

PM-3133P/-MTCP/-CPS

Three-phase Smart Power Meter

Features

- Bi-directional Energy
- True RMS Power Measurements
- Energy Analysis for 3P4W, 3P3W, 1P3W, 1P2W
- Supports CTs with 333 mV voltage output
- Voltage Measurements Up to 500 V
- Total Harmonic Distortion (THD)
- Supports 2 Power Relay Output (Form A)
- IEC 61010-1 and EN 61010-1

Introduction

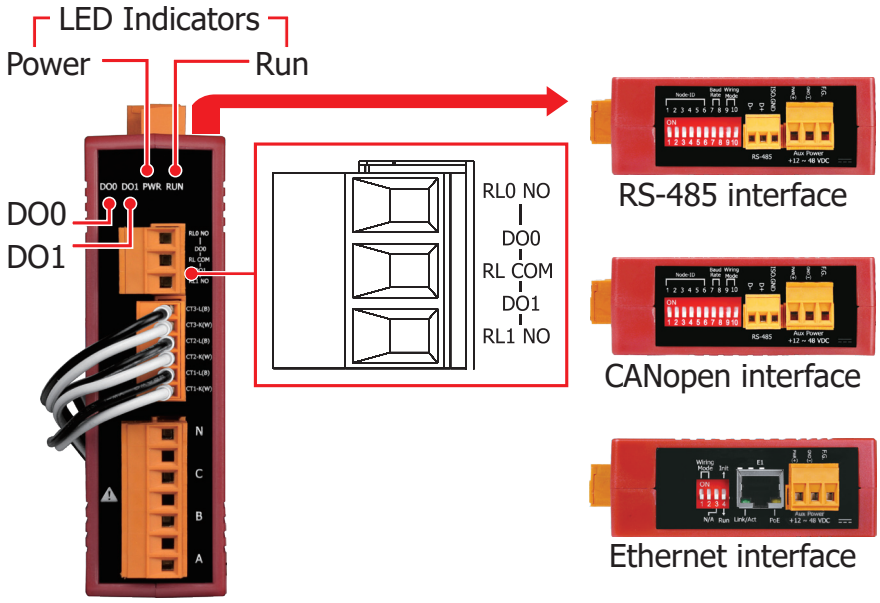
ICP DAS offers the powerful and cost-effective PM-3133P series Smart Power Meters, providing real-time measurement data for three-phase power systems. The PM-3133P series is suitable for both low-voltage primary-side and medium/high-voltage secondary-side applications, allowing users to obtain reliable and accurate energy consumption data and perform real-time equipment monitoring and control. It supports a wide input voltage range of 10 to 500 VAC, making it compatible with international voltage standards. The device features two relay output channels, which can be integrated with sirens or lighting systems to issue alarm notifications when abnormal power conditions are detected. The PM-3133P does not include current transformers (CTs) by default, allowing users to choose their own 333 mV output CTs to meet various application requirements. However, Rogowski coils are not supported.

Specifications

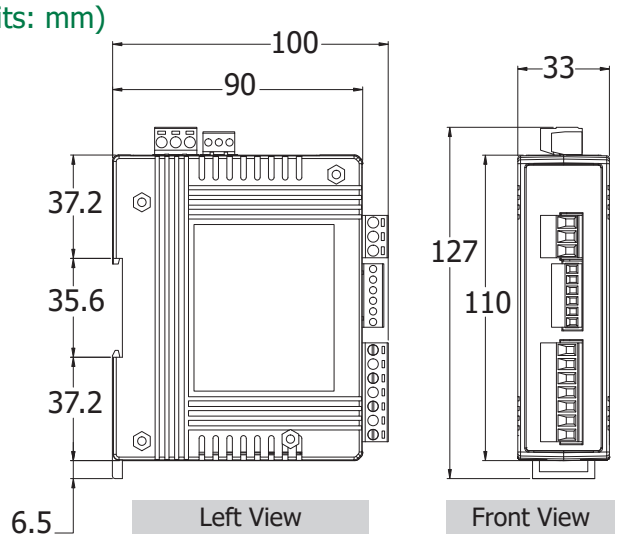
Models		PM-3133P	PM-3133P-MTCP	PM-3133P-CPS
AC Power Measurement				
Wiring		3P4W-3CT, 3P3W-2CT, 3P3W-3CT, 1P2W-1CT, 1P3W-2CT		
Loops		3-phase: 1; 1-phase: 3 @ 1P2W-1CT, 1 @ 1P3W-2CT		
Measurement Voltage		10 to 500 V		
Measurement Current		Supports 333 mV output CTs; actual current range depends on CT's primary rating		
Measurement Frequency		50/60 Hz		
W Accuracy		Accuracy is approximately 2–5% (PF = 1), depending on the CT used. The CT ratio must be set correctly		
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 to 63Hz), 5 A @ 30 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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Appearance



Dimensions (Units: mm)



Ordering Information

RS-485 Interface	
PM-3133P CR	Modbus RTU, 3-phase power meter; supports 333 mV CTs, not for Rogowski coils (RoHS)

Ethernet Interface	
PM-3133P-MTCP CR	Modbus TCP, 3-phase power meter; supports 333 mV CTs, not for Rogowski coils (RoHS)

CAN bus Interface	
PM-3133P-CPS CR	CANopen, 3-phase power meter ; supports 333 mV CTs, not for Rogowski coils (RoHS)

Optional

333mV Split-Core CTs		
CA-SCT10P-005A-L040-3P	Φ10 mm split-core CT (3 pcs), 0.05–5 A, ±0.5% accuracy, 4 m cable, 50/60 Hz (RoHS)	
CA-SCT10P-60A-L040-3P	Φ10 mm split-core CT (3 pcs), 0.05–60 A, ±1% accuracy, 4 m cable, 50/60 Hz (RoHS)	
CA-SCT16P-100A-L040-3P	Φ16 mm split-core CT (3 pcs), 0.1–100 A, ±2% accuracy, 4 m cable, 50/60 Hz (RoHS)	
CA-SCT24P-200A-L040-3P	Φ24 mm split-core CT (3 pcs), 0.15–200 A, ±1% accuracy, 4 m cable, 50/60 Hz (RoHS)	
CA-SCT36P-300A-L040-3P	Φ36 mm split-core CT (3 pcs), 0.3–300 A, ±0.5% accuracy, 4 m cable, 50/60 Hz (RoHS)	
CA-SCT36P-400A-L040-3P	Φ36 mm split-core CT (3 pcs), 0.3–400 A, ±0.5% accuracy, 4 m cable, 50/60 Hz (RoHS)	

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