



Application

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

Function

- **Measuring:** 1 main circuit + 42 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:

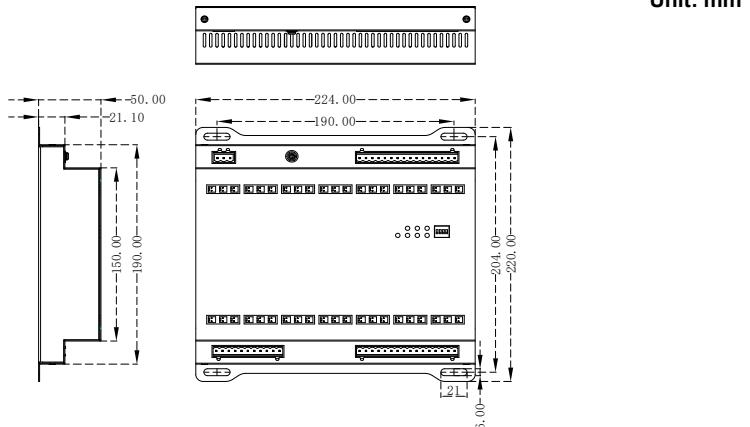
	Accuracy
➤ Voltage-Ua, Ub, Uc	(0.5%)
➤ Current--Ia, Ib, Ic, In, I unbal, Max. I	(0.5%)
➤ Active power- Pa, Pb, Pc, $\sum P$	(1.0%)
➤ Reactive power – Qa, Qb, Qc, $\sum Q$	(2.0%)
➤ Power factor – PF	(1.0%)
➤ Frequency – F	($\pm 0.01\text{Hz}$)
➤ Active energy – kWh	(1.0%)
➤ Reactive energy – kvarh	(2.0%)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

PWG-42CM & Accessories:

◆ Main Module

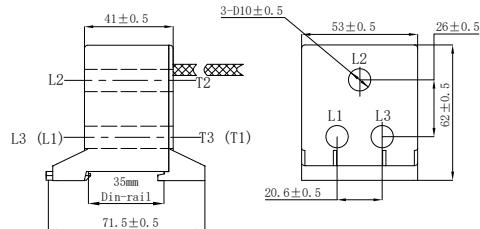


◆ CTs

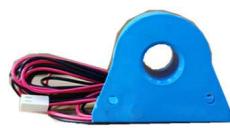
>> CT group (3CTs in one) for branch circuit



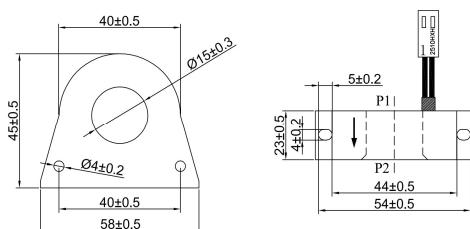
Input 60A, cable 2.5m



>> Individual CT for branch circuit



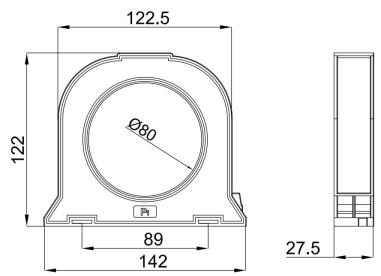
Input 50A/100A/ 200A/ 400A/ 600A, cable 2.5m



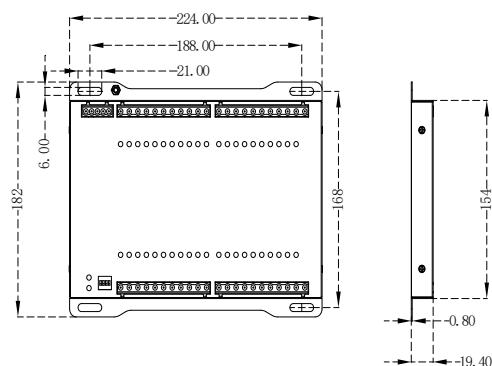
>> Leakage CT



Input 1A

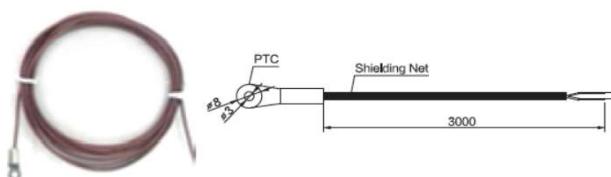


◆ Optional DI Module



Unit: mm

◆ Optional Temperature Sensor



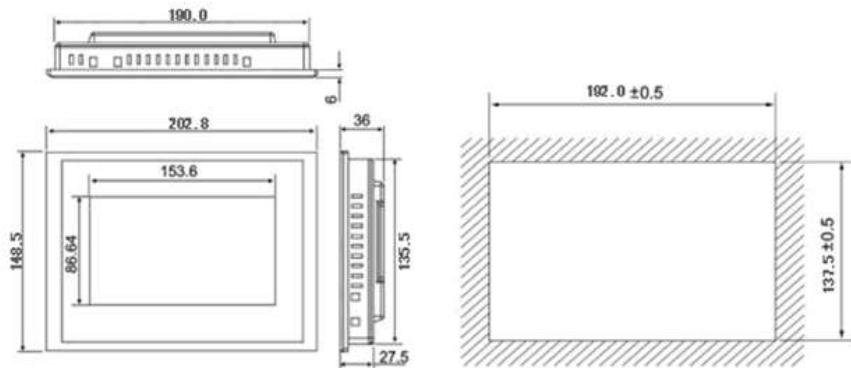
Unit: mm

◆ Optional Display Module

Unit: mm

HMI: 7" touch screen LCD. One HMI monitors max. 4 units of PWG-42CM main module.

Resolution ratio: 800×480



The screenshot shows a software application titled "Branch Circuit Power Meter". The main interface displays a grid of 24 columns representing different branches or circuits. Each column contains a green bar at the top indicating the current status, followed by a digital value and a unit (e.g., "0.00W"). Below the bars, there are several control buttons: "Page Down", "IN Data", "Branch Data", "Alert Recored", "Alert", "System Config", "COM", and two small buttons labeled "1" and "2".

Branch	Power (W)	Status
1	0.00W	Green
2	0.00W	Green
3	0.00W	Green
4	0.00W	Green
5	0.00W	Green
6	0.00W	Green
7	0.00W	Green
8	0.00W	Green
9	0.00W	Green
10	0.00W	Green
11	0.00W	Green
12	0.00W	Green
13	0.00W	Green
14	0.00W	Green
15	0.00W	Green
16	0.00W	Green
17	0.00W	Green
18	0.00W	Green
19	0.00W	Green
20	0.00W	Green
21	0.00W	Green
22	0.00W	Green
23	0.00W	Green
24	0.00W	Green

Circuit diagram

IN	A	Set	(Module- 1)			
COM add		Band rate:	Parity:	IN DI alarm	OUT DI alarm	SD breakdown
2	9600		None	Enable	Disable	Disable
SL2 alarm mode	S2 alarm mode					
ON to OFF	ON to OFF					
Relay-1	Relay-2	DI-1 function	DI-2 function	DI-3 function	DI-4 function	
RUN indicate	Universal	Universal	IN Breaker	Universal	Universal	
CT	100	Current to limit(A)	0	Neutral current to limit	0	
Temp. limit(°C)	0	Current to limit(A)	0	Leakage current to limit	1	
Volt. return (V)	0	Current to limit(A)	0	Vgnd to limit	-5	
Voltage hi-limit(%)	288	Current to limit(A)	0	Frequency to limit	0	
Voltage lo-limit(%)	0	Current unbalance limit	0	Frequency hi-limit	0	
Apply to All				IN B	Set	Read
						Back

Parameter and Alarm Setting

IN A Real-time data					
Item	Phase A	Phase B	Phase C	Total	Neutral line
V	0	0	0	0	V
I	0	0	0	0	A
Max. I	0	0	0	0	A
Dind_1	0	0	0	0	A
Max_dind_1	0	0	0	0	A
P	0	0	0	0	W
Dind_P	0	0	0	0	W
Max_dind_P	0	0	0	0	W
Q	0	0	0	0	var
THDn	0	0	0	0	%
THDc	0	0	0	0	%
Load current	0	0	0	0	%
Total kWh				0	kWh
Total kwhh				0	kwhh
PF	0	0	0	0	
S	0	0	0	0	VA
	IN B		IN Set		Back

Real time measurement

History and Alarm record

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

Branch Circuit Configuration

XXXXYear	1	to	42	Yearly Kwh	IN	0.0	kWh		
Branch	1		2	3	4	5	6	7	Unit
Energy data	0.0		0.0		0.0	0.0	0.0	0.0	kWh
Branch	8		9		10	11	12	13	14
Energy data	0.0		0.0		0.0	0.0	0.0	0.0	kWh
Branch	15		16		17	18	19	20	21
Energy data	0.0		0.0		0.0	0.0	0.0	0.0	kWh
Branch	22		23		24	25	26	27	28
Energy data	0.0		0.0		0.0	0.0	0.0	0.0	kWh
Branch	29		30		31	32	33	34	35
Energy data	0.0		0.0		0.0	0.0	0.0	0.0	kWh
Branch	36		37		38	39	40	41	42
Energy data	0.0		0.0		0.0	0.0	0.0	0.0	kWh
Search last	1		Year	Refresh			Monthly energy		Back

History Energy Record

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.

Technical Specification

Main circuit	1 circuit, three phase AC 220V/ 380V
Branch circuit	Max. 42 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