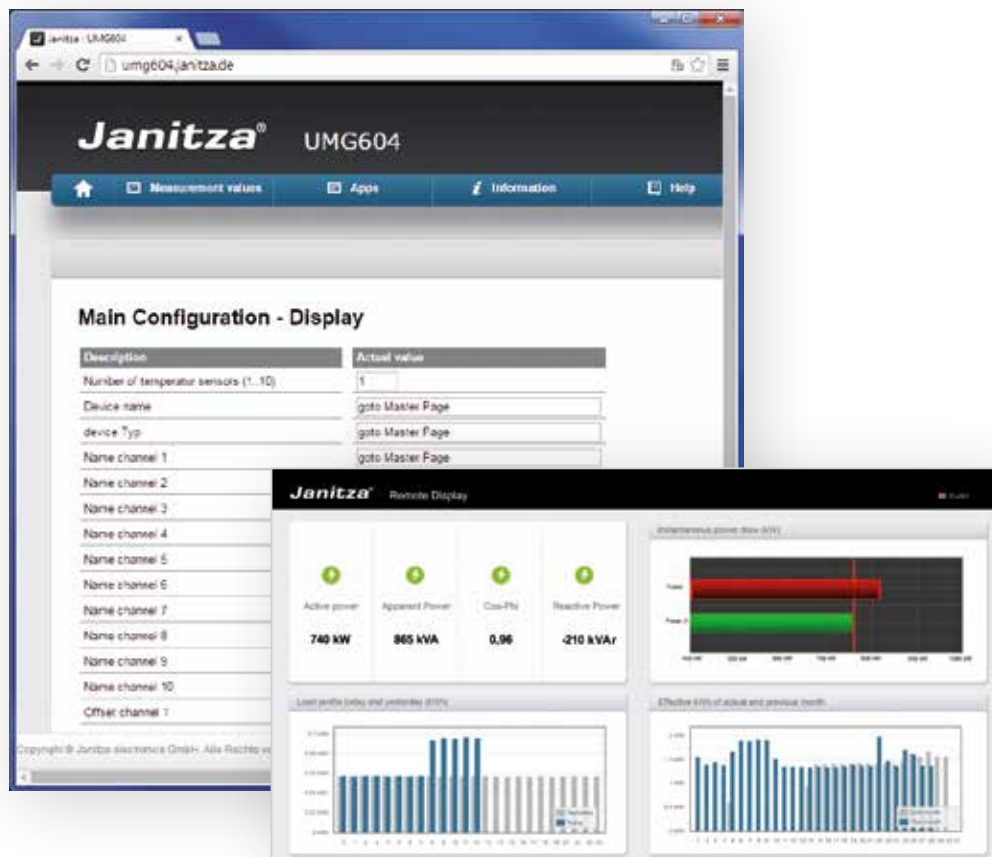# APPs –

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® Power Grid Monitoring 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 509 / UMG 512 and PRO series	**51.00.209**
EN 50160 Watchdog[*2] Integrated "Watchdog"-function for continuous monitoring per EN 50160	UMG 605 / 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 509 / UMG 512 and 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 509 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 509 / UMG 512 and PRO series	**15.06.337**
IEC61000-2-4 Watchdog[*2] Integrated "Watchdog"-function for continuous monitoring per IEC 61000-2-4	UMG 605 / 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 509 / 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 509 / UMG 512 and PRO series	**51.00.207**
Push Service[*2] Sending data directly from the measurement device to a server without any additional software with 10 slave devices	UMG 604 / UMG 605 / UMG 509 / 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] Sending data directly from the measurement device to a server without any additional software For UMG 20CM queries over: UMG 604 / UMG 605 / UMG 509 / UMG 512 and PRO series	UMG 604 / UMG 605 / UMG 509 / UMG 512 and PRO series	**51.00.285**
RCM analysis Extensive options for setting limit values and analysing fault currents in detail. Up to 20RCM channels can be managed and evaluated via a gateway. The evaluation covers all types of residual current with an associated frequency analysis. In addition, the application enables the proven dynamic limit value formation with Janitza energy measuring devices.	UMG 604-PRO / UMG 605-PRO / UMG 509-PRO / UMG 512-PRO	**51.00.312**
SNMP[*2] Threshold monitoring with alarm function (SNMP-Trap)	UMG 604 / UMG 605 / UMG 509 / 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

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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 509 / 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 509 / 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 509 / UMG 512 and PRO series

Fig.: Humidity / temperature sensor JFTF -I

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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 and UMG 512
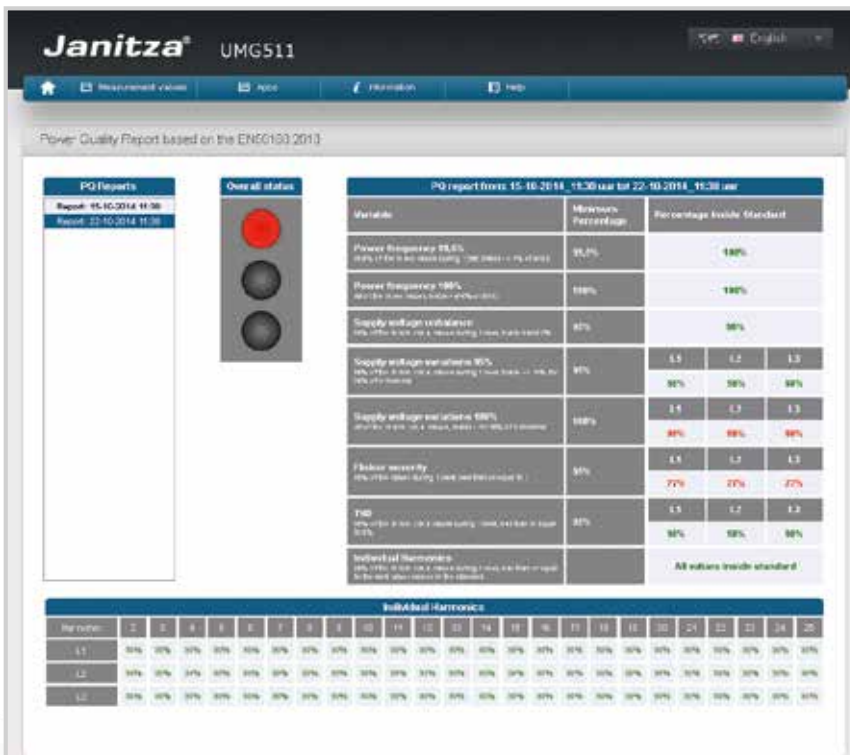**Item no. 51.00.305 suitable for:** UMG605-PRO and UMG 512-PRO

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

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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 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

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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 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 509 / 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

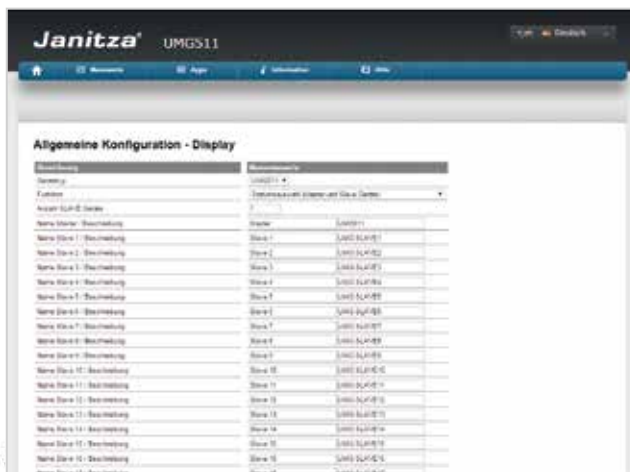Fig.: Display of measured values for an individual slave device

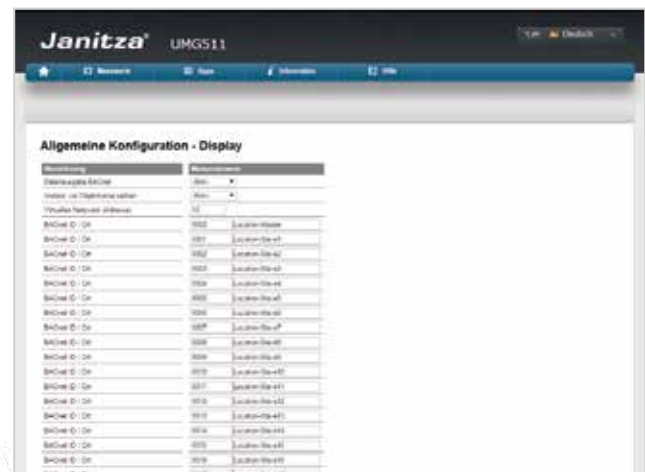Fig.: General configuration of the monitoring master/slave devices

Fig.: General BACnet configuration

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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 509 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 509 / UMG 512 and PRO series

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

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

Janitza®

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 509-PRO and UMG 512-PRO)
- UMG 96RM-EL with integrated Push App function is supported
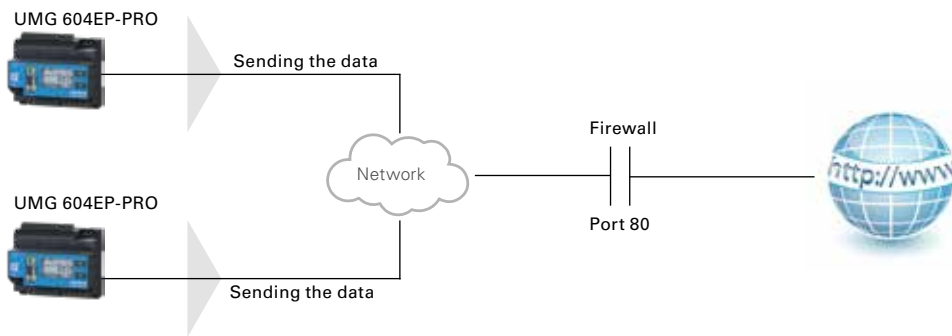- Prodata and UMG 20CM – only via Jasic®-capable devices

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

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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 509 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

Server Apikey for identifying the sender

Setting of transmission buffer and transmission interval

Server IP address

Selection of the measured values to be transmitted. Only measured values that were previously configured in the measurement device will be displayed

Fig.: Convenient configuration of the APP Push Service 2.0

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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 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

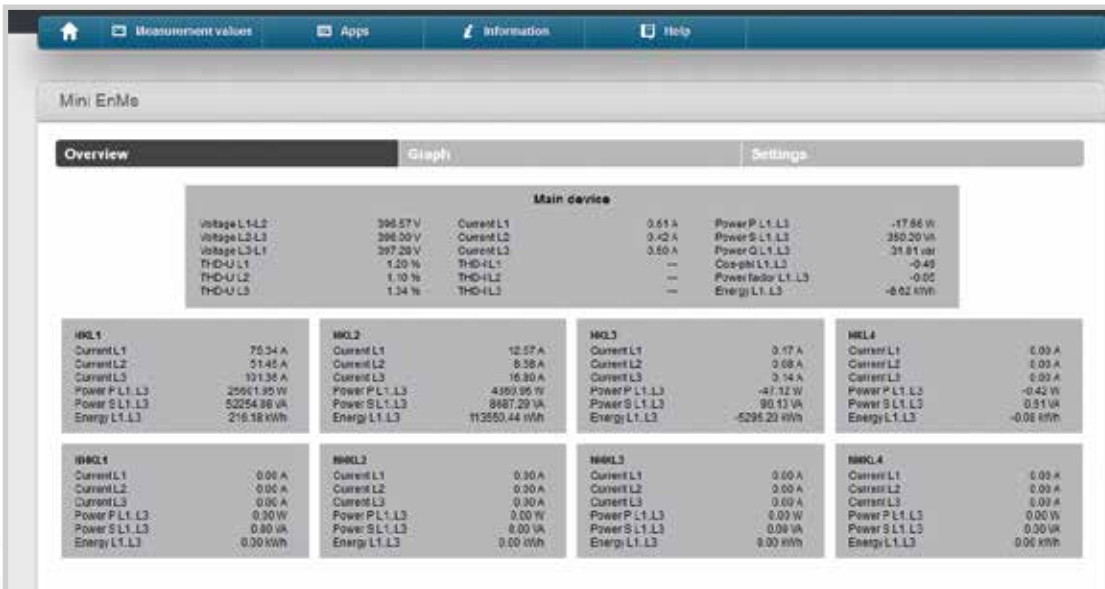**Suitable for:** UMG 604 / UMG 605 / UMG 509 / UMG 512 and PRO series

Fig.: APP Mini EnMS

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APP RCM analysis **Item no. 51.00.312**

- APP with extensive options for setting limit values and analysing fault currents in detail
- Up to 20 RCM channels can be managed and evaluated via a gateway
- The evaluation covers all types of residual current with an associated frequency analysis
- For example, 50 Hz, pure DC or high-frequency residual currents in the 20 kHz range can be displayed individually
- In addition, the application enables the proven dynamic limit value formation with Janitza energy measuring devices
- Energy measuring devices can be assigned to each of the 20 RCM channels and limit values can be calculated as a function of power

Janitza®