

HTP TEMPERATURE & HUMIDITY TRANSMITTER

■ PRODUCT

HTP series, new type of temperature & humidity sensor, with 4~20mA output function · LCD display screen and RS485 communication port. Multiple types to fulfill various needs, selectable temperature or humidity or temperature & humidity output. Buttons within wiring box for field adjustment of output range, response time, inaccuracy correction and communication parameters. For different field condition and space, HTP series transmitters are designed in 4 types W(wall mounting), H(Pipe mounting_H), V(Pipe mounting_V) and S(Pipe mounting_S).



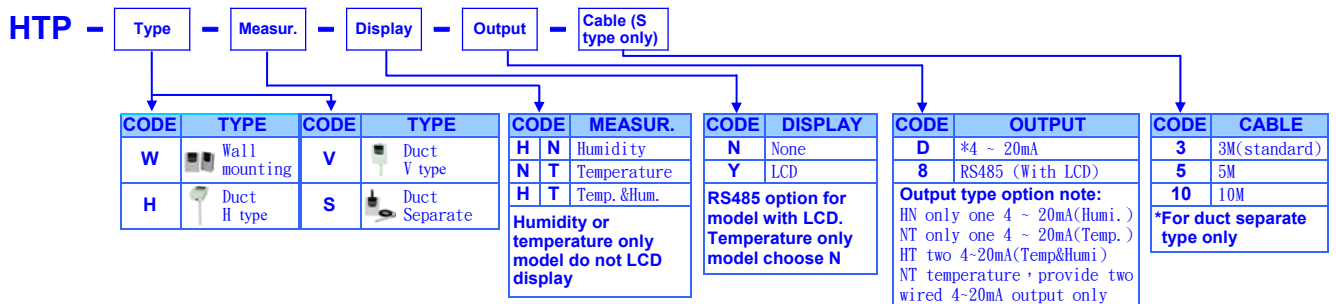
■ FEATURES

- Two 4-20mA outputs or RS 485(Modbus RTU Mode) communication port.
- Option LCD display function
- 4 selectable temperature range and output 0~50°C 、 -50~+50°C 、 0~100°C or Free range(-30/0~50/~100°C)
- Adjustment of temperature, humidity value and analogue output hi/low limit by button setting.
- Temperature and humidity analogue output response time setting 1~10 second.

■ APPLICATIONS

Building ventilation, computer room, agriculture, laboratory, hospital, product warehouse etc monitoring system.

■ ORDERING INFORMATION



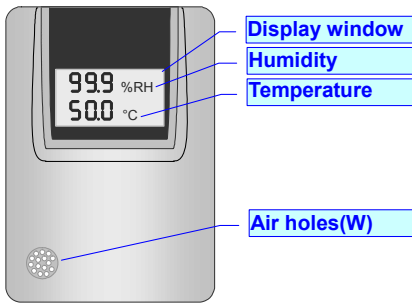
■ SPECIFICATIONS

Measure	
Range	-20~100°C Selectable 3 range by button or PCB jumper.; 0.0~99.9%RH
Sensing element	SHT11®, Epoxy
Accuracy	Tem p. band-gap sensor; Drift/annual: < 0.04°C/year; In HTP-X-NT-X-N-X, temperature only, temperature sensor by LM35(National semiconductor)
	Humi. capacitive sensor element, Drift/annual: < 0.5%RH/year
Response time	Temp. Condition 30s (Still air) / 5s (Duct air speed 3m/s), 63%, 25°C
	Hum. Condition 30s (Still air) / 4s (Duct air speed 3m/s), 63%, 25°C
Adjustment	Sensing element: Factory only; Transmitter: By RS485 or button adjust
Display	
LCD	Grey, 8.0mm height
Display measure temperature	Setting by button(-20~100°C) within temperature range, select °C / °F; Model with no LCD, adjust range by jumper on PCB 0~50°C、-50~+50°C、0~100°C、Free range(low: -30~0°C, high: ~+50~+100°C);
Display Humi.	0.0~99.9%RH
Analog. output	
Range	2 Wired 4~20mA*2(Temp./Hum.)
Output ripple	≤±0.5%
Load limit	4~20mA: ≤500Ω; 0~10V: ≥1.0K ohm
RS485	
Communication	Modbus RTU mode
Address	1~255
Baud rate	9600 or 19200 selectable
Parity	N,8,1 N,8,2 O,8,1 E,8,1 selectable (8 data bit, 1 or 2 stop bit)
Power	
Power supply	16~30Vdc
Consumption	6V A(With LCD display and 2 sets of 4~20mA output)

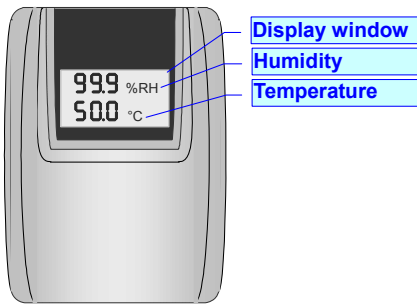
Environment	
Temperature	-5~50°C
Humidity	≤100% RH, non-condensing
Pressure	1 Atmosphere(760mmHg)
Tem p. Coeff.	≤100ppm
Storage	-20~+70°C
Enclosure	IP54 IP65
Size	
Installation Type (mm)	Wall Mounting Duct H Duct V Separate
Casing	85(W) x 120(H) x 30(D) 88(W) x 120(H) x 50(D)
Tube	X Φ16 x (170+40) Provide flange X Φ16 x (80+40) Provide flange
Cable	X X X 3、5、10M
Material	ABS Fire proof (UL 94V-0)
Weight	150g 250g 210g

FRONT PANEL AND DISPLAY

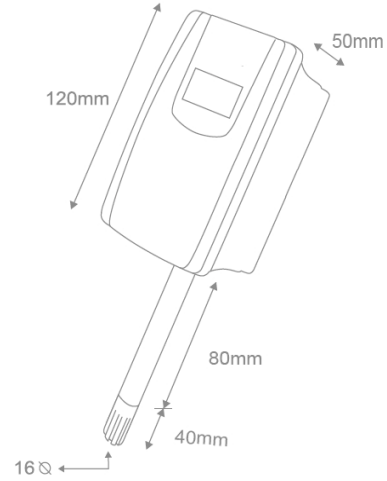
Wall mounting(W)



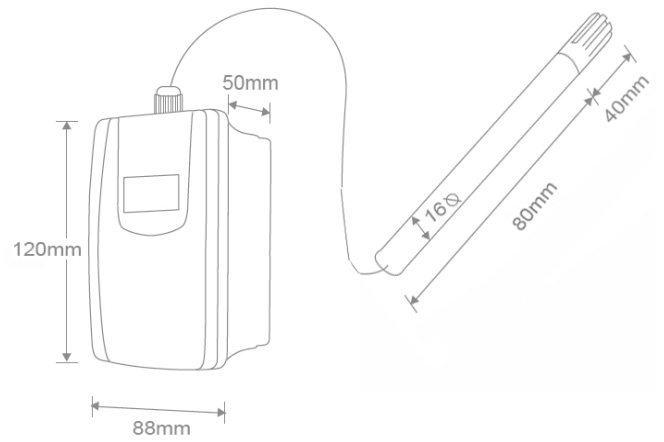
Duct type(H \ V)



Duct type (V)

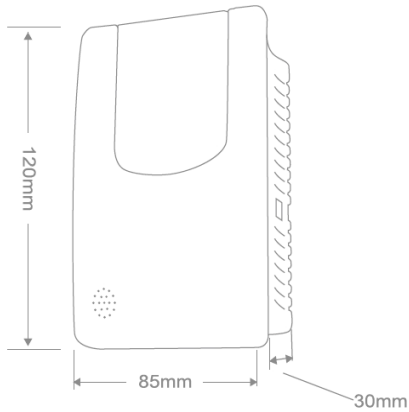


Separate(S)

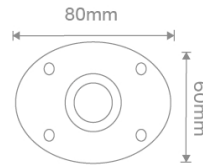


DIMENSION

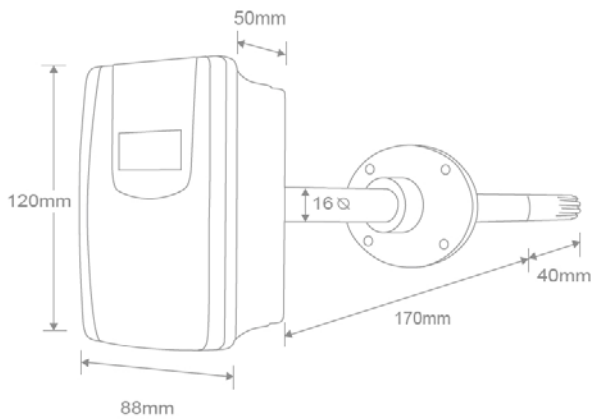
Wall mounting (W)



(Flange)

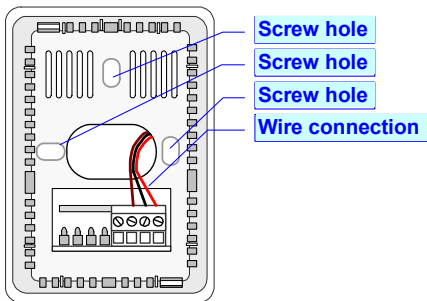
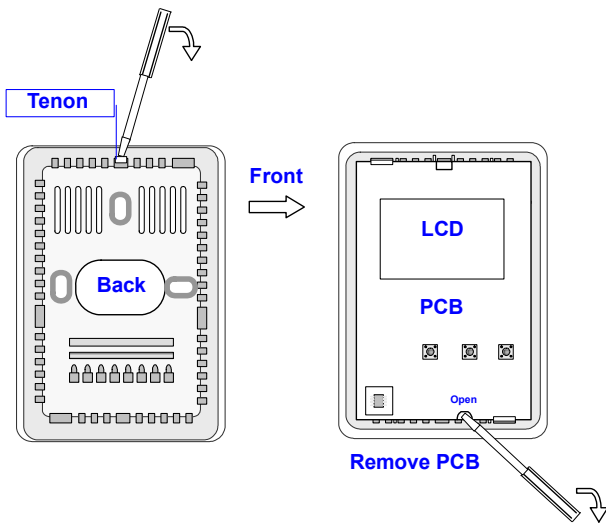


Duct type (H)

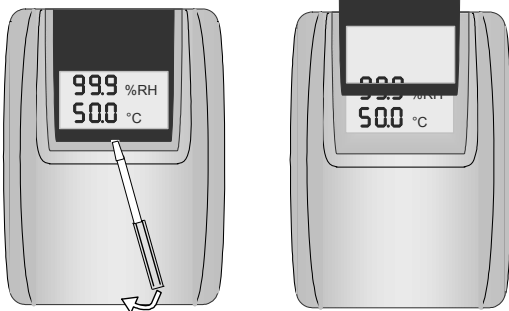


■ INSTALLATION

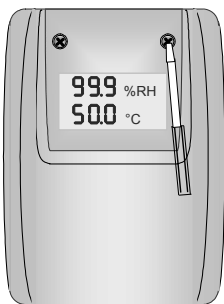
Wall mounting (W)



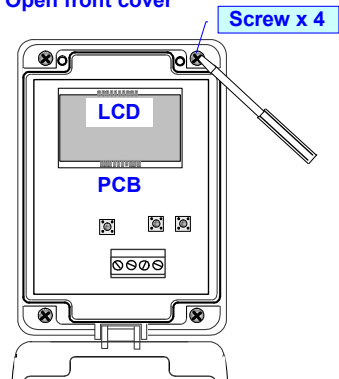
Duct type (H,V and S) Slide protection cover



Loosen screws



Open front cover

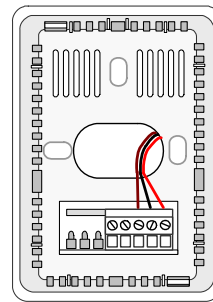


■ WIRE CONNECTION

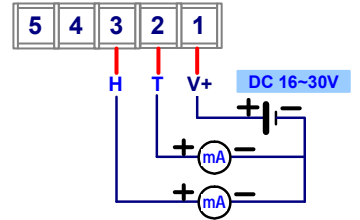
Please check power supply voltage and wiring connection before installation. For safety of device, install fuse at power source for protection
⚠ In case of change in wiring, please follow connection diagram on unit.

Connection wire size 22AWG. Please use isolated twisted pair cable for analogue and RS485 output connection
 Connection terminal: 8A/300Vac, M3.5, 1.2~3.5mm² (22~12AWG)

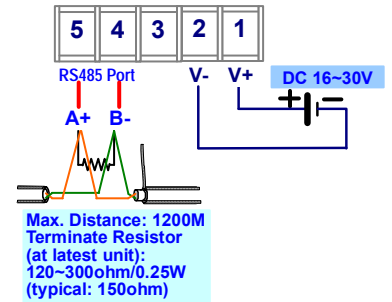
Wall mounting (W)



2 wired 4~20mA output connection

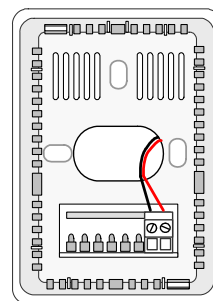


RS485 output connection



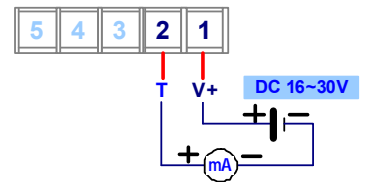
Wall mounting (W)

-Temperature only

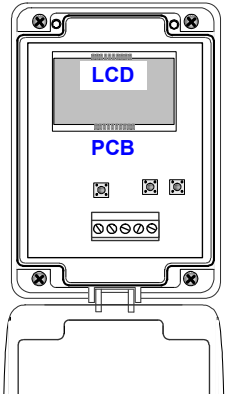


Only 2 wired 4~20mA output

2 wired 4~20mA output connection

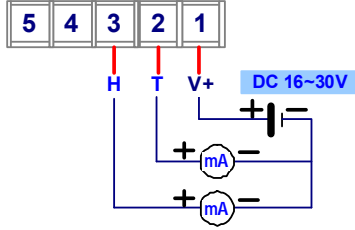


**Duct type
(H, V and S)**

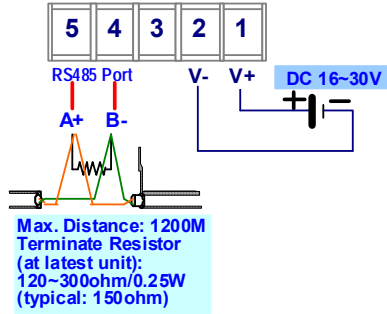


- Insert wire into terminal to be in contact with connector ;
- European standard terminal DIN PG9
Nylon Cable Gland
Range of wire diameter : 4.0~8.0mm
Protection class : IP65

2 wired 4~20mA output connection



RS485 output connection



Display value

When temperature & humidity value is inaccurate, please follow instruction manual to adjust values from PCB button.

Analogue output

Output value

Follow operation manual to set temperature and humidity range by button on PCB for analogue output.

Output response

Follow operation manual to set analogue output response time by buttons on PCB ; setting range 1.0~10.0 sec/time

FUNCTIONS

Display function

Display range:

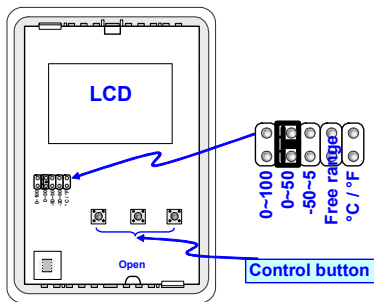
HPT series are designed with 4 temperature range on PCB, change by using jumper, the range are 0~50°C \ -50~+50°C \ 0~100°C \ -30/0~50/100°C. According to difference model, they can be changed in difference range.

Without display type: 0~100, 0~50, -50~50

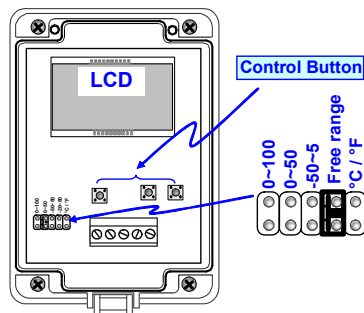
With display type: 0~100, 0~50, -50~50, Free range(with analogue output: the default of Free range will be -20~80; low range can be set : -30~0, high range can be set : 50~100. with RS485 port : Free range is disabling. User can select range through button.)

Output value according to selected range.

Wall mounting (W)



Duct type(H, V and S)



HTP temp&Humid