

INDOOR TEMPERATURE AND HUMIDITY TRANSMITTER



■ Features

- Configure adaptor available for setting.
- 128X64 LCD monitor for maximum up to 2 measurement display.
- Analog dual channel with selectable physical quantity.
- RS485 Modbus data with integer and floating type. Support metric and imperial unit.
- Resistor alarm output (PNP or NPN based on the connection)

■ Order Information

MRTH —

2

1

M

D

R

A B C D E

A. Output:

2 - 4 ~ 20mA
3 - 0 ~ 10V
5 - 0 ~ 5V
6 - 0 ~ 1V

B. Temperature Scale:

1 - 0 ~ 50°C
2 - 0 ~ 100°C
S - By order

C. Psychometric calculations:

(Option)
M - Yes
X - No

D. LCD Display with touch buttons:

(Option)
D - Yes
X - No

E. Transistor output:

(Option)
R - Yes
X - No

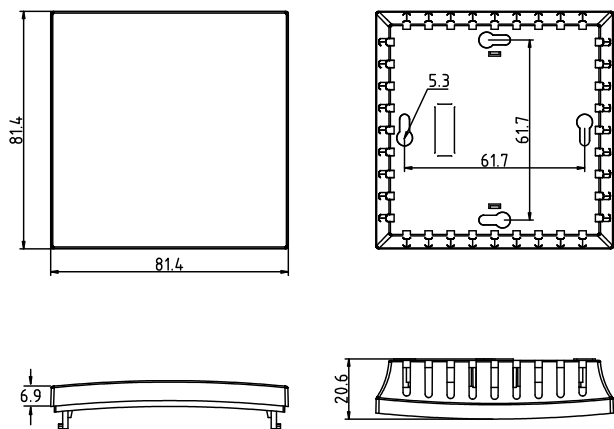
INDOOR TEMPERATURE AND HUMIDITY TRANSMITTER

■ Specifications 規格

Model Name		MRTH
Humidity 濕度	Measurement range 量測範圍	0 ~ 95 %RH
	Accuracy (including non-linearity, hysteresis, and repeatability) 精度	±3%RH@25°C(20~80%RH)
	Temperature coefficient 溫度係數	typ. ±0.05%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	-20 ~ 80 °C
	Accuracy (including non-linearity, hysteresis, and repeatability) 精度	±0.4°C
	Long term drift 長時間飄移	<0.02°C/year
	Response Time from 15 to 45°C 反應時間從15 到 45°C	1 minute (at 1m/s air flow)
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	3-wire, 0 ~ 1V/ 0 ~ 5/ 0 ~ 10V
	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
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
Transistor outputs (option) 電晶體輸出	Isolation 訊號隔離	YES
	Current capacity 電流容量	50mA sink/ source
	Operating Voltage 工作電壓	DC 30V max.
	Circuit connection 電路接法	PNP/ NPN
	Parameter setting 參數設定	Set-point -9999 to 9999 / hysteresis 0 to 9999/ delay 0 to 3600 second/ locking ON/OFF
LCD Display (option) LCD 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	2-wire Current output 二線式電流輸出	11 ~ 35 VDC
	3-wire Current/ Voltage/ RS485 output 三線式電流/電壓/RS485輸出	15 ~ 35 VDC or 12 ~ 29 VAC
Mechanics 機構	Housing material 外殼材質	ABS
	Connection 端子抬連接線徑	12 AWG ~ 24 AWG
	Housing classification 保護等級	IP 20
temperature range 工作溫度		Without display -20 ~ 80 °C (-4 ~ 176°F)/ With display -20 ~ 70°C (-4 ~ 185°F)
Electromagnetic compatibility 電磁干擾防護		Complies with EMC standard EN61326-1, Industrial Environment

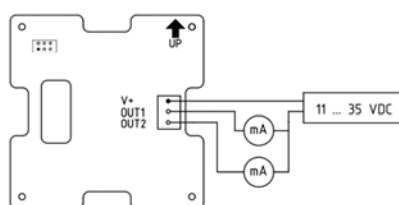
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DIMENSIONS (mm)



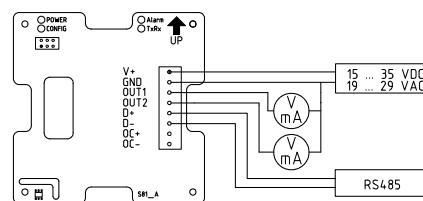
3-WIRE CONNECTION DIAGRAM

4...20mA

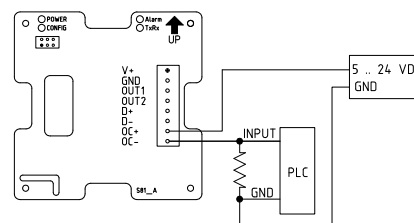


3-WIRE CONNECTION DIAGRAM

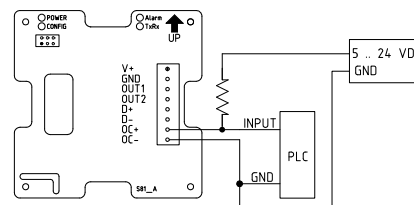
4...20mA
0...1/5/10V
RS485



PLC PNP



PLC NPN



PHYSICAL QUANTITY OUTPUT RANGE

	Metric	Imperial
- 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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