

PM-5133-RCT

3.5" Touchscreen 3-phase Smart Power Meter with Rogowski Coil CT

Features

- Bi-directional Energy
- True RMS Power Measurements
- Energy Analysis for 3P4W, 3P3W, 1P3W, 1P2W
- Rogowski Coil Soft CT for Easy Installation
- W Accuracy Better than 2% (PF=1; Input Current >50A; for -500P and -1000P)
- W Accuracy Better than 2% (PF=1; Input Current >200A; for -2000P and -4000P)
- Total Harmonic Distortion (THD)
- 3.5” High-resolution color touch screen
- Provides time-stamped power information logging function
- 1-hour demand trend display and contract capacity warning
- 2 Power Relay outputs triggered by defined alarm
- Offers 32 alarms or events information display

Introduction

The **PM-5133-RCTxxxP series** is a touch-type three-phase smart meter designed for industrial automation and energy management applications. Equipped with a 3.5-inch high-resolution color TFT touch screen, it allows users to intuitively monitor power information and manage demand to comply with contracted capacity requirements for carbon inventory and ISO 50001 energy management. The product provides a comprehensive set of power measurement functions, including voltage measurement up to 500 VAC, Rogowski coils (various types supported, with input current up to 4000 A), bidirectional kWh measurement, RMS measurement, energy consumption analysis with multiple wiring configurations, and power measurement accuracy better than 2% (PF = 1). It also supports Total Harmonic Distortion (THD) measurement, enabling high-precision energy management with clear visualization. In addition, the PM-5133-RCTxxxP series features time-stamped power data logging, a one-hour demand trend display, and contracted capacity alerts with relay alarm linkage. It also supports the display of up to 32 event and alarm records. These features facilitate power demand prediction and management in flexible system integration and remote monitoring applications.

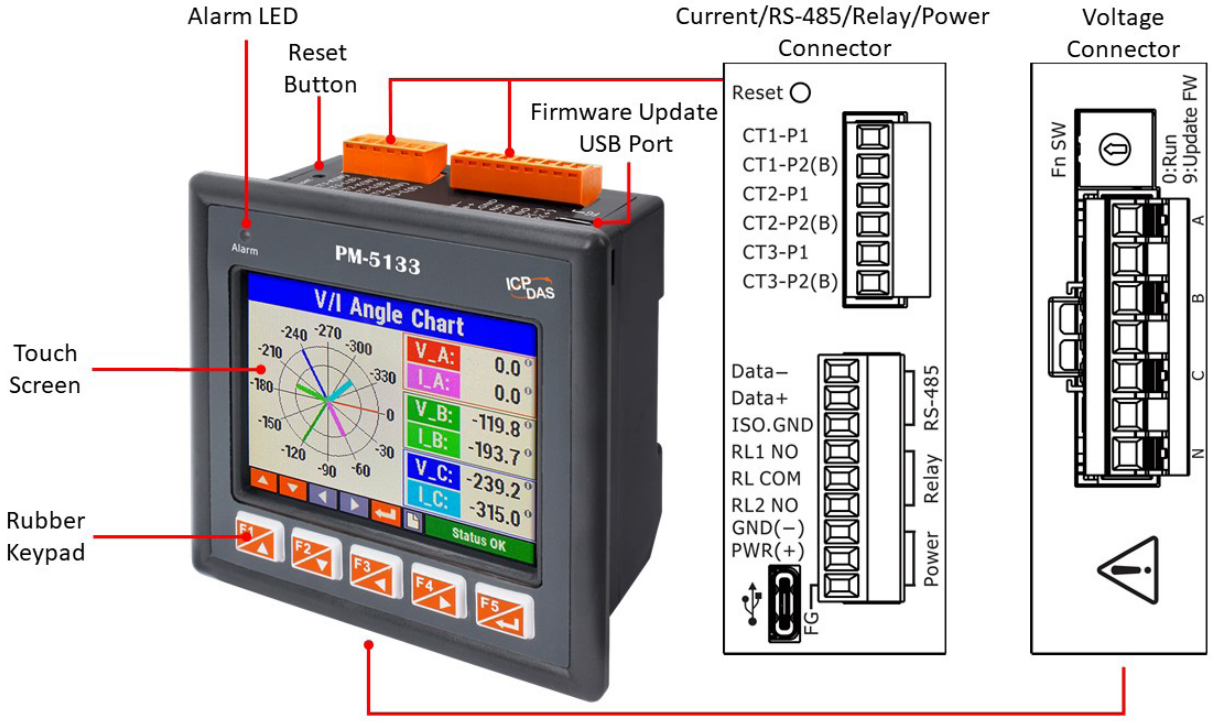
Specifications

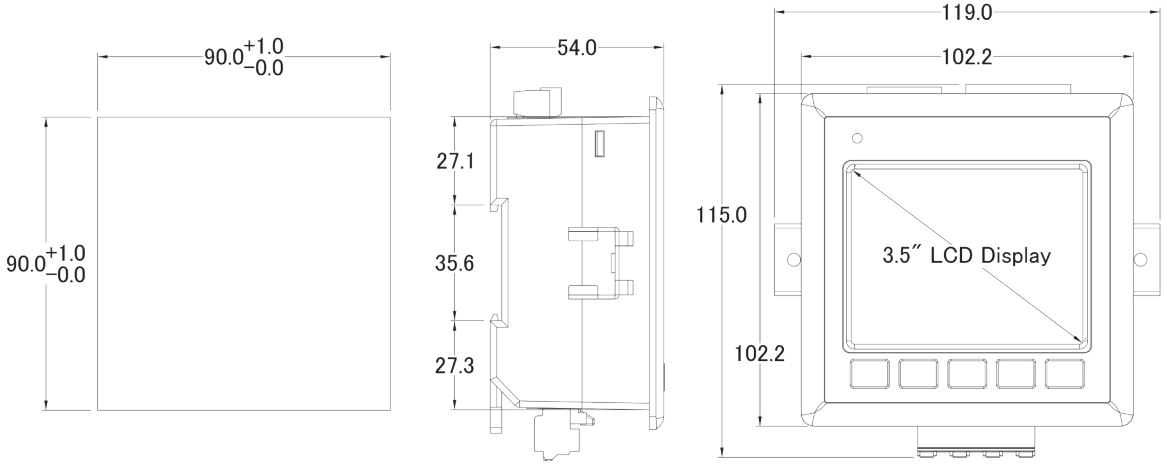
System		
Real Time Clock(RTC)		Yes
Data Logger		
Time Stamp		Yes
Time Interval		1 second to 24 hours
Max. Records		638,586 records 7.39 days @ 1 second, 443 days @ 1 minute 24 power parameters per record (selectable)
AC Power Measurement		
Wiring		3P4W-3CT, 3P3W-2CT, 3P3W-3CT, 1P2W-1CT, 1P3W-2CT
Loops		3-phase: 1; 1-phase: 3 @ 1P2W-1CT, 1 @ 1P3W-2CT
Measurement Voltage		10 to 500 V
Measurement Current		PM-5133-RCT500P: CTØ55 mm (5 A to 500 A) PM-5133-RCT1000P: CTØ80 mm (5 A to 1000 A) PM-5133-RCT2000P: CTØ105 mm (5 A to 2000 A) PM-5133-RCT4000P: CTØ185 mm (5 A to 4000 A)
Measurement Frequency		50 Hz (Range 45 to 55 Hz)/ 60 Hz (Range 55 to 65 Hz)
W Accuracy		Better than 2% (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 (45 to 65 Hz)
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 VDC
USB		Type C Connector; USB 1.1 Client (Firmware updates only)

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}
HMI	
LCD Display	3.5 TFT (Resolution 240 x 320, 65535 colors)
Backlight Life	20,000 hours
Brightness	270 cd/m2
LED Indicators	Yes, 1 Alarm LED
Touch Screen	Yes
Reset Button	Yes
Rotary Switch	Yes(Firmware updates only)
Rubber Keypad	5 keys(Programmable)
Buzzer	Yes
Power	
Power Input	+12 to 48 VDC
Power Consumption	3 W
Mechanical	
Casing	Plastic
Dimensions (mm)	119 x 115 x 54 (W x L x H)
Ingress Protection Rating	Front Panel: IP65
Installation	DIN-Rail Mounting and Panel Mounting
Panel Cut-out (mm)	90 x 90, +1/-0
Environment	
Temperature	Operating Temperature: -20 to +50 °C Storage Temperature: -25 to +80 °C
Humidity	10% to 90% RH, Non-condensing

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Appearance





Panel Cut-out | Left View | Front View

Ordering Information

RS-485 Interface	
PM-5133-RCT500P	3.5" Touch LCD screen, Modbus RTU, Isolated 3-phase power meter; 500A Rogowski Coil CT (Inside diameter 55 mm; wire lead 4 m) x 3 (RoHS)
PM-5133-RCT1000P	3.5" Touch LCD screen, Modbus RTU, Isolated 3-phase power meter; 1000A Rogowski Coil CT (Inside diameter 80 mm; wire lead 4 m) x 3 (RoHS)
PM-5133-RCT2000P	3.5" Touch LCD screen, Modbus RTU, Isolated 3-phase power meter; 2000A Rogowski Coil CT (Inside diameter 105 mm; wire lead 4 m) x 3 (RoHS)
PM-5133-RCT4000P	3.5" Touch LCD screen, Modbus RTU, Isolated 3-phase power meter; 4000A Rogowski Coil CT (Inside diameter 185 mm; wire lead 4 m) x 3 (RoHS)

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