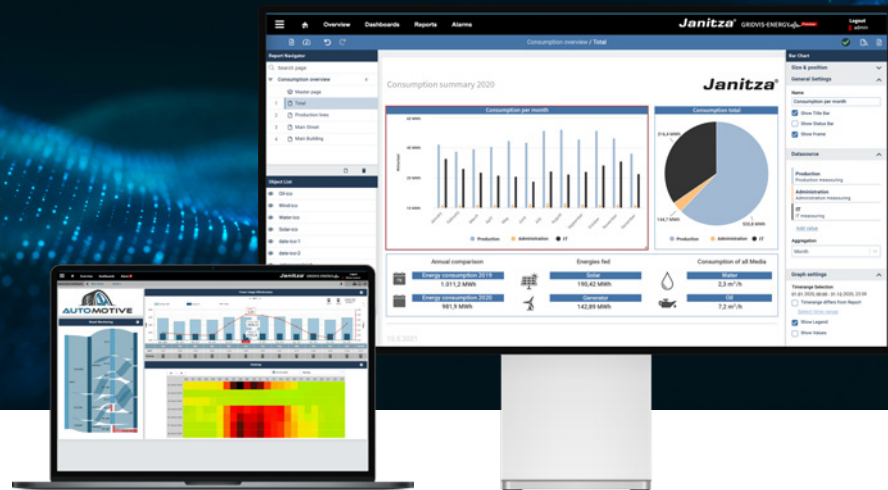


Power Grid Monitoring Software – GridVis®

GridVis®



GridVis® 8

Energy management, Power Quality analysis,
Residual Current monitoring

Janitza®

Three applications – one software package

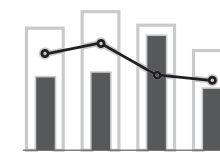
ENERGY MANAGEMENT – POWER QUALITY – RESIDUAL CURRENT MONITORING

Implement all three application areas of Energy management, Power Quality and Residual Current Monitoring with the scalable GridVis® network analysis software. GridVis® identifies energy saving potentials and helps to optimize the utilization of operating equipment as well as detect production downtimes at an early stage. Numerous functions support the fulfillment of standards, the preparation of key figures and the analysis of measured values. This makes the scalable, user-friendly software perfectly suited for developing standards-compliant energy, Residual current and Power quality monitoring systems. Depending on your requirements, three editions with different functionalities are available.



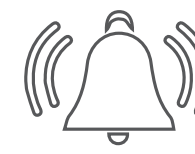
FUNCTIONS AT A GLANCE

ENERGY MANAGEMENT



Certified according to ISO 50001. With Janitza GridVis®, you are on the safe side when it comes to subjects like BAFA, reduction of the EEG levy or peak balancing according to SpaEfV.

SAFETY & ALARM MANAGEMENT



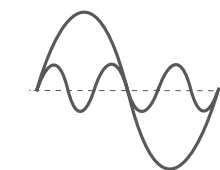
Monitor limit values of measured variables, consumption data, residual currents and device communication. Escalation levels for needs-based alerting via email and web interface.

VISUALIZATION & DOCUMENTATION



Visualization according to your needs. Create dashboards quickly and easily without programming knowledge and use the report editor for customized reports.

NETWORK ANALYSIS & EVALUATION



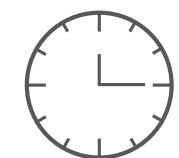
Analyze and evaluate measurement data. Use numerous tools such as statistics, charts, heat-maps, Sankey diagrams and Key Performance Indicators.

CONNECTIVITY



Whether OPC UA, REST API or CSV. We offer many options for data import & export as well as data access. An open and future-proof system.

AUTOMATION



Automation functions for time-controlled task management. Plan data imports, report generation or device readouts and create shift schedules.

HIGHLIGHTS

The highlight of GridVis® 8 is the new report editor, which you can use to prepare your measurement data in reports customized according to your requirements. In addition, we have optimized existing elements, such as the graph function, so that you can derive far easier even more information from your data.



Customizing reports

The GridVis® report editor enables reports to be customized, archived and output as PDF. Integrate images and logos and use various objects, for example, diagrams, to visualize measured values directly. New in GridVis® reporting: Data exports, such as meter reading cycle or utilization reports are now also available in the Web version.



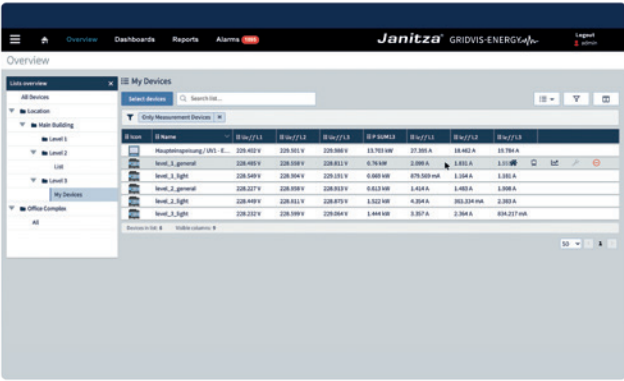
Analyzing correlations

The Event Browser enables you to access voltage and current events directly. Events that occurred within a selected period of time can be clearly displayed and analyzed directly with one click. You can use the search and filter function to find specific event types or measurement points. The integrated ITI (CBEMA) curve can be used to obtain a valid evaluation.



Graph function for quick value analysis

The online graph function provides direct access to all measured and energy values. Scaling, color and other settings are variable. Compare different measurement sites directly with each other, thanks to the option of pinning on measurement data. Alternatively, aggregate measured and energy values to quickly and easily display daily, monthly and annual values.



Creating your own device overview

Create your own lists of measurement points in the device overview and access it directly. The lists can include information and device details, such as IP address and firmware version. Current measured values of a device can also be displayed. Measurement points can be easily found using the filter and search function. The folder structure enables you to create lists, for example, according to the company structure.

OVERVIEW OF EDITIONS

The latest version of the functions per edition can be found on our website www.gridvis.com.

	GridVis® Essentials	GridVis® Standard	GridVis® Expert
SYSTEM FUNCTIONS			
Device configuration	•	•	•
Service	—	•	•
Logic	—	•	•
Automation	—	•	•
Online recorder	—	•	•
Database management	—	•	•
Device monitoring	—	•	•
User management	—	•	•
Active directory	—	—	•
Alarm management	—	—	•
VISUALIZATION			
Graph function	•	•	•
Device overview	•	•	•
Event browser	•	•	•
Dashboards & templates	—	•	•
Widget basic package	—	•	•
Widget enhancement	—	—	•
Sankey diagram	—	—	•
Key performance indicators (KPI)	—	—	•
DOCUMENTATION			
Basic data exports	•	•	•
RCM data exports	•	•	•
PQ data exports	—	•	•
EnMS data exports	—	•	•
Report editor	—	—	•
CONNECTIVITY			
CSV data import	—	•	•
MSCONS data import	—	•	•
REST API	—	•	•
Modbus devices from third party suppliers	—	—	•
OPC UA Client	—	—	•
Comtrade data exports	—	—	•
MSCONS data export	—	—	•



ESSENTIALS EDITION

FUNCTIONS OF THE ENTRY-LEVEL MODEL

The free GridVis® Essentials offers basic functions for the configuration of Janitza energy measurement devices as well as a graph function for the visualization of current and historical measured values. In addition, a tool for evaluating events and transients is included. Simple standard reports, such as the EN 50160 evaluation or CSV/XLS data exports as well as reports for Residual Current Measurement (RCM) are provided.

SYSTEM FUNCTIONS

Device configuration

Configure your measurement devices using numerous setting and parametrization options.

VISUALIZATION

Event browser

Events and transients can be analyzed easily and in detail using graphs, the CBEMA curve and statistics.

Device overview

Overview of all meters as well as a search and filter function.

DOCUMENTATION

Basic data export

CSV exports and various reports (Commissioning report, Energy report and EN 50160 report)

RCM data exports

The RCM report allows clear and straightforward display of measurement data from Residual Current Measurements.

GridVis®
Essentials
Entry-level

GridVis®
Standard
Enhanced

GridVis®
Expert
Full-range

The latest version of the functions per edition can be found on our website www.gridvis.com.

STANDARD EDITION

ADDITIONAL FUNCTIONS AND VISUALIZATION OPTIONS

In addition to the basic functions of the Essentials edition, GridVis® Standard offers advanced data visualization options. Extensive system functions facilitate data management, create a quick overview and simplify processes. Data exports in the form of various reports leaven evaluation. The data import function enables the import of external data such as turnover or quantities into GridVis®.

SYSTEM FUNCTIONS

Logic

Logical links and operations e.g. to create cost centers or virtual measurement points.

Automation & monitoring

Data export and tariff management, notifications in the event of faulty device communication. Online recorder for logging data.

Databases & users

Use database actions and MSSQL/MySQL drivers. The user management allows roles and permissions to be set up.

VISUALIZATION

Widget basic package

Create dashboards and add visual features such as charts and live values

CONNECTIVITY

Data import

Data imports from CSV or MSCONS files.

REST API

Interface for developers and application engineers.

DOCUMENTATION

Basic data export

CSV exports and various reports, such as the Commissioning report or the Energy report.

RCM & EnMS data export

RCM report for clear presentation of the measurement data. For energy management, the Utilization report and the Energy bill are available.

PQ data export

Data exports for assessing power quality, such as the High availability report, the LET report or the EN 50160 annual evaluation.

The latest version of the functions per edition can be found on our website www.gridvis.com.

EXPERT EDITION

ENHANCED FUNCTION RANGE BASED ON GridVis® STANDARD

GridVis® Expert provides the full range of GridVis® functions. This includes additional visualization options, system functions and optimal adaptation to your needs. You can create Key Performance Indicators as well as energy flow diagrams and combine them clearly. Your data can be imported securely and easily with the OPC UA Client. In addition, third-party devices can be integrated via Modbus/TCP or Modbus/RTU. Furthermore, other protocols and interfaces are also supported by the software. This means GridVis® Expert enables optimal processing of your data.



Visualization of a quantity flow diagram (Sankey), a heatmap and a KPI evaluation

The latest version of the functions per edition can be found on our website www.gridvis.com.

SYSTEM FUNCTIONS

- Active Directory**
Connection to a central Windows user management via LDAP protocol is possible.
- Alarm management**
Monitoring of data and communication as well as alerting via different channels; logbook and escalation levels included.

VISUALIZATION

- Widget enhancement**
Additional useful visual functions that can be placed on dashboards, such as heat maps, Sankey diagrams and key figures.
- Sankey diagram**
Creation of energy flow diagrams. Visual representation of energy consumption based on historical values and live values.
- Key Performance Indicators (KPI)**
Creation and evaluation of Key Performance Indicators. Recognize changes and improvements in the energetic baseline (EnB).

DOCUMENTATION

- Report editor**
Create reports according to your own preferences, archive them within the software and download them as PDFs.
- RCM & EnMS data export**
RCM report for clear presentation of the measurement data. For energy management, the Utilization report and the Energy bill are available.
- Basic and PQ Data export**
CSV exports and basic exports, such as the Commissioning report. Evaluation of Power quality, for example, through the High availability report or the EN 50160 annual evaluation.

CONNECTIVITY

- Modbus third-party devices**
Integrate third-party devices via Modbus/TCP or Modbus/RTU (RS485).
- OPC UA Client**
Integration of OPC UA servers to access their data.
- Comtrade & MSCONS data export**
Events and transients can be stored in the Comtrade format, consumption data in the MSCONS format.

CUSTOMIZING REPORTS



THE NEW GridVis® REPORTING

Create reports and overviews directly in the GridVis® without detours via other programs. The report editor of GridVis® enables you to visually prepare your measurement data, print it or save it as a PDF. Various objects are available for visualization, such as image elements in order to include your logo or text elements to add additional information. The measurement data can be displayed via various charts and can be flexibly adapted to your requirements. The elements are integrated according to the drag & drop principle.

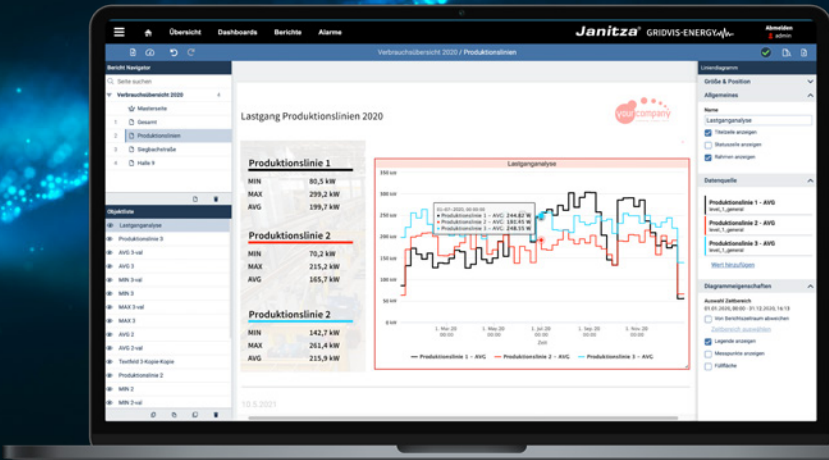
The side view corresponds to the output in digital (PDF) and printed form.

New in reporting: GridVis® data exports, such as the Meter reading cycle report or the Commissioning report, can be accessed in the GridVis® Web application. All executed data exports (whether manual or automated) are stored in a versioned order in the GridVis® database and are available there as a PDF or XLS file.

OVERVIEW

- Easy operation via drag & drop
- Complete design freedom for reports
- Create layouts for recurring reports
- Save all relevant data in PDF format or print it directly
- Define analysis periods easily and flexibly
- Data exports/reports always available in the Web application

REPORT EDITOR



CUSTOMIZED DESIGN

Adapt the design & appearance of the reports to your own CI. Regardless of whether charts, text fields or images are involved, you can drag & drop individual elements on the pages and position them freely. Include logos and important information. The side view corresponds to the output in digital (PDF) and printed form. The object list also simplifies working with several elements.

SAVING TIME VIA TEMPLATES

Save yourself time and work. Create **master pages** to include elements such as your logo or a date with a fixed position on each report page. Thus, you benefit from a consistent design, regardless of how many pages are included in your report.

Create **layout pages** that apply to several report pages in order to display data with the same design.

DOCUMENTATION

You can save your reports as PDF, print them directly or store them in the GridVis® archive. This makes it easier to distribute and store them.

AROUND THE CLOCK

The standard data exports, such as the Commissioning report, Utilization report or High availability report, are available in the GridVis® Web application. Thus, you always have access to the important reports and information.

PERFECTLY PREPARED MEASUREMENT DATA

Configure individual elements, for example, charts, exactly according to your requirements. You can directly select the meters, measured values and time periods and adapt the display, such as size or colors, to your needs. In addition, captions can be created for individual objects and graphs.

ONLY TWO STEPS TO YOUR OWN GridVis®

1. SELECT THE GridVis® EDITION

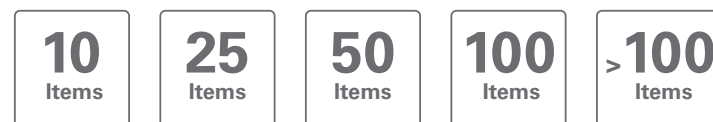


In Essentials, the number of items is unlimited, so the following steps are not necessary.

2. SELECT THE BASIC PACKAGE

Basic packages are available in different sizes, depending on the number of items required. Each basic package includes an update period of one year. You can obtain the latest release at any time within the update period.

GridVis® can continue to be used after the update period has expired; in this case updates are no longer possible.



What are items?

Items are devices, users and data imports created in GridVis®.

Devices
(meters, 801 modules)
*Virtual devices
do not consume any items*



Users
(created users)



Data imports
(OPC, CSV, MSCONS groups)



One meter is equivalent to one item, regardless of how many data points are collected by that meter. The UMG 801 modules are also counted as separate items, which does not apply to the modules of other devices. The

number of your items can be increased at any time. An item enhancement enables you to cost-effectively increase your project size.

OPTIONS, UPGRADES AND EXPANSIONS

Extend update period (available for Standard and Expert):

If you wish to continue to receive updates after your update period has expired, you can purchase a 1 or 3 year extension of the update period at any time. You can also choose between different package sizes (see basic packages). The new packages are balanced based on your existing items and previous expiring date.

Not a day goes missing!



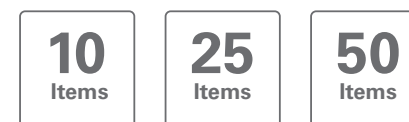
Upgrade to GridVis® Expert (available for Standard):

With the upgrade, the range of functions of GridVis® Standard can be increased to the range of functions of GridVis® Expert. You can upgrade at any time, and the upgrade period is automatically extended by 12 months.

Please note that the upgrade also depends on the number of items. This must be greater than or equal to the current number of items used.

Item enhancement (available for Standard and Expert):

The basic packages can be enhanced with item packages. These enhancements might be ordered several times and can be combined with each other.



Calculation example – this is how the required items are calculated

Meters	50
Modules	10
GridVis® users	2
Data import	1
One data import can contain up to 50 variables or measured values per group	
Total items	63
Item packages required	50 + 25 = 75
Items still available	12

GridVis®

MULTIPROTOCOL SERVER

INCREASE YOUR CONNECTIVITY

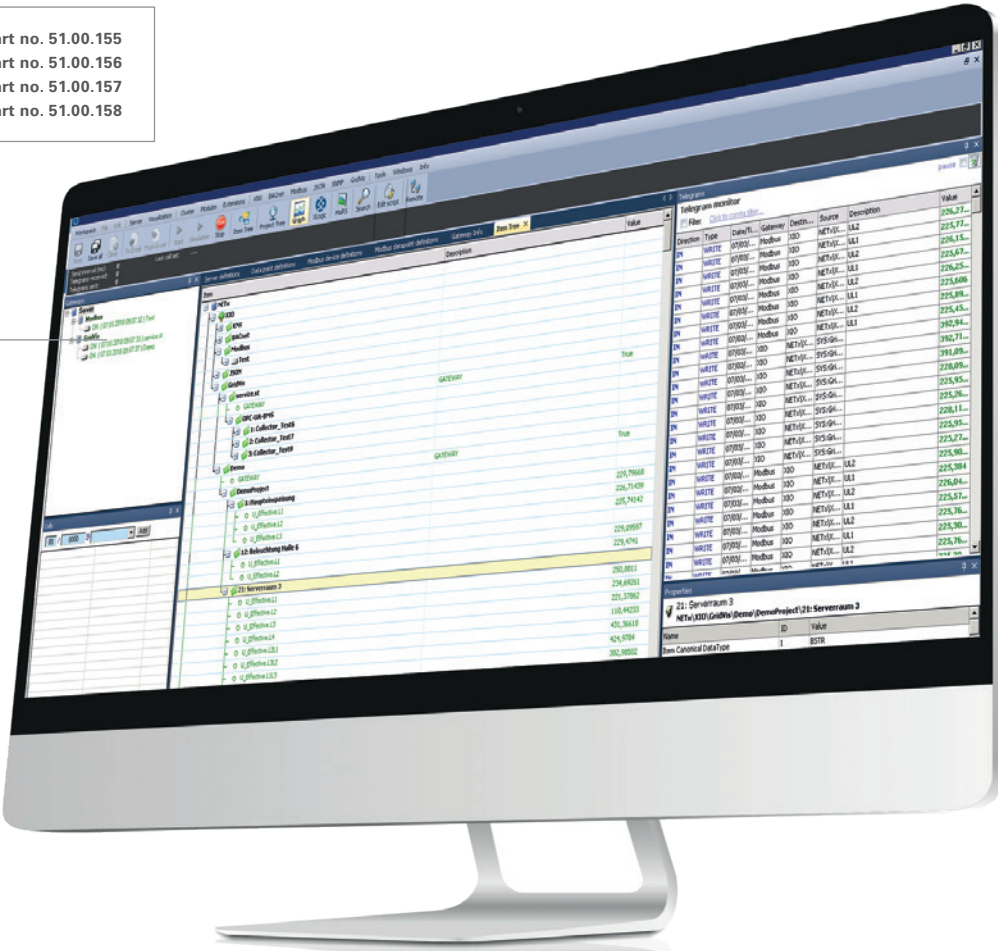
Extend the connectivity of GridVis® with the multi-protocol server (MPS) from NETxAutomation and use the option of providing measurement data at OPC UA level. The multi-protocol server from NETxAutomation, with an integrated GridVis® driver, is available exclusively from Janitza and can be used in addition to the OPC UA Client.

The server enables direct access to measurement data and Key Performance Indicators of GridVis®. Clear advantages of the integrated driver include the little setup effort required and the high availability of all measurement data. In addition, the complete GridVis® meter structure is available directly in the OPC UA tree. The embedment of several GridVis® projects is also supported. OPC UA Clients, in-

cluding the GridVis® OPC UA Client, Building Management Systems, SCADA systems, ERP systems and many more are processing online data of GridVis®. In addition to the direct GridVis® connection, the multiprotocol server offers KNX, BACnet, Modbus, SNMP, OPC, MQTT as well as logic functions that are already included in the scope. The Janitza specialists are well-trained to support you in the installation and commissioning of the server upon request.

Note: The multiprotocol server is a stand-alone application and can be purchased in addition to GridVis®. Billing is based on required data points. We will be delighted to provide you with a customized offer.

Multiprotocol Server 1000	Part no. 51.00.155
Multiprotocol Server 2500	Part no. 51.00.156
Multiprotocol Server 5000	Part no. 51.00.157
Multiprotocol Server 10000	Part no. 51.00.158



GridVis® COLLECTOR

MOBILE DATA EXPORT

As a mobile unit, the GridVis® Collector provides the option of reading measurement data from Janitza meters without an on-site communication link. This data can be compared and evaluated with other measurement points in a project. With a battery life of up to 9 hours, the GridVis® Collectors manage up to 500 meters. The handling is easy to understand and can be performed in a few simple steps by an electrician.

The measurement data is afterwards synchronized with a locally installed GridVis® via Ethernet or WLAN.

The GridVis® Collector provides the ideal solution for collecting measurement data in distribution stations or other self-supporting electrical distributions that have no radio or network link.

GridVis® LICENSE MANAGEMENT

You can conveniently register your GridVis® power grid monitoring software online. This is carried out using the new Janitza license management feature (Janitza ID). You can register free of charge at <https://id.janitza.de>. Licenses and extensions can be added via license key using the Janitza ID server. The license overview outlines your licenses – those still available as well as already used items. Licenses

can be used on a project-specific basis so that a project can be used on both the GridVis® desktop and the GridVis® web with no need for re-activation. Several projects can be managed and licensed within one company with only one ID. The security of your data is ensured using SSL encryption and a signature between GridVis® and the ID server.

Janitza electronics GmbH
Vor dem Polstück 6 | 35633 Lahnau
Germany

Phone: +49 6441 9642-0
info@janitza.com | www.janitza.com

Sales partner

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The latest version of the brochure is available at www.janitza.com.