



THS30X Series(THS301 / 302 / 304 / 307)

www.eyc-tech.com

Multifunction Temp. & Humidity Transmitter Wall type/Duct/Remote/Outdoor

THS301-Wall type
0 ... 50°CTHS302-Duct
- 40 ... + 80°CTHS304-Remote
- 40 ... + 80°CTHS307-Outdoor
- 40 ... +80°C

| Features |

- Industrial sensor comes with high accuracy and long-term stability
- Capable of temperature compensation and linear calibration
- 2 analog output or Modbus RS-485
- Optional analog output + RS-485
- Probe : PC
- Power supply : DC 8 ... 35 V and AC 12 ... 30 V
- RS-485 and Modbus RTU
- Free programmable software - Physical quantities / Output / Data logger / Charts / Calibration

| Applications |

Monitoring for HVAC process / Air conditioning / Environmental ventilation control / Building / Factory / Hospital / Clean room / Lab / Storeroom / Cooling tank / Environmental chambers / Weather station / Indoor pool / Greenhouse / Livestock nursery / Pharmaceutical / Textile / Agriculture / Food / Manufacturing industry / Drying facility

Specification

Input

Input type Capacitive humidity sensor & Pt 100 class A

Operating Range Suggestion

Temperature 0 ... 50°C(THS301)
- 40 ... + 80°C(THS302 / 304 / 307)
Humidity 0 ... 100%RH

Output

Output 4 ... 20 mA / 0 ... 10 V / RS-485
Signal connection 3-wire
Display type LCD Module with back light, double line character
Display range Upon request, one decimal place
Height of character 5.56 mm

Linear Accuracy(at 25°C)

Temperature* $\pm 0.1^{\circ}\text{C} \pm 0.005^{\circ}\text{C} \times \text{tactual}$
Humidity Nonlinear error : $\pm 1.8\% \text{RH}$
Repeatability error : $\pm 0.7\% \text{RH}$
Temp. influence 0.05%RH/°C
Load resistance Current output : Max.500 Ω
Voltage output : Min.10 K Ω
Output calibration Software
(ZERO & SPAN)
Response time t90 < 20 sec(Membrane filter)
< 30 sec(Sintered filter)

*This accuracy specification is measured under on-site test conditions in a flow environment above 1 m/s, and verified in accordance with the factory's ISO 9001 production and testing standards.

Electrical

Power supply DC 8 ... 35 V / AC 12 ... 30 V
Current consumption DC 24V : 60 mA / DC 12 V : 120 mA
AC 24V : 140 mA / AC 12 V : 230 mA
Electrical connection M12 connector with 2 m cable
or terminal(Cable gland)

Environment

Medium Air
Operating Temp. Housing : - 20 ... +60°C
Housing with display : 0 ... +60°C
Operating humidity Housing : 0 ... 95%RH(Non-condensing)
Proof Temp. PC probe : Max.80°C
Cable PVC cable : Max.80°C(Remote type)
Storage Temp. - 25 ... +60°C
Filter Plastic membrane filter(Standard) ; Option

Certification

Certification CE

Protection

IP rating Housing : IP65 ; Probe : IP20
Electrical protection ■ Reverse polarity ■ Over-voltage
■ Short-circuit

Installation

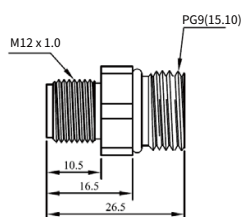
Installation Wall type
Outdoor : Supporting plate (Standard)
Duct / Remote : Plastic flange (Standard)

Material

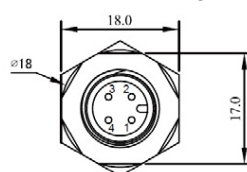
Housing PC fire-proof class(PC-110)(UL94V-2)
Probe PC fire-proof class(PC-110)
Remote probe cable PVC (Remote THS304)

Electric Connector

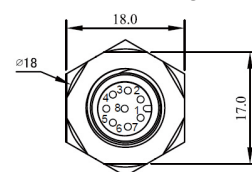
Unit : mm



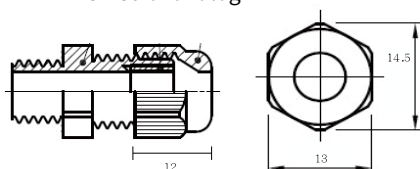
M type (M12-4PIN connector)
RS-485 or analog



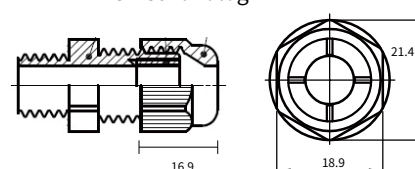
M type (M12-8PIN connector)
RS-485+analog



N type (M12 cable gland)
RS-485 or analog



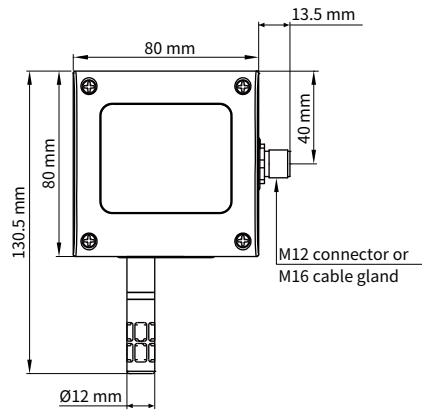
N type (M16 cable gland)
RS-485+analog



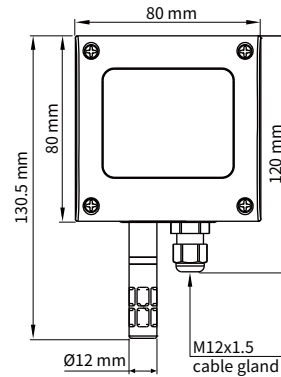
Dimension

Unit : mm

THS301 Wall type

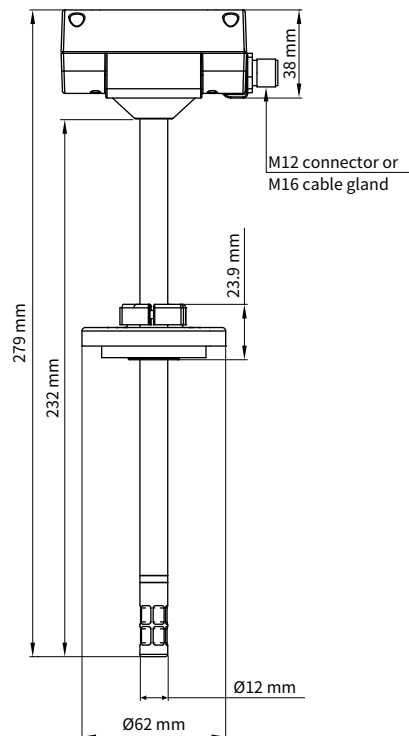


M type (4PIN) : RS-485 or analog
M type (8PIN) or N type : RS-485+analog

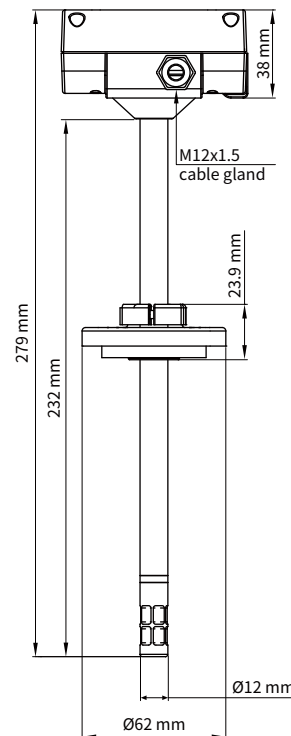


N type : RS-485 or analog

THS302 Duct type (Standard : Plastic flange)



M type (4PIN) : RS-485 or analog
M type (8PIN) or N type : RS-485+analog

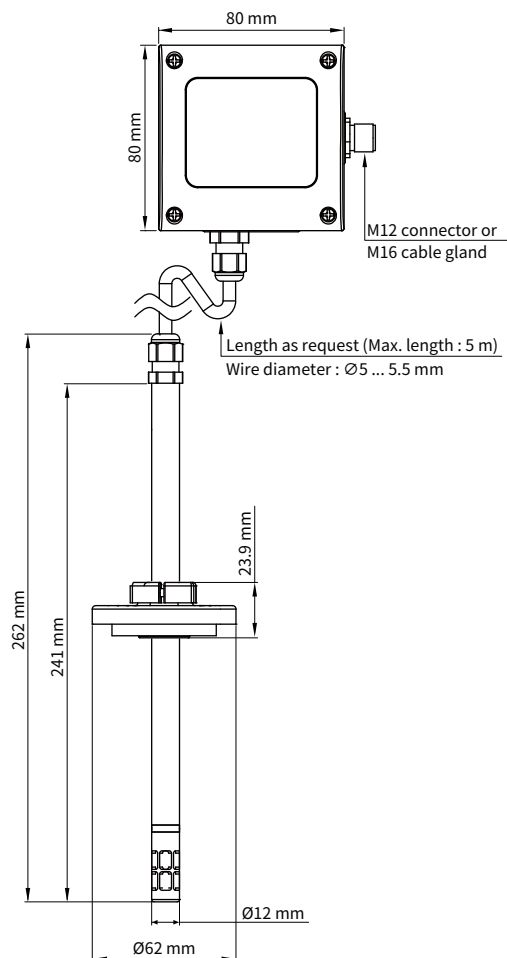


N type : RS-485 or analog

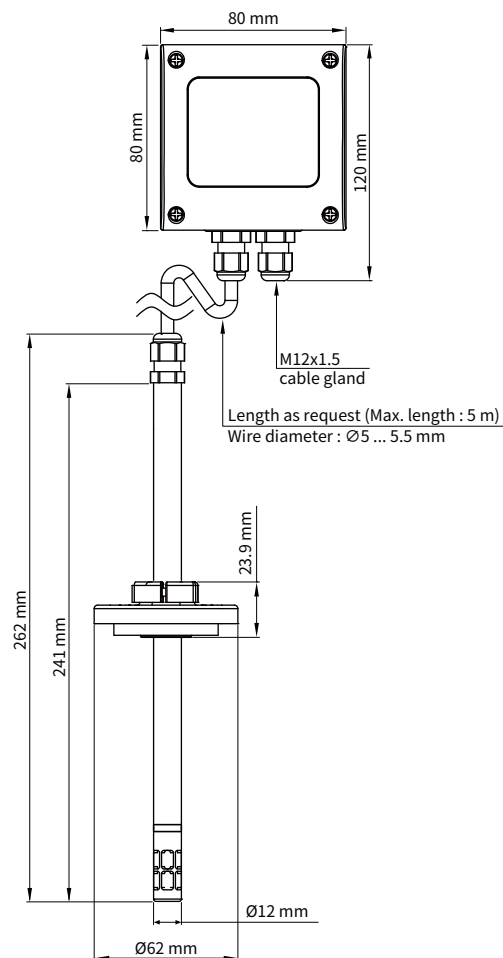
Dimension

Unit : mm

THS304 Remote type (Standard : Plastic flange + PVC 2 m cable)

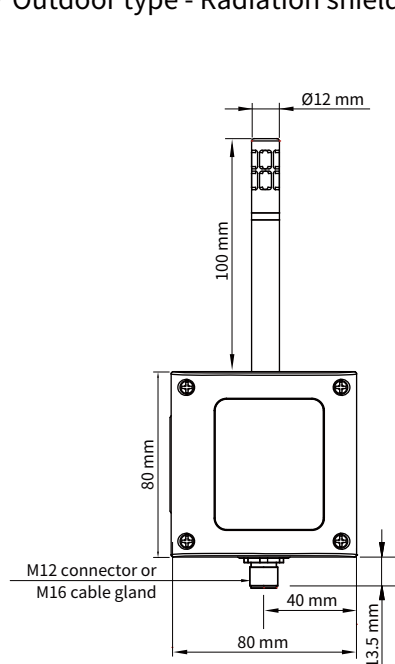


M type (4PIN) : RS-485 or analog
M type (8PIN) or N type : RS-485+analog

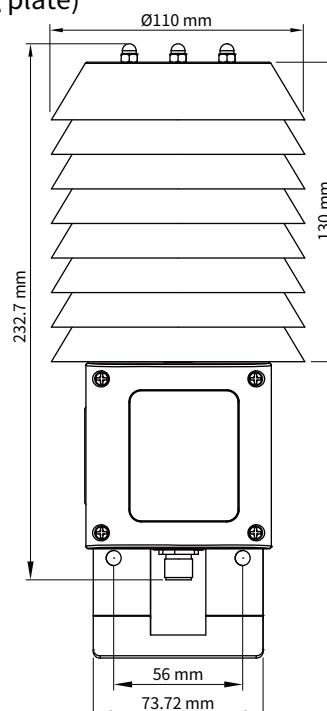


N type : RS-485 or analog

THS307 Outdoor type - Radiation shield (Standard : Supporting plate)

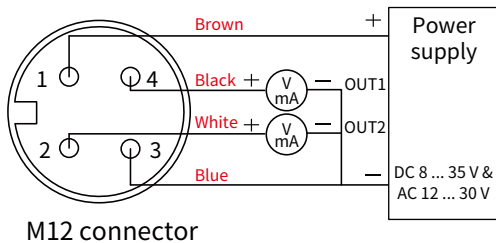


M type or N type : RS-485+analog



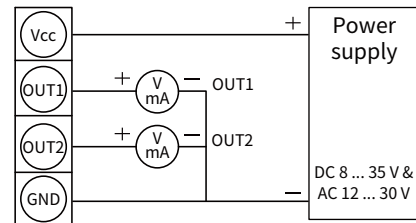
N type : RS-485 or analog

| Analog Diagram |



M12 connector

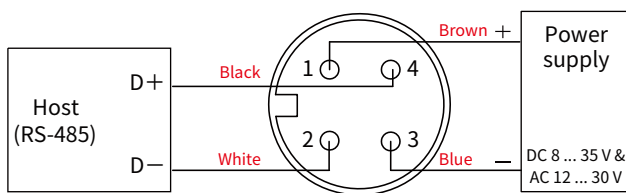
M type (4P)



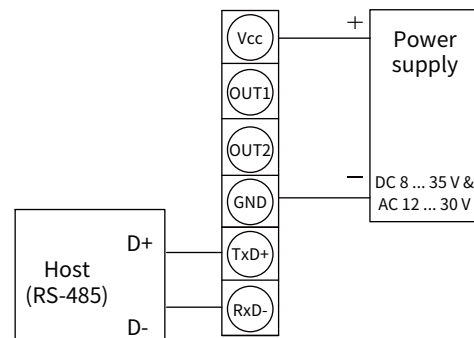
4P terminal

N type

| RS-485 Diagram |

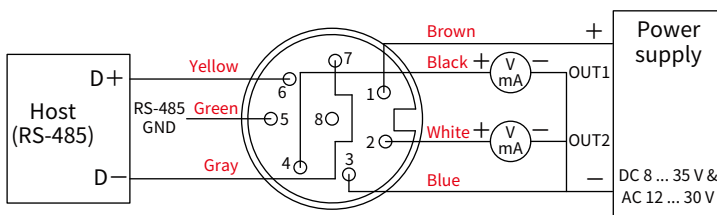


M type (4P)

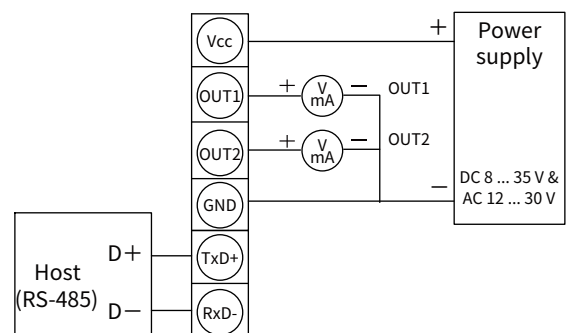


N type

| Analog + RS-485 Diagram |



M type (8P)



N type

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

Ordering Guide

THS30	Installation	Physical quantity output 1	Physical quantity scale 1	Signal output 1	Physical quantity output 2	Physical quantity output 2	Signal output 2	Display	Electrical connector	Filter	Remote probe cable	Other request
	4	T	30	1	H	00	1	D	M	P	2	U
								D : Yes X : No				W : Other request (Quote as demand) U : RS-485 + analog
								1 : 4 ... 20 mA 6 : 0 ... 10 V 9 : RS-485				2 : 2 m (Standard) 5 : 5 m
								00 : 0 ... 100%RH				P : PC membrane filter(Standard : PC probe) S : Sintered filter(Standard : S.S. probe)
								H : Humidity N : RS-485(Default humidity)				N : Plastic cable gland M : M12 connector(with 2 m cable)
								1 : 4 ... 20 mA 6 : 0 ... 10 V 9 : RS-485				
								30 : 0 ... 50°C 38 : 0 ... 80°C 14 : -40 ... +60°C 00 : RS-485 setting YY : Customized Temp. range				
								T : Temperature N : RS-485(Default temperature)				
								1 : Wall type 2 : Duct(PC probe) 4 : Remote(PC probe, PVC cable) 7 : Outdoor(PC probe, shield)				

*Recommended best-selling

Product ordering number	Product Specifications
THS301-T301H001-DMPU	Wall type + display, CH1 : T, 0 ... 50°C/CH2 : H, 0 ... 100%, O/P : 4 ... 20 mA + RS-485, M12, PC membrane filter
THS301-T301H001-XMPU	Wall type, CH1 : T, 0 ... 50°C/CH2 : H, 0 ... 100%, O/P : 4 ... 20 mA + RS-485, M12, PC membrane filter
THS302-T301H001-XMPU	Duct type, CH1 : T, 0 ... 50°C/CH2 : H, 0 ... 100%, O/P : 4 ... 20 mA + RS-485, M12, PC membrane filter
THS304-T301H001-DMP5U	Remote type + display, CH1 : T, 0 ... 50°C/CH2 : H, 0 ... 100%, O/P : 4 ... 20 mA + RS-485, M12, 5 m PVC cable, PC membrane filter
THS304-T301H001-XMP5U	Remote type, CH1 : T, 0 ... 50°C/CH2 : H, 0 ... 100%, O/P : 4 ... 20 mA + RS-485, M12, 5 m PVC cable, PC membrane filter
THS307-T301H001-XMSU	Outdoor type, CH1 : T, 0 ... 50°C/CH2 : H, 0 ... 100%, O/P : 4 ... 20 mA + RS-485, M12, Sintered filter

| Additional Option Test Report |

For more detailed information please contact us.

■ ILAC / TAF

YUDEN-TECH CO.,LTD. Calibration Laboratory - (ILAC / TAF) Test report.

(TAF accreditation : 3032, complying with ISO / IEC 17025) TAF has mutual recognition arrangement with ILAC MRA

Project	Measurand level or range
Hygrometer	Temperature : 0°C ... 69.5°C
	Humidity : 10% ... 95%

■ ISO 9001

Project	Measurand level or range
Temperature and Humidity	Temperature : 0°C ... 200°C
	Humidity : 0.1% ... 99.8%