Dwyer Instruments, Inc. uses state of the art sensing technology to provide accurate and reliable humidity measurements. The sensor is comprised of a capacitive polymer humidity sensing element and a band gap temperature sensing element. The two sensing elements are seamlessly coupled to a 14-bit analog to digital converter. Each sensor is individually calibrated using a chilled mirror hygrometer reference standard.

**KEY ADVANTAGES**

- Excellent long term stability
- Completely recoverable from 100% saturation
- No field calibration needed
- Fast response time
- Available with 2% or 3% accuracy

**APPLICATIONS**

Series RHP-W can be used to accurately measure and control the humidity and temperature in office buildings.

Model RHP-2Dia can be used to greatly reduce the time it takes to dry wood in dehumidification rooms.

Model WHT-322 can be used to maintain environmental conditions in poultry and hog barns.

Outside air and duct mount humidity/temperature transmitters are used to control fresh air intake dampers in air handler economizers.

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**RELIABLE SENSING TECHNOLOGY**

**APPLICATIONS**

**HUMIDITY TRANSmitter**

**OVERVIEW**

**WE HAVE ALL YOUR FIELD INSTRUMENTATION NEEDS**

Request your Building Automation Catalog via email at info@dwyer-inst.com or at www.dwyer-inst.com/BACatalogRequest.
OUTSIDE AIR INSTALLATION

The Series RHP outdoor transmitters are ideal for monitoring humidity and temperature outside of air handlers or commercial buildings. The NEMA 4X enclosure protects the internal circuit board and wiring connections from the elements. The back-suction design prevents pooling of condensation from the sensor head, allowing for easier installation and maintenance.

**KEY FEATURES**
- NEMA 4X enclosure
- Surface or suspension mount

**Model**
- RHP-3N40
- RHP-3N4A
- RHP-3N4F
- RHP-3N4E
- RHP-3N4B

**Accuracy**
- 2%

**Humidity Output**
- 4 to 20 mA

**Temperature Output**
- Type II Pt100 RTD

**Cable Length**
- 4', 8', 12', 16'

**Display**
- Yes, optional radiation shield

**Optional accessories**
- Radiation shield

**REMOTE PROBE INSTALLATION**

The Series RHP remote transmitters are ideal for applications in which space is limited. The compact sensor is protected by a field replaceable filter and can be mounted up to 16 feet away from the transmitter housing. The RH-R is available with either a voltage or current output for both humidity and temperature.

**KEY FEATURES**
- Intrinsically safe
- Explosion-proof

**Model**
- RHT-R004
- RHT-R008
- RHT-R012
- RHT-R016

**Humidity/Temperature**
- 4 to 20 mA

**Display**
- No

**Hazardous Areas INSTALLATION**

The Series RHT transmitters are ideal for applications in which space is limited. The compact sensor is protected by a field replaceable filter and can be mounted up to 16 feet away from the transmitter housing. The RH-R is available with either a voltage or current output for both humidity and temperature.

**KEY FEATURES**
- Intrinsically safe
- Explosion-proof

**Model**
- RHU-R008
- RHU-R012
- RHU-R016

**Humidity**
- 4 to 20 mA

**Temperature**
- 4 to 20 mA

**HAZARDOUS AREAS INSTALLATION**

**Model**
- RHT-R104
- RHT-R108
- RHT-R112
- RHT-R116

**Humidity/Temperature**
- 4 to 20 mA

**Display**
- No

**OUTSIDE AIR INSTALLATION**

The Series RHP outdoor transmitters are ideal for monitoring humidity and temperature outside of air handlers or commercial buildings. The NEMA 4X enclosure protects the internal circuit board and wiring connections from the elements. The back-suction design prevents pooling of condensation from the sensor head, allowing for easier installation and maintenance.

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- RHP-3N4A
- RHP-3N4F
- RHP-3N4E
- RHP-3N4B

**Accuracy**
- 2%

**Humidity Output**
- 4 to 20 mA

**Temperature Output**
- Type II Pt100 RTD

**Cable Length**
- 4', 8', 12', 16'

**Display**
- Yes, optional radiation shield

**Optional accessories**
- Radiation shield

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- Intrinsically safe
- Explosion-proof

**Model**
- RHT-R004
- RHT-R008
- RHT-R012
- RHT-R016

**Humidity/Temperature**
- 4 to 20 mA

**Display**
- No

**Hazardous Areas INSTALLATION**

The Series RHT transmitters are ideal for applications in which space is limited. The compact sensor is protected by a field replaceable filter and can be mounted up to 16 feet away from the transmitter housing. The RH-R is available with either a voltage or current output for both humidity and temperature.

**KEY FEATURES**
- Intrinsically safe
- Explosion-proof

**Model**
- RHU-R008
- RHU-R012
- RHU-R016

**Humidity**
- 4 to 20 mA

**Temperature**
- 4 to 20 mA

**HAZARDOUS AREAS INSTALLATION**

**Model**
- RHT-R104
- RHT-R108
- RHT-R112
- RHT-R116

**Humidity/Temperature**
- 4 to 20 mA

**Display**
- No

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- 4 to 20 mA

**Temperature Output**
- Type II Pt100 RTD

**Cable Length**
- 4', 8', 12', 16'

**Display**
- Yes, optional radiation shield

**Optional accessories**
- Radiation shield

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- Intrinsically safe
- Explosion-proof

**Model**
- RHT-R004
- RHT-R008
- RHT-R012
- RHT-R016

**Humidity/Temperature**
- 4 to 20 mA

**Display**
- No

**Hazardous Areas INSTALLATION**

The Series RHT transmitters are ideal for applications in which space is limited. The compact sensor is protected by a field replaceable filter and can be mounted up to 16 feet away from the transmitter housing. The RH-R is available with either a voltage or current output for both humidity and temperature.

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- Intrinsically safe
- Explosion-proof

**Model**
- RHU-R008
- RHU-R012
- RHU-R016

**Humidity**
- 4 to 20 mA

**Temperature**
- 4 to 20 mA

**HAZARDOUS AREAS INSTALLATION**

**Model**
- RHT-R104
- RHT-R108
- RHT-R112
- RHT-R116

**Humidity/Temperature**
- 4 to 20 mA

**Display**
- No

**OUTSIDE AIR INSTALLATION**

The Series RHP outdoor transmitters are ideal for monitoring humidity and temperature outside of air handlers or commercial buildings. The NEMA 4X enclosure protects the internal circuit board and wiring connections from the elements. The back-suction design prevents pooling of condensation from the sensor head, allowing for easier installation and maintenance.

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- NEMA 4X enclosure
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**Model**
- RHP-3N40
- RHP-3N4A
- RHP-3N4F
- RHP-3N4E
- RHP-3N4B

**Accuracy**
- 2%

**Humidity Output**
- 4 to 20 mA

**Temperature Output**
- Type II Pt100 RTD

**Cable Length**
- 4', 8', 12', 16'

**Display**
- Yes, optional radiation shield

**Optional accessories**
- Radiation shield

**REMOTE PROBE INSTALLATION**

The Series RHP remote transmitters are ideal for applications in which space is limited. The compact sensor is protected by a field replaceable filter and can be mounted up to 16 feet away from the transmitter housing. The RH-R is available with either a voltage or current output for both humidity and temperature.

**KEY FEATURES**
- Intrinsically safe
- Explosion-proof

**Model**
- RHT-R004
- RHT-R008
- RHT-R012
- RHT-R016

**Humidity/Temperature**
- 4 to 20 mA

**Display**
- No

**Hazardous Areas INSTALLATION**

The Series RHT transmitters are ideal for applications in which space is limited. The compact sensor is protected by a field replaceable filter and can be mounted up to 16 feet away from the transmitter housing. The RH-R is available with either a voltage or current output for both humidity and temperature.

**KEY FEATURES**
- Intrinsically safe
- Explosion-proof

**Model**
- RHU-R008
- RHU-R012
- RHU-R016

**Humidity**
- 4 to 20 mA

**Temperature**
- 4 to 20 mA

**HAZARDOUS AREAS INSTALLATION**

**Model**
- RHT-R104
- RHT-R108
- RHT-R112
- RHT-R116

**Humidity/Temperature**
- 4 to 20 mA

**Display**
- No
**OUTSIDE AIR INSTALLATION**

The Series RH-R humidity transmitter is ideal for applications in which space is limited. The compact sensor is protected by a field replaceable filter and can be installed up to 15 ft away from the waterproof housing. The RH-R is available with several voltage outputs for both humidity and temperature.

**REMOTE PROBE INSTALLATION**

The Series RH-HT humidity transmitter is ideal for applications in which space is limited. The compact sensor is protected by a field replaceable filter and can be installed up to 15 ft away from the waterproof housing. The RH-HT is available with several voltage outputs for both humidity and temperature.

**DUCK MOUNT INSTALLATION**

The Series RHP duct mount transmitters are ideal for monitoring humidity and temperature in supply or return air ducts. For quick verification of measurements, or optional field LCD display can be attached to display both the temperature and humidity inside the duct. The metal mounting bracket has mounting holes wide enough to allow quick installation of the transmitter to the duct, which reduces installation time. The humidity sensors and filter can be replaced weekly in the field without additional field calibration. The Series RHP comes standard with either a current or voltage output for the humidity and can optionally have a Pt100 RTD, a current or voltage output for the temperature.

**WALL MOUNT INSTALLATION**

The Series RHP/HT wall mount transmitters are an attractive solution for rooms or space limited applications where improved accuracy is required and air flow is not uniform. The transmitters are built in explosion-proof and intrinsically-safe versions and offer a static humidity and temperature output in the harshest of environments. The transmitter is offered in explosion-proof and intrinsically-safe versions and offers a static humidity and temperature measurement with an LCD display.

**OUTSIDE AIR INSTALLATION**

The Series RH-HT compact humidity transmitters can be used to monitor humidity in outside air applications, surface mount applications or suspension mount applications. The integral mounting stud allows for easy wall mount installation. The RH-HT is available with 4 to 20 mA, 0 to 5 VDC, 0 to 10 VDC or none. The housing can be ordered with a radiation shield option. The probe is shipped with a 16’ cable.

**HAZARDOUS AREAS INSTALLATION**

The Series HHT takes accurate humidity and temperature measurements in the harshest of environments. The transmitter is offered in explosion-proof and intrinsically-safe versions, depending on the application's requirements. The RH-HT is available with an LCD display and the RH-HT-HT is available with an LCD display and an internal air handler to allow the Series RH-HT to monitor humidity and temperature in hazardous areas.

**KEY FEATURES**

- Field replaceable sensors
- Optional dual line LCD display

**WALL MOUNT INSTALLATION**

- Vented designer housing
- Local or remote LCD display
- Humidity output: 4 to 20 mA, 0 to 5 VDC, 0 to 10 VDC or none
- Temperature output: 4 to 20 mA, 0 to 5 VDC, 0 to 10 VDC or none
- Cable Length: 16’, 12’, 8’, 4’, or 0’
- Humidity/Temperature: Humidity/Temperature

**OUTSIDE AIR INSTALLATION**

- Accuracy: 2%
- Humidity Output: 4 to 20 mA
- Temperature Output: Pt100 RTD
- Model: RH-104
- Cable Length: 16’
- Description: Humidity/Temperature
- Display: Yes

**HAZARDOUS AREAS INSTALLATION**

- Explosion-Proof
- Intrinsically-Safe
- Humidity: Yes
- Temperature: Yes
- Display: Yes

**REMOTE PROBE INSTALLATION**

- Up to 16 ft cable
- North American
- European
- Housing: Explosion-Proof
- Description: Humidity/Temperature
- Display: Yes

**WALL MOUNT INSTALLATION**

- Accuracy: 2%
- Humidity Output: 4 to 20 mA
- Temperature Output: Pt100 RTD
- Model: RH-104
- Cable Length: 16’
- Description: Humidity/Temperature
- Display: Yes

**OUTSIDE AIR INSTALLATION**

- Accuracy: 2%
- Humidity Output: 4 to 20 mA
- Temperature Output: Pt100 RTD
- Model: RH-104
- Cable Length: 16’
- Description: Humidity/Temperature
- Display: Yes

**HAZARDOUS AREAS INSTALLATION**

- Explosion-Proof
- Intrinsically-Safe
- Humidity: Yes
- Temperature: Yes
- Display: Yes
• Local or remote LCD display

The Series RHP dual mount transmitters are ideal for monitoring humidity and temperature in supply or return air ducts for ventilation, refrigeration, or miscellaneous environments. An optional dual line LCD display can be ordered to display both the temperature and humidity inside the duct. The metal mounting bracket includes mounting holes wide enough to allow quick installation of the transmitter in the duct, which reduces installation labor. The humidity sensors and filter caps can be replaced easily in the field without additional field calibration. The Series RHP comes standard with either a current or voltage output for the humidity and can optionally have a thermistor, RTD, current or voltage output for the temperature. For improved accuracy, the designer wall mount housing is well vented to reduce installation labor cost. The humidity sensors and filter caps can be replaced easily in the field without additional field calibration. The Series RHP comes standard with either a current or voltage output for the temperature.

• Optional dual line LCD display

The Series RH-R humidity transmitter is ideal for applications in which space is limited. The transmitter is offered in explosion-proof and intrinsically-safe versions to meet the requirements of the application. It is designed specifically for applications in which the temperature and humidity sensors are inside the duct. The metal mounting bracket includes mounting holes wide enough to allow quick installation of the transmitter in the duct, which reduces installation labor. The humidity sensors and filter caps can be replaced easily in the field without additional field calibration. The Series RH-R comes standard with either a current or voltage output for the humidity and can optionally have a thermistor, RTD, current or voltage output for the temperature. For improved accuracy, the designer wall mount housing is well vented to reduce installation labor cost. The humidity sensors and filter caps can be replaced easily in the field without additional field calibration. The Series RH-R comes standard with either a current or voltage output for the temperature.

• Optional dual line LCD display

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- Excellent long term stability
- Completely recovers from 100% saturation
- No field calibration needed
- Fast response time
- Available with 2% or 3% accuracy

**APPLICATIONS**

- Series RHP-W can be used to accurately measure and control the humidity and temperature in office buildings.
- Model RHP-2DIA can be used to greatly reduce the time it takes to dry wood in dehumidification rooms.
- Model WHT-322 can be used to maintain environmental conditions in poultry and hog barns.
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www.dwyer-inst.com/humiditytransmitters
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Humidity Sensor

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