidity values are automatically compensated for air pressure (the air pressure is measured directly at the measuring point in the sensor tip).
- The transmitters can be configured via the internal display and the keypad.
- The analog output type (10 V or 20 mA) can be selected (via the keypad); the analog output range can be programmed.
- Display of measured value, channel, units, humidity range, analog start, analog end, and analog type
- The sensor tube can be connected either directly by plugging onto the transmitter itself or via a connecting cable.
- Suitable for conduit mounting or wall mounting

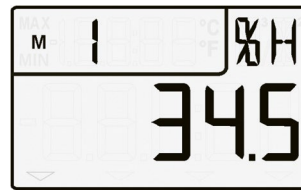
Technical data

| | | | |
|--|--|---------------------|--|
| Operative range | Sensor -20 to +80 °C, 5 to 98 % RH Electronics -10 to +50 °C, IP65 | Output type | 0 to 10 V, 0 to 20 / 4 to 20 mA, selectable |
| Humidity sensor | | Resolution | 16 bit |
| Measuring range | 0 to 100 % RH | Accuracy | 0.1 % of final value |
| Sensor | CMOSens® technology | Temperature drift | 10 ppm / K |
| Fixed measuring period / output period approx. | 3 seconds | Time constant | 100 µs |
| Accuracy (incl. hysteresis) | ±3 % RH in range 10 to 90 % RH ±5 % RH in range 5 to < 98 % RH at nominal temperature | Connection | Cable, via screwless clamp connector, with cable bushing Cable diameter 2 to 5 mm |
| Hysteresis | typical ±1 % RH | Standard equipment | |
| Nominal temperature | +23 °C ±5 K | Display, internal | 2-row LCD 7 segments 4 1/2 and 5 characters 2 digits 16 segments |
| Sensor operating pressure | Atmospheric pressure | Operation, internal | 3 keys |
| Response time T ₆₃ | typical 8 seconds at +25 °C, 1 m/s (without filter) | Power supply | |
| Temperature sensor | | DC voltage | 9 to 30 VDC |
| Sensor | CMOSens® technology | Current consumption | 37 mA + 1.5·I _{Out} |
| Fixed measuring period / output period approx. | 3 seconds | Connection | Cable, via screwless clamp connector, with cable bushing Cable diameter 2 to 5 mm |
| Accuracy | typical ±0.2 K at 5 ... 60 °C max. ±0.4 K at 5...60 °C max. ±0.7 K at -20...80 °C | Mechanical design | |
| Reproducibility | typical ±0.1 K | Sensor tube | Stainless steel, diameter 12 mm |
| Response time T ₆₃ | typical 20 seconds (without filter) | Protective cap | SK7, metal-mesh filter |
| Outputs | | Housing | Die-cast aluminum, closed cover |
| Double analog output | Digital-to-analog converter (DAC) electr. isol. | Dimensions | 100 x 100 x 60 mm (LxWxH) |
| 0 to 10 V, load >100 kilohms | | Protective class | IP65 (with sensor tube and connecting cable plugged in) |
| 0 to 20 mA, load <500 ohms | | | |

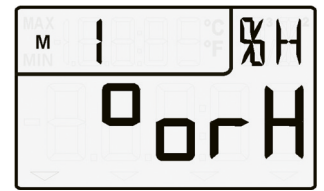
Display of measured values and programming (housing open)



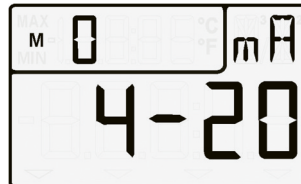
Measured value display, channel M0, temperature



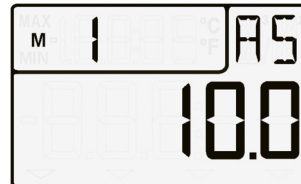
Measured value display, channel M1, humidity variable, e.g. relative humidity



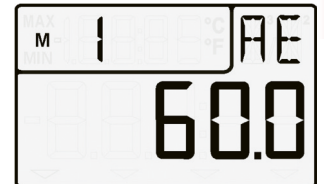
Selecting the humidity variable, e.g. relative humidity, % RH



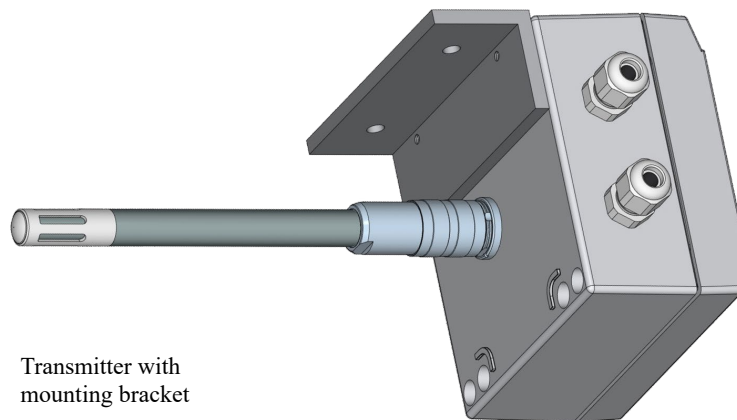
Selecting the analog output type, e.g. 4 to 20 mA



Programming the analog start



Programming the analog end



Transmitter with mounting bracket

Accessories

| | | | Order no. |
|---|-------------------|---|-------------------|
| Angle bracket for wall mounting | ZB8D00W | Connecting cable between sensor tube and transmitter | |
| Rubber gasket (mat) for mounting the housing directly on a conduit wall (immersion depth = sensor length + approx. 42 mm plug length) | ZB8D00GD | Length = 2 meters | ZH9D46VK02 |
| Movable brass screw with plastic sealing ring (see page 197) | ZB9600KV20 | Same as above Length = 5 meters | ZH9D46VK05 |
| Connecting flange for screw connection, pitch circle diameter 38 mm (see page 197) | ZB9600F20 | Same as above Length = 10 meters | ZH9D46VK10 |
| Protective caps (see page 197) | ZB1012NA12 | Spare sensor, complete Sensor element inside sensor tube including protective cap SK7 | |
| Mains plug, 100 to 240 VAC, 12 VDC, 1.8 A | | Sensor length = 125 mm | FH9D46C1K1 |
| | | Same as above Sensor length = 265 mm | FH9D46C1K2 |
| | | Same as above Sensor length = 525 mm | FH9D46C1K3 |
| | | Replacement sensor element, digital, adjusted, plug-in | FH0D46C |

Variants including manufacturer's test certificate

Digital transmitter for temperature and humidity

with double analog output, 10 V or 20 mA (selectable via keypad), internal display, 3 keys, aluminum housing, IP65, with plug-in digital sensor, sensor length = 125 mm
 Same as above Sensor length = 265 mm
 Same as above Sensor length = 525 mm

Order no.
MH8D46C1K1
MH8D46C1K2
MH8D46C1K3

DAkKS or factory calibration KH9xxx, temperature, humidity, for digital sensor, see chapter „Calibration certificates“.
 DAkKS calibration meets all the requirements regarding test resources laid down in DIN EN ISO/IEC 17025.