Temperature & Humidity-THS30X

eyc

THS30X Series (THS301 / 302 / 304 / 307)
Multifunction Temp. & Humidity Transmitter Wall type/Duct/Remote/Outdoor

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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

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| 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	$\pm0.2°C\pm0.005°Cxtactual$
Humidity	Nonlinear error : ±1.8%RH
	Repeatability error : ±0.7%RH
Temp. influence	0.05%RH/°C
Load resistance	Current output : Max.500 Ω
	Voltage output : Min.10 KΩ
Output calibration (ZERO & SPAN)	Software
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)

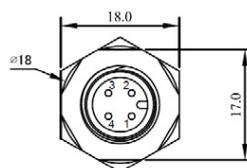### Material

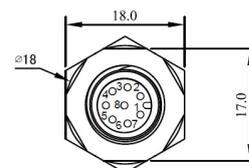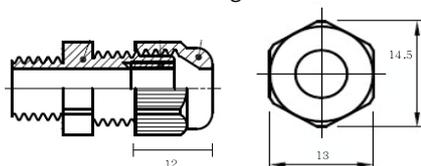|	
Housing	PC fire-proof class(PC-110)(UL94V-2)
Probe	PC fire-proof class(PC-110)
Remote probe cable	PVC (Remote THS304)

| Electric Connector | Unit : mm
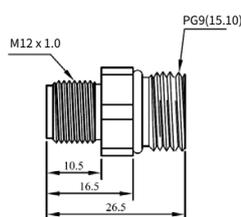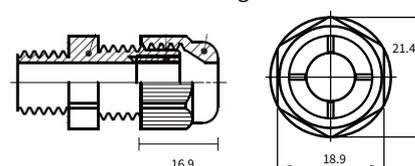

M type (M12-4PIN connector)
RS-485 or analog

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

N type (M12 cable gland)
RS-485 or analog
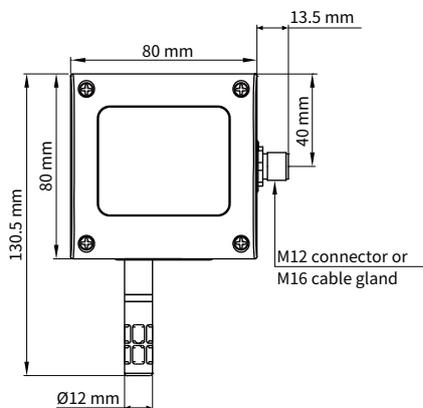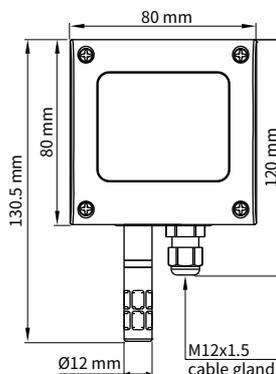
N type (M16 cable gland)
RS-485+analog

Temperature & Humidity-THS30X

| Dimension | Unit : mm

■ THS301 Wall type

40 mm

13.5 mm

80 mm

80 mm

130.5 mm

Ø12 mm

M12 connector or
M16 cable gland

80 mm

80 mm

120 mm

130.5 mm
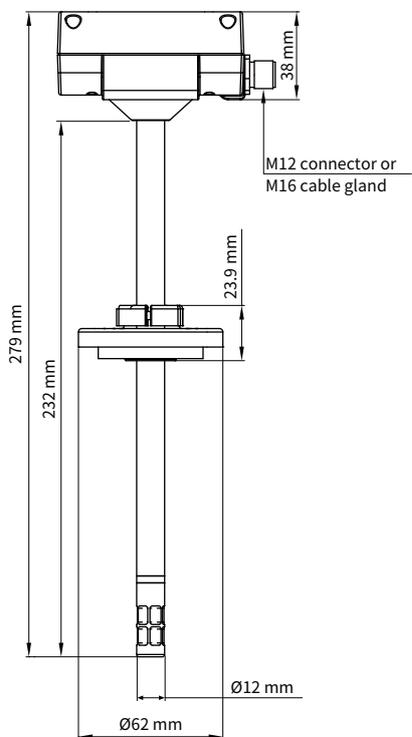
Ø12 mm

M12x1.5
cable gland

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

N type : RS-485 or analog

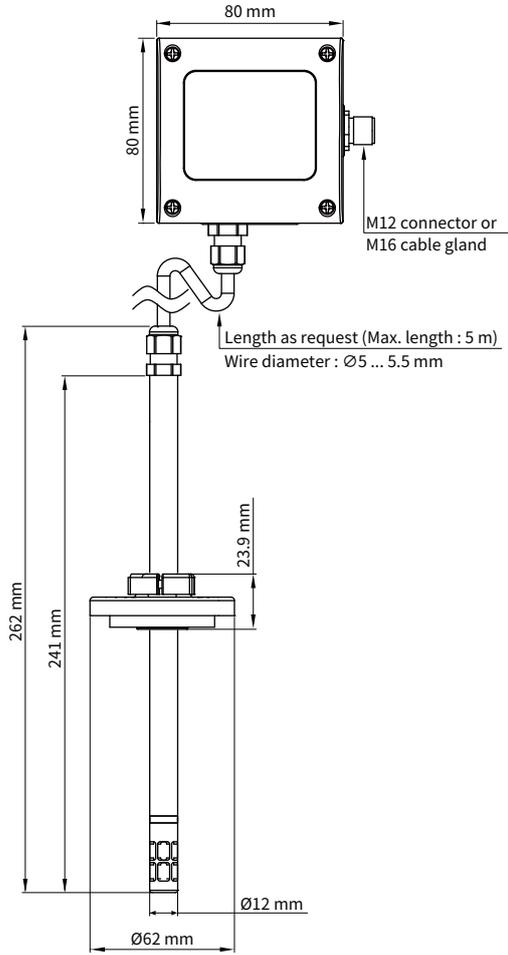### ■ THS302 Duct type (Standard : Plastic flange)

38 mm

279 mm

232 mm

23.9 mm

M12 connector or
M16 cable gland

Ø12 mm

Ø62 mm

38 mm

279 mm

232 mm

23.9 mm

M12x1.5
cable gland

Ø12 mm

Ø62 mm

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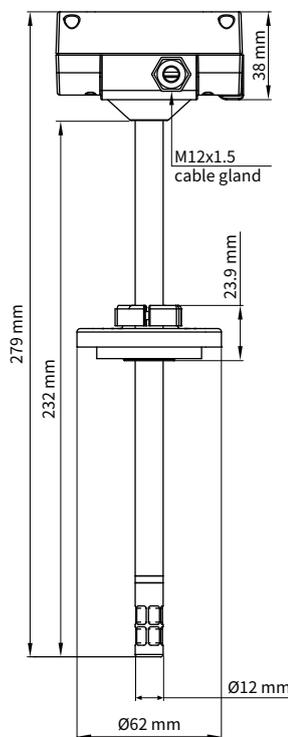
N type : RS-485 or analog

| Dimension | Unit : mm

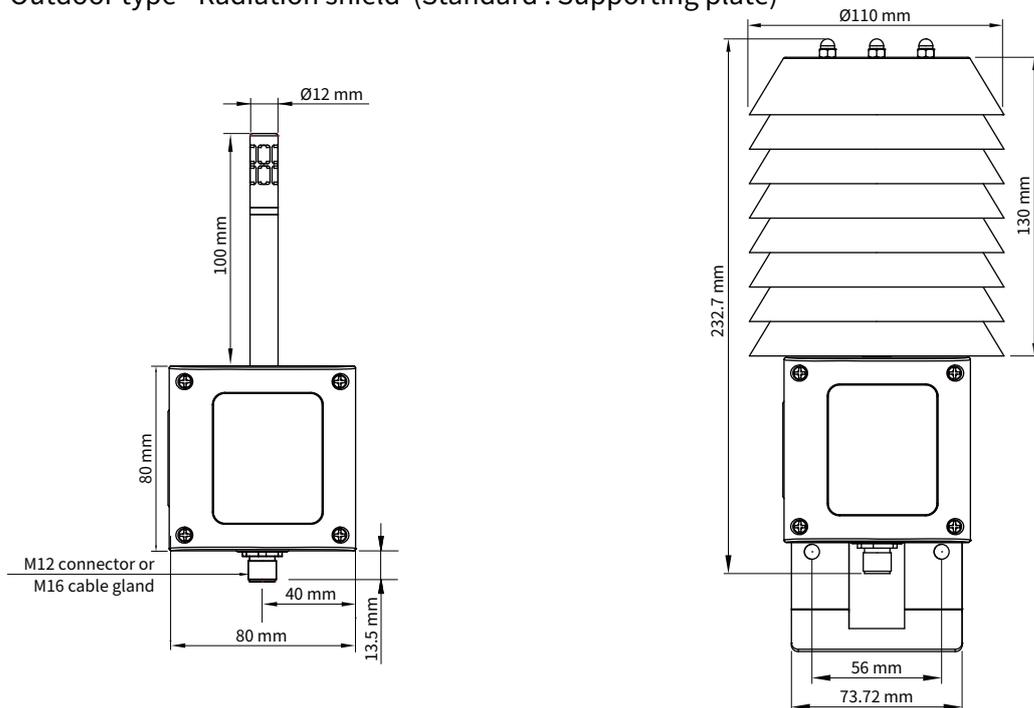■ THS304 Remote type (Standard : Plastic flange + PVC 2 m cable)

80 mm
80 mm
M12 connector or
M16 cable gland
Length as request (Max. length : 5 m)
Wire diameter : Ø5 ... 5.5 mm
262 mm
241 mm
23.9 mm
Ø12 mm
Ø62 mm

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

80 mm
80 mm
120 mm
M12x1.5
cable gland
Length as request (Max. length : 5 m)
Wire diameter : Ø5 ... 5.5 mm
262 mm
241 mm
23.9 mm
Ø12 mm
Ø62 mm
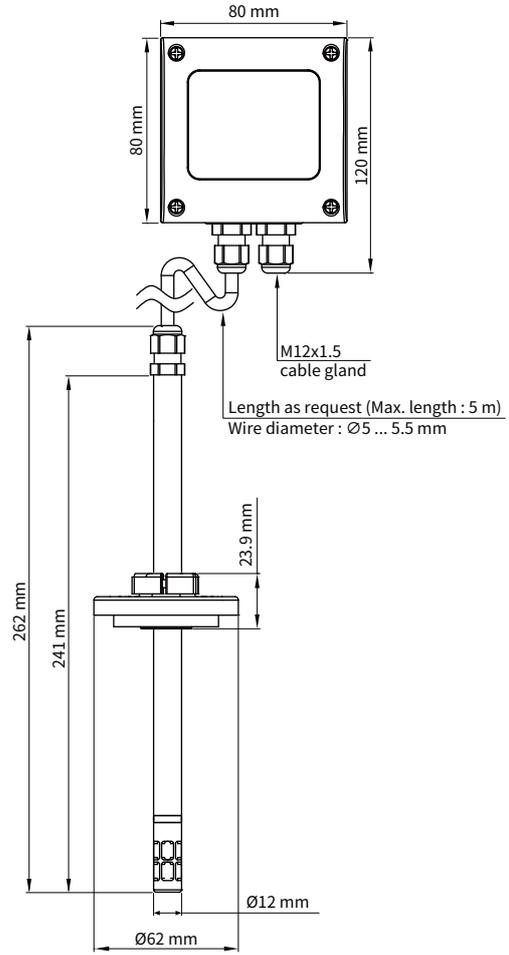
N type : RS-485 or analog

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

Ø12 mm
100 mm
80 mm
M12 connector or
M16 cable gland
40 mm
80 mm
13.5 mm

M type or N type : RS-485+analog

Ø110 mm
130 mm
232.7 mm
56 mm
73.72 mm

N type : RS-485 or analog

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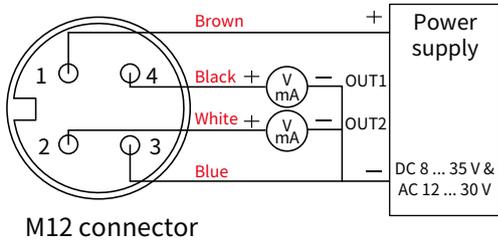
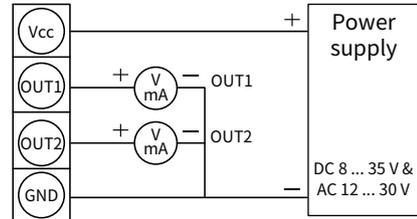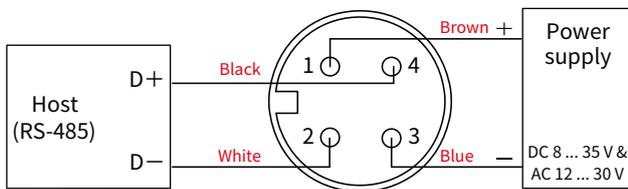## | Analog Diagram |

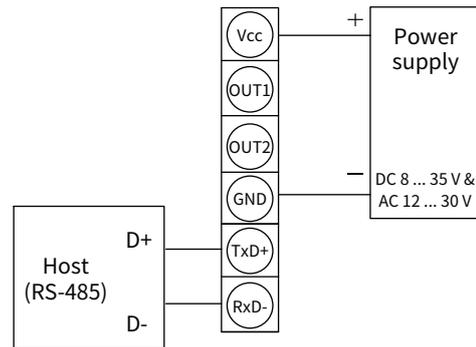M12 connector

M type (4P)
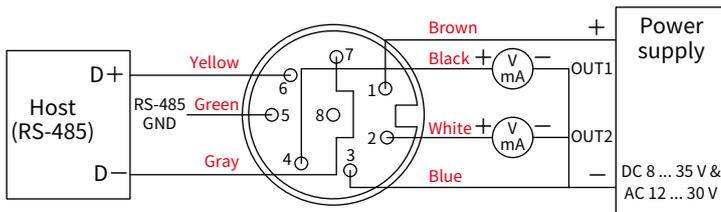
4P terminal

N type

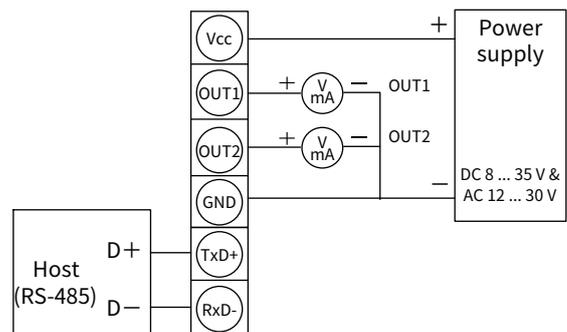## | RS-485 Diagram |

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 |

	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
THS30	4	- T	30	1	H	00	1	- D	M	P	2	U

Display
D : Yes
X : No

Signal output 2
1 : 4 ... 20 mA
6 : 0 ... 10 V
9 : RS-485

Physical quantity output 2
00 : 0 ... 100%RH

H : Humidity
N : RS-485(Default humidity)

Signal output 1
1 : 4 ... 20 mA
6 : 0 ... 10 V
9 : RS-485

Physical quantity scale 1
30 : 0 ... 50°C
38 : 0 ... 80°C
14 : -40 ... +60°C
00 : RS-485 setting
YY : Customized Temp. range

Physical quantity output 1
T : Temperature
N : RS-485(Default temperature)

Installation
1 : Wall type
2 : Duct(PC probe)
4 : Remote(PC probe, PVC cable)
7 : Outdoor(PC probe, shield)

Other request
W : Other request (Quote as demand)
U : RS-485 + analog

Remote probe cable
2 : 2 m (Standard)
5 : 5 m

Filter
P : PC membrane filter(Standard : PC probe)
S : Sintered filter(Standard : S.S. probe)

Electrical connector
N : Plastic cable gland
M : M12 connector(with 2 m cable)

*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

Temperature & Humidity-THS30X

| 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%