

Accuracy

Parameters	Accuracy	Resolution
Voltage	±0.2% Reading + 0.05% F.S.	0.001V
Current	±0.2% Reading + 0.05% F.S.	0.001A
kW, kvar, kVA	±0.5% Reading + 0.05% F.S.	0.001k
kWh, kVAh	IEC 62053-22 Class 0.5S	0.01kWh
kvarh	IEC 62053-23 Class 2	0.01kvarh
PF	±0.5%	0.001
Frequency	±0.02 Hz	0.01Hz
THD	IEC 61000-4-7 Class B	0.001%
Phase Angles	±1°	0.1°

Technical Specifications

Voltage Inputs (V1, V2, V3, VN)	
Standard Un	400VLN/690VLL
Range	10V to 1.2Un
Overload	1.2xUn continuous, 2xUn for 1s
Burden	<0.02VA per phase
Measurement Category	CAT III up to 600VLL
Frequency	45-65Hz

Current Inputs (I11, I12, I21, I22, I31, I32)	
Standard In	5A (5A/1A Auto-Scaling)
Range	0.1% to 200% In
Starting Current	0.1% of In
Overload	2xIn continuous, 20xIn for 1s
Measurement Category	CAT III up to 600VLL
Burden	<0.15VA per phase

Power Supply (L+, N-)	
Standard	95-250VAC/DC, ±10%, 47-440Hz
Burden	<2W
Overvoltage Category	CAT III up to 300VLL

Installation Torque	
Voltage/Current Inputs	12lb-in (1.3 N.m)
Power Supply, RS-485	5lb-in (0.5 N.m)

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	92x92 mm (3.62"x3.62")
Unit Dimensions	96x96x88 mm
IP Rating	65

Electromagnetic Compatibility

CE EMC Directive 2014/30/EU (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

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 1500Vdc	IEC 61557-12: 2018 (PMD)
Insulation Dielectric Test: 2kV @ 1 minute Impulse Voltage: 6kV, 1.2/50µs	IEC 62052-11: 2003

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
Vibration Test	IEC 62052-11: 2003
Shock Test	IEC 62052-11: 2003

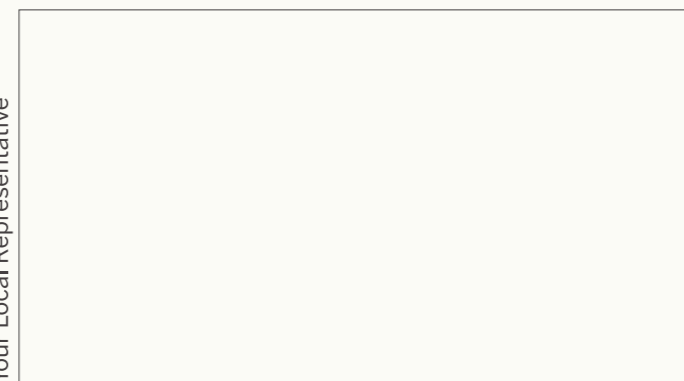
Ordering Information

Product Code	Description
PMC-33M A	7-segment LCD, 1xRS-485 with Modbus
Input Current	5 5A/1A Auto-Scaling (Class 0.5S for 5A and Class 1 for 1A)
Input Voltage	9 400VLN/690VLL
Power Supply	2 95-250 VAC/DC, 47-440Hz
Frequency	5 45Hz-65Hz
I/O	X None
Communications	A 1xRS-485
Language	E English
PMC-33M - A 5 9 2 5 X A E	PMC-33M-A-5925XAE (LCD Standard Model)

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Your Local Representative



V.00 10.07.2023



Intelligent Multifunction Meter

PMC-33M-A

www.cet-global.com

PMC-33M-A Intelligent Multifunction Meter

PMC-33M-A Digital Multifunction Meter is CET's latest offer for the economical digital power/energy metering market. Housed in a standard DIN form factor measuring 96x96x88mm, it is perfectly suited for industrial, commercial and utility applications. The PMC-33M-A features quality construction, multifunction true RMS measurements and a large, backlit, 7-segment LCD. Compliance with the IEC 62053-22 Class 0.5S standard, it is a cost-effective replacement for analog instrumentation that is capable of displaying 3-phase measurements at once. The standard RS-485 port and Modbus RTU Protocol support makes the PMC-33M-A a smart metering component for any Energy Management System.



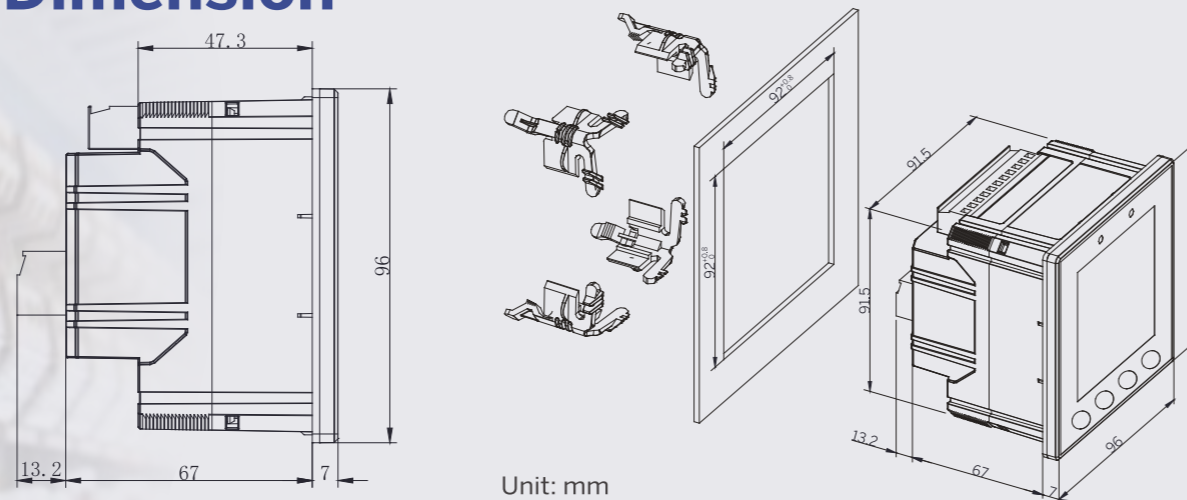
Measurements

Voltage (VLN/VLL) (per phase & Avg)	✓
Current (per phase & Avg)	✓
Neutral Current (Calculated)	✓
Frequency	✓
Phase Angles	✓
PF (True & Displacement)	✓
Operating Time (Running Hours)	✓
Active Power (per phase & Total)	✓
Reactive Power (per phase & Total)	✓
Apparent Power (per phase & Total)	✓
Active Energy	Imp./Exp./Tot./Net
Reactive Energy (4 Quadrant)	Imp./Exp./Tot./Net
Apparent Energy	Total
Max./Min. of instantaneous values	With Timestamp
Demand (kW, kvar, KVA, I), Predicted & Peak	With Timestamp
Setpoints	-
U/I Fundamental	-

Typical Applications

- Industrial, Commercial and Utility Substation Metering
- Building, Factory and Process Automation
- Sub-metering and Cost Allocation
- Energy Management and Power Quality Monitoring

Dimension



Appearance



- ① LED Pulse Output
- ② Enclosure
- ③ Front Panel
- ④ Communication Indicator
- ⑤ Units
- ⑥ Measurements
- ⑦ Buttons

General

Power Supply	95-250VAC/DC, ±10%
Accuracy Class (kWh)	Class 0.5S
Accuracy for Voltage and Current	±0.2% Reading + 0.05% F.S.
Voltage Input	400VLN/690VLL, Range: 10V to 1.2Un
Current Input	1A/5A, Range: 0.1%-200%In
Humidity Conditions	5% to 95% non-condensing
Operating Temperature (°C)	-25°C to 70°C
Storage Temperature (°C)	-40°C to 85°C
Atmospheric Pressure	70 kPa to 106 kPa
Unit Dimensions/Panel Cutout (mm)	96x96x88 mm/92x92 mm (3.62"x3.62")
Measurement Category	CAT III up to 600 VLL
True RMS Sampling Rate (samples/cycle)	64
Battery-backed Real-time Clock	25ppm accuracy (<2s per day)
IP Rating	IP65
Display	Backlit, 7-segment LCD Display

Power Quality

THD Voltage & Current (per phase)	✓
TOHD Voltage & Current (per phase)	✓
TEHD Voltage & Current (per phase)	✓
Individual Harmonics	2 nd - 31 st
U/I Symmetrical Components	-
K-Factor	✓
Crest Factor	✓
TDD (Odd/Even/Total)	✓
U/I Unbalance	✓

Max./Min. Log

Max./Min. Log	44 parameters
Self-Read Time Mode	This Month & Last Month (or Since Last Reset & Before Last Reset)

Communication

Protocol	Modbus RTU
RS-485 Port	1 (max. 38,400 bps)

Input/Output

kWh & kvarh Pulse Output (LED)	✓
Communication Indicator (LED)	✓