



Relative Humidity & Temperature Transmitters

TYPICAL APPLICATIONS

| | |
|-------------------|-----------------|
| Energy management | Food Processing |
| Bakery Products | Tobacco |
| Greenhouses | Paper |
| HVAC | Textiles |
| Warehouses | Fruit Storage |
| Clean Rooms | Museums |
| Grain Storage | Meat Storage |

The relative humidity transmitter continuously measures the ambient humidity and provides an analog output directly proportional to the Relative Humidity. The output signal is given from 0-100% RH. The 2-wire models provides a passive 4-20mA output requiring a current loop supply of 4.5-35V $\overline{=}$. The output of the 3/4-wire model is user selectable: 0-1V, 0-2,5V, 0-5V or 0-10V. The unit is factory set at 0-10V. Relative Humidity Transmitters can be combined with a temperature transmitter or a single Pt100 or Pt1000 element. Customized versions on request. Options include a PVDF, a wire-mesh and a stainless steel filter to protect the sensors in dusty environments, a weather protection cap for Meteo applications and a mounting flange.

SPECIFICATIONS

3/4-Wire Relative Humidity Transmitter

Measuring range: 0-100 %RH
Operating range:
 5-95 %RH (High accuracy types)
 10-90 %RH (Low cost types)
Output: 0-1V or 0-10V user selectable, standard set at 0-10V. (current max 1mA)
Accuracy @ 23°C:
 ± 2 %RH (10-90%RH) (High accuracy types)
 ± 3 %RH (30-80%RH) (Low cost types)
Stability: ± 1 %RH, 1 year typ. (depending on environmental conditions)
Temperature drift:
 ± 0.03 %RH/°C typ. (High accuracy types)
 ± 0.05 %RH/°C typ. (Low cost types)
Response time: 10 sec. typ. (90% of the change)
Power supply:
 14-35 V $\overline{=}$ for 0-10V output
 4.5-35V $\overline{=}$ for 0-1V output supply current typ. 1.5mA

Supply influence:

± 0.003 RH/V typ. (High accuracy types)

± 0.005 RH/V typ. (Low cost types)

Operating temperature: -30..60 °C

3/4-Wire Temperature Transmitter

Range: 0..100 °C or -20..80 °C

Output: 0-1V or 0-10V user selectable, standard set at 0-10V. (current max 1mA)

Accuracy:

± 0.2 °C (-10...+50°C) (High accuracy types)

± 0.3 °C (5...40°C) (Low cost types)

Power supply:

14-35 V $\overline{=}$ for 0-10V output

4.5-35 V $\overline{=}$ for 0-1V output

Supply influence:

± 0.003 °C/V typ. (High accuracy types)

± 0.005 °C/V typ. (Low cost types)

2-Wire Relative Humidity Transmitter

Measuring range: 0-100 %RH

Operating range:

5-95 %RH (High accuracy types)

10-90 %RH (Low cost types)

Output: 4-20 mA

Accuracy @ 23°C:

± 2 %RH (10-90%RH) (High accuracy types)

± 3 %RH (30-80%RH) (Low cost types)

Stability: ± 1 %RH, 1 year typ. (depending on environmental conditions)

Temperature drift:

± 0.03 %RH/°C typ. (High accuracy types)

± 0.05 %RH/°C typ. (Low cost types)

Response time: 10 sec. typ. (90% of the change)

Power supply: 4.5-35 V $\overline{=}$

Supply influence:

± 0.003 °C/V typ. (High accuracy types)

± 0.005 °C/V typ. (Low cost types)

Operating temperature: -30..60 °C

2-Wire Temperature Transmitter

Range: 0..100 °C or -20..80 °C

Output: 4-20 mA

Accuracy:

± 0.2 °C (-10...+50°C) (High accuracy types)

± 0.3 °C (5...40°C) (Low cost types)

Power supply: 4.5-35 V $\overline{=}$

Supply influence:

± 0.003 °C/V typ. (High accuracy types)

± 0.005 °C/V typ. (Low cost types)

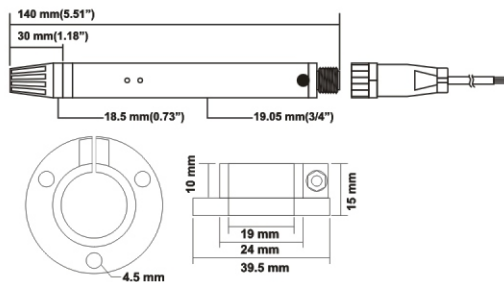
Probe Type

Low cost (Accuracy@23°C: ±3%RH (30-80%RH))

| Product Code | Measurement | Output | Connection |
|--------------|----------------------|--------------|------------|
| HX-784-I-L1 | Humidity | 0...10V | 3/4 Wire |
| HT-784-I-L1 | Humidity&Temperature | 2 x 0...10V | 3/4 Wire |
| HX-785-I-L1 | Humidity | 4...20mA | 2 Wire |
| HT-785-I-L1 | Humidity&Temperature | 2 x 4...20mA | 2 Wire |

High accuracy (Accuracy@23°C: ±2%RH (10-90%RH))

| Product Code | Measurement | Output | Connection |
|--------------|----------------------|--------------|------------|
| HX-912-I-01 | Humidity | 0...10V | 3/4 Wire |
| HT-912-I-01 | Humidity&Temperature | 2 x 0...10V | 3/4 Wire |
| HX-922-I-01 | Humidity | 4...20mA | 2 Wire |
| HT-922-I-01 | Humidity&Temperature | 2 x 4...20mA | 2 Wire |



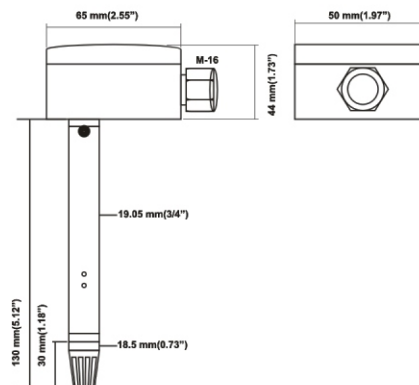
Duct Mount Type

Low cost (Accuracy@23°C: ±3%RH (30-80%RH))

| Product Code | Measurement | Output | Connection |
|--------------|----------------------|--------------|------------|
| HX-784-I-L2 | Humidity | 0...10V | 3/4 Wire |
| HT-784-I-L2 | Humidity&Temperature | 2 x 0...10V | 3/4 Wire |
| HX-785-I-L2 | Humidity | 4...20mA | 2 Wire |
| HT-785-I-L2 | Humidity&Temperature | 2 x 4...20mA | 2 Wire |

High accuracy (Accuracy@23°C: ±2%RH (10-90%RH))

| Product Code | Measurement | Output | Connection |
|--------------|----------------------|--------------|------------|
| HX-912-I-02 | Humidity | 0...10V | 3/4 Wire |
| HT-912-I-02 | Humidity&Temperature | 2 x 0...10V | 3/4 Wire |
| HX-922-I-02 | Humidity | 4...20mA | 2 Wire |
| HT-922-I-02 | Humidity&Temperature | 2 x 4...20mA | 2 Wire |



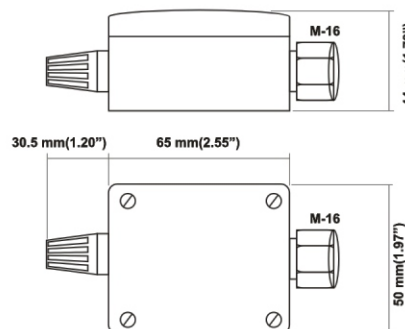
Wall Mount Type

Low cost (Accuracy@23°C: ±3%RH (30-80%RH))

| Product Code | Measurement | Output | Connection |
|--------------|----------------------|--------------|------------|
| HX-786-I-L6 | Humidity | 0...10V | 3/4 Wire |
| HT-786-I-L6 | Humidity&Temperature | 2 x 0...10V | 3/4 Wire |
| HX-787-I-L6 | Humidity | 4...20mA | 2 Wire |
| HT-787-I-L6 | Humidity&Temperature | 2 x 4...20mA | 2 Wire |

High accuracy (Accuracy@23°C: ±2%RH (10-90%RH))

| Product Code | Measurement | Output | Connection |
|--------------|----------------------|--------------|------------|
| HX-913-I-06 | Humidity | 0...10V | 3/4 Wire |
| HT-913-I-06 | Humidity&Temperature | 2 x 0...10V | 3/4 Wire |
| HX-923-I-06 | Humidity | 4...20mA | 2 Wire |
| HT-923-I-06 | Humidity&Temperature | 2 x 4...20mA | 2 Wire |



Accessory

| Order Code | Description |
|------------|---|
| A-000014 | PVDF Dust Filter, dia=18.5mm |
| A-000020 | Sintered Stainless Steel Dust Filter, dia=18.5mm |
| A-000021 | Protection cap with wire-mesh filter, dia=18.5mm |
| A-000030 | Connector (female) for Probe, dia=19mm & screws for cable |
| A-000031 | Connector (female) for Probe, dia=19mm with 2m cable |
| A-000150 | Plastic Flange for dia. 19mm Probe Types |