

# HT-1300 Series

## Temperature and Humidity Duct Sensor

### Product Bulletin

*Specifically designed for HVAC application, the HT-130x-UD1 sensor is a highly accurate and reliable for measuring relative air humidity and temperature.*

*The enclosure minimizes installation cost and provides outstanding protection against contamination and condensation, thus ensuring flawless operation.*

*In combination with a long calibration experience, the HT-130X-UDx provides a humidity measurement accuracy of  $\pm 2,5\%$ .*



- **Power Supply 15...30 VDC / 24 VAC**  
Flexible application
- **Humidity Accuracy 2.5% RH from 10 to 95% RH**  
Suitable for a wider range of applications
- **Temperature Outputs 0...10 VDC, Pt1000**  
Suitable for any field controllers
- **HT-130x-UD1 Duct probes length 200 mm**  
Easy to install. No expert required
- **HT-130x-UD1 Protection Class IP65**  
It can be mounted in several environments
- **Calibration Certificate**  
Each product is calibrated against factory standards traceable to international standard units

## Calibration Certificate

Each sensor is delivered with a Calibration Certificate which certifies that the product is manufactured in compliance with the latest technical standards.

All used materials and components have passed the quality assurance system. Manufacturing, calibration and quality testing are performed according to the Quality Assurance System.

The products are calibrated against factory standards traceable to international standards units administrated by the national metrology institutes like NIST, PTB, NBL, BEV or other recognized national standard laboratories.

For engineering samples and repair parts extent of certification is restricted to test result only.


  
**Johnson Controls**

### KALIBRIERZERTIFIKAT CALIBRATION CERTIFICATE / CERTIFICAT DE CALIBRATION

**Abnahmeprüfzeugnis nach DIN EN 10204 – 3.1**  
**Inspection certificate acc. DIN EN 10204 – 3.1**  
**Certificat de réception selon DIN EN 10204 – 3.1**

Zertifikat Nr. / Certificate No / Certificat N°.: N90036456

Type / Model / Modèle: HT-1306-UD1

Gegenstand / Object / Objet: humidity temperature transmitter

Serien Nummer / Serial Number / Numéro de série: 144413000928AD

Hiermit bestätigen wir, dass die angeführten Erzeugnisse unter Verwendung einwandfreier Werkstoffe nach dem Stand der Technik gefertigt wurden. Produktion, Kalibrierung und Qualitätsprüfung werden im Rahmen der Qualitätssicherungsmaßnahmen überwacht. Die Erzeugnisse werden gegen Werksstandards kalibriert, welche auf internationale Standardeinheiten, verwaltet von den nationalen metrologischen Instituten wie NIST, PTB, NPL, BEV oder anderen anerkannten nationalen Standard Labors, rückführbar sind. Bei Entwicklungsmustern und Reparaturteilen bezieht sich die Bescheinigung ausschließlich auf das Prüfergebnis.

We herewith certify that above listed products are manufactured in compliance with the latest technical standards. All used materials and components have passed the quality assurance system. Manufacturing, calibration and quality testing are performed according to the Quality Assurance System.

The products are calibrated against factory standards traceable to international standard units administrated by the national metrology institutes like NIST, PTB, NBL, BEV or other recognized national standard laboratories.

For engineering samples and repair parts extent of certification is restricted to test results only.

Nous certifions par la présente que les produits ci-dessus mentionnés sont fabriqués selon les règles de l'art avec l'utilisation de matériaux de qualité. La fabrication, la calibration et le contrôle qualité des produits sont exécutées conformément au système d'assurance qualité. Les produits sont étalonnés par rapport à des étalons de travail dont la traçabilité est rattachée aux étalons internationaux, administrés par les instituts de métrologie tel que le NIST, PTB, NBL, BEV, COFRAC ou d'autres laboratoires de référence reconnus. Pour les échantillons ou prototypes et les pièces de réparation, la validité du certificat est restreinte aux seuls résultats de tests.

#### Rückführbare Standards / Traceable Standards / Etalons raccordés

|                                                                           |                |
|---------------------------------------------------------------------------|----------------|
| Temperatur Referenz / Temperature reference / Température de référence    | MKT 100, Paar  |
| Feuchte Referenz / Humidity reference / Humidité de référence             | DP30; MBW      |
| Messunsicherheiten / Uncertainty of Measurement / Incertitude de mesure : | 0,5% rH, 0,1°C |

#### Prüfergebnis / Test result / Résultat de mesure

|                                                      | 30 %RH | 76 %RH | 23 °C |
|------------------------------------------------------|--------|--------|-------|
| Referenzwert / Reference value / Valeur de référence | 29,90  | 75,80  | 23,24 |
| Messwert / Calibrated value / Valeur mesurée         | 31,02  | 75,82  | 23,25 |
| Abweichung / Error / Ecart                           | 1,12   | 0,02   | 0,01  |

Die angeführten Daten sind gültig, unter den angegebenen Bedingungen, zum Zeitpunkt der Messung und nehmen Bezug auf die angegebenen Standards und verwendeten Messeinrichtungen.

The calibrated values are valid under above conditions only at the time of measurement and are referenced to marked reference and working standards.

Les valeurs de calibration sont valides selon les conditions spécifiées ci-dessus au moment de la mesure et font référence aux spécifications et aux systèmes de mesure utilisés.

Ort, Datum / Place, Date / Lieu, date      Techniker / Technician / Technicien      Geprüft / Supervised / Vérification

Engerwitzdorf    31.10.2014





## Installation

The installation of electrical wiring must conform to local codes and should be carried out by authorized personnel only. Users should ensure that all Johnson Controls products are used safely and without risk to health or property.

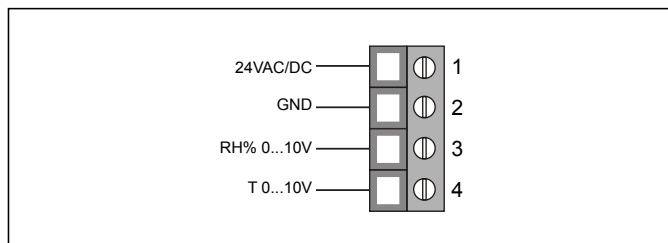
The HT-130x-UD1 series duct humidity sensors are intended to provide input to equipment under normal operating conditions. Where failure or malfunction of an HT-130x-UD1 series duct humidity sensors could lead to an abnormal operating condition that could cause personal injury or damage to the equipment or other property, other devices (limit or safety controls) or systems (alarm or supervisory) intended to warn of, or protect against, failure or malfunction of the HT-130x-UD1 sensors must be incorporated into and maintained as part of the control system.

To avoid damage to the HT-130x-UD1 sensors, do not mount the unit in a location where high concentrations of corrosive vapours are present.

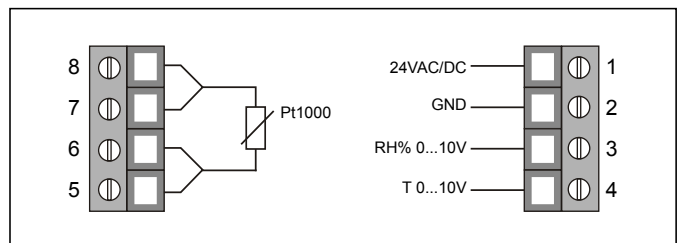
## Wiring Instructions

For wiring follow the instructions below:

- All wiring must be in accordance with local regulations and national rules.
- Do not attempt field repairs. If the transmitter is not operating properly, even though it is wired correctly, it should be replaced.

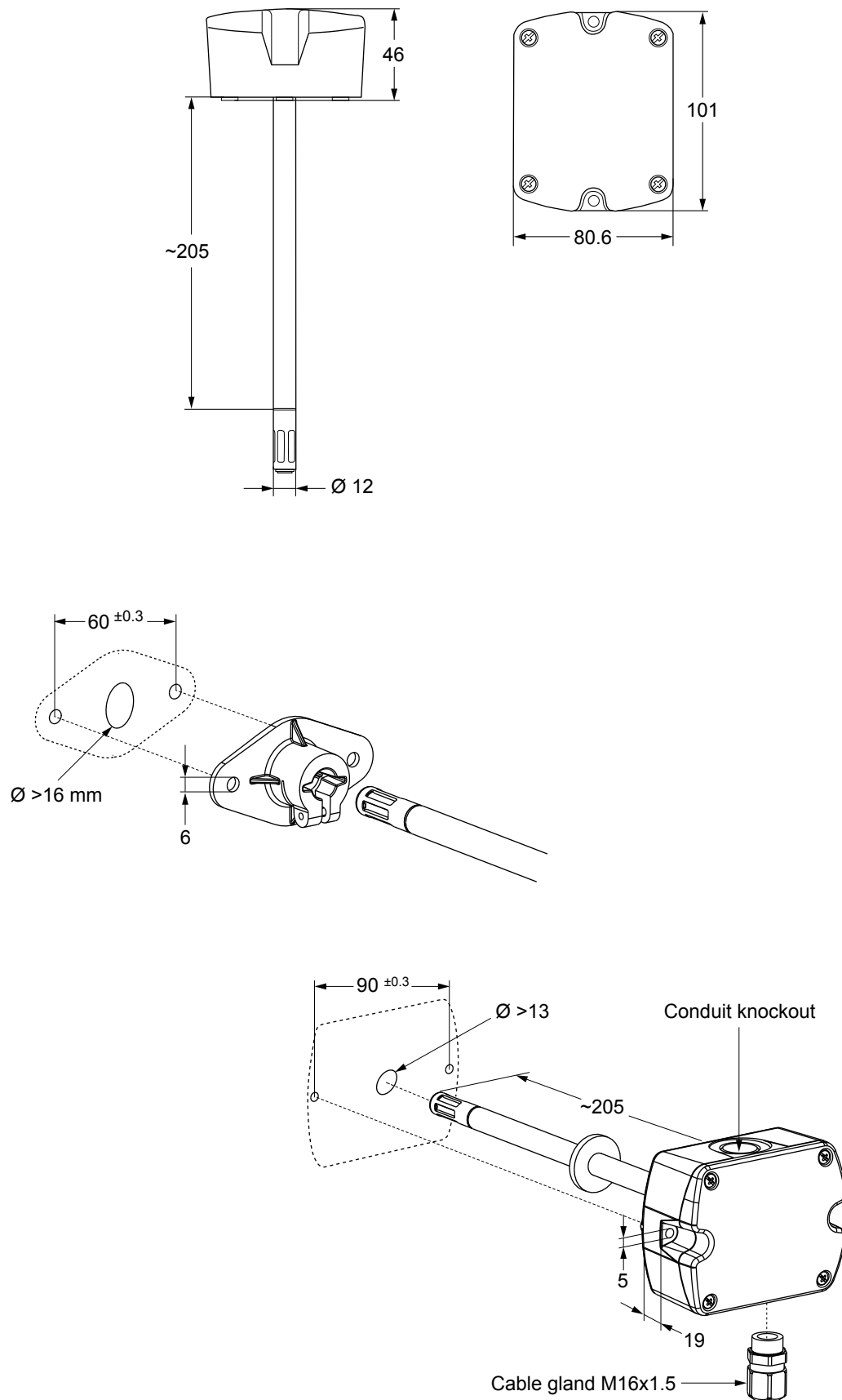


HT-1301-UD1



HT-1306-UD1

### Dimensions (in mm)



## Ordering Codes

| Codes       | Humidity Output | Humidity Accuracy | Working Humidity Range | Temperature Output | Temperature Accuracy | Temperature Range |
|-------------|-----------------|-------------------|------------------------|--------------------|----------------------|-------------------|
| HT-1301-UD1 | 0...10 VDC      | 2,5%              | 10...95% RH            | 0...10 VDC         | ± 0.3 °C             | -15...+60 °C      |
| HT-1306-UD1 |                 |                   |                        | Pt1000             | EN60751 Class A      |                   |

## Technical Specifications

| Sensor                            | HT-1301-UD1                                                                                                                                                           |  | HT-1306-UD1                              |  |
|-----------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|------------------------------------------|--|
| Power Supply                      | 15 - 35 VDC or 24 VAC ±20%                                                                                                                                            |  |                                          |  |
| Relative Humidity                 |                                                                                                                                                                       |  |                                          |  |
| <i>Analog Output 0 to 100% RH</i> | 0 - 10 V - 1mA < I <sub>L</sub> < mA                                                                                                                                  |  |                                          |  |
| <i>Working Range</i>              | 10...95 RH                                                                                                                                                            |  |                                          |  |
| <i>Accuracy at 20 °C</i>          | ± 2.5% RH                                                                                                                                                             |  |                                          |  |
| <i>Temperature Dependency</i>     | Typ. ±0.03% RH / °C                                                                                                                                                   |  |                                          |  |
| Temperature                       |                                                                                                                                                                       |  |                                          |  |
| <i>Analog Output *</i>            | 0 - 10 V                                                                                                                                                              |  | Pt1000                                   |  |
| <i>T-Accuracy at 20 °C</i>        | ±0.3 °C                                                                                                                                                               |  | EN60751 Class A (±0.15 °C + 0.002* T °C) |  |
| <i>Output</i>                     | Analog                                                                                                                                                                |  | Passive                                  |  |
|                                   | * Output scaling see "Ordering Codes" table                                                                                                                           |  |                                          |  |
| Current Consumption               |                                                                                                                                                                       |  |                                          |  |
| <i>Analog</i>                     | With DC power supply typ. 5 mA<br>With AC power supply typ. 13 mA                                                                                                     |  |                                          |  |
| Connection                        | Screw terminals, max 1.5 mm²                                                                                                                                          |  |                                          |  |
| Housing / Protection Class        | Polycarbonate (UL listed) / IP65                                                                                                                                      |  |                                          |  |
| Cable Gland                       | M16 x 1.5                                                                                                                                                             |  |                                          |  |
| Sensor Protection                 | Membrane filter                                                                                                                                                       |  |                                          |  |
| Electromagnetic Compatibility     | EN61326-1<br>EN61326-2-3                                                                                                                                              |  |                                          |  |
| Temperature Ranges                |                                                                                                                                                                       |  |                                          |  |
| <i>Operating Temperature</i>      | -15...60 °C (5...140 °F)                                                                                                                                              |  |                                          |  |
| <i>Storage Temperature</i>        | -25...60 °C (-13...140 °F)                                                                                                                                            |  |                                          |  |
| CE Compliance                     | Johnson Controls, Inc., declares that these products are in compliance with the essential requirements and other relevant provisions of the EMC Directive 2004/108/EC |  |                                          |  |

The performance specifications are nominal and conform to acceptable industry standards. For application at conditions beyond these specifications, consult the local Johnson Controls office. Johnson Controls, Inc. shall not be liable for damages resulting from misapplication or misuse of its products.