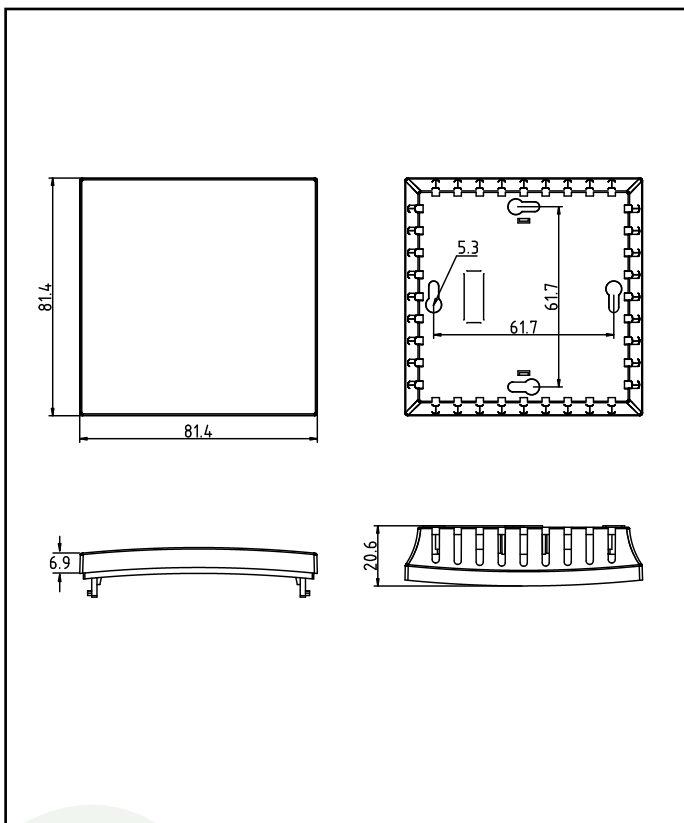




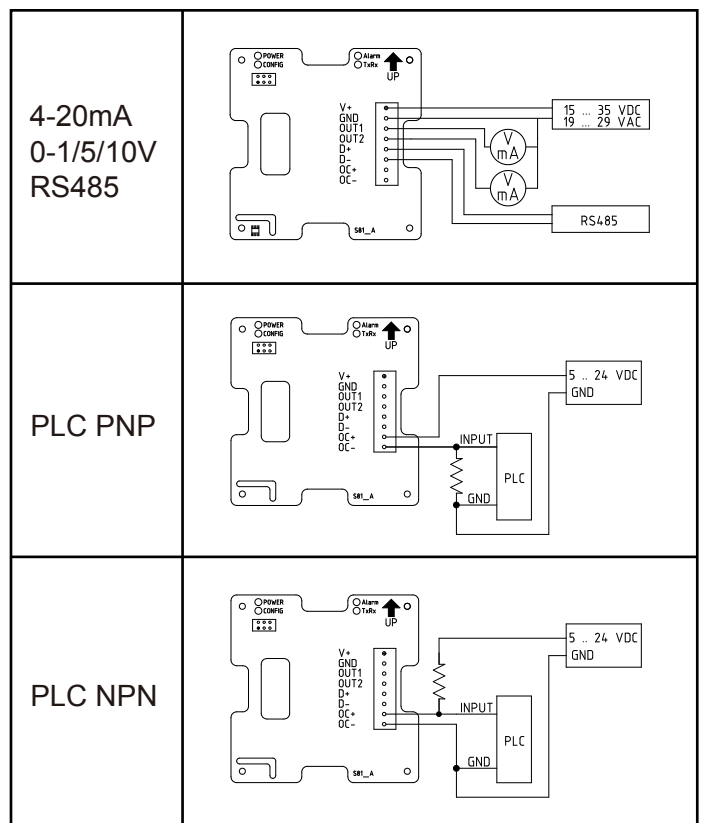
### Features

- 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)	±0.4°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><b>SA021101</b> 118 to 86 adapter</p>	
<p><b>SA021103</b> 86 wall mounting</p>	

<p><b>SA010201</b> 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