CET Electric Technology

PMC-340-A6
Digital Three-Phase Energy Meter

The PMC-340-A6 Digital Three-Phase Energy Meter is CET's latest offer for the low voltage power/energy metering market featuring DIN-Rail mount, high accuracy, multifunction true RMS measurements and a large, easy to read LCD display. The PMC-340-A6 complies with the IEC 62053-21: 2020 & AS 62053.21: 2023 Class 0.5 for 100A Direct Connected Input and IEC 62053-22: 2020 & AS 62053.22: 2023 Class 0.5S for CT Input. The PMC-340-A6 comes standard with a LED as well as a Solid State Pulse Output for energy pulsing. The PMC-340-A6 provides 16MB on-board non-volatile memory for Data Recording and 1xDigital Input for status monitoring and pulse counting for collecting WAGES (Water, Air, Gas, Electric and Steam) information. The standard RS-485 port and Modbus protocol support allows the PMC-340-A6 to become a vital component of an intelligent, multifunction monitoring solution for any Power and Energy Management Systems.

Typical Applications

- DIN-Rail mount energy metering
- Industrial, Commercial and Utility Substation Metering
- Building, Factory and Process Automation
- Sub-metering and Cost Allocation
- NMI compliant Energy Management

Features Summary

Ease of use
- Large, easy to read LCD for both data viewing and configuration
- Two LED indicators for Energy Pulsing and communication activities
- Password protected setup via Front Panel or free PMC Setup software
- Easy installation with DIN-Rail mounting, no tools required
- Direct Connected Input up to 100A without external CT

Basic Measurements
- Multifunction True RMS measurements
  - ULN, ULL, I, Phase Angle, In (calculated), P, Q, S, PF, dPF
  - Per-phase and Total kWh and kvarh Imp./Exp./Tot./Net and kVAh, 4-Quadrant kvarh as well as kWh/kvarh Imp./Exp./Tot./Net per Tariff
  - Voltage and Current THD, TOHD, TEHD, Individual Harmonics up to 31st and Unbalance
  - Current K-Factor, Crest Factor, TDD, TDD Odd and TDD Even
  - Demand and Max. Demand for I, P, Q, S, ULN, ULL and Temperature
  - Temperature and Operating Time
- Max./Min. Log
- 12 monthly recording of kWh, kvarh Imp./Exp./Tot./Net, kVAh and kvarh Q1-Q4 as well as kWh, kvarh Imp./Exp. and kVAh per Tariff
- Two TOU schedules, each providing
  - 12 Seasons
  - 20 Daily Profiles, each with 14 Periods
  - 90 Holidays or Alternate Days
  - 5 Tariffs, each providing the following information
    - kWh/kvarh Import/Export, kVAh
    - P/Q/S Max. Demands

SOE Log
- 128 events time-stamped to ±1ms resolution

Setpoint
- 20 user-programmable Setpoints with extensive list of monitoring parameters including Voltage, Current, Power, Temperature and DI Status, etc.
- Configurable thresholds and time delay

Pulse Outputs
- 1 Front Panel LED and 1 Solid State Pulse Output for energy pulsing application

Tamper Detection and Alarm
- DI connected to external switch as Setpoint Parameter for Tamper Alarm
- Built-in sensors for Magnetic Tamper Detection
- Alarm Events are stored in SOE Log

Digital Input
- 1 channel for external status monitoring or pulse counting
- Self-excited, internally wetted at 5VDC

Data Recorder
- Two Data Recorder Log of Max. 16 parameters
- Recording Interval from 1 second to 40 days
- Configurable Recording Depth (Max. 65535) and Recording offset
- Capable of recording 16 parameters at 5-min interval for over 7 months
- Available parameters: U, I, P, Q, S, PF, Freq., Temperature, kWh Imp./Exp., kvarh Imp./Exp., Demands and Max. Demands for U, I, P/Q/S Total and DI Pulse Counter

Communications
- Optically isolated RS-485 port, baud rate from 1,200 to 38,400 bps
- Modbus RTU protocol

Security
- Programmable Password protection for configurations on Front Panel
- 3-level independent security Comm. password protection and different access permissions

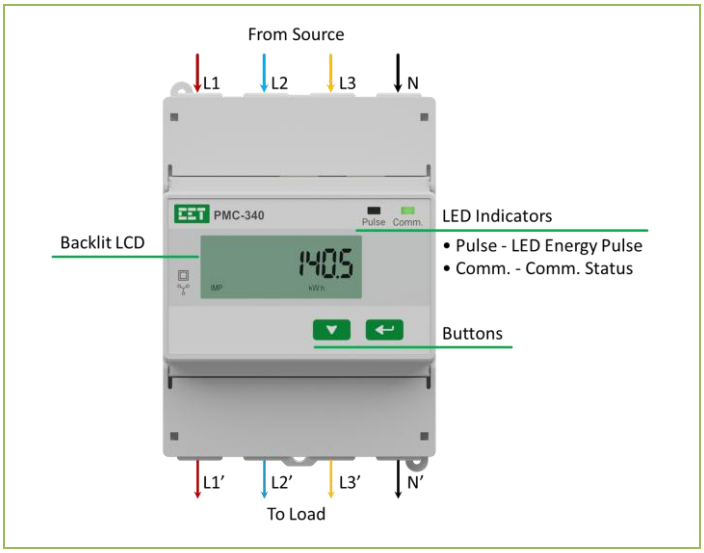
Real-Time Clock
- Battery backed RTC @ 6ppm (≤0.5s/day)
- Battery Life > 10 years

System Integration
- Supported by our PecStar® iEMS and PMC Setup
- Easy integration into other Automation or SCADA systems via Modbus RTU protocol

Accuracy

Parameters	Accuracy		Resolution
	Direct Connected Input	CT Input	
Voltage	±0.2%		0.01V
Current	±0.2%		0.001A
P, Q, S	±0.5%		0.001W/var/VA
kWh, kVAh	IEC 62053-21: 2020 & AS 62053.21: 2023 Class 0.5	IEC 62053-22: 2020 & AS 62053.22: 2023 Class 0.5S	0.01kXh
kvarh	IEC 62053-24: 2020 Class 1		0.01kvarh
PF	±0.5%		0.001
Frequency	±0.02Hz		0.01Hz
In (Cal.)	±1.0%		0.001A
THD	IEC 61000-4-7 Class II		0.001%
Temperature	±1°C		0.1°C

Appearance and Terminals



Designed For Reliability *Manufactured To Last*

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Technical Specifications

Inputs (L1, L2, L3, N)			
Voltage (Un)	220VAC	230VAC	240VAC
Overrange (%Un)	125%	120%	115%
Range (V)	88-276VAC (Self-powered)		
Burden	<2VA/phase		
Direct Input			
Current (In/Imax)	10A/100A		
Range	0.4% In to Imax		
Starting Current (Ist)	0.4% In (40mA)		
Minimum Current (Imin)	5% In (0.5A)		
Burden	<0.2VA/phase		
CT Input			
Current (In/Imax)	1A/10A		
Range	0.1% In to Imax		
Starting Current (Ist)	0.1% In (1mA)		
Minimum Current (Imin)	1% In (0.01A)		
Burden	<0.2VA/phase		
Frequency	45Hz-65Hz		

Solid State Energy Pulse Output (Selectable - kWh/kvarh)	
Isolation	Optical
Max. Load Voltage	80V
Max. Forward Current	50mA
Pulse Width	30-500ms configurable
Pulse Constant	1-0xFFFFFFFF configurable
Direct Connected Input	500 imp./kWh (default)
CT Input	10000 imp./kWh (default)

Communications	
RS-485	Modbus RTU
Baud Rate	1.2/2.4/4.8/9.6/19.2/38.4 kbps
Maximum Wire Size	1.5mm² (16AWG)
Maximum Torque	0.45 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
Pollution Degree	2

Mechanical Characteristics	
Mounting	DIN Rail
Unit Dimensions	72x95x70mm
IP Rating	51 (Front), 30 (Body)

Ordering Information

Version 20250110

Product Code	Description
PMC-340 Digital Three-Phase Energy Meter	
Basic Function	
A6	3-Phase Metering, Bi-directional Energy, Demands and Max. Demands, Max. & Min., Monthly Energy Log, Multi-Tariff TOU, Setpoint, SOE Log, Data Recorder Log, 16MB Log Memory
Display	
L	7-segment Backlit LCD Display
Input Current~	
A	10A (100A), Direct Connected Input
B	1A (10A), CT Input
Input Voltage	
3	110-240VLN/190-415VLL (-20% to +15%)
System Frequency	
5	45-65Hz
I/O~	
A	1xSS Pulse Output
B	1xDI
C	1xSS Pulse Output + 1xDI
Communications	
A	1xRS-485 Port
Protocol	
M	Modbus
Display Language	
E	English

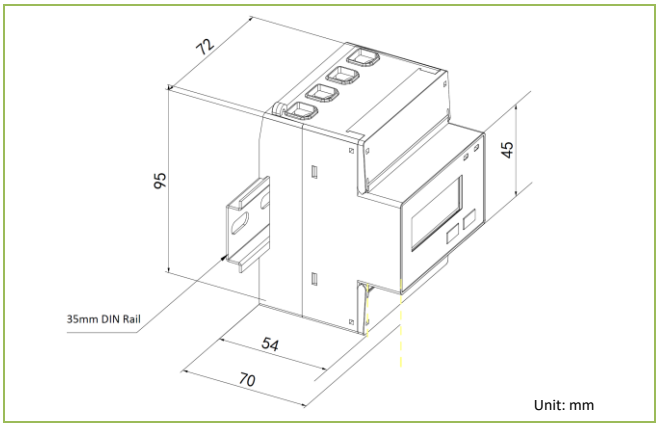
PMC-340	-	A6	L	A	3	5	A	A	M	E	PMC-340-A6LA35AAME (Standard Model)

~Device with Input Current "A" can work with I/O option "A" or "B".
Device with Input Current "B" is only available with I/O option "C".

Standards of Compliance

Safety Requirements	
CE LVD 2014/35/EU	EN 61010-1: 2010 + A1: 2019 EN 61010-2-030: 2010
Electrical Safety in Low Voltage Distribution Systems up to 1000Vac and 1500 Vdc	IEC 61557-12: 2021 (PMD)
Products Safety Requirements and Tests NMI AC Voltage Impulse Voltage	IEC 62052-31: 2015 AS 62052.31: 2017+A1:2021 M13-1 4kV @ 1 minute 6kV, 1.2/50µs
Electromagnetic Compatibility EMC 2014/30/EU (EN 61326: 2013)	
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 & Interruptions	EN 61000-4-11: 2004 + A1: 2017
Ring Wave	EN 61000-4-12: 2017
Mechanical Tests	
Spring Hammer Test	IEC 62052-31: 2015 & AS 62052.31: 2017 + A1:2021
Vibration Test	IEC 62052-11: 2020 & AS 62052.11: 2023
Shock Test	IEC 62052-11: 2020 & AS 62052.11: 2023
Revenue Metering Approval	
NMI M13-1 of Australia	Approval Mark: NMI XX/X/XXX

Dimensions and Installation



Unit: mm

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Your Local Representative

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