



## Features

- True RMS Power Measurements
- Energy Analysis for 1P2W, 1P4W
- Current Measurements Up to 200 A with Different CT Ratio
- Voltage Measurements Up to 300 V
- Clip-on CT for Easy Installation
- W Accuracy Better than 0.5% (PF=1)
- Supports Modbus RTU, Modbus TCP or CANopen Protocol
- Supports 2 Power Relay Output (Form A)
- IEC 61010-1 and EN 61010-1



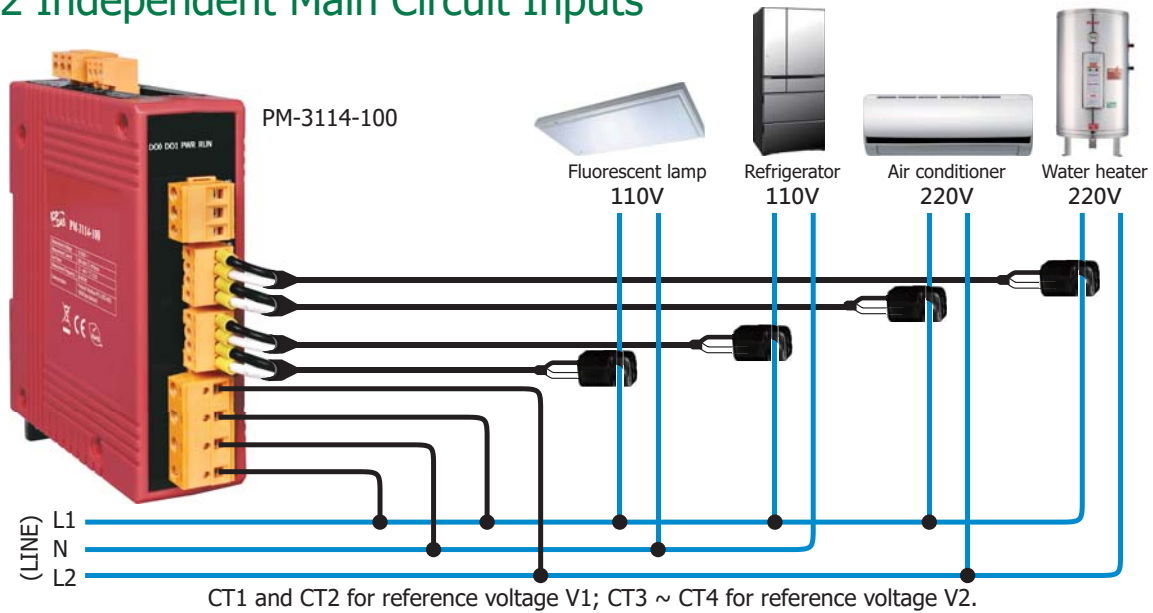
## Introduction

ICP DAS brings the most powerful, cost-effective, advanced Smart Power Meters PM-3000 series that gives you access to real-time electric usage for single-phase power measurement. With its high accuracy ( $< 0.5\%$ ,  $PF=1$ ), the PM-3000 series can be applied to both low voltage primary side and/or medium/high voltage secondary side and enables the users to obtain reliable and accurate energy consumption readings from the monitored equipments in real time under operation. These compact size and cost-effective power meters are equipped with revolutionary wired clip-on CT (various types, support input current up to 200 A). It operates over a wide input voltages range  $10 \sim 300$  V<sub>AC</sub> which allows worldwide compatibility. And with 2 channels relay outputs, it can be linked with sirens or lightings for alarm messages. It also supports Modbus RTU, Modbus TCP or CANopen protocols for easy integration.

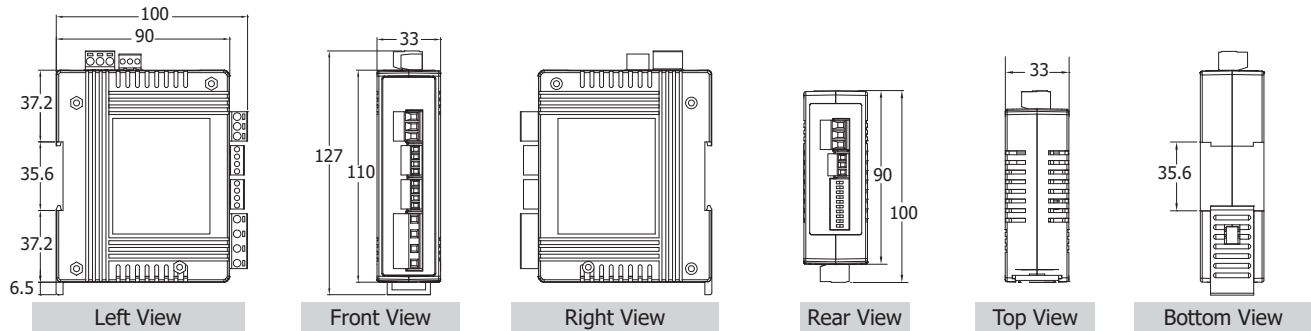
## Specifications

Models	PM-3112	PM-3114	PM-3112-MTCP	PM-3114-MTCP	PM-3112-CPS	PM-3114-CPS
<b>AC Power Measurement</b>						
Wiring	1P2W-2CT	1P4W-4CT	1P2W-2CT	1P4W-4CT	1P2W-2CT	1P4W-4CT
Input Voltage	10 ~ 300 V					
Input Current	CT $\varnothing$ 10 mm (60 A); CT $\varnothing$ 16 mm (100 A); CT $\varnothing$ 24 mm (200 A)					
Input Frequency	50/60 Hz					
W Accuracy	Better than 0.5% (PF=1)					
Starting Current	$>0.03A$ (60A), $>0.05A$ (100A), $>0.09A$ (200A)					
Power Parameter Measurement	True RMS voltage ( $V_{rms}$ ), True RMS current ( $I_{rms}$ ), Active Power (kW), Active Energy (kWh), Apparent Power (kVA), Apparent Energy (kVAh), Reactive Power (kVAR), Reactive Energy (kVARh), Power Factor (PF), Frequency					
Data Update Rate	1 Second					
<b>Communication</b>						
RS-485	Protocol	Modbus-RTU	-	-	-	-
	Baud Rate	9600,19200 (default), 38400, 115200; DIP Switch Selectable	-	-	-	-
	Data Format	N,8,1 (default); N,8,2; E,8,1; E,8,2; O,8,1; O,8,2	-	-	-	-
	Isolation	3000 V <sub>dc</sub>	-	-	-	-
Ethernet	Protocol	-	Modbus TCP	-	-	-
CANopen	Protocol	-	-	-	CANopen	-
	Baud Rate	-	-	-	125 k (default), 250 k, 500 k, 1 M; DIP Switch Selectable	-
<b>Alarm Output</b>						
Power Relay	Form A (Normal Open) x 2; Relay Contact Voltage Range: 5 A @ 250 V <sub>AC</sub> (47 ~ 63Hz), 5 A @ 30 V <sub>DC</sub>					
<b>Power</b>						
Input Range/Power Consumption	$+12 \sim 48$ V <sub>DC</sub> /2 W					
<b>Environment</b>						
Temperature/Ambient Relative Humidity	Operating Temperature: $-20 \sim +70^{\circ}C$ /Storage Temperature: $-25 \sim +80^{\circ}C$ /10% ~ 90% RH, Non-condensing					

## 2 Independent Main Circuit Inputs



## Dimensions (Units: mm)



## Ordering Information

RS-485 Interface	
PM-3112-100 CR	Modbus RTU, 2 loops single-phase Power Meter; includes 60A CT (Inside diameter 10 mm; wire lead 1.8 m) x 2 (RoHS)
PM-3112-160 CR	Modbus RTU, 2 loops single-phase Power Meter; includes 100A CT (Inside diameter 16 mm; wire lead 1.8 m) x 2 (RoHS)
PM-3112-240 CR	Modbus RTU, 2 loops single-phase Power Meter; includes 200A CT (Inside diameter 24 mm; wire lead 1.8 m) x 2 (RoHS)
PM-3114-100 CR	Modbus RTU, 4 loops single-phase Power Meter; includes 60A CT (Inside diameter 10 mm; wire lead 1.8 m) x 4 (RoHS)
PM-3114-160 CR	Modbus RTU, 4 loops single-phase Power Meter; includes 100A CT (Inside diameter 16 mm; wire lead 1.8 m) x 4 (RoHS)
PM-3114-240 CR	Modbus RTU, 4 loops single-phase Power Meter; includes 200A CT (Inside diameter 24 mm; wire lead 1.8 m) x 4 (RoHS)
Ethernet Interface	
PM-3112-100-MTCP CR	Modbus RTU, 2 loops single-phase Power Meter; includes 60A CT (Inside diameter 10 mm; wire lead 1.8 m) x 2 (RoHS)
PM-3112-160-MTCP CR	Modbus RTU, 2 loops single-phase Power Meter; includes 100A CT (Inside diameter 16 mm; wire lead 1.8 m) x 2 (RoHS)
PM-3112-240-MTCP CR	Modbus RTU, 2 loops single-phase Power Meter; includes 200A CT (Inside diameter 24 mm; wire lead 1.8 m) x 2 (RoHS)
PM-3114-100-MTCP CR	Modbus RTU, 4 loops single-phase Power Meter; includes 60A CT (Inside diameter 10 mm; wire lead 1.8 m) x 4 (RoHS)
PM-3114-160-MTCP CR	Modbus RTU, 4 loops single-phase Power Meter; includes 100A CT (Inside diameter 16 mm; wire lead 1.8 m) x 4 (RoHS)
PM-3114-240-MTCP CR	Modbus RTU, 4 loops single-phase Power Meter; includes 200A CT (Inside diameter 24 mm; wire lead 1.8 m) x 4 (RoHS)
CAN bus Interface	
PM-3112-100-CPS CR	Modbus RTU, 2 loops single-phase Power Meter; includes 60A CT (Inside diameter 10 mm; wire lead 1.8 m) x 2 (RoHS)
PM-3112-160-CPS CR	Modbus RTU, 2 loops single-phase Power Meter; includes 100A CT (Inside diameter 16 mm; wire lead 1.8 m) x 2 (RoHS)
PM-3112-240-CPS CR	Modbus RTU, 2 loops single-phase Power Meter; includes 200A CT (Inside diameter 24 mm; wire lead 1.8 m) x 2 (RoHS)
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