

Multifunction Energy Meter

PMC-D726M

DIN72 3-Ø Digital Multifunction Meter

PMC-D726M Digital Multifunction Meter is CET's latest offer for the low-cost digital power/energy metering market. Housed in an industry standard DIN form factor measuring 72mmx72mmx71.8mm (LCD) or 72mmx72mmx76.8mm (LED), it is perfectly suited for industrial, commercial and utility metering applications. The PMC-D726M features quality construction, true RMS multifunction measurements and a LED or LCD display. Compliance with the IEC 62053-21 Class 1 kWh Accuracy Standard, it provides optimum Price to Value ratio and is a cost effective replacement for traditional analog instrumentation, capable of displaying 3-phase measurements at once. The PMC-D726M optionally provides Split-Core CT (SCCT) support for retrofit applications, two Digital Inputs for status monitoring, two Digital Output for control, or one 0/4-20mA Analog Output for interfacing with 3rd party SCADA system. The standard SOE Log records meter events such as power-off, setup and DI status changes in 1ms resolution. With a standard RS-485 port and Modbus RTU protocol support, the PMC-D726M becomes a vital component of an intelligent, multifunction monitoring solution for any Power and Energy Management systems.



Typical Applications

- Analog meter replacement
- Industrial, Commercial and Utility panel metering
- Substation, Factory and Building Automation
- Sub-metering and Cost Allocation
- Ideal for retrofitting with the SCCT option

Features Summary

Ease of use

- Large, bright, backlit LCD or high-contrast LED display
- Front panel kWh and kvarh LED energy pulse outputs
- Password-protected setup via front panel or free PMC Setup software
- Easy installation with mounting clips, no tools required

Measurements

- Uln, Ull per phase and Average
- Current per phase and Average with calculated Neutral
- kW, kvar, kVA, P.F. per phase and Total
- Bi-directional energy measurements
- Frequency

PQ Measurements

- THD, TOHD, TEHD and Individual Harmonics up to 31st
- TDD, K-Factor and Crest-Factor
- U and I Unbalance and Phase Angles

Setpoints

- 6 user programmable setpoints with extensive list of monitoring parameters including Voltage, Current, Power and Demand
- Configurable Threshold and Time Delay
- SOE Logging and DO trigger

SOE Log

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

TOU and Demand

- One TOU schedule, providing
 - o 6 Seasons
 - o 6 Daily Profiles, each with 6 Periods in 15-minute interval
 - o 10 Holidays or Alternate Days
 - o 4 Tariffs, each providing kWh and kvarh Imp/Exp and kVAh
- Demands and Max. Demands with Timestamp for per phase Current, kW Total, kvar Total and kVA total

Inputs and Outputs

- kWh and kvarh LED Energy Pulse Outputs on the Front Panel
- Two Digital Inputs for Status Monitoring
- Two Digital Outputs for Control applications
- Optional Analog Output at 0/4-20mA

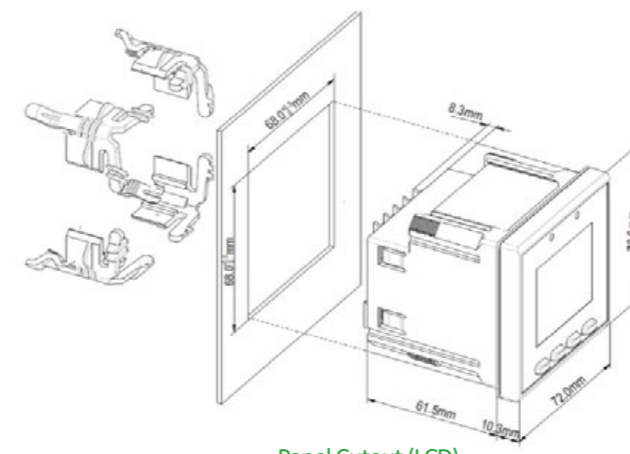
Communications

- Optically isolated RS-485 port at 1,200 to 19,200 bps
- Modbus RTU support

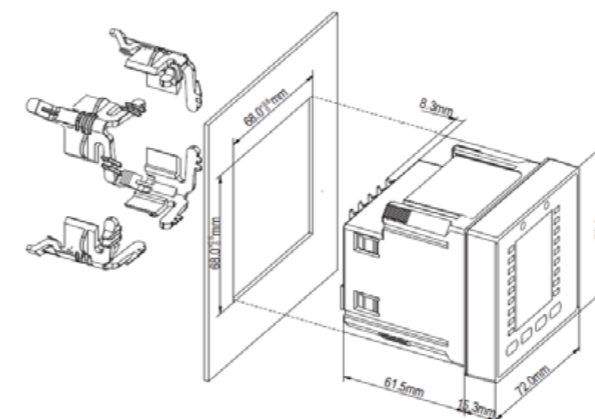
System Integration

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

Device Dimensions



Panel Cutout (LCD)



Panel Cutout (LED)

Accuracy

Parameters	Accuracy	Resolution
Voltage	$\pm 0.2\%$ reading	0.1V
Current	$\pm 0.2\%$ reading	0.001A
kW, kvar, kVA	$\pm 0.5\%$ reading	0.001kX
kWh	IEC62053-21 Class 1	0.01kWh
kvarh	IEC62053-23 Class 2	0.01kvarh
P.F.	$\pm 1.0\%$ reading	0.001
Frequency	± 0.02 Hz	0.01Hz
AO	$\pm 0.5\%$ F.S.	-
Harmonics	IEC61000-4-7 Class B	0.1%
K-Factor	IEC61000-4-7 Class B	0.1

Technical Specifications

Voltage Inputs (V1, V2, V3, VN)	
Standard	240VLN/415VLL
Range	10V to 120% Un
Starting Voltage	10V
PT Ratio	1-1,000,000 (Primary), 1-690 (Secondary)
Overload	1.2xUn continuous, 2xUn for 1s
Burden	<0.02VA per phase
Frequency	45-65Hz

Current Inputs (I11, I12, I21, I22, I31, I32)	
Standard Input	5A
Optional Input	1A
CT Ratio	1-30,000 (Primary), 1-5 (Secondary)
Optional SCCT Input	2mA (SCCTA Option for 5A SCCT) 40mA (SCCT Option for 100-800A SCCT)
Range	0.1% to 120% In
Starting Current	0.1% In
Overload	1.2xIn continuous, 10xIn for 10s, 20xIn for 1s
Burden	<0.25VA per phase

Power Supply (L/+, N/-)	
Standard	95-250VAC/DC, $\pm 10\%$, 47-440Hz
Burden	<2W

Digital Inputs (DI1, DI2, DIC)	
Type	Dry contact, 24VDC internally wetted
Sampling	1000Hz
Hysteresis	1ms minimum

Digital Outputs (DO11, DO12, DO21, DO22)	
Type	Form A Mechanical Relay
Loading	5A @ 250VAC or 30VDC

Analog Output (AO+, AO-)	
Type	0-20 / 4-20 mA
Parameter	Selectable
Loading	500 Ω maximum
Overload	24 mA maximum

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 (LCD), 72x72x76.8 mm (LED)
IP Rating	52
Shipping Weight	0.802 kg
Shipping Dimensions	125x110x80 mm

Accessories

Split-Core CT Options

Split-Core CTs Model # (PMC-SCCT)	Rating	Aperture (mm)	Output Wire	I _{max}	Accuracy	Max. Burden
100A-40mA-16-A	100A/40mA	φ16	2m	200A	0.5	10Ω
200A-40mA-24-A	200A/40mA	φ24	2m	240A	0.5	10Ω
400A-40mA-35-A	400A/40mA	φ35	2m	480A	0.5	10Ω
800A-40mA-A	800A/40mA	80x50	2m	960A	0.5	10Ω
5A-2mA-16-A	5A/2mA	∅16	2m	20A	2.0	226Ω

Insulation=100MΩ/500VDC
 UL94-V0 rated
 Open-Circuit Protection @ 6-8V
 22AWG Output Wire (S1=White, S2=Black)

Standards of Compliance

Safety Requirements	
CE LVD 2006 / 95 / EC	EN61010-1: 2010 EN61010-2-030: 2010
Electrical Safety in Low Voltage Distribution Systems up to 1000Vac and 1500 Vdc	IEC61557-12: 2018 (PMD)
Insulation AC Voltage Insulation Resistance Impulse Voltage	IEC62052-11: 2003 IEC62053-22: 2003 2kV @ 1 minute >100MΩ 6kV, 1.2/50μs

EMC Compatibility

CE EMC Directive 2004 / 108 / EC (EN61326: 2013)

Immunity Tests	
Electrostatic Discharge	EN61000-4-2: 2009
Radiated Fields	EN61000-4-3: 2006+A1: 2008+A2: 2010
Fast Transients	EN61000-4-4: 2012
Surges	EN61000-4-5: 2014+A1: 2017
Conducted Disturbances	EN61000-4-6: 2014
Magnetic Fields	EN61000-4-8: 2010
Voltage Dips and Interruptions	EN61000-4-11: 2004+A1: 2017
Ring Wave	EN61000-4-12: 2017
Emission Tests	
Limits and Methods of Measurement of Electromagnetic Disturbance Characteristics of Industrial, Scientific and Medical (ISM) Radio-Frequency Equipment	EN55011: 2016
Limits and Methods of Measurement of Radio Disturbance Characteristics of Information Technology Equipment	EN55032: 2015
Limits for Harmonic Current Emissions for Equipment with Rated Current ≤16A	EN61000-3-2: 2014
Limitation of Voltage Fluctuations and Flicker in Low-Voltage Supply Systems for Equipment with Rated Current ≤16A	EN61000-3-3: 2013
Emission Standard for Residential, Commercial and Light-Industrial Environments	EN61000-6-4: 2007 + A1: 2011
Mechanical Tests	
Spring Hammer Test	IEC62052-11: 2003
Shock Test	IEC62052-11: 2003
Vibration Test	IEC62052-11: 2003

Ordering Information

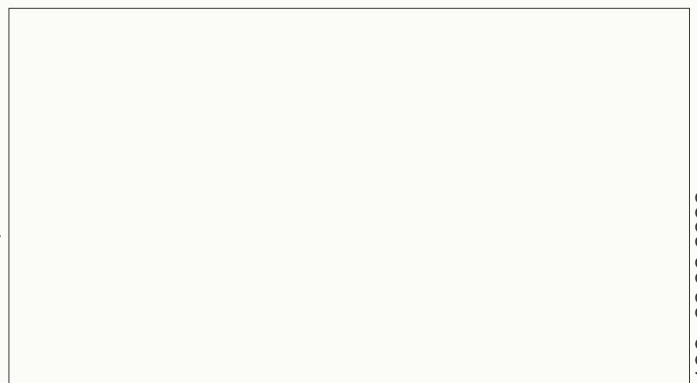
Product Code	Description
PMC-D726M 3-Phase Multifunction Meter	
Display Screen	LED L LCD
Input Current	5 5A 1 1A SCCT* For use with 100A,200A,400A and 800A SCCTs with 40mA Output SCCTA* For use with 5A SCCT with 2mA Output
Input Voltage	3 240V/415V
Power Supply	2 95/250V AC/DC, 47-440Hz
System Frequency	5 45-65Hz
I/O	C* 1×AO D 2×DI+2×DO
Communications	A 1×RS-485 Port, Modbus
Display Language	E English
PMC-D726M	- 5 3 2 5 D A E PMC-D726M-5325DAE (LED Example) L 5 3 2 5 D A E PMC-D726M-L5325DAE (LCD Example)

*Additional charges apply

Email: sales@cet-global.com
 Website: www.cet-global.com

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