

# ENERJİ KONTROL ÜNİTELERİ

## NETWORK ANALYZERS

Power analyzers for energy control in industrial environment for Din Rail and panel mounting (96x96mm).

Suitable to be combined to Rogowski coils.



### UPM209 | UPM309 *Small size, high performance*

#### FEATURES



THD & HARMONICS



UP TO 8 MB MEMORY



ETHERNET & RS485



REAL TIME VALUES



UP TO 24 REGISTERED PARAMETERS



#### BENEFITS

- Compact
- Generation of consumption profiles
- Alarm page on the webserver
- Excellent performance/price ratio
- Reduction of electricity consumption

#### APPLICATIONS

- Energy audit
- Energy monitoring
- Load monitoring of single machines

### SMART KIT: UPM209RGW | UPM309RGW *Measuring is smart*

#### FEATURES



THD & HARMONICS



UP TO 8 MB MEMORY



ETHERNET & RS485



EMBEDDED WEBSERVER



3 ROGOWSKI COILS



#### BENEFITS

- Compact
- Installation without switching off plant
- Full scale selectable on the field
- Fast installation
- Kit ready to use

#### APPLICATIONS

- Retrofitting
- Energy audit
- Switchboards, generators etc.

### UPA20 | UPA30 | UPA41 + PLUG-IN MODULES *Easy to use*

#### FEATURES



MODULARITY



REMOTE DETECTION OF CONSUMPTION



I/O



CLASS 0.5S



THD & HARMONICS



#### BENEFITS

- Suitable to be combined with Plug-in Modules
- Multilingual manuals
- Easy to use
- Wiring error detection
- Compliance to IEC 61557-12

#### APPLICATIONS

- Switchboards, generators etc.
- Energy monitoring
- Load monitoring of single machines

## MID ENERGY METERS

Single and three phase meters for consumption measurement and control, MID certified, with built-in communication or to be combined with communication modules.



### UEM SERIES *Compact and versatile with built-in communication*

#### FEATURES



MID  
EN 50470-1  
EN 50470-3



ETHERNET  
RS485 & M-BUS



THREE PHASE &  
SINGLE PHASE



50 OUTPUT FOR  
PULSE EMISSION



ACCURACY  
CLASS B OR C



#### BENEFITS

- Remote management
- For billing purposes
- Models with operating temperature up to 70°C
- Single phase: direct connection 40A and 80A
- Three phase: 1/5 A CT and direct connection 80A

#### APPLICATIONS

- Charging stations for electric vehicles
- Measurement of energy generated by renewable sources
- Totalization of the electric energy for single machine

### UEC SERIES *Simple and reliable*

#### FEATURES



MID  
EN 50470-1  
EN 50470-3



THREE PHASE &  
SINGLE PHASE



50 OUTPUT FOR  
PULSE EMISSION



UP TO 30 PARAMETERS  
DISPLAYED



ACCURACY  
CLASS B OR C



#### BENEFITS

- Suitable to be combined with communication modules
- For billing purposes
- Fully bi-directional 4-quadrant
- Single phase: direct connection 40A and 80A
- Three phase: 1/5 A CT and direct connection 80A

#### APPLICATIONS

- Accounting and billing of consumptions in camp sites, malls, residential areas, naval ports, office buildings etc.
- Measurement of energy generated by renewable sources

### COMMUNICATION MODULES *Easy to install*

#### FEATURES



CONNECTION BY  
OPTICAL PORT



RS485



M-BUS



LAN GATEWAY



1 OR 2 MODULES



#### BENEFITS

- Suitable to be combined with UEC energy meters
- Compact
- Easy to use
- Possibility to switch the use according to the required application

#### APPLICATIONS

- Measurement of energy generated by renewable sources
- Totalization of the electric energy for single machine
- Totalization of consumptions for civilian and industrial buildings

## ROGOWSKI COILS

Flexible Rogowski coils to be combined with integrators or suitable measurement devices to achieve a compact measuring system.



### MFC140 | MFC150 *Excellence in the accuracy*

#### FEATURES



COIL CROSS SECTION 7 OR 8 mm



WITH OR WITHOUT BUILT-IN INTEGRATOR



MEASUREMENT FROM mA TO VARIOUS kA



UL E1015-1 UL 2008



COMPLETELY SHIELDED



#### BENEFITS

- Installation without interruption of plant
- Fast installation
- MFC150 can be combined with UPM209 and UPM309 (Smart Kit)
- Suitable for portable devices
- Rejection to the external current conductor

#### APPLICATIONS

- Retrofitting
- Very high current measurement
- Measurements in limited spaces

### MFC190 *High sensitivity*

#### FEATURES



COIL CROSS SECTION 12 mm



OUTPUT VALUE: 0.3 mV/A



MEASUREMENT FROM mA TO VARIOUS kA



UL E1015-1



COMPLETELY SHIELDED



#### BENEFITS

- Installation without interruption of plant
- Fast installation
- Suitable for portable devices
- Rejection to the external current conductor
- It can be hanged on the measured conductor

#### APPLICATIONS

- Retrofitting
- Measuring devices, lab instrumentation
- Very high current measurement

## ROGOWSKI INTEGRATOR *Flexible systems*

#### FEATURES



TO BE COMBINED WITH MFC150



DIFFERENT SELECTABLE SCALES



DIFFERENT OUTPUTS



DIN RAIL



SUPPLY



#### BENEFITS

- Single phase or three phase
- Linear response in a wide field of frequencies
- High current value
- Real RMS value output

#### APPLICATIONS

- Integrated part of a monitoring system
- Suitable to be combined with PLC
- High current value (hundreds of kA)

## PQ METERS - CLASS A

Class A Power Quality Analyzers certified according to IEC/EN 61000-4-30:2015 Ed.3 to monitor power quality both for industrial applications and utilities.



### PQM4000 CT *Class A: top of the range*

#### FEATURES



CT INPUT



CLASS A IEC/EN 61000-4-30:2015 Ed.3



ETHERNET, WIF, RS485 & USB



HARMONICS & INTERHARMONICS



EMBEDDED WEBSERVER



#### BENEFITS

- Data recording for analysis in accordance with EN 50160
- Bundled software for creating a report in accordance with EN 50160
- Evaluate the Energy Quality
- Multilingual user-friendly web interface
- Simultaneous recording of events and Min/AVG/Max values

#### APPLICATIONS

- Recording and analysis of disturbances
- Motor inrush current study
- Monitor the electrical power supply
- Data center

### PQM4000 CLAMP *Class A: touch the excellence*

#### FEATURES



CURRENT CLAMP INPUT



CLASS A IEC/EN 61000-4-30:2015 Ed.3



ETHERNET, WIF, RS485 & USB



HARMONICS & INTERHARMONICS



EMBEDDED WEBSERVER



#### BENEFITS

- Data recording for analysis in accordance with EN 50160
- Bundled software for creating a report in accordance with EN 50160
- Evaluate the Energy Quality
- Multilingual user-friendly web interface
- Simultaneous recording of events and Min/AVG/Max values

#### APPLICATIONS

- Recording and analysis of disturbances
- Motor inrush current study
- Monitor the electrical power supply
- Data center