Zakład Elektronicznych Urządzeń Pomiarowych
POZYTON Sp. z o.o.
ZEUP POZYTON
is given Certificate of quality
ISO 9001:2008 assigned by
DEKRA Certification Sp. z o.o.

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

Application

sEA-b is a multi-tariff, electricity meter, designed for bi-directional direct and transformer measurements of active and reactive energy in 3 or 4-wire power network. Meter housing is designed for installation on standard TH-35 rail.
According to metrological, functional and installation features, sEA-b meter is recommended for commercial energy consumers, shopping centers, industrial measuring application and management systems with remote metering data acquisition.

Measuring functions

- Measurement and registration of active and reactive energy in four tariffs in both directions: P+, P-, Q+, Q-
- Measurement of active and reactive power in both directions applying 15, 30 or 60 minutes integration period
- Measurement and registration of three highest average active powers in both directions (so called maximum demand values)
- Measurement and registration of active power overconsumption due to contractual power value
- Number of contractual power value exceeded is also to be registered in the meter
- Measurement and registration of reactive energy excess for the first measurement quadrant
- Measurement of instantaneous values: P, Q, I, U, f
- Measurement and presentation of actual active and reactive growing average powers with period minute indication for import and export direction
- Registration of load profile in four canals P+, P-, Q+, Q- applying 15, 30 or 60 minutes integration period
- Registration of 33 600 mean power values. When the integration period is set to 15 minutes the load profile registration has capacity to store 350 days of measuring data
- Signalling and registration of measurement voltage failures
- Signalling of opposite phase rotation
- Registration and storage of billing values from last 12 billing periods
- Automatic billing period reset according to programmed schedule
- Manual billing period reset using utility software and optical head

When billing period reset was made, meter stores in its memory following data: active and reactive energy registers in tariffs for import and export, maximum demand values, number of contractual power value exceeded, active power overconsumption due to contractual power value, value of reactive energy excess in the first measurement quadrant.

Communication interfaces

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

Additional functions

sEA-b 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 FRAM 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.

Parametrization and configuration

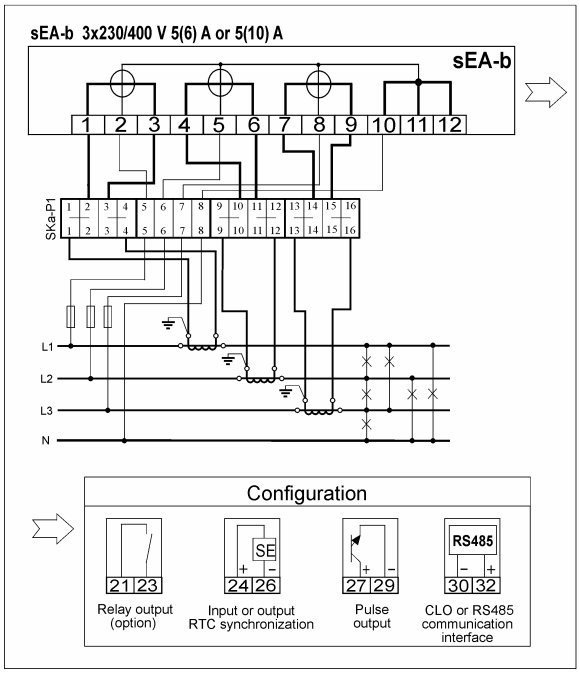
All operations in connection with downloading of tariffs parameters, tariff structure and the way the billing period is to be reset, as well as display operating modes are to be performed using specially designed software tool SOLEN.

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

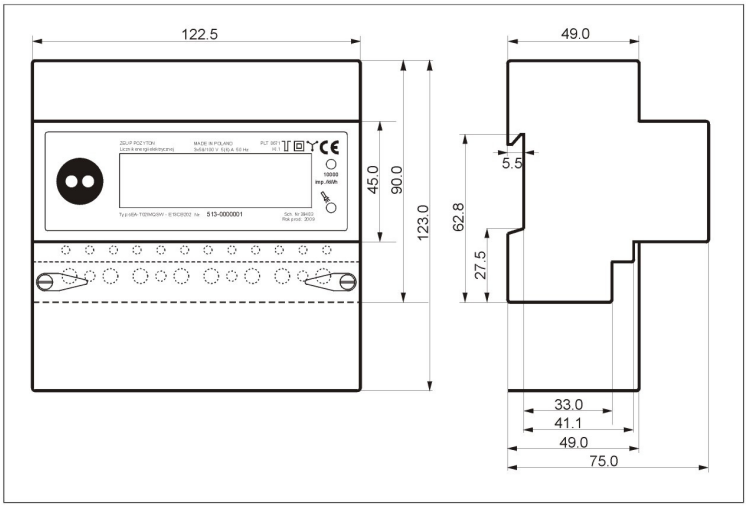
Basic technical data

Type	**sEA-b**						
Measuring system	Direct	Transformer		Transformer			
Accuracy	**P: 1** - IEC 62053-21 **Q: 2** - IEC 62053-23						
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**	
Maximum current I_{max}	**50 A**	**6 A**	**10 A**	**6 A**	**10 A**	**6 A**	**10 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	**999999,99**	**99999,999**		**9999,9999**			
Meter constant	**800 imp./kWh(kvarh)**	**4 000 imp./kWh(kvarh)**		**10 000 imp./kWh(kvarh)**			
Pulse output constant	**800 imp./kWh(kvarh)**	**4 000 imp./kWh(kvarh)**		**10 000 imp./kWh(kvarh)**			
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** Functionality: pulse output of active or reactive energy (configuration programmable)						
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 ... +60 °C**						
Maximum operating temperature range	**–34 ... +60 °C**						
Storage temperature range	**–40 ... +70 °C**						
Weight	**~0,6 kg**						

Exemplary connection diagram



Dimensions



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