

## H7015B1060 / H7015B1080

### DUCT HUMIDITY TEMPERATURE SENSOR

#### PRODUCT DATA



#### GENERAL

The H7015B1060 Humidity Temperature Duct Transmitter combines a capacitance-type relative humidity sensor and a temperature sensor in one housing, both with 0...10V output. The Model H7015B1080 is additionally equipped with a 20k $\Omega$  NTC passive temperature sensor.

These sensors can be used

- for discharge, outside or return air control
- as high limit sensor, e.g., for steam humidification

#### Models

| OS-No.     | Temperature Sensor Type              |
|------------|--------------------------------------|
| H7015B1060 | 0...10V                              |
| H7015B1080 | 0...10V and 20k $\Omega$ NTC passive |

#### FEATURES

- 0...10V %rh / temperature output or additional 20k $\Omega$  NTC temperature sensing element
- Wide sensing range
- Capacitance-type sensing element for relative humidity
- Maintenance free

#### SPECIFICATION

|                     |                                                  |
|---------------------|--------------------------------------------------|
| Power supply        | 24 V AC, $\pm 20\%$ (SELV)<br>15...35 VDC        |
| Current consumption | typ. 5 mA at DC supply<br>typ. 13mA at AC supply |

#### Ambient Limits

|                                   |                              |
|-----------------------------------|------------------------------|
| Operating temperature             | -15...65 °C (5...149 °F)     |
| Transport and storage temperature | -25...+60 °C (-13...+140 °F) |
| Humidity                          | 5...95% rh, non-condensing   |

#### Safety

|                     |                                |
|---------------------|--------------------------------|
| Protection class    | III as per EN60730-1           |
| Protection standard |                                |
| - Terminal box      | IP65 as per EN60529            |
| Housing material    | Flame retardant V0 as per UL94 |
| Terminal box        | plastic (PC)                   |
| Dimensions          | see Fig. 1 on pg. 2            |
| Mounting            | duct                           |

#### Temperature Sensor

|                                                                       |                              |
|-----------------------------------------------------------------------|------------------------------|
| Temperature sensing range of 0...10V output for H7015B1060/H7015B1080 | 0...+50°C (+32...122°F)      |
| H7015B1080 (at NTC20K)                                                | -30...+70 °C (-22...+158 °F) |
| Nominal value, NTC                                                    | 20 k $\Omega$ at 25 °C       |
| Accuracy, 0...10V output                                              | $\pm 0.3$ K at 20°C          |
| Accuracy, NTC                                                         | $\pm 0.3$ K at 25 °C         |
| Characteristic NTC 20K                                                | see EN0B-0476GE51            |
| Response time for temperature at air velocity 3 m/s                   |                              |
| 0...10V $\tau_{63}$                                                   | < 110 s                      |
| NTC $\tau_{63}$                                                       | < 80 s                       |

#### Relative Humidity Sensor

|                                 |                                               |
|---------------------------------|-----------------------------------------------|
| Humidity sensing range          | 0...100% rh                                   |
| Output signal                   | 0...10 Vdc $\triangleq$ 0...100% rh           |
| Output current                  | -1mA < $I_L$ < 1mA                            |
| Outputs short circuit protected |                                               |
| Operating range                 | 10...95% rh                                   |
| Accuracy                        | $\pm 2.5\%$ rh at 20 °C, 10...95%rh           |
| Temperature stability:          | typ. $\pm 0.03\%$ rh/K                        |
| Response time                   | $\tau_{63} \approx 9$ s at air velocity 3 m/s |

## WIRING

| wiring run           | maximum length |
|----------------------|----------------|
| sensor to controller | 200 m (660 ft) |

**NOTE:** Installation of the sensor near high EMI-emitting devices may lead to faulty measurements.

Use shielded wiring in areas with high EMI.

Keep 15 cm (5.9") min. distance between sensor lines and 230 Vac power lines.

Use two transformers: one for sensors and actuators and one for the controller.

## DIMENSIONS

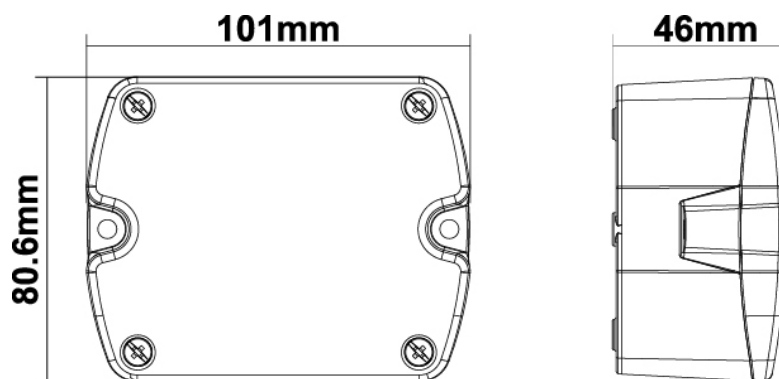
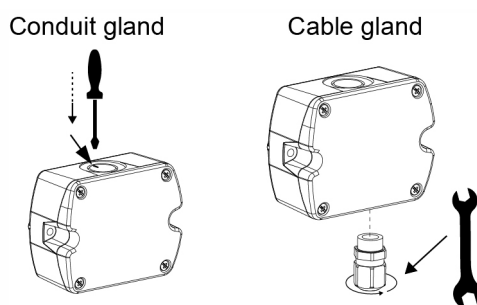


Fig. 1. Dimensions

## MOUNTING



SCREW WITH TORQUE OF 1.5 Nm FOR BREAK-THROUGH.  
RECOMMENDED TIGHTENING TORQUE: 3.5 Nm.

Fig. 2. Assembly of Conduit / Cable Gland

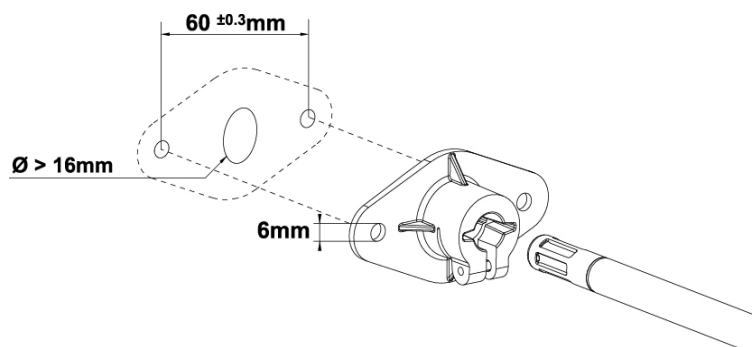


Fig. 3. Flange mounting on duct

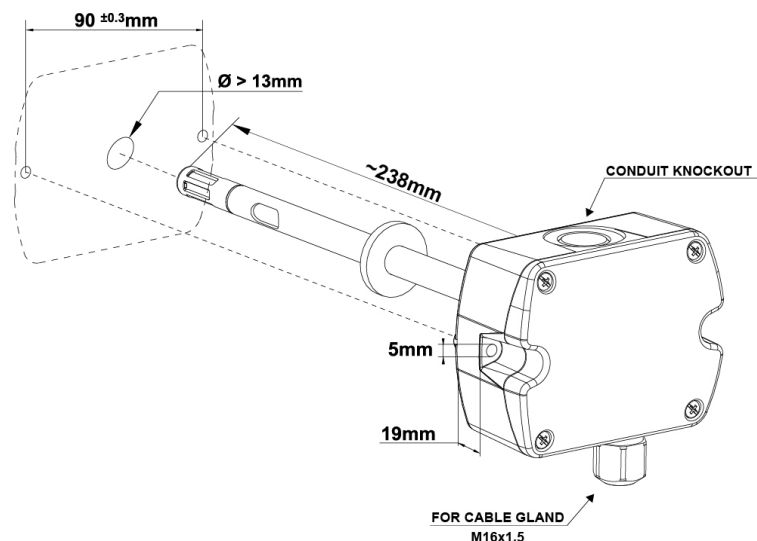


Fig. 4. Mounting on duct

## TERMINAL ASSIGNMENTS

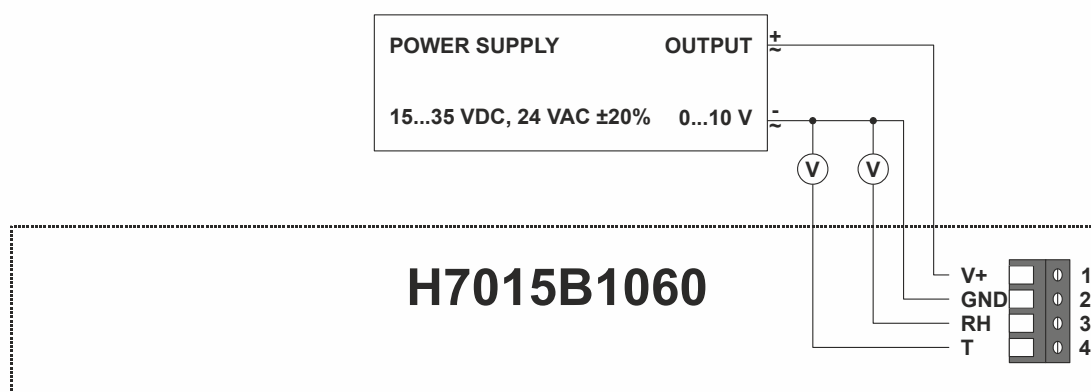


Fig. 5. Connection diagram H7015B1060

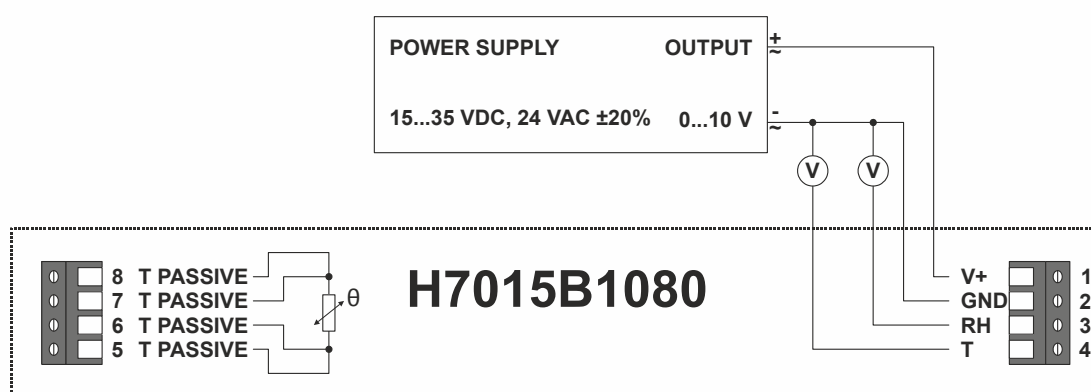


Fig. 6. Connection diagram H7015B1080

**Honeywell**

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