



EM21 72R and EM21 72V: the retrofit solutions

Controls

EM21 72R 72V

The Retro-fit solutions

EM21-72R and EM21-72V are two innovative, cost-effective and compact energy meters for retro-fit applications: they are the first on the market to have a detachable display allowing them to be mounted either on a panel with just 72x72 mm or on a DIN-rail in only 4 modules with neither any adaptor or external accessory. Current measurements are carried out by means of external miniature split-core current sensors, which can be included in the box (72R) or not (72V).



Simple while saving space and money

Detachable display

- Detachable display to carry out up to 3 installation modes from the same instrument: DIN-rail, panel mounting or transducer.

Ready-to-use

- Miniature split-core current sensors supplied together with EM21-72R: everything is needed in just a single box.

Easy Installation

- Time saving installation system exploiting self-power supply, automatic phase detection and application oriented programming procedure.

Communication

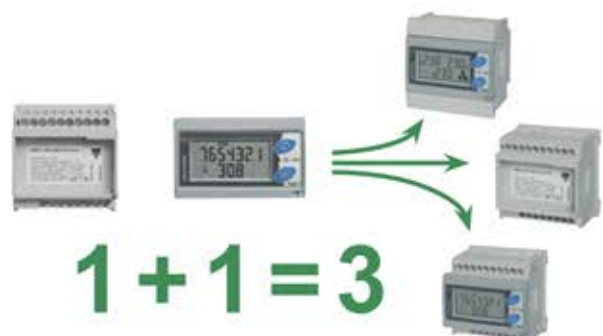
- Pulsing output for easy and quick data transmission to PC/PLC for full load control.
- RS485 communication port for full BMS integration.

Compact housing

- Space saving on panel boards by means of its compact housing.

The standards

- Energy measurement equivalent to class 1 of the international standard IEC62053-21 (EM21-72V) or class 2 (including the whole measuring chain, in case of 72R model).



Market Application

Retro-fit of existing installations

When dealing with old buildings and existing installations realised in the past years, when the sensibility to the energy efficiency issue was totally negligible, there is no other way then retrofitting the switch-gears introducing an energy measuring system. EM21-72R and EM21-72V are com-

plete retrofitting solutions which does not imply any modification in the existing wiring. Installing them, it is possible to realise the current measurement simply clamping on the wires, without disconnecting them, the relevant miniature split-core current sensors.



Some of the instrument features

- Accuracy $\pm 0.5\%$ RDG (V).
- Accuracy $\pm 0.5\%$ RDG (A), 0.333V standard current inputs (72V).
- Accuracy $\pm 1\%$ RDG (A), including also the current sensors (72R).
- Programmable primary current value from 10 to 10000 A (72V).
- Pre-programmed primary current value (72R).
- Instantaneous variables readout: 3 DGT.
- Energies readout: 6+1 DGT.
- System variables: W, var, PF, Hz, Phase-sequence.
- Single phase variables: VLL, VLN, A, PF.
- Energy measurements: total kWh and kvarh.
- TRMS measurements of distorted sine waves.
- Protection degree (front): IP50.
- Self power supply.



The EM21-72R dedicated split core CTs

The EM21-72R is provided with 3 miniature current sensors with split core technology: no wiring modification and no cable disconnection are required. The CTs come in 3 different types:



CTV series: the current sensors for EM21-72V

The CTV series includes 5 ranges of split-core current sensors (0,333V output) suitable to be used with EM21-72V.

Name	Range	Hole size (mm)
CTV1X	60A	9,6 (diameter)
CTV2X	100A	15,7 (diameter)
CTV3X	200A	15,3 (diameter)
CTV4X	400A	20,5 (diameter)
CTV8X	800A	50 x 89,8 (rectangular hole)



Energy

Applications Map

Fiscal metering for cost allocation

Power quality analyzer for load control

Modularity



WM3 96

WM30 96



WM5 96

WM40 96

Direct Connection

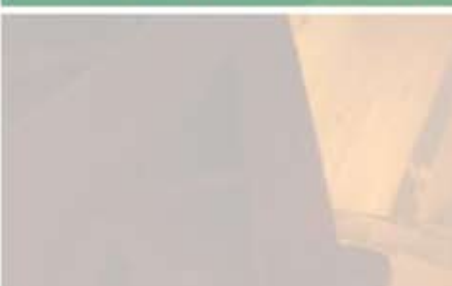


EM10DIN

EM23DIN

EM24DIN

EM33DIN



Extended Communication



EM26 96



WM5 96



WM40 96



Double-housing feature



EM21 72D



Eye-catching display



EM26 96



WM3 96



WM5 96



WM40 96



The right features for every application

Multi function meters for basic measurements



WM10DIN



VMU E
VMU X



EM21 72R



WM12DIN



WM14 96

WM14DIN



WM14 96

Transducers for Building Management Systems (BMS)



PQT H



CPT DIN



CPT DIN
Advanced



Field bus communication and energy metering for Building Automation



EM4 DIN

EM3 DIN

WM22 DIN



EM3 DIN

EM4 DIN

WM22 DIN



EM24DIN



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