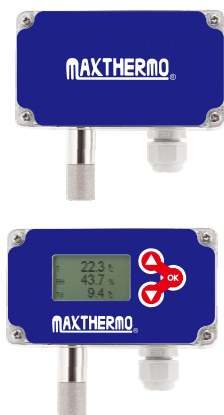


MULTI-FUNCTIONAL DEW POINT TRANSMITTER



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

MDP	110	2	2	A	D	R
H	B	C	I	D	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

MULTI-FUNCTIONAL DEW POINT TRANSMITTER

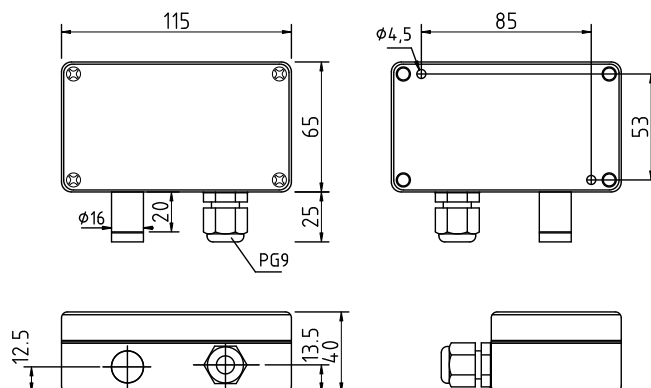
■ Specifications 規格

Model Name		MDPA	MDP
Humidity 濕度	Measurement range 量測範圍	-60 ~ 60°C Td	-40 ~ 60°C Td
	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)	±3°C Td@25°C	±3°C Td@25°C
	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	±0.7°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, (V) PPMv, (W) PPMw	
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	

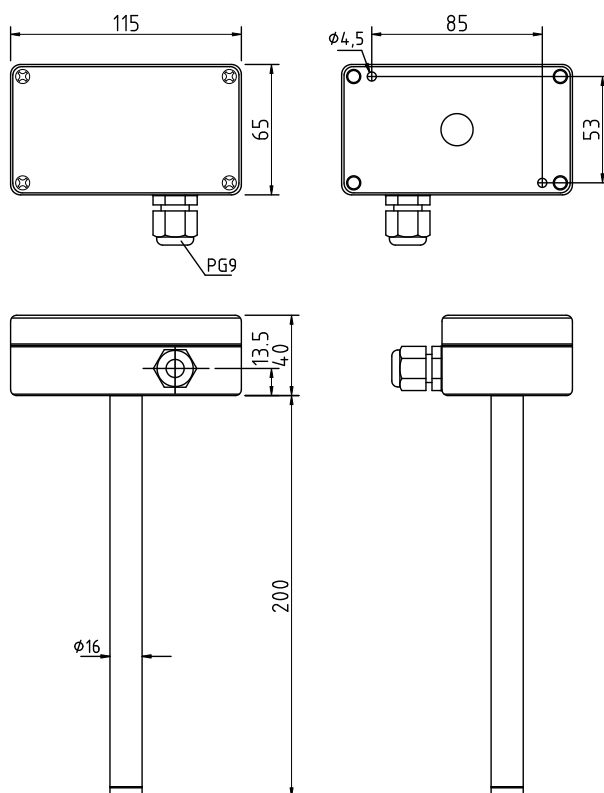
MULTI-FUNCTIONAL DEW POINT TRANSMITTER

DIMENSIONS (mm)

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

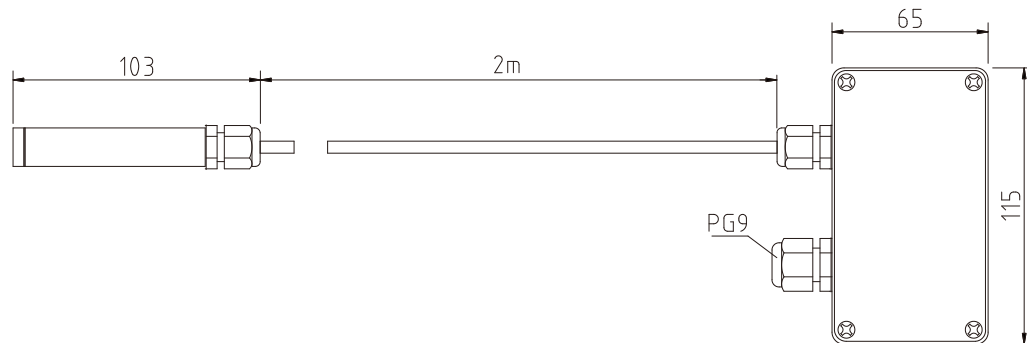


120 Duct version (Probe material: aluminum)

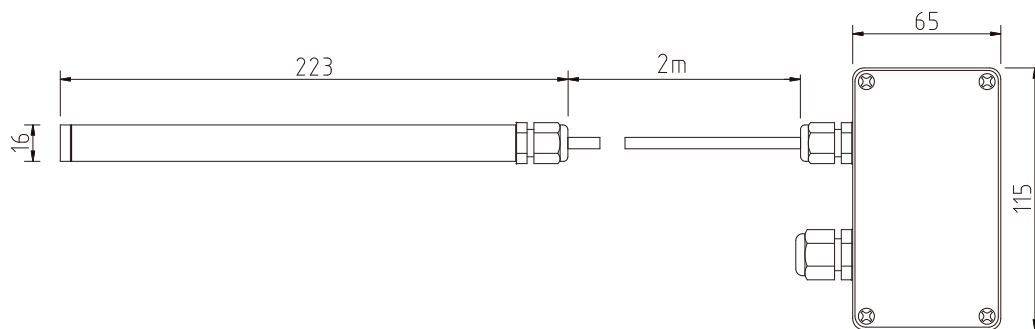


MULTI-FUNCTIONAL DEW POINT TRANSMITTER

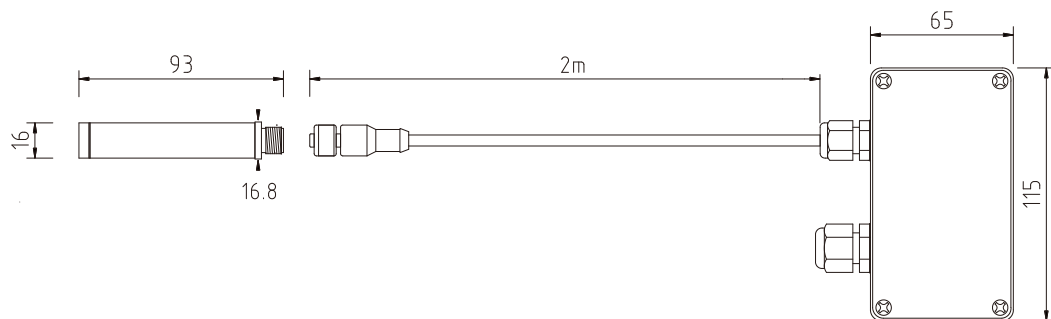
130 Remote probe (Probe material: brass nickel-plated)



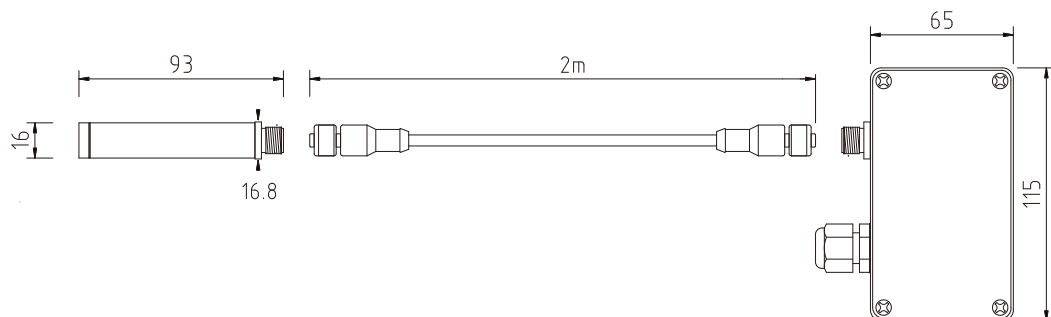
131 Remote probe (Probe material: aluminum)



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



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

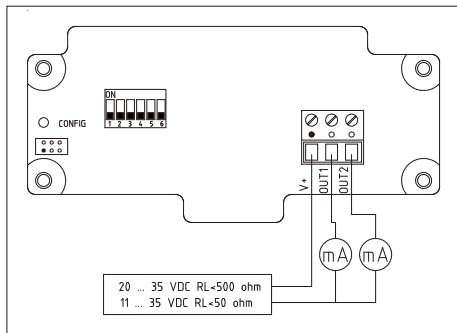


MULTI-FUNCTIONAL DEW POINT TRANSMITTER

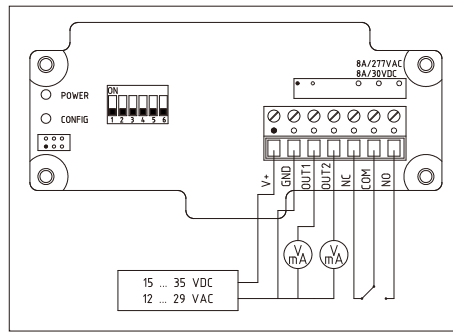
CONNECTION DIAGRAMS

Cable gland with terminal block

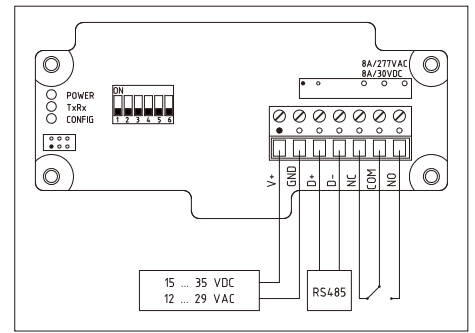
2-wire 4...20mA output
(OUT1 must be connected)



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

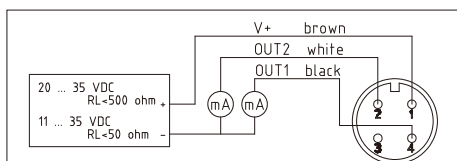


RS485 output

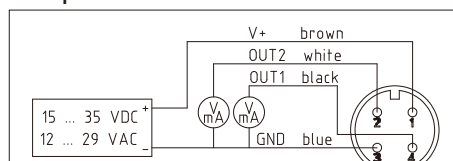


M12 – 4 pin connector

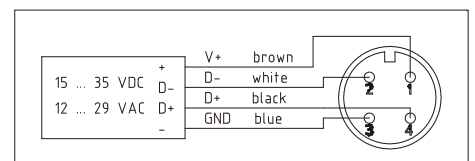
2-wire 4...20mA output
(OUT1 must be connected)



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

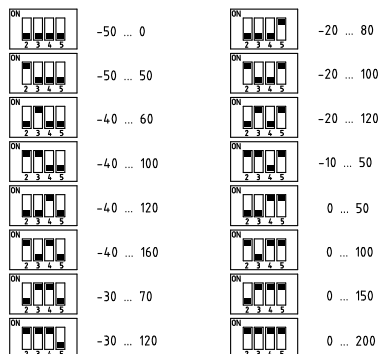
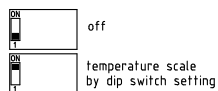


RS485 output

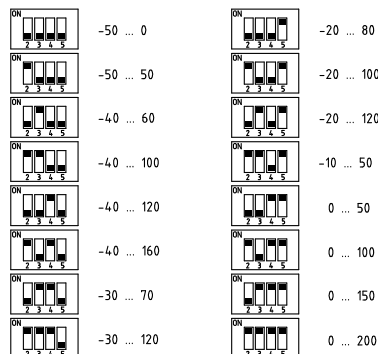
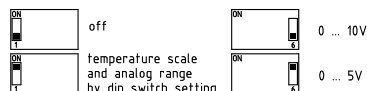


DIP SWITCH

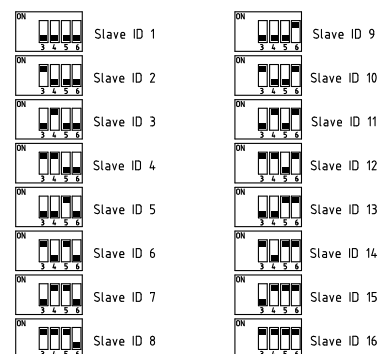
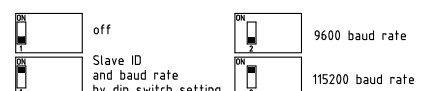
4...20mA version



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

Contact

Head Office

Add: 11F., No.168, Jiankang Rd., Zhonghe Dist., New Taipei City 235, Taiwan

Tel: +886-2-2228-7950 (Rep.)

Fax: +886-2-2228-6140

E-mail : service@maxthermo.com.tw

Web : www.maxthermo.com

Showroom

Add: 3C25, Taipei World Trade Center, No. 5, Sec. 5, Hsin Yi Rd. Taipei Taiwan

Tel: +886-2-2720-6601

Fax: +886-2-2345-5120

Thailand Office

Add: 86/132-133 m.7 Samaedum Bangkoontien 10150 Thailand.

Tel: +662-415-8318 , +662-417-2548-49

Fax: +662-415-8798

Web : www.thaimaximum.com