

sEA - three phase electricity meter for active energy measurement designed for installation on the standard rail (TH-35)



- Registration of 53 760 mean power values. When the integration period is set to 15 minutes the load profile registration has capacity to store 560 days of measuring data
- Number of contractual power value exceeded is also to be registered in the meter
- Measurement and registration of active power overconsumption due to contractual power value
- Measurement of instantaneous values: P, I, U, f
- Registration of data for the last 12 billing periods
- Signalling and registration of voltage failures
- Signalling of opposite phase rotation
- Automatic reset of billing period defined by the user
- Manual reset of billing period using utility software and optical head

Communication interfaces

In standard configuration sEA is equipped with an optical interface (acc. to IEC 62056-21) and RS485 or current loop (CLO) interface.

Application

sEA is a three phase electricity meter designed for multi-tariff active energy measurement in 3 or 4-wire direct or transformer power network.

Meter housing is designed for installation on standard TH-35 rail.

According to metrological, functional and installation features, sEA meter is recommended for commercial energy consumers, shopping centers, industrial measuring application and management systems with remote metering data acquisition.

Additional functions

sEA meter is equipped with real time clock and automatic calendar function that enables automatic change over between winter and daylight time. All measured values are registered and stored in non-volatile memories EEPROM and Flash, which do not require additional battery

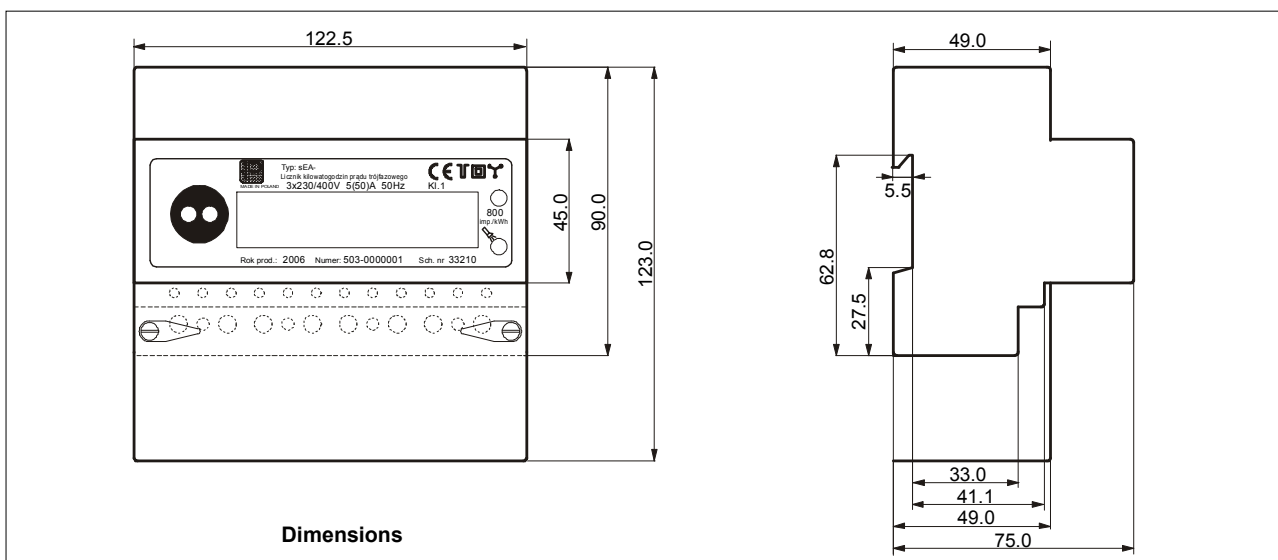
Review of individual display screens can be done in automatic mode or using sequence light switch. The meter is equipped with galvanic separation between measuring, analog-digital and communication circuits

Measuring functions

- Measurement and registration of active energy in four tariffs
- Measurement and registration of three highest average active powers (so called maximum demand values) applying 15, 30 or 60 minutes integration period
- Registration of load profile applying 15, 30 or 60 minutes integration period

Parametrization and configuration

All operations in connection with downloading of tariffs parameters, tariff structure and the way the billing period is to be reset, as well as display operating modes are to be performed using specially designed software tool SOLEN.



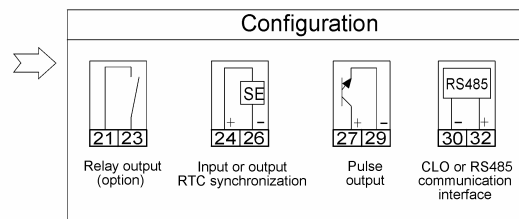
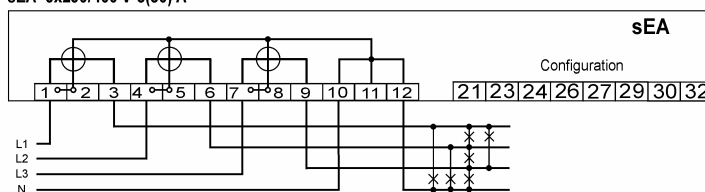
sEA meter has got an approval certificate granted by Central Office of Measures **PLT 0671**.
sEA meter fulfils requirements of European Directive 89/336/EEG and is given CE certificate.
ALL FEATURES ARE SUBJECT TO CHANGE WITHOUT NOTICE ACCORDING TO PRODUCTS IMPROVEMENTS.

Basic technical data

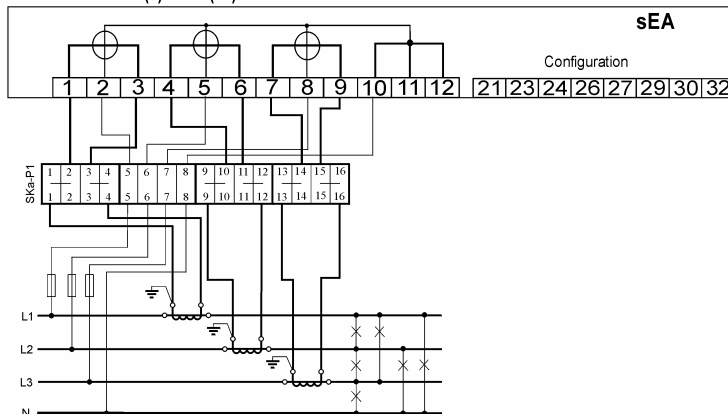
Type	sEA							
Measuring system	Direct	Transformer			Transformer			
Accuracy	1 (acc. IEC 62053-21)							
Nominal voltage U_n	3 x 230/400 V				3 x 58/100 V		3 x 100 V	
Base current I_b	5 A							
Nominal current I_n	5 A		5 A		5 A		5 A	
Maximum current I_{max}	50 A		6 A		10 A		6 A	
Starting current	< 20 mA		< 10 mA					
Power consumption in voltage circuits	< 1,8 VA i < 0,7 W per phase				< 1,5 VA i < 0,5 W per phase			
Power consumption in current circuits	< 0,02 VA per phase							
Frequency	50 Hz							
Tariffication	4 tariffs							
RTC (real time clock) battery supply	Lithium battery: 10 years of life time							
Display	LCD display, 23x79 mm, height of digits 8 mm							
Counter capacity	999999,9		99999,99			9999,999		
Meter constant	800 imp. / kWh		4 000 imp. / kWh			10 000 imp. / kWh		
Pulse output constant	800 imp. / kWh		4 000 imp. / kWh			10 000 imp. / kWh		
Communication interfaces	OPTICAL (acc. IEC 62056-21), RS485 or CLO							
Pulse output	Transoptor, open collector type, negative or positive pulse with duration time 50 ms $U_{nom}=24$ V DC, $U_{max}=38$ V DC, $I_{nom}=10$ mA, $I_{max}=20$ mA							
Synchronization input or output	Transoptor, negative or positive pulse with duration time 50 ms $U_{nom}=24$ V DC, $U_{max}=38$ V DC, $I_{nom}=10$ mA, $I_{max}=20$ mA							
Relay output (optional)	Maximum load of relay contacts 150 VA AC, 30 W DC $U_{max}=250$ V AC, 24 V DC							
Electromagnetic compatibility (acc. IEC 61000-4, IEC 62052-11)	Repetitive electrical fast transients – 4 kV; Surges caused by overvoltages – 4 kV Static electricity discharges – 8 kV; Voltage failures and interruptions							
Housing	ABS, Protection Class: II, IP 51							
Operating temperature range	–30 °C ... +60 °C							
Maximum operating temperature range	–34 °C ... +60 °C							
Storage temperature range	–40 °C ... +70 °C							
Weight	~0,6 kg							

Exemplary connection diagram *

sEA 3x230/400 V 5(50) A



sEA 3x230/400 V 5(6) A or 5(10) A



* Valid for electricity meters with serial number higher then 503-0003353