

Single Phase Power Meter,with external CT

Description

The Single Phase Power Meter with internal CT are solid state transducers for measuring the current and voltage in fans, pumps, and other HVAC equipment. The connections are by Modbus.They have two analog output,0-10V&4-20mA.



Specifications

Power supply voltage	24V AC
Power Consumption	30mA@24Vdc
Voltage Range	0-260V
Current Range	0-400A
Frequency	50hz/60hz
Net	Modbus RS485
Analog Output	0-5V
Operating Temp	-1 5°C-60°C

Part Number Scheme

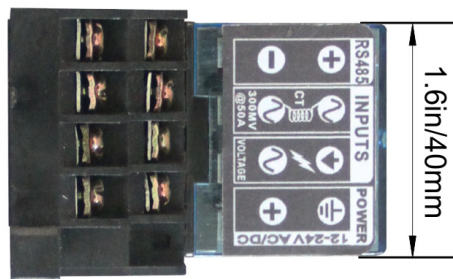
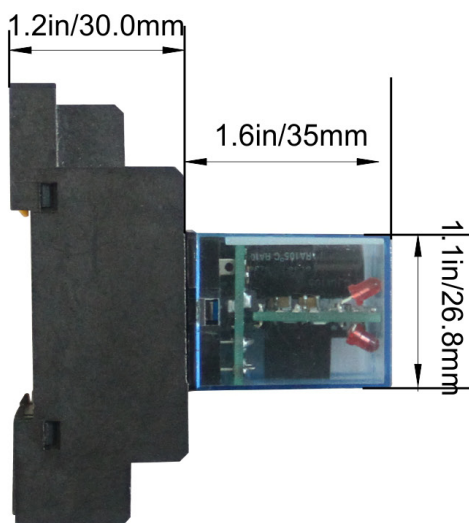
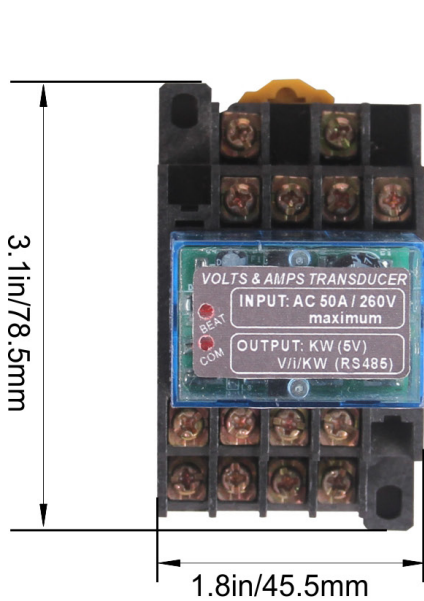
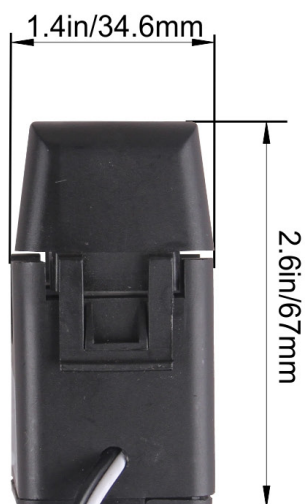
SPM2 - 50

Code	Description
SPM2	Single Phase Power Meter, with external CT

Code	Maximum Current
X	without external CT
50	50A
100	100A
200	200A
300	300A

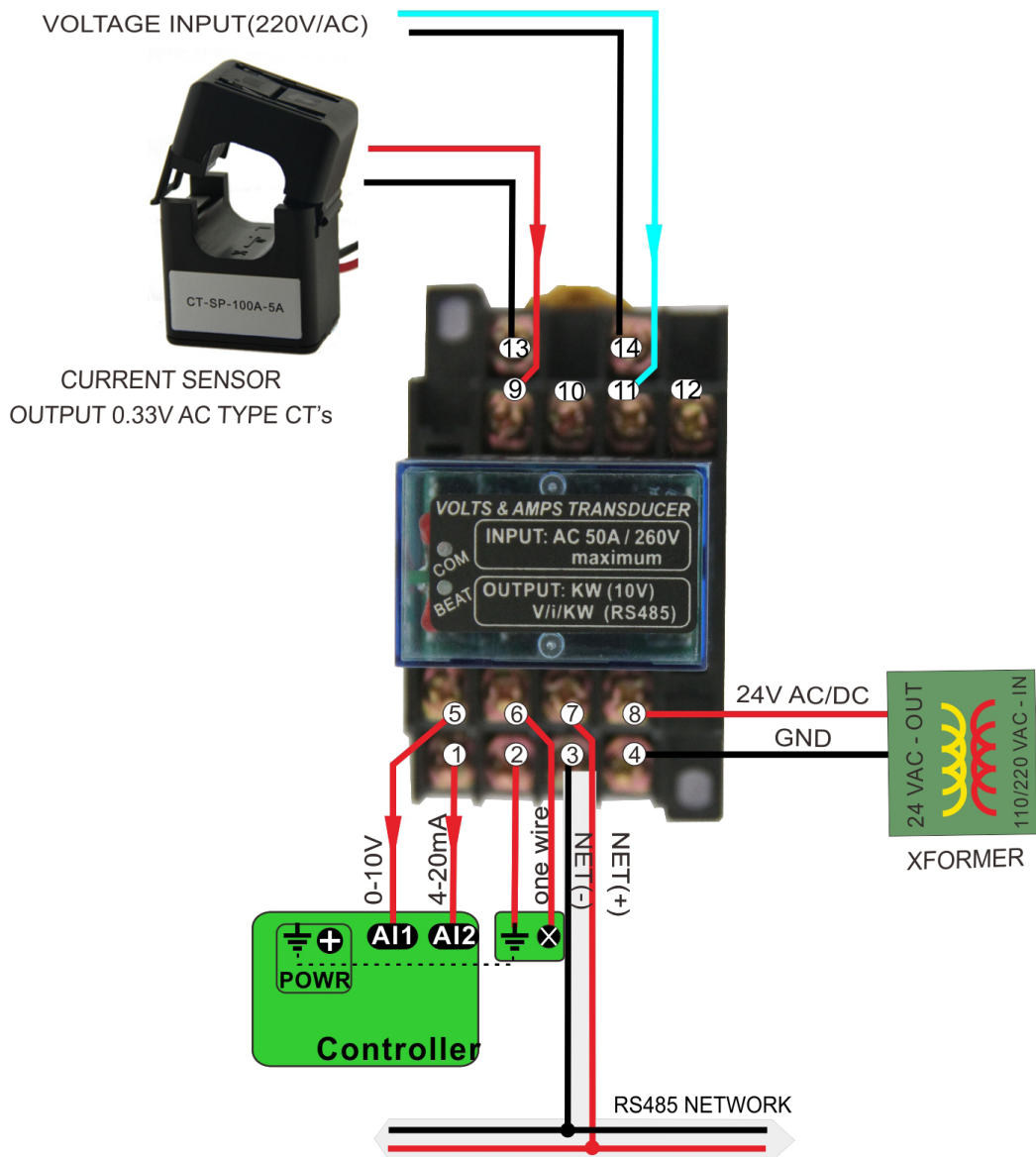
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Dimension



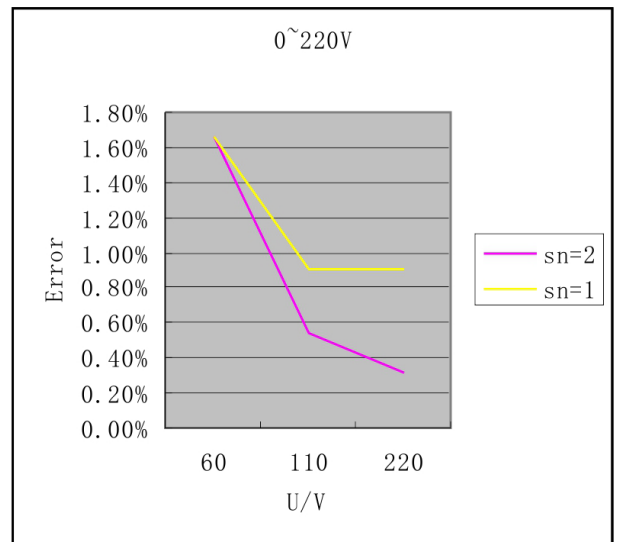
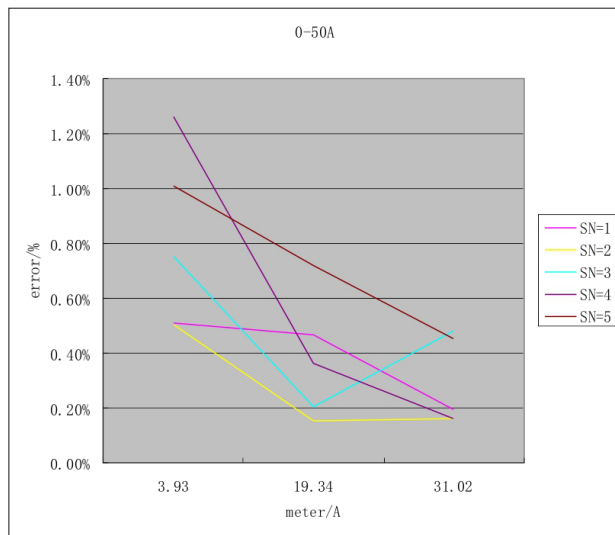
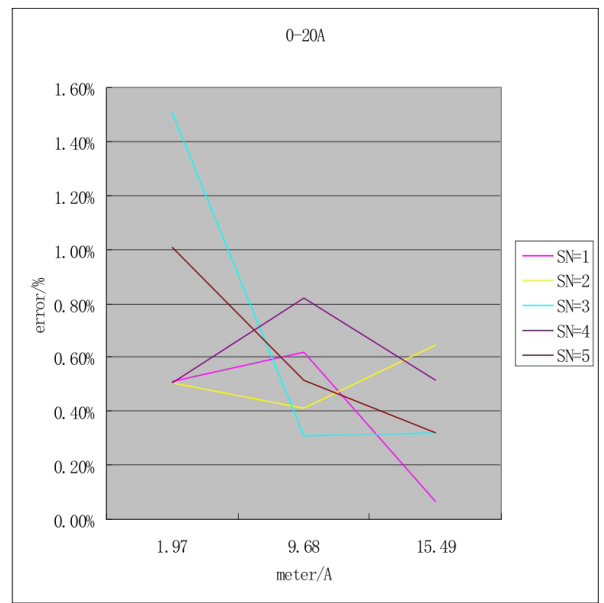
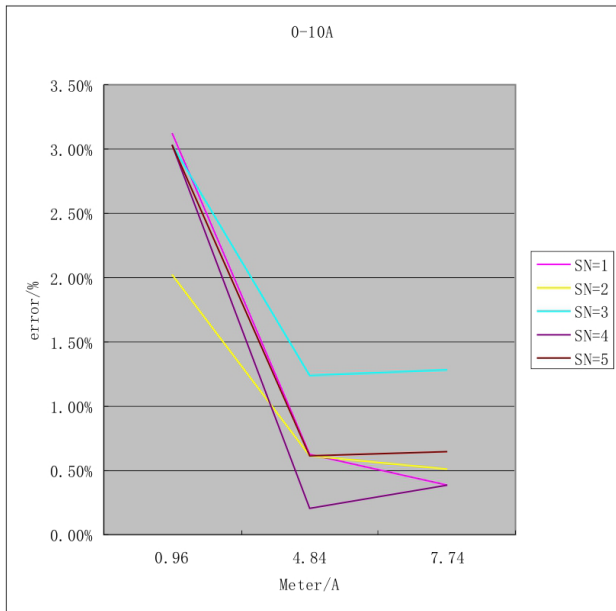
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Wiring Diagram



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AC Current/Voltage Test



Calibration

Calibrate current:

Write the real value to register 1 00.

Calibrate the voltage:

Write the real value to register 1 01 .

Set Analog Output

1 . Set the output mode (auto mode):

Write 0 to register 1 43.

2. Select current or voltage value for the analog output.

Set register 1 42(0: current. 1 : voltage)

3. Use register 1 45 to set the current range or register 1 46 to set the voltage range

4. I f you set 0 to register 1 42,

The analog output value = current value (reg1 00)/1 00 / current range (reg1 45)*5V (AC)

e. g. : Range = 1 00A, Current Value = 1 0A, DA = 1 0/1 00*5 = 0. 5V

The analog output value = current value (reg1 00)/1 0 / current range (reg1 45)*5V (DC)

I f set 1 to register 1 42 then.

Analog output value = voltage value (reg1 01)/1 0 / current range (reg1 46)*5V

e. g. : Range = 1 000V, Voltage Value = 200V, DA = 200/1 000*5 = 1 V

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Register List

Address	Bytes	Range	Operation info	Register and Description	Note
0 ~ 3	4	-	W/R	Serial Number -4 byte value.	
4 ~ 5	2	-	R	Software Version -2 byte value.	
6	1	0-255	R/W	ADDRESS. Modbus device address	
7	1	0-255	W/R	Product Model.	
8	1	0-255	W/R	Hardware Revision.	
100	2	AC:0-50A DC:0-100A	W/R	The value of current and calibrate.	AC:eg.102 is 1.02A(0.01A) DC:eg.102 is 10.2A(0.1A)
101	2	AC:0-260V DC:0-380V	W/R	The value of voltage and calibrate.	eg.1102 is 110.2V(0.1V)
103	1	0-1	R/W	Output BUS Selected	0:RS485. 1:one wire
104	1	0-10	R/W	the range of current	
calibrate the DC current of sensor					
111	2	0~1000	R/W	1st calibration current target value	when calibrate,need to set R139=11 and R140=22.
112	2		R	1st calibration current original value	
113	2	0~1000	R/W	2nd calibration current target value	
114	2		R	2nd calibration current original value	
115	2	0~1000	R/W	3rd calibration current target value	
116	2		R	3rd calibration current original value	
117	2	0~1000	R/W	4th calibration current target value	
118	2		R	4th calibration current original value	
119	2	0~1000	R/W	5th calibration current target value	
120	2		R	5th calibration current original value	

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calibrate the voltage of sensor					
121	2	0~3800	R/W	1st calibration voltage target value	when calibrate,need to set R139=11 and R140=22.
122	2		R	1st calibration voltage original value	
123	2	0~3800	R/W	2nd calibration voltage target value	
124	2		R	2nd calibration voltage original value	
125	2	0~3800	R/W	3rd calibration voltage target value	
126	2		R	3rd calibration voltage original value	
127	2	0~3800	R/W	4th calibration voltage target value	
128	2		R	4th calibration voltage original value	
129	2	0~3800	R/W	5th calibration voltage target value	
130	2		R	5th calibration voltage original value	
calibrate the AC current of sensor					
131	2	0~5000	R	the rate of calibrate(0-10A)	you can write the real value to Register100 to calibrate the AC current
132	2	0~5000	R	the rate of calibrate(0-20A)	
133	2	0~5000	R	the rate of calibrate(0-50A)	
Offset set					
134	2		R/W	the offset of current(DC)	
135	2		R/W	the offset of voltage	
filter set					
136	1	0~10	R/W	the filter of current	
137	1	0~10	R/W	the filter of voltage	
lock set					
139	1	0-255	R/W	lock_x,when lockx =11 and lock_y=22,we can calibrate sensor	
140	1	0-255	R/W	lock_y	
Baud Rate set					
141	1	0-1	R/W	Baud Rate set	0:19200.1:9600
Analog Output set					
142	1	0-1	R/W	current or voltage output set	0:current.1:voltage
143	1	0-1	R/W	OutMode set	0:auto.1>manual
144	2	0-65535	R/W	the manual input value	
145	2	0-65535	R/W	the range of current set for analog output	A
146	2	0-65535	R/W	the range of voltage set for analog output	V