Transducer

Descriptions

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 out put 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, stadium, etc.

XDUCER-D-TH

XDUCER-D-T

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	Jumper select:4-20mA,0-10V	
Output Signal Drive	>500Ω for mA mode,75mA max output drive for voltagemode	
Power	15-24V+/-10%, AC or DC,1watt typical	
Operating Temp	-30~+60°C,0-95%non condensing	
Plastic Housing	Flammability rating UL94V0 file E194560	
Control Features	N/A	
HUM	Sensor Type	Capacitive
	Range	0-100%Non-Condensing
	Accuracy	5%@25°C,20~80%
	Drift	<0.5%RH/year
TEMP	Sensor Type	10K thermistor
	Range	-40~150°C(-60~340°F)
	Accuracy	<±0.5°C@25°C
Size	72.2mmX64mmX38.4mm	

Transducer

Dimension

Unit:mm

⌀ 6(or ⌀ 22)

64

72.2

38.4

⌀ 16(or ⌀ 22)

Jumper Settings

	D1	D2	D3	D4		D5	
ON					Temperature 0…50°C		Output signal T1= 0…10V
OFF							Output signal T1= 4…20mA
ON					Temperature -50…50°C		
OFF							
ON					Temperature 0…100°C		
OFF							
ON					Temperature -10…120°C		
OFF							

temperature
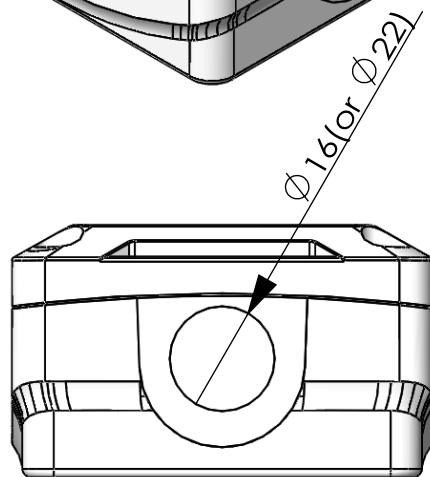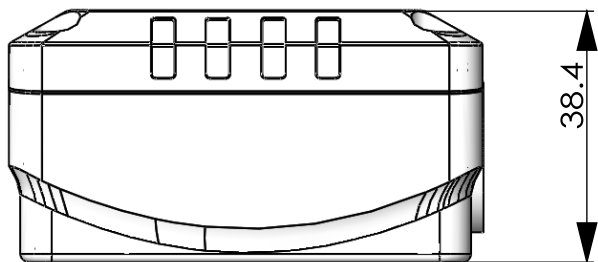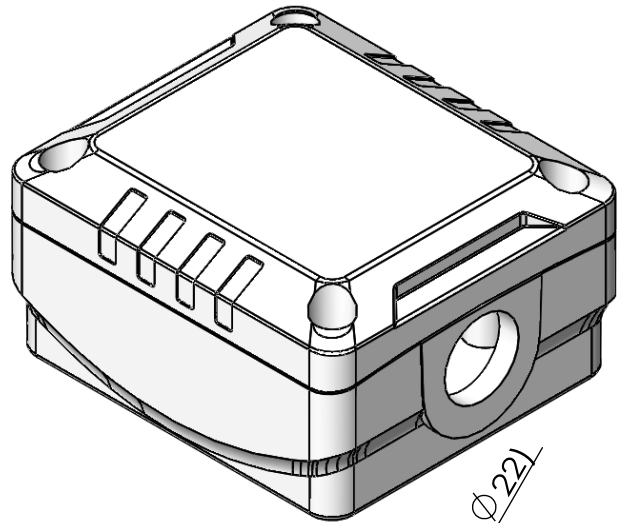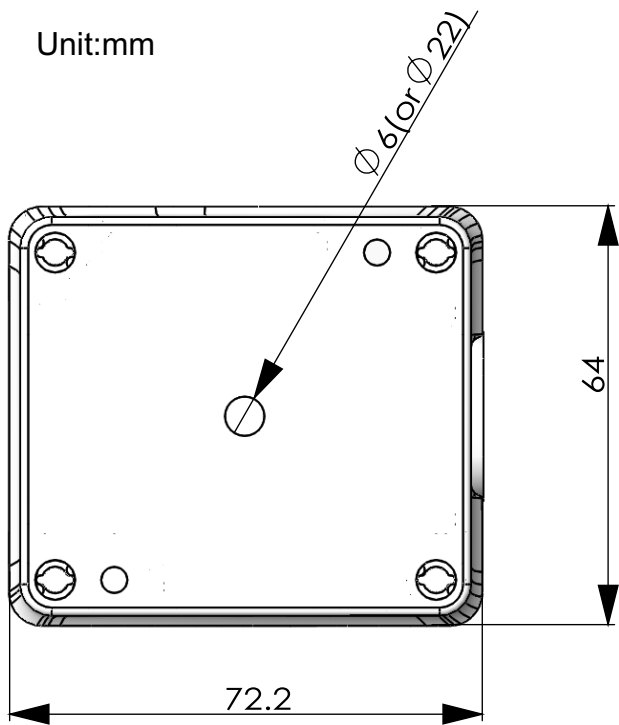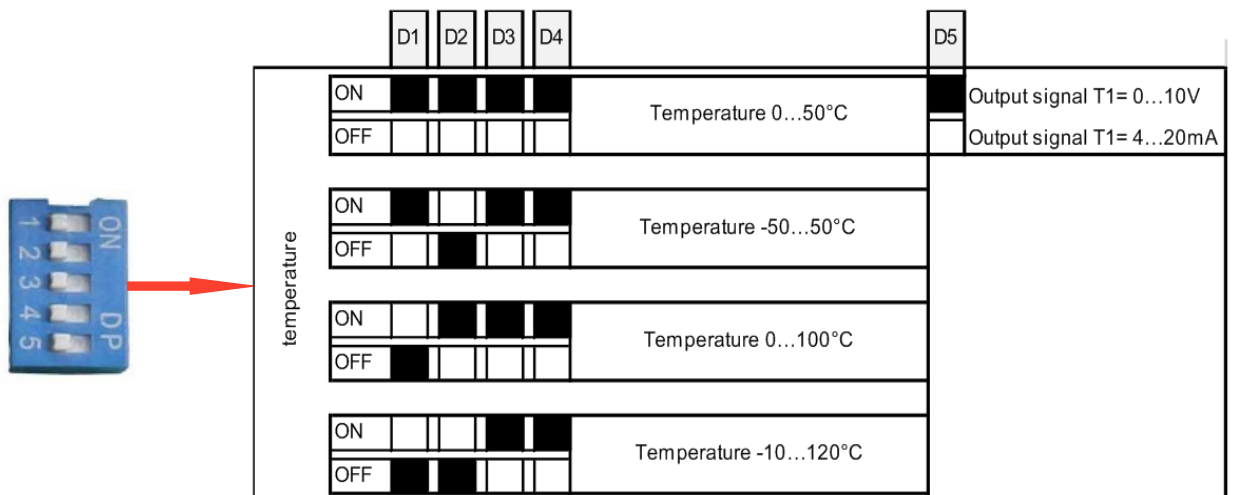
Transducer

Wiring Diagram
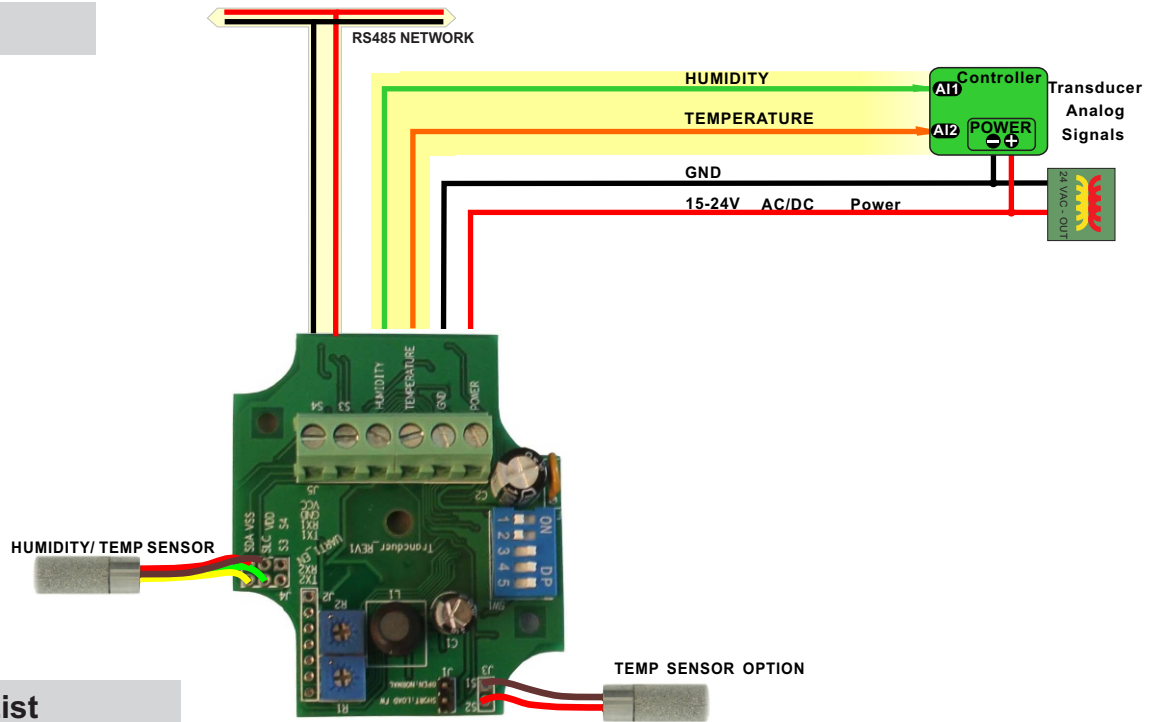
Modbus Register List

| ADDRESS	Register Description
0-3	Serial number
4	Software version
6	Modbus Address
8	Hardware version
17	Switch 5, 1=0...10V, 0=4...20mA
18	Switch 1-2, 0=0-100,1=-20...80,2=0...50,3=-50...50
19	Switch 3-4, 0=dewPoint, 1=enthalpy, 2=absolute humidity,3=real humidity
25	potentiometer R1 AD value
27	potentiometer R2 AD value
34	SHT 35 Temperature
35	SHT 35 Humidity
45	NTC temperature
36	potentiometer R1 offset value
37	potentiometer 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 5.00 v
53	input voltage for humidity output, 500 mean 5.00 v
54	input current for temperature output, 4 mean 4mA
55	input current for humidity output, 4 mean 4mA
60-76	NTC sensor 17 calibration points
80	NTC sensor's AD value

Transducer

Part Number Scheme

$$\underline{\text{XDUCER}} - \underline{\text{D}} - \underline{\text{TH}}$$

Code	Description
XDUCER	Transducer Sensor

Code	Module
D	Duct Mount

Code	Option
T	Temp
TH	Temp & Hum

Mounting Installation
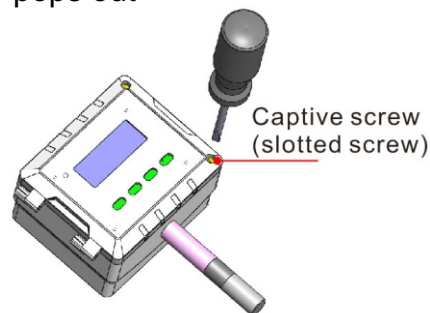
1)slotted screwdriver
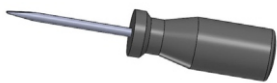
Captiver screw(slotted screw)

2)Unfasten screw at cover,turn the captive screw ½ turn till it pops out
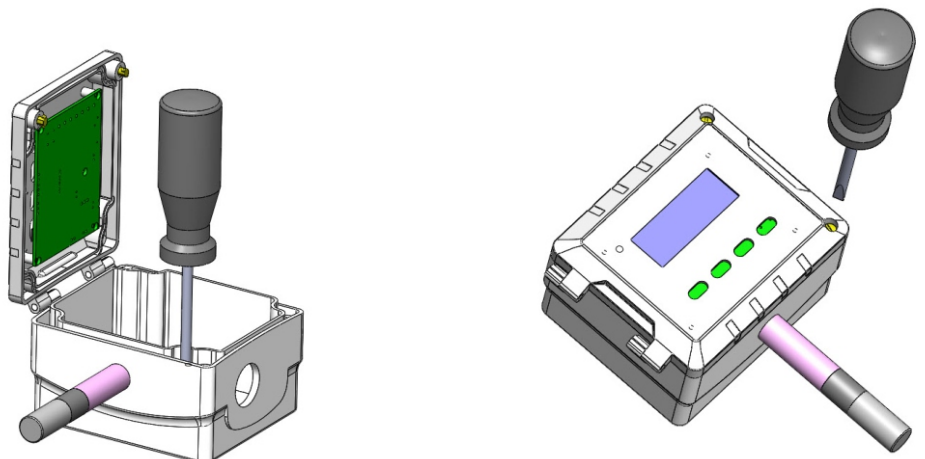
Captive screw (slotted screw)

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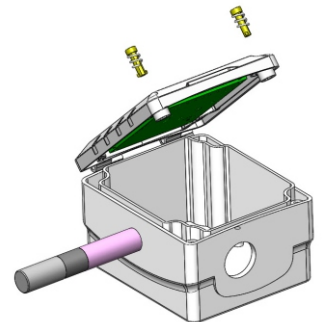
4)There are three small holes as red arrows showed below inside the box for fastening self tapping screws drilling the hole in the duct with a template

Self tapping screws
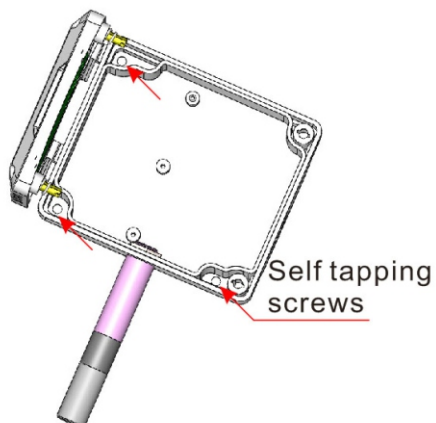
5)Re-fasten screw at cover

Bacnet Objects 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, confirmed-service, unconfirmed-service

MSTP Object

Analog-value	AV0:baudrate select	
	AV1:Temperature range	0=0-100℃; 1=-20...80℃ ;2=0...50℃; 3=-50...50℃
	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	