H7080B

Temperature/Humidity Duct Sensor

SPECIFICATION DATA



Application

H7080B series duct mounting humidity and temperature transducers are designed for environmental monitoring and control applications in industrial, commercial and general building.

These sensors can be used for discharge, outside or return air control.

Features

- 4~20mA/ 0~10VDC or resistance output for temperature
- 4~20mA/ 0~10VDC output for humidity
- Duct mounted
- Excellent linearity
- Good long term Stability
- High reliability
- Wide sensing range
- Easy installation

Specifications

Relative Humidity

Measurement Range: 0~100%RH

Output: 4~20mA or 0~10VDC

Accuracy: 2%, 3%, 5%RH (25°C, 20~80%RH)

Total Accuracy: 5~9%RH

Long Term Stability: 0.5%RH per year

Temperature

Temp Sensor: NTC10K, NTC20K, Pt1000

Measurement Range: -10~40°C

0~70℃

Output: 4~20mA or 0~10VDC

NTC10K, NTC20K, Pt1000

Accuracy: $\pm 0.2 \text{K}$ at 25 $^{\circ}\text{C}$

for NTC10K sensor ±0.2K at 25°C for NTC20K sensor ±0.3K at 0°C for Pt1000 sensor

±0.5°C (-10~40°C or 0~70°C)

With transducer

Power Supply: 24 VAC ±15% /24 VDC ±10%

Current Output Load: 500 Ohms Max
Voltage Output Load: 10K Ohms Min
Current consumption: 70mA Max
Working temperature: -30℃~+70℃

Transport and Storage

Temperature: $-40^{\circ}\text{C} \sim +70^{\circ}\text{C}$ Housing Material: Plastic (PC-ABS)

Flame retarded acc. to

UL94-V0

Protection Standard: IP54

EMC Conformity: EN 61000-6-3

EN 61000-6-1 EN 61000-3-2 EN 61000-3-3

Models

OS Number	Humidity Output	Humidity Accuracy	Temperature Output Type	Temperature Range
C7080A3240	NA	NA	4~20mA/0-10V	-10℃~40℃
C7080A3270	NA	NA	4~20mA/0-10V	0℃~70℃
H7080B3102	4~20mA/0-10V	±2%	Pt1000	0℃~50℃
H7080B3242	4~20mA/0-10V	±2%	4~20mA/0-10V	-10℃~40℃
H7080B3272	4~20mA/0-10V	±2%	4~20mA/0-10V	0℃~70℃
H7080B2103	4~20mA/0-10V	±3%	NTC20K	0℃~50℃
H7080B1103	4~20mA/0-10V	±3%	NTC10K	0℃~50℃
H7080B3103	4~20mA/0-10V	±3%	Pt1000	0℃~50℃
H7080B3243	4~20mA/0-10V	±3%	4~20mA/0-10V	-10℃~40℃
H7080B3273	4~20mA/0-10V	±3%	4~20mA/0-10V	0℃~70℃
H7080B2105	4~20mA/0-10V	±5%	NTC20K	0℃~50℃
H7080B1105	4~20mA/0-10V	±5%	NTC10K	0℃~50℃
H7080B3105	4~20mA/0-10V	±5%	Pt1000	0℃~50℃

Wiring

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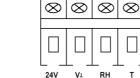
POWER SUPPLY

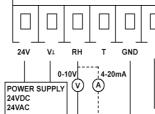
24VDC 24VAC

• For Temperature output model:

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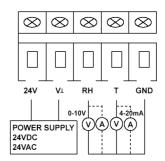




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C7080A3240 H7080B3102 H7080B2103 C7080A3270 H7080B1103 H7080B3103 H7080B2105 H7080B1105 H7080B3105

• For temperature sensor & humidity output: • For temperature & humidity output model:



H7080B3242 H7080B3272 H7080B3243 H7080B3273

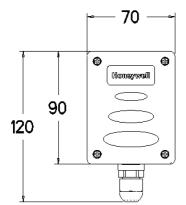
Note:

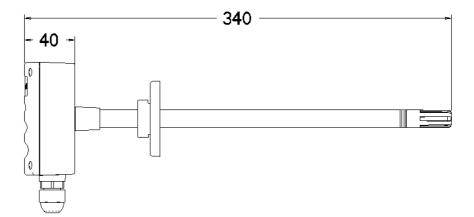
- Field wiring AWG 18 to 24 connects to a terminal block on the PCB.
 Maximum length 200m (current output recommended).
- 3. Offset for temperature sensor due to wire resistance per 10m distance from sensor to controller:

Wiring of Type	Pt1000	NTC
1.0mm ² (Awg18)	0.11K	negligible
0.5mm ² (Awg20)	0.18K	
0.34mm ² (Awg22)	0.28K	

Dimension

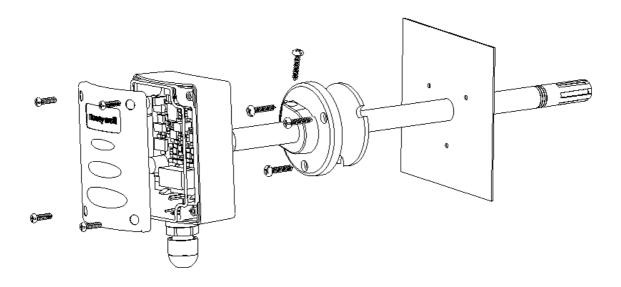
Dimension in mm





Installation

Dimension in mm



INSTALLATION:

- Drilling a mounting hole on the duct near measuring point.
- Use enclosed screws to install the flange and gasket on the duct. Insert the probe pipe into flange and duct.
- Fix the probe pipe on the flange by enclosed screw.
 (Note: Plug face to the bottom direction)
- Unscrew & open the front cover of the product.
- Lead wire from DDC or PLC panel through plug.
 Using screw driver to connect each wire to the terminals of the transducer module according to field wiring diagram.
- Put front cover back and tighten front cover by screws.

ATTENTION:

Absolutely avoid extreme mechanical and unspecified strain.

When using a 24 VAC transformer, use an isolated Transformer (Class II). If sharing the transformer with your controller, valve, actuator, or any other device, be sure to connect all of the devices with the proper polarity, since most controllers are earth grounded. Failure to do so may result in damage to the transducer, your controller, or any other devices that are attached due to a ground loop problem.

The product is equipped with stainless steel filter: since the sensor is an ESD-sensitive device, you should avoid touching the sensor cap during operation.

For maintenance purposes it is recommended, that you observe the valid ESD-safety precautions!

Honeywell

Automation and Control Solutions

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