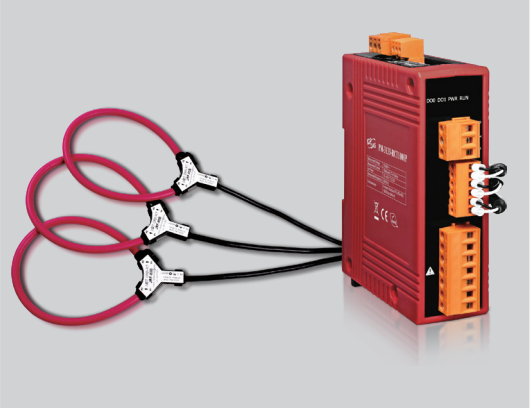


PM-3133-RCT

Three-phase Smart Power Meter

Features

- Bi-directional Energy
- True RMS Power Measurements
- Energy Analysis for 3P4W, 3P3W, 1P3W, 1P2W
- Current Measurements Up to 4000 A
- Voltage Measurements Up to 500 V
- 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)
- Supports 2 Power Relay Output (Form A)
- IEC 61010-1 and EN 61010-1
- Supports multiple RS-485 data formats

Introduction

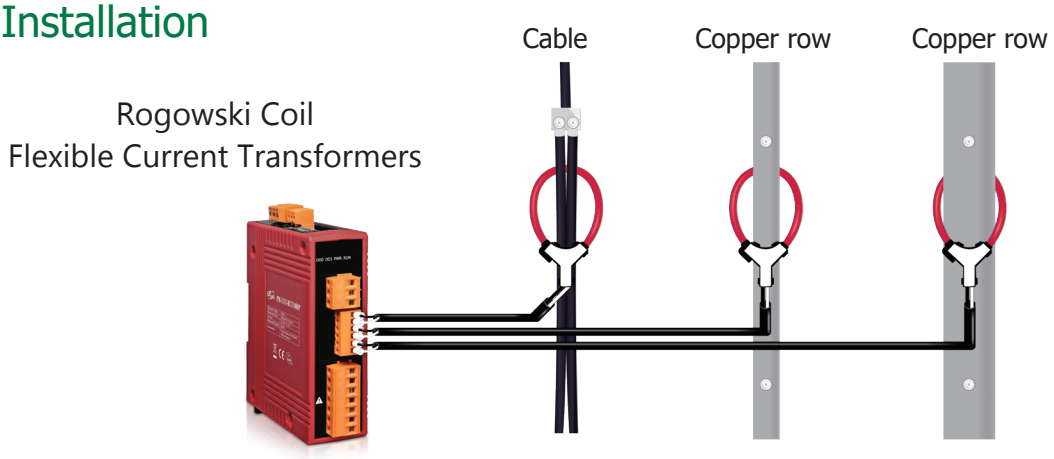
ICP DAS has launched the PM-3133-RCT series of smart power meters, offering a powerful and cost-effective solution designed for real-time three-phase power system measurement. This series uses easy-to-install Rogowski coil rope-type current transformers, suitable for high current measurements from 500A to 4000A (but not suitable for precise low current measurements), making them particularly ideal for installations with large conductor diameters and confined spaces. Even in situations where traditional ferromagnetic material transformers cannot measure, the Rogowski coil current sensors provide a convenient measurement solution. The PM-3133-RCT supports a wide voltage range from 10 to 500 VAC, meeting international voltage standards, and features two relay outputs that can be integrated with alarms or lighting control systems to signal anomalies in power measurement information. Additionally, the series supports Modbus RTU, Modbus TCP, CANopen, or EtherNet/IP protocols, facilitating integration with power monitoring systems.

Specifications

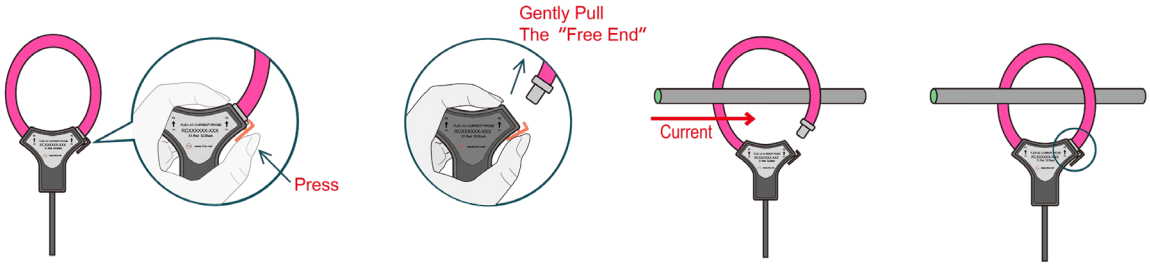
Models	PM-3133-RCT	PM-3133-RCT-MTCP	PM-3133-RCT-EIP	PM-3133-RCT-CPS
AC Power Measurement				
Wiring	3P4W-3CT, 3P3W-2CT, 3P3W-3CT, 1P2W-1CT, 1P3W-2CT			
Loops	3-phase: 1; 1-phase: 3 @ 1P2W-1CT, 1 @ 1P3W-2CT			
Measurement Voltage	10 to 500 V			
Measurement Current	CTØ55 mm (5 A to 500 A), CTØ80 mm (5 A to 1000 A), CTØ105 mm (5 A to 2000 A), CTØ185 mm (5 A to 4000 A)			
Measurement Frequency	50/60 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)			
Data Update Rate	1 Second			
Communication				
Interface	RS-485	Ethernet (PoE)		CANopen
Protocol	Modbus-RTU	Modbus TCP	EtherNet/IP	CANopen
Baud Rate	9600,19200 (default), 38400, 115200; DIP Switch Selectable	-		125 k (default), 250 k, 500 k, 1 M; 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}	-		3000 V_{DC}
Alarm Output				
Power Relay	Form A (Normal Open) × 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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Installation

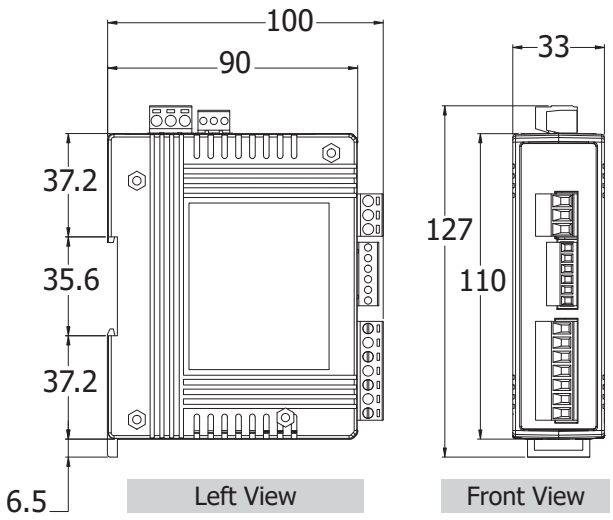


Rogowski Coil CT is "ropestyle" which delivers "Easy Installation" features for large window size and mechanical flexibility for tight space.



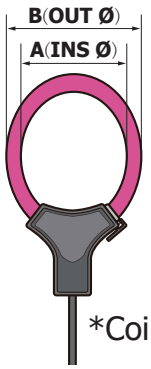
Rogowski Coil Soft CT Installation

Dimensions (Units: mm)



CT Dimensions (Units: mm)

Models	A (Inside diameter)	B (Outer diameter)
PM-3133-RCT500P	55 mm	68 mm
PM-3133-RCT1000P	80 mm	93 mm
PM-3133-RCT2000P	105 mm	118 mm
PM-3133-RCT4000P	185 mm	199 mm



*Coil Cross Section 6.5mm

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Ordering Information

RS-485 Interface (Modbus RTU)	
PM-3133-RCT500P CR	Modbus RTU, 3-phase power meter, 500A Rogowski Coil CT (Inside diameter 55 mm; wire lead 4 m) x 3 (RoHS)
PM-3133-RCT1000P CR	Modbus RTU, 3-phase power meter, 1000A Rogowski Coil CT (Inside diameter 80 mm; wire lead 4 m) x 3 (RoHS)
PM-3133-RCT2000P CR	Modbus RTU, 3-phase power meter, 2000A Rogowski Coil CT (Inside diameter 105 mm; wire lead 4 m) x 3 (RoHS)
PM-3133-RCT4000P CR	Modbus RTU, 3-phase power meter, 4000A Rogowski Coil CT (Inside diameter 185 mm; wire lead 4 m) x 3 (RoHS)

Ethernet Interface (Modbus TCP)	
PM-3133-RCT500P-MTCP CR	Modbus TCP, 3-phase power meter, 500A Rogowski Coil CT (Inside diameter 55 mm; wire lead 4 m) x 3 (RoHS)
PM-3133-RCT1000P-MTCP CR	Modbus TCP, 3-phase power meter, 1000A Rogowski Coil CT (Inside diameter 80 mm; wire lead 4 m) x 3 (RoHS)
PM-3133-RCT2000P-MTCP CR	Modbus TCP, 3-phase power meter, 2000A Rogowski Coil CT (Inside diameter 105 mm; wire lead 4 m) x 3 (RoHS)
PM-3133-RCT4000P-MTCP CR	Modbus TCP, 3-phase power meter, 4000A Rogowski Coil CT (Inside diameter 185 mm; wire lead 4 m) x 3 (RoHS)

Ethernet Interface (EtherNet/IP)	
PM-3133-RCT500P-EIP CR	EtherNEt/IP, 3-phase power meter, 500A Rogowski Coil CT (Inside diameter 55 mm; wire lead 4 m) x 3 (RoHS)
PM-3133-RCT1000P-EIP CR	EtherNEt/IP, 3-phase power meter, 1000A Rogowski Coil CT (Inside diameter 80 mm; wire lead 4 m) x 3 (RoHS)
PM-3133-RCT2000P-EIP CR	EtherNEt/IP, 3-phase power meter, 2000A Rogowski Coil CT (Inside diameter 105 mm; wire lead 4 m) x 3 (RoHS)
PM-3133-RCT4000P-EIP CR	EtherNEt/IP, 3-phase power meter, 4000A Rogowski Coil CT (Inside diameter 185 mm; wire lead 4 m) x 3 (RoHS)

CAN bus Interface (CANopen)	
PM-3133-RCT500P-CPS CR	CANopen, 3-phase power meter, 500A Rogowski Coil CT (Inside diameter 55 mm; wire lead 4 m) x 3 (RoHS)
PM-3133-RCT1000P-CPS CR	CANopen, 3-phase power meter, 1000A Rogowski Coil CT (Inside diameter 80 mm; wire lead 4 m) x 3 (RoHS)
PM-3133-RCT2000P-CPS CR	CANopen, 3-phase power meter, 2000A Rogowski Coil CT (Inside diameter 105 mm; wire lead 4 m) x 3 (RoHS)
PM-3133-RCT4000P-CPS CR	CANopen, 3-phase power meter, 4000A Rogowski Coil CT (Inside diameter 185 mm; wire lead 4 m) x 3 (RoHS)

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