



THS30X Series(THS301 / 302 / 304 / 307)

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



THS301-Wall type
0 ... 50°C



THS302-Duct
- 40 ... + 80°C



THS304-Remote
- 40 ... + 80°C



THS307-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 $\pm 0.2^{\circ}\text{C} \pm 0.005^{\circ}\text{C} \times \text{tactual}$
 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 KΩ
 Output calibration Software
 (ZERO & SPAN)
 Response time t90 <20 sec(Membrane filter)
 <30 sec(Sintered filter)

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

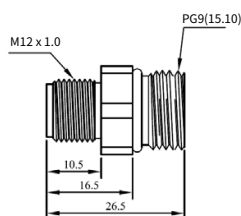
Installation

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

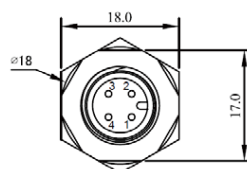
Material

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

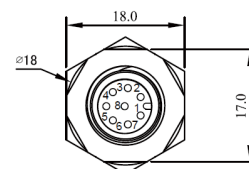
| Electric Connector | Unit : mm



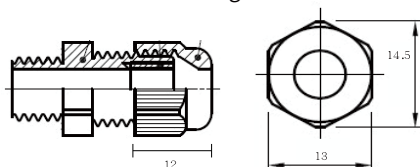
M type (M12-4PIN connector)
RS-485 or analog



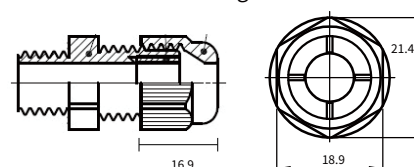
M type (M12-8PIN connector)
RS-485+analog



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



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

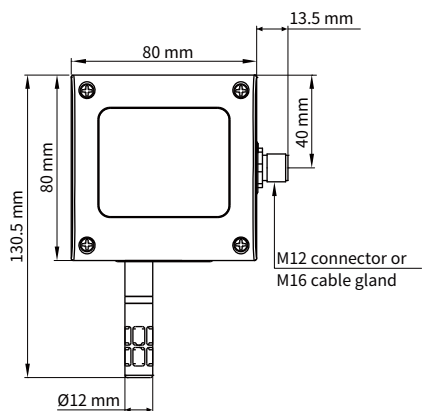




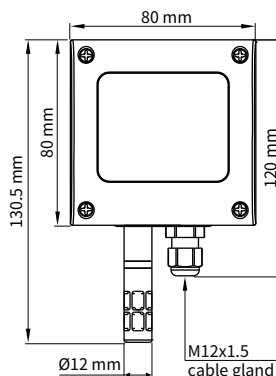
Dimension

Unit : mm

THS301 Wall type

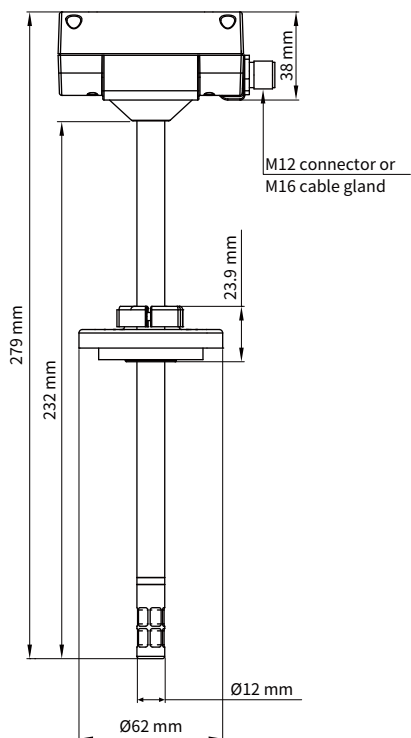


M type (4PIN) : RS-485 or analog
M type (8PIN) or N type : RS-485+analog

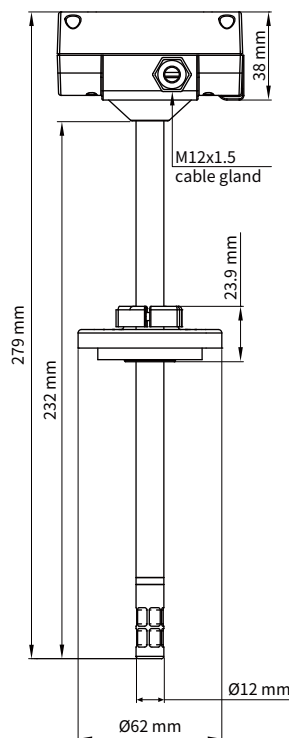


N type : RS-485 or analog

THS302 Duct type (Standard : Plastic flange)



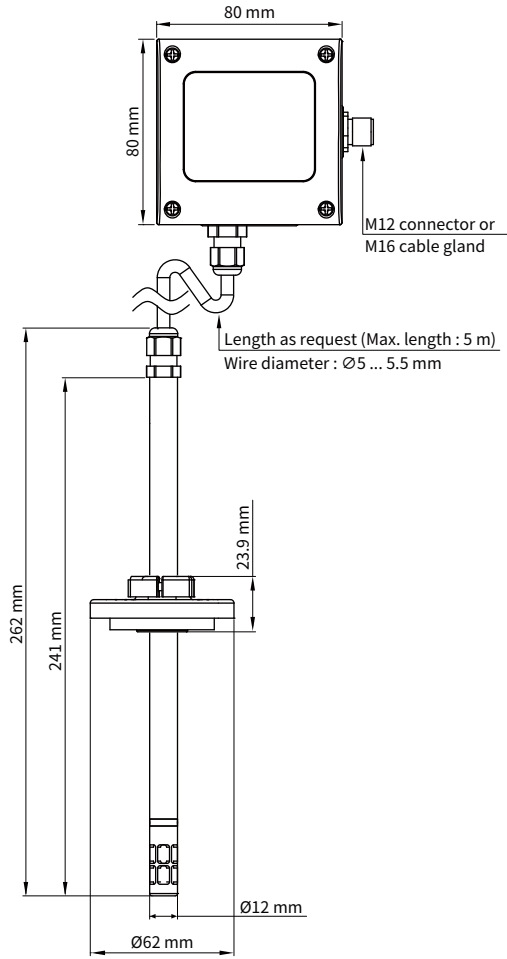
M type (4PIN) : RS-485 or analog
M type (8PIN) or N type : RS-485+analog



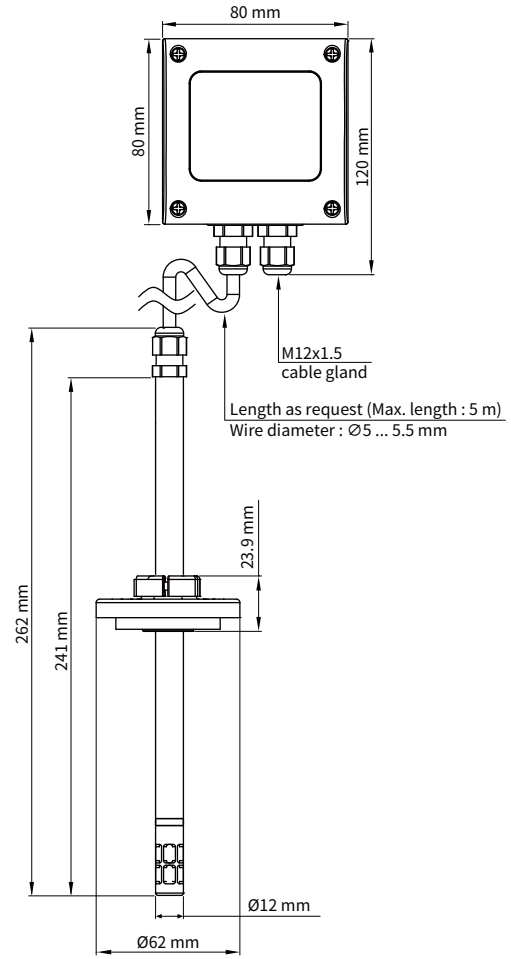
N type : RS-485 or analog

Dimension | Unit : mm

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

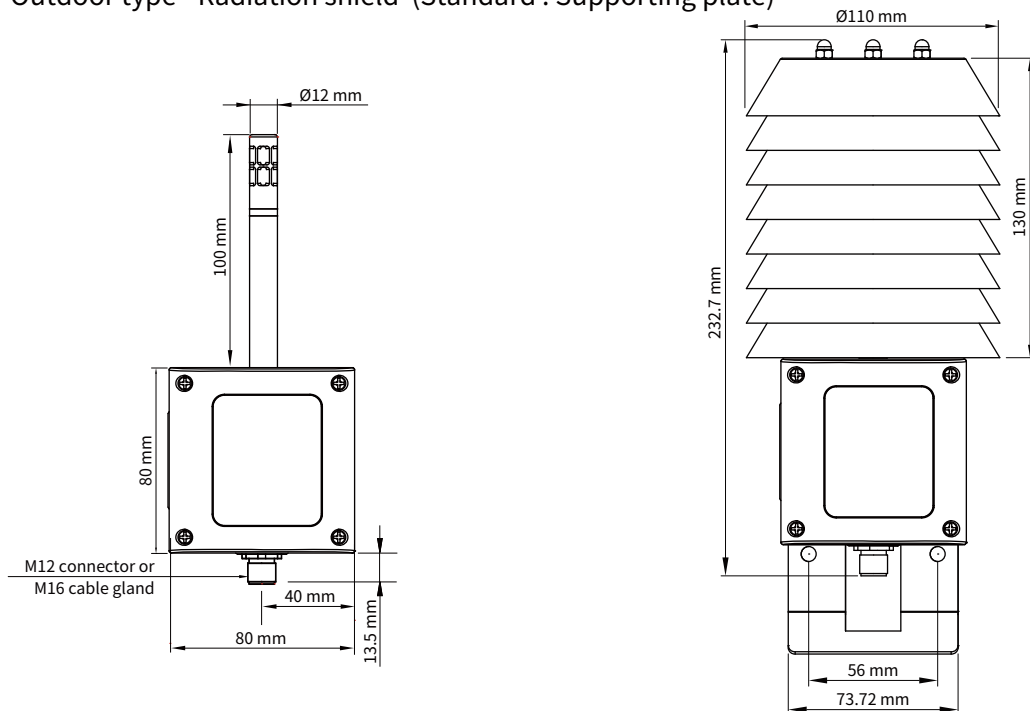


M type (4PIN) : RS-485 or analog
M type (8PIN) or N type : RS-485+analog



N type : RS-485 or analog

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

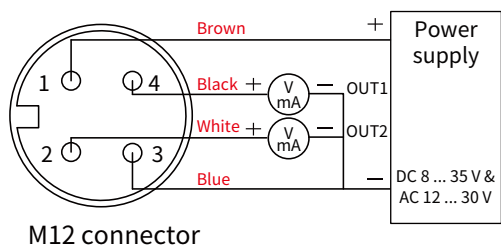


M type or N type : RS-485+analog

N type : RS-485 or analog

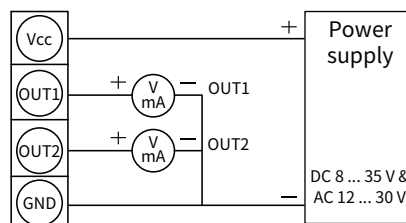


| Analog Diagram |



M12 connector

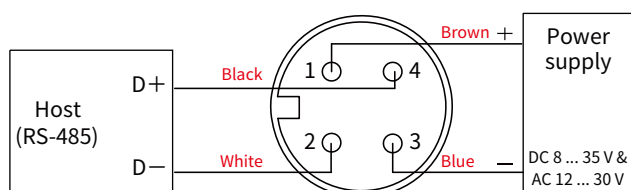
M type (4P)



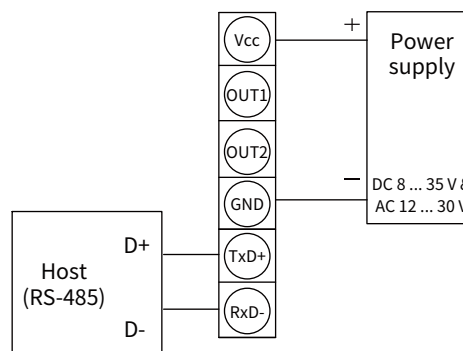
4P terminal

N type

| RS-485 Diagram |

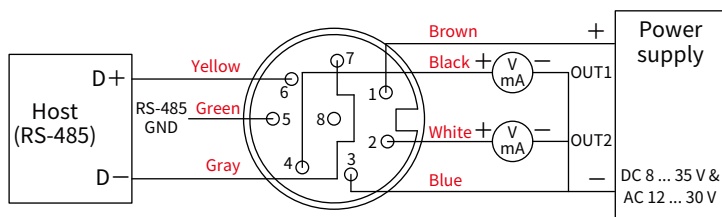


M type (4P)

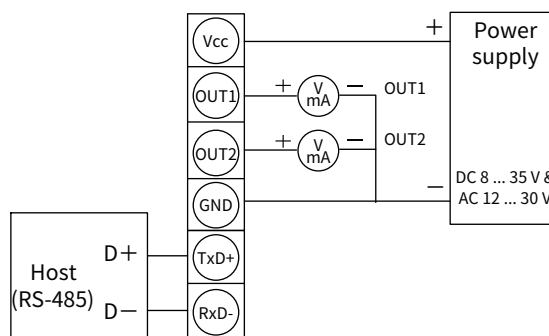


N type

| 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 4 - T 30 1 H 00 1 - D M P 2 U

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