

Application



- AC load management
 - Data Center Power Management
 - Telecommunication Power Management

Function

- **Measuring:** 1 main circuit + 54 branch circuits
 - **DI / DO:** 4 status input (dry contact), 2 relay outputs, 1 pulse output
 - **Settable Pre-Alarm function:**
 - Main circuit:** Alarm for voltage, current, current unbalance
(optional alarm for leakage current/ temperature)
 - Branch circuit:** Alarm for current (lo-lo-limit, lo-limit, hi-limit, hi-hi-limit)
 - **Communication:** RS485, support Modbus-RTU protocol
 - **Phase sequence of branch circuit is programmable.**
 - **Optional CT input for branch circuit:** 50A, 100A, 200A, 400A, 600A
 - **Settable wiring for branch circuit:** Either single phase or 3 phase
 - **Historical kWh record:** kWh yearly consumption of last 10 years,
kWh monthly consumption of last 12 months

Measurement

Main circuit measuring:

- Voltage-Ua, Ub, Uc (0.5%)
 - Current--Ia, Ib, Ic, In, I unbal, Max. I (0.5%)
 - Active power– Pa, Pb, Pc, $\sum P$ (1.0%)
 - Reactive power – Qa, Qb, Qc, $\sum Q$ (2.0%)
 - Power factor – PF (1.0%)
 - Frequency – F ($\pm 0.01\text{Hz}$)
 - Active energy – kWh (1.0%)
 - Reactive energy – kvarh (2.0%)
 - Demand (for 3I, 3P, Ptot) and Max. demand
 - THD for U, I (2~31st)
 - Leakage current (optional) (0.5%)
 - Temperature (optional) (0~120°C)

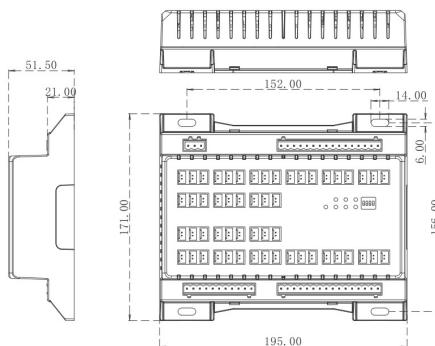
Branch circuit measuring:

- | | Accuracy |
|-------------------------------------|----------|
| ➤ Current--I, Max. I, | (0.5%) |
| ➤ Active power- -P, | (1.0%) |
| ➤ Reactive power--Q, | (1.0%) |
| ➤ Power factor-- PF | (1.0%) |
| ➤ Active energy--kWh, | (1.0%) |
| ➤ Reactive energy--kvarh, | (2.0%) |
| ➤ Demand (for I, P) and Max. demand | |
| ➤ THD for I | |

PilotSPM206 & Accessories:

◆ Main Module: PilotSPM206-54

Unit: mm



◆ CTs

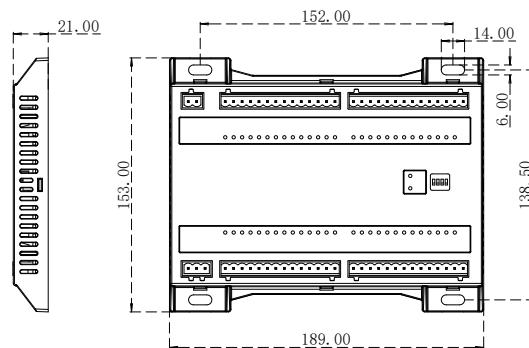
>> CT group (3CTs in one) for branch circuit

>> Individual CT for branch circuit

>> Leakage CT

<p>LACT-60M2 Input 60A, cable 2.5m</p>	<p>LACT-50C1/ 100C2/ 200C2/ 400C2/ 600C2 Input 50A/100A/ 200A/ 400A/ 600A, cable 2.5m</p>	<p>PMAC503L-250 Input 1A</p>
<p>Technical drawing showing mounting dimensions: L2 (41±0.5), T2 (3-D10±0.5), L3 (L1) (20.6±0.5), T3 (T1) (35mm Din-rail), 71.5±0.5.</p>	<p>Technical drawing showing mounting dimensions: L2 (53±0.5), L1 (40±0.5), L3 (58±0.5), T2 (26±0.5).</p>	<p>Technical drawing showing dimensions: Ø80, 122, 122, 89, 142, 27.5.</p>

◆ Optional DI Module

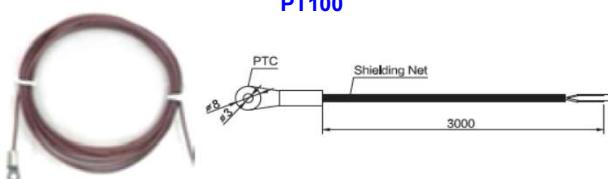


Unit: mm

◆ Optional Temperature Sensor

PT100

Unit: mm



◆ Optional Display Module

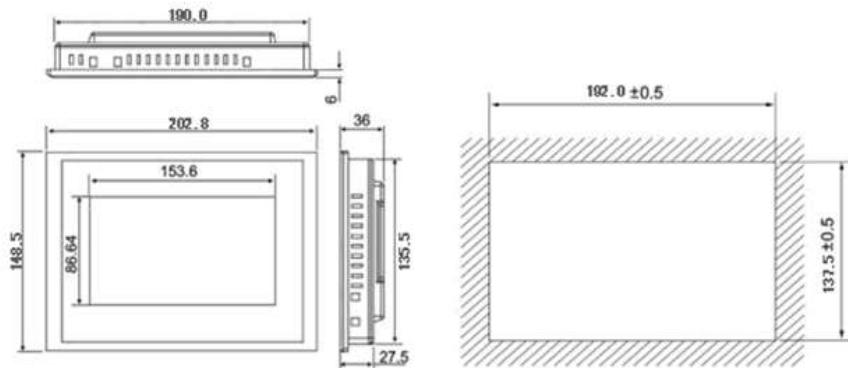
Unit: mm

HMI: 7" touch screen LCD. One HMI monitors max. 4 units of PilotSPM206 main module

Resolution ratio: 800×480



PMAC201V6



Circuit diagram

Parameter and Alarm Setting

IN	A	Set	(Module- 1)
COM add:	Board rate:	Parity:	IN DI alarm
2	9600	None	Enable
S2 alarm mode	S4 alarm mode		OUT DI alarm
ON to OFF	OFF to ON		SD breakdown
Relay 1	Relay 2	DI1 function	DI2 function
RUN indicate	Universal	Universal	IN Breaker
CT	100	Current to bi-limit(A)	0
Temp_hi limit(°C)	0	Current to bi-limit(A)	0
Temp_return(°C)	0	Current hi-limit(A)	0
Voltage_hi limit(V)	288	Current hi-limit(A)	0
Voltage_lo limit(V)	0	Current sublimit(A)	0
Apply to All		IN B	Set
		Read	Back

Real time measurement

IN A Real-time data						
Item	Phase A	Phase B	Phase C	Total	Neutral Inv	Unit
V	0	0	0	0	0	V
I	0	0	0	0	0	A
Mos. I	0	0	0	0	0	A
Dmd. I	0	0	0	0	0	A
Max. dmd. I	0	0	0	0	0	A
P	0	0	0	0	0	W
Dmd. P	0	0	0	0	0	W
Max. dmd. P	0	0	0	0	0	W
Q	0	0	0	0	0	Var
THDv	0	0	0	0	0	%
THDl	0	0	0	0	0	%
Load current	0	0	0	0	0	%
Total kWh				0		kWh
Total kwht				0		kwht
PF	0	0	0	0	0	
S	0	0	0	0	0	VAr
					IN B	IN Set
						Back

History and Alarm record

Branch Circuit Configuration

Branch 1 to 21 CT config (IN A)	Branch 4 to 15 CT config (IN B)	Branch 7 to 18 CT config (IN C)	Branch 10 to 21 CT config (IN D)
1 - 3 Branch	4 - 6 Branch	7 - 9 Branch	10 - 12 Branch
<input checked="" type="radio"/> 50A			
<input type="radio"/> 100A	<input type="radio"/> 100A	<input type="radio"/> 100A	<input type="radio"/> 100A
<input type="radio"/> 200A	<input type="radio"/> 200A	<input type="radio"/> 200A	<input type="radio"/> 200A
<input type="radio"/> 400A	<input type="radio"/> 400A	<input type="radio"/> 400A	<input type="radio"/> 400A
<input type="radio"/> 600A	<input type="radio"/> 600A	<input type="radio"/> 600A	<input type="radio"/> 600A
13 - 15 Branch	16 - 18 Branch	19 - 21 Branch	
<input checked="" type="radio"/> 50A	<input checked="" type="radio"/> 50A	<input checked="" type="radio"/> 50A	
<input type="radio"/> 100A	<input type="radio"/> 100A	<input type="radio"/> 100A	
<input type="radio"/> 200A	<input type="radio"/> 200A	<input type="radio"/> 200A	
<input type="radio"/> 400A	<input type="radio"/> 400A	<input type="radio"/> 400A	
<input type="radio"/> 600A	<input type="radio"/> 600A	<input type="radio"/> 600A	

History Energy Record

XXXX Year	1	to	42	Yearly Kwh	IN'	0.0	KWh
Bronch	1		2	3	4	5	6
Energy data	0.0		0.0	0.0	0.0	0.0	0.0
Bronch	8		9	10	11	12	13
Energy data	0.0		0.0	0.0	0.0	0.0	0.0
Bronch	15		16	17	18	19	20
Energy data	0.0		0.0	0.0	0.0	0.0	0.0
Bronch	22		23	24	25	26	27
Energy data	0.0		0.0	0.0	0.0	0.0	0.0
Bronch	29		30	31	32	33	34
Energy data	0.0		0.0	0.0	0.0	0.0	0.0
Bronch	36		37	38	39	40	41
Energy data	0.0		0.0	0.0	0.0	0.0	0.0
Search last	1		Year	Refresh		Monthly	Back

Technical Specification

Main circuit	1 circuit, three phase AC 220V/ 380V
Branch circuit	Max. 54 circuit per unit
Power supply	AC 220V, range: 85~264V
MTBF	≥50000h
Service life	10 years
Rated voltage	AC 220V, Range: 10%~120%, Accuracy: 0.5%
Marin circuit rated current	5A via CT, CT primary to 2000A Range: 1%~120%, Accuracy: 0.5%
Branch circuit rated current	50A~600A up to the CT Range: 1%~120%, Accuracy: 0.5%
Active power and Active energy	Main circuit Accuracy: 1% Branch circuit Accuracy: 1%
Rated frequency	50Hz, Range: 45~60Hz, ±0.01Hz

Demand	Demand Interval: 15 mins Slip interval: 1 mins
Communication	RS485 port Baud rate: 2400, 4800, 9600, 19200, 38400 (optional)
DI module	Main Income Circuit 4DI: Dry contact DI module for branch circuit: wet contact, 220Vac, Range: 70~120%, or Dry contact (optional)
Relay output capacity	250Vac/5A or 30Vdc/5A
IP index	Main Module: IP20 HMI (Front board): IP65
Insulation Resistance	$\geq 100M\Omega$ IEC62052-11
Environment	Operation: -10°C ~ +55 °C Storage : -25°C ~ +70 °C Humidity: 5%~95%, non-condensing

Order Information

PilotSPM206	Order code		Description
Main module	PilotSPM206-54-	C1	Branch Circuit Rated Current: 50A
		C2	Branch Circuit Rated Current: 100A
		C3	Branch Circuit Rated Current: 200A
		C4	Branch Circuit Rated Current: 400A
		C5	Branch Circuit Rated Current: 600A
Optional module	PMAC201V6		HMI - 7" touch screen LCD
	PilotSPM206K-54		Branch Circuit DI Module: 54 channel (2 options: dry contact or supply AC 220V)
Accessory	Branch circuit CT	LACT-60M2	
			Rated current 60A CT group, hole diameter: Φ10mm Each group has 3 CTs to measure 3 circuits
		50C1	Rated current 50A, hole diameter: Φ9mm
		100C2	Rated current 100A, hole diameter: Φ15mm
		200C2	Rated current 200A, hole diameter: Φ25mm
	Leakage CT	400C2	Rated current 400A, hole diameter: Φ34.5mm
		600C2	Rated current 600A, hole diameter: Φ34.5mm
	Temperature sensor	MS6-PT100B-3000	
	24VDC Relay	MY2N-GS	
			Switch HMI main /back up power supply Select when there has 2 main input circuit.

Note: Above branch circuit CT comes with 2.5m cable. If project require split core CT, please inform the sales to order split core CT.