

# PMC-352-D **DIN-Rail DC Energy Meter**



The PMC-352-D DIN-Rail DC Energy Meter is CET's latest offer for the lowcost DC metering market. Designed in a compact DIN form factor measuring 36x65x90mm, it is perfect for DC metering application in a space-limited environment. The PMC-352-D comes standard with 3xCurrent Inputs, 4xNTC Inputs for temperature monitoring and 3xDI for status monitoring. It also optionally provides 1xIresidual Input for Residual Current measurement. The standard SOE Log records meter events such as power-off, setup changes and DI operations in 1ms resolution. With a standard RS-485 port and optional LoRa supporting the Modbus RTU protocol, the PMC-352-D becomes a vital component of an intelligent, wireless, multifunction monitoring solution for any DC Power and Energy Management systems.

### **Typical Applications**

- DC Inverter, DC Panel Metering and DC Charging Station
- Industrial and commercial DC metering
- DC Distribution Monitoring and Data Center
- Wireless Energy & Condition Monitoring of DC Charging Stations

#### **Features Summary**

#### Ease of use

- Easy installation with DIN Rail mounting, no tools required
- Simple commissioning and low-deployment cost with Solid Core & Split Core Hall Effect Sensors and optional wireless IoT communication

#### **Basic Measurements**

- 1xDC Voltage Input and 3xDC Current Inputs
- 3xDC Sub-Meters (SM), each with Current, kW, kWh, Current and kW Demand

#### **Setpoints**

- 10 user programmable Setpoints with extensive list of monitoring parameters including Current, kW and kW Total, Temperature, Residual Current and Demand measurements
- Configurable thresholds and time delays

- 16 events time-stamped to ±1ms resolution
- Setup changes, Setpoint Alarms, DI Status changes, Clear Actions, etc.

#### 1/0

- 3xDI for Status Monitoring
- 4xNTC Inputs for Temperature Monitoring (sensor not included)
- Optional 1xIresidual Input for Residual Current Measurement

#### **Communications**

- Optically isolated RS-485 port at 1,200 to 38,400 bps
- Optional LoRa\* @ 860-935 MHz, configurable for EU863-870, RU864-870, IN865-867, US902-928, AU915-928, AS920-923, AS923-925

\*The LoRa option will be supported in the future.

#### **System Integration**

- Supported by our PecStar® iEMS and PMC EasyConfig
- Easy integration into other Automation or SCADA systems via Modbus RTU protocol or IoT based Energy Management System via LoRa

#### Accuracy

Parameters	Accuracy	Resolution
Voltage	±0.5%	0.001V
Current	±0.5% + Error of Hall Effect Sensor	0.001A
kW	±1.0%	0.001kW
kWh	IEC 62053-41: 2021 Class 1	0.01kWh
Residual Current	±0.5% + Error of Hall Effect Sensor	0.1mA
Temperature	±1°C	0.1°C

# **Technical Specifications**

Voltage (Un) Range Range Starting Voltage 100 to 400 VDC Starting Voltage 100V Overload 100V Overload 240VC Urrent Inputs (HALL)  Current (In) Split Core Hall Sensor Solid Core Hall Sensor Range 0.8% to 100% in 1.2xIn continuous, 10xIn for 1s Starting Current 8 Urden 1.2xIn continuous, 10xIn for 1s 20A/50A/100A/400A/600A/1000A 100A 0.8% to 100% in 1.2xIn continuous, 10xIn for 1s 35arting Current 8 Urden 1.2xIn continuous, 10xIn for 1s 240V in 1.2xIn continuous, 10xIn for 1s 240V in 1.2xIn continuous, 10xIn for 1s 240VDC 100 to 400VDC 100 to 4	echnical specifications			
Range Starting Voltage 100V Continuous  Current (In) Split Core Hall Sensor Solid Core Hall Sensor Overload 100A 100A 100A 100A 100A 100A 100A 100	Voltage Inputs (V+, V-)			
Starting Voltage Overload  Vourcload  Current (In) Split Core Hall Sensor Solid Core Hall Sensor Range Overload  Verload  Verload	Voltage (Un)	240VDC		
Current (In) Split Core Hall Sensor Solid Core Hall Sensor Range Overload  Overload  Overload  Starting Current Burden Hall Sensor Output  Power Supply (Self-Powered via Voltage Input)  Nominal Voltage Range Surden  Digital Inputs (D11, D12, D13, D1C)  Type Sampling Hysteresis  In Somn/10mA (via Hall Effect Solid Core Residual Current Measurement)  Residual Current (IR)  In Somn/10mA (via Hall Effect Solid Core Residual Current Sensor)  O to 120% In Somn/10mA (via Hall Effect Solid Core Residual Current Sensor)  O to 120% In Hall Sensor Output  Somn/10mA (via Hall Effect Solid Core Residual Current Sensor)  O to 120% In Hall Sensor Output  Somn/10mA (via Hall Effect Solid Core Residual Current Measurement)  Temperature Inputs (TC11, TC12, TC21, TC22, TC31, TC32, TC41, TC42)  Type 2-Wire NTC Input (sensor not included) Protocol Baud Rate  1200/2400/4800/9600/19200/38400 bps  LORa (Future) RF Range RF Output Power Receiver Sensitivity Output Watts FCC Part 15C Certified by TCB  Environmental Conditions  Operating Temp. Storage Temp. Humidity Atmospheric Pressure Pollution Degree  DIN Rail JONN 1000 A(400A/400A/600A/1000A  2040VDC Externally Excited JONN 101, DI2, DI3, DIC)  Type 240VDC Externally Excited 1000Hz 1000 to 400VDC 240VDC Externally Excited 1000Hz 1000Hz 1000Hz 1000 to 400VDC 240VDC Externally Excited 1000Hz 1000 to 400VDC 240VDC Externally Excited 1000Hz 1000 to 400VDC 240VDC Externally Excited 1000Hz 1000Hz 1000 to 400VDC 240VDC Externally Excited 1000Hz 1000Hz 1000 to 400VDC 240VC Externally Excited 1000Hz 1000	Range	100 to 400 VDC		
Current (In) Split Core Hall Sensor Solid Core Hall Sensor Range Overload Starting Current Burden Hall Sensor Output Power Supply (Self-Powered via Voltage Input)  Nominal Voltage Range Sampling Hysteresis In Hall Sensor Output Temperature Inputs (Pt.) Hall Sensor Output Temperature Inputs (TC1), TC12, TC21, TC22, TC31, TC32, TC41, TC42) Type Range Communications RS-485 (Standard) Protocol Burden RS-6935 MHz (Configurable) Som RS-6935 MHz (Config	Starting Voltage	100V		
Current (In) Split Core Hall Sensor Solid Core Hall Sensor Range Overload Starting Current Burden Hall Sensor Output  Power Supply (Self-Powered via Voltage Input)  Nominal Voltage Range Sampling Hysteresis Hysteresis Hall Sensor Output  Residual Current (IR) In SomA/10mA (via Hall Effect Solid Core Residual Current Measurement)  Residual Current (IR) In SomA/10mA (via Hall Effect Solid Core Residual Current Measurement)  Temperature Inputs (TC11, TC12, TC21, TC22, TC31, TC32, TC41, TC42) Type Range S-485 (Standard) Protocol Baud Rate LORa (Future) RF Range ISM Bands LORa (Future) RF Routput Power Receiver Sensitivity Output Watts FCC Part 15C Environmental Conditions  Modus RTU Storage Temp. Storage Temp. Storage Temp. Storage Temp. FCC Part 15C Environmental Conditions  Modus RTU SomA/10mA (wia Hall Effect Solid Core Residual Current Measurement) Temperature Inputs (TC11, TC12, TC22, TC31, TC32, TC41, TC42) Type Sensor Output SomA/10mA (via Hall Effect Solid Core Residual Current Measurement) Temperature Inputs (TC11, TC12, TC22, TC22, TC31, TC32, TC41, TC42) Type SomA/10mA (via Hall Effect Solid Core Residual Current Measurement) Temperature Inputs (TC11, TC12, TC22, TC22, TC31, TC32, TC41, TC42) Type SomA/10mA (via Hall Effect Solid Core Residual Current Measurement) Temperature Inputs (TC11, TC12, TC22, TC22, TC31, TC32, TC41, TC42) Type SomA/10mA (via Hall Effect Solid Core Residual Current Measurement)  Temperature Inputs (TC11, TC12, TC22, TC22, TC31, TC32, TC41, TC42) Type SomA/10mA (via Hall Effect Solid Core Residual Current Measurement)  Temperature (IR)  In SomA/10mA (via Hall Effect Solid Core Residual Current Measurement)  We (Bi-directional Current Measurement)  Temperature (IR)  In SomA/10mA (via Hall Effect Solid Core Residual Current Measurement)  Residual Current (IR)  In SomA/10mA (via Hall Effect Solid Core Residual Current Measurement)  Residual Current (IR)  In SomA/10mA (via Hall Effect Solid Core Residual Current Measurement)  Residual Current (IR)  In SomA/10mA (via Hall Effect Solid	Overload	400V continuous		
Split Core Hall Sensor Solid Core Hall Sensor Range Overload Starting Current Burden Hall Sensor Output  Power Supply (Self-Powered via Voltage Input)  Nominal Voltage Range Burden  Digital Inputs (DI1, DI2, DI3, DIC)  Type Sampling Hysteresis  Residual Current (IR)  In SomA/10mA (via Hall Effect Solid Core Residual Current Sensor)  Range Hall Sensor Output  **5V (Bi-directional Current Measurement)  Residual Current (IR)  In SomA/10mA (via Hall Effect Solid Core Residual Current Sensor)  Range Hall Sensor Output  **5V (Bi-directional Current Measurement)  Temperature Inputs (TC11, TC12, TC21, TC22, TC31, TC32, TC41, TC42)  Type 2-Wire NTC Input (sensor not included) -20°C to +140°C  Communications  RS-485 (Standard) Protocol Baud Rate  LORa (Future) RF Range ISM Bands EU863-870, RU864-870, IN865-867, US902-928, AU915-928, AS920-923, AS923-925  RF Output Power Receiver Sensitivity Output Watts FCC Part 15C Euroimantal Conditions  Operating Temp. Storage Temp. Humidity Atmospheric Pressure Pollution Degree  Mochanical Characteristics  Mounting Unit Dimensions  20A/50A/100A/400A/400A/600A/1000A  1.2xIn continuous, 10xIn for 1s 0.8% to 100% in 1.2xIn continuous, 10xIn for 1s 0.8% to 100% in 1.2xIn continuous, 10xIn for 1s 0.8% to 100% in 1.2xIn continuous, 10xIn for 1s 0.8% to 100% in 1.2xIn continuous, 10xIn for 1s 0.8% to 100% in 1.2xIn continuous, 10xIn for 1s 0.8% to 100% in 1.2xIn continuous, 10xIn for 1s 0.8% to 100% in 1.2xIn continuous, 10xIn for 1s 0.8% to 100% in 1.2xIn continuous, 10xIn for 1s 0.8% to 100% in 1.2xIn continuous, 10xIn for 1s 0.8% to 100% in 1.2xIn continuous, 10xIn for 1s 0.8% to 100% in 1.2xIn continuous, 10xIn for 1s 0.8% to 100% in 1.2xIn continuous, 10xIn for 1s 0.8% to 400vDC 240vDC 240vBc 24vBc	Current Inputs (HALL)			
Solid Core Hall Sensor Range Overload Starting Current Burden Hall Sensor Output Power Supply (Self-Powered via Voltage Input)  Nominal Voltage Range Burden Sampling Hysteresis  In Burden Hall Sensor Output  Residual Current (IR)  In SomA/10mA (via Hall Effect Solid Core Residual Current Measurement)  Residual Current (IR)  In SomA/10mA (via Hall Effect Solid Core Residual Current Measurement)  Temperature Inputs (TC11, TC12, TC21, TC22, TC31, TC32, TC41, TC42)  Type Range Power Supply (Self-Powered via Voltage Input)  Nominal Voltage Range 100 to 400VDC 240VDC 240VDC Externally Excited  Sampling 1000Hz Hysteresis  Residual Current (IR)  In SomA/10mA (via Hall Effect Solid Core Residual Current Sensor)  Romal Effect Solid Core Residual Current Measurement)  Temperature Inputs (TC11, TC12, TC21, TC31, TC32, TC41, TC42)  Type 2-Wire NTC Input (sensor not included) 2-20°C to +140°C Communications  RS-485 (Standard) Protocol Baud Rate 1200/2400/4800/9600/19200/38400 bps  LORa (Future) RF Range ISM Bands Eu863-870, RU864-870, IN865-867, US902-928, AU915-928, AS920-923, AS923-925  19 dBm (Maximum) Receiver Sensitivity Output Watts FCC Part 15C Certified by TCB Environmental Conditions  Operating Temp. Storage Temp. Humidity Atmospheric Pressure Pollution Degree  Mechanical Characteristics  Mounting Unit Dimensions  DIN Rail 36(W)x65(D)x90(H)mm	Current (In)			
Range Overload Starting Current Burden Verload Starting Current Burden Verload Starting Current Surden Verload Starting Current Surden Verload Verload Surden Verload Surden Verload Verload Surden Verload Verload Surden Verload Verl	Split Core Hall Sensor	20A/50A/100A/400A/600A/1000A		
Overload Starting Current Burden Hall Sensor Output  Power Supply (Self-Powered via Voltage Input)  Nominal Voltage Range 100 to 400VDC Burden Sampling Hysteresis In SomA/10mA (via Hall Effect Solid Core Residual Current Measurement)  Residual Current (IR)  In SomA/10mA (via Hall Effect Solid Core Residual Current Sensor)  Range 10 to 120% In Hall Sensor Output  Temperature Inputs (TC11, TC12, TC21, TC22, TC31, TC32, TC41, TC42)  Type 2-0"C to +140"C  Communications  RS-485 (Standard) Protocol Baud Rate LORA (Future) RF Range ISM Bands EU863-870, RU864-870, IN865-867, US902-928, AU915-928, AS920-923, AS923-925  RF Output Power Receiver Sensitivity Output Watts FCC Part 15C Certified by TCB  Environmental Conditions  Operating Temp. Storage Temp. Humidity Atmospheric Pressure Pollution Degree  Mechanical Characteristics  Mounting Unit Dimensions  In Sultan Current Measurement)  LoRa (Future) RF Range Receiver Sensitivity Output Watts FCC Part 15C Certified by TCB  Environmental Conditions  Distance Temp. Polive Receiver Sensity Polive Receiver Sen	Solid Core Hall Sensor	100A		
Starting Current Burden	Range	0.8% to 100% In		
Surden   Sensor Output   Every   Eve		1.2xIn continuous, 10xIn for 1s		
Hall Sensor Output  Power Supply (Self-Powered via Voltage Input)  Nominal Voltage Range Range Burden  Digital Inputs (DI1, DI2, DI3, DIC)  Type Sampling Hysteresis  Ins minimum  Residual Current (IR)  In  SomA/10mA (via Hall Effect Solid Core Residual Current Sensor)  Range Hall Sensor Output  Temperature Inputs (TC11, TC12, TC21, TC22, TC31, TC32, TC41, TC42)  Type Range Range  Residual Current (IR)  Temperature Inputs (TC11, TC12, TC21, TC22, TC31, TC32, TC41, TC42)  Type Range  Residual Current Sensor)  Residual Current Measurement)  Temperature Inputs (TC11, TC12, TC21, TC22, TC31, TC32, TC41, TC42)  Type Range  Residual Current Measurement)  Temperature Inputs (TC11, TC12, TC21, TC22, TC31, TC32, TC41, TC42)  Type Range  Residual Current Measurement)  Temperature Inputs (TC11, TC12, TC21, TC22, TC31, TC32, TC41, TC42)  Type Range  Residual Current Sensor)  Residual Current Measurement)  Temperature Inputs (TC11, TC12, TC21, TC22, TC31, TC32, TC41, TC42)  Type Range  Residual Current (IR)  Lore Residual Current (IR)  Lore Residual Current (IR)  Modbus RTU  1200/2400/4800/9600/19200/38400 bps  LoRa (Future)  RF Range Receiver Sensitivity  Output Power Receiver Sensitivity  Output Watts PCC Part 15C  Environmental Conditions  Operating Temp.  Storage Temp.  Humidity Sw to 95% non-condensing  To kPa to 106 kPa  Pollution Degree  Pollution Degree  DIN Rail  Unit Dimensions  Avonting Unit Dimensions	_			
Nominal Voltage   Range   240VDC   100 to 400VDC   3VA				
Nominal Voltage Range Burden  Digital Inputs (DI1, DI2, DI3, DIC)  Type Sampling Hysteresis Insminimum  Residual Current (IR) In SomA/10mA (via Hall Effect Solid Core Residual Current Sensor) 0 to 120% In ± 5V (Bi-directional Current Measurement)  Temperature Inputs (TC11, TC12, TC22, TC31, TC32, TC41, TC42)  Type Range -20°C to +140°C  Communications  RS-485 (Standard) Protocol Baud Rate 1200/2400/4800/9600/19200/38400 bps  LORa (Future) RF Range ISM Bands EU863-870, RU864-870, IN865-867, US902-928, AU915-928, AS920-923, AS923-925  RF Output Power Receiver Sensitivity Output Watts FCC Part 15C Certified by TCB  Environmental Conditions  Operating Temp. Storage Temp. Humidity Atmospheric Pressure Pollution Degree  Mechanical Characteristics  Mounting Unit Dimensions  DIN Rail 36(W)x65(D)x90(H)mm				
Range Burden  Digital Inputs (DI1, DI2, DI3, DIC)  Type	Power Supply			
Burden	Nominal Voltage	240VDC		
Digital Inputs (DI1, DI2, DI3, DIC)  Type	Range			
Type Sampling 1000Hz 10000Hz 10000Hz 10000Hz 10000Hz 10000Hz 10000Hz 10000Hz 10000Hz 1	Burden	< 3VA		
Type Sampling 1000Hz 10000Hz 10000Hz 10000Hz 10000Hz 10000Hz 10000Hz 10000Hz 10000Hz 1	Digital	Inputs (DI1, DI2, DI3, DIC)		
Sampling Hysteresis  Residual Current (IR)  In  SomA/10mA (via Hall Effect Solid Core Residual Current Sensor)  Range Hall Sensor Output  Temperature Inputs (TC11, TC12, TC21, TC22, TC31, TC32, TC41, TC42)  Type Range  2-Wire NTC Input (sensor not included) -20°C to +140°C  Communications  RS-485 (Standard) Protocol Baud Rate  LoRa (Future) RF Range ISM Bands  EU863-870, RU864-870, IN865-867, US902-928, AU915-928, AS920-923, AS923-925  RF Output Power Receiver Sensitivity Output Watts FCC Part 15C  Environmental Conditions  Operating Temp.  Storage Temp. Humidity Atmospheric Pressure Pollution Degree  Mechanical Characteristics  Mounting Unit Dimensions  No to 120% In Mod Via Hall Effect Solid Core Residual Current (IR)  Mod Via Hall Effect Solid Core Residual Current (IR)  Mod Via Hall Effect Solid Core Residual Current (IR)  Mod Via Hall Effect Solid Core Residual Current Sensor  Nomal Effect Solid Core Residual Current (IR)  Mod Via Hall Effect Solid Core Residual Current (IR)  Mod Via Hall Effect Solid Core Residual Current (IR)  Mod Via Hall Effect Solid Core Residual Current Via Hall Effect Solid Core Residual Current Sensor Nomal (Configurable)  Bodo Via Hall Effect Solid Core Residual Current Measurement)  ### Double Comment In Conditions  ### Discource Comment In Conditions    Configurable	Type	240VDC Externally Excited		
Hysteresis   1ms minimum   Residual Current (IR)	Sampling			
Residual Current (IR)  In		1ms minimum		
In 50mA/10mA (via Hall Effect Solid Core Residual Current Sensor)  Range 0 to 120% In ± 5V (Bi-directional Current Measurement)  Temperature Inputs (TC11, TC12, TC21, TC22, TC31, TC32, TC41, TC42)  Type 2-Wire NTC Input (sensor not included) -20°C to +140°C  Communications  RS-485 (Standard) Protocol Modbus RTU Baud Rate 1200/2400/4800/9600/19200/38400 bps  LORa (Future) RF Range 860-935 MHz (Configurable) EU863-870, RU864-870, IN865-867, US902-928, AU915-928, AS920-923, AS923-925  RF Output Power Receiver Sensitivity 0.03 (Typical) Certified by TCB  Environmental Conditions  Operating Temp25°C to +70°C -40°C to +85°C Humidity 5% to 95% non-condensing 70 kPa to 106 kPa Pollution Degree 2  Mechanical Characteristics  Mounting Unit Dimensions 36(W)x65(D)x90(H)mm				
Residual Current Sensor)  Range Hall Sensor Output  Temperature Inputs (TC11, TC12, TC21, TC22, TC31, TC32, TC41, TC42)  Type Range Paul Sensor Output  Temperature Inputs (TC11, TC12, TC21, TC22, TC31, TC32, TC41, TC42)  Type Range Protocol Baud Rate  LoRa (Future) RF Range ISM Bands  EU863-870, RU864-870, IN865-867, US902-928, AU915-928, AS920-923, AS923-925  RF Output Power Receiver Sensitivity Output Watts FCC Part 15C  Environmental Conditions  Operating Temp. Storage Temp. Humidity Atmospheric Pressure Pollution Degree  Mechanical Characteristics  Mounting Unit Dimensions  A-Wire At 152 (V (Bi-directional Current Measurement)  ± 5V (Bi-directional Current Measurement)  ## 5V		. ,		
Range Hall Sensor Output  Temperature Inputs (TC11, TC12, TC21, TC22, TC31, TC32, TC41, TC42)  Type Range Protocol Baud Rate  LoRa (Future) RF Range ISM Bands  RS-0485 (Standard) Protocol Protocol Baud Rate  LoRa (Future) RF Range ISM Bands  RF Output Power Receiver Sensitivity Output Watts FCC Part 15C  Environmental Conditions  Operating Temp. Storage Temp. Humidity Atmospheric Pressure Pollution Degree  Mechanical Characteristics  Moir VIC (Rigurational Current Measurement)  ± 5V (Bi-directional Current Measurement)  ± 5V (Bi-directional Current Measurement)  ± 5V (Bi-directional Current Measurement)  ## Stor (Roully Counting Current Measurement)  ## Stor (Roully Cart (Roully Cart (Roully Current Measurement)  ## Stor (Roully Counting Current Measurement)  ## Stor	""	,		
Hall Sensor Output ±5V (Bi-directional Current Measurement)  Temperature Inputs (TC11, TC12, TC21, TC22, TC31, TC32, TC41, TC42)  Type 2-Wire NTC Input (sensor not included) Range -20°C to +140°C  Communications  RS-485 (Standard) Protocol Modbus RTU Baud Rate 1200/2400/4800/9600/19200/38400 bps  LORa (Future) RF Range 860-935 MHz (Configurable) ISM Bands EU863-870, RU864-870, IN865-867, US902-928, AU915-928, AS920-923, AS923-925  RF Output Power 19 dBm (Maximum) Receiver Sensitivity -137 dBm (Maximum) Output Watts 0.03 (Typical) FCC Part 15C Certified by TCB  Environmental Conditions  Operating Temp25°C to +70°C Storage Temp. +40°C to +85°C Humidity 5% to 95% non-condensing Atmospheric Pressure Pollution Degree 2  Mechanical Characteristics  Mounting DIN Rail Unit Dimensions 36(W)x65(D)x90(H)mm	Danga	•		
Temperature Inputs (TC11, TC12, TC21, TC22, TC31, TC32, TC41, TC42)  Type Range  2-Wire NTC Input (sensor not included) -20°C to +140°C  Communications  RS-485 (Standard) Protocol Baud Rate  1200/2400/4800/9600/19200/38400 bps  LoRa (Future) RF Range ISM Bands  EU863-870, RU864-870, IN865-867, US902-928, AU915-928, AS920-923, AS923-925  RF Output Power Receiver Sensitivity Output Watts FCC Part 15C  Environmental Conditions  Operating Temp. Storage Temp. Humidity Atmospheric Pressure Pollution Degree  Mechanical Characteristics  Mounting Unit Dimensions  Modbus RTU 1200/2400/4800/9600/19200/38400 bps  EU863-870, RU864-870, IN865-867, US902-928, AU915-928, AS923-925  19 dBm (Maximum) -137 dBm (Maximum) -137 dBm (Maximum) -137 dBm (Maximum) -100 GT (TD (TD (TD (TD (TD (TD (TD (TD (TD (T	_			
Type Range 2-Wire NTC Input (sensor not included) -20°C to +140°C  Communications  RS-485 (Standard)	Hall Sensor Output	± 5V (Bi-directional Current Measurement)		
Range         -20°C to +140°C           Communications           RS-485 (Standard)         Modbus RTU           Baud Rate         1200/2400/4800/9600/19200/38400 bps           LoRa (Future)         860-935 MHz (Configurable)           ISM Bands         EU863-870, RU864-870, IN865-867, US902-928, AU915-928, AS920-923, AS923-925           RF Output Power         19 dBm (Maximum)           Receiver Sensitivity         -137 dBm (Maximum)           Output Watts         0.03 (Typical)           FCC Part 15C         Certified by TCB           Environmental Conditions           Operating Temp.         -25°C to +70°C           Storage Temp.         -40°C to +85°C           Humidity         5% to 95% non-condensing           Atmospheric Pressure         70 kPa to 106 kPa           Pollution Degree         2           Mechanical Characteristics           Mounting         DIN Rail           Unit Dimensions         36(W)x65(D)x90(H)mm	T	TO TO TOO TOO TOO TOO TO TO TO TO TO TO		
RS-485 (Standard) Protocol Modbus RTU Baud Rate 1200/2400/4800/9600/19200/38400 bps  LORa (Future) RF Range 860-935 MHz (Configurable) ISM Bands EU863-870, RU864-870, IN865-867, US902-928, AU915-928, AS920-923, AS923-925 RF Output Power 19 dBm (Maximum) Receiver Sensitivity -137 dBm (Maximum) Output Watts 0.03 (Typical) FCC Part 15C Certified by TCB  Environmental Conditions  Operating Temp25°C to +70°C Storage Temp. +40°C to +85°C Humidity 5% to 95% non-condensing Atmospheric Pressure Pollution Degree 2  Mechanical Characteristics  Mounting DIN Rail Unit Dimensions 36(W)x65(D)x90(H)mm				
RS-485 (Standard) Protocol Baud Rate  LORa (Future) RF Range ISM Bands  EU863-870, RU864-870, IN865-867, US902-928, AU915-928, AS920-923, AS923-925 RF Output Power Receiver Sensitivity Output Watts FCC Part 15C  Environmental Conditions  Operating Temp. Storage Temp. Humidity Atmospheric Pressure Pollution Degree  Mechanical Characteristics  Mounting Unit Dimensions  M60-935 MHz (Configurable) EU863-870, RU864-870, IN865-867, US902-928, AU915-928, AS920-923, AS923-925 19 dBm (Maximum) -137 dBm (Maximum) 0.03 (Typical) Certified by TCB  Environmental Conditions  -25°C to +70°C -40°C to +85°C Humidity Atmospheric Pressure Pollution Degree 2  Mechanical Characteristics  Mounting Unit Dimensions  Modbus RTU Adouble RTU Bodes 1200/2400/4800/9600/19200/38400 bps	Туре	2-Wire NTC Input (sensor not included)		
Protocol Baud Rate  LORa (Future) RF Range ISM Bands EU863-870, RU864-870, IN865-867, US902-928, AU915-928, AS920-923, AS923-925 RF Output Power Receiver Sensitivity Output Watts FCC Part 15C Certified by TCB Environmental Conditions  Operating Temp. Storage Temp. Humidity Atmospheric Pressure Pollution Degree  Mounting Unit Dimensions  M60-935 MHz (Configurable) EU863-870, RU864-870, IN865-867, US902-928, AU915-928, AS920-923, AS923-925 19 dBm (Maximum) -137 dBm (Maximum) 0.03 (Typical) Certified by TCB  Environmental Conditions  Operating Temp25°C to +70°C -40°C to +85°C Humidity Atmospheric Pressure Pollution Degree 2  Mechanical Characteristics  Mounting Unit Dimensions  Mounting DIN Rail 36(W)x65(D)x90(H)mm	Туре	2-Wire NTC Input (sensor not included) -20°C to +140°C		
Baud Rate   1200/2400/4800/9600/19200/38400 bps	Type Range	2-Wire NTC Input (sensor not included) -20°C to +140°C		
LoRa (Future)  RF Range  ISM Bands  EU863-870, RU864-870, IN865-867, US902- 928, AU915-928, AS920-923, AS923-925  RF Output Power Receiver Sensitivity Output Watts FCC Part 15C  Environmental Conditions  Operating Temp. Storage Temp. Humidity Atmospheric Pressure Pollution Degree  Mechanical Characteristics  Mounting Unit Dimensions  M860-935 MHz (Configurable) EU863-870, RU864-870, IN865-867, US902- 928, AU915-928, AS920-923, AS923-925 19 dBm (Maximum) 0.03 (Typical) Certified by TCB  Environmental Conditions  -25°C to +70°C -40°C to +85°C Humidity 5% to 95% non-condensing 70 kPa to 106 kPa Pollution Degree 2  Mechanical Characteristics  Mounting Unit Dimensions  B60-935 MHz (Configurable) EU863-870, RU864-870, IN865-867, US902- 928, AU915-928, AS920-923, AS923-925 19 dBm (Maximum) -137 dBm (Maximum	Type Range RS-485 (Standard)	2-Wire NTC Input (sensor not included) -20°C to +140°C		
RF Range ISM Bands EU863-870, RU864-870, IN865-867, US902- 928, AU915-928, AS920-923, AS923-925  RF Output Power Receiver Sensitivity Output Watts FCC Part 15C Certified by TCB Environmental Conditions  Operating Temp. Storage Temp. Humidity Atmospheric Pressure Pollution Degree  Mechanical Characteristics  Mounting Unit Dimensions  EU863-870, RU864-870, IN865-867, US902- 928, AU915-928, AS920-923, AS923-925  19 dBm (Maximum) 0.03 (Typical) Certified by TCB  Environmental Conditions  -25°C to +70°C -40°C to +85°C Humidity 5% to 95% non-condensing 70 kPa to 106 kPa Pollution Degree 2  Mechanical Characteristics  Mounting Unit Dimensions  BOIN Rail 36(W)x65(D)x90(H)mm	Type Range RS-485 (Standard)	2-Wire NTC Input (sensor not included) -20°C to +140°C Communications		
RF Range ISM Bands EU863-870, RU864-870, IN865-867, US902- 928, AU915-928, AS920-923, AS923-925  RF Output Power Receiver Sensitivity Output Watts FCC Part 15C Certified by TCB Environmental Conditions  Operating Temp. Storage Temp. Humidity Atmospheric Pressure Pollution Degree  Mechanical Characteristics  Mounting Unit Dimensions  EU863-870, RU864-870, IN865-867, US902- 928, AU915-928, AS920-923, AS923-925  19 dBm (Maximum) 0.03 (Typical) Certified by TCB  Environmental Conditions  -25°C to +70°C -40°C to +85°C Humidity 5% to 95% non-condensing 70 kPa to 106 kPa Pollution Degree 2  Mechanical Characteristics  Mounting Unit Dimensions  BOIN Rail 36(W)x65(D)x90(H)mm	Type Range RS-485 (Standard) Protocol	2-Wire NTC Input (sensor not included) -20°C to +140°C Communications  Modbus RTU		
ISM Bands  EU863-870, RU864-870, IN865-867, US902- 928, AU915-928, AS920-923, AS923-925  RF Output Power Receiver Sensitivity Output Watts FCC Part 15C  Environmental Conditions  Operating Temp. Storage Temp. Humidity Atmospheric Pressure Pollution Degree  Mechanical Characteristics  Mounting Unit Dimensions  EU863-870, RU864-870, IN865-867, US902- 928, AU915-928, AS923-925  19 dBm (Maximum) 0.03 (Typical) Certified by TCB  Environmental Conditions  0.25°C to +70°C -40°C to +85°C +40°C to +85°C -40°C to +85°C -	Type Range RS-485 (Standard) Protocol	2-Wire NTC Input (sensor not included) -20°C to +140°C Communications  Modbus RTU		
RF Output Power Receiver Sensitivity Output Watts FCC Part 15C  Environmental Conditions  Operating Temp. Storage Temp. Humidity Atmospheric Pressure Pollution Degree  Mechanical Characteristics  Mounting Unit Dimensions  19 dBm (Maximum) -137 dBm (Maximum) 0.03 (Typical) Certified by TCB  Environmental Conditions  -25°C to +70°C -40°C to +85°C -40°	Type Range RS-485 (Standard) Protocol Baud Rate	2-Wire NTC Input (sensor not included) -20°C to +140°C Communications  Modbus RTU		
RF Output Power Receiver Sensitivity Output Watts FCC Part 15C  Certified by TCB  Environmental Conditions  Operating Temp. Storage Temp. Humidity Atmospheric Pressure Pollution Degree  Mechanical Characteristics  Mounting Unit Dimensions  19 dBm (Maximum) 10 d	Type Range  RS-485 (Standard) Protocol Baud Rate  LoRa (Future)	2-Wire NTC Input (sensor not included) -20°C to +140°C  Communications  Modbus RTU 1200/2400/4800/9600/19200/38400 bps		
Receiver Sensitivity Output Watts FCC Part 15C  Certified by TCB  Environmental Conditions  Operating Temp. Storage Temp. Humidity Atmospheric Pressure Pollution Degree  Mechanical Characteristics  Mounting Unit Dimensions  O.3 (Typical) Certified by TCB  Certifie	Type Range  RS-485 (Standard) Protocol Baud Rate  LoRa (Future) RF Range	2-Wire NTC Input (sensor not included) -20°C to +140°C  Communications  Modbus RTU 1200/2400/4800/9600/19200/38400 bps  860-935 MHz (Configurable)		
Receiver Sensitivity Output Watts FCC Part 15C  Certified by TCB  Environmental Conditions  Operating Temp. Storage Temp. Humidity Atmospheric Pressure Pollution Degree  Mechanical Characteristics  Mounting Unit Dimensions  O.3 (Typical) Certified by TCB  Certifie	Type Range  RS-485 (Standard) Protocol Baud Rate  LoRa (Future) RF Range	2-Wire NTC Input (sensor not included) -20°C to +140°C  Communications  Modbus RTU 1200/2400/4800/9600/19200/38400 bps  860-935 MHz (Configurable) EU863-870, RU864-870, IN865-867, US902-		
Output Watts FCC Part 15C  Certified by TCB  Environmental Conditions  Operating Temp. Storage Temp. Humidity Atmospheric Pressure Pollution Degree  Mechanical Characteristics  Mounting Unit Dimensions  O.03 (Typical) Certified by TCB  Certified by TCB  -40°C to +85°C	Type Range  RS-485 (Standard) Protocol Baud Rate  LoRa (Future) RF Range ISM Bands	2-Wire NTC Input (sensor not included) -20°C to +140°C  Communications  Modbus RTU 1200/2400/4800/9600/19200/38400 bps  860-935 MHz (Configurable) EU863-870, RU864-870, IN865-867, US902-928, AU915-928, AS920-923, AS923-925		
FCC Part 15C Certified by TCB  Environmental Conditions  Operating Temp25°C to +70°C Storage Temp40°C to +85°C Humidity 5% to 95% non-condensing Atmospheric Pressure Pollution Degree 2  Mechanical Characteristics  Mounting DIN Rail Unit Dimensions 36(W)x65(D)x90(H)mm	Type Range  RS-485 (Standard) Protocol Baud Rate  LoRa (Future) RF Range ISM Bands  RF Output Power	2-Wire NTC Input (sensor not included) -20°C to +140°C  Communications  Modbus RTU 1200/2400/4800/9600/19200/38400 bps  860-935 MHz (Configurable) EU863-870, RU864-870, IN865-867, US902- 928, AU915-928, AS920-923, AS923-925 19 dBm (Maximum)		
Environmental Conditions  Operating Temp25°C to +70°C Storage Temp40°C to +85°C Humidity 5% to 95% non-condensing Atmospheric Pressure Pollution Degree 2  Mechanical Characteristics  Mounting DIN Rail Unit Dimensions 36(W)x65(D)x90(H)mm	Type Range  RS-485 (Standard) Protocol Baud Rate  LoRa (Future) RF Range ISM Bands  RF Output Power Receiver Sensitivity	2-Wire NTC Input (sensor not included) -20°C to +140°C  Communications  Modbus RTU 1200/2400/4800/9600/19200/38400 bps  860-935 MHz (Configurable) EU863-870, RU864-870, IN865-867, US902- 928, AU915-928, AS920-923, AS923-925 19 dBm (Maximum) -137 dBm (Maximum)		
Operating Temp25°C to +70°C Storage Temp40°C to +85°C Humidity 5% to 95% non-condensing Atmospheric Pressure Pollution Degree 2  Mechanical Characteristics  Mounting DIN Rail Unit Dimensions 36(W)x65(D)x90(H)mm	Type Range  RS-485 (Standard) Protocol Baud Rate  LoRa (Future) RF Range ISM Bands  RF Output Power Receiver Sensitivity Output Watts	2-Wire NTC Input (sensor not included) -20°C to +140°C  Communications  Modbus RTU 1200/2400/4800/9600/19200/38400 bps  860-935 MHz (Configurable) EU863-870, RU864-870, IN865-867, US902- 928, AU915-928, AS920-923, AS923-925 19 dBm (Maximum) -137 dBm (Maximum) 0.03 (Typical)		
Storage Temp40°C to +85°C Humidity 5% to 95% non-condensing Atmospheric Pressure Pollution Degree 2  Mechanical Characteristics  Mounting DIN Rail Unit Dimensions 36(W)x65(D)x90(H)mm	Type Range  RS-485 (Standard) Protocol Baud Rate  LoRa (Future) RF Range ISM Bands  RF Output Power Receiver Sensitivity Output Watts FCC Part 15C	2-Wire NTC Input (sensor not included) -20°C to +140°C  Communications  Modbus RTU 1200/2400/4800/9600/19200/38400 bps  860-935 MHz (Configurable) EU863-870, RU864-870, IN865-867, US902- 928, AU915-928, AS920-923, AS923-925 19 dBm (Maximum) -137 dBm (Maximum) 0.03 (Typical) Certified by TCB		
Humidity 5% to 95% non-condensing Atmospheric Pressure 70 kPa to 106 kPa Pollution Degree 2  Mechanical Characteristics  Mounting DIN Rail Unit Dimensions 36(W)x65(D)x90(H)mm	Type Range  RS-485 (Standard) Protocol Baud Rate  LoRa (Future) RF Range ISM Bands  RF Output Power Receiver Sensitivity Output Watts FCC Part 15C	2-Wire NTC Input (sensor not included) -20°C to +140°C  Communications  Modbus RTU 1200/2400/4800/9600/19200/38400 bps  860-935 MHz (Configurable) EU863-870, RU864-870, IN865-867, US902- 928, AU915-928, AS920-923, AS923-925 19 dBm (Maximum) -137 dBm (Maximum) 0.03 (Typical) Certified by TCB ironmental Conditions		
Atmospheric Pressure 70 kPa to 106 kPa Pollution Degree 2  Mechanical Characteristics  Mounting DIN Rail Unit Dimensions 36(W)x65(D)x90(H)mm	Type Range  RS-485 (Standard) Protocol Baud Rate  LoRa (Future) RF Range ISM Bands  RF Output Power Receiver Sensitivity Output Watts FCC Part 15C  Env Operating Temp.	2-Wire NTC Input (sensor not included) -20°C to +140°C  Communications  Modbus RTU 1200/2400/4800/9600/19200/38400 bps  860-935 MHz (Configurable) EU863-870, RU864-870, IN865-867, US902- 928, AU915-928, AS920-923, AS923-925 19 dBm (Maximum) -137 dBm (Maximum) 0.03 (Typical) Certified by TCB ironmental Conditions -25°C to +70°C		
Pollution Degree 2  Mechanical Characteristics  Mounting DIN Rail Unit Dimensions 36(W)x65(D)x90(H)mm	Type Range  RS-485 (Standard) Protocol Baud Rate  LoRa (Future) RF Range ISM Bands  RF Output Power Receiver Sensitivity Output Watts FCC Part 15C  Env Operating Temp. Storage Temp.	2-Wire NTC Input (sensor not included) -20°C to +140°C  Communications  Modbus RTU 1200/2400/4800/9600/19200/38400 bps  860-935 MHz (Configurable) EU863-870, RU864-870, IN865-867, US902- 928, AU915-928, AS920-923, AS923-925 19 dBm (Maximum) -137 dBm (Maximum) 0.03 (Typical) Certified by TCB ironmental Conditions -25°C to +70°C -40°C to +85°C		
Mechanical Characteristics  Mounting DIN Rail Unit Dimensions 36(W)x65(D)x90(H)mm	Type Range  RS-485 (Standard) Protocol Baud Rate  LoRa (Future) RF Range ISM Bands  RF Output Power Receiver Sensitivity Output Watts FCC Part 15C  Env Operating Temp. Storage Temp. Humidity	2-Wire NTC Input (sensor not included) -20°C to +140°C  Communications  Modbus RTU 1200/2400/4800/9600/19200/38400 bps  860-935 MHz (Configurable) EU863-870, RU864-870, IN865-867, US902- 928, AU915-928, AS920-923, AS923-925 19 dBm (Maximum) -137 dBm (Maximum) 0.03 (Typical) Certified by TCB ironmental Conditions -25°C to +70°C -40°C to +85°C 5% to 95% non-condensing		
Mounting DIN Rail Unit Dimensions 36(W)x65(D)x90(H)mm	Type Range  RS-485 (Standard) Protocol Baud Rate  LoRa (Future) RF Range ISM Bands  RF Output Power Receiver Sensitivity Output Watts FCC Part 15C  Env Operating Temp. Storage Temp. Humidity Atmospheric Pressure	2-Wire NTC Input (sensor not included) -20°C to +140°C  Communications  Modbus RTU 1200/2400/4800/9600/19200/38400 bps  860-935 MHz (Configurable) EU863-870, RU864-870, IN865-867, US902- 928, AU915-928, AS920-923, AS923-925 19 dBm (Maximum) -137 dBm (Maximum) 0.03 (Typical) Certified by TCB ironmental Conditions -25°C to +70°C -40°C to +85°C 5% to 95% non-condensing 70 kPa to 106 kPa		
Unit Dimensions 36(W)x65(D)x90(H)mm	Type Range  RS-485 (Standard) Protocol Baud Rate  LORa (Future) RF Range ISM Bands  RF Output Power Receiver Sensitivity Output Watts FCC Part 15C  Env Operating Temp. Storage Temp. Humidity Atmospheric Pressure Pollution Degree	2-Wire NTC Input (sensor not included) -20°C to +140°C  Communications  Modbus RTU 1200/2400/4800/9600/19200/38400 bps  860-935 MHz (Configurable) EU863-870, RU864-870, IN865-867, US902- 928, AU915-928, AS920-923, AS923-925 19 dBm (Maximum) -137 dBm (Maximum) 0.03 (Typical) Certified by TCB ironmental Conditions -25°C to +70°C -40°C to +85°C 5% to 95% non-condensing 70 kPa to 106 kPa 2		
	Type Range  RS-485 (Standard) Protocol Baud Rate  LORa (Future) RF Range ISM Bands  RF Output Power Receiver Sensitivity Output Watts FCC Part 15C  Env Operating Temp. Storage Temp. Humidity Atmospheric Pressure Pollution Degree	2-Wire NTC Input (sensor not included) -20°C to +140°C  Communications  Modbus RTU 1200/2400/4800/9600/19200/38400 bps  860-935 MHz (Configurable) EU863-870, RU864-870, IN865-867, US902- 928, AU915-928, AS920-923, AS923-925 19 dBm (Maximum) -137 dBm (Maximum) 0.03 (Typical) Certified by TCB ironmental Conditions -25°C to +70°C -40°C to +85°C 5% to 95% non-condensing 70 kPa to 106 kPa 2		
IP Rating IP30	Type Range  RS-485 (Standard) Protocol Baud Rate  LoRa (Future) RF Range ISM Bands  RF Output Power Receiver Sensitivity Output Watts FCC Part 15C  Env Operating Temp. Storage Temp. Humidity Atmospheric Pressure Pollution Degree	2-Wire NTC Input (sensor not included) -20°C to +140°C  Communications  Modbus RTU 1200/2400/4800/9600/19200/38400 bps  860-935 MHz (Configurable) EU863-870, RU864-870, IN865-867, US902- 928, AU915-928, AS920-923, AS923-925 19 dBm (Maximum) -137 dBm (Maximum) 0.03 (Typical) Certified by TCB ironmental Conditions -25°C to +70°C -40°C to +85°C 5% to 95% non-condensing 70 kPa to 106 kPa 2 chanical Characteristics DIN Rail		
	Type Range  RS-485 (Standard) Protocol Baud Rate  LoRa (Future) RF Range ISM Bands  RF Output Power Receiver Sensitivity Output Watts FCC Part 15C  Env Operating Temp. Storage Temp. Humidity Atmospheric Pressure Pollution Degree  Med	2-Wire NTC Input (sensor not included) -20°C to +140°C  Communications  Modbus RTU 1200/2400/4800/9600/19200/38400 bps  860-935 MHz (Configurable) EU863-870, RU864-870, IN865-867, US902- 928, AU915-928, AS920-923, AS923-925 19 dBm (Maximum) -137 dBm (Maximum) 0.03 (Typical) Certified by TCB ironmental Conditions -25°C to +70°C -40°C to +85°C 5% to 95% non-condensing 70 kPa to 106 kPa 2 chanical Characteristics DIN Rail		

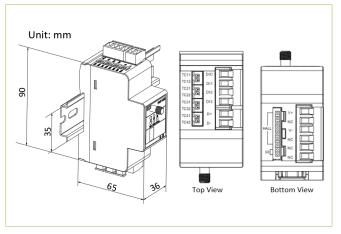


# PMC-352-D **DIN-Rail DC Energy Meter**

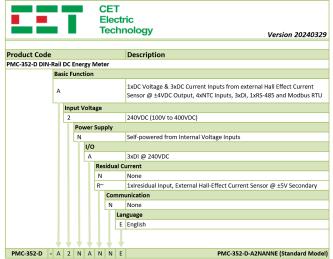
# **Standards of Compliance**

Sofate Board	ivomonto			
Safety Requirements				
CE LVD 2014 / 35 / EU	EN 61010-1: 2010 + A1: 2019 EN 61010-2-030: 2010			
Electrical Safety in Low Voltage Distribution Systems up to 1000Vac and 1500 Vdc	IEC 61557-12: 2018			
Insulation	IEC 62052-31: 2015			
AC Voltage:	1.8kV @ 1 minute			
Insulation Resistance:	>100MΩ			
Impulse Voltage:	6kV, 1.2/50μs			
Electromagnetic	Compatibility			
CE EMC Directive 2014 / 30 / EU (EN 61326: 2013)				
Immunity Tests				
Electrostatic Discharge	EN 61000-4-2: 2009			
Radiated Fields	EN 61000-4-3: 2006+A1:			
	2008+A2: 2010			
Fast Transients	EN 61000-4-4: 2012			
Surges	EN 61000-4-5: 2014+A1: 2017 EN 61000-4-6: 2014			
Conducted Disturbances  Magnetic Fields	EN 61000-4-6: 2014 EN 61000-4-8: 2010			
Ring Wave	EN 61000-4-8. 2010 EN 61000-4-12: 2017			
Emission Tests				
Limits and Methods of Measurement of Electromagnetic Disturbance Characteristics of Industrial, Scientific and Medical (ISM) Radio-Frequency Equipment	EN 55011: 2016			
Limits and Methods of Measurement of Radio Disturbance Characteristics of Information Technology Equipment	EN 55032: 2015			
Limits for Harmonic Current Emissions for Equipment with Rated Current ≤16 A	EN 61000-3-2: 2014			
Limitation of Voltage Fluctuations and Flicker in Low-Voltage Supply Systems for Equipment with Rated Current ≤16 A	EN 61000-3-3: 2013			
Emission Standard for Residential, Commercial and Light-Industrial Environments	EN 61000-6-4: 2007+A1: 2011			
Mechanical Tests				
Spring Hammer Test	IEC 62052-31: 2015			
Vibration Test	IEC 62052-11: 2020			
Shock Test	IEC 62052-11: 2020			

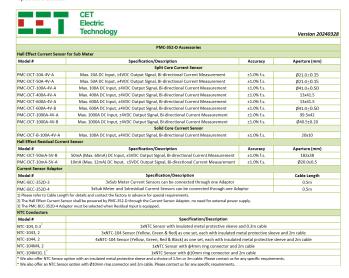
#### **Dimensions and Installation**



# **Ordering Information**



<sup>\*</sup>Additional charges apply
~Please refer to the Accessories sheet to order the NTC Sensor and Hall Effect Current Sensor for Sub Meter and



### **CET Electric Technology Inc.**

sales@cet-global.com W: www.cet-global.com

# Your Local Representative



Revision Date: April 12, 2024