

Multifunction Energy Meter

For Industrial & Commercial Metering

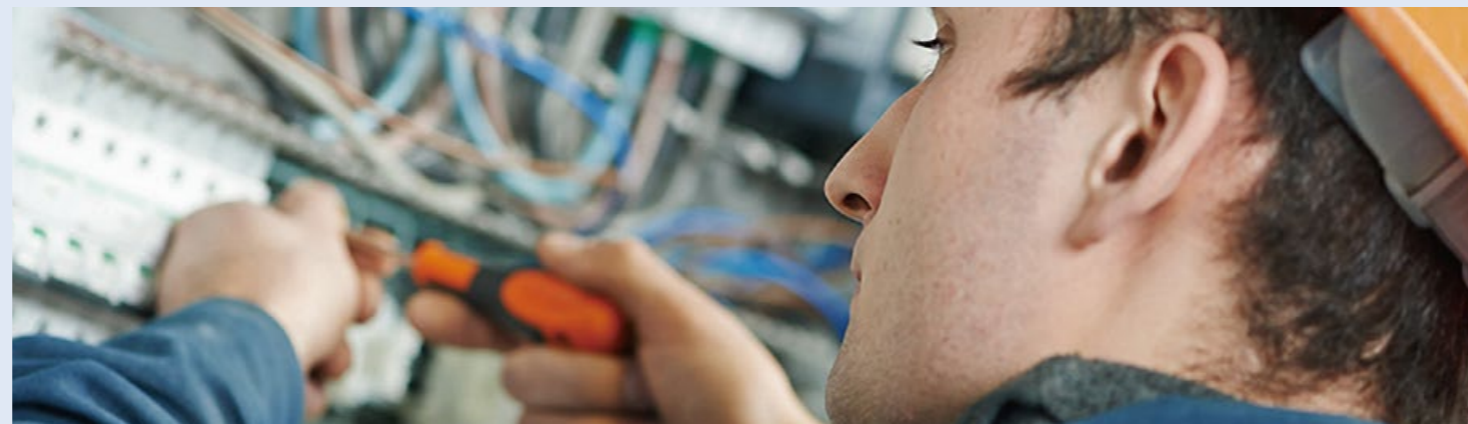
Multifunction

Direct Connection

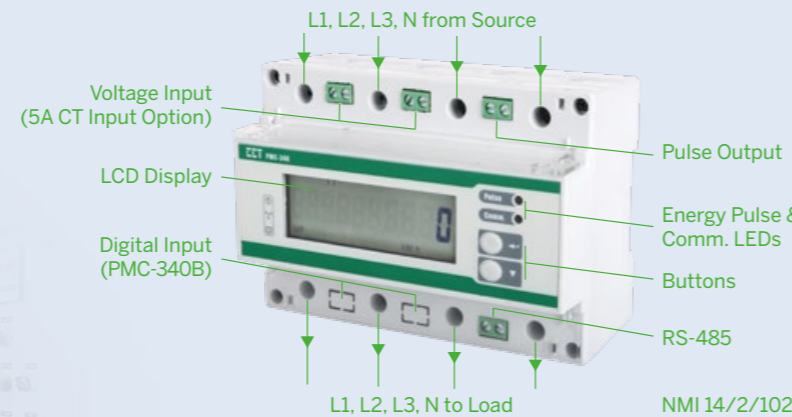
Energy Meter

High Accuracy

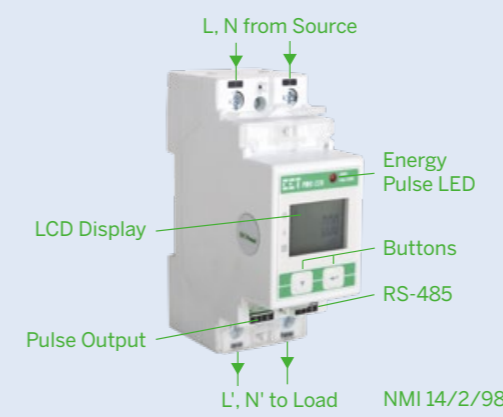
PMC-340 and PMC-220 are CET's latest offers for the low voltage energy metering market featuring DIN rail mount, high accuracy, multifunction measurements and a large, easy to read LCD display. The PMC-340 provides 3-Ø multifunction measurements with 100A Direct Input or 5A CT Input and optional Digital Inputs for status monitoring or pulse counting for WAGES information. The PMC-220 is designed for low cost 1-Ø multifunction measurement with Direct Input up to 63A. Both PMC-340 and PMC-220 come standard with RS-485 port, a front panel LCD as well as a Solid State Relay Output for energy pulsing. In addition, both devices have received the Certificate of Approval from The National Measurement Institute (NMI) of Australia and been verified by UL with reference to NMI M6-1 Electricity Meters, Part 1: Metrological and Technical Requirements.



PMC-340



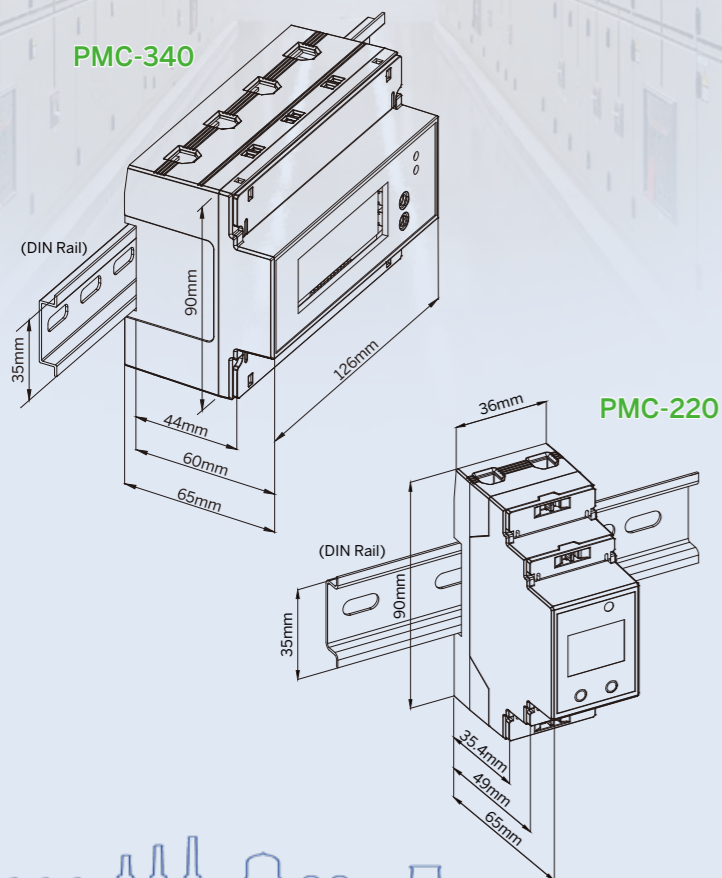
PMC-220



Typical Applications

- DIN rail mount energy metering
- Industrial and commercial metering
- Substation, building and factory automation
- Sub-metering
- Harmonic monitoring (PMC-340)

Dimension



Features

	3-Ø PMC-340	1-Ø PMC-220
Meter Type	Three-Phase Multifunction Energy Meter	Single-Phase Multifunction Energy Meter
Dimensions	126x90x65mm	36x90x65mm
Accuracy	IEC62053-21 Class 1 (100A) and IEC62053-22 Class 0.5S (5A CT)	IEC62053-21 Class 1
Current Input	100A Direct Input and 5A CT Input	63A Direct Input
Power Supply	Self-powered, no external control power required	Self-powered, no external control power required
Display	Large, Easy to read LCD	8-digit Multifunction LCD
LED Indicator	Two LED indicators for energy pulsing and communication status	kWh LED Pulse Output
Solid State O/P	1 Solid State Energy Pulse Output	1 Solid State Energy Pulse Output
Communication	Standard RS-485 port with Modbus RTU support	Standard RS-485 port with Modbus RTU support
Digital Input	3 Optional DIs for status monitoring, pulse counting or tariff switching	/
Access	Password Protected	Password Protected
Integration	Easy integration into other Automation or SCADA systems	Easy integration into other Automation or SCADA systems

Measurements

	PMC-340	PMC-220
U/I, Power, PF, Freq.	Voltage, Current, kW, kvar, kVA, PF and Frequency	Voltage, Current, kW, kvar, kVA, PF and Frequency
Energy	Per phase and Total kWh and kvarh Imp/Exp/Tot/Net and kVAh	Total kWh and kvarh Imp/Exp/Tot/Net and kVAh
Harmonics	THD, TOHD, TEHD and Individual up to 31 st	/
Demand	I1, I2, I3, kW/kvar/kVA Total Demands and Max. Demands	/
Max./Min.	Max./Min. Log	/
Data Recorder	16 measurements @ 10-minute intervals for 197 days	/
TOU	2 TOU Schedules and Monthly Energy Log of kWh/kvarh/kVAh	/
SOE	16 SOE events time-stamped to 1ms resolution	/

Accuracy

	3-Ø PMC-340		1-Ø PMC-220	
	Accuracy	Resolution	Accuracy	Resolution
Voltage (U)	± 0.5%	0.01V	± 0.5%	0.1V
Current (I)	± 0.5%	0.001A	± 0.5%	0.001A
kW, kVA	± 1.0%	0.01kX	± 1.0%	0.001kX
kvar	± 1.0%	0.01kvar	± 1.0%	0.001kvar
kWh	Class 1 Direct Input	0.01kXh	Class 1 Direct Input	0.01kXh
kVAh	Class 0.5S 5A CT Input	0.01kXh	/	/
kvarh	IEC62053-23 Class 2	0.01kvarh	IEC62053-23 Class 2	0.01kvarh
PF	± 1.0%	0.001	± 1.0%	0.001
Frequency	± 0.02 Hz	0.001Hz	± 0.02 Hz	0.01Hz
Harmonics	IEC61000-4-7 Class B	0.1%	/	/

Technical Specifications

	3-Ø PMC-340	1-Ø PMC-220
Voltage (Un)	220-240VLN	220-240VLN
Range	168 to 264VAC	96-264VAC
Burden	<10VA/phase	<0.5VA
Current (Ib/Imax)	20A/100A	5A/63A
Starting Current	0.4% Ib (0.08A)	0.4% Ib (0.02A)
Direct Input Burden	<4VA/phase	<2VA
Power Supply	Self-powered 168 to 264VAC	Self-powered 96-264VAC
Maximum Wire Size	35mm ² (3AWG)	25mm ² (4AWG)
Maximum Torque	2.5 N.m	2.5 N.m
Current (In/Imax)	5A/6A	/
CT Input Range	(0.1%-120%) In	/
Starting Current	0.1% In	/
Burden	<0.5VA/phase	/
Frequency	45-65Hz	45-65Hz
SS Pulse Output		
Pulse Constant	1/10/100/1000/3200 imp/kWh or imp/kvarh	1000 imp/kWh or imp/kvarh
Isolation	Optical	Optical
Max. Load Voltage	80V	80V
Max. Forward Current	50mA	50mA
Pulse Width	60-150ms	60-100ms
Communications		
RS-485	Modbus RTU	Modbus RTU
Baud Rate	1200/2400/4800/9600/19200 bps	1200/2400/4800/9600/19200 bps
Maximum Wire Size	1.5mm ² (16AWG)	1.5mm ² (16AWG)
Maximum Torque	0.45 N.m	0.45 N.m

Environmental and Mechanical Specifications

Environmental Conditions

Operating Temp.	-25°C to 70°C
Storage Temp.	-40°C to 85°C
Humidity	5% to 95% non-condensing
Atmospheric Pressure	70kPa to 106kPa
Pollution Degree	2

Mechanical Characteristics

	PMC-340	PMC-220
Mounting	DIN Rail	
Unit Dimensions	126x90x65mm	36x90x65mm
Shipping Dimensions	165x140x110mm	120x103x42mm
Shipping Weight	0.79kg	0.18kg
IP Rating	IP51 (Front), IP30 (Body)	

Mechanical Tests

	PMC-340	PMC-220
Vibration Test	IEC62052-11: 2003 Level I	
Shock Test	IEC62052-11: 2003 Level I	
Spring Hammer Test	IEC62052-11: 2003 Level I	

EMC Compatibility

CE EMC Directive 2014/30/EU (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
Conducted Disturbances	EN61000-4-6: 2014
Magnetic Fields	EN61000-4-8: 2010
Voltage Dips and Interruptions	EN61000-4-11: 2004
Oscillatory Waves	EN61000-4-12: 2006

Emission Tests

Limits and Methods of Measurement of Electromagnetic Disturbance Characteristics of Industrial, Scientific and Medical (ISM) Radio-Frequency Equipment	EN55011: 2009+A1: 2010 (CISPR 11)
Limits and Methods of Measurement of Radio Disturbance Characteristics of Information Technology Equipment	EN55022: 2010+AC: 2011 (CISPR 22)
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 Industrial Environments	EN61000-6-4: 2007 +A1: 2011
Testing and Measurement Techniques - Ring Wave Immunity Test	EN61000-4-12: 2006

Safety Standards

Safety Requirements

CE LVD 2014/35/EU	EN61010-1: 2010, EN61010-2-030: 2010
Insulation	IEC62052-11: 2003 IEC62053-21/22: 2003 NMI M6-1
AC Voltage	4kV @ 1 minute
Impulse Voltage	12kV, 1.2/50µs (NMI M6-1)

Ordering Information

Product Code

Description

Product Code	Description
PMC-340	Three-Phase Multifunction Energy Meter
Basic Function	A Basic Model B Model A + 3xDI + 2MB Log Memory
Input Current	A 20A (100A Max.), Direct Input B 5A (6A), CT Input
Input Voltage	3 240ULN/415ULL
Frequency	5 45Hz-65Hz
Reserved	X None
Communications	A 1xRS-485 Port
Language	E English
PMC-340	A A 3 5 X A E PMC-340-AA35XAE (Standard Model)

Product Code

Description

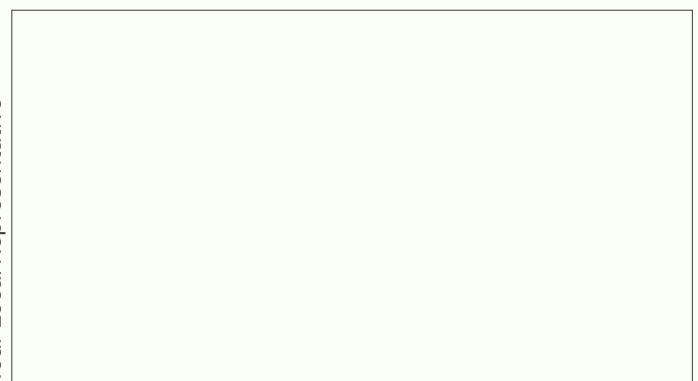
Product Code	Description
PMC-220	Single-Phase Multifunction Energy Meter
Input Current	C 5A (63A Max.), Direct Input
Input Voltage	3 95V-240V AC ±10%
Frequency	5 45Hz-65Hz
Communications	A 1xRS-485 Port
Language	E English
PMC-220	C 3 5 A E PMC-220-C35AE (Standard Model)

* Additional charges apply

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