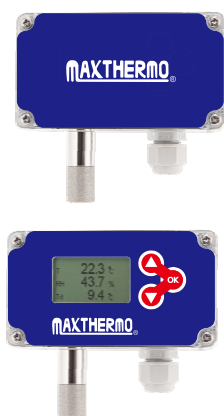


MULTI-FUNCTIONAL TEMPERATURE & HUMIDITY TRANSMITTER



Wall mount type



Duct type



Remote probe type

■ Features

- Metal probe to withstand harsh environments and avoid electromagnetic interference.
- Configure adaptor available for setting.
- Energy saving with 4mA single channel available for micro processor + display + push button + sensor element.
- 128X64 LCD monitor for maximum up to 3 measurement display.
- One channel 4...20mA two wire with selectable physical quantity.
- Dew point, wet-bulb temperature and enthalpy output available.
- With sensing element module for easy replacement and repair.
- RS485 Modbus data with integer and floating type. Support metric and imperial unit.
- Alarm output with more flexibility.

■ Order Information

MHT	—	120	—	3	A	M	D	R
A		B		C	D	E	F	G

A. Model 型號:

MHTA
MHT
MHTB

B. Installation 安裝型態:

110 - Wall mount 室內型
120 - Duct 風管型
130 - Remote probe 分離型
131 - Remote probe 分離型
135 - Remote probe 分離型
136 - Remote probe 分離型

C. Output 輸出信號:

2 - 2-wire 4 ~ 20mA
(without Alarm option)
7 - 3-wire 4 ~ 20mA
3 - 0 ~ 10V
5 - 0 ~ 5V
6 - 0 ~ 1V
4 - RS485

D. Connection 電氣連接:

A - Cable gland
B - M12-4 pin(with 2m cable)

E. Psychrometric calculations

(Option)多物理量選擇(選配):

M - Yes
X - No

F. Display with touch button(Option)

顯示器+觸控按鍵(選配):

D - Yes
X - No

G. Alarm(Option)

警報(選配):

R - Yes
X - No

H. Model 型號:

MDPA
MDP

I. Dew point Scale:

露點量程範圍:

1 - -20 ~ 60°C
2 - -40 ~ 60°C
3 - -40 ~ 20°C
4 - -60 ~ 20°C
S - By order
X - No

■ Applications

- Semiconductor and microelectronics industry
- Pharmaceutical industry, paper industry
- Environmental chambers, drying equipment, spraying equipment
- Agriculture, farms
- Greenhouse, storage room, cooling chamber
- Building Automation
- Environment and ventilation control

ECONOMIC MODEL TEMPERATURE & HUMIDITY TRANSMITTER

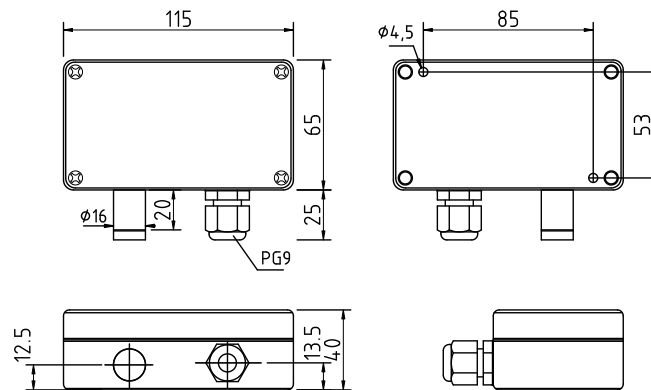
■ Specifications 規格

Model Name		MHTA	MHT	MHTB
Humidity 濕度	Measurement range 量測範圍	0 ~ 100 %RH	0 ~ 100 %RH	0 ~ 100 %RH
	Accuracy(including non-linearity, hysteresis, and repeatability) 精度 (包含非線性誤差, 遲滯誤差, 和非重複性誤差)	±1.5%RH@25°C (20~80%RH) ±2%RH@25°C (0~20%RH)/ (80~100%RH)	±3%RH@25°C (20~80%RH) ±3%RH@25°C (0~20%RH)/ (80~100%RH)	±3%RH@25°C (20~80%RH)
	Temperature coefficient 溫度係數	typ. ±0.02%RH/°C (from 0°C to 80°C)		
	Humidity Hysteresis 遲滯誤差	±1%RH		
	Recovery time after 150 hours of condensation 回復時間,在150小時結露之後	10 second		
	Long term drift 長時間飄移	0.25%RH/year		
	Response Time from 33 to 75%RH 反應時間從33 到 75%RH	10 second (at 1m/s air flow)		
Temperature 溫度	Measurement range 量測範圍	-40 ~ 120 °C		
	Accuracy (including non-linearity, hysteresis, and repeatability) 精度	±0.2°C±0.003*T@25°C/ ±0.7°C (-40 ~ 5°C) / ±0.3°C (5 ~ 60°C) / ±0.9°C (60 ~ 120°C)		
	Long term drift 長時間飄移	0.02°C/year		
Psychrometric calculations(Optional) 濕度單位選擇(選配)		(Td) dew point temperature, (Tf) frost point temperature, (Tw) wet bulb temperature, (A) absolute humidity, (E) water vapor pressure, (S) enthalpy, (R) mixing ratio		
Analog output 類比輸出	Current output 電流輸出	2-wire or 3-Wire, 4 ~ 20mA		
	Voltage output 電壓輸出	0 ~ 1 V / 0 ~ 5 V / 0 ~ 10 V		
	Accuracy @25°C 精度	±0.1% full scale		
	Temperature dependence 溫度係數	±0.005%/°C full scale		
	External loads 輸出負載	current outputs RL < 500 ohm/ voltage output 0 ~ 1 V output RL > 2K ohm 0 ~ 5 V and 0 ~ 10 V outputs RL > 10K ohm		
Digital output 數位輸出	RS485	meet the standards TIA/EIA-485-A		
	Protocol	MODBUS RTU		
Alarm (option) 警報輸出		Relay type:Electromagnetic / Contact:SPDT / 8A / 277 VAC (resistive load)/ Latch on/off		
Display (option) 顯示器	LCD	128 x 64 dots without backlight		
	Lines(顯示行數)	1,2 or3		
	Buttons (按鈕)	capacitive *3		
Power supply 電源供應	Current output 電流輸出	2-Wire: 11 ~ 35VDC RL<50 ohm / 20 ~ 35 VDC RL<500 ohm, 3-Wire: 15 ~ 35 VDC, 12~ 29 VAC		
	Voltage output 電壓輸出	15 ~ 35 VDC, 12~ 29 VAC		
	RS485	15 ~ 35 VDC, 12~ 29 VAC		
Mechanics 機構	Housing material 外殼材質	PC, POLYCARBONATE		
	Housing classification 保護等級	IP 65		
	Probe pressure 測棒耐壓	10bar		
	Cable of remote probe version 電纜材質	2m, shield PVC 80°C		
Probe material 測棒材質	Wall mount version 壁掛型	brass nickel-plated		
	Duct version 風管型	aluminum		
	Remote probe version 分離型	brass nickel-plated		
temperature range 工作溫度		Without display -40 ~ 80°C (-40 ~ 176 °F)/ With display -20 ~ 70°C (-4 ~ 158 °F)		
Probe temperature range 棒測工作溫度		Duct and remote probe version -40 ~ 120 °C (-40 ~ 248 °F)		
Electromagnetic compatibility 電磁干擾防護		Complies with EMC standard EN61326-1, Industrial Environment		

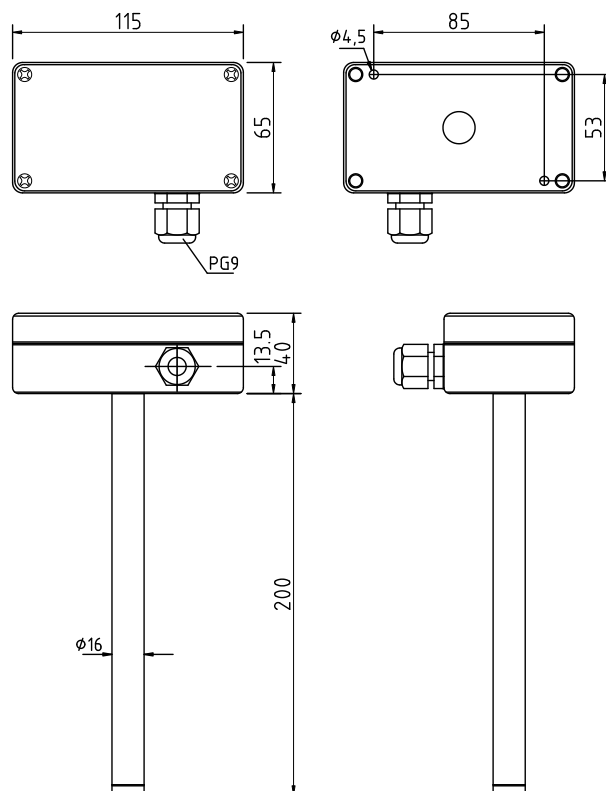
MULTI-FUNCTIONAL DEW POINT TRANSMITTER

DIMENSIONS (mm)

110 Wall mount version (Probe material: brass nickel-plated)

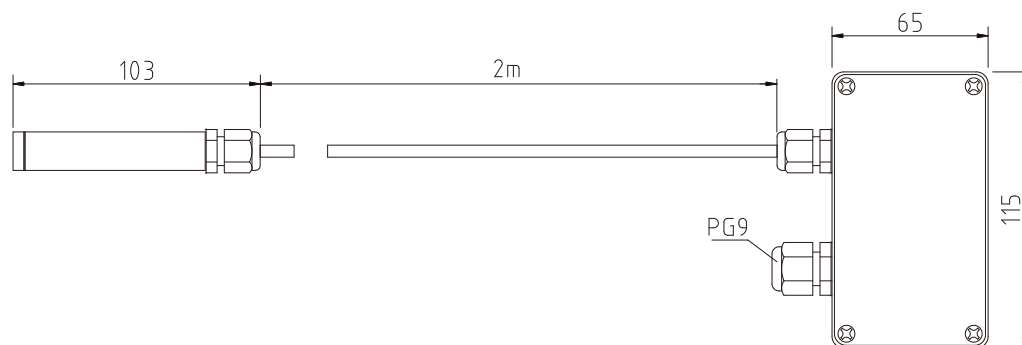


120 Duct version (Probe material: aluminum)

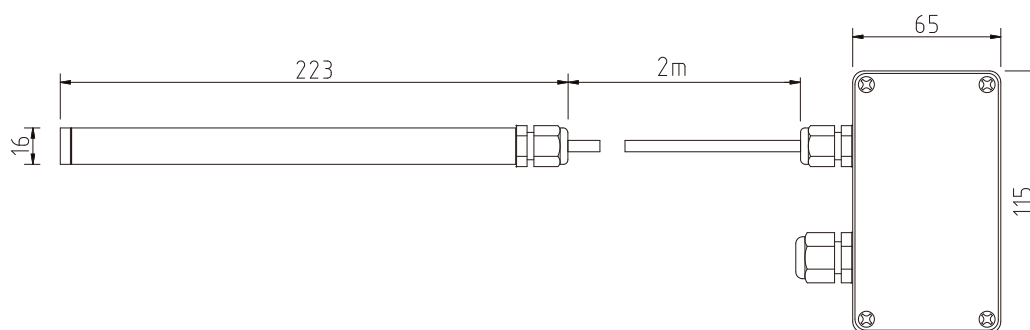


MULTI-FUNCTIONAL DEW POINT TRANSMITTER

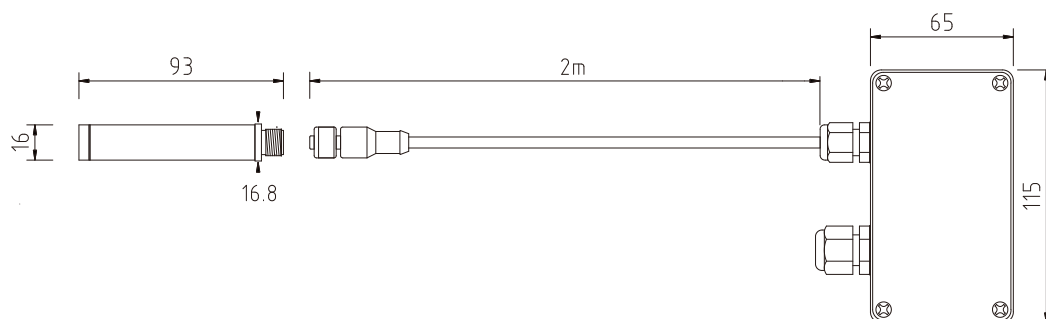
130 Remote probe (Probe material: brass nickel-plated)



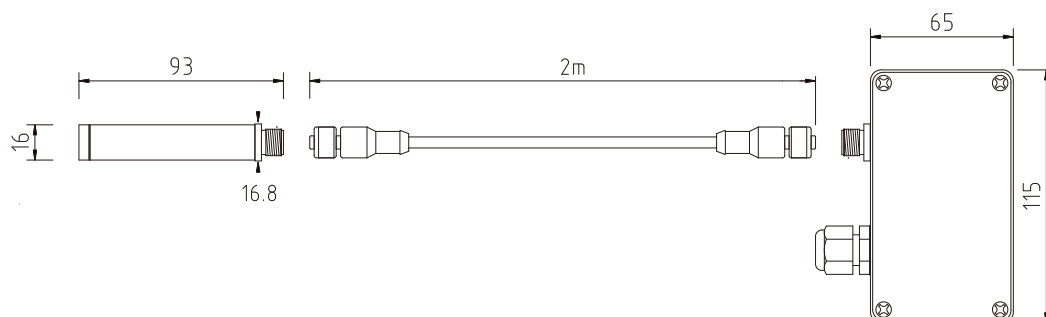
131 Remote probe (Probe material: aluminum)



135 Remote probe with M12connector (Probe material: brass nickel-plated)



136 Remote probe with dual M12connector (Probe material: brass nickel-plated)

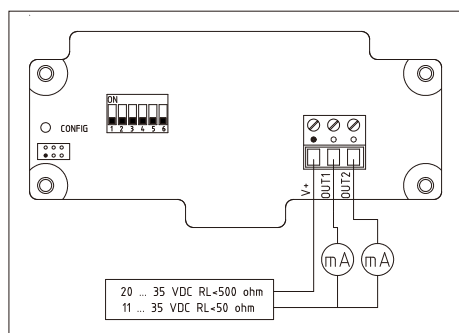


MULTI-FUNCTIONAL DEW POINT TRANSMITTER

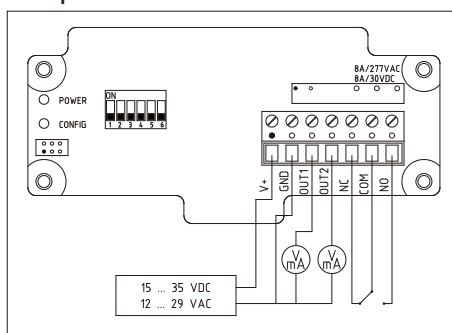
CONNECTION DIAGRAMS

Cable gland with terminal block

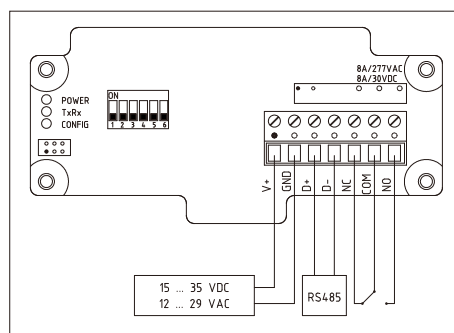
2-wire 4...20mA output
(OUT1 must be connected)



3-wire 4...20mA or voltage
output

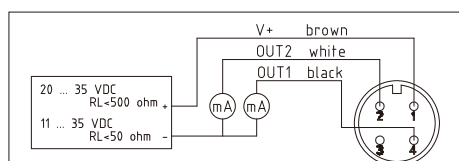


RS485 output

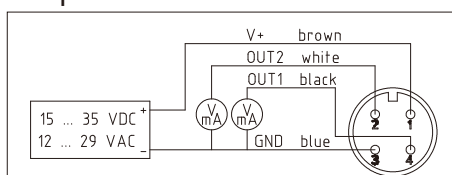


M12 – 4 pin connector

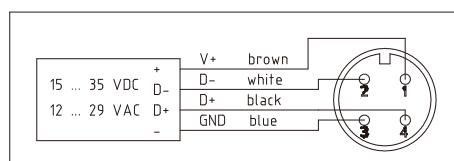
2-wire 4...20mA output
(OUT1 must be connected)



3-wire 4...20mA or voltage
output

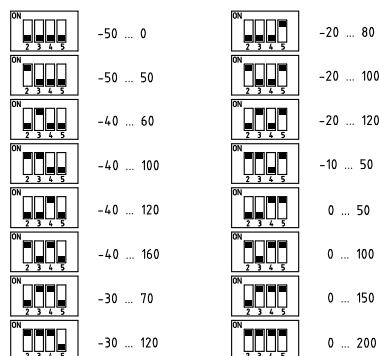
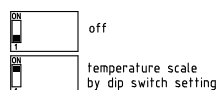


RS485 output

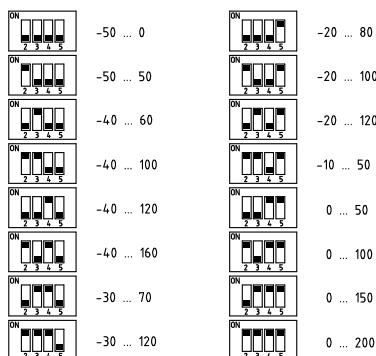
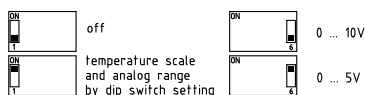


DIP SWITCH

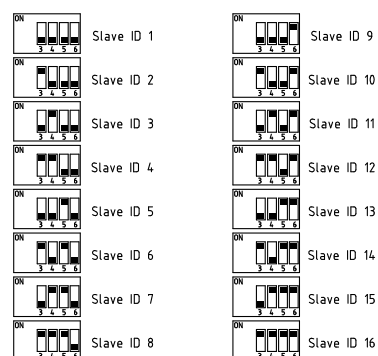
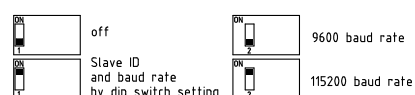
4...20mA version



Voltage version



RS485 version



MULTI-FUNCTIONAL DEW POINT TRANSMITTER

PHYSICAL QUANTITY OUTPUT RANGE

	<u>Metric</u>	<u>Imperial</u>
- Temperature <u>T</u>	-40 ... 120 °C	-40... 248 °F
- Relative Humidity <u>RH</u>	0 ... 100 %	0 ... 100 %
- Dew point <u>Td</u>	-20 ... 100 °C	-4 ... 212 °F
- Frost / dew point <u>Tf</u>	-20 ... 100 °C	-4 ... 212 °F
- Wet bulb temperature <u>Tw</u>	-40 ... 100 °C	-40 ... 212 °F
- water vapor pressure <u>E</u>	0 ... 1013 mbar	0 ... 14.7 psi
- Mixing ratio <u>R</u>	0 ... 30000 g/kg	0 ... 210000 gr/lb
- Absolute humidity <u>A</u>	0 ... 550 g/m ³	0 ... 240 gr/ft ³
- Enthalpy <u>S</u>	-40 ... 40000 kJ/kg	-10 ... 20000 BTU/lb

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