SECTION 1 GENERAL INFORMATION

1.1 General Features

POWYS 1xxx series is an energy analyzer designed for single phase systems, measuring the following parametres:

- Voltage
- Current
- Network frequency
- CosØ value
- Power factor
- Active power
- Reactive power
- Apparent power
- THDV
- THDI
- Voltage and current harmonics between 1-31

In addition to the measurement features, it also executes the following functions:

- Import active, export active, import reactive, export reactive energy meters
- Demand values for current, active power, reactive power and apparent power are calculated and stored in its memory.
- Establishes and stores in its memory the maximum and minimum values reached by current, voltage, frequency, cosØ, power factor, THDV, THDI, active, reactive and apparent powers
- Assigns alarms for current, voltage, frequency, cosØ and power factor parameters
- Keeps the on hour, run hour and number of power interruption
- CTR setting that may be entered from 1 to 5000
- VTR setting that may be entered from 0.1 to 5000
- RS485 communication that may be adjusted from 1200 to 57600 baud (POWYS 11xx)
- Communication with MODBUS RTU (POWYS 11xx)
- 2 pulse outputs can be used for high and low alarm outputs(POWYS 10xx)
- Pulse outputs that may be assigned to the energy values as output parametre (POWYS 10xx)
- Unauthorized access protection with 4 digit user password
- Adjustable automatic menu browsing feature

- Adjustable LCD backlight on duration
- Sealable cover
- Low power consumption
- A wide range of feeding and operating temperature

Device model	POWYS 1110	POWYS 1012	POWYS 1120	POWYS 1022	POWYS 1023
Order number	606 351	606 354	606 352	606 355	606 356
Connection	Rail mount	Rail mount	Rail mount	Rail mount	Rail mount
Basic Measurements	●	●	●	●	●
Minimum-maximum value storage	●	●	●	●	●
Demand Measurements	●	●	●	●	●
LCD	-	-	●	●	●
7 segment displays and LEDs	●	●	-	-	-
Energy Digit Display	8+0 (XX XXX XXX)	8+0 (XX XXX XXX)	8+0 (XX XXX XXX)	8+0 (XX XXX XXX)	7+1 (XX XXX XX.X)
Alarm Definition	●	●	●	●	●
RS485 Communicaiton	●	-	●	-	-
Digital output that may be assigned to pulse or alarm	-	2 pcs	-	2 pcs	2 pcs

1.2 Poper Use and Safety Conditions

- Installation and connections should be established in accordance with the instructions set out in the manual by authorized persons. Unless the connection is built properly, device should not be operated.
- Before wiring the device up, make sure that energy is cut off
- Do not disconnect the POWYS current transformer connection before short circuiting the k-1 tips of the current transformer somewhere else. Otherwise, dangerous high voltages may emerge at the secondary tips of the current transformer.
- Use a dry cloth to remove the dust from the device/clean the device. Avoid using alcohol, thinner or a corrosive material.
- Device should be engaged only after all the connections are made.
- Do not open the inside of the device. There are no parts which the users can intervene inside.

- Device should be kept away from humid, wet, vibrant and dusty environments.
- It is recommended to connect a breaker or automatic fuse (2 amper) between the voltage inputs of the device and the network.

The manufacturing company may not be kept responsible for unfavorable incidents that arise out of the failure to follow the above cautions.

1.3 Connection Types

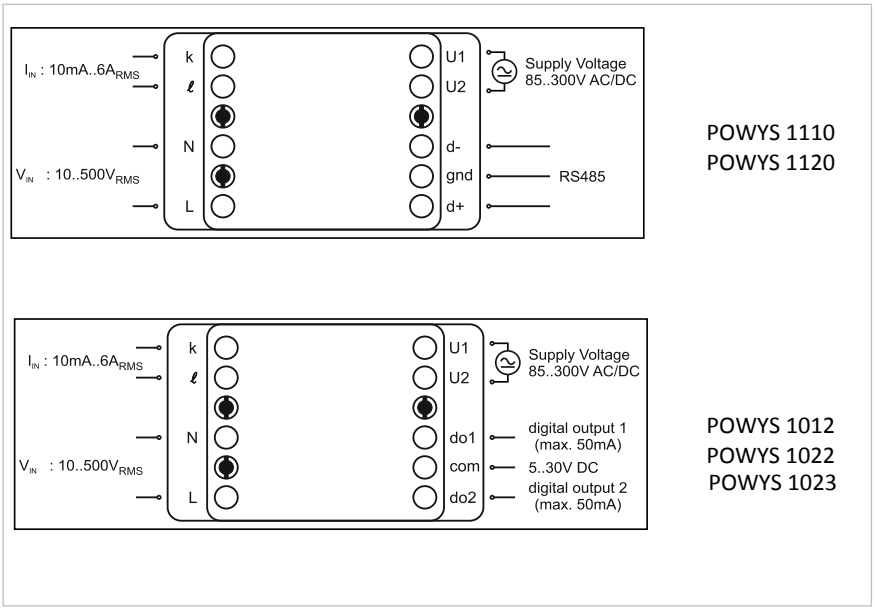

Fig. 1-1 Connections

1.4 General View&Definitions

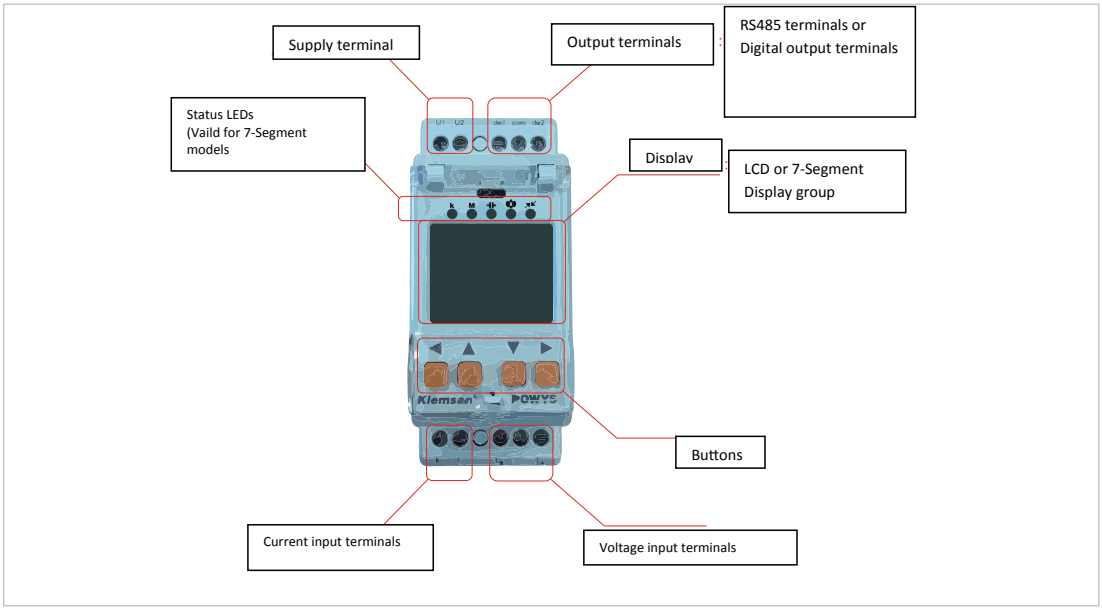

Fig. 1-2 General view of the device