

# Honeywell

# H7625, H7726, H7735, H7736 Humidity/Temperature Sensors

## INSTALLATION INSTRUCTIONS



## LIMITES DE L'APPLICATION DU PRODUIT

Les produits Honeywell ne sont pas conçus pour des applications de sécurité ou de sauvetage. Les produits Honeywell ne sont pas conçus pour les applications critiques, comme les installations nucléaires, les dispositifs implantables dans le corps humain ou d'assistance vitale. Honeywell n'est pas responsable, en tout ou en partie, des réclamations ou dommages découlant d'une telle utilisation.

## IMPORTANT WARNINGS

- Only qualified trade installers should install this product.
- This product is not intended for life-safety applications.
- Do not install in hazardous or classified locations.
- The installer is responsible for all applicable codes.
- De-energize power supply prior to installation or service.

## AVERTISSEMENTS IMPORTANTS

- Seuls les installateurs spécialisés sont autorisés à installer ce produit.
- Ce produit n'est pas destiné aux applications de sécurité ou de sauvetage.
- Ne l'installez pas dans des endroits dangereux ou classés comme tels.
- L'installateur doit respecter tous les codes applicables.
- Coupez l'alimentation électrique avant l'installation ou l'entretien.

## PRODUCT APPLICATION LIMITATION

Honeywell products are not designed for life or safety applications. Honeywell products are not intended for use in critical applications such as nuclear facilities, human implantable device or life support. Honeywell is not liable, in whole or in part, for any claims or damages arising from such uses.

## INSTALLATION

1. Drill a 3/4" hole in duct. Install sensor using gasket and screws provided. The pickup tube will ensure adequate air flow regardless of air flow direction.
2. If installing with a conduit adapter, remove and replace the factory-installed cable gland.
3. Wire sensor as shown. Wiring for 2 and 3-wire 4-20mA signals is shown in next column.

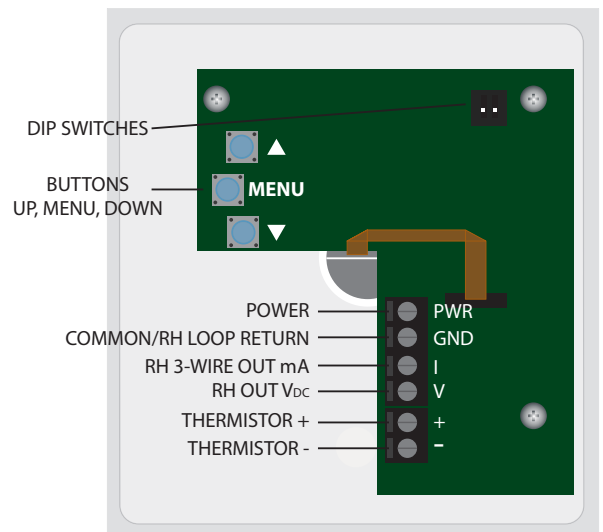


Fig. 1.



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DIMENSIONS

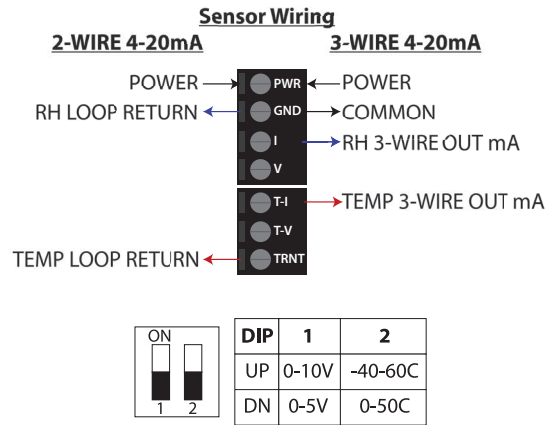


Fig. 2. Sensor Wiring.

- 4. Set DIP switch positions to accommodate your application. DIP switch 2 is not used.
- 5. Apply power to sensor.
- 6. Tighten cable gland firmly around wires. If installing with a conduit adapter, seal wire entry to prevent conduit air from affecting sensor readings or operation.
- 7. Close lid and tighten screw. Cover must be securely installed to prevent moisture from entering enclosure.

OPERATION

Press center MENU button once to access the %RH offset. A red LED will blink to indicate the %RH offset setting can be adjusted.

The down ▼ arrow and up ▲ arrow can be used to decrease or increase offset values in 0.1 increments up to ±5%.

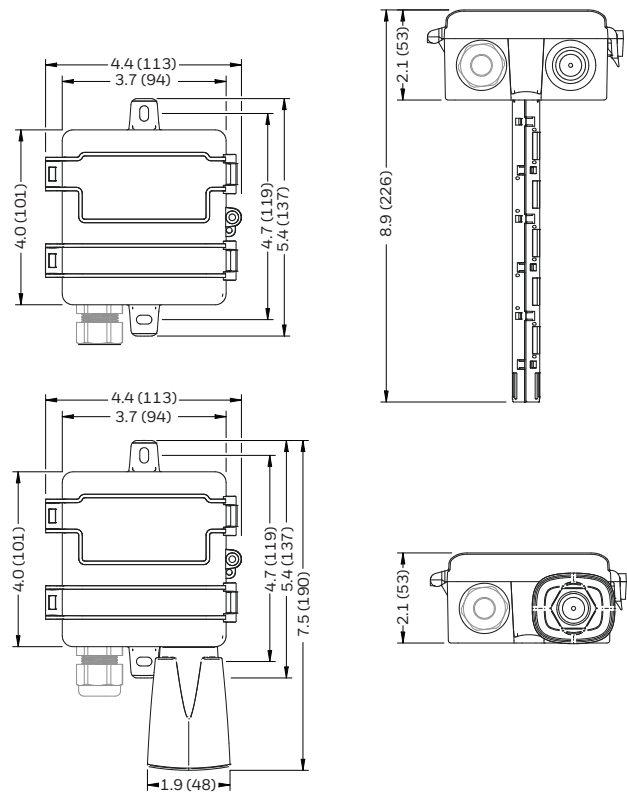


Fig. 3. Dimensions in inches (mm).

## TROUBLESHOOTING

**Table 1. Troubleshooting.**

| Symptom                                          | Solution                                                                             |
|--------------------------------------------------|--------------------------------------------------------------------------------------|
| No output                                        | Check wiring. Ensure power supply meets requirements.                                |
| Temp or RH reading error                         | Verify control panel software is configured for correct output scaling.              |
|                                                  | Verify accuracy of test instrument. Observe installation and calibration guidelines. |
|                                                  | Verify unit is securely installed on duct without excessive air leakage.             |
|                                                  | Offset calibration only if necessary.                                                |
| Sensor damage, contamination, or long-term drift | Replace sensor element. Consult factory for ordering information.                    |

## CALIBRATION

Honeywell RH sensors are factory calibrated to NIST traceable standards. No field calibration is necessary or recommended. However, to facilitate compliance with commissioning requirements field calibration offsets are allowed.

1. Locate calibration instrument and sensor in close proximity to each other in a controlled environment free of drafts, people, and equipment to reduce influence on RH and temperature.
2. Allow both readings to stabilize (10-30 minutes). Compare reading of sensor to calibration instrument, and calculate difference.
3. Refer to OPERATION section to change offsets as needed. Setting an offset of zero restores factory calibration.

## RECYCLING

Product should not be thrown away in regular trash. Instead, it should be recycled according to local municipality.

## SPECIFICATIONS

**Table 2. Models.**

| Model        | Humidity Accuracy | Thermistor | Enclosure |
|--------------|-------------------|------------|-----------|
| H7725B2006   | 2%                | 20 kOhm    | Duct      |
| H7725B2006-C | 2% NIST Certified | 20 kOhm    | Duct      |
| H7726B2024   | 2%                | 1097 Ohm   | Duct      |
| H7735B2018   | 3%                | 20 kOhm    | Duct      |
| H7736B2026   | 3%                | 1097 Ohm   | Duct      |
| H7735C2015   | 3%                | 20 kOhm    | Outdoor   |

**Table 3. Specifications.**

|                      |                                      |                                                                                                     |
|----------------------|--------------------------------------|-----------------------------------------------------------------------------------------------------|
| Power supply         | AC Supply/<br>DC Supply              | 24VAC, 100mA max.<br>12-30VDC, 50mA max.                                                            |
| Outputs              | RH                                   | 3-wire 0-5V/10V <sup>4</sup> ,<br>3-wire or 2-wire 4-20mA (Selectable)                              |
| Output scaling       | RH                                   | 0-100%RH                                                                                            |
| Thermistor/<br>RTD   | Nominal<br>resistance @ 25 °C        | 20 kOhm<br>1097 kOhm                                                                                |
| Media filter         |                                      | PBT with water vapor-permeable<br>membrane                                                          |
| Relative<br>Humidity | Accuracy                             | 2% models: $\pm 2\%$ max 0 to 100% RH,<br>$\pm 1.5\%$ typ 0 to 80% RH @25°C                         |
|                      |                                      | 3% models: $\pm 3\%$ max 0 to 100% RH,<br>$\pm 2\%$ typ 0 to 100% RH @25°C                          |
|                      | Resolution                           | 0.01% RH                                                                                            |
|                      | Hysteresis                           | $\pm 0.8\%$ RH                                                                                      |
|                      | Repeatability                        | 0.08% RH                                                                                            |
|                      | Non-linearity                        | Factory linearized <1%RH                                                                            |
|                      | Temperature<br>coefficient           | Fully compensated by on-board<br>sensor                                                             |
|                      | Response time <sup>2</sup>           | 8s                                                                                                  |
|                      | Output update                        | 0.5s                                                                                                |
|                      | Operating range                      | 0 to 100% RH (non-condensing)                                                                       |
|                      | Long term drift                      | <0.25% RH per year                                                                                  |
|                      | Operating<br>conditions <sup>3</sup> | 41 to 140°F<br>(5 to 60°C)<br>@ 20-80% RH                                                           |
| Enclosure            | Materials                            | ABS/Polycarbonate                                                                                   |
|                      | Dimensions                           | 4.0"h x 4.4"w x 2.1"d<br>Duct: (+6.8" probe)<br>Outdoor: (+2.8" Solar Shield)                       |
|                      | Enclosure Rating                     | Duct: IP20/NEMA 1<br>Outdoor: IP20/NEMA 1 *Vent bottom<br>of enclosure to achieve NEMA 3R<br>Rating |
|                      | Unit Temp Rating                     | -40°F to 158°F (-40 to 70°C)                                                                        |

<sup>1</sup> One side of transformer secondary is connected to signal common. Dedicated transformer is recommended.

<sup>2</sup> Time for reaching 63% of reading at 25oC and 1 m/s air-flow.

<sup>3</sup> Long term exposures to conditions outside normal range or high humidity may temporarily offset the RH reading (+3%RH after 60 hours).

<sup>4</sup> 15-30VDC/24VAC power supply voltage required for 10 volt output.

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