



PM-3133/-MTCP/-CPS

Three-phase Smart Power Meter

Features

- Bi-directional Energy
- True RMS Power Measurements
- Energy Analysis for 3P4W, 3P3W, 1P3W, 1P2W
- Current Measurements Up to 400 A with Different CT Ratio
- 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 RS-485, Ethernet (PoE) or CANopen Interface
- Supports Modbus RTU, Modbus TCP or CANopen Protocol
- Supports 2 Power Relay Output (Form A)
- IEC 61010-1 and EN 61010-1
- Multiple Data Format

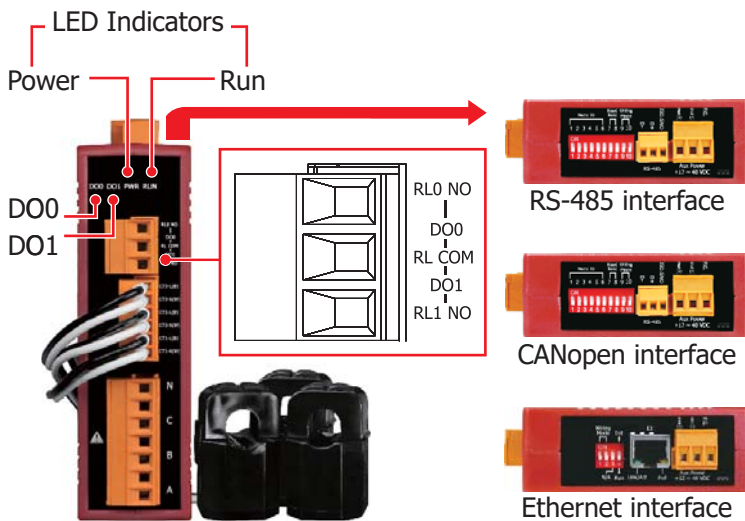


ICP DAS brings the most powerful, cost-effective, advanced Smart Power Meters PM-3133 series that gives you access to real-time electric usage for three-phase power measurement. With its high accuracy ($<0.5\%$, $PF=1$), the PM-3133 series can be applied to both low voltage primary side and/or medium/high voltage secondary side and enables the users to obtain reliable and accurate energy consumption readings from the monitored 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 400 A). It operates over a wide input voltages range $10 \sim 500$ V_{AC} 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. You can use CT's that you currently own with PM-3133P (without CTs) Power Meter. The CT inputs of the PM-3133P can handle a maximum of 333mV of AC current.

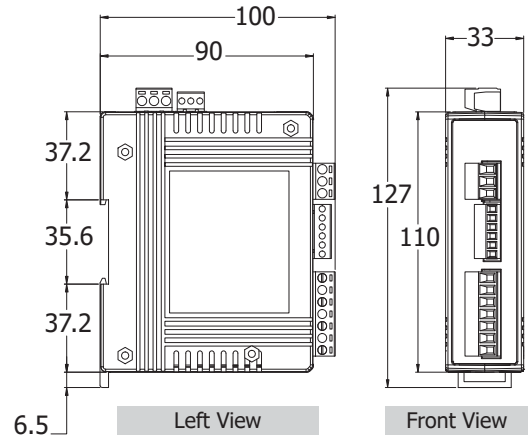
Specifications

| Models | PM-3133 | PM-3133-MTCP | PM-3133-CPS |
|-----------------------------|--|---|---|
| AC Power Measurement | | | |
| Wiring | 3P4W-3CT, 3P3W-2CT, 3P3W-3CT, 1P2W-1CT, 1P3W-2CT | | |
| Measurement Voltage | 10 ~ 500 V | | |
| Measurement Current | CTØ10 mm (60 A); CTØ16 mm (100 A); CTØ24 mm (200 A); CTØ36 mm (300 A); CTØ36 mm (400 A) | | |
| 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} |
| Alarm Output | | | |
| Power Relay | Form A (Normal Open) x 2; Relay Contact Voltage Range: 5 A @ 250 V _{AC} (47 ~ 63Hz), 5 A @ 30 V _{DC} | | |
| Power | | | |
| Power Input | +12 ~ 48 V _{DC} | +12 ~ 48 V _{DC} or PoE | +12 ~ 48 V _{DC} |
| Power Consumption | 2 W | | |
| Environment | | | |
| Temperature | Operating Temperature: -20 ~ +70 °C / Storage Temperature: -25 ~ +80 °C | | |
| Ambient Relative Humidity | 10% ~ 90% RH, Non-condensing | | |

Appearance



Dimensions (Units: mm)



Selection Guide

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

X X X P - X X X

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

Current Transformers
 (Secondary voltage 333 mV)

Communication
X: RS-485
X: CANopen
X: Modbus TCP

Ordering Information

| RS-485 Interface | |
|------------------|---|
| PM-3133P CR | Modbus RTU, 3-phase power meter (Compatible with CTs from 50 to 1000 A/333 mV output) (RoHS) |
| PM-3133-100 CR | Modbus RTU, 3-phase power meter; includes 60A CT (Inside diameter 10 mm; wire lead 1.8 m) x 3 (RoHS) |
| 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-3133-240 CR | Modbus RTU, 3-phase power meter; includes 200A CT (Inside diameter 24 mm; wire lead 1.8 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 | |
|----------------------|---|
| PM-3133P-MTCP CR | Modbus TC, 3-phase power meter (Compatible with CTs from 50 to 1000 A/333 mV output) (RoHS) |
| PM-3133-100-MTCP CR | Modbus TCP, 3-phase power meter; includes 60A CT (Inside diameter 10 mm; wire lead 1.8 m) x 3 (RoHS) |
| 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-3133-240-MTCP CR | Modbus TCP, 3-phase power meter; includes 200A CT (Inside diameter 24 mm; wire lead 1.8 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) |

| CAN bus Interface | |
|---------------------|--|
| PM-3133-100-CPS CR | CANopen, 3-phase power meter; includes 60A CT (Inside diameter 10 mm; wire lead 1.8 m) x 3 (RoHS) |
| 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-3133-240-CPS CR | CANopen, 3-phase power meter; includes 200A CT (Inside diameter 24 mm; wire lead 1.8 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) |