



## Features

- Bi-directional Energy
- True RMS Power Measurements
- Energy Analysis for 3P4W, 3P3W, 1P3W, 1P2W
- Current Measurements Up to 400 A
- Voltage Measurements Up to 500 V
- Clip-on CT for Easy Installation
- W Accuracy Better than 0.5% (PF=1)
- Total Harmonic Distortion (THD)
- Supports 2 Power Relay Output (Form A)
- IEC 61010-1 and EN 61010-1



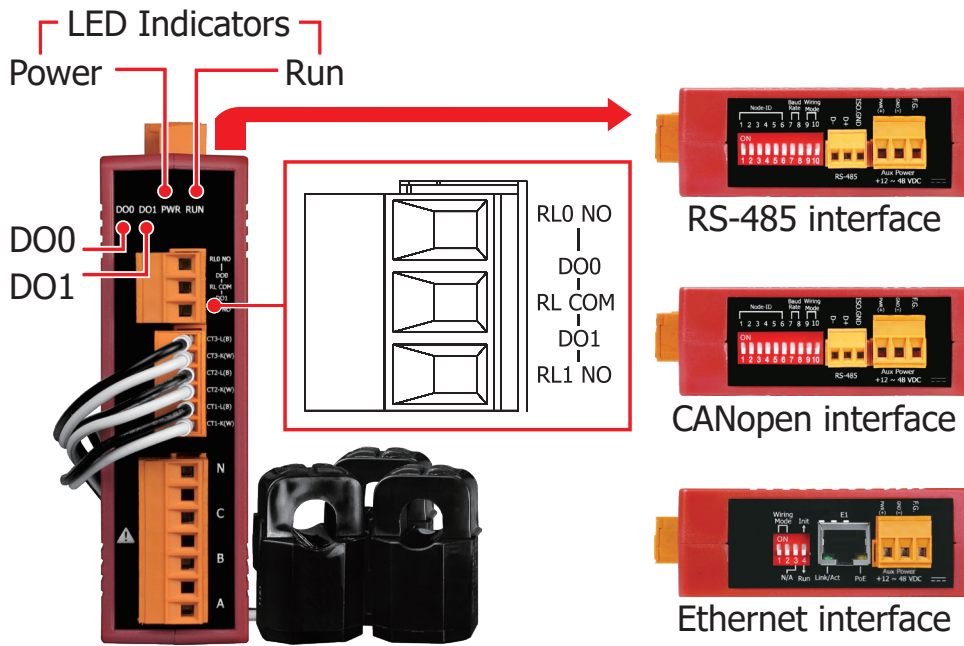
## Introduction

ICP DAS brings the most powerful, cost-effective, advanced Smart Power Meters PM-3133 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-3133 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 equipment 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 400 A). It operates over a wide input voltages range 10 to 500 VAC 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, CANopen or EtherNet/IP protocols for easy integration.

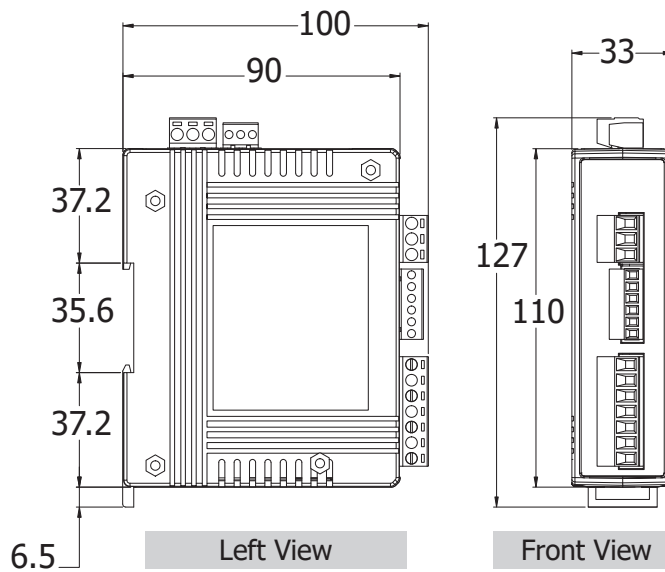
## Specifications

Models	PM-3133	PM-3133-MTCP	PM-3133-EIP	PM-3133-CPS
<b>AC Power Measurement</b>				
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	-005 (0.05 A to 5 A); -100 (0.05 A to 60 A); -160 (0.1 A to 100 A); -240 (0.15 A to 200 A); -360 (0.3 A to 300 A); -400 (0.3 A to 400 A)			
Measurement Frequency	50/60 Hz			
W Accuracy	Better than 0.5% (PF=1; -005 Input Current $>0.5A$ ; -100 Input Current $>1.5A$ ; -160 Input Current $>3A$ ; -240 Input Current $>3.5A$ ; -360 Input Current $>7A$ ; -400 Input Current $>10A$ ).			
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 (45 to 65 Hz)			
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 VDC	-	-
Ethernet (PoE)	Protocol	-	Modbus TCP	EtherNet/IP
CANopen	Protocol	-	-	CANopen
	Baud Rate	-	-	125 k (default), 250 k, 500 k, 1 M; DIP Switch Selectable
	Isolation	-	-	3000 VDC
<b>Alarm Output</b>				
Power Relay	Form A (Normal Open) x 2; Relay Contact Voltage Range: 5 A @ 250 VAC (47 to 63Hz), 5 A @ 30 VDC			
<b>Power</b>				
Power Input	+12 to 48 VDC	+12 to 48 VDC or PoE	+12 to 48 VDC	
Power Consumption	2 W			
<b>Environment</b>				
Temperature	Operating Temperature: -20 to +70 °C / Storage Temperature: -25 to +80 °C			
Ambient Relative Humidity	10% to 90% RH, Non-condensing			

## Appearance



## Dimensions (Units: mm)



## Selection Guide

**PM-3133 -** **X X X P** - **X X X**

**CT dimensions (Max. Current)**  
 005P: CTΦ10 mm, 5 A Max.  
 160: CTΦ16 mm, 100 A Max.  
 400: CTΦ36 mm, 400 A Max.  
**100P: CTΦ10 mm, 60 A Max.**  
 160P: CTΦ16 mm, 100 A Max.  
 240P: CTΦ24 mm, 200 A Max.  
 360P: CTΦ36 mm, 300 A Max.  
 400P: CTΦ36 mm, 400 A Max.

**Current Transformers (Secondary voltage 333 mV)**

**Communication**  
 □: RS-485  
 □: CANopen  
 □: Modbus TCP  
 □: EtherNet/IP

## Ordering Information

RS-485 Interface	
PM-3133-160 CR	Modbus RTU, 3-phase power meter; includes 100A CT (Inside diameter 16 mm; wire lead 1.8 m) x 3 (RoHS)
PM-3133-400-L080 CR	Modbus RTU, 3-phase power meter; includes 400A CT (Inside diameter 36 mm; wire lead 8 m) x 3 (RoHS)
PM-3133-005P CR	Modbus RTU, 3-phase power meter; includes 5A CT (Inside diameter 10 mm; wire lead 4 m) x 3 (RoHS)
PM-3133-100P CR	Modbus RTU, 3-phase power meter; includes 60A CT (Inside diameter 10 mm; wire lead 4 m) x 3 (RoHS)
PM-3133-160P CR	Modbus RTU, 3-phase power meter; includes 100A CT (Inside diameter 16 mm; wire lead 4 m) x 3 (RoHS)
PM-3133-240P CR	Modbus RTU, 3-phase power meter; includes 200A CT (Inside diameter 24 mm; wire lead 4 m) x 3 (RoHS)
PM-3133-360P CR	Modbus RTU, 3-phase power meter; includes 300A CT (Inside diameter 36 mm; wire lead 4 m) x 3 (RoHS)
PM-3133-400P CR	Modbus RTU, 3-phase power meter; includes 400A CT (Inside diameter 36 mm; wire lead 4 m) x 3 (RoHS)

Ethernet Interface (Modbus TCP)	
PM-3133-160-MTCP CR	Modbus TCP, 3-phase power meter; includes 100A CT (Inside diameter 16 mm; wire lead 1.8 m) x 3 (RoHS)
PM-3133-005P-MTCP CR	Modbus TCP, 3-phase power meter; includes 5A CT (Inside diameter 10 mm; wire lead 4 m) x 3 (RoHS)
PM-3133-100P-MTCP CR	Modbus TCP, 3-phase power meter; includes 60A CT (Inside diameter 10 mm; wire lead 4 m) x 3 (RoHS)
PM-3133-160P-MTCP CR	Modbus TCP, 3-phase power meter; includes 100A CT (Inside diameter 16 mm; wire lead 4 m) x 3 (RoHS)
PM-3133-240P-MTCP CR	Modbus TCP, 3-phase power meter; includes 200A CT (Inside diameter 24 mm; wire lead 4 m) x 3 (RoHS)
PM-3133-360P-MTCP CR	Modbus TCP, 3-phase power meter; includes 300A CT (Inside diameter 36 mm; wire lead 4 m) x 3 (RoHS)
PM-3133-400P-MTCP CR	Modbus TCP, 3-phase power meter; includes 400A CT (Inside diameter 36 mm; wire lead 4 m) x 3 (RoHS)

Ethernet Interface (EtherNet/IP)	
PM-3133-100P-EIP CR	EtherNet/IP, 3-phase power meter; includes 60A CT (Inside diameter 10 mm; wire lead 4 m) x 3 (RoHS)
PM-3133-160P-EIP CR	EtherNet/IP, 3-phase power meter; includes 100A CT (Inside diameter 16 mm; wire lead 4 m) x 3 (RoHS)
PM-3133-240P-EIP CR	EtherNet/IP, 3-phase power meter; includes 200A CT (Inside diameter 24 mm; wire lead 4 m) x 3 (RoHS)
PM-3133-360P-EIP CR	EtherNet/IP, 3-phase power meter; includes 300A CT (Inside diameter 36 mm; wire lead 4 m) x 3 (RoHS)
PM-3133-400P-EIP CR	EtherNet/IP, 3-phase power meter; includes 400A CT (Inside diameter 36 mm; wire lead 4 m) x 3 (RoHS)

CAN bus Interface	
PM-3133-160-CPS CR	CANopen, 3-phase power meter; includes 100A CT (Inside diameter 16 mm; wire lead 1.8 m) x 3 (RoHS)
PM-3133-005P-CPS CR	CANopen, 3-phase power meter; includes 5A CT (Inside diameter 10 mm; wire lead 4 m) x 3 (RoHS)
PM-3133-100P-CPS CR	CANopen, 3-phase power meter; includes 60A CT (Inside diameter 10 mm; wire lead 4 m) x 3 (RoHS)
PM-3133-160P-CPS CR	CANopen, 3-phase power meter; includes 100A CT (Inside diameter 16 mm; wire lead 4 m) x 3 (RoHS)
PM-3133-240P-CPS CR	CANopen, 3-phase power meter; includes 200A CT (Inside diameter 24 mm; wire lead 4 m) x 3 (RoHS)
PM-3133-360P-CPS CR	CANopen, 3-phase power meter; includes 300A CT (Inside diameter 36 mm; wire lead 4 m) x 3 (RoHS)
PM-3133-400P-CPS CR	CANopen, 3-phase power meter; includes 400A CT (Inside diameter 36 mm; wire lead 4 m) x 3 (RoHS)