

Din Rail
eVision



Energy consumptions under control, always and everywhere

eVision.

An intelligent Energy meter that allows you to keep consumption under control in order to save cost for your house or office.



Very simple to install.
Extremely easy to use.

Once installed, eVision will pay back the investment in few months since it allows you to control the consumed Energy in a more rational way.



External current
transforms for easy
and fast installation



Wall mounting
accessory

eVision.

The intelligent control of your Energy consumption

eVision is an innovative Energy meter that allows the user to know and analyse at all times the flow of Energy consumption of your house or office. Through the collected and visualized information from the embedded web application of eVision, it is possible to optimize the use of the electric Energy choosing the most convenient hour tariff in order to avoid bill wastes. eVision offers a concrete opportunity to reduce the electricity bill and hold down the CO₂ emissions, contributing to a more sustainable future. The investment will be paid back in a very short time. eVision constantly controls the Energy consumption of your household appliances, lights, air conditioner, heaters, swimming pool pumps etc.

visualizing in real time the Energy cost of your house or office, advising you with an e-mail, once the set limits are exceeded. Because of the LAN connection, the user can consult eVision wherever he likes; through PC, Smartphone or Tablet. The Internet web access allows you to analyse different information, for example the instant consumption showed in kWh, or in your currency, visualizing it in a clear and simple graphic. Unlike the other solutions available in the market, eVision is easy to install and to use. The installing procedure do not need any severe interventions on your existing plant and the LAN connection allows to interact in a direct and easy way (Plug & Play).

eVision.

A new generation Energy meter for a better and more efficient Energy use.

With eVision is possible to have with you in each moment the consumption data of your house or office. Using some external split CT's, the installation of eVision don't need severe operations on the existing installations. The data can be checked everywhere using any internet browser for PC, Smartphone or Tablet, offering an immediate view of the house consumption. The historical backup allows to develop accurate analysis that can be consulted

in a numeric or graphic format, obtaining an essential device for a better consumption habit.

Home appliances, lights, air conditioner, heaters generators, swimming pool pumps and so on can now be managed in a more efficient way deciding use or tariff priorities, reducing in this way the costs of the bills and helping to preserve the environment.



HOME

Indication of the actual consumption and hour cost of your house or office.



COST

Visualization of the month and day balance showed in your currency. Possibility to have the indication of generated Energy if there are solar panels or windmills.



GRAPH

A clear and friendly indication of your consumption flow expressed in kWh or currency for day, week, month or year with the possibility to compare it with the previous ones.

EVENTS

Possibility to set events. Once you will pass them, eVision will send you immediately an e-mail. You can receive also a day, week, month or year report whenever you wish.

SETTINGS

Set the Low and High Tariff cost for import and export energies.



You can reach your home or office consumption information from any place in the World.
Consumptions and costs can be read directly from the display or via Internet in a more comfortable way.

Communication technical data

Applications

Data are available through Ethernet/Internet in two ways:

- Using the ECS web application just opening a web browser
- Via Modbus/TCP

Description

- TCP/IP data protocol
- HTTP for web
- Modbus/TCP (RTU) to access the measurement device database
- Static or DHCP based addressing
- Dynamic DNS to maintain a host name, accessible on the internet, without the need of a static IP
- Plug & Play technology
- Web browser user interface

User interface

- Simple to use
- Visualization and storage of the performed measures
- Immediate consumption cost evaluation
- LAN network and system parameters configuration (only for administrator)
- User management (only for administrator)

Data and time

- eVision has a RTC to maintain date and time information
- The device is able to synchronize the time through NTP protocol

Data saving

The measured data are saved internally for at least 10 years in a micro SD-Card with a 2 GB capacity

Operation features

- System starts automatic at the connection of auxiliary power
- eVision is identified through its IP address
- Data transfer speed ≤ 100 Mbit/s
- Web application through any internet browser

LAN Interface

- HW interface: RJ45 connector
- SW protocol: TCP/IP
- Application protocols: HTTP – Modbus/TCP – FTP – SNMP – DHCP – DNS – DynDNS – SNMP

Energy meter technical data

| | |
|---|--|
| Housing | |
| Dimension | 6 modules (DIN 43880) |
| Mounting | 35 mm rail mounting (EN 60715) |
| Height | 69 mm |
| Weight | 290 gr |
| Housing Material | Polycarbonate |
| Compliance | |
| EMC: compliant to | EN61326-1 (EMC requirements) |
| Safety: compliant to | EN61010-1 |
| Flammability | class V0 (UL94) |
| Isolation | Voltage inputs - currents inputs: 4 kVac S0 output - any other circuit: 2 kVac Tariff input - any other circuit: 2 kVac Ethernet connection - any other circuit: 2 kVac |
| Matering connections | 3 phase/4 wires - or - 1 phase/2 wires |
| Tariffs | 2 tariffs, selectable by means of a voltage applied to the dedicated input (40 to 230 Vdc or Vac) |
| Environmental conditions | |
| Application | Indoor |
| Mechanical/Electrical environment | M1/E2 |
| Operating temperature range | -10°C ... 55°C |
| Storage temperature range | -25°C ... 70°C |
| Relative humidity | <80% (not condensing) |
| Protection degree | IP51 (front frame), IP20 (terminals) (EN60529) |
| Maximum absolute ratings | |
| Voltage - phase to neutral (permanent) | 276 V rms |
| Voltage - phase to neutral (1 second) | 300 V rms |
| Voltage - phase to phase (permanent) | 480 V rms |
| Voltage - phase to phase (1 second) | 520 V rms |
| Current - permanent | 6 A rms |
| Current - for less than 0,5 seconds | 120 A rms |
| Supply | |
| Self supplied through Voltage measuring inputs | yes |
| Minimum supply voltage | 120 V rms (applied at least to one phase) |
| Maximum supply voltage | 276 V rms |
| Rated burden | ≤ 3,5 W |
| Measuring Features (for all 3 phases) | |
| Measuring ranges | |
| Phase voltage (V1, V2, V3) | 120 ... 276 V rms |
| System voltage (V12, V23, V3) (L 1-2, L 2-3, L 3-1) | 208 ... 276 V rms |
| Phase current (L1, L2, L3) | 0,003 ... 6000 A rms (ref. to secondary winding) |
| Phase power (P1/Q1/S1, 2 ,3) | 0,36 ... 1656 Watt/Var/VA (ref. to secondary winding) |
| Measuring frequency (fundamental) | 48 Hz ... 61 Hz |
| Ranges that guarantee accuracy (*) | |
| Phase voltage (L1-L2-L3) | 184 ... 276 V rms |
| System voltage (L1-2,L2-3,L3-1) | 318 ... 480 V rms |
| Phase current (L1, L2, L3) | 0,05 ... 6000 A rms (ref. to secondary winding) |
| Phase power (P1/Q1/S1, 2 ,3) | 0,92 ... 1656 Watt/Var/VA (ref. to secondary winding) |
| Measuring frequency (fundamental) | 48 Hz ... 61 Hz |
| Measuring accuracy | |
| Phase voltage (L1-L2-L3) | 1% of measured value, +/- 0,1 V rms |
| System voltage (L1-2,L2-3,L3-1) | 1% of measured value, +/- 0,1 V rms |
| Phase current (L1-L2-L3) | 1% of measured value, +/- 2 mA rms |
| Phase and total power (P, Q, S) | 1% of measured value, +/- 0,5 W |
| Active energies | class B (+/- 1%) according to EN50470-1, -3 |
| Reactive energies | class 2 (+/- 2%) according to EN62053-23 |
| Frequency | 0,1 Hz |
| Residual (Neutral) current | 2% of measured value, +/- 5 mA rms |
| Power factors | error equivalent to +/- 0,5 degrees |

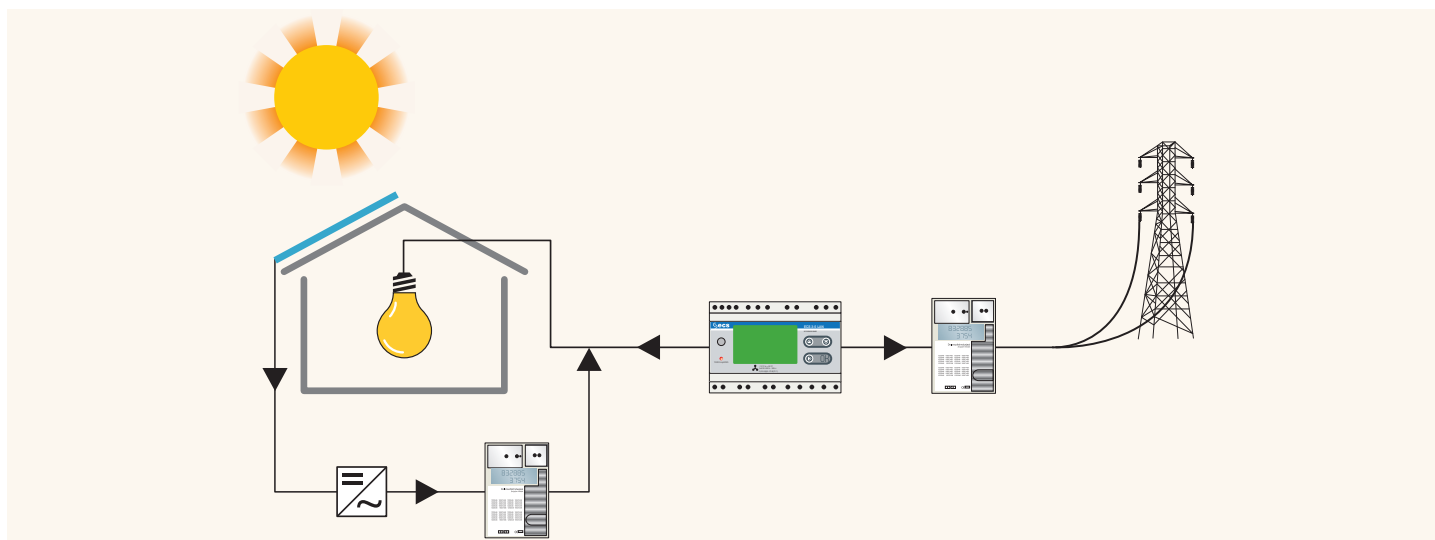
(*) incoming signal spectra must be limited to 15th harmonic of fundamental nominal frequency

Available measures

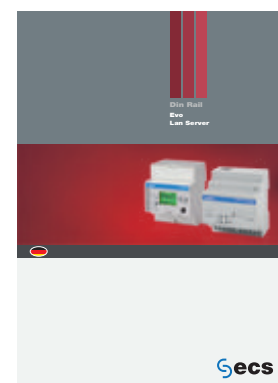
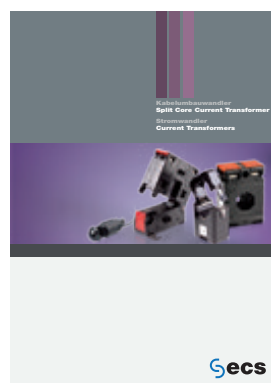
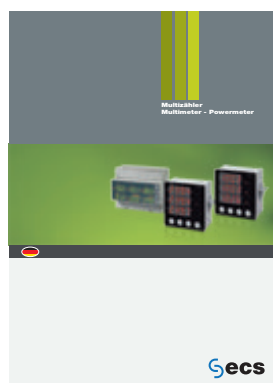
Phase Voltages, System Voltages, Phase Currents, Residual (Neutral) Current, Phase and Total Active, Reactive and Apparent Powers, Phase and Total Power Factors, Frequency, Active and Reactive Imported and Exported Phase and Total Energies

eVision.

Example of a possible installation for import and export energies in a solar plant.



eVision allows you to visualize with a simple click your actual, day, week, month and annual Energy consumption. Understand how and how much you are spending has never been so simple. eVision is perfectly adaptable to a solar plant. It will indicate the quantity of generated and consumed Energy calculating automatically the cost or the earning of your house.



All documentation available from mid April 2012 on **www.hhcontrols.com**

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