



**KLEA 110P Energy Analyzer**

## Defining KLEA 110P Energy Analyzer in simple terms

**KLEA 110P 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, DIO applications etc.

### Which actions are executed?

**KLEA 110P 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

## Equipment Maintenance



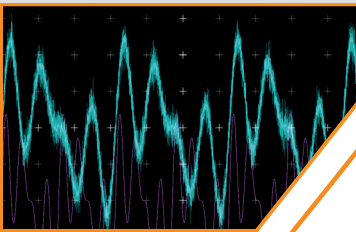
Monitoring elapsed hours for equipment warranty, recording actual running hours for equipment resale, tracking running time for equipment service thanks to Run hour, On hour and Power interruption counter features

## Counting Quantities



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

## Pulse Concentration Applications



KlemSAN energy analyzers offer several meters which are suitable all type of electrical networks. The pulse output function enables the kWh/kVAh consumption to be exported to a concentrator so that they can be analysed for energy saving and billing purposes.

# Buildings and Infrastructure



The main consumers can be identified by measuring the energy consumption of the various sub-assemblies in your buildings. So energy costs that belong to the departments can be managed and distributed between the various users by the help of submetering function. By correctly detecting peak demands in consumption gives you opportunity to reduce your electricity bills.

# Harmonic Management



Harmonics cause many problems for all sorts of equipment connected to the low voltage network. Before taking the cost and consequences of poor power quality, harmonics must be measured instantaneously and isolated from the source when it is necessary.

# Equipment Status Management



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



## KLEA 110P ENERGY ANALYZER

Definition	Energy Analyzer
Stock Code	606180
Connection	3Ø
Mounting	Panel Mount(96x96mm)
Seven Segment Display	Available
Basic measurements (V,VLL, I, IN, F, Cos , PF, P, Q, S, THD)	Available
1-31 Harmonics	Available
Max-Min Value	Available
Demand Values (I, P, Q, S)	Available
On hour, Run Hour, Power interruption counter	Available
Energy Meters	2 tariffs
Assigning alarm to the parameters	Available
Alarm Relay	2 pcs.
RS485	Available
Digital Input	1 pc.
Digital Output	2 pcs.