PEC-EM
Energy Meters

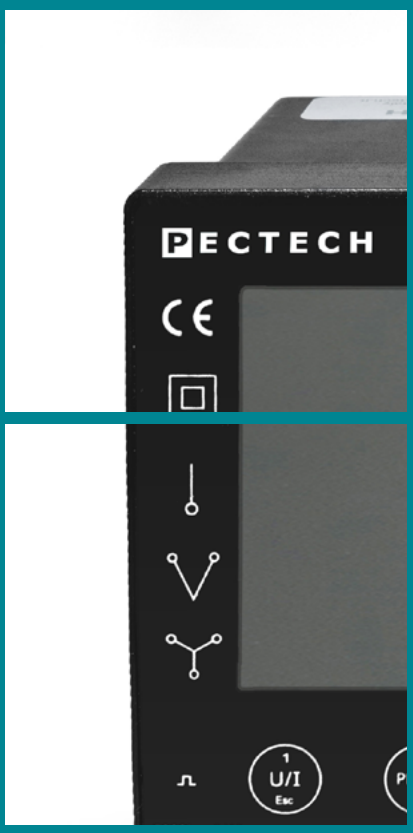


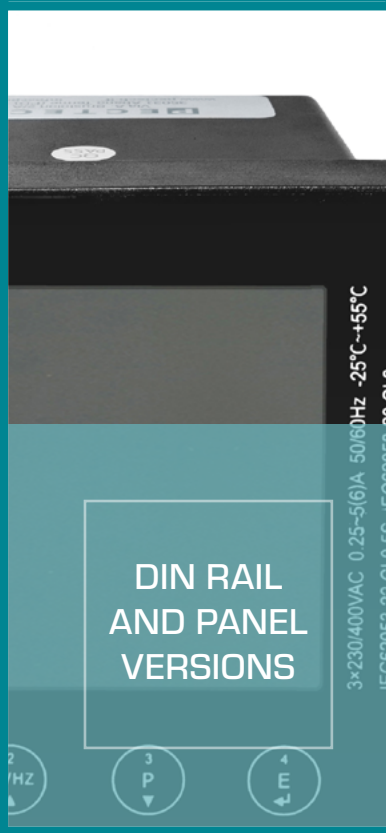












Energy Meters
Serie PEC-EM

PEC-EM1
SINGLE PHASE
Energy Meter

PEC-EM3
THREE PHASE
Energy Meter

PEC-EMx-MID
MID CERTIFIED
Energy Meters

PEC-EM3-96
PANEL 96*96
Energy Meter

MASTER CHIPS

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THREE PHASE ENERGY METERS

DIRECT INSERTION THREE PHASE ENERGY METERS

ENERGY METERS FOR CURRENT TRANSFORMERS: 1/5A - 333mV - ROGOWSKI COILS

MOD. PEC-EM3

DIFFERENT VERSIONS AVAILABLE	
Primary Current selectable range: 1-9999A	
PEC-EM3-5A / PEC-EM3-ETH-5A	for CTs secondary **1A/5A**. Measurement range: 0,003 to 6 A. Ib (Base Current)= 5A Overload: 120A per 0,5 sec.
PEC-EM3-333 / PEC-EM3-ETH-333	for CTs secondary **333mV** Impedance: >1 Mohm
PEC-EM3-RC / PEC-EM3-ETH-RC	for **Rogowski coils** da 50/85/100mV/kA selectable Measurement range: from 5 to 5000 A (referred to 100mV/kA version) Impedance: >1 Mohm
PEC-EM3-100A	Direct connection up to 100 A

MAIN FEATURES	
DIMENSIONS AND MOUNTING	4 Din Rail with backlit display. 72x100x66 (L x H x D)
POWER SUPPLY	80 ~ 300 Vac / 100 ~ 420 Vdc (24Vdc on demand) Frequency 45 ~ 65 Hz Absorption < 4VA/0.5W
ACTIVE ENERGY ACCURACY CLASS	Active Energy Class 0,5S referred to IEC62053-22
VOLTAGE MEASUREMENT RANGE	30 - 300 Vac (LN), 30 - 500 Vac (LL)
CTS SECONDARY INPUT	Versions available with direct insertion up to 100A, secondary current 1/5 A, secondary 333mV, Rogowski probes
THD MEASUREMENT	Available for Current and Voltage channels
MAX DEMAND WITH RTC	Real-time clock with recording of value and date/time of maximum daily demand, previous days and previous months
WORKING TEMPERATURE	from -25°...+ 70°C (direct connection version +55°C max)
SERIAL PORT - COMMUNICATION	Modbus RTU version on RS485, baud rate up to 38400 / ETH version with Modbus RTU and Modbus TCP-IP (Gateway function)
DISPLAY	Backlit, programmable. Graphical display of load type Reactive (Capacitive/Inductive)
PULSE OUTPUT	Open collector impulse output, configurable weight and duration for Active and Reactive Energy. RS485 versions only.
SETTINGS	Via integrated capacitive keypad

AVAILABLE MEASUREMENTS	
VOLTAGE AND CURRENT CLASS 0,5 - IEC 61557-12	L-N Voltage from 30 to 300 Vac L-L Voltage from 30 to 500 Vac
FREQUENCY CLASS 0,2 - IEC 61557-12	Range 45-65Hz
POWER **ACTIVE:** CLASS 0,5 - IEC 61557-12 **REACTIVE:** CLASS 2 - IEC 61557-12	Active Power/ Reactive Power/ Apparent Power. Maximum power demand since the last demand reset.
ENERGY **ACTIVE:** CLASS 0,5S IEC 62053-22/ IEC 61557-12 **REACTIVE:** CLASS 2 - IEC 61557-12	Bidirectional measurement of active and reactive energy import/export. Total active energy/total reactive energy. Multi-tariff.

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POWER FACTOR CLASS 1 - IEC 61557-12	For each phase and total.
HARMONIC DISTORTION CLASS 1 - IEC 61557-12	THD% for each Current and Voltage channels and Total
DATA REFRESH	1 second
SERIAL COMMUNICATION	RS485 Modbus RTU - Baud rate from 1200 to 38400 ETH Version: RS485 Modbus RTU - Baud rate da 1200 a 38400 and RJ45 Ethernet port with Modbus TCP-IP (Gateway function)

ENVIRONMENTAL INFO	
WORKING TEMPERATURE	-25°C ... +70°C (-25°C... + 55°C for PEC-EM3-100A)
STORAGE TEMPERATURE	-40°C ... +80°C
HUMIDITY	<90 % not condensing
ALTITUDE INSTALLATION	up to 2000 mt
IP PROTECTION	Frontal IP51 - Body IP 30 (under IEC 60529)
VIBRATIONS	10Hz -150Hz under IEC 60068-2-6
DIMENSIONS	72x100x66 mm - DIN Rail module - 4 Modules



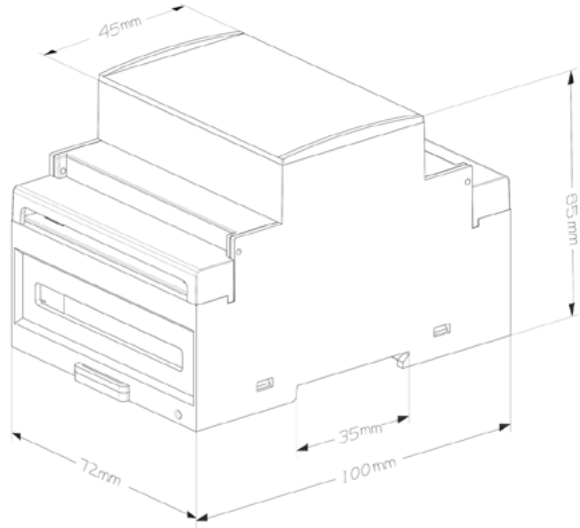
PEC-EM3-ETH-CT



PEC-EM3-CT

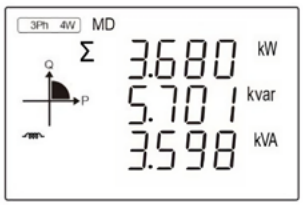


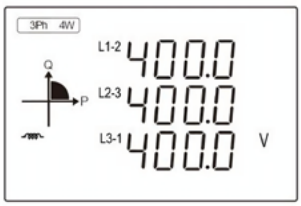
PEC-EM3-100A

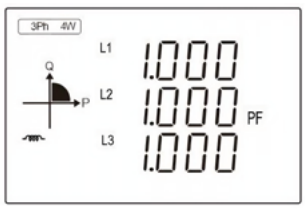




PEC-EM3-CT / PEC-EM3-ETH-CT











SINGLE PHASE ENERGY METER

DIRECT CONNECTION UP TO 100A

RS485 Modbus RTU

MOD. PEC-EM1-100A

MAIN FEATURES	
DIMENSION AND MOUNTING	1 DIN rail module with backlit
POWER SUPPLY	L-N from Network
ACTIVE ENERGY ACCURACY	Class 0,5/1 under IEC 62053-22, IEC 61557-12
VOLTAGE MEASUREMENT RANGE	176 - 275Vac – Nominal Voltage 230Vac
MAX DEMAND WITH RTC	Real-time clock with recording of value and date/time of maximum daily demand, previous days and previous months.
SERIAL COMMUNICATION	RS485 Modbus RTU - Baud rate from 1200 to 19200
DISPLAY	Backlit, programmable. Graphical display of load type Reactive (Capacitive/Inductive)
SETTINGS	Via integrated capacitive keypad

AVAILABLE MEASUREMENTS	
	Bidirectional measurement of active and reactive energy import/export Multi-tariff
ACTIVE ENERGY **REACTIVE ENERGY**	CLASS 0,5S / 1 - IEC 62053-22/ IEC 61557-12 CLASS 2 - IEC 61557-12
POWER FACTOR	CLASS 1 - IEC 61557-12

ENVIRONMENTAL INFO	
WORKING TEMPERATURE	-25°C ... +70°C
STORAGE TEMPERATURE	-40°C ... +80°C
HUMIDITY	<90 % not condensing
ALTITUDE INSTALLATION	up to 2000 mt
IP PROTECTION	Frontal IP51 - Body IP 30 (under IEC 60529)
VIBRATIONS	10Hz -150Hz under IEC 60068-2-6
DIMENSION	18x100x66 mm – DIN rail mounting - 1 Module

MID CERTIFIED VERSIONS NEW

PEC-EM1-100A-MID	Single phase direct connection energy meter up to 100A RS485 Modbus RTU Active Energy in Class C under EN50470-3:2022
PEC-EM3-100A-MID	Three phase direct connection energy meter up to 100A RS485 Modbus RTU Active Energy in Class C under EN50470-3:2022
PEC-EM3-5A-MID	Three phase for external CTs 1/5A energy meter RS485 Modbus RTU Active Energy in Class C under EN50470-3:2022
PEC-EM3-ETH-5A-MID	Three phase for external CTs 1/5A energy meter RS485 Modbus RTU and ETH port with Modbus TCP-IP (Gateway function) Active Energy in Class C under EN50470-3:2022



PANEL VERSION ENERGY METER 96x96

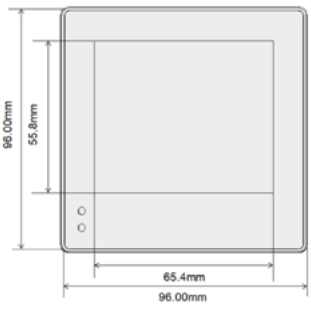
FOR CURRENT TRANSFORMERS SECONDARY 1A/5A
RS485 Modbus RTU

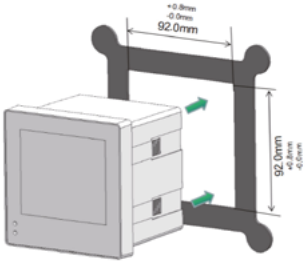
MOD. PEC-EM3-96-5A

PEC-EM3-96-5A is the 96x96 panel version of the PEC-EM3 line.

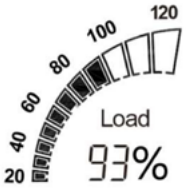
It is equipped with Modbus RTU serial communication via RS485. Equipped with digital inputs and relays for threshold alarm logic. Harmonic analysis up to the 63rd.

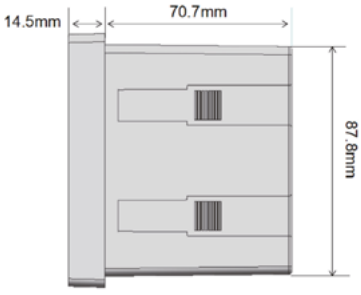
MAIN FEATURES	
DIMENSION AND MOUNTING	96x96 Panel mounting
POWER SUPPLY	80~300 Vac / 100~420 Vdc (24Vdc on demand)
ACTIVE ENERGY ACCURACY	Class 0,5S under IEC 62053-22
VOLTAGE MEASUREMENT RANGE	30 - 350Vac (LN), 30 - 660Vac (LL)
SUITABLE	for network 1P2W, 2P3W, 3P3W, 3P4W
WORKING TEMPERATURE	-25°C ... +70°C
SERIAL COMMUNICATION	Modbus RTU - Baud rate 38400 max
DISPLAY	Bar graph, reactive load type indications, digital contact status
WORKING FREQUENCY	45 ... 65 Hz
DIGITAL INPUTS	4 inputs - dry contacts
RELAYS	2 x 250Vac 3A relays - configurable
PULSE OUTPUT	Configurable
AVAILABLE MEASUREMENTS AND FUNCTIONS	
MAX DEMAND	Programmable with date and time indication for the 31 days of the month and 12 months
NETWORK ANALYSIS	THD I and THD V, Harmonic Analysis up to the 63rd order
ALARM MANAGEMENT	4 Digital inputs / 2 Relays with programmable alarms / Pulse output
BIDIRECTIONAL MEASUREMENT AND MULTITARIFF FUNCTION	RTC on board - Real Time Clock

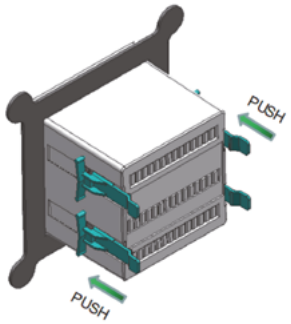


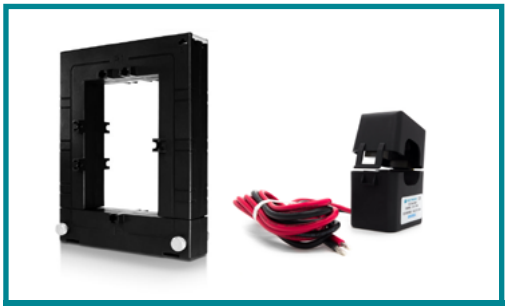












It manage PECTECH's Split core and Solid core CTs with 1A/5A secondary

PECTECH

PEC-EM
Energy Meters

	STANDARD VERSION									MID VERSION			
	PEC-EM1-100A	PEC-EM3-100A	PEC-EM3-5A	PEC-EM3-333	PEC-EM3-RC	PEC-EM3-ETH-5A	PEC-EM3-ETH-333	PEC-EM3-ETH-RC	PEC-EM3-96	PEC-EM1-100A-MID	PEC-EM3-100A-MID	PEC-EM3-5A-MID	PEC-EM3-ETH-5A-MID
Single Phase	☑									☑			
Three Phase		☑	☑	☑	☑	☑	☑	☑	☑		☑	☑	☑
Panel Mounting 96 x 96									☑				
Din Rail Mounting	1	4	4	4	4	4	4	4		1	4	4	4
Display backlit	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑
RS485 - Modbus RTU	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑
Modbus TCP-IP						☑	☑	☑					☑
Direct Connection	☑	☑								☑	☑		
CTs Connection by 1/5A			☑			☑						☑	☑
CTs Connection by 333mV				☑			☑						
CTs Connection by Rogowsky Coils					☑			☑					
Gateway Function						☑	☑	☑					☑
Auxiliari Power Supply	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑
THD Voltage and Current		☑	☑	☑	☑	☑	☑	☑	☑		☑	☑	☑
Multitariff / RTC	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑	☑

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