



### Typical Applications

- DIN rail mount energy metering
- Industrial and commercial metering
- Substation, building and factory automation
- Sub-metering
- Power quality monitoring

### Features Summary

#### Ease of use

- Large, easy to read LCD
- 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
- 3-phase power supply, no external control power required

#### Basic Measurements

- Multifunction measurements
  - Voltage, Current, kW, kvar, kVA, PF and Frequency
  - Total and per phase kWh and kvarh Imp/Exp/Tot/Net and kVAh
  - Voltage/Current THD, TOHD, TEHD, Unbalance and K Factor
  - Individual harmonics up to 31<sup>st</sup>
  - kW/kvar/kVA Total Demands and Max. Demands
  - Per Phase Current Demands and Max. Demands
  - Min/Max Log
  - One Data Recorder Log of max 12 parameters for Real-time measurements, Harmonics, Unbalance and Demands,...etc
- Two TOU schedules, each providing
  - 12 Seasons
  - 20 Daily Profiles, each with 12 Periods in 15-minute interval
  - 90 Holidays or Alternate Days
  - 4 Tariffs, each providing the following information
    - kWh/kvarh Import/Export
    - kW/kvar/kVA Total Demands and Max. Demands
- 12 monthly recording of kWh and kvarh Imp/Exp and kVAh
- 16 SOE events time-stamped to 1ms resolution

#### Digital Inputs (Optional)

- 3 channels for external status monitoring and pulse counting
- Self-excited, internally wetted at 24VDC

#### Pulse Outputs

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

#### Communications

- Optically isolated RS485 port, baud rate from 1200 to 38,400 bps
- Modbus RTU protocol

#### Real-time Clock

- Battery-backed real-time clock @ 6ppm
- Clock error  $\leq 0.5s/day$
- Can be set through front panel or communications

#### System Integration

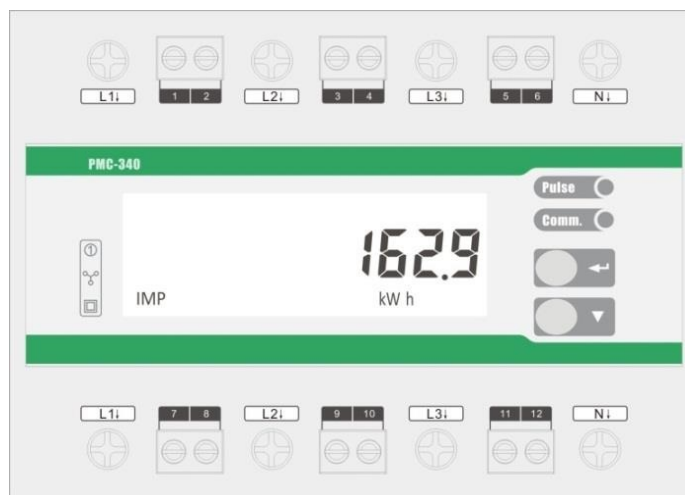
- Supported by our PecStar® iEMS and PMC Setup
- Easy integration into other Automation or SCADA systems via Modbus RTU protocol

The PMC-340 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 measurements and a large, easy to read LCD display. The PMC-340 complies with the IEC 62053-21 Class 1 and IEC 62053-22 Class 0.5S kWh Accuracy Standards for 100A Direct Input and 5A CT Input, respectively. The PMC-340 comes standard with a LED as well as a Solid State Pulse Output for energy pulsing. The standard RS485 port and Modbus protocol support allows the PMC-340 to become a vital component of an intelligent, multifunction monitoring solution for any Power and Energy Management Systems.

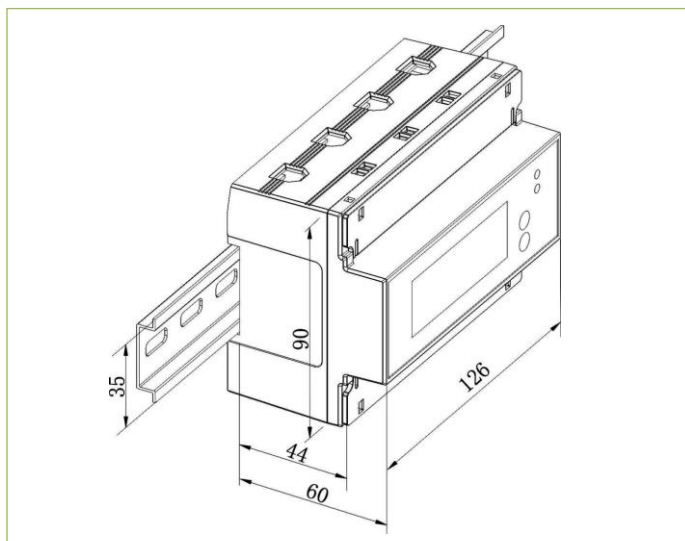
### Accuracy

Parameters	Accuracy	Resolution
Voltage	$\pm 0.5\%$	0.01V
Current	$\pm 0.5\%$	0.001A
kW, kvar, kVA	$\pm 1\%$	0.01kW/kvar/kVA
kWh, kVAh	IEC 62053-21 Class 1 for Direct Input	0.1kWh
	IEC 62053-22 Class 0.5S for 5A CT Input	
kvarh	IEC 62053-23 Class 2	0.1kvarh
P.F.	$\pm 1\%$	0.001
Frequency	$\pm 0.02Hz$	0.001Hz
Harmonics	IEC 61000-4-7 Class B	0.1%

### Terminals




### Dimensions and Installation



**Technical Specifications**

Inputs (L1, L2, L3, N)	
Voltage (Un)	240VLN
Range	0.7 to 1.1 Un
Burden	<10VA/phase
<b>Direct Input</b>	
Current (Ib/Imax)	20A/100A
Range	0.4% Ib to Imax
Starting Current	0.4% Ib
Burden	<4VA/phase
Maximum Wire Size	35mm <sup>2</sup> (3 AWG)
Maximum Torque	2.5 N.m
<b>CT Input</b>	
Current (In/Imax)	5A/6A
Range	(0.1%-120%) In
Starting Current	0.1% In
Burden	<0.5VA/phase
Frequency	45Hz-65Hz
Solid State Energy Pulse Output (Selectable - kWh/kvarh)	
Pulse Constant	1/10/100/1000/3200 imp/kWh or imp/kvarh
Isolation	Optical
Max. Load Voltage	80V
Max. Forward Current	50mA
Pulse Width	60-150ms
Communications	
RS-485	Modbus RTU
Baudrate	1200/2400/4800/9600/19200 bps
Maximum Wire Size	1.5mm <sup>2</sup> (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	126x90x60mm
Shipping Dimensions	TBD
Shipping Weight	TBD
IP Rating	51

**Ordering Information**


Product Code	Description
PMC 340	Digital Three Phase Energy Meter
<b>Basic Function</b>	
A	Basic Model
B*	Model A + 3xDI + 256kB Log Memory
<b>Input Current</b>	
A	20A (100A), Direct Input
B	5A (6A), CT Input
<b>Input Voltage</b>	
3	240VLN/415VLL
<b>System Frequency</b>	
5	45-65Hz
<b>Reserved</b>	
X	None
<b>Communications</b>	
A	1xRS-485 Port
<b>Display Language</b>	
E	English
PMC-340 - A A 3 5 X A E	PMC-340-AA35XAE (Standard Model)

**Standards of Compliance**

Safety Requirements		
CE LVD 2006/95/EC	EN61010-1-1-2001	
Insulation Dielectric test	IEC 60255-5-2000 2kV @ 1 minute	
Insulation resistance	>100MΩ	
Impulse voltage	6kV, 1.2/50μs	
Electrical safety in low voltage distribution systems up to 1000Vac and 1500 Vdc	IEC 61557-12: 2008 (PMD)	
Electromagnetic Compatibility CE EMC Directive 2004/108/EC (EN 61326: 2006)		
Immunity Tests		
Electrostatic discharge	IEC 61000-4-2:2001 Level IV	
Radiated fields	IEC 61000-4-3:2002 (10 V/m)	
Fast transients	IEC 61000-4-4:2004 Level IV	
Surges	IEC 61000-4-5:2005 Level IV	
Conducted disturbances	IEC 61000-4-6:2006 Level III	
V dips, interruptions & variations	IEC 61000-4-11:2004	
Oscillatory waves	IEC 61000-4-12:2006 Level III	
Radio Disturbances	CISPR 22:2006, Level B	
Emission Tests		
Limits and methods of measurement of electromagnetic disturbance characteristics of industrial, scientific and medical (ISM) radio-frequency equipment	EN 55011: 2009 (CISPR 11)	
Limits and methods of measurement of radio disturbance characteristics of information technology equipment	EN 55022: 2006+A1: 2007 (CISPR 22)	
Limits for harmonic current emissions for equipment with rated current ≤16 A	EN 61000-3-2: 2006+A1: 2009	
Limitation of voltage fluctuations and flicker in low-voltage supply systems for equipment with rated current ≤16 A	EN 61000-3-3: 2006	
Emission standard for residential, commercial and light-industrial environments	EN 61000-6-3: 2007	
Electromagnetic Emission Tests for Measuring Relays and Protection Equipment	IEC 60255-25: 2000	
Mechanical Tests		
Vibration Test	Response	IEC 62052-11: 2003 Level I
	Endurance	IEC 62052-11: 2003 Level I
Shock Test	Response	IEC 62052-11: 2003 Level I
	Endurance	IEC 62052-11: 2003 Level I
Bump Test		IEC 62052-11: 2003 Level I

**Contact us**

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