

PM-3033/-MTCP/-CPS

Three-phase Smart Power Meter

Features

- Bi-directional Energy
- True RMS Power Measurements
- Energy Analysis for 3P4W, 3P3W, 1P3W, 1P2W
- Direct input of secondary side 1A/5A CT
- Voltage Measurements Up to 500 V
- W Accuracy Better than 0.5% (PF=1)
- Total Harmonic Distortion (THD)
- IEC 61010-1 and EN 61010-1

ICP DAS brings the most powerful, cost-effective, advanced Smart Power Meters PM-3033 series that gives you access to real-time electric usage for three-phase power measurement. With its high accuracy (<0.5%, PF=1), the PM-3033 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.

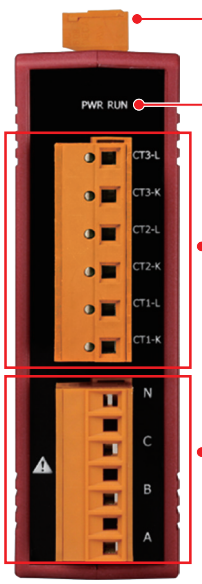
Direct input from "secondary side 1A/5A" type CTs. Dedicated CTs are no longer needed, which lowers the cost of implementation. It operates over a wide input voltages range 10 to 500 V_{AC} which allows worldwide compatibility. It also supports Modbus RTU, Modbus TCP or CANopen protocols for easy integration.

Specifications

Models		PM-3033	PM-3033-MTCP	PM-3033-CPS
AC Power Measurement				
Wiring		3P4W-3CT, 3P3W-2CT, 3P3W-3CT, 1P2W-1CT, 1P3W-2CT		
Loops		3-phase: 1; 1-phase: 3 @ 1P2W-1CT, 1 @ 1P3W-2CT		
Measurement Voltage		10 to 500 V		
Measurement Current		0.05A to 5A		
Measurement Frequency		50/60 Hz		
W Accuracy		Better than 0.5% (PF=1)		
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		
Communication				
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_{DC}	-	-
Ethernet (PoE)	Protocol	-	Modbus TCP	-
CANopen	Protocol	-	-	CANopen
	Baud Rate	-	-	125 k (default), 250 k, 500 k, 1 M; DIP Switch Selectable
	Isolation	-	-	3000 V_{DC}
Power				
Power Input		+12 to 48 V_{DC}	+12 to 48 V_{DC} or PoE	+12 to 48 V_{DC}
Power Consumption		2 W		
Environment				
Temperature		Operating Temperature: -20 to +70 °C / Storage Temperature: -25 to +80 °C		
Ambient Relative Humidity		10% to 90% RH, Non-condensing		

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CT Installation and Wiring



Aux. Power Input
+12 to 48 VDC

LED Indicators

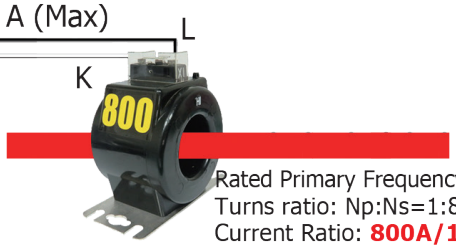
Direct input of
secondary side
1A/5A CT

AC Measurement
10 to 500 V

PM-3033



1 A (Max)

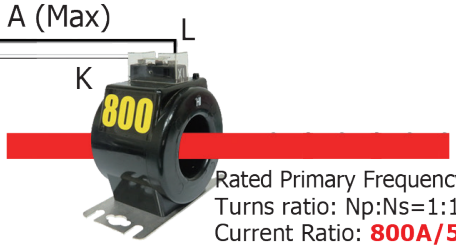


Rated Primary Frequency: 50/60 Hz
Turns ratio: Np:Ns=1:800
Current Ratio: **800A/1A**

PM-3033

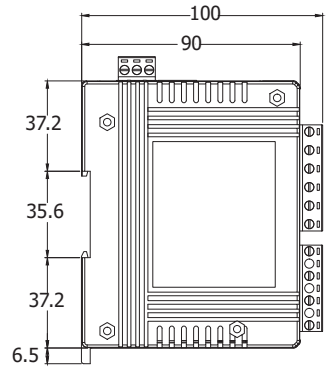


5 A (Max)

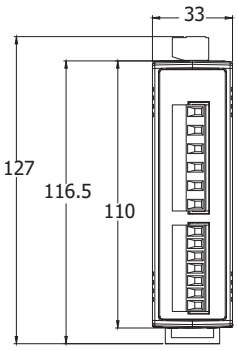


Rated Primary Frequency: 50/60 Hz
Turns ratio: Np:Ns=1:160
Current Ratio: **800A/5A**

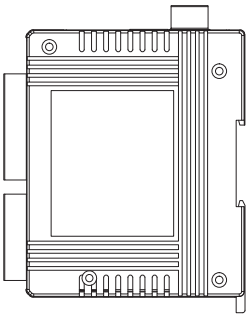
Dimensions (Units: mm)



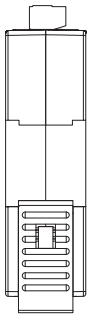
Left View



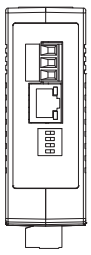
Front View



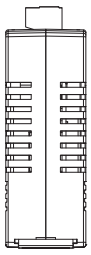
Right View



Rear View



Top View



Bottom View

Selection Guide

PM-3033 - **X X X**

Communication
□: RS-485
CPS: CANopen
MTCP: Modbus TCP

Ordering Information

RS-485 Interface	
PM-3033 CR	Modbus RTU, 3-phase power meter (1A/5A CT Input type) (RoHS)

Ethernet Interface	
PM-3033-MTCP CR	Modbus TCP, 3-phase power meter (1A/5A CT Input type) (RoHS)

CAN bus Interface	
PM-3033-CPS CR	CANopen, 3-phase power meter (1A/5A CT Input type) (RoHS)

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