PMC-D726M
DIN72 3-Ø Digital Multifunction Meter



- DIN 72x72
- Multifunction Measurements
- THD & 31 Individual Harmonics
- Voltage & Current Phase Angles
- K-Factor, Crest Factor & Unbalance
- TOU, Demands & Max. Demands
- Setpoint Alarms and SOE Log
- Optional RS-485 with Modbus
- Optional Split-Core CT Support
- Compact but Versatile
- IEC 62053-21 Class 1 Accuracy
- Support LED & LCD Option
- Extensive I/O Options
- IP52 Enclosure with no Opening
- Industrial Grade Components
- Standard Tropicalization
- Extended Temperature Range
- Extended Warranty

Designed For Reliability *Manufactured To Last*

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The 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 the optional 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 ±1ms resolution
- Record all setup, Setpoint and Digital Input status changes

TOU and Demand

- One TOU schedule, providing
  - 6 Seasons
  - 6 Daily Profiles, each with 6 Periods in 15-minute interval
  - 10 Holidays or Alternate Days
  - 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

Optional Inputs and Outputs

- Two Digital Inputs for Status Monitoring
- Two Digital Outputs for Control applications
- One Analog Output at 0/4-20mA
- Two Solid State Relay Output for Energy Pulsing applications

Communications

- Optically isolated RS-485 port at 1200 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

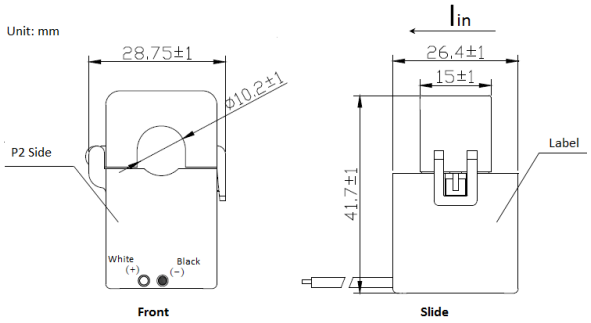
Technical Specifications

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	2.5mA (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/-, GND)	
Standard	95-250VAC/DC, ±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

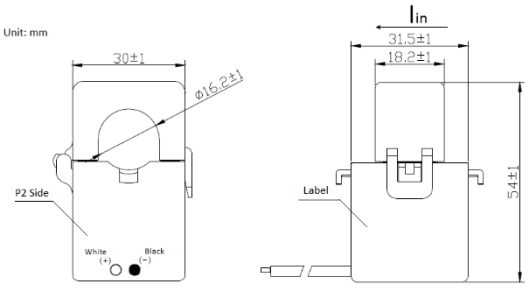
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SCCT Dimensions

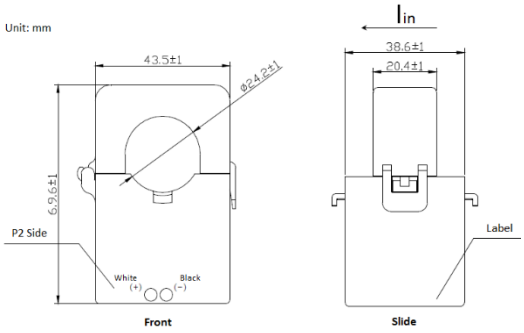
5A/2.5mA (for SCCTA Current Input Option)



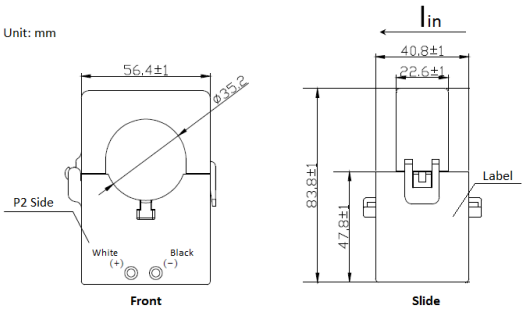
100A/40mA (for SCCT Current Input Option)



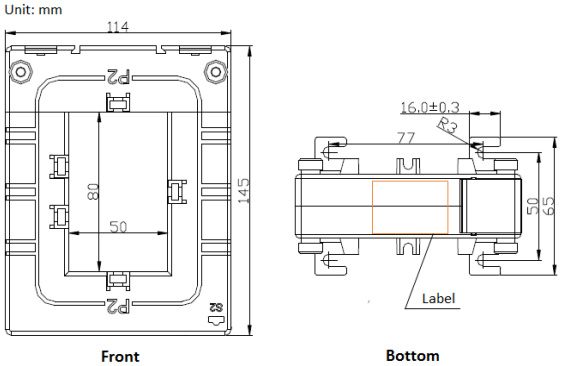
200A/40mA (for SCCT Current Input Option)



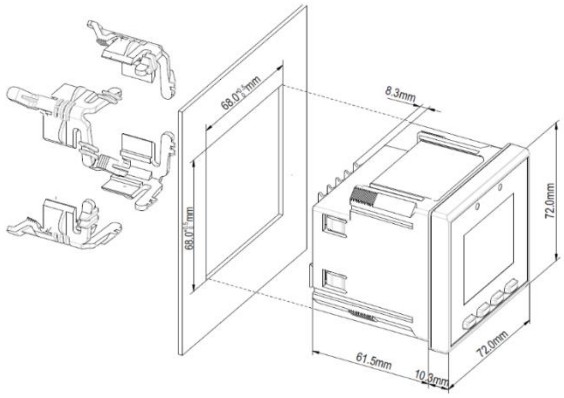
400A/40mA (for SCCT Current Input Option)



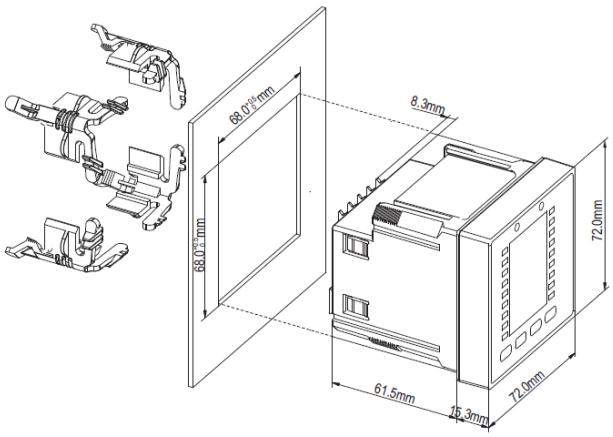
800A/40mA (for SCCT Current Input Option)



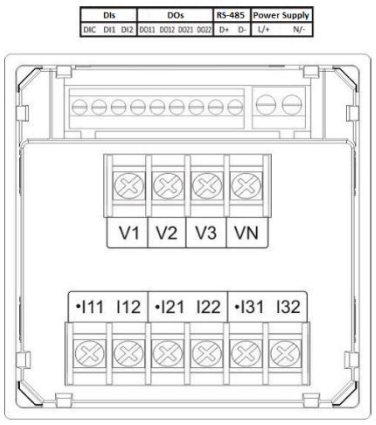
Device Dimensions, Cutout and Appearance

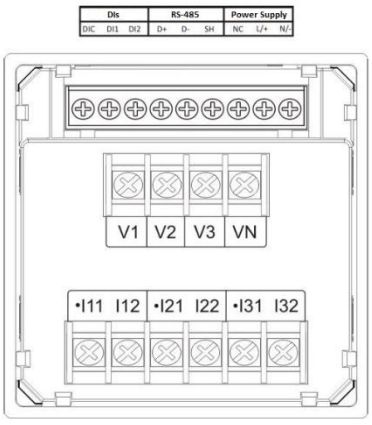


Panel Cutout (LCD)



Panel Cutout (LED)





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Accuracy

Parameters	Accuracy	Resolution
Voltage	±0.2% reading	0.1V
Current	±0.2% reading	0.001A
kW, kvar, kVA	±0.5% reading	0.001kX
kWh	IEC 62053021 Class 1	0.1kWh
kvarh	IEC 62053-23 Class 2	0.1kvarh
P.F.	±1.0% reading	0.001
Frequency	±0.02 Hz	0.01Hz
AO	±1% F.S.	-
Harmonics	IEC 61000-4-7 Class B	0.1%
K-Factor	IEC 61000-4-7 Class B	0.1

Standards of Compliance

Safety Requirements	
CE LVD 2006 / 95 / EC	EN 61010-1-1: 2001 EN 61010-2-030: 2010
Insulation Dielectric test: Insulation resistance: Impulse voltage:	IEC 60255-5: 2000 2kV @ 1 minute >100MΩ 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	IEC 60255-25: 2000

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

Ordering Information

Product Code	Description
PMC-D726M DIN72 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 2.5mA Output
Input Voltage	
3	240V/415V
Power Supply	
2	95-250V AC/DC, 47-440Hz
System Frequency	
5	45-65Hz
I/O	
X	None
A*	2xDI
C*	1xAO
D*	2xDI+2xDO
E*	2xDI+2xSSR Pulse Output
Communications	
X	None
A	1xRS-485 Port, Modbus
Display Language	
E	English

PMC-D726M	-		5	3	2	5	X	A	E	PMC-D726M-5325XAE (LED Example)
PMC-D726M	-	L	5	3	2	5	X	A	E	PMC-D726M-L5325XAE (LCD Example)

* Additional charges apply

Accessories – Split-Core CT Options

PMC-D726M Split-Core CT Spec - Insulation=100MΩ/500VDC, UL94-V0 rated, OC Protection @ 6-8V, 22AWG Output Wire (S1=White, S2=Black), Class 0.5					
Split-Core CT Model #	Rating	Aperture (mm)	Output Wire	Imax	Load
PMC-SCCT-100A-40mA-16-A	100A/40mA	Ø16.2±1	2m	200A	10Ω
PMC-SCCT-200A-40mA-24-A	200A/40mA	Ø24.2±1	2m	240A	10Ω
PMC-SCCT-400A-40mA-35-A	400A/40mA	Ø35.2±1	2m	480A	10Ω
PMC-SCCT-800A-40mA-A	800A/40mA	80x50	2m	960A	10Ω
PMC-SCCT-5A-2.5mA-A	5A/2.5mA	Ø10.2±1	1m	40A	10Ω

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