

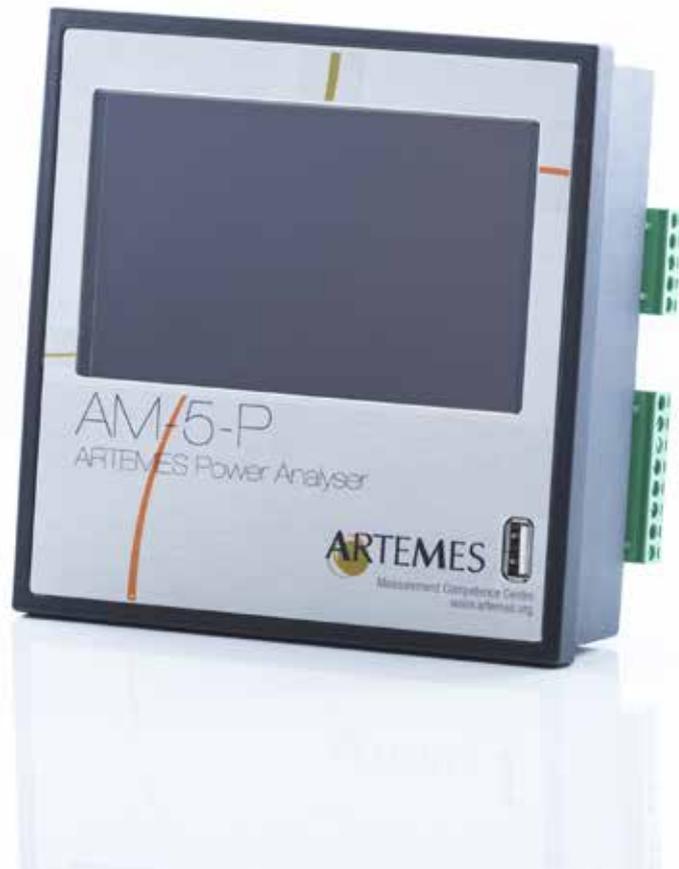
ARTEMES

arte[s] me[nsioni]s - The Art of Measuring
Power & Energy



Power Analyser AM-5-P

Power Analyser AM-5-P



- PQ + PMU + PFR + PM + DFR
- 24 bit resolution
- 10 ksamples/sec. events recorder and data-streaming
- 4 voltages and 4 currents
- measuring and evaluation via web browser
- **ARTEMES** CLOUD interface
- display optional

The ARTEMES Power Analyzer AM-5-P is a powerful 24-bit resolution device that combines the requirements of energy measurement and power quality analysis with the very latest data transmission technology. In addition to the possibility of using web interface such as smartphone or PC, all post-processing activities via the web - as a browser application directly on the device, on a special server or the ARTEMES CLOUD - are available as well.

The basic version already gives you the possibility to make a thermal energy analysis for e.g. ISO50001-reports. The PQ extension option also provides power quality analysis in accordance with the EN 50160 standard. As a high-end solution, the PMU option even offers full phasor measurement functionality for GPS synchronous measurements at different locations.



Energy - ISO 50001
Power Quality EN 50160, IEC 61000-2-4
IEC 61000-4-30 Class A
PMU - phasor measurement unit
web technology for operation and evaluation via web browser

Measurement Functions

Overview - Online

representation of the data over time,
as a vector diagram and as numerical values

recording mode or simulation mode,
RMS, AVG, min, max (10 period values,
adjustable)

RMS, AVG (period values, adjustable
overlapping and duration)

U, I, P, Q, S, D, PF, unbalance

flicker

IEC 61000-4-15: 2012 Class F1

frequency

symmetrical components

IEC 61000-4-30: 2008 Class A



Oscilloscope - Real-Time

real-time oscilloscope on the web browser

voltage and current

selectable scaling left or right



FFT - Real-Time

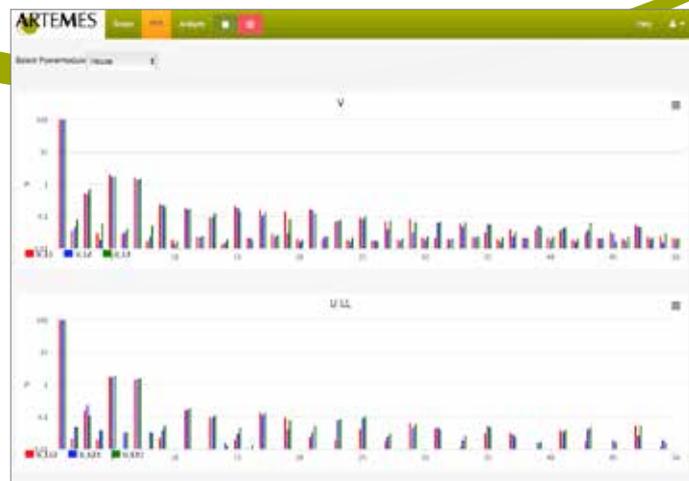
voltage, current, power, phase angle

phase and phase voltages

bar chart representation and numerical values

IEC 61000-4-7: 2009 Class 1

interharmonics





Dynamic Reports

- diagrams of any channels
- ready-made templates
- reduction and enlargement possible



Static Reports

- report generator for defining reports or ready-made reports
- EN 50160: 2011, Energy (ISO 50001)
- IEC 61000-2-4: 2002
- any diagrams possible
- event statistics



Events Recorder

- transient recordings (TFR)
- fault records (DFR)
- event records EN 50160: 2011
- IEC 61000-4-30: 2008
- scaling: possibilities to enlarge or reduce
- statistical ratings: DisDip/Unipede, CBEMA, events according to EN 50160: 2011

Technical Data

| | | AM-15-PLOG |
|-------------------------------|--|---|
| voltage inputs | | 4 |
| | range | +/- 400V / 800V |
| | accuracy (on value, 5-100% of range) | 0,1 % |
| current inputs | | 5 |
| | clamp 5A | set of 3 / set of 5 |
| | order number | AM-15-3CL5 / AM-15-5CL5 |
| | range | 5 A |
| | accuracy | 1 % |
| | Rogowski coil | set of 3 / set of 5 |
| | order number | AM-15-3Rog10k / AM-15-5Rog10 |
| | range | 100 / 1.000 / 10.000 A |
| | accuracy | 1 % |
| | other clamps (www.artemes.org) | on request |
| measurement parameters | resolution | 16 bit |
| | sampling rate | up to 10 kSamples/sec. per channel |
| | bandwidth | 3 kHz |
| measurement values | phase voltages, neutral voltage | ✓ |
| | line voltages | ✓ |
| | phase currents, neutral current | ✓ |
| evaluation online | web interface | ✓ |
| | recorder - diagram and actual values | ✓ |
| | Scope, FFT | ✓ |
| | FFT IEC 61000-4-7 | ✓ |
| | | ✓ |
| data processing | flexible report generator on web | ✓ |
| | EN 50160 | ✓ |
| | IEC 61000-2-4 class 1,2,3 | ✓ |
| | ISO 50001 energy report | ✓ |
| data storage | internal SD | 32 GB |
| | ARTEMES server | licence included (max 3 measurement clients) |
| | ARTEMES CLOUD | option: AS-CLOUD |
| communication ports | USB 3.0 | 1 |
| | LAN | 1 |
| | WLAN / GSM | Option AM-15-Route |
| EMC | IEC 61326-1 industry | ✓ |
| | IEC 61000-4-4 surge, IEC 61000-4-5 burst | 4 kV |
| | isolation (AC, 1 min) | 2 kV |
| safety | IEC 61010-1 | ✓ |
| dimensions | width x depth x height | 265 x 210 x 70 mm |
| power supply | AC - V/f | 85-264 VAC / 47-63 Hz |
| power consumption | VA | ca 10 VA |
| weight | kg | ca 1 kg |
| temperature range | operation | -20°C to +60°C |
| | storing | -20°C to +80°C |

Order Number

| | article | order number | description |
|------|-----------------|---------------------|--|
| AM-5 | AM-5-P | 550-AM-5-P | Panel mount power meter with PFR functionality |
| | AM-5-PQ | 550-AM-5-PQ | Panel mount power meter with PQ functionality |
| | AM-5-PMU | 550-AM-5-PMU | Panel mount power meter with PMU functionality |
| | AM-5N-P | 550-AM-5N-P | Panel mount power meter with PFR functionality, without display |
| | AM-5N-PQ | 550-AM-5N-PQ | Panel mount power meter with PQ functionality, without display |
| | AM-5N-PMU | 550-AM-5N-PMU | Panel mount power meter with PMU functionality, without display |
| | AM-5R-P | 550-AM-5R-P | Panel mount power meter with PFR functionality, with Rogowskicoils |
| | AM-5R-PQ | 550-AM-5R-PQ | Panel mount power meter with PQ functionality, with Rogowskicoils |
| | AM-5R-PMU | 550-AM-5R-PMU | Panel mount power meter with PMU functionality, with Rogowskicoils |
| | AM-5RN-P | 550-AM-5RN-P | Panel mount power meter with PFR functionality, without display, with Rogowskicoils |
| | AM-5RN-PQ | 550-AM-5RN-PQ | Panel mount power meter with PQ functionality, without display, with Rogowskicoils |
| | AM-5RN-PMU | 550-AM-5RN-PMU | Panel mount power meter with PMU functionality, without display, with Rogowskicoils |
| | AM-5-DC | 550-AM-5-DC | DC Supply Option for AM-5 instruments, to order only with new instruments |
| AS | AS-Server-light | 550-AS-Server-light | ARTEMES server light for up to 4 measurement units (included in AS-Basic) |
| | AS-Server | 550-AS-Server | ARTEMES Server for more than 4 measurement units, web-based analysis tool for ARTEMES measurement instruments, for Windows Server, Linux on request |
| | AS-Topo | 550-AS-Topo | ARTEMES topological view for control centres (add-on to the ARTEMES server) |
| | AS-Cloud-light | 550-AS-Cloud-light | using the cloud for 6 months, for new instruments only (included in AS-Basic) |
| | AS-Cloud | 550-AS-Cloud | monthly rent for the cloud server; The cloud server is a virtual server in the internet on which you can store and analyse your data, secured by VPN. The software corresponds to the ARTEMES server technology. |
| | AS-Modbus | 550-AS-Modbus | ARTEMES driver for AS-Basic: Modbus (TCP and serial) |

Measurements for Power Applications

System Integration and Monitoring Solution

- convenient generation of reports
- energy management systems for commerce and industry
- load profile measurings and multi-channel power analyses
- power quality analyses according to definded standards
- qualification of power plants with renewables
- software and hardware solutions for individual test bench systems
- automated test sequences for repeated testings
- cloud solutions for continuous and distributed measurement tasks
- data compression and data base solutions for easy and individual use

