

Temperature and Humidity Transducer with Bacnet & Modbus port

Description

Duct temperature and humidity sensor / transmitter is applicable to all kinds of building automation, environment monitoring, HVAC systems. Product appearance is simple, direct connection terminals, convenient installation. Products use high performance embedded microprocessor, and high-precision sensors to meet all kinds of high precision, high stability of the temperature and humidity measurement requirements, and variety needs of different environments. Duct temperature sensor / transmitter has current, voltage, 485 output signal to select, using 485 serial port output and Modbus communication protocol. It is commonly used in HVAC, electrical plant, environment monitoring, dynamic environment monitoring, agricultural environmental monitoring, meteorological environmental monitoring, environmental monitoring of biological pharmacy, airport, subway stations, hotel, museum,



XDUCER-D-TH

Highlights

- High precision temperature and humidity sensor
- Applicable to all types of air environmental monitoring
- HVAC systems
- Advanced circuit design, high accuracy, stable performance
- Appearance is concise, easy to install, cost-effective

Specifications

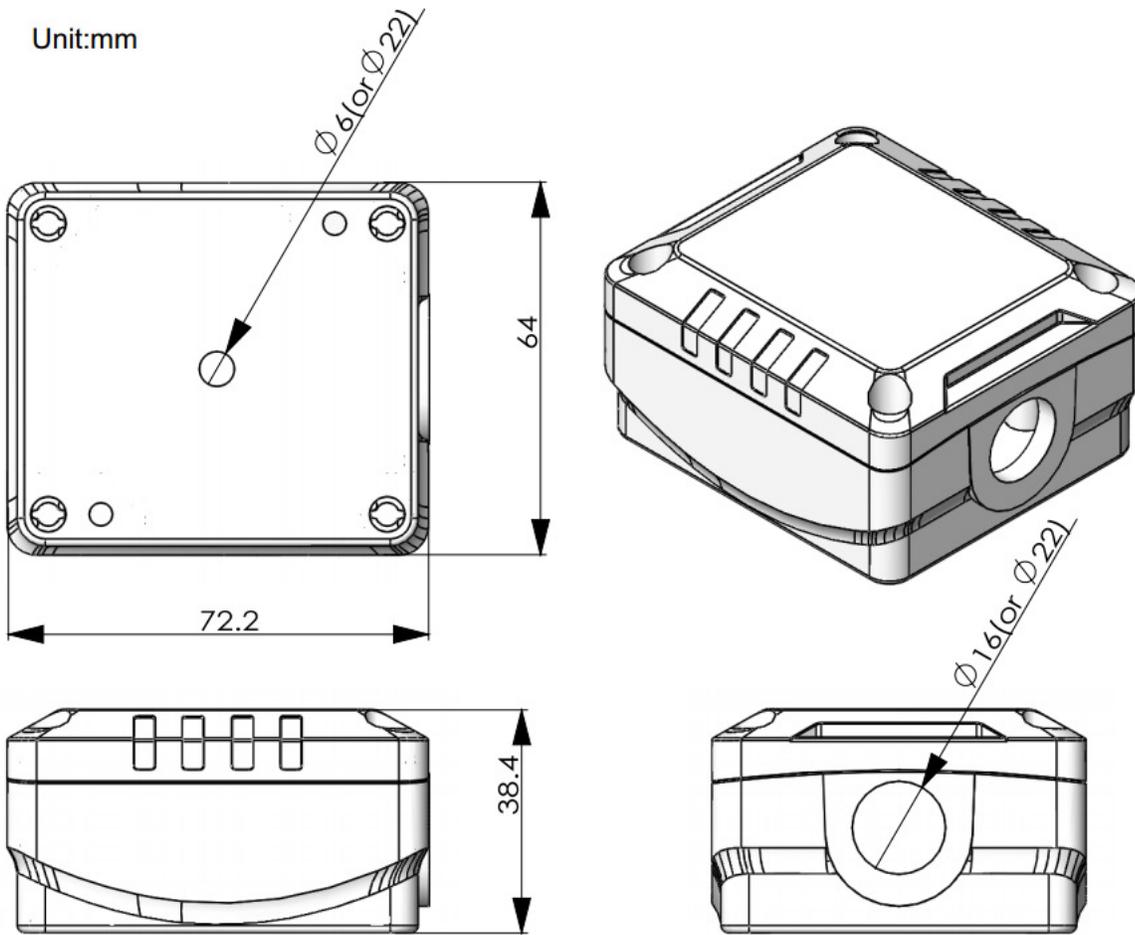
Typical Application	Duct mount indoors
Output Signal Type	4-20mA, 0-10V
Output Signal Drive	> 500Ω for mA mode, 75mA, max output drive for voltage mode
Power	15-24V±10% AC or DC, 1 Watt typical
Operating Temp	-30-60°C, 0-95% non condensing
Plastic Housing	Flammability rating UL 94V0 file E194560
Size	72.2mmX64mmX38.4mm

Humidity	Accuracy tolerance	0-100%RH ±2
	Repeatability	0.18~0.21%RH
	Resolution	0.01%RH
	Hysteresis	at 25°C ±0.8%RH
	Specified range	0 to 100%RH
	Response time	8 S
	Long-term drift	<0.25 %RH/yr

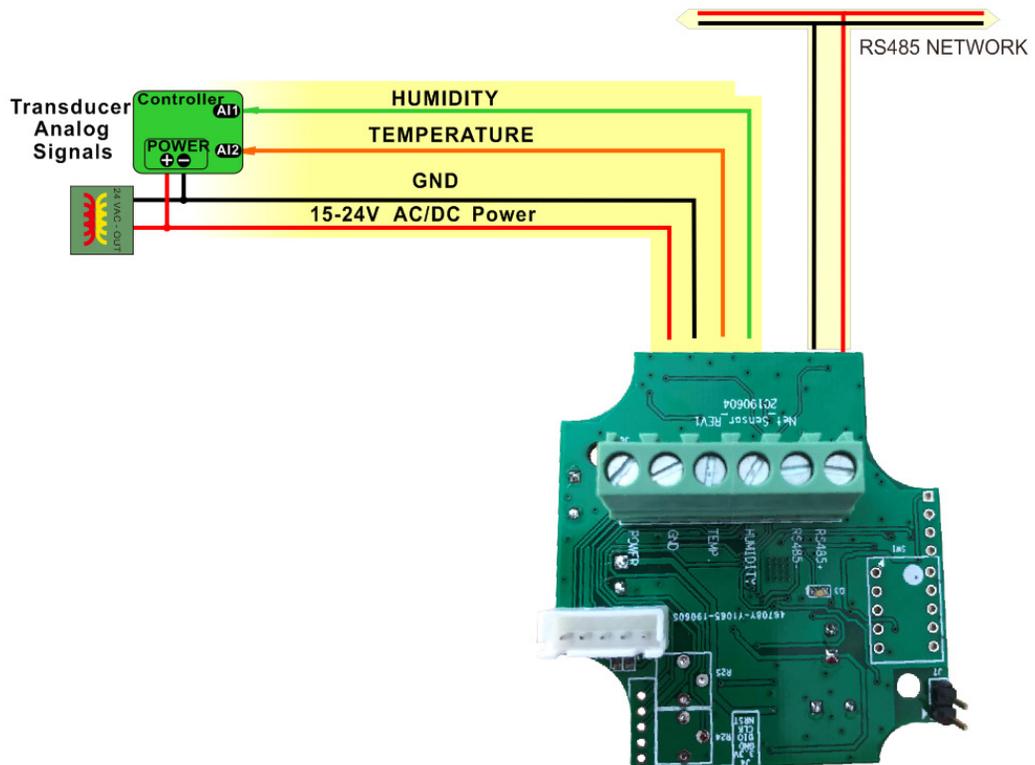
Temperature	Accuracy tolerance	0°C to 90°C ±0.2
	Repeatability	0.04~ 0.15°C
	Resolution	0.01°C
	Specified range	-40~ 125°C
	Response time	>2S
	Long-term drift	<0.03 °C/yr

Dimension

Unit:mm



Wiring Diagram



Part Number Scheme

XDUCER — D — TH

Code	Description
XDUCER	Transducer Sensor

Code	Option
TH	Temp & Hum

Code	Module
D	Duct Mount

Mounting Installation

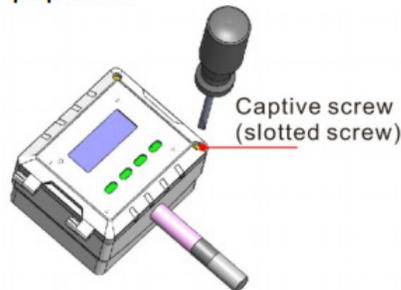
1) slotted screwdriver



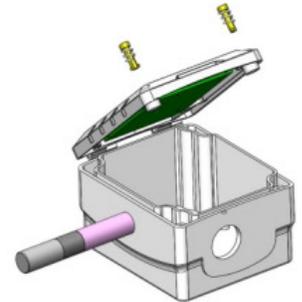
Captiver screw(slotted screw)



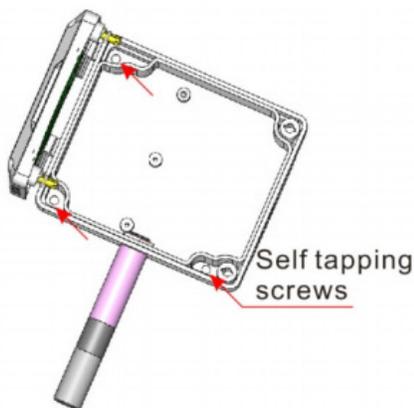
2) Unfasten screw at cover, turn the captive screw 1/2 turn till it pops out



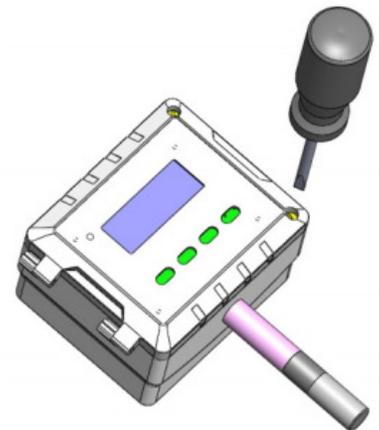
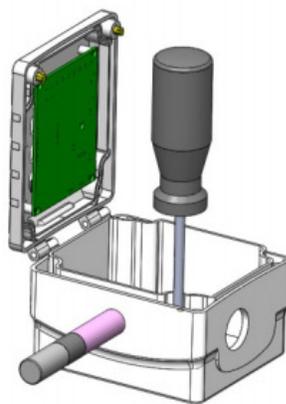
3) Open the cover



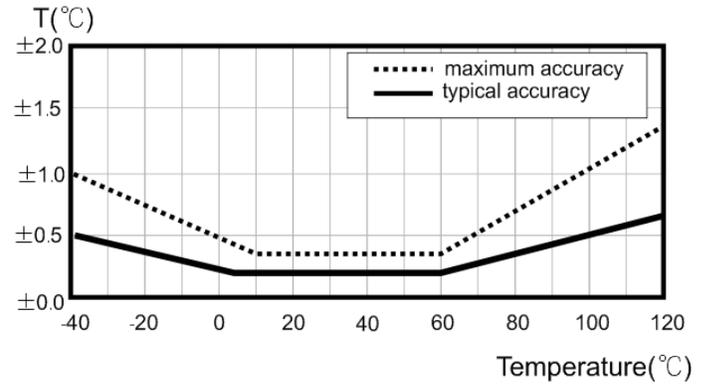
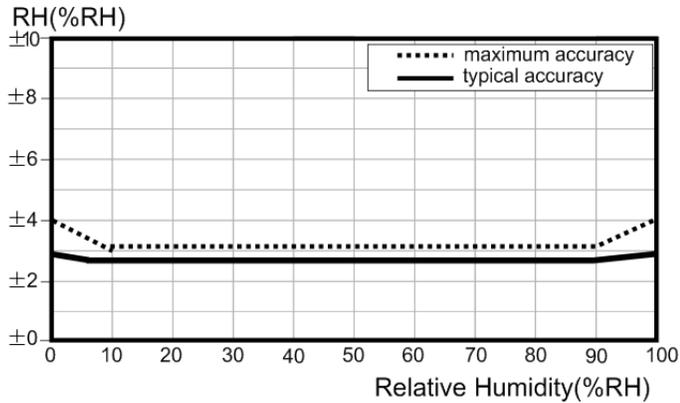
4) There are three small holes as red arrows showed below inside the box for fastening self tapping screws drilling the hole in the duct with a template



5) Re-fasten screw at cover



Accuracy Curves



Modbus Register List

Address	Register and Description
0-3	Serial number
4	Software version
6	Modbus address
8	Hardware version
17	Switch5, 1=0.....10V,0=4.....20mA
18	Switch1-2,0=0-100,1=-20...80,2=0....50,3=-50.....50
19	Switch3-4,0=dewpoint,1=enthalpy,2=absolute humidity,3=reasl humidity
25	Potionmeter R1 AD value
27	Potionmeter R2 AD value
34	SHT 35 temperature
35	SHT 35 humidity
45	NTC temperature
36	Potionmeter R1 offset value
37	Potionmeter R2 offset value
38	Temperature with offset
39	Humidity with offset
41	Dew point value
42	Enthalpy value
44	Absolute humidity
51	Test switch,if on, input voltage to register 52,53
52	Input voltage for temperature output,500 mean 5.00v
53	Input voltage for humidity output ,500 mean 5.00v
54	Input current for temperature output,4 mean 4mA
55	Input current for humidity output, 4 mean 4mA
60-76	NTC sensor17 calibration point
80	NTC sensor's AD value

Bacnet Object List

Supported Bacnet Object Types		
analog-value,device		
Supported Bacnet Services		
Who-is, i-am		
object-identifier, object-name, object-type,present-value,units,object-list,vendor-id, vendor-name,system-status,confirms-service,unconfirmed-service		
MSTP Object		
Analog-Value	AV0:baudrate select	
	AV1:Temperature range	0=0-100°C 1=-20.....80°C , 2=0...50°C 3=-50...50°C
	AV2:Humidity range	0=dewpoint,1=enthalpy,2=absolute humidity,3=real humidity
	AV3:Protocol	0=Modbus; 1=Bacnet
	AV4:Output type	0=4~20mA, 1=0-10V
	AV5:Temperature	
	AV6:Reality humidity	
	AV7:absolute humidity	
	AV8:Dew point	
	AV9:Enthalpy	
	AV10:Temperature Offset	Range:-4.0~4.0
AV11:Humidity Offset	Range:-4.0~4.0	
Device	device-identifier,device-name	

