



# PMC-D721MD DC Multifunction Meter



- Class 0.5 Energy Accuracy
- Multifunction DC Measurements
- RS485 with Modbus RTU
- Optional 2xDI + 2xPulse Outputs
- SOE Log
- 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*

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# PMC-D721MD DC Multifunction Meter



The PMC-D721MD DC Multifunction Meter is CET's latest offer for the DC metering market. Housed in an industry standard DIN form factor measuring 72mmx72mmx71.8mm, 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-721MD comes standard with two front panel LEDs for Energy Pulsing and Communication indicators. It optionally provides two Digital Inputs for Status Monitoring and two Solid State Pulse Outputs for Bi-directional Energy Pulsing applications. The standard SOE Log records meter events such as power-off, setup changes and DI operations in 1ms resolution. With the standard RS485 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
- Configurable Current Input rating to work with Shunts of different output ratings such as 50mV, 60mV, 75mV and 100mV
- 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

- 2xFront Panel LED Pulse Outputs for Energy Pulsing and Communication indicators
- Optional 2xDigital Inputs for Status Monitoring
- Optional 2xSolid State Relay for Bi-directional Energy Pulsing

### SOE Log

- 32 events time-stamped to  $\pm 1$ ms resolution
- Record all Setup and Digital Input status changes

### Communications

- Standard RS485 port with Modbus RTU support at 1200 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

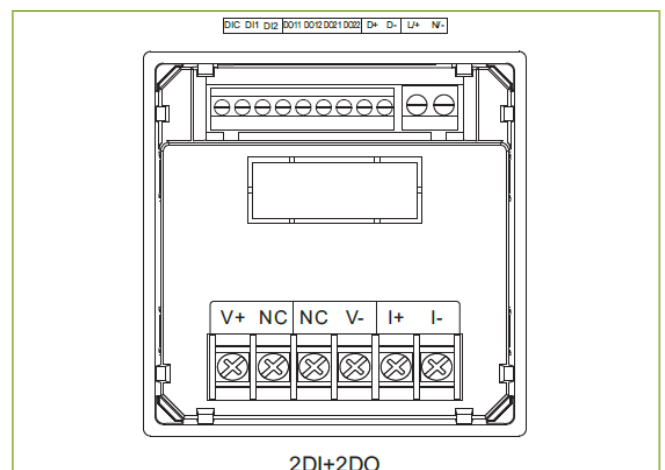
## Accuracy

Parameters	Accuracy	Resolution
Voltage	$\pm 0.2\%$	0.1V
Current	$\pm 0.2\%$	0.01A
kW	$\pm 0.2\%$	0.001kW
kWh	$\pm 0.5\%$	0.1kWh

## Technical Specifications

DC Inputs	
<b>Voltage Input</b>	
Nominal (Un)	1000V DC
Measurement Range	1% to 120% Un
Starting Voltage	10V DC
Overload	1.2xUn continuous, 2xUn @ 1s
<b>Current Input</b>	
Nominal (In)	100mV DC (via Shunt Output), configurable for Shunts rated at 50, 60, 75 and 100mV
Measurement Range	1% to 120% In
Starting Current	0.1% of In
Max. Shunt Current	10,000A
Overload	1.2xIn continuous, 10xIn @ 10s, 20xIn @ 1s
Power Supply (L/+, N/-, GND)	
Standard	95-250VAC/DC, $\pm 10\%$ , 47-440Hz
Burden	<2W
Optional Digital Inputs	
Type	Dry contact, 24VDC internally wetted
Hysteresis	20ms minimum
Pulse Output	
Type	Front Panel LED / Optional Solid State DO
Pulse Constant	25 / 100 / 400 / 1000 / 3200 pulse/kWh
Pulse Width	20-80ms
Communications	
RS-485	Modbus RTU
Baudrate	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	52
Shipping Weight	0.3kg
Shipping Dimensions	125x110x80 mm

## Rear Panel



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# PMC-D721MD DC Multifunction Meter

## Standards of Compliance

Safety Requirements		
CE LVD 2014 / 35 / EU	EN 61010-1: 2010, EN 61010-2-030: 2010	
Insulation	IEC 60255-5-2000	
Dielectric test:	2kV @ 1 minute	
Insulation resistance:	>40MΩ	
Impulse voltage:	6kV, 1.2/50μs	
Electromagnetic Compatibility CE EMC Directive 2004 / 108 / EC (EN 61326: 2006)		
Immunity Tests		
Electrostatic discharge	EN 61000-4-2:2009	
Radiated fields	EN 1000-4-3:2006+A1:2008+A2:2010	
Fast transients	EN 61000-4-4:2012	
Surges	EN 61000-4-5:2006	
Conducted disturbances	EN 61000-4-6:2009	
Magnetic fields	EN 61000-4-11:2004	
Oscillatory waves	EN 61000-4-2:2009	
Emission Tests		
Limits and methods of measurement of electromagnetic disturbance characteristics of industrial, scientific and medical (ISM) radio-frequency equipment	EN 55011: 2009 + A1: 2010 (CISPR 11)	
Limits and methods of measurement of radio disturbance characteristics of information technology equipment	EN 55022: 2010 (CISPR 22)	
Limits for harmonic current emissions for equipment with rated current ≤16 A	EN 61000-3-2: 2006+A1: 2009 +A2: 2009	
Limitation of voltage fluctuations and flicker in low-voltage supply systems for equipment with rated current ≤16 A	EN 61000-3-3: 2008	
Emission standard for residential, commercial and light-industrial environments	EN 61000-6-4: 2007+A1: 2011	
Electromagnetic emission tests for measuring relays and protection Equipment	EN 61000-4-12: 2006	
Mechanical Tests		
Vibration Test	Response	IEC 255-2-1:1989 Level I
	Endurance	IEC 255-2-1:1989 Level I
Shock Test	Response	IEC 255-2-2: 1989 Level I
	Endurance	IEC 255-2-2: 1989 Level I
Bump Test		IEC 255-2-2: 1989 Level I

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Your Local Representative

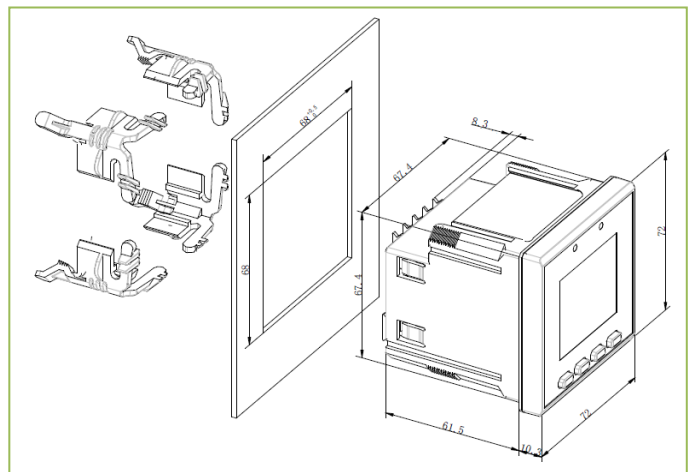
Revision Date: June 19, 2020

## Ordering Information

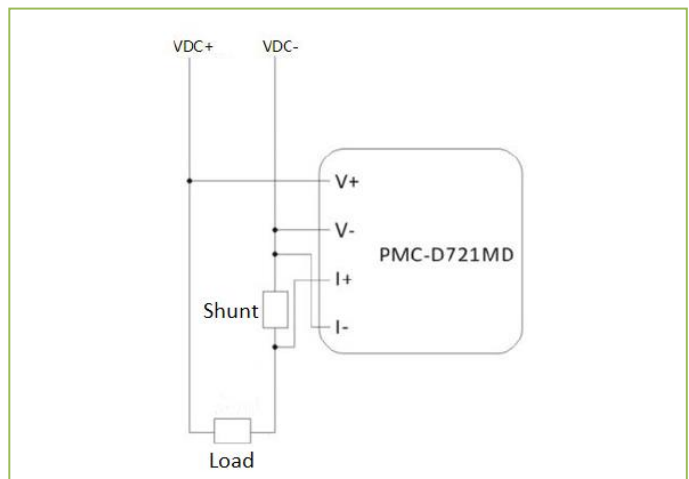
Product Code	Description
PMC-D721MD DC Multifunction Meter	
Display Screen	
L	LCD
Input Current	
1	0-100mV (via Shunt Output)
Input Voltage	
1	0-1000V
Power Supply	
2	95-250V AC/DC · 47-440Hz
I/O	
X	None
A*	2xDI+2xPulse Output
Communications	
A	1xRS-485 Port
Display Language	
E	English
PMC-D721MD - L 1 1 2 X A E	PMC-D721MD-L112XAE (Standard Model)

\* Additional charges apply

## Device Dimensions



## Wiring Diagram



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