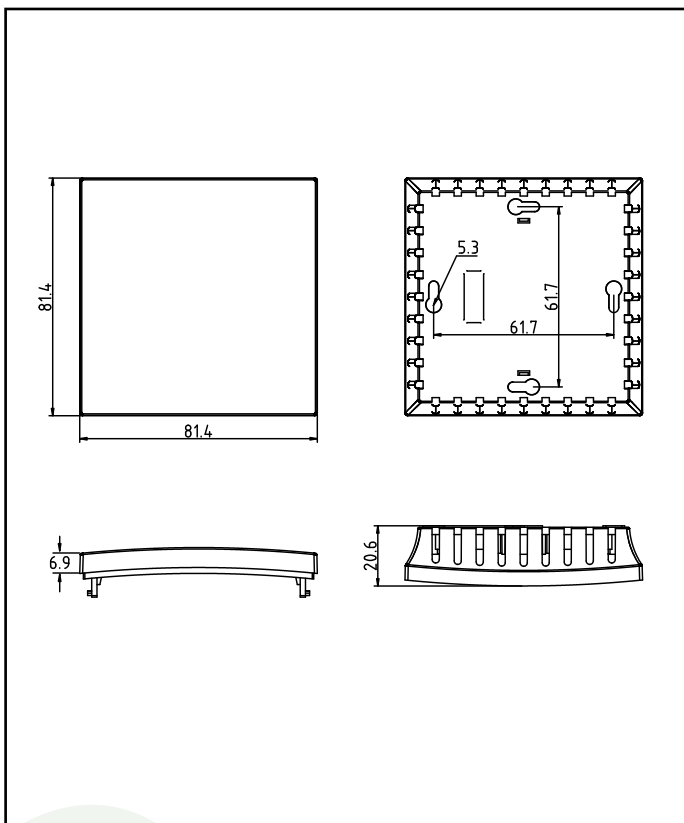




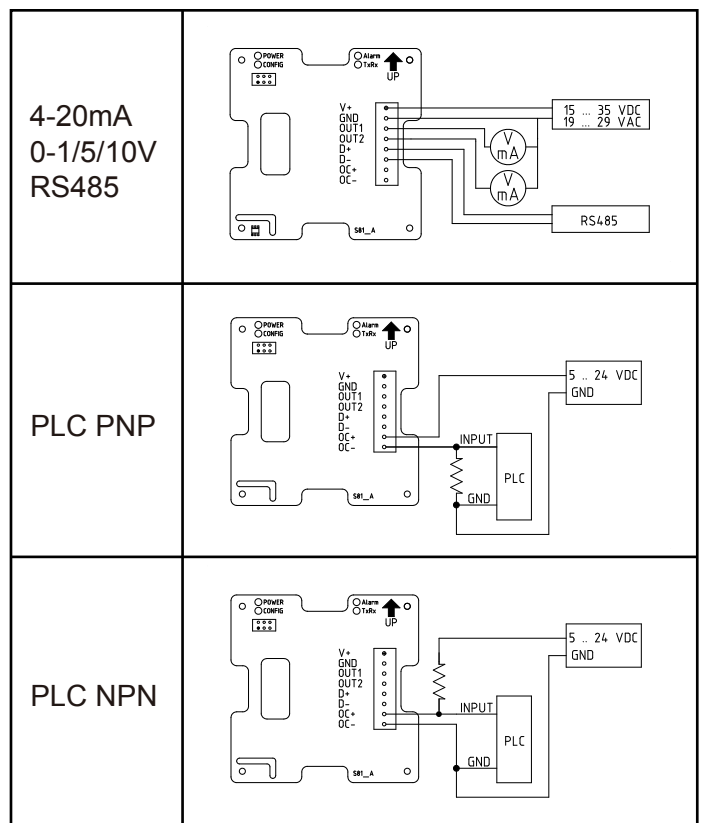
Features

- Excellent quality and stable measurement
- 1-point user adjustment
- Analog output and RS485
- MODBUS RTU protocol with integer and floating type
- Unit support metric or imperial
- Configure adapter support
- Transistor output with PNP or NPN connection
- LCD display plus 3 capacitive buttons

DIMENSIONS (mm)



CONNECTION DIAGRAMME



TECHNICAL DATA

Humidity

Measurement range	0~95%RH
Accuracy (including non-linearity, hysteresis, and repeatability)	3%RH@25°C (20~80%RH)
Temperature coefficient	typ.±0.05%RH/°C
Long term drift	<0.25%RH/year
Response Time from 33 to 75%RH	10 second (at 1m/s air flow)

Temperature

Measurement range	-20~80°C
Accuracy (including non-linearity, hysteresis, and repeatability)	±0.3°C
Long term drift	<0.02°C/year
Response Time from 15°C to 45°C	1 minute (at 1m/s air flow)

Analog outputs

Current version	3-wire,4~20mA
Voltage version	3-wire,0~1V/5V/10V
Accuracy of analog outputs at 25°C	±0.1% full scale
Temperature dependence	±0.005%/°C full scale
External loads	current output RL < 500 ohm voltage output 0~1 V output RL > 2 kohm 0~5 V and 0~10 V outputs RL > 10 kohm

RS485 Modbus RTU (Standard)

ID	1~247
Baud rate	9600/19200/38400/57600/115200
Data format	N81/N82/E81/E82/O81/O82

Psychometric calculations (option)

(Td) dew point temperature, (Tf) frost point temperature, (R) mixing ratio, (A) absolute humidity, (S) enthalpy,(Tw) wet bulb temperature, (E) water vapor pressure

Display with touch button (option)

LCD	128x64 dots without backlight
Lines	1,2 or 3
Buttons	capacitive *3

Transistor output (option)

Isolation	Yes
Current maximum	50mA sink/source
Voltage maximum	30 VDC
Connection	PNP / NPN
Activate	Increasing / Decreasing
Set-point	-9999 to 9999
Hysteresis	0 to 9999
Delay	0 to 3600 second
Latch	on/off

Power supply

DC	15~35 VDC
AC	12~29 VAC

Power consume

Current version	max. 50mA
Voltage version	typ. 35mA

Mechanics

Housing material	ABS
Housing classification	IP20
Connection	AWG 12~24

Temperature range

without display	-20~80°C(-4~176°F)
with display	-20~70°C(-4~158°F)

Electromagnetic compatibility

Complies with EMC standard
EN61326-1,Industrial Environment

Ordering Guide

Model	Output		Temperature Scale		Psychrometric calculations (Option)		LCD Display with touch buttons (Option)		Transistor Output (Option)	
					Yes	(M)	Yes	(D)	Yes	(R)
RT-S81	*4~20mA+RS485	(2)	0~50°C	(1)	Yes	(M)	Yes	(D)	Yes	(R)
	0~10V+RS485	(3)	0~100°C	(2)						
	0~5V+RS485	(5)	By order	(S)						
	0~1V+RS485	(6)								
	**RS485	(4)								

Ordering example

RT-S81-21MDR

Output : 4~20mA



Temperature Scale : 0~50°C


Option - Psychrometric calculation : Yes

Option – LCD Display with touch button : Yes

Option – Transistor Output : Yes

Accessory

<p>SA021101 118 to 86 adapter</p>	
<p>SA021103 86 wall mounting</p>	

<p>SA010201 Configure adapter</p>	
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Physical Quantity Output Range

	Metric	Imperial
• Temperature T	-20~80°C	-4~176°F
• Relative Humidity RH	0~100%	0~100%
• Dew point Td	-20~80°C	-4~176°F
• Frost/dew point Tf	-20~80°C	-4~176°F
• Wet bulb temperature Tw	-20~80°C	-4~176°F
• water vapor pressure E	0~1013 mbar	0~14.7 psi
• Mixing ratio R	0~30000 g/kg	0~210000 gr/lb
• Absolute humidity A	0~550 g/m³	0~240 gr/ft³
• Enthalpy S	-20~40000 KJ/kg	-1~20000 BTU/lb