PMC-D721MD
DC Multifunction Meter

- Class 0.5 Energy Accuracy
- Multifunction DC Measurements
- RS-485 with Modbus RTU
- 2xDI + 2xPulse Outputs
- SOE Logs
- 4 Buttons for Simple Operation
- Large, Bright, Backlit LCD Display with Wide Viewing Angle
- IP52 Enclosure with No Openings
- Standard Tropicalization
- Industrial Grade Components
- Extended Warranty

Designed For Reliability *Manufactured To Last*

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DC Multifunction Meter

The PMC-D721MD DC Multifunction Meter is CET's latest offer for the low-cost DC metering market. Housed in an industry standard DIN form factor measuring 72x72x71.8mm, it is perfectly suited for industrial, commercial and utility DC metering applications. The PMC-D721MD complies with Class 0.5 kWh Accuracy Standard and features quality construction, multifunction measurements and a bright, easy to read LCD display. The PMC-D721MD comes standard with two Front Panel LED indicators for Energy Pulsing and Communication. It provides two Digital Inputs for status monitoring and two Solid State Pulse Outputs for kWh Energy Pulsing applications. 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 Modbus protocol support, the PMC-D721MD becomes a vital component of an intelligent, 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

Features Summary

Ease of use

- Large, backlit LCD display with wide viewing angle
- Intuitive user interface
- LED indicators for Energy Pulsing and Communication activities
- Password protected setup via Front Panel or free PMC Setup software
- Easy installation with mounting clips, no tools required

Measurements

- Voltage, Current and kW
- Bi-directional kWh measurements

Inputs and Outputs

- 2 x Front Panel LED indicators for Energy Pulsing and Communication
- 2 x Digital Input for Status Monitoring
- 2 x Solid State Relay for kWh Imp and kWh Exp Pulse Output

SOE Log

- 32 events time-stamped to ±1ms resolution
- Record all setup and Digital Input status changes

Communications

- Standard with one RS-485 port
- Modbus RTU support at 1,200 to 19,200 bps

System Integration

- Supported by our PecStar® iEMS and PMC Setup
- Easy integration into other Automation, SCADA or BMS systems via Modbus RTU

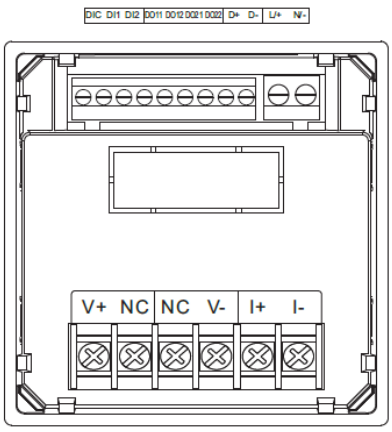
Accuracy

Parameters	Accuracy	Resolution
Voltage	±0.2%	0.1V
Current	±0.2%	0.01A
kW	±0.5%	0.001kW
kWh	Class 0.5	0.1kWh

Technical Specifications

DC Inputs	
Voltage Input	
Standard (Un)	1000V DC
Measurement Range	1% to 120% Un
Starting Voltage	10V DC
Overload	1.2xUn continuous, 2xUn for 1s
Current Input	
Nominal Input (In)	100mV DC (via Shunt Output), configurable for Shunts rated at 50, 60, 75 and 100mV
Measurement Range	1% to 120% In
Starting Current	0.2% of In
Max. Shunt Current	10,000A
Overload	1.2xIn continuous, 10xIn for 10s, 20xIn for 1s
Power Supply (L/+, N/-)	
Standard	95-250VAC/DC, ±10%, 47-440Hz
Burden	<2W
Digital Inputs	
Type	Dry contact, 24VDC internally wetted
Hysteresis	20ms minimum
Pulse Outputs	
Type	Front Panel LED / Solid State DO
Pulse Constant	25 / 100 / 400 / 1000 / 3200 Imp/kWh
Pulse Width	80ms±20ms
Communications	
RS-485	Modbus RTU
Baud Rate	1200 / 2400 / 4800 / 9600 / 19200bps
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
Mechanical Characteristics	
Panel Cutout	68x68 mm
Unit Dimensions	72x72x71.8 mm
IP Rating	IP52
Shipping Weight	0.34kg
Shipping Dimensions	125x110x80 mm

Rear Panel



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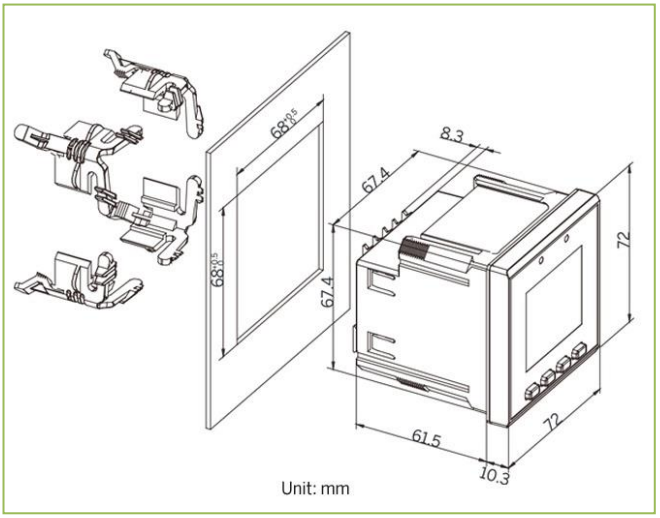
Standards of Compliance

Safety Requirements	
CE LVD 2014 / 35 / EU	EN 61010-1: 2010 EN 61010-2-030: 2010
Electrical Safety in Low Voltage Distribution Systems up to 1000Vac and 1500 Vdc	IEC 61557-12: 2018 (PMD)
Insulation Dielectric test: Insulation resistance: Impulse voltage:	IEC 62052-11: 2003 IEC 62053-22: 2003 4kV @ 1 minute >40MΩ 6kV, 1.2/50μs
Electromagnetic Compatibility CE EMC Directive 2014 / 30 / EC (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
Conducted Disturbances	EN 61000-4-6:2014
Magnetic Fields	EN 61000-4-8:2010
Voltage Dips and Interruptions	EN 61000-4-11:2004+A1: 2017
Ring Wave	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
Electromagnetic Compatibility of Multimedia Equipment - Emission Requirements	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 Industrial Environments	EN 61000-6-4: 2007+A1: 2011
Mechanical Tests	
Spring Hammer Test	IEC 62052-11: 2003
Shock Test	IEC 62052-11: 2003
Vibration Test	IEC 62052-11: 2003

Device Dimensions



Ordering Information

Version 20220218

Product Code	Description
PMC-D721MD DC Multifunction Meter	
Display Screen: L	LCD
Input Current: 1	0-100mV DC (via external Shunt Resistor)
Input Voltage: 1	0-1000V DC
Power Supply: 2	95-250V AC/DC, 47-440Hz
I/O: A	2xDI+2xPulse Output
Communications: A	1xRS-485 Port
Display Language: E	English

PMC-D721MD	-	L	1	1	2	A	A	E	PMC-D721MD-L112AAE (Standard Model)

Your Local Representative

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