

## HLX30X Series Multifunction Temp. & Humidity Transmitter

Wall type/Duct/Remote/Outdoor



301-Wall type 0 ...  
50°C



302-Duct  
- 40 ... +80°C



304-Remote -  
40 ... +80°C



307-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  $\Omega$   
                                       Voltage output : Min.10 K $\Omega$   
 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

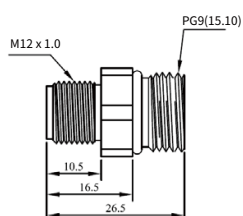
### Installation

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

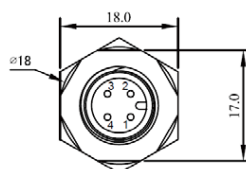
### Material

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

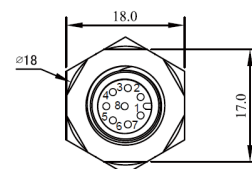
## | Electric Connector | Unit : mm



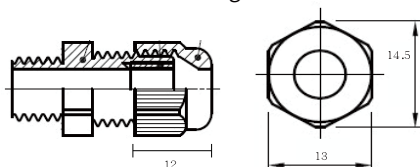
M type (M12-4PIN connector)  
RS-485 or analog



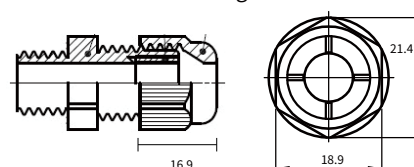
M type (M12-8PIN connector)  
RS-485+analog



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



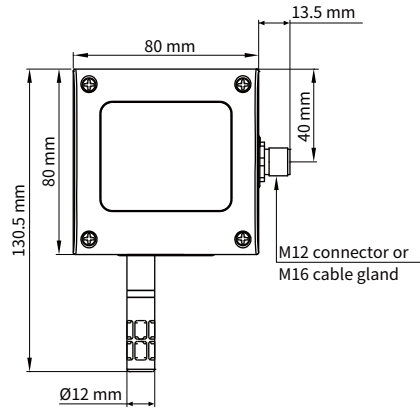
N type (M16 cable gland)  
RS-485+analog



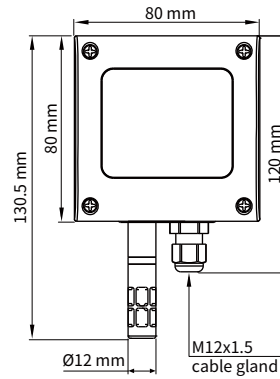
### Dimension

Unit : mm

#### THS301 Wall type

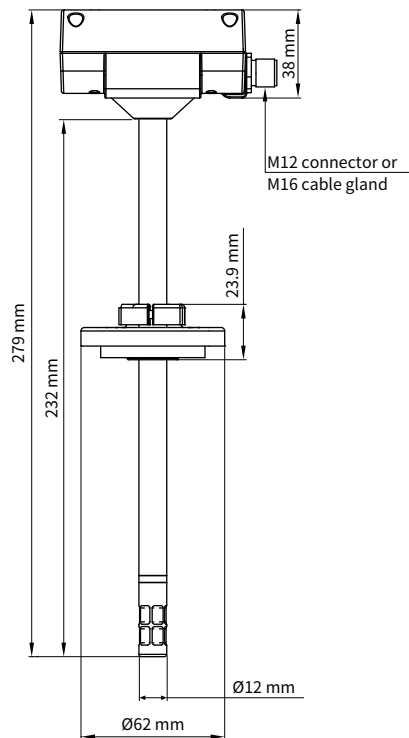


M type (4PIN) : RS-485 or analog  
M type (8PIN) or N type : RS-485+analog

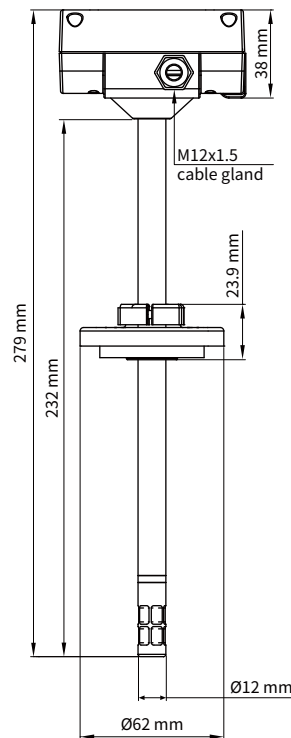


N type : RS-485 or analog

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



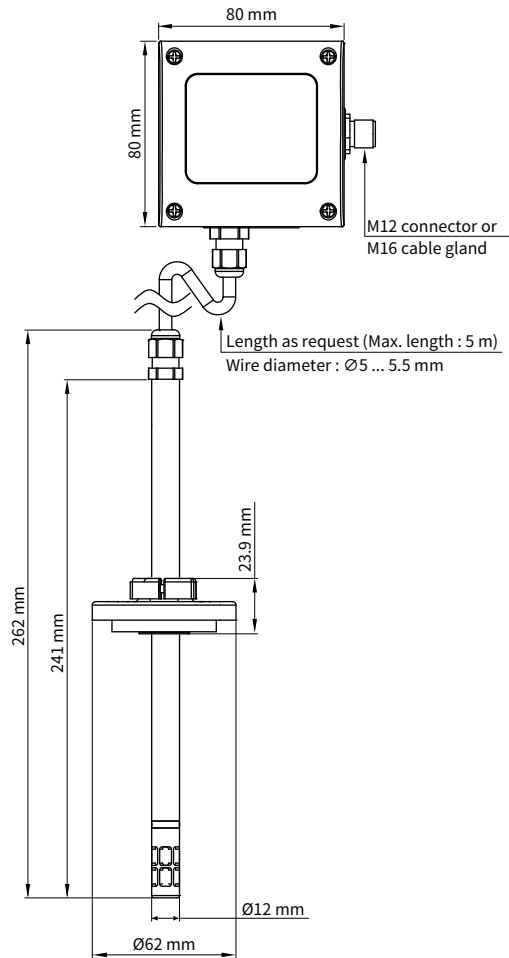
M type (4PIN) : RS-485 or analog  
M type (8PIN) or N type : RS-485+analog



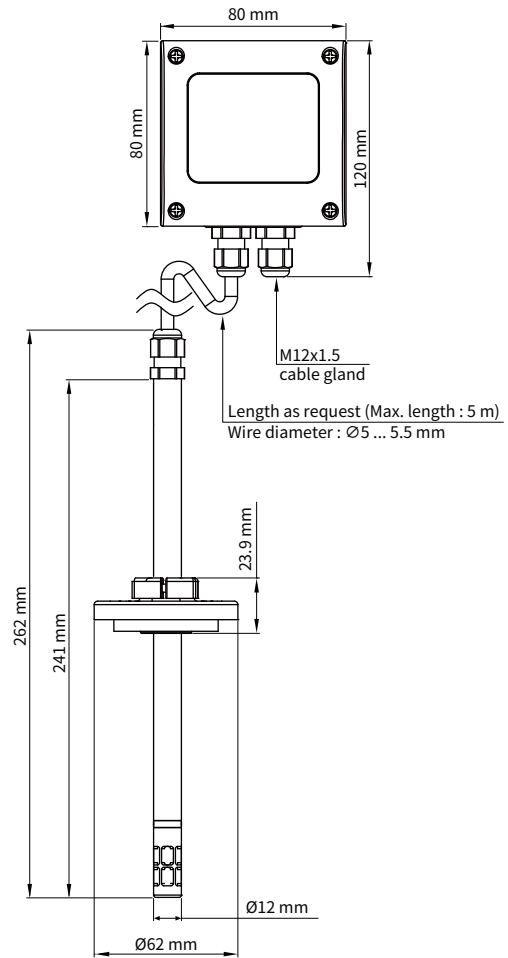
N type : RS-485 or analog

### Dimension | Unit : mm

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

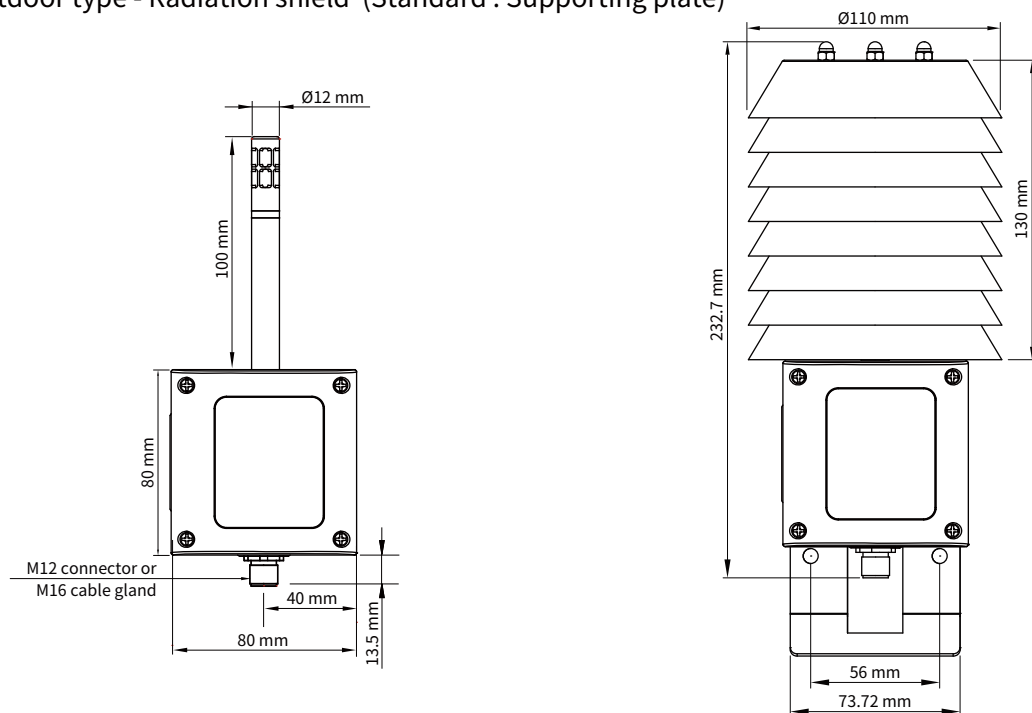


M type (4PIN) : RS-485 or analog  
M type (8PIN) or N type : RS-485+analog



N type : RS-485 or analog

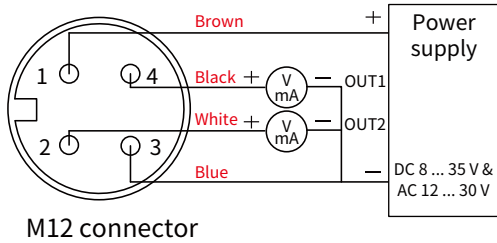
#### 307 Outdoor type - Radiation shield (Standard : Supporting plate)



M type or N type : RS-485+analog

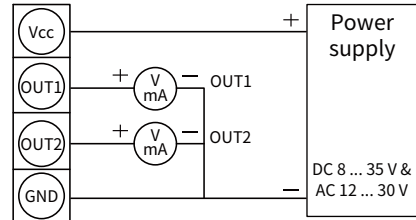
N type : RS-485 or analog

### | Analog Diagram |



M12 connector

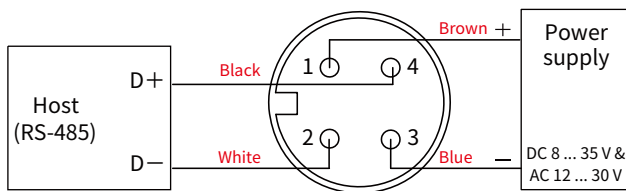
M type (4P)



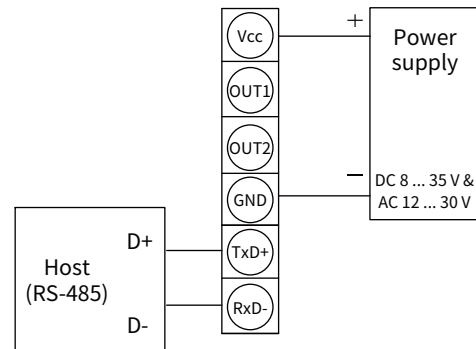
4P terminal

N type

### | RS-485 Diagram |

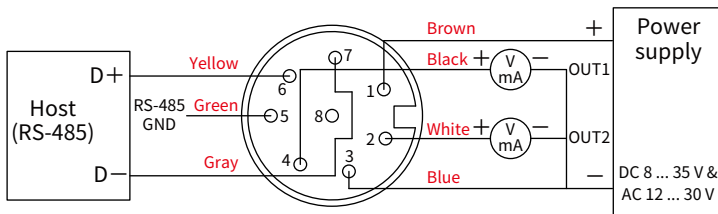


M type (4P)

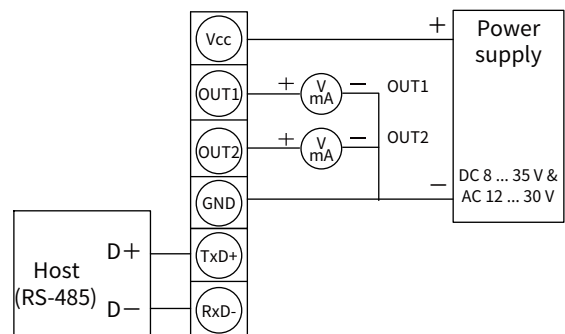


N type

### | 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 |

HLX30

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

## | Additional Option Test Report |

For more detailed information please contact us.

### ■ ILAC / TAF

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%