



THS88

High Pressure Dew Point Transmitter

Dew point

www.eyc-tech.com



Features

- Capable of temperature compensation and linear calibration
- Industrial sensor with non-condensing. Bearable pressure : 16 bar
- High pressure, low humidity. Dew point scaling range : -100 ... +60 dp°C
- Standard Modbus RTU protocol, RS-485 communication interface
- High accuracy and long-term stability
- More size of connector for different environment
- Analog output : 0 ... 1 V / 0 ... 5 V / 1 ... 5 V / 0 ... 10 V / 2 ... 10 V / 0 ... 20 mA / 4 ... 20 mA
- Free programmable software which can adjust dew point range and provide more physical quantities such as dew point, frost point, absolute humidity and so on

Application

Compressed air system / Freezer / Adsorption machine / Plastic dryer / Industrial drying process / Paper / Chemical process monitoring

Specification

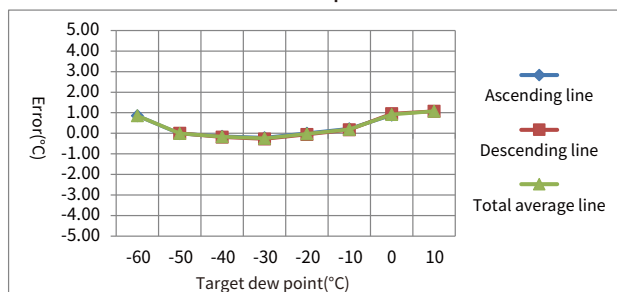
Input		Environment	
Input type	Capacitive humidity sensor & Pt 100	Medium	Air
Operating range of dew point	-60 ... +60 dp°C	Operating Temp. for housing	-40 ... +80°C
		Operating Humid. for housing	0 ... 95%RH (Non-condensing)
Output		Operating Temp. for probe	-70 ... +80°C
Max. scaling range	Dew point : -100 ... +60 dp°C	Storage temperature	-25 ... +60°C
Dew point switch to another physical quantity range	Frost point : -60 ... 0 fp°C ; Absolute humidity(Volume)0 ... 50000 ppm/v Absolute humidity(Weight)0 ... 50000 ppm/w	Bearable pressure	16 bar
Output signal	Standard RS-485 & 1 analog output 0 ... 20 mA / 4 ... 20 mA / 0 ... 1 V / 0 ... 5 V / 0 ... 10 V	Installation	
Signal connection	3-wire	Installation	Metal connector
Modbus	Standard RS-485 & 1 analog output	Protection	
Linear accuracy	±2 dp°C(at +25°C) ±(0.02%F.S. / °C) (Operating range of dew point : -60 ... +60 dp°C)	IP rating	IP65(Probe : IP20)
Load resistance	Current output : Max.500 Ω Voltage output : Min.10 KΩ	Electrical protection	■ Polarity protection ■ Over-voltage ■ Short-circuit
Output calibration(ZERO & SPAN) adjustment range	Software	Material	
Response time t90 (Temp. at+25°C)	<20 sec	Housing	S.S.(SUS304)
		Probe	S.S.(SUS304) ; SUS sintered filter(SUS316)
		Weight	233 g
Electrical		Factory setting	
Power supply	DC 8 ... 35 V&AC 10 ... 30 V	Measuring range of dew point	: -100 ... +20°C ;
Current consumption	DC 24 V, 50 mA	Output	: 4 ... 20 mA&standard RS-485
Electrical connection	M12 connector		

*Please make sure the product and the device which connect with RS-485 are on common ground, avoid damaged product.

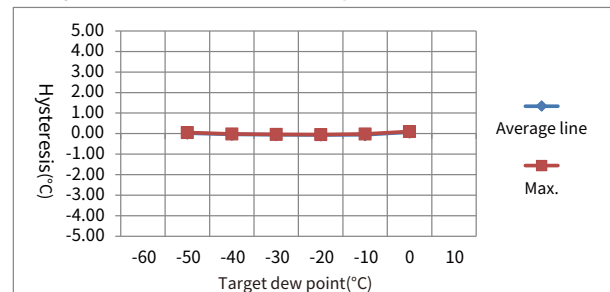
Accuracy Error Curve

※ According to IEC 61298 and ISO 17025 standard to measure

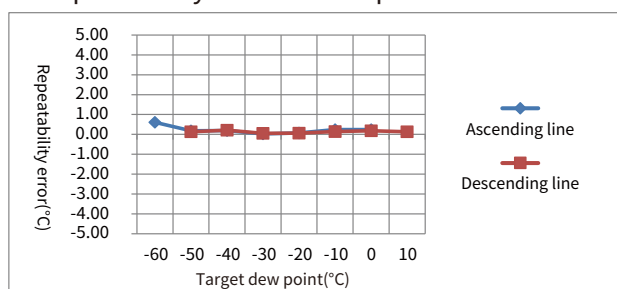
● Nonlinear error : 1.07 dp°C



● Hysteresis error : 0.10 dp°C

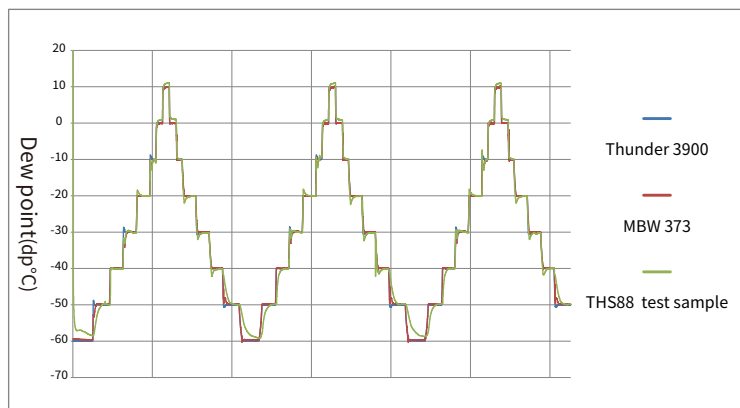
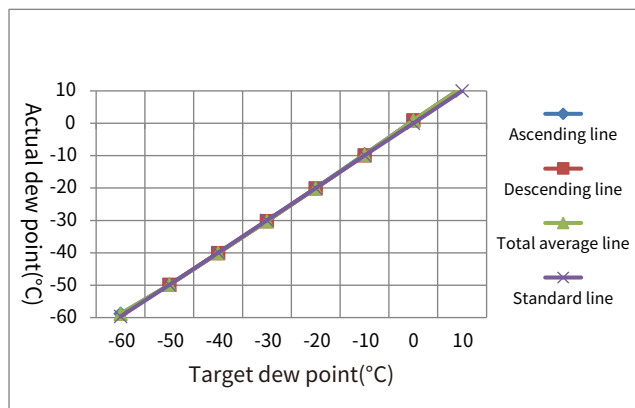


● Repeatability error : 0.61 dp°C

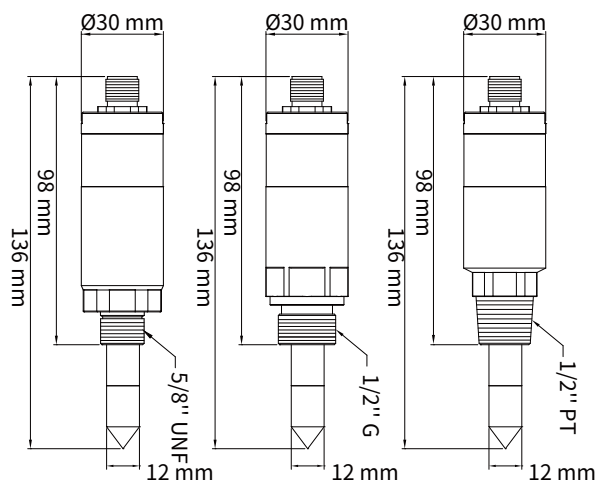


3-cycle Curve

※ 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

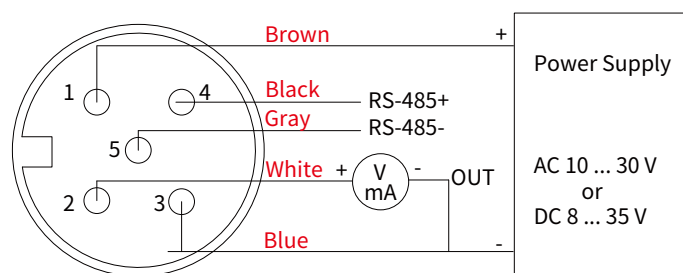


Dimension



※ Standard — PVC-5PIN 2M waterproof cable

Diagram



M12 connector

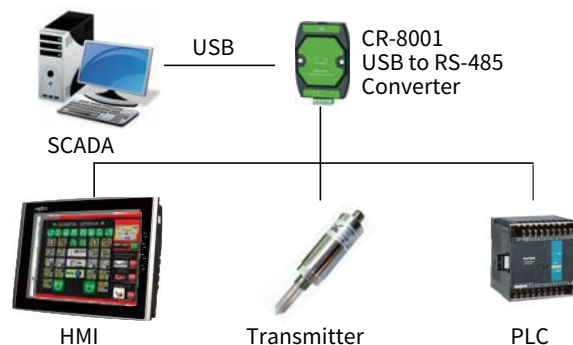
Dew Point Automatic Inspection System



■ 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

USB to Isolated RS-485 Application



■ Require Device

- PC / RS-485 to USB Converter / Power supply / UI software

Ordering Guide

Type	THS	88	—	C	1
Dew point measuring range	-20 ... +20°C -40 ... +20°C -100 ... +20°C		— — —	A B C	
Connector	1/2" PT (R1/2") 1/2" G 5/8" UNF				1 2 3

| Additional Option (ILAC / TAF) Test Report



Additional option: (ILAC / TAF) Test report - Standard calibration laboratory(TAF accreditation: 3032, complying with ISO / IEC 17025)
TAF has mutual recognition arrangement with ILAC MRA

Project	Measurand level or range
Dew point hygrometer	$\geq -80^{\circ}\text{C} \dots \leq 60^{\circ}\text{C}$