

HT series

Humidity & Temperature Sensor and Transmitter

PRODUCT DATA



Application

HT series Humidity and Temperature Transmitters are designed for use with building automation, energy management, and computer / monitoring systems.

These sensors can be used for HVAC system, hospitals, greenhouse, food storage, and incubators.

Features

- 4~20mA, 0~10VDC or Mod-bus output for both humidity and temperature
- Option for resistance temperature sensor
- LCD display option for both humidity / temperature
- Various mounted types selectable
- Temperature range is selectable in one model
- High reliability & accuracy
- Wide sensing range
- Rapid response

Specifications

Relative Humidity

Sensor Element: Capacitive Polymer with CMOS processes
Measurement Range: 0~100%RH
Signal Output: 4~20mA ,0~10VDC or Mod-bus
Accuracy: $\pm 2\%$ RH(20°C, 20~80%RH)
 $\pm 3\%$ RH(20°C, 20~80%RH)
Long Term Stability: $\pm 1\%$ RH; typical at 50% RH in five years

Temperature

Temp Sensor: NTC20k, Pt100 , Pt1000
Measurement Range: 0~50°C, 0~100°C, -50~50°C
Range selected by Jumper (0~50°C as default)
Signal Output: 4~20mA , 0~10VDC or Mod-bus
NTC20k, Pt100, Pt1000
Accuracy: $\pm 0.3^\circ\text{C}$ at 25°C for NTC20k sensor
 $\pm 0.2^\circ\text{C}$ at 25°C for Pt100, Pt1000 sensor
 $\pm 0.2^\circ\text{C}$ (0~50°C) With transmitter
Long Term Stability: $\pm 0.25^\circ\text{C}$ per year
Power Supply: 24 VAC/VDC $\pm 10\%$
Current Output Load: 500 Ohm Max
Working temperature:
Room type -30°C ~ +70°C
Duct type -50°C ~ +70°C
5% ~ 95% RH without condensation

Certification:



Report No. HA110097

Housing Material:

Plastic (ABS)
Flame retarded acc. to UL94-V1

Protection Standard

Room type IP30
Duct, OSA or Immersion IP65
Calibration: Factory calibrated

Model Selection

Combined Humidity and Temperature sensor or transmitter

HT3	3% RH transmitter	Base model
HT2	2% RH transmitter	
HD3	3% RH transmitter w/LCD	
HD2	2% RH transmitter w/LCD	
C	4~20mA output	Humidity output
V	0~10V output	
M	RS485 with Modbus (RH+Temp. model only)	
2	Wall mount	Housing
3	Duct mount 12" probe	
7	Remote Sensor	
8	Outside Air	
0	No temp. output	Temp. range
1	w/temp. Xmitter 0~50C (0~100 by dip sw.)	
P	w/Pt 100 sensor	
Q	w/Pt 1000 sensor	
K	w/NTC 20k sensor	

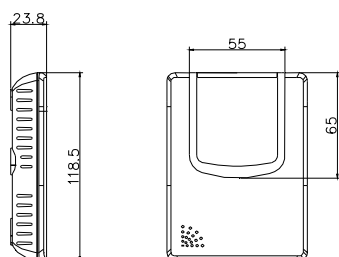
Temperature sensor or transmitter

T7	Temp. sensor/transmitter(Pt100)	Base model
TD	Temp. transmitter w/LCD(only for Transmitter)	
2	Space mount	Housing
3	Duct mount 12" probe	
4	Immersion mount 4" probe	
6	Immersion mount 6" probe	
7	Remote Sensor	
8	Outside Air	
9	Duct 20' Ave (only for Pt100 or 4~20mA)	
C1	w/temp. Xmitter, 4~20mA, 0~50C	Output & range
V1	w/temp. Xmitter, 0~10V, 0~50C	
M	RS485 with Modbus	
K	w/NTC 20k sensor	
L	w/NTC 10k sensor	
P	w/Pt 100 sensor	
Q	w/Pt 1000 sensor	

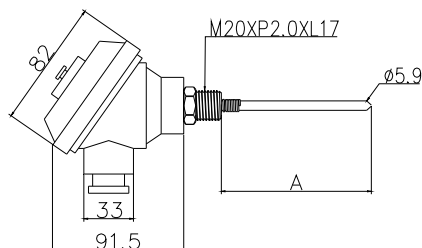
TI	Industrial Temp. Transmitter, IP67	Base model
4	Immersion mount 4" probe	Probe Length
6	Immersion mount 6" probe	
8	Immersion mount 8" probe	
C1	Pt100 w/temp. Xmitter, 4~20mA, 0~50C	Output & range
C2	Pt100 w/temp. Xmitter, 4~20mA, 0~100C	
C3	Pt100 w/temp. Xmitter, 4~20mA, -50~50C	
K	w/NTC 20k sensor	
L	w/NTC10k sensor	
P	w/Pt 100 sensor	
Q	w/Pt 1000 sensor	

Appearance and Dimension (Dimension in mm)

Wall mount Sensor / Transmitter

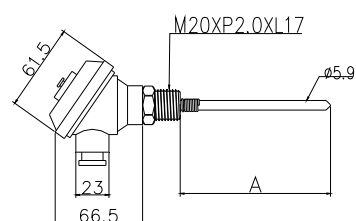
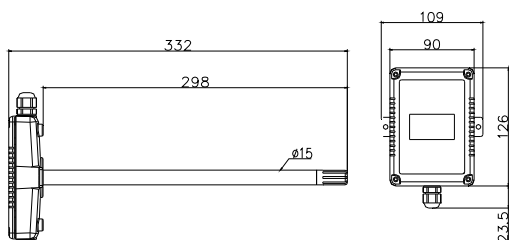


IP67 Industrial Temp. Transmitter/Sensor

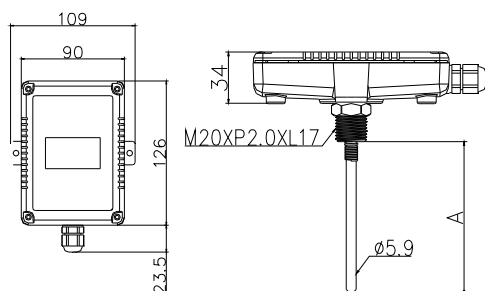


PIPE SIZE	A(mm)
4"	101.6
6"	152.4
8"	203.2

Duct mount Sensor / Transmitter

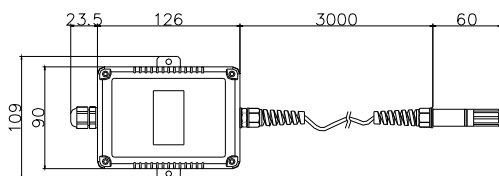


Immersion mount Sensor / Transmitter

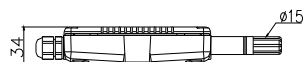
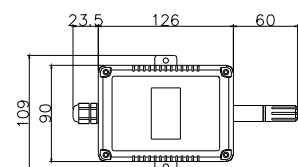


PIPE SIZE	A(mm)
4"	101.6
6"	152.4

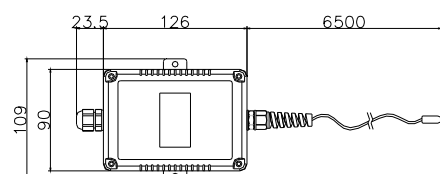
Remote Sensor / Transmitter



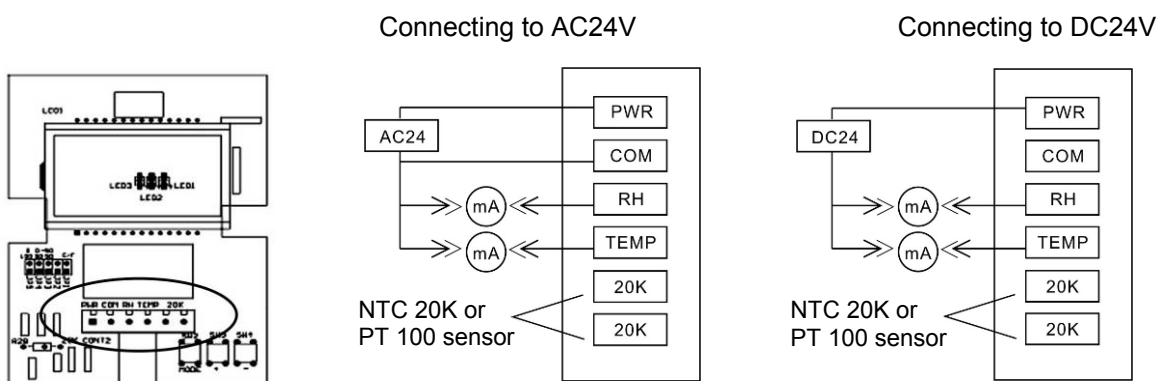
Outside Air Sensor / Transmitter



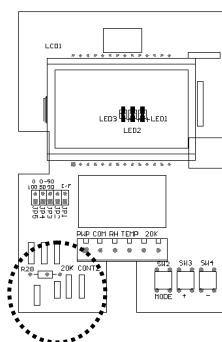
Duct Average Sensor / Transmitter



Wiring



Temperature Range Selection



Jumper setting

- By selecting JP1 to "0" position, the display shows Celsius mode; by selecting JP1 to "1" position, the display shows Fahrenheit mode.

Temperature range	JP3	JP4	JP5
0~50°C	0	1	0
0~100°C	0	0	1
-50~50°C	1	0	0

- By selecting JP2 to "1" position, the unit will commence the mode adjustment. After completion of mode adjustment, the unit will enact the mode setting.
- JP3, JP4, and JP5 are used to select temperature range.

INSTALLATION GUIDE FOR DUCT MOUNT SENSOR OR TRANSMITTER :

- Drilling a mounting hole with diameter 13mm on the duct near measuring point. Insert the probe pipe into duct.
- Unscrew & open the front cover of the product.
- Use enclosed screws to install the wiring box on the duct.
- Lead wire from DDC or PLC panel through opening by using a properly sized 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 screw.
- Use a properly sized screw driver to connect the lead wires to the terminals.

INSTALLATION GUIDE FOR WALL MOUNT SENSOR OR TRANSMITTER :

- Remove the front cover and place the back panel to the desired location.
- Attaching the enclosed screws to the back panel.
- Place the front cover to the back panel.
- Keep the sensor or transmitter away direct sun light, heat source and cold source.
- The recommended location of wall mount sensor or transmitter is 1.5M above the ground.

Honeywell