



EP-3 - four quadrant, prepaid, three-phase electricity meter for active and reactive energy equipped with Wi-Fi communication (MID* certificate)



Application

EP-3 is a four quadrant, three phase electricity meter designed for single or bi-directional direct measurements of active and reactive energy. EP-3 is a multi tariff electricity meter (four tariffs), equipped with internal tariff switch, battery supplying Real Time Clock and memory for measuring data, settings and parameters. **EP-3 uses IP data transmission** which enables ultrafast data transferring for electricity distributors and suppliers.

Advantages of EP-3:

- Networking using Wi-Fi and IP technology via www and email
- Registration of total energy registers for active energy in both directions and reactive energy at four quadrant measurements applying 1-minute integration period
- QWERTY keyboard for advanced configuration of electricity meter and communication modules
- LCD display with presentation of QR codes
- Designed for prepaid billing systems using digital code or proximity card
- Ability of simultaneous working with two chosen communication modules (Wi-Fi, GSM, ETHERNET)
- Replacable batteries LR03 (reading data in case of voltage failure) and CR2032 (RTC battery supply)

Presentation of measuring data in OBIS standard according to EN 62056-6-1).

Measuring functions

- Measurement of three phase active energy in four tariffs for both directions
- Measurement of three phase reactive energy in four tariffs (Q1, Q2, Q3, Q4)
- Measurement of three phase total active energy for both directions
- Measurement of three phase total reactive energy (Q1, Q2, Q3, Q4)
- Measurement of active power, applying 1, 15, 30 or 60 minutes integration periods for both directions

- Registration of the 10 highest values of maximum demand in both directions, with identification of the date and time of their appearance due to contractual power value, according to the algorithm of the highest value selected from the clock time
- Registration of active power overconsumption in relation to contractual power value
- Registration of number of exceedances of consumed contractual active power with respect to predefined demand power value
- Registration of overconsumed active power selected from the 10 highest values of maximum demand
- Registration of load profile (96000 power values and energy registers) applying 1, 15, 30 or 60 minutes integration period for active energy in both directions and reactive energy (Q1, Q2, Q3, Q4)
- Billing periods and operating:
 - ✓ registration of measured values for the last 31 billing periods in meter's memory
 - ✓ automatic reset of billing period for defined day of defined months
 - ✓ manual reset of billing period using:
 - touch keyboard
 - communication interface (using utility software „SOLEN”)

Control functions

- Measurement and presentation of momentary values of voltage, current, power and frequency
- Signaling of supply voltage
- Registration of the last 150 billing periods with following data: meter programming, setting of date and time, influence of external magnetic fields with magnets, voltage failures
- QR codes for automation of reading process and access to measured data
- Automatic time synchronization
- 120 A power switch controlled with SPEL prepaid system (designed by ZEUP Pozyton)

Communication interfaces

EP-3 is equipped with:

- OPTO interface according to EN 62056-21
- USB and micro SD for quick data saving from meter's memory
- Wi-Fi + GSM (optional) communication interfaces

Additional functions

- Ability of manual switching off: keyboard, remote configuration and optical interface
- Resistance against influence of strong external magnetic fields caused by magnets


Parametrization and configuration

It is possible to provide meter in a custom configuration adaptable to individual client requirements. All operations in conjunction with downloading of tariffs parameters, tariff structure and the way the billing period is reset, as well as display operating modes are performed using software tools specially designed by ZEUP Pozyton: SOLEN (tariff software), SEL (remote reading software), SPEL (prepaid system). ZEUP Pozyton provides technical support for all meter's configurations.

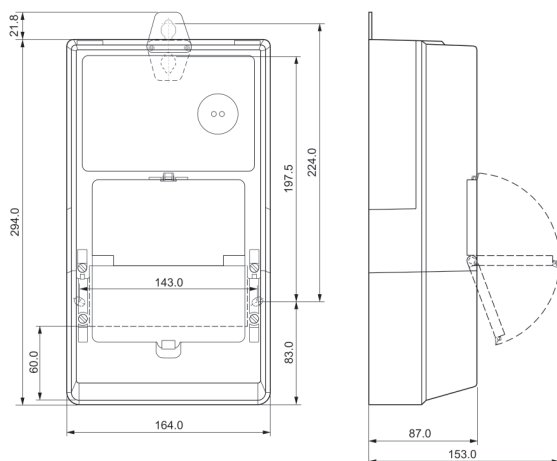
* **MID** - *Measuring Instruments Directive*

The meter has an EU - Type Examination Certificate number **TCM 221/17 - 5518** and is the subject to conformity assessment according to EU MID Directive and can be submitted to secondary legalization.

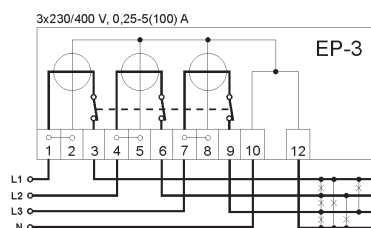
Basic technical data

Type		EP-3
Accuracy	active energy (P)	2 or 1 - EN 62053-21 A or B - EN 50470-3
	reactive energy (Q)	1 - EN 62053-24 and ZN/LB/T/08/11
Nominal voltage U_n		3x230/400 V AC
Reference current I_{ref}		5 A
Maximum current I_{max}		100 A
Starting current I_{st} / Minimum current I_{min}		20 mA / 250 mA
Transitional current I_{tr}		0,5 A
Frequency		50 Hz
Power consumption in voltage path		< 2 VA / < 1 W (without module LP-1/EP-3/WiFi) < 2,5 VA / < 1,5 W (with module LP-1/EP-3/WiFi)
Power consumption in current path		< 0,1 VA (without power switch) < 0,22 VA (with power switch)
Battery supply (for reading the display without voltage supply)		Battery type: LR03 (AAA), $U_n = 1,5 V$
Load profile registration		Integration period 1, 15, 30 or 60 minutes
Energy profile registration		Energy registers stored with resolution of 1, 15, 30 or 60 minutes
Power switch		$I_{max} = 120 A, 250 V AC$
Tariffication		Four programmable tariffs with resolution of 15 minutes
RTC clock accuracy		< $\pm 0,5 s/24 h$
RTC (real time clock) battery supply		Battery type CR2032 (replaceable), 10 years of life time
Display		LCD display, 128 x 64 dots with back light, 66 x 33 mm
Counter capacity		999999,999
Meter constant		800 imp./kWh and 800 imp./kvarh
OPTO interface according to EN 62056-21		For data reading and programming
Two communication Interfaces for replaceable modules		Wi-Fi + GSM. For: data transmission, communication with modules, setting of date and time (with remote time synchronization code)
Remote time synchronization code		Active  or inactive
Electromagnetic compatibility		According to EN 61000-4 and EN 50470-1
Housing		PC/ABS, Protection Class: II, IP 51
Temperature	operating (EN 60721-3-3)	- 40 °C ... + 70 °C (class 3K7)
	storage (EN 60721-3-1)	- 40 °C ... + 70 °C (class 1K5)
	transport (EN 60721-3-2)	- 40 °C ... + 70 °C (class 2K4)
Weight		2,35 kg (with power switch) + 0,036 kg (LP-1/EP-3/WiFi module)
Notes		no. W.123697

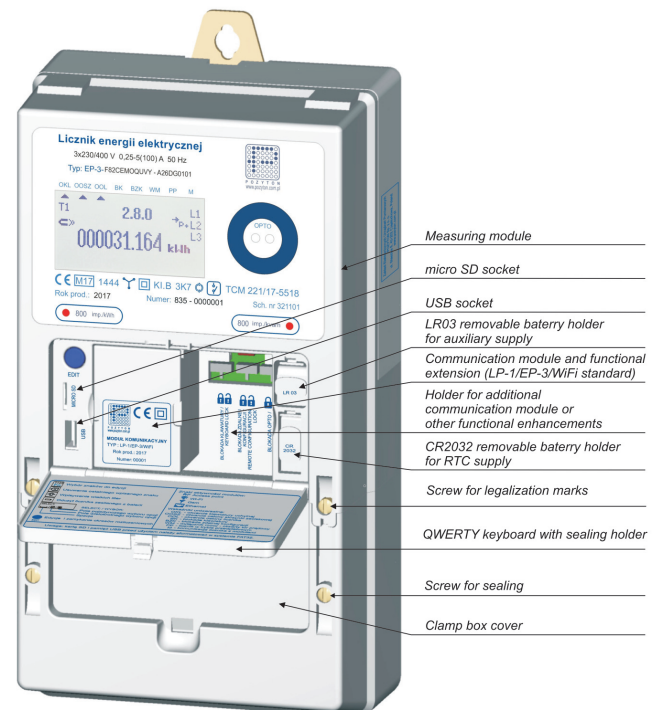
Construction of the meter assures resistance against influence of strong external magnetic fields caused by magnets with induction up to 150 mT, when measure is carry out at 30 mm distance from its surface.



Dimensions



EP-3 connection diagram (with power switch)



EP-3 meter construction

When ordering give us following informations: tariff, demand values and load profile integration periods, the way of billing period reset and code for remote time synchronization.

ALL FEATURES ARE SUBJECT TO CHANGE WITHOUT NOTICE ACCORDING TO PRODUCTS IMPROVEMENTS.