

■ 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 3 types H(Pipe mounting H), V(Pipe mounting V) and S(Pipe mounting S).



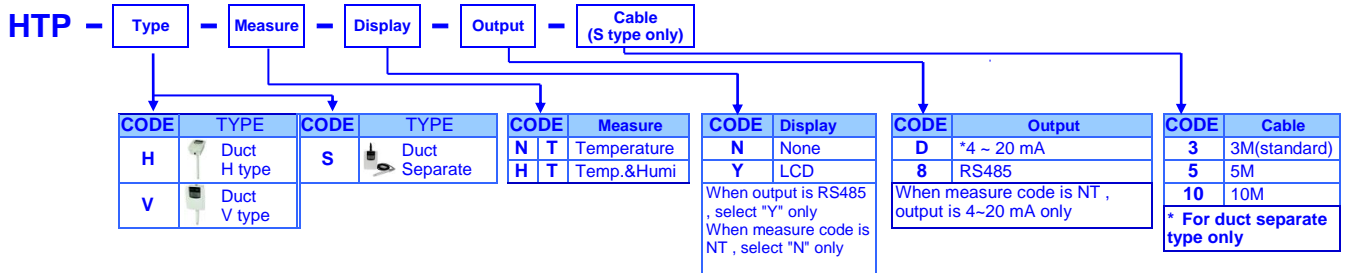
■ FEATURES

- 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	Temp. None LCD type : 0~100, 0~50, -50~50, Free range (-20~80)°C, 3 range by PCB jumper. LCD type : 0~100, 0~50, -50~50, Free range(Optional AO : Free range: -20~80; Low:-30~0, High: 50~100, by button. Optional RS485 : Free range disable) Humi. 0.0~99.9%RH
Sensing element	SHT11®, Epoxy
	Temp. band-gap sensor ; Drift/annual : < 0.04°C / year ; HTP-X-NT-X-N-X temperature only ; temperature sensor by LM35(National semiconductor) Humi. capacitive sensor element ; Drift/annual : < 0.5%RH/year
Accuracy	Temp. ≤±0.5°C @25°C / ≤±1.2°C (0~50°C) Humi. ≤±3%RH(20~80%) / ±4%RH(0~10%,90~100%)
Response time	Temp. Condition 30s (Still air) / 5s (Duct air speed 3m/s), 63%, 25°C Humi. 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 Temp.	As Range
Display Humi.	0.0~99.9%RH
Analog. output	
Range	2 Wired 4~20mA*2(Temp./Humi.)
Out put ripple	≤±0.5%
Load limit	4~20mA: ≤500Ω ; 0~10V: ≥1.0KΩ
RS485	
Communicatio	Modbus RTU mode
Address	1~247
Baud rate	9600 or 19200
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)

Enviroment			
Temperature	-5~50°C		
Humidity	≤100% RH, non-condensing		
Pressure	1 Atmosphere(760mmHg)		
Temp. Coeff.	≤100ppm		
Storage	-20~+70°C		
Enclosure	IP65		
Size			
Installation	Duct H	Duct V	Separate
Type (mm)			
Casing	88(W) x 120(H) x 50(D)		
Tube	Φ16 x (160+40) Provide flange	Φ16 x (80+40) Provide flange	
Cable	X	X	3 · 5 · 10M
Material	ABS 防火材料 (UL 94V-0)		
Weight	250g		210g

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.

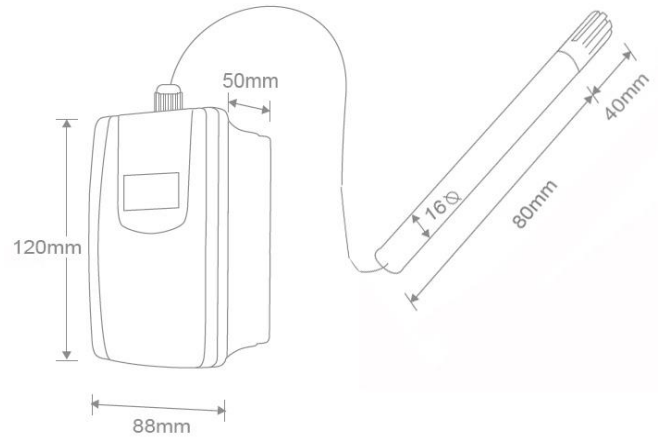
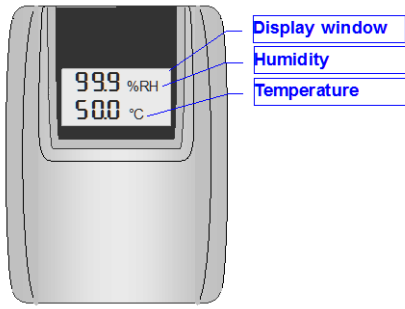
Output response:

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

■ FRONT PANEL AND DISPLAY

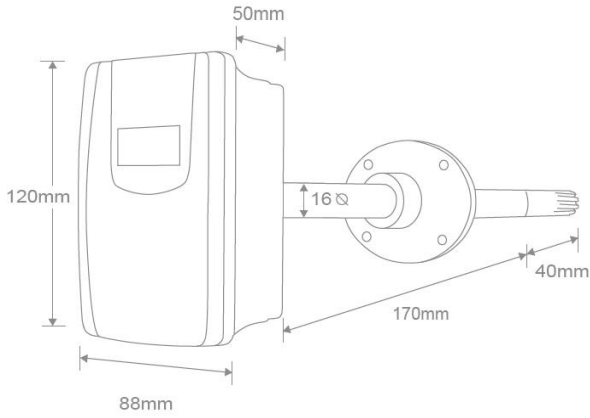
Separate(S)

Duct type(H, V)

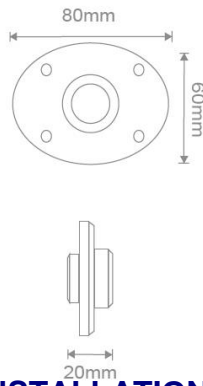


■ DIMENSION

Duct type (H)

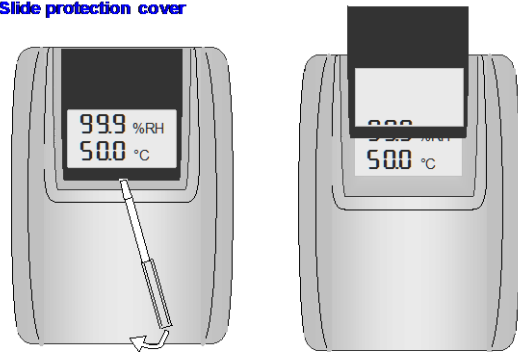


(Flange)

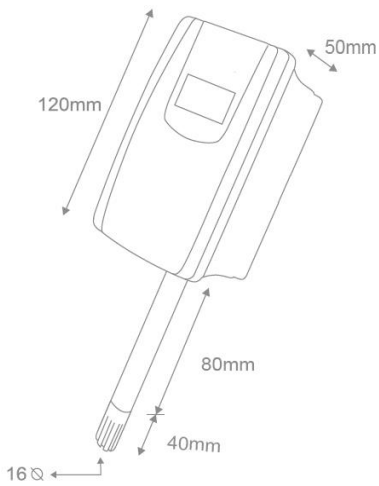


■ INSTALLATION

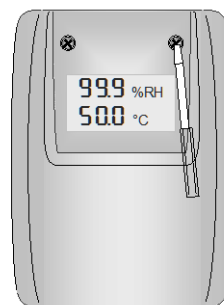
**Duct type (H,V and S)
Slide protection cover**



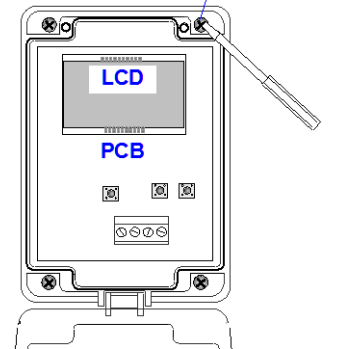
Duct type (V)



Loosen screws



Open front cover



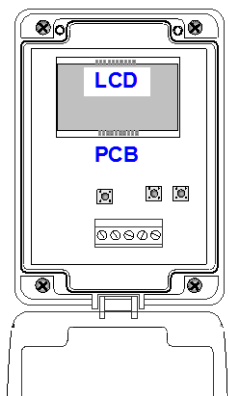
WIRE CONNECTION

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.

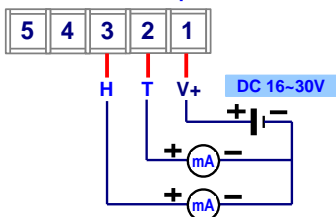
Connection wire size 22AWG. Please use isolated twisted pair cable for analogue and RS485 output connection.
 Connection terminal: 8A/300Vac, M3.5, 1.2~3.5mm² (22~12AWG)

Duct type (H \ V & S)

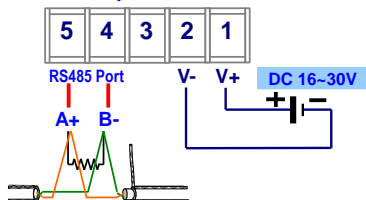


- Insert wire into terminal to be in contact with connector ;
- European standard terminal DIN PG9 Nylon Cable Gland
 Range of wire diameter : 4.0~8.0mm
 Protection : IP65

2 wire 4~20mA output connection



RS485 output connection



Max. Distance: 1200M
 Terminate Resistor (at latest unit):
 120~300Ω/0.25W
 (typical: 150Ω)

FUNCTIONS

Display function

Display range:

HTP 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.

Duct type (H \ V & S)

