JANITZA SOFTWARE AND IT SOLUTIONS

Fig.: The device's own homepage

Fig.: GridVis®-Software

Janitza software & IT solutions

UMG measurement devices – homepage & APPs
- Display the measured values via the device's own homepage
- Expansions (APPs) for various different UMG measurement devices

GridVis®-Basic
Free basic version:
- Maximum of five measuring devices
- Graphs and analysis tools
- Database (Jan-DB)
- Reports:
  - Commissioning report
  - Energy and consumption reports
  - PQ reports (EN 50160, EN 61000-2-4 etc.)
  - Fault monitoring/RCM report

GridVis®-Professional
As GridVis®-Basic, but with the following additional features:
- Unlimited number of devices and data points
- Database driver (MSSQL, MySQL)
- Automation (readout, time setting, etc.)
- Virtual measuring devices and logic
- User administration

GridVis®-Service
As GridVis®-Professional, but with the following additional features:
- Enhanced reports:
  - Uptime
  - LET (Limits, Events, Transients)
  - Energy billing
- COMTRADE & MSCONS Export
- Service, including REST API
- Online recorder
- Alarm management
- Measurement and consumption data export (CSV)
- Third party devices (generic Modbus)
- Enhanced automation: Reports, database actions, E-mail/alerting, cost centers and rate formation

GridVis®-Ultimate
As GridVis®-Service, but with the following additional features:
- Web interface GridVis®-Energy
- Enhanced user administration
- Dashboard and template manager
- Widgets
- Key performance indicator evaluation (KPI)
- Sankey diagram (energy flow analysis)
- Device overview with graph function
- OPC UA Client
- Image and symbol library

GridVis® –

Grid visualisation software

GridVis®

Three applications in a single software tool: energy management, power quality, ground fault monitoring (RCM)

GridVis® reveals potential energy savings. In addition, the measured parameters measured can be analyzed to detect possible production stoppages at an early stage and thus to optimize your operating equipment uptime. The scalable, user-friendly software is perfect for building standard-compliant energy, fault monitoring/RCM and power quality monitoring systems.

Energy management (EnMS)

Certified in accordance with ISO 50001. You are on the safe side with Janitza GridVis® when it comes to topics such as energy management.

Transparency

Keep track of consumption data and costs. Recognize cost generators as well as problems in the power quality. Discover rising fault currents and overloads. Define key performance figures from consumption and measurement data in line with the specifications of ISO 50006.

Network analysis & evaluation

Analyze and evaluate measurement data. The GridVis® software offers numerous functions, such as statistics, line diagrams, pie charts, heat maps, CBEMA curves, continuous lines, tables, Sankey diagrams, key performance indicators, etc. The functions can be designed intuitively. Measurement data can be analyzed as required by the user.

Safety & alarm management

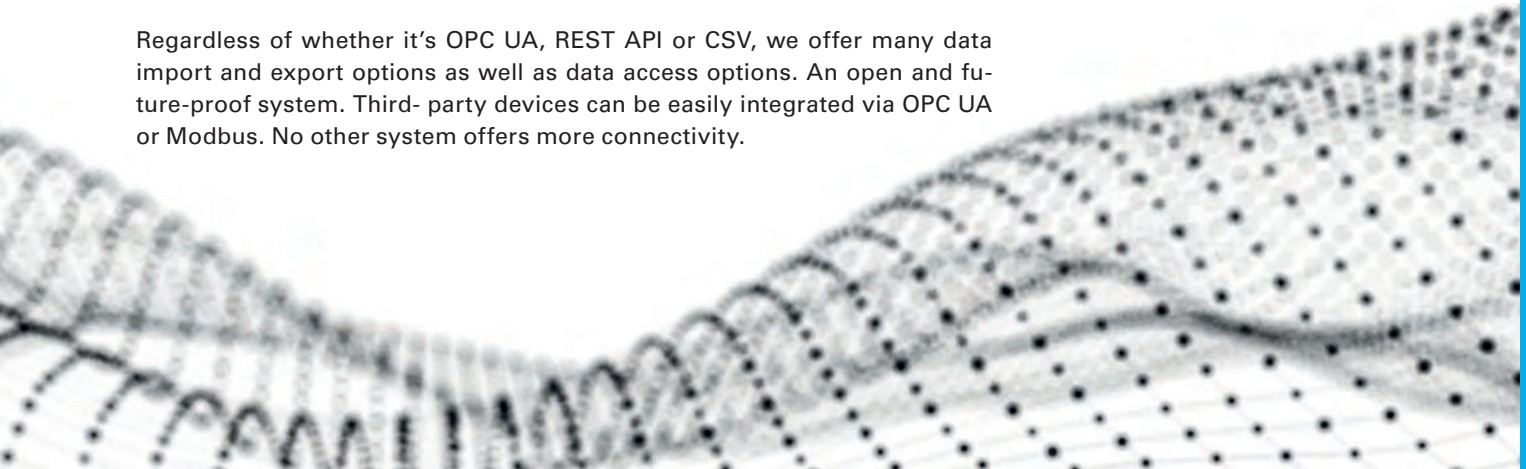
Monitor limit values of measured variables, consumption data, residual currents as well as device communication. Reliable alerting via e-mail and the web interface. With Janitza's GridVis® measurement technology and network visualization software, you give your company more reliability and safety.

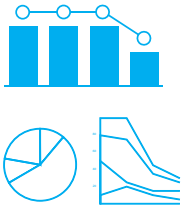
Visualization & documentation

Web visualization in line with your needs. Quickly and easily create your own dashboards and overview with a large selection of functions and graphics, without programming skills. Benefit from prepared reports and documentation on the topics of energy management, power quality and residual current monitoring.

Open system

Regardless of whether it's OPC UA, REST API or CSV, we offer many data import and export options as well as data access options. An open and future-proof system. Third- party devices can be easily integrated via OPC UA or Modbus. No other system offers more connectivity.



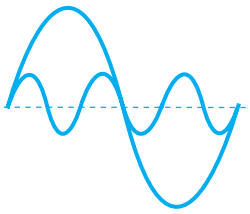


- FREE LAYOUT DESIGN
- APPLICATION-ORIENTED FUNCTIONS

Visualization

Design your own overviews with numerous functions and graphics

- Professional editor for the creation of dashboards
- Dashboards and templates: free design of overviews
- User management and regulation of access rights
- Numerous widgets and functions: line diagrams, bar charts and pie charts, heat maps, Sankey diagrams, key performance indicators (KPI), tables, indicators, continuous lines, weather, live values, links and much more.



- PROFESSIONAL TOOLS FOR EVALUATING ALL MEASUREMENT AND CONSUMPTION DATA

Analysis & Evaluation

All details in an overview, with our tools for analyzing and evaluating your measurement data

- Result and transient browser
- Graph and graph set functions
- Statistical evaluations
- CBEMA curve
- Continuous line
- Dashboards & widgets
- Ground fault monitoring (RCM) analysis

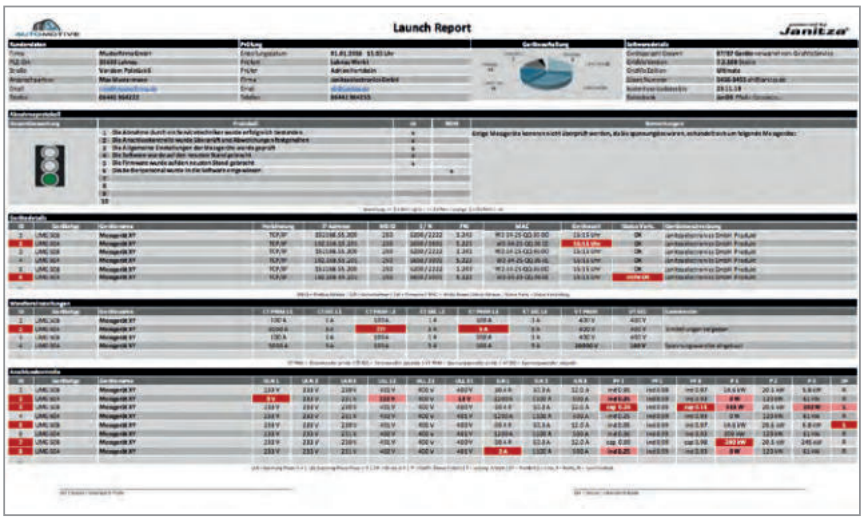


Fig.: GridVis® Launch-Report

Documentation

Reports optimized for EnMS, power quality and ground fault monitoring (RCM)

- EN 50160 & EN 61000-2-4 evaluation
- Uptime analysis as well as statistical analyses
- Results, transients and limit-value violation
- Energy overviews
- Energy billing
- Residual current analysis
- System acceptance

- XLS- UND PDF-OUTPUT
- AUTOMATIC E-MAIL SENDING

Connectivity

Data access, data export and import made easy

- OPC UA client and server (optional)
- REST API (M2M solution)
- Modbus third-party devices
- CSV, XLS import & export
- GridVis® Collector (mobile data collector)
- MSCONS (Lastprofil und Zählerdaten)
- COMTRADE (transients and events)

- FUTURE-PROOF SOLUTIONS
- OPEN SYSTEM
- THE LATEST TECHNOLOGIES

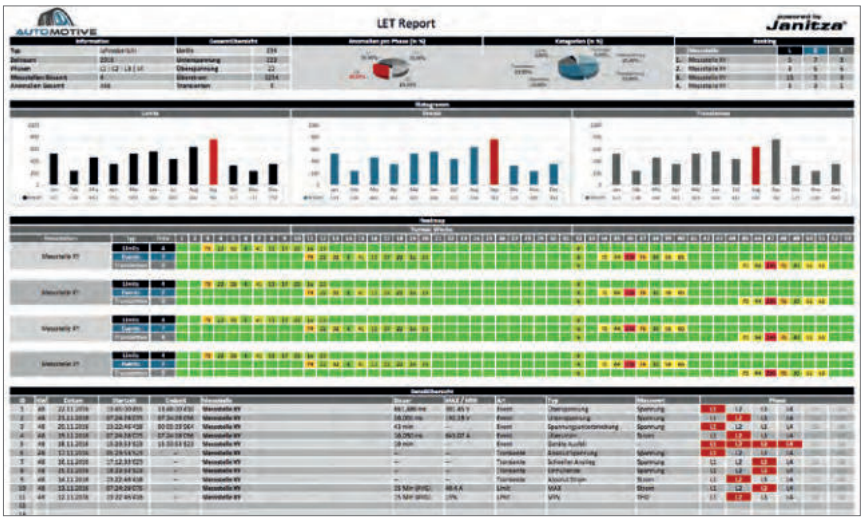


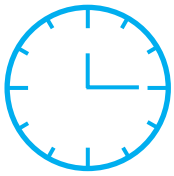
Fig.: GridVis® LET-Report

- UPTIME
- RELIABILITY AND SAFETY THROUGH MONITORING
- MEASUREMENT TECHNOLOGY AND MEASURED VALUES UNDER CONTROL

Alerting

System and energy monitoring at the highest level

- Monitoring communication, limit values and much more
- Alerting via web UI, e-mail or external program
- Acknowledgement requirement with logging & history
- Escalation levels for needs-based alerting
- Full access to measurement data and communication parameters

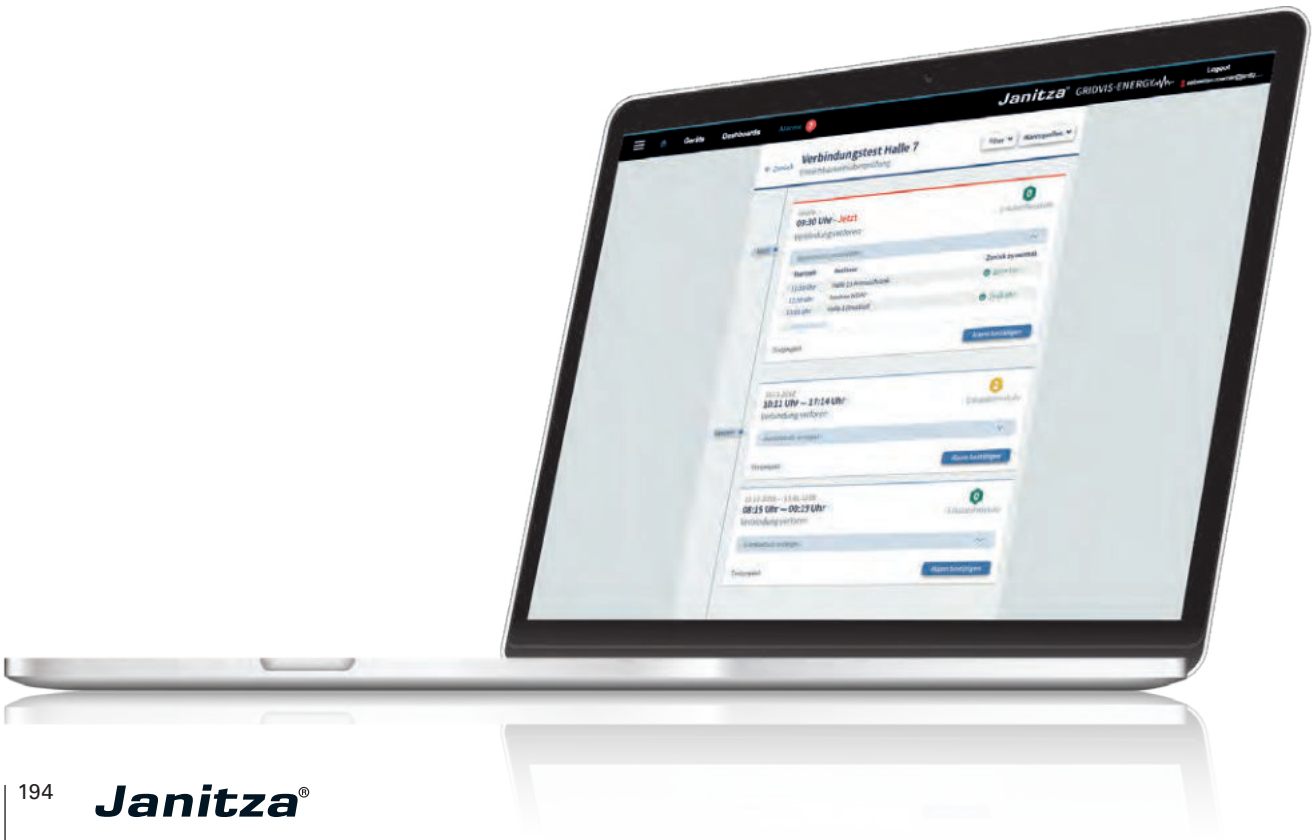


- TIME TASK MANAGEMENT
- EASY SYSTEM HANDLING THROUGH AUTOMATION FUNCTIONS

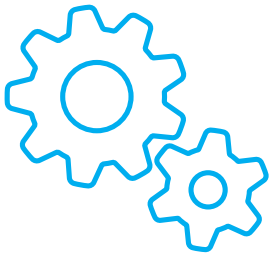
Automation

Plan the functions and automate your system

- Planning of device readouts, time synchronization, report creation or e-mail sending
- Automatic data import
- Database management with automation functions
- Shift schedules and rates



Web interface



- Dashboards and widgets
- No local installation required

Engineering Tool

- Local installation
- Commissioning and parameterization of measuring devices
- Analysis and evaluation

Database

- Jan DB (database in the scope of delivery)
- MySQL (driver)
- MSSQL (driver)

Service

- Background process
- Operable without registered users

User administration & language

- Password protection and access control
- User management
- German, English, Spanish

Virtual measurement points & logic

- Measurement points without measuring device
- Mathematic operations

Data recording & device configuration

- Memory readout
- Online recorder
- Device parameterization

GridVis® editions – the right package of functions for every requirement profile

GridVis® – ULTIMATE 51.00.190

Like GridVis®– Service, plus:

- Web interface GridVis®-Energy
- Enhanced user administration
- Dashboard and template manager
- Widgets
- Key performance indicator evaluation (KPI)
- Sankey diagram (energy flow analysis)
- Device overview with graph function
- OPC UA Client
- Image and symbol library

GridVis®– SERVICE 51.00.180

Like GridVis®– Professional, plus:

- Enhanced reports:
  - Uptime
  - LET (Limits, Events, Transients)
  - Energy billing
- COMTRADE & MSCONS Export
- Service, including REST API
- Online recorder
- Alarm management
- Measurement and consumption data export (CSV)
- Third party devices (generic Modbus)
- Enhanced automation:
  - Reports
  - Database actions
  - E-mail/alerting
  - Cost centers and rate formation

GridVis®– PROFESSIONAL 51.00.160

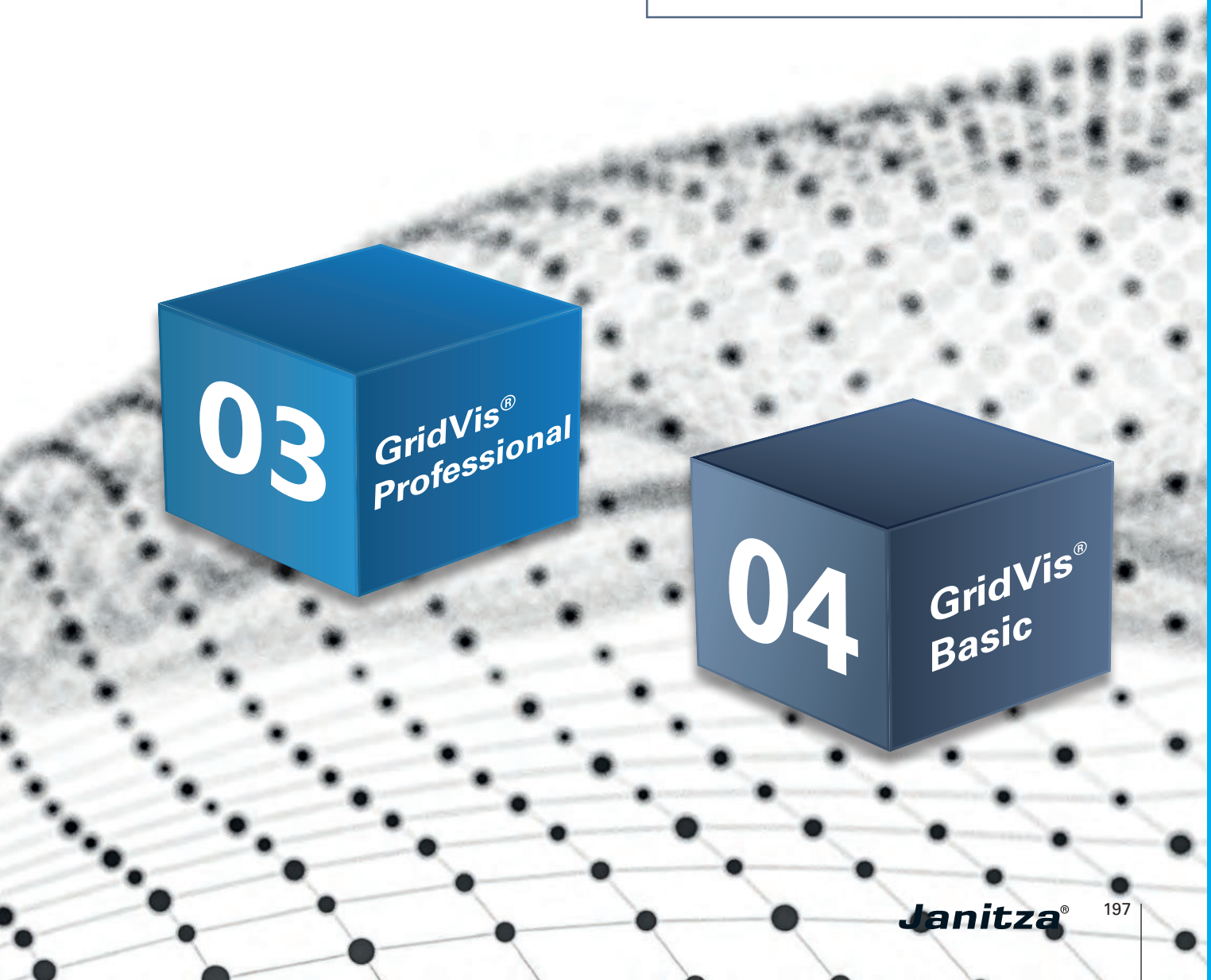
Like GridVis®– Basic, plus:

- Unlimited number of devices and data points
- Database driver (MSSQL, MySQL)
- Automation (readout, time setting, etc.)
- Virtual measuring devices and logic
- User administration

GridVis®– BASIC 51.00.116

Free basic version:

- Maximum of five measuring devices
- Graphs and analysis tools
- Database (Jan-DB)
- Reports:
  - Commissioning report
  - Energy and consumption reports
  - PQ reports (EN 50160, EN 61000-2-4 etc.)
  - Fault monitoring / RCM report



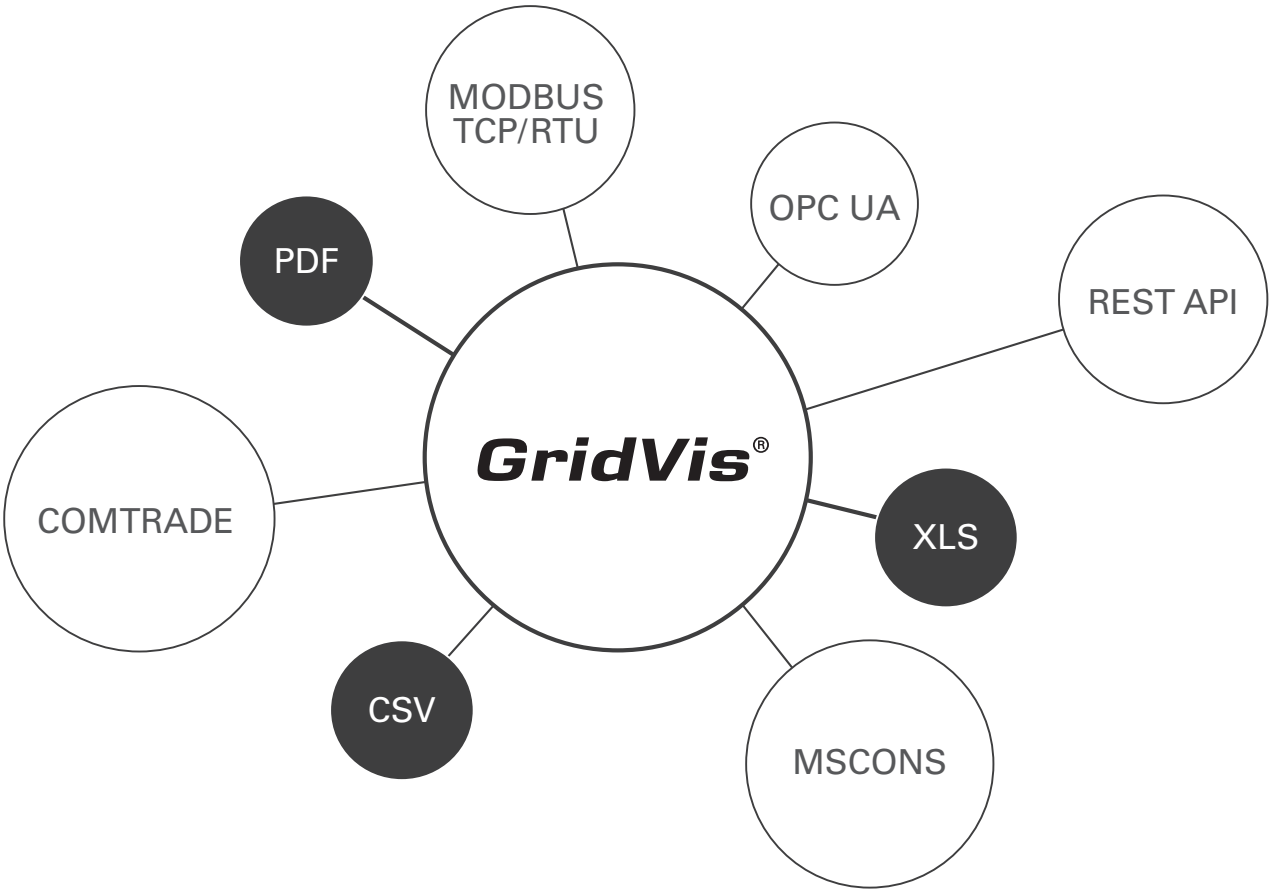
Rely on connectivity and a professional altering on the web

With GridVis® 7. 3, Janitza has expanded the powerful GridVis® to include many interesting functions. Add-on tools (e.g. the OPC UA server and GridVis® Collector), which are not included in the standard functions package, expand your options for data collection and processing.

Expanded functions of GridVis® 7.3:

Connectivity
- OPC UA client: fully integrate the OPC UA server in our system, use the values for mathematical operations, key performance indicators or record them with our online recorder.
- COMTRADE export
- MSCONS export

Alarm list in the WEB
- User-friendly and intuitive web interface
- Acknowledgment and history on the web
- Search and filter functions



Enhanced reports

- Uptime report – maximum system reliability with statistical evaluation
- LET report – events, transients, limit value violations
- Energy billing calculation – support of price groups, performance values and extra reactive energy, rates
- Commissioning report – acceptance protocol with connection check

Improved image management

- Pre-installed image and symbol library
- Grouping and search function

New line diagram

- Simple and intuitive configuration
- Dual time axis mode
- Limit value line
- Continuous line as a function
- Improved layout design

GridVis® Collector – mobile data readout

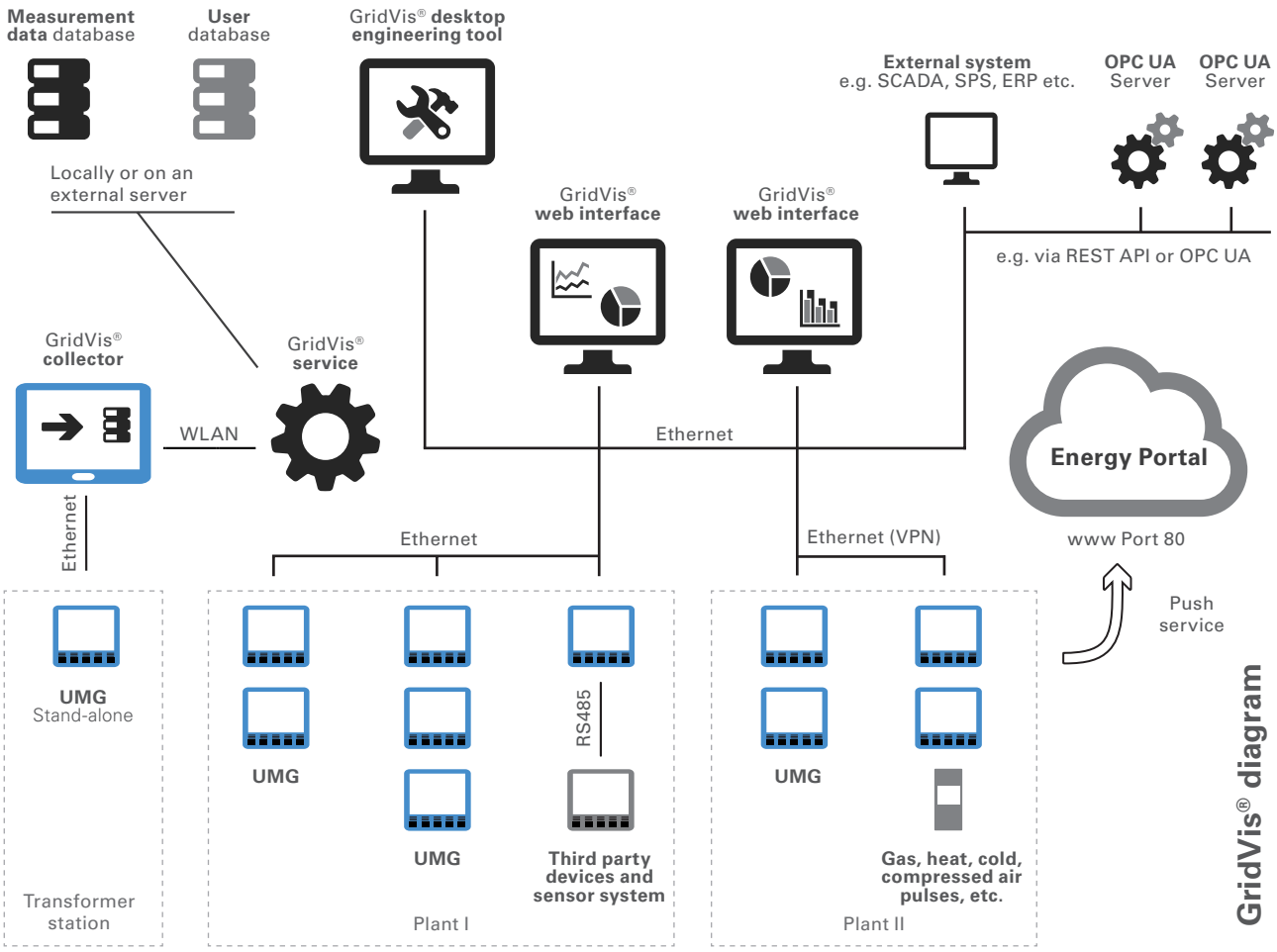
As a mobile unit, the GridVis® Collector makes it possible to read out measurement data from Janitza measurement devices on site without a communication connection. This data can be compared and evaluated in a project with other measurement points. With a battery runtime of up to 9 hours, the GridVis® Collector can manage up to 500 measuring devices. The handling is easy to understand and can be done by a qualified electrician in just a few easy steps.

The synchronization of measurement data with a locally installed GridVis® can be done via Ethernet or WLAN.

The GridVis® Collector offers the ideal solution for collecting measurement data in local network stations or other autonomous electrical distribution systems, which do not have a wireless or network connection.

GridVis® Collector
Item no. 51.00.400

The GridVis® Collector is not part of a GridVis® edition and can be purchased as an option.


Measurement data database
User database
GridVis® desktop engineering tool
Locally or on an external server
External system
e.g. SCADA, SPS, ERP etc.
OPC UA Server
OPC UA Server
e.g. via REST API or OPC UA
GridVis® web interface
GridVis® web interface
GridVis® collector
GridVis® service
WLAN
Ethernet
Energy Portal
www Port 80
Push service
Ethernet
Ethernet
Ethernet (VPN)
UMG
Stand-alone
Transformer station
UMG
UMG
RS485
Third party devices and sensor system
Plant I
UMG
Gas, heat, cold, compressed air pulses, etc.
Plant II
GridVis® diagram

Services

Our support engineers as well as a network of professional solution partners offer you a large range of services. From installation or retrofitting, or the complete commissioning of the entire measurement system, to the power quality analysis by certified experts.

TRUST IN A STRON PARTNER

Extensive service
Benefit from custom in-house training workshops and seminars and a diverse range of training courses at our training center in Lahnau. Professional consultation and support services are free for GridVis® customers. We will provide you with on-site assistance during your commissioning and offer fair maintenance contracts to ensure optimal system availability. Customized adjustments to reports are possible.

You can rely on a partner with an extensive product portfolio and many years of experience. As a partner with experience and know-how in numerous industries, we can help you to integrate a perfect solution in your company.

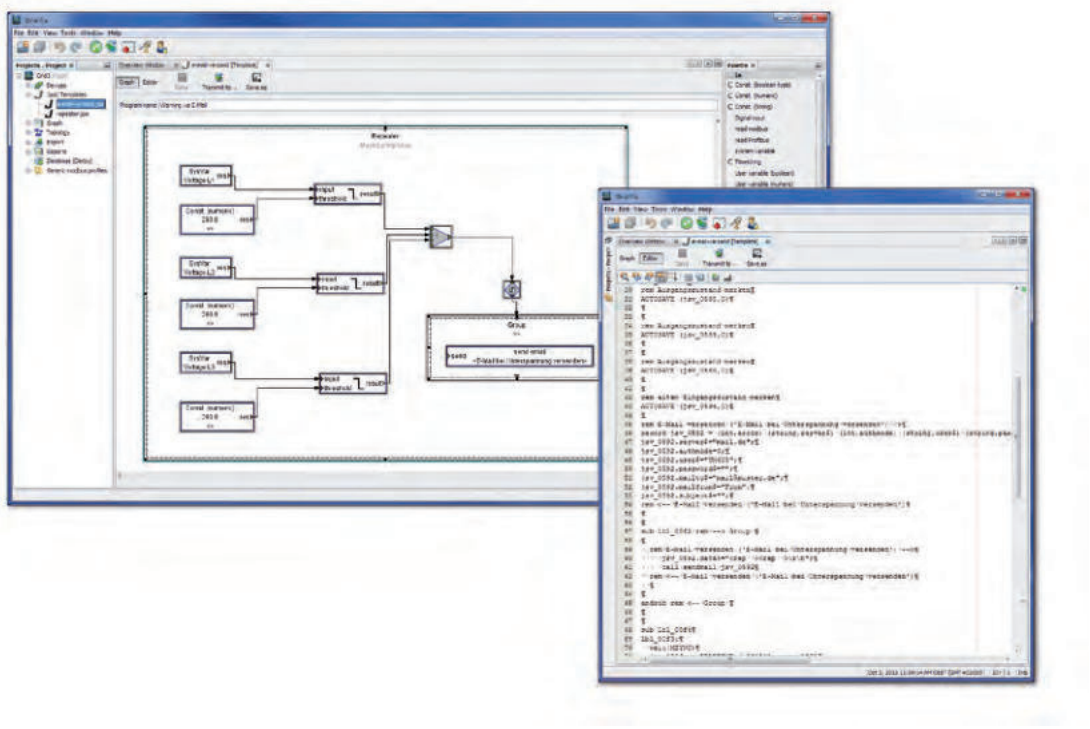
Overview of GridVis® editions

Attribute	Basic	Professional	Service	Ultimate
Installations (desktop)	1	3	5	5
Installations (service / virtual server)	0	0	2	2
Number of devices	5	Unlimited	Unlimited	Unlimited
Update period	Unlimited	1 year	1 year	1 year
Telephone support	Unlimited	Unlimited	Unlimited	Unlimited
Graphs	•	•	•*2	•*2
Data base Janitza DB / Derby DB	•	•	•	•
Manual reports	•	•	•*2	•*2
Graphical programming	•	•	•*2	•*2
Topology	•	•	•*2	•*2
Energy and consumption reports	•	•	•	•
Commissioning report	•	•	•	•
RCM report	•	•	•	•
Data base support MS SQL / MySQL*1	-	•	•	•
Automatic read-out	-	•	•	•
Virtual device	-	•	•	•
User administration	-	•	•	•
Scheduling points in time	-	•	•	•
CSV data import	-	•	•	•
Scheduling time periods	-	-	•	•
PQ reports	-	-	•	•
Automatic Excel export	-	-	•	•
Generic Modbus	-	-	•	•
Graphical programming module (read / write Modbus)	-	-	•*2	•*2
Automatic reports	-	-	•*2	•*2
Online logging	-	-	•	•
Service	-	-	•	•
Alarm management	-	-	•	•
REST-API	-	-	•	•
Energy billing report	-	-	•	•
LET report	-	-	•	•
Uptime report	-	-	•	•
COMTRADE & MSCONS export	-	-	•	•
Image and symbol library	-	-	-	•
OPC UA Client	-	-	-	•
GridVis®-Energy web visualisation	-	-	-	•
Item number	**51.00.116**	**51.00.160**	**51.00.180**	**51.00.190**
Item number for update extension (per year)	**-**	**51.00.161**	**51.00.181**	**51.00.191**
Item number for upgrade to next higher suite	**-**	**51.00.162**	**51.00.182**	**-**

*1 SQL database is not included in the scope of deliverables.
*2 This feature is only available in conjunction with GridVis® installation on the desktop.

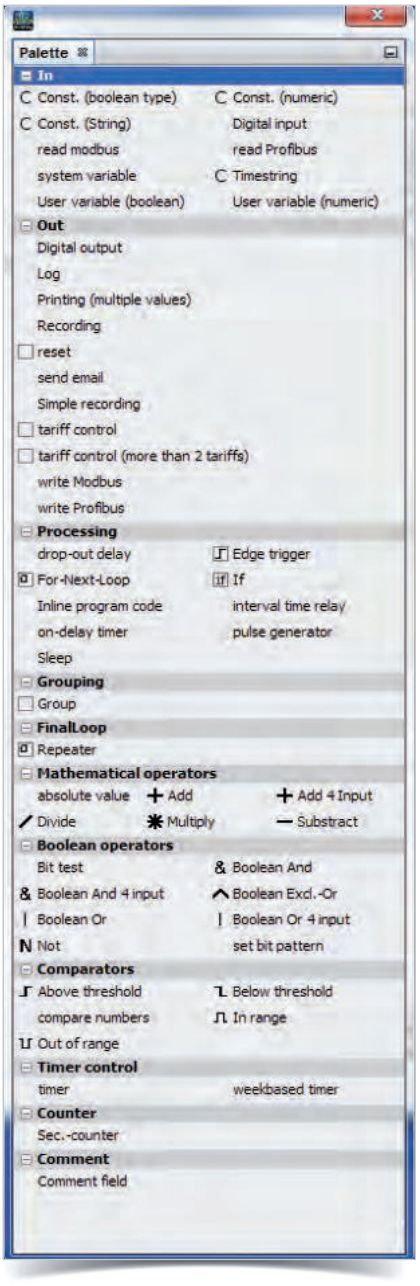
Number of devices:	Max. number of simultaneously loaded devices (e.g. within the basic version: a project with 5 devices or 5 projects with one device).
Update period:	Please notice, that after expiration of the update period probably several updates have to be gained. One update period lasts for 12 months. E.g. your extension period expired 2 years ago. You require 2 updates to use the actual GridVis® version.
Automatic read-out:	Device read-out in accordance with freely configurable time plans.
Online logging:	Measurement data from devices without memory will be averaged in the GridVis® software.
Service:	The GridVis® software runs in the background and will be started automatically. Devices can be readout time-independent and automatically. For configuration and data processing the desktop installation is required.

Jasic® PROGRAMMING LANGUAGE



Manifold programming options

- Special programming / script language for the measurement devices UMG 604-PRO / UMG 605-PRO / UMG 508 / UMG 509-PRO / UMG 511 and UMG 512-PRO
- The user is no longer restricted to the functionalities integrated in the measurement device, but rather the device can be expanded to suit the individual's requirements
- Graphical programming supports the creation and configuration of mathematical functions and logical links
- The devices' own digital outputs can be set
- Digital inputs can be easily evaluated
- The processing and writing of registers belonging to external devices can be implemented via the Modbus
- Free configuration of threshold value infringements, timer functions or recording of special values can be implemented
- Programs created can be stored as files or transferred directly to the measurement device
- There are 7 memory spaces available, each with 128 kByte, for the saving of the programs
- Simultaneous operation of these 7 programs possible
- User-friendly, graphical programming
- Free programming of the Jasic® source code by the user



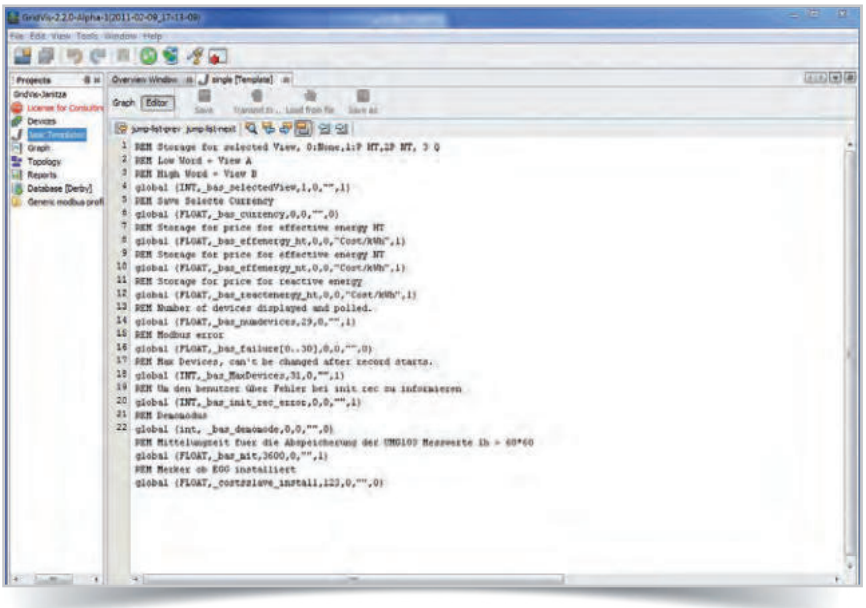


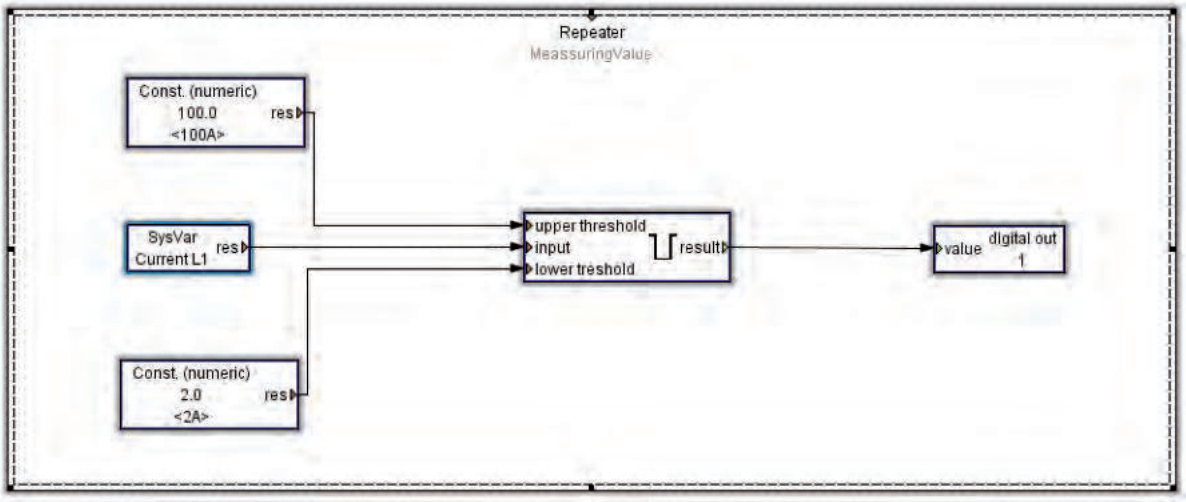
Fig.: Jasic® source code

Graphical programming: Examples

Example of threshold value monitoring (comparator)

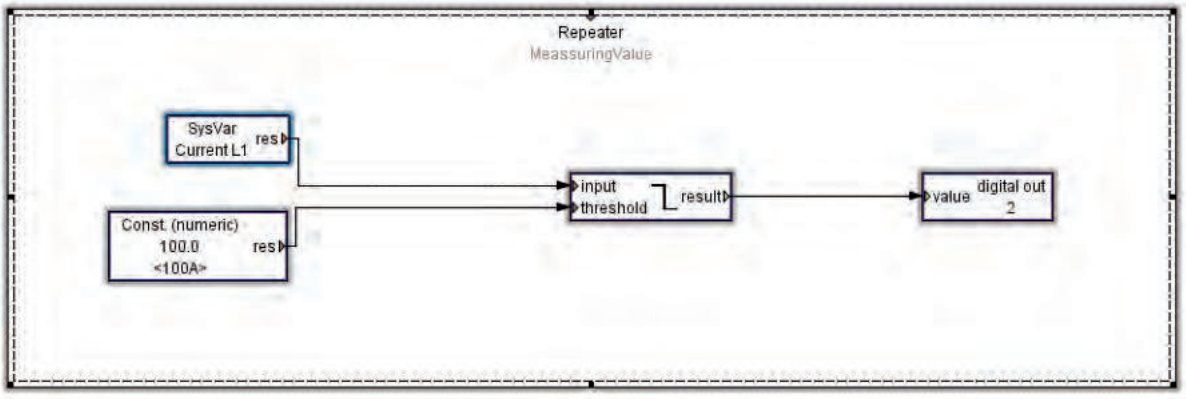
Example 1

- Monitoring of current L1: Determination of the threshold value by means of constants, lower level 2 A, upper level 100 A
- Digital output 1 signals the exceedance of the predefined values



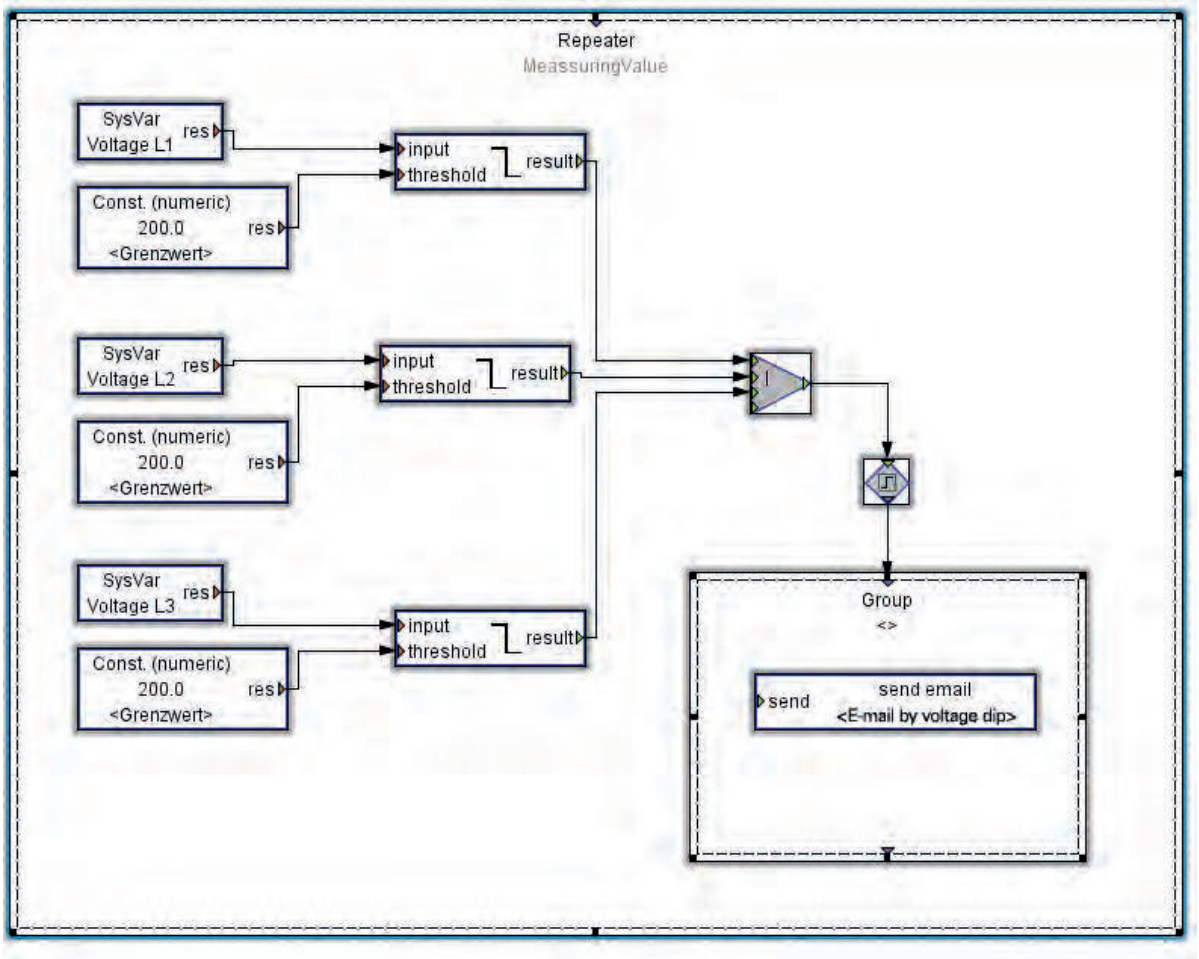
Example 2

- Works with only one lower threshold (in this case 100 A)
- In the event of the current dropping below 100 A, digital output 2 will be activated



Example 3

- An email will be sent in the event of the value dropping below the predefined setting
- In this example the email will be sent with an under-voltage of < 200 V in phases L1, L2 or L3
- Additional information: Voltage values from the 3 phases at the time of the undervoltage



APPs –

expansions with know-how

Software based expansions for the measurement devices

- Functions integrated in the UMG device can be expanded, controlled and visualised via APPs
- Depending on the application, consisting of several Jasic®, Flash and homepage files (administration and installation implemented via GridVis® software)
- The programming language for creating APPs is Jasic®
- Alternatively, the programming can also be implemented graphically with the GridVis®
- Development of further APPs for the measurement devices by the user and third parties possible
- The creation of APPs requires programming knowledge of Jasic®, JAVA Script, JSON, AJAX or Action Script depending on the application

Overview of product variants		
Description	Suitable for	Item number
Alert Messenger[*2] Configurable Jasic® program for sending fault messages by email	UMG 604 / UMG 605 / UMG 508 / UMG 509 / UMG 511 / UMG 512 and PRO series	**51.00.209**
EN 50160 Watchdog[*2] Integrated "Watchdog"-function for continuous monitoring per EN 50160	UMG 605 / UMG 511 / UMG 512	**51.00.264**
	UMG 605-PRO / UMG 512-PRO	**51.00.305**
FBM10PT1000[*3] Up to 10 additional thermistor inputs can be implemented via the RS485 interface by means of hardware expansion	UMG 604 / UMG 605 / UMG 508 / UMG 509 / UMG 511 / UMG 512 und PRO-Serie	**51.00.211**
GPS Sync Synchronization of the device time via digital input. For usage of the APP the GPS receiver, item no.15.06.240, is required	UMG 604 / UMG 605 / UMG 508 / UMG 509 / UMG 511 and PRO series	**51.00.291**
Humidity & Temperature JFTF-I[*4] Processing and recording of up to 8 temperature / moisture sensors possible	UMG 604 / UMG 605 / UMG 508 / UMG 509 / UMG 511 / UMG 512 snd PRO series	**15.06.337**
IEC61000-2-4 Watchdog[*2] Integrated "Watchdog"-function for continuous monitoring per IEC 61000-2-4	UMG 605 / UMG 511 / UMG 512	**51.00.265**
	UMG 605-PRO / UMG 512-PRO	**51.00.306**
	UMG 604 / UMG 509	**51.00.309**
	UMG 604-PRO / UMG 509-PRO	**51.00.308**
Mini EnMS[*2] Display of current and historical measured values in numbers and diagrams from a master device and max. 15 UMGs without memory, on the device's own homepage	UMG 604 / UMG 605 / UMG 508 / UMG 509 / UMG 511 / UMG 512 and PRO series	**51.00.266**
Multitouch[*5] Reading out of 30 measured values and max. 31 slave devices via RS485	UMG 604 / UMG 605 / UMG 96-PN / UMG 96-PA / UMG 508 / UMG 509 / UMG 511 / UMG 512 and PRO series	**51.00.207**
Push Service[*2] [*6] Sending data directly from the measurement device to a server without any additional software with 10 slave devices	UMG 604 / UMG 605 / UMG 508 / UMG 509 / UMG 511 / UMG 512	**51.00.238**
	UMG 604-PRO / UMG 605-PRO / UMG 509-PRO / UMG 512-PRO	**51.00.307**
Push Service + UMG 20CM[*2] [*6] Sending data directly from the measurement device to a server without any additional software For UMG 20CM queries over: UMG 604 / UMG 605 / UMG 508 / UMG 509 / UMG 511 / UMG 512 and PRO series	UMG 604 / UMG 605 / UMG 508 / UMG 509 / UMG 511 / UMG 512 and PRO series	**51.00.285**
SNMP[*2] Threshold monitoring with alarm function (SNMP-Trap)	UMG 604 / UMG 605 / UMG 508 / UMG 509 / UMG 511 / UMG 512 and PRO series	**51.00.310**

[*2] Serial number is needed
[*3] Free APP for item-no. 15.06.077
[*4] Free APP for item-no. 15.06.074
[*5] Also needed for BACnet, if slave devices have to be visualized via RS485
[*6] The APP Push Service is integrated in the firmware of the measuring device UMG 96RM-EL (unencrypted).

APP Alert Messenger **Item no. 51.00.209**

- Configurable Jasic® program for sending fault messages by email
- Depending on configuration, sending of fault messages with the following events: Total harmonic distortion voltage exceeded, short-term interruption detected, transient detected
- Saving the meter readings for the event and transient messages in the Modbus register
- Option to monitor additional measured values via an interface (not included)
- Emails*[1] with consumption values for day, week and month can be sent (a non-encrypted mail server is required)
- Serial number is needed

Suitable for: UMG 604 / UMG 605 / UMG 508 / UMG 509 / UMG 511 / UMG 512 and PRO series

APP FBM10PT1000 **Item no. 51.00.211**

- Up to 10 additional thermistor inputs can be implemented via the RS485 interface
- Hardware expansion FBM10 PT1000 – a DIN rail module with 10 PT1000 inputs – necessary for this APP

Suitable for: UMG 604 / UMG 605 / UMG 508 / UMG 509 / UMG 511 / UMG 512 and PRO series

Fig.: Measured value display via the devices' homepage

APP Humidity & Temperature JFTF-I **Item no. 15.06.337**

- Can process and record the measured values from up to 8 temperature/ moisture sensors (item no. 15.06.074)
- In doing so the display of the measured values is implemented via a homepage after installing the APP, or via global variables in the GridVis®
- Measured values can be saved in a second Jasic® program via the graphical programming
- Delivers two analogue 4 – 20 mA output signals, which will be processed by the function module FBM DI8AI8 (item no. 15.06.079)

Suitable for: UMG 604 / UMG 605 / UMG 508 / UMG 509 / UMG 511 / UMG 512 and PRO series

Fig.: Humidity / temperature sensor JFTF -I

APP EN 50160 Watchdog

Item no. 51.00.264 & 51.00.305

Integrated “Watchdog” function for continuous monitoring of the power quality per EN 50160. The power quality on the supply side should comply with EN 50160. This standard describes various power quality parameters for the distribution of electrical power on public power grids. EN 50160 pertains to mains voltage, i.e. the voltage measured at the mains connection point. With power quality monitoring per EN 50160, all the algorithms (including for 95% and 100% values) are integrated in the measurement device itself.
The auxiliary voltage of the device should be buffered to ensure that power failures can be reliably detected as events.

- Integrated watchdog function
- No need to transmit large volumes of measured data from the measurement device to a host system
- Save on communications costs for applications with remote consumers
- Simple analysis possible thanks to integrated colour display based on a “traffic light” system
- Possible to perform power quality analyses even with no particular knowledge on the topic
- No alarm functionality
- Serial number is needed

Item no. 51.00.264 suitable for: UMG 605, UMG 511 and UMG 512
Item no. 51.00.305 suitable for: UMG605-PRO and UMG 512-PRO

Fig.: APP Power Quality Report based on the EN 50160

APP IEC 61000-2-4 Watchdog

Item no. 51.00.265 / 51.00.306 / 51.00.309 / 51.00.308

Integrated “Watchdog” function for continuous monitoring of the power quality per IEC 61000-2-4. The standard IEC 61000-2-4 defines numerical limits for industrial and private power distribution systems at rated voltages up to 35 kV. For the consumer, the standard IEC 61000-2-4 should be applied with reference to power quality. Therefore the power quality in all technical systems must be continuously monitored in accordance with IEC 61000-2-4, in order to ensure fault-free operation of the installed system.
The auxiliary voltage of the device should be buffered to ensure that power failures can be reliably detected as events.

- Integrated watchdog function accordance with standard IEC 61000-2-4
- No need to transmit large volumes of measured data from the measurement device to a host system
- Save on communications costs for applications with remote consumers
- Simple analysis possible thanks to integrated colour display based on a “traffic light” system
- Possible to perform power quality analyses even with no particular knowledge on the topic
- No alarm functionality
- Serial number is needed

Item no. 51.00.265 suitable for: UMG 605, UMG 511 and UMG 512
Item no. 51.00.306 suitable for: UMG 605-PRO and UMG 512-PRO
Item no. 51.00.309 suitable for: UMG 604 and UMG 509
Item no. 51.00.308 suitable for: UMG 604-PRO and UMG 509-PRO

Fig.: APP Power Quality Analyse acc. to IEC 61000-2-4

APP Multitouch **Item no. 51.00.207**

- Reads out 30 measured values (fixed default value) from up to 31 slave devices (configurable) via RS485
- Filing of the measured values in the master in global variables or on BACnet data points
- Display of the measured values is implemented via the JPC35 touch panel or via the device homepage (browser with FLASH plug-in necessary)
- Expansion for live value display
- Integrated BACnet gateway function (option, item no. 52.16.083)
- The BACnet-ID can be changed via the homepage
- Program installs a control program
- Possible communications fault (RS485-Bus) directly visible via a status display
- The number of devices and device descriptions can be configured via the master devices homepage
- The master device is automatically recognised and entered in the "Device type" field
- The BACnet configuration is likewise implemented via the master device homepage
- Each device can be assigned its own BACnet-ID
- EDE file for the import of the BACnet data points in a BACnet-GLT is included in the scope of deliverables for the APP

Item no. 51.00.207 suitable for: UMG 604 / UMG 605 / UMG 96-PN / UMG 96-PA / UMG 508 / UMG 509 / UMG 511 / UMG 512 and PRO series

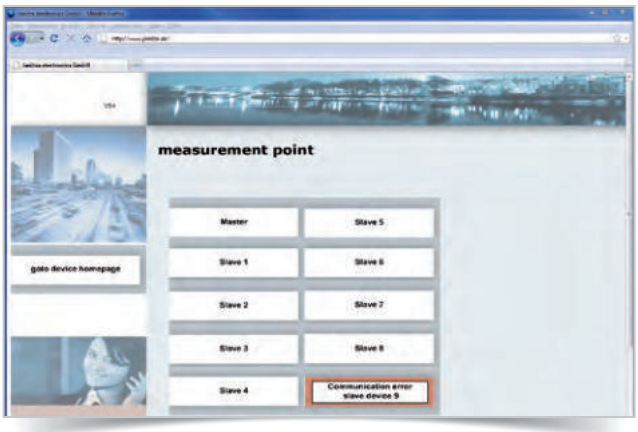


Fig.: Multitouch APP: Slave measurement devices overview on the master device homepage, e.g. up to 31 UMG Modbus slaves can be displayed via a UMG 604-PRO master device

Fig.: Display of measured values for an individual slave device

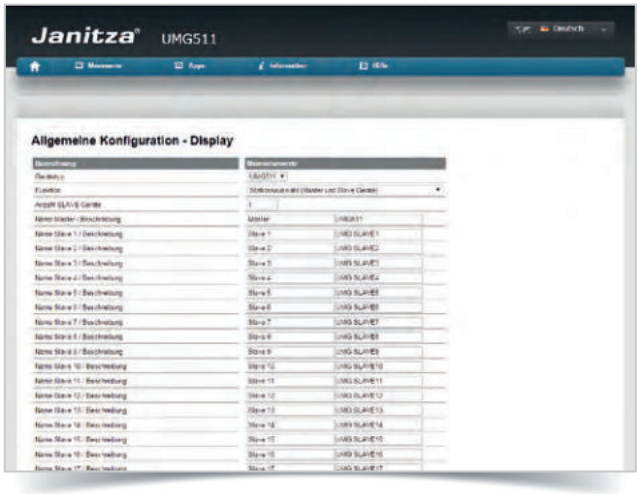


Fig.: General configuration of the monitoring master/slave devices

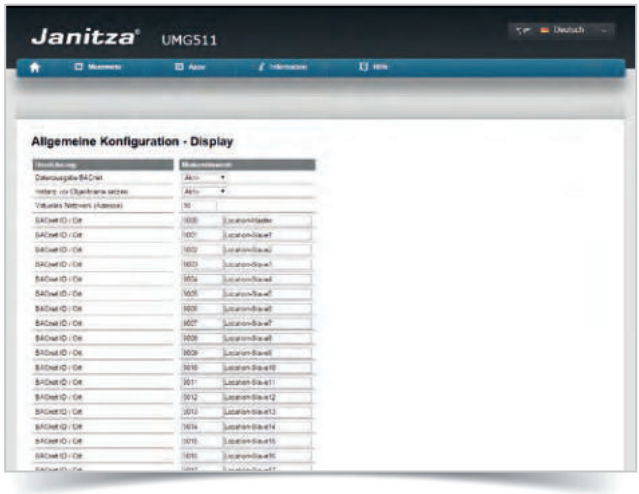


Fig.: General BACnet configuration

APP Push Service **Item no. 51.00.238 & 51.00.307**

Applications

- Sending data directly from the device to the energy portal (without additional software)
- The delivery of data is implemented via port 80
- Data can be saved in a MySQL database automatically
- Data can be visualised via a web server by means of a web browser
- An APP must be installed on each device
- Only Jasic-capable devices are supported (UMG 604-PRO / UMG 605-PRO / UMG 508 / UMG 509-PRO / UMG 511 / UMG 512-PRO)
- UMG 96RM-EL with integrated Push App function is supported
- Prodata and UMG 20CM – only via Jasic®-capable devices

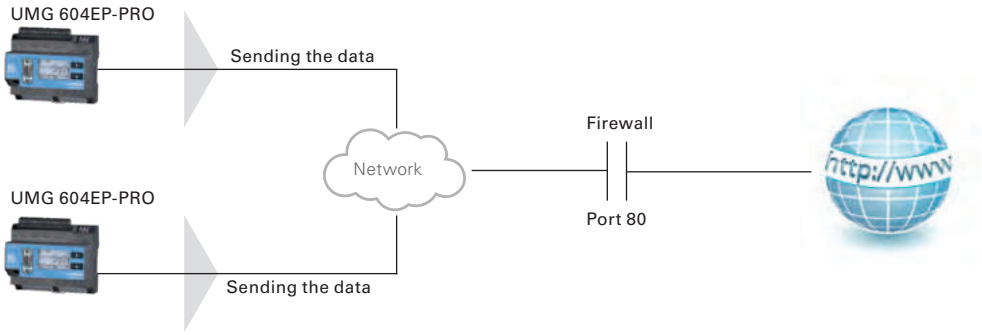


Fig.: Sending the content of the memory for the web application

Properties

- Sending of up to 25 measured values is possible simultaneously
- Delivery of the last mean values from the ring buffer
- APP automatically detects which data in the ring buffer is saved with which averaging time, and presents these for selection
- The measured values to be sent can be selected via the homepage
- Mean values are automatically synchronised to the device time
- The transmission time can be adjusted for the transmission buffer. In the event of the network connection failing, there are no gaps in the data so long as the failure is shorter than the transmission buffer time
- View of a status display on the homepage with the last data transmitted
- Setting of a daily status email to verify a successful sending process (optional)

Advantages

- Less data traffic
- Multiple devices can send data simultaneously
- The transmission string can be easily modified to suit individual requirements
- Thus there is an option to send data from external software
- The sending of data is implemented via port 80 (generally enabled with firewalls)
- Decentralisation and thus less susceptible to interference
- The transmission of data can be implemented as randomly controlled, so that there will be no overlapping
- Simple configuration

Overview of the main features of the APP Push Service 2.0

- Sending of up to 25 measured variables to a "software as a service" program
- Time intervals adjustable via port 80 (via HTTP/Json)
- Configuration implemented via the device website
- APP will be delivered, encrypted, linked to an individual serial number of the UMG device (provision of the serial number necessary)
- Serial number is needed

Item no. 51.00.238 suitable for: UMG 604 / UMG 605 / UMG 508 / UMG 509 / UMG 511 and UMG 512
Item no. 51.00.307 suitable for: UMG 604-PRO / UMG 605-PRO / UMG 509-PRO and UMG 512-PRO

Fig.: Push Service 2.0 UMG 604-PRO

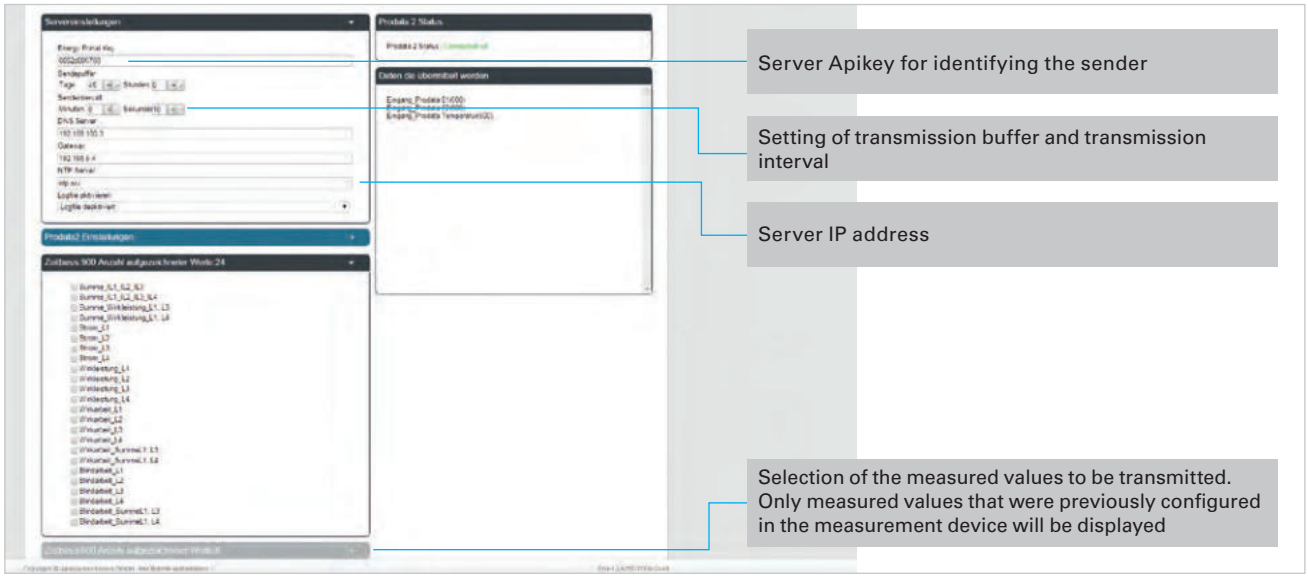


Fig.: Convenient configuration of the APP Push Service 2.0

GPS Sync **Item no. 51.00.291**

- Synchronisation of the device time via digital input
- No NTP server required
- Easy installation
- Accuracy +/-1 s per GPS synchronization
- A GPS receiver (item no. 15.06.240), available as an accessory, is required
- This APP is not required for the UMG 512-PRO because the GPS receiver can be connected to the digital input 1 without an APP on the UMG 512-PRO

Suitable for: UMG 604 / UMG 605 / UMG 508 / UMG 509 / UMG 511 and PRO series

SNMP Alert **Item no. 51.00.310**

- The “Limit value alarm via SNMP” application monitors the settings made on the weg page and in GridVis® and sends an SNMP trap when it is exceeded.
- Freely adjustable trap number
- Until two hosts setable
- Serial number is needed

Suitable for: UMG 604 / UMG 605 / UMG 508 / UMG 509 / UMG 511 / UMG 512 and PRO series

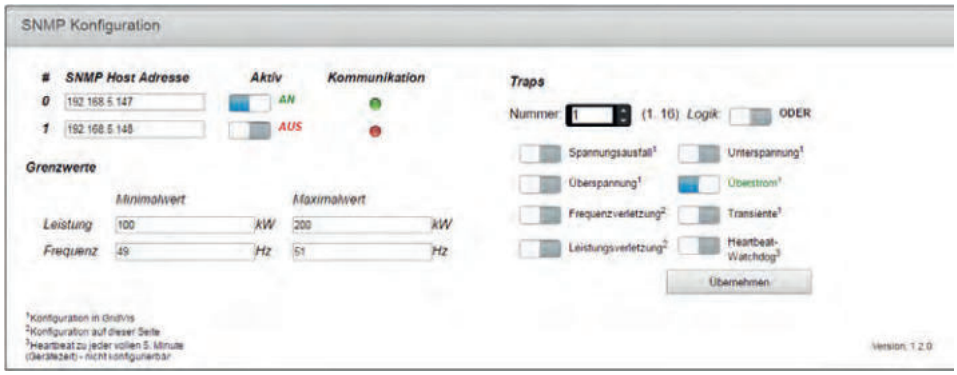


Fig.: Configuration page on an UMG **without** RCM functionality

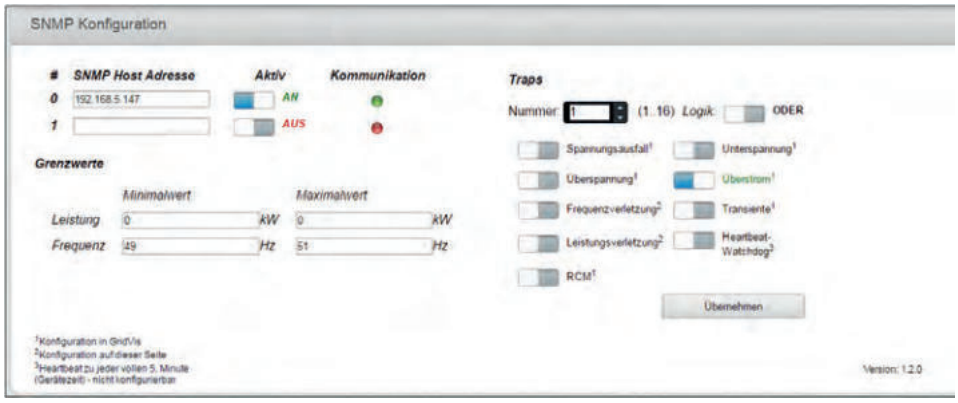


Fig.: Configuration page on an UMG **with** RCM functionality

APP Mini EnMs **Item no. 51.00.266**

With the “Mini EnMs” APP you can set up a small, local, web-based energy management system for a maximum of 16 Janitza devices without memory. Online and historical data from the master and slave devices are displayed via the web-based user interface. The master device also acts as a data collector for the slave devices.

- Optimised for use on desktops, laptops or tablets
- Select measured variables for the master device and slave devices using drag & drop
- Select the desired time window with the integrated calendar function
- The main variables of the Modbus slaves are stored and displayed on the “main measurement device”
- No external server or software package needed; just a standard browser will suffice
- Maximum of 16 slaves (UMG 103-CBM, UMG 104 or UMG 96RM)
- Memory variables for slave devices
  – Current L1, L2, L3
  – Total effective power
  – Total apparent power
  – Total effective energy
- The master collects the data and presents it on its own device homepage. The APP was developed for small applications where GridVis® ist not being used.
- Serial number is needed

Suitable for: UMG 604 / UMG 605 / UMG 508 / UMG 509 / UMG 511 / UMG 512 and PRO series

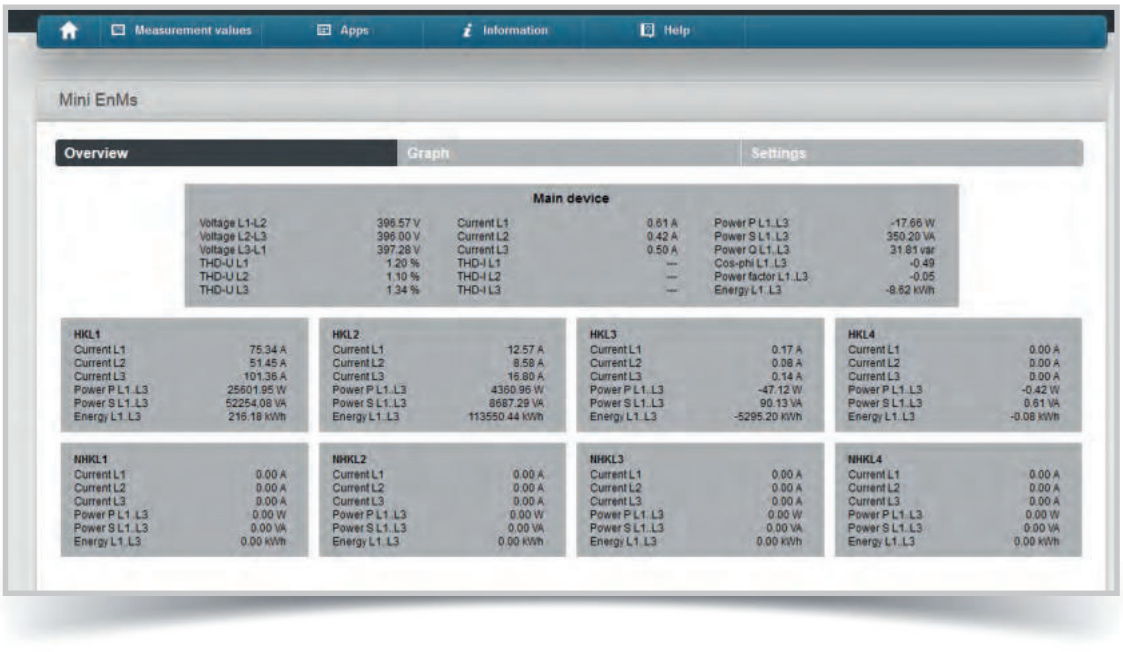


Fig.: APP Mini EnMS

Device homepage

Power management and power quality analysis online

The device-specific homepage for the measuring devices is ideal for users or target groups within a company, who do not wish to install the GridVis® software or do not require it. For access to this, the user simply requires a conventional web browser and an Ethernet connection (or a local patch cable). The screens have been graphically revised and have now been made even more user-friendly. Each measuring device has an integrated web server, which makes a separate, password-protected homepage available. It is possible to operate the device just as comprehensively via this, as via the device display. Furthermore, extensive online and historic measuring data (standard power consumptions), including the power quality analysis, can also be called up. It is even possible to control the measuring device remotely and configure it via the display indications. Because a multitude of PQ measured values can be displayed in addition to the countless standard electrical values, for many users the measuring device homepage constitutes the basic configuration for a monitoring system.

- Access to the powerful meter-homepage via web browser
- No software installation necessary
- Real-time data, historical data etc. directly accessible via the meter home page
- Function extension via APPs possible
- Remote control of device display via homepage
- Password protection possible

Fig.: IEC 61000-2-4 analysis with traffic-light principle

Abb.: Power Quality status overview

OPC UA SERVER

OPC UA Server

Increase connectivity

Extend the connectivity of the Janitza software GridVis® with the new OPC UA server from NETxAutomation and take advantage of the possibility to offer measurement data at OPC UA level. The BMS Server from NETxAutomation, with the integrated GridVis® driver, is available exclusively from Janitza and can be used in addition to the OPC UA client (part of GridVis® 7.3, Ultimate edition).

The server enables direct access to measurement data and key performance indicators of GridVis®. The clear advantages of the integrated driver include low setup costs and uptime of all measurement data. In addition, the complete GridVis® measurement device structure is directly available in the OPC UA tree. Several GridVis® projects can also be mounted. OPC UA clients, such as the GridVis® OPC UA client, building management systems, SCADA systems, ERP systems and many more can thus easily process GridVis® online data. In addition to the direct GridVis® connection, the OPC UA server offers KNX, SNMP and BACnet clients as well as logic functions, which are already included in the scope. Our partner NETxAutomation, provides support with its many years of experience in the field of OPC UA and building automation. Janitza specialists are optimally trained to assist you with the server installation and commissioning.

Note: The OPC UA Server is an independent application and can be acquired in addition to GridVis®. Billing is based on the required data points. We will be happy to make you an individual offer.

Description	Item no.
OPC UA Server 250	51.00.151
OPC UA Server 1000	51.00.152
OPC UA Server 2500	51.00.153
OPC UA Server 10000	51.00.154

DATABASE SERVER

Database server

Comprehensive monitoring and analyses require powerful server solutions

- Janitza electronics GmbH offers a powerful server as a complete solution
- Trouble-free and immediate use is guaranteed
- Simple and rapid integration of the pre-configured server into the existing network
- GridVis® software is already installed on the database server
- Available databases: Janitza DB, MS SQL or MySQL
- Application of a powerful tower or rack server from Dell
- The Dell PowerEdge server offers high quality and reliability with maximum expandability
- A RAID-10 system with hot-plug hard drives guarantees a high standard of data security

Fig.: Server (tower)

Fig.: Server (rack)

Guaranteed all-round service

- Access to the database server thanks to Janitza maintenance diagnostics and fault rectification (only with authorisation)
- Rapid diagnostics and rectification of problems possible
- Highest level of security: Use of common remote maintenance solutions with three-stage encryption per industry standards

For larger projects we currently recommend the following configuration:

- Current Intel processor
- 16 GB RAM
- RAID controller
- RAID 10 with 4 hard drives, 1 TB capacity each
- DVD-ROM drive
- Windows 2008 Server with 5 CALs, 64 Bit (German or English version)
- Installation of GridVis® software and the database driver for SQL servers
- MySQL / MS SQL databases should be provided by the client
- The integration of the server into the company's own network must be implemented by the customer's own administration

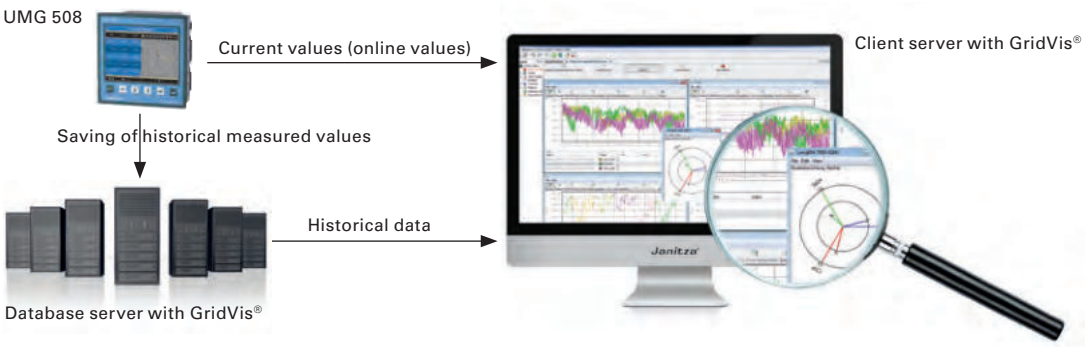


Fig.: The UMG 508, for example, currently has 6 communication ports. Of these, two are designed as gateways (port 8000) for downstream RS485 devices.

Areas of application

- With extensive monitoring systems with a large number of measurement devices
- For applications that require a high degree of data security and maximum performance
- With companies whose systems must be scalable and expandable

Application

- GridVis® runs as a service on the server
- Log-in of a user not required for automatic data logging
- For measured value analysis the client computer accesses the server directly via the network
- Access to measurement data within the database by any number of client systems possible
- Display of online measurement values dependent of the number of ports per device, i.e. visualisation of historical data via the database, online measurement values available direct from the UMG device

Product overview		
Description		**Item no.**
Server (tower)	• Current Intel processor • 16 GB RAM • RAID controller • RAID 10 with 4 hard drives, 1 TB capacity each • DVD-ROM drive • Incl. mouse and keyboard with german layout • Windows 2012 Server with 5 CALs, 64 Bit (German or English version) **Note:** • GridVis® software and database driver for SQL server • MySQL / MS SQL databases should be provided by the customer • The integration of the server into the company's own network must be implemented by the customer's own administration • Warranty from Dell GmbH	**15.06.352** (Windows version, German) **15.06.353** (Windows version, English)
Server (rack)	• Current Intel processor • 16 GB RAM • RAID controller • RAID 10 with 4 hard drives, 1 TB capacity each • DVD-ROM drive • Windows 2012 Server with 5 CALs, 64 Bit (German or English version) **Note:** • GridVis® software and database driver for SQL server • MySQL / MS SQL databases should be provided by the customer • The integration of the server into the company's own network must be implemented by the customer's own administration • Warranty from Dell GmbH	**15.06.354** (Windows version, German) **15.06.355** (Windows version, English)
Setup package 1 for MS SQL	• Install hard drives • Install operating system • RAID configuration (RAID 10) • Install updates • Install MS SQL Server* • Install GridVis®	**51.01.018**
Setup package 2 for My SQL	• Install hard drives • Install operating system • RAID configuration (RAID 10) • Install updates • Install MySQL Server* • Install GridVis®	**51.01.019**
Setup package 3 for JanDB	• Install hard drives • Install operating system • RAID configuration (RAID 10) • Install updates • Install JanDB • Install GridVis® • Install RTP user	**51.01.023**

* The MS SQL or MySQL database should be provided by the customer. GridVis® software and database drivers are separate items. The integration of the server into the company's own network must be implemented by the customer's own administration. Hardware warranty from Dell GmbH.

Fig.: Server (tower)

Fig.: Server (rack)

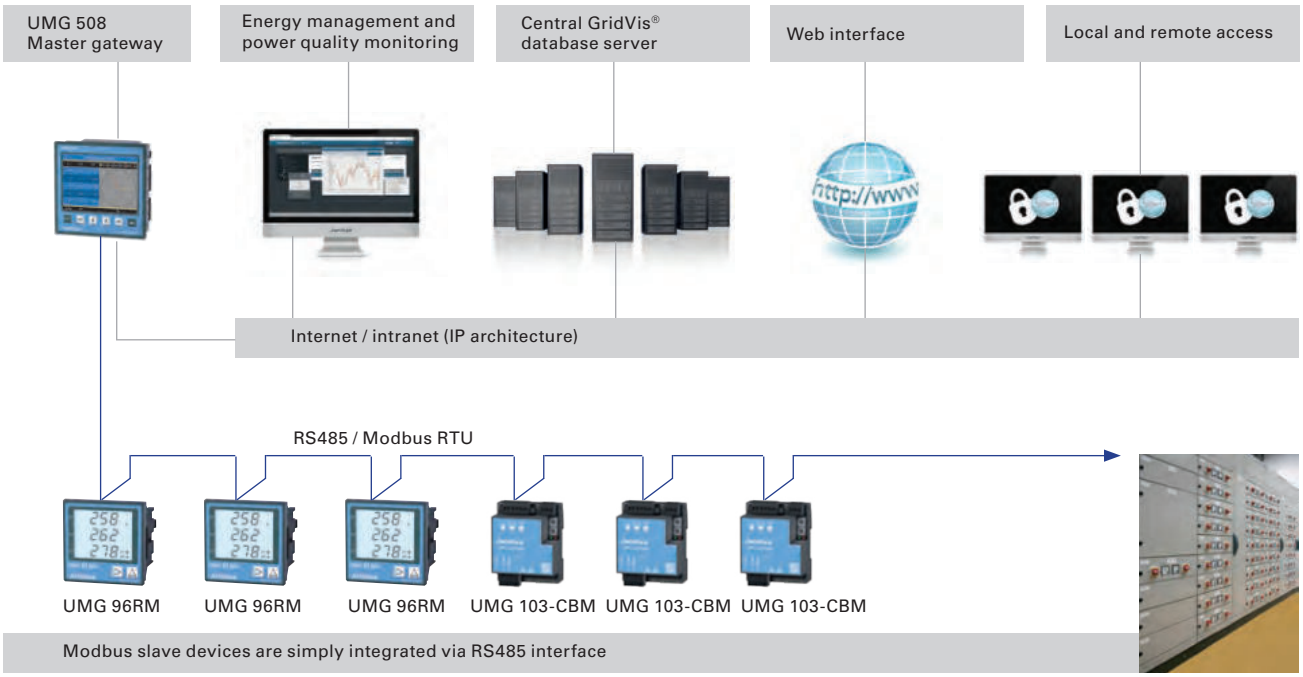


Fig.: Master-Slave communication architecture