

ARTEMES

measurement competence centre
www.artemes.org



Measurement Unit AM-60

Measurement Unit AM-60



- modular 19" measurement system
- several modules
- integrated CPU or in-panel solution
- web-interface
- **ARTEMES CLOUD** interface
- up to 48 channels in one instrument

The ARTEMES AM-60 series is a modular solution for complex measurement tasks. The 19" racks with integrated CPI can include up to 4 modules for voltage and current with a resolution of 24-bit and a synchronised sampling rate of 144 ksamples /sec.

The instrument is operated via the sophisticated and reliable ARTEMES cloud technology without needing any individual software. The data can be stored on the instrument itself or the server and can thus be monitored over a longer period of time as well. On request the instruments can be equipped with WLAN and GSM router.

The software itself as the central unit offers not only standard functions for recording data but also various mathematical functions. A powerful toolbox for energy-related applications and fault recordings makes it possible to use this instrument as a power quality (PQ) monitor, fault recorder (PFR, DFR) and phasor measurement unit (PMU). Last but not least, this instrument series can also be used for multichannel monitoring of load profiles in a company.



19" body
up to 48 analogue channels
web- and cloud technology
optional WLAN and GSM

Measurement Functions

Overview - Online

showing a recorder with actual data, as vector-scope and as numeric 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, flicker emission

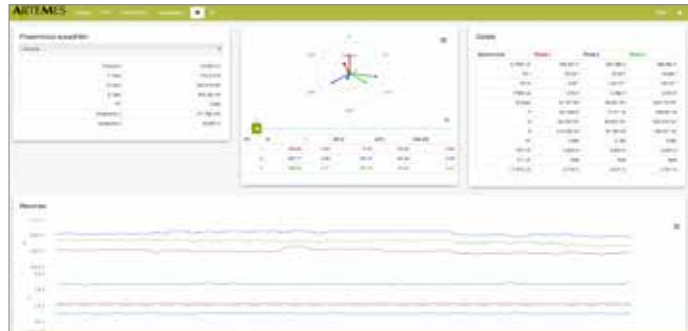
IEC 61000-4-15: 2012 class F1

frequency

symmetrical components

IEC 61000-4-30: 2008 class A and

IEC 61400-21: 2008



Oscilloscope - Real-Time

real time-scope in the web browser

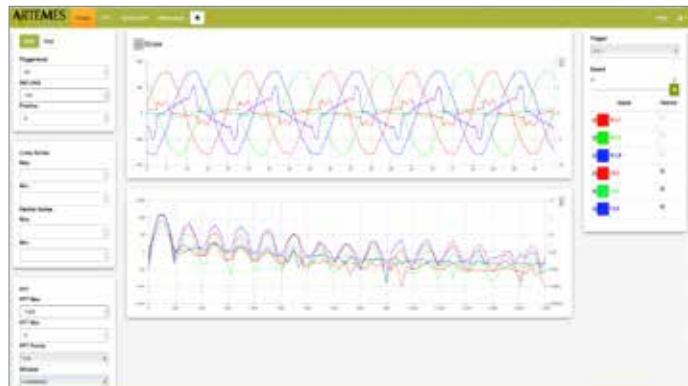
voltage and current

scaling left or right, adjustable

FFT with filters:

HANN, HAMMING, RECTANGULAR, BLACK-MAN, BARTLETT, BARTLETTTHANN, COSINE,

GAUSS; LANZOS, TRIANGULAR



FFT - Real-Time

voltage, current, power, phase angle

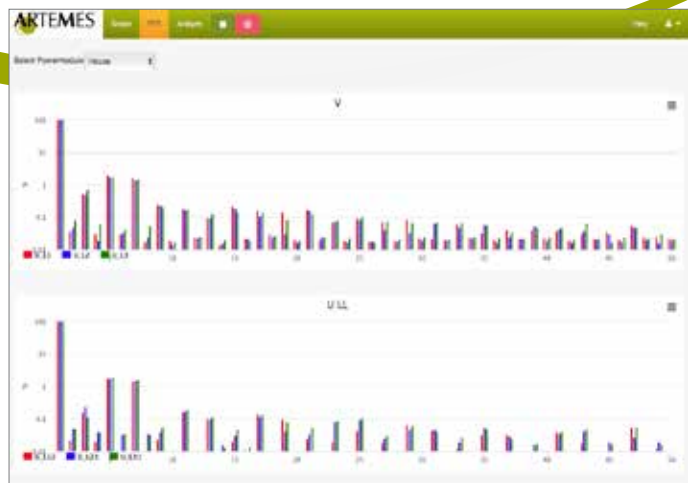
phase and line voltage

bar diagram and numeric values

IEC 61000-4-7: 2009 Class 1

interharmonics

frequency bands 2-9 kHz in 200 Hz-groups





Dynamic Reports

- diagrams of individual channels
- predefined templates
- zoom-in and zoom-out possibilities



Static Reports

- report generator to define complete reports, predefined reports according to:
 - EN 50160: 2011, energy (ISO 50001)
 - IEC 61000-2-4: 2002
 - IEC 61400-12-1: 2007
 - IEC 61400-21: 2008
- individual diagrams
- event statistics



Transient Fault Recording and Data Streaming

- fast transient recorder (TFR)
- disturbance recorder (DFR)
- event recorder EN 50160: 2011
- IEC 61000-4-30: 2008
- zoom-in and zoom-out possibilities
- statistical evaluation: DisDip/Unipede, CBEMA, events according to EN 50160: 2011
- data streaming with full sampling rate continuously possible (max. 144 kSamples/sec.)

Modules

	AM60-V4C4-144K24	AM60-V4C6-144K24
input connector	banana/LEMO (-BL)	banana/LEMO (-BL)
	banana/DSUB (-BD)	banana/DSUB (-BD)
	screw/DSUB (-SD)	screw/DSUB (-SD)
	screw/screw (-SS)	screw/screw (-SS)
for clamps and Rogowski coils	(-BL),(-BD),(-SD)	(-BL),(-BD),(-SD)
direct current input 5A	(-SS)	(-SS)
voltage channels	4	4
range	1600 V	
accuracy	0,1%	
resolution	24 bit	
sampling rate	144 ksamples/sec, adjustable	
connector	banana 4mm (-BL), (-BD)	
	screw terminals 7.62mm*2 (-SD), (-SS)	
isolation voltage	6 kV	
burst	4 kV	
surge	4 kV	
current channels	4	6
range	±10V for clamp input, ±2V for Rogowski coil, ±20A for direct input	
accuracy	0,1% (0,5% for direct input)	
resolution	24 bit	
sampling rate	144 ksamples/sec, adjustable	
connector	Lemo P1 (-BL)	
	SUB-D9 (-BD), (-SD)	
isolation voltage	-	
burst	4 kV	4 kV
surge	4 kV	4 kV
digital Inputs	8	-
switch level	0~50 Vpeak	-
compatibility	adjustable trigger levels	-
trigger resolution	12 mV	-
isolation	1 kV	-
connector	SUB-D9	-
digital outputs	2	-
contact	PhotoMOS relais	-
isolation	1.5 kV	-
load	350Vp / 0,12A cont / 0,3A p	-
connector	SUB-D9	-

Chassis

	AM60-4U-i5	AM60-4U-i7
size	19", 4U	19", 4U
slots	4	4
CPU	i5	i7
GPS	option	option
Supply Voltage	85-264 V AC / 47-63 Hz	85-264 V AC / 47-63 Hz

Accessories

ARTEMES CLOUD

AM-CLOUD

ARTEMES CLOUD for safe data storage and worldwide access via the web



clamp 5 A

AM-CL-5

precise clamp for small currents with Mumetal, from mA to 5 A

GSM / WLAN module

AM-60-Route

internal router for WLAN- and GSM-connection

external antenna for GSM / WLAN module

AM-10-antenna

external antenna with magnetic bottom



Rogowski-coil 10.000 A

AM-CL-Rog10k

flexible coil for measuring on bus bars and cables ranging from A to 10 kA



DC clamp 300 A

AM-CL-300DC

current clamp for measuring direct and alternating current, very precise



carrying case

AM-50-TP

carrying case as protection against water, dust and vibration, offers space for measurement instrument and accessories, rollers and extendible handle



lead fuse for leads, 4mm, 3 black

AM-Leadfuse



screw adapter, 5 black + 5 blue

AM-screwadapter

screw adapter for leads, 4 mm



alligator clamp, 5 black

AM-alligator clamp



uninterruptible power supply

AM-UPS

external USV



magnetic adapter, 5 black

AM-magnetic adapter



set of voltage leads, 4 mm

AM-10-leads

5 leads black, 2m

5 leads blue, 2 m



For further accessories and additional information please visit www.artemes.org.

Measurements for Power Applications

System Integration and Monitoring Solution

convenient generation
of reports

data compression and data base solutions
for easy and individual use

cloud solutions for continuous and
distributed measurement tasks

automated test sequences
for repeated testings

ARTEMES
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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

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