



THS88 High Pressure Dew Point Transmitter



Application

〈 Feature 〉

- High accuracy and long-term stability.
- Capable of temperature compensation and linear adjustment.
- Industry sensor with non- cond. Bearable pressure : 16 bar
- Analogue output : 0-1V/0-5V/1-5V/0-10V/2-10V/0-20mA/4-20mA
- Standard MODBUS RTU protocol, RS-485 communication interface
- More size of connector for different environment to be easily installed.
- High pressure, low humidity. Dew point measuring range : -100~+60 dp °C
- Free programmable software which can adjust dew point range and provide more physical quantities, dew point, frostpoint, absolute humidity and so on to choose

〈 Application Field 〉

- Compressed air system / freezer / adsorption machine
- Plastic Dryer / industrial drying process
- Paper / Chemical Process Monitoring

Specification

Input

Input type	Capacitive Humidity Sensor & PT 100 Ω
Working range of dew point	-60~+60 dp $^{\circ}\text{C}$

Output

Max. scaling range	dew point : -100~+60 dp $^{\circ}\text{C}$
Dew point switch to another physical quantity range	frost point : -60~0 fp $^{\circ}\text{C}$; Absolute humidity(volume) 0~50000 ppm/v Absolute humidity(weight) 0~50000 ppm/w
Output signal	standard RS-485 & 1 analogue output 0~20mA/4~20mA/0~1VDC/0~5VDC/0~10VDC
Signal connection	3-wire
Modbus	standard RS-485 & 1 analogue output
Linear accuracy	± 2 dp $^{\circ}\text{C}$ (at +25 $^{\circ}\text{C}$) \pm (0.02%F.S/ $^{\circ}\text{C}$) (working range of dew point : -60~+60 dp $^{\circ}\text{C}$)
Load resistance	current output : max. 500 Ω / voltage output : min. 10K Ω
Output calibration(ZERO & SPAN) adjustment range	software
Response time t90 (temp. at +25 $^{\circ}\text{C}$)	< 20S

Environment

Media measured	air
Working temp. for housing	-40~+80 $^{\circ}\text{C}$
Working humidity for housing	0~95 RH % (non-cond.)
Working temp. for probe	-70~+80 $^{\circ}\text{C}$
Storage temperature	-25 ~ +60 $^{\circ}\text{C}$
Bearable pressure	16 bar

Electrical

Power supply	8~35VDC & 10~30VAC
Current consumption	DC24V, 50mA
Electrical connection	M12 connector

Installation

Installation	metal conncor
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Protection

Protect degree	body IP : 65 (probe : IP 20)
	ⓄPolarity protection Ⓞover-voltage Ⓞshort circuit

Material

Housing	S.S. (SUS304)
Probe	S.S. (SUS304) / SUS sintered filter (SUS316)
Weight	233g

Factory setting

Measuring range of dew point : -100~+20 $^{\circ}\text{C}$; Output : 4~20mA & standard RS-485

Ordering Guide

Type	THS	88	—	C	1
dew point measuring range	-20 ... +20 $^{\circ}\text{C}$		—	A	
	-40 ... +20 $^{\circ}\text{C}$		—	B	
	-100 ... +20 $^{\circ}\text{C}$		—	C	
connector	1/2" PT (R1/2")				1
	1/2" G				2
	5/8" UNF				3

Dew Point Automatic Inspection System

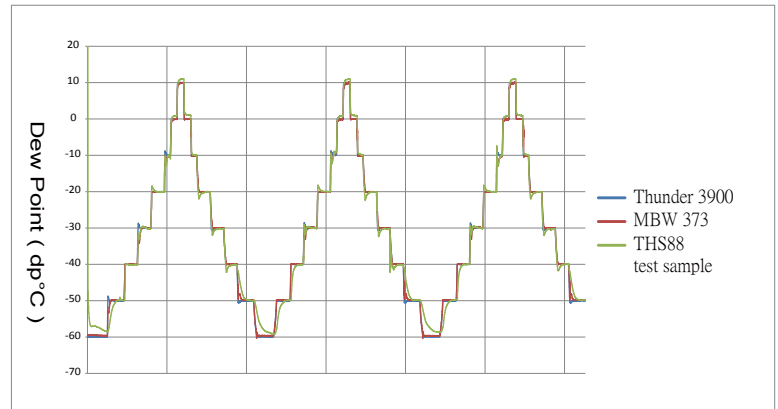
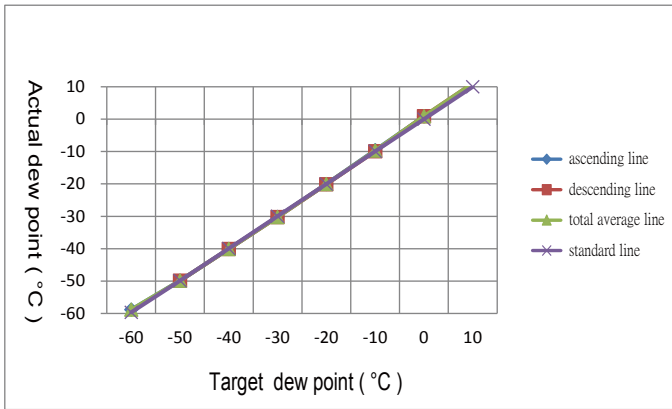


System facility :

- Thunder 3900 humidity generator
- MBW 373 dew point mirror
- Laboratory level facility to produce products, and automatic QC inspection sheet printing and factory report

3-cycle curve

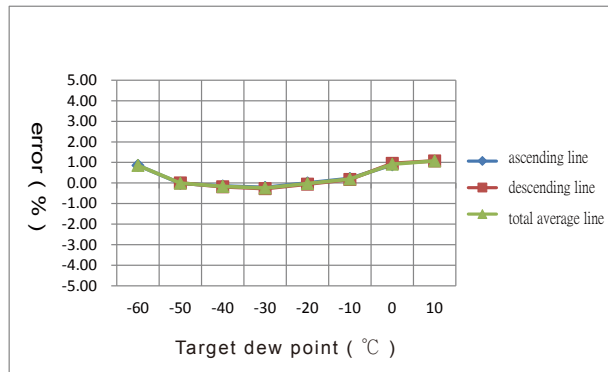
※ According to IEC 61298 and ISO 17025 standard to measuring 3-cycle curve.
As the charts result, accuracy of test sample match with accuracy chart of humidity generator + dew point mirror



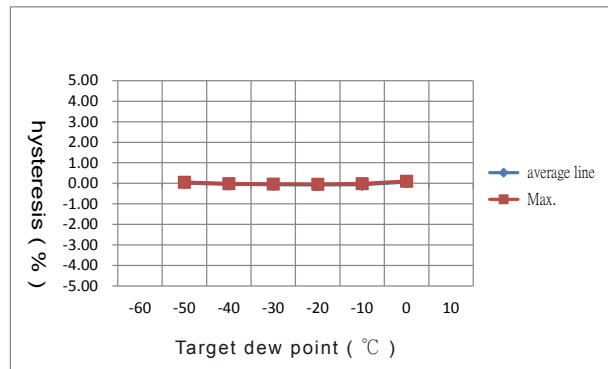
Accuracy Error curve

※ According to IEC 61298 and ISO 17025 standard to measure

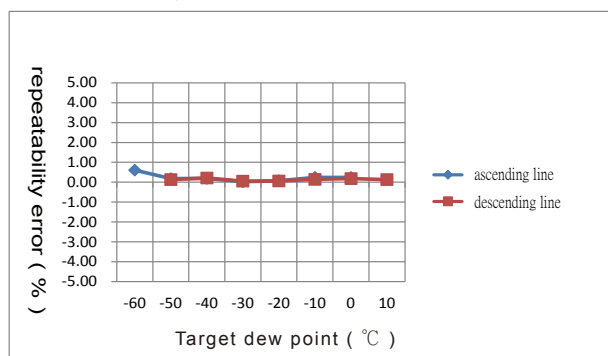
• nonlinear error : 1.07 dp°C



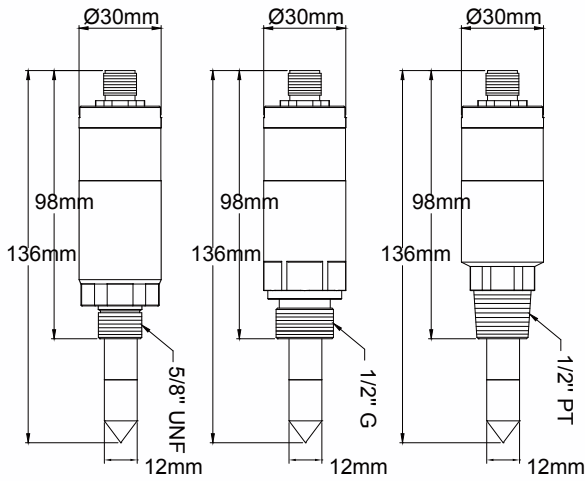
• hysteresis error : 0.10 dp°C



• repeatability error : 0.61 dp°C

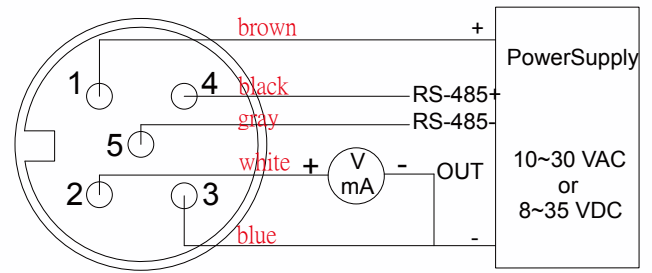


Dimension



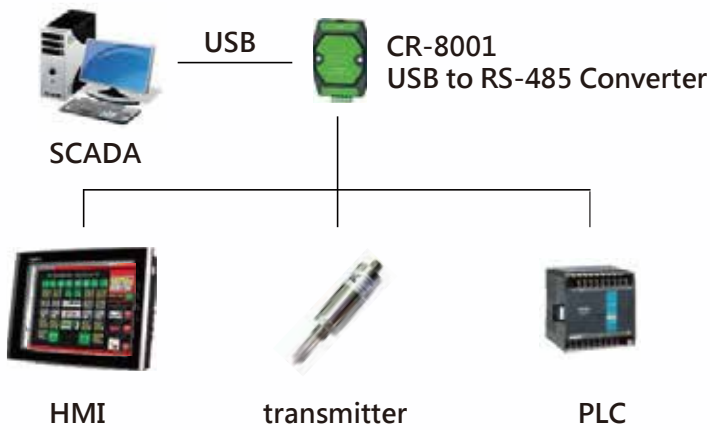
※ standard – PVC-5PIN 2M waterproof cable

Diagram



M12 connector

USB to Isolated RS485 Application



※ Require Device

1. PC
2. RS-485 to USB Converter
3. power supply
4. THS88 UI software