# PMC-D721MD
## DC Multifunction Meter


- Class 0.5 Energy Accuracy
- Multifunction DC Measurements
- RS-485 with Modbus RTU
- Optional 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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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 optionally 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 the optional 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
- Optional 2 x Digital Input for Status Monitoring
- Optional 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

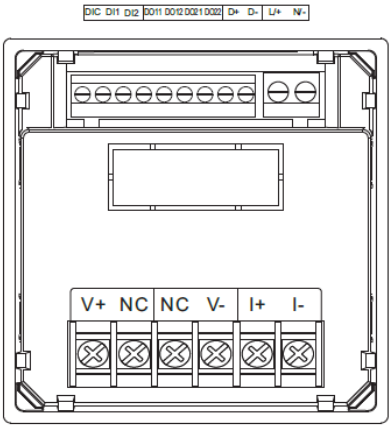
## Accuracy

| 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 |
| **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 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




2DI+2DO

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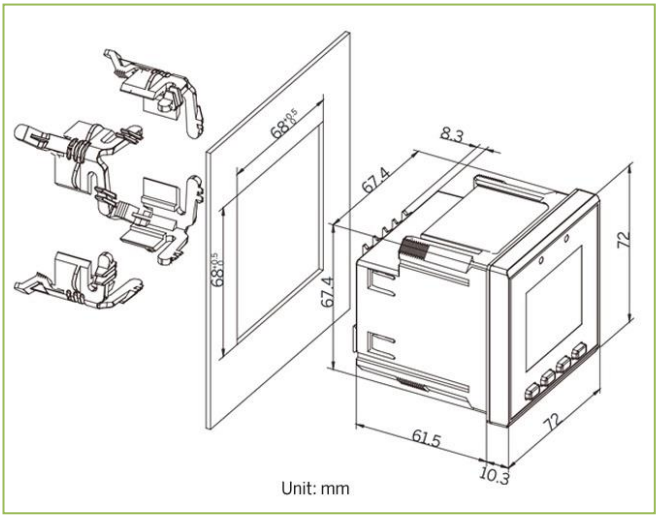
## Standards of Compliance

| Safety Requirements | |
|---|---|
| CE LVD 2014 / 35 / EU | EN 61010-1: 2010<br>EN 61010-2-030: 2010 |
| Electrical Safety in Low Voltage Distribution Systems up to 1000Vac and 1500 Vdc | IEC 61557-12: 2018 (PMD) |
| Insulation<br><br>Dielectric test:<br>Insulation resistance:<br>Impulse voltage: | IEC 62052-11: 2003<br>IEC 62053-22: 2003<br>4kV @ 1 minute<br>>40MΩ<br>6kV, 1.2/50µs |
| **Electromagnetic Compatibility<br>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 20170222*

| 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 |
| I/O: 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

## Contact Us


EcoXplore Pte Ltd
120 Lower Delta Road
#12-15/16 Cendex Centre
Singapore 169208
Tel: (65)6274 4840
Fax: (65)6274 2939
Email: sales@ecoxplore.com.sg


www.EcoXplore.com

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