



# Zeus PV Home Standard Kit

Multifunctions energy data logger complete with sensors



Product Number: TP-018-100

## General Features

Zeus PV Home Standard Kit consists of the following parts:

<i>Description</i>	<i>Product Number</i>
Zeus PV	TP-018-001
CT Sensor for main current	TP-014-004
CT Sensor for photoltaic current	TP-014-004

# Zeus PV Home

## Multifunctions energy data logger



- 230 Vac Power supply
- Fast Ethernet Interface MDX
- USB 2.0 Mass storage interface
- Small footprint: 1 DIN module only
- Internal clock with backup battery
- Firmware upgrade via USB or Ethernet interface
- Integrated web server
- Works as a standalone device
- Time resolution: 1 minute
- Power and energy exchanged from grid, from inverter and from load

Product number: **TP-018-001**

### General features

Zeus PV device measures, memorizes and monitors the main parameters of an electrical system extended with a photovoltaic system. With its small footprint, it takes the space of just one DIN module, it is easy to install especially when there's not much space available.

Zeus PV is equipped with two interfaces: USB Mass storage and Ethernet 10/100. It can be easily connected to the internet, giving the users a easy way to get their data. Zeus PV is simple to configure and manage thanks to its integrated web server.

All the data gathered by the device are recorded and permanently stored into the internal memory. The recorded data can be downloaded via web interface or through a USB pen drive. By analysing the stored data it's possible to highlight any anomalies related to the electrical system. The Energy data logger viewer is freely downloadable from [www.zeuslog.com](http://www.zeuslog.com) website.

Electrical parameters measured are: active power and energy exchanged from grid, from inverter and from load, reactive power and energy exchanged from grid, from inverter and from load, RMS voltage, RMS current exchanged from grid, from inverter and from load.

### Applications

- Logging and verification of energy consumption from load
- Logging and verification of energy exchanged from grid
- Logging and verification of energy generated by renewable sources such as solar, eolic, etc.
- Verification right voltage range

### *Parameters measured*

<i>Instantaneous measurements</i>	<i>Recorded measurements</i>
RMS Voltage	RMS Voltage
RMS Main Current	RMS Main Current
RMS Photovoltaic Current	RMS Photovoltaic Current
Active Power exchanged from grid	RMS Load Current
Reactive Power exchanged from grid	Active Power exchanged from grid with sign (consumed or generated)
Active Power generated from inverter	Reactive Power exchanged from grid with sign (inductive or capacitive)
Reactive Power generated from inverter	Active Power generated from inverter with sign (consumed or generated)
Internal Temperature	Reactive Power generated from inverter with sign (inductive or capacitive)
	Active Power used by load
	Reactive Power used by load (inductive or capacitive)

## Specifications

### Power supply

Voltage	110V-230V
Power Consumption	< 1,6 W with active ethernet interface
Terminals	Screw terminals for conductors: 0.05 mm <sup>2</sup> (30AWG) - 2.5 mm <sup>2</sup> (14 AWG)

### Voltage sensor input (the same of power supply)

Max. voltage	250V
Min. voltage	100 V
Operating frequency	50Hz-60Hz

### CT sensor input for main current

Max. current	Up to 85 A (CT sensor depend)
Terminals	Screw terminals for conductors: 0.05 mm <sup>2</sup> (30AWG) - 2.5 mm <sup>2</sup> (14 AWG)

### CT sensor input for photovoltaic current

Max. current	Up to 85 A (CT sensor depend)
Terminals	Screw terminals for conductors: 0.05 mm <sup>2</sup> (30AWG) - 2.5 mm <sup>2</sup> (14 AWG)

### Accuracy

Voltage	1,0 %
Main current	1,0 %
Active and reactive power	1,0 %
Active and reactive energy	1,0 %
Photovoltaic current	1,0 %

### Interfaces

Ethernet port	10/100 Mbit/s IEEE802.3/802.3u (Fast Ethernet)
USB	Version 2.0

### Housing

Fastening	DIN Rail
Dimensions	17,5x90x56,4 one DIN module
Weight	69g
Material	PA
Flame protection	PA - UL 94 V0

### Environmental Condition

Operating Temperature	-10°C e +60°C
Storage Temperature	-20°C e +75°C
Humidity	80% max without condensation

*Grade Protection*

Housing IP30

Terminals IP20

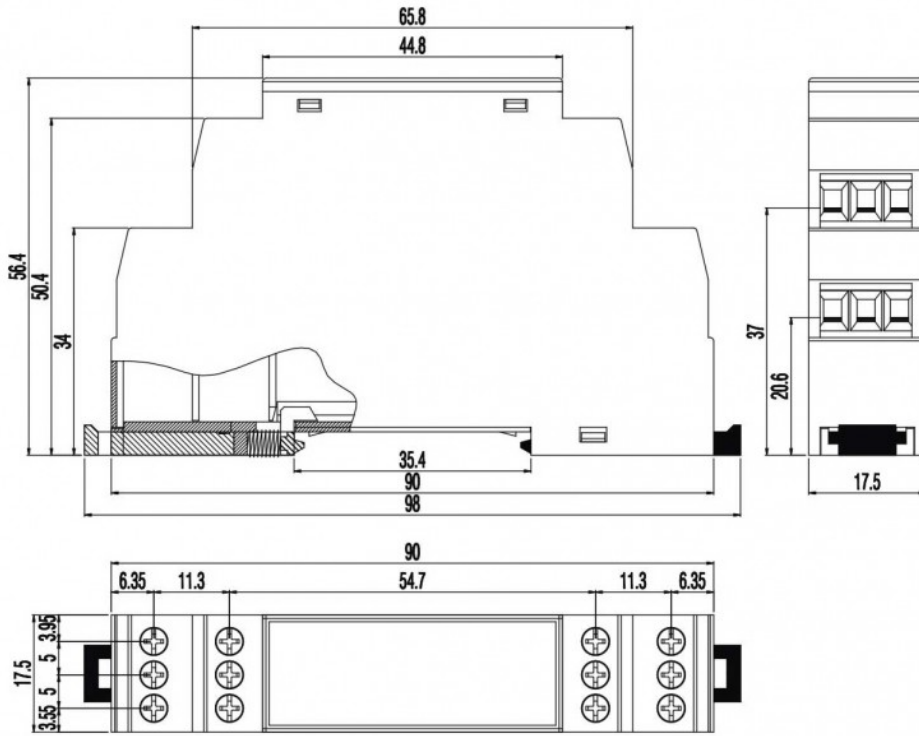
*Compliance*

Security CEI EN 61010-1

EMC EN61326-1



Technical Drawings



# CT Sensor (standard kit)

## Current transformer for main current



Product Number: TP-014-004

### General features

The **Current transformer (CT)** is a device that allows to read the current of a conductor by reading the magnetic field generated by the latter when it is traversed by an alternating current. The current transformer is inserted around the conductor carrying the current to be measured.

A current transformer has a primary winding, an air core and a secondary winding. The alternating current in the primary produces an alternating magnetic field in the core, which then induces an alternating current in the secondary. Accurate current transformers have to close coupling between the primary and secondary to ensure that the secondary current is proportional to the primary current over a wide current range. So the conductor corresponds to the primary winding and the secondary winding is a conductor wrapped in a toroidal core around the conductor.

The output current on the secondary winding is proportional to the measured current and the relationship between the primary and secondary current is equal to the ratio between the turns (1: N).

### Applications

- Current Measurement
- Instruments and sensors
- Energy and sub-metering products

## Specifications

### Technical features

Measured current	0 – 30 A
Transformer ratio	1:1000
Output current	0 – 30 mA
Accuracy	±0,2%
Operating Frequency	50 – 400 Hz

### Housing

Shape	Toroidal
Ext. Dimension	Diam. 22 mm
Int. Dimension	Diam. 9 mm
Weight	about 20g
Material	ABS + epoxy resin + PVC

### Connections

Cable	Shielded type UL E301305
Connection terminals	2 x AWG 24 (0,205 mm <sup>2</sup> ) sensors 1 x AWG 18 (0,823 mm <sup>2</sup> ) shield

### Compliance

Standard	CEI EN 60044-1 e ANSI C57.13
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## Technical Drawings

