



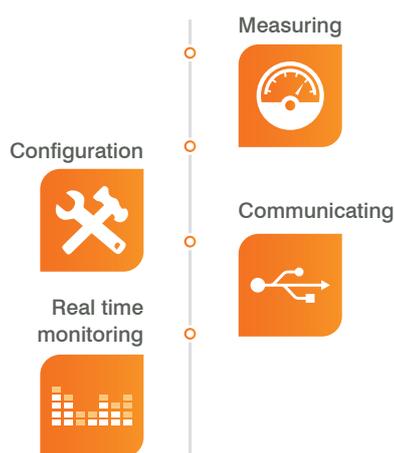
POWYS (3Ø Energy Analyzer)

Klemsan[®]

Defining an Energy Analyzer in simple terms

An energy analyzer is an automation device which offers 3-phase energy monitoring, analyzing and controlling the network comprehensively. It enables advanced applications such as energy metering, data logging, DIO applications, transducer applications etc.

Which actions are executed?



Energy Analyzer provides highly accurate **measuring** for main electrical parameters and expanded energy **metering** solutions for your electrical network.

All the data which are being measured can be transmitted to remote monitoring system thanks to **modbus communication**.

Digital inputs can be used as a **counter**, equipment status/position monitoring or activation second tariff which is used by generators.

Digital outputs can be used to **take an impulse** which is synchronized with energy meters.

Low/high limit thresholds for all electrical parameters can be defined so load management in a network is possible by means of **alarm** relay outputs.

In dept-analysis of individual current and voltage **harmonics** in order to increase network quality.

Specifying **run hours**, **on hours** and **power interruptions** in order for your machines to use more effectively.

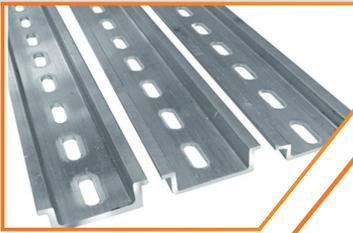
Which market are they used frequently?

- Medium voltage modular cabinets
- Submetering station
- PLC-Scada applications
- Electrical power plants and substations
- Electric utilities
- Energy meter applications
- Infrastructure
- Alarm station
- IT centres
- High-rise buildings

Benefits and Advantages

- Besides 3 phase energy meters, keeping individual phase meters as well
- Current inputs can withstand surges up to 100 A for 1 second
- State of the art technology; modular design, no connector cables, no fixing screws inside
- Harmonic measurement up to 31st
- Programmable digital inputs and outputs
- Programmable alarm output
- Modbus communication
- Long distance visibility with super bright seven segment displays
- AC/DC power supply
- Connection to current transformer x/1 A or x/5 A
- High measurement accuracy according to IEC standards
- High level of Electromagnetic compatibility (EMC) .e. maximum
- Self-Extinguishing plastic housing

Din-Rail Applications



POWYS Series

Installation costs are significantly decreased by the installation of measurement devices on a standard 35mm DIN rail instead of mounting them in a panel. This means that panel cut-out is no longer necessary so time and energy can be saved.

Remote Monitoring



POWYS Series

All measured parameters are transmitted to a PC through RS485 so that you are kept informed of system performance 24 hours per day. Parameters can be changed remotely and a variety of measured values can be monitored, analyzed and downloaded via a Web browser with the use of an energy management software and an Ethernet gateway from anywhere in the world.

Counting Quantities



POWYS Series

Production quantity can be collected by a limit switch or a dry contact coming from a proximity sensor thanks to the digital input feature.

Equipment Status Management



POWYS Series

The status of a circuit breaker or a disconnector in an electrical power distribution center can be monitored by means of digital inputs. According to the digital input status (open or short circuit), a simple Logic-0 or Logic-1 signal is sent to the PC through the Modbus communication instantaneously.

	POWYS 3121	POWYS 3111	POWYS 3101	POWYS 3100
				
Definition	3Ø Energy Analyzer	3Ø Energy Analyzer	3Ø Energy Analyzer	3Ø Energy Analyzer
Order Number	606305	606304	606303	606300
Display	LCD	Seven Segment Display	-	-
CTR & VTR	1-5000 adj.	1-5000 adj.	1-5000 adj.	1-5000 adj.
Demand Period	1-60 minutes adjustable	1-60 minutes adjustable	1-60 minutes adjustable	1-60 minutes adjustable
Number of Measurement in a period	256	256	256	256
RS485 Communication	Available	Available	Available	Available
Range	85 - 300 VAC/DC	85 - 300 VAC/DC	85 - 300 VAC/DC	85 - 300 VAC/DC
Power Consumption	<2W, <4,5VA	<3W, <6VA	<3W, <6VA	<3W, <6VA
Basic Measurements(V, I, f, CosØ, PF, P, Q, S, THDI, THDV, etc.)	Available	Available	Available	Available
Min/Max/Demand Values	Available	Available	Available	Available
Current Measurement Input	10mA-6A AC	10mA-6A AC	10mA-6A AC	10mA-6A AC
Voltage Measurement Input	1-300 VAC (L-N) 2-500 VAC (L-L)	1-300 VAC (L-N) 2-500 VAC (L-L)	1-300 VAC (L-N) 2-500 VAC (L-L)	1-300 VAC (L-N) 2-500 VAC (L-L)
Harmonics for Current and Voltage Phases	Upto 31st	Upto 31st	Upto 31st	Upto 31st
THD for Voltage and Current in %	Available	Available	Available	Available
Number of Tariffs	2	2	2	1
1Ø Phase Energy Meters	Available	Available	Available	Available
On Hour, Run Hour and Int Counter	Available	Available	Available	Available
Protocol	Modbus RTU	Modbus RTU	Modbus RTU	Modbus RTU
Baud Rate	1200-57600 bps adj.	1200-57600 bps adj.	1200-57600 bps adj.	1200-57600 bps adj.