



Janitza Introduction: EnMS+RCM+PQ-Monitoring

Who is Janitza electronics?

Janitza®

Janitza a family owned enterprise in the second generation (founded 1961), with the focal point on development and production of **energy efficiency solutions**.

- High level of innovation:
GridVis-Energy, UMG 104/604/605, UMG 509/512, UMG 96RM, ProData II
- Energy management: holistic solutions out of one hand
- Product and application-know how of a market leader












2011: 50th - Years Aniversary



Who is Janitza electronics?

-  1961: Founding of „Eugen Janitza GmbH“.
-  1986: Founding of “Janitza electronics GmbH” with focus on development and production of energy measuring devices and software.
-  1996: Certification according DIN EN 9001
-  Today: one of the leading manufacturer of energy measuring devices
-  Solutions for energy management (ISO 50001) and power quality (EN 61000-4-30 / EN 50160)
-  Approx. 100 employees in Lahnau for development, production, sales, service, marketing and management
-  20 out of 30 German stock index DAX-enterprises are using Janitza products. The export share is approx. 40% in more than 60 countries world wide.

Worldwide Projects and Local Support

Janitza®





MEG – Mitteldeutsche Erfrischungsgetränke
Project Manager: T. Wagner



MEG Weißenfels

Introduction of an EMS

- ✓ For all sites (actually 8):
 - ✓ Weißenfeld (HQs)
 - ✓ Himmelsberger Mineralbrunnen
 - ✓ Leislinger Mineralbrunnen
 - ✓ Rossbacher Kunststoffverarbeitung
 - ✓ Pfälzer Erfrischungsgetränke
 - ✓ Kirkler Erfrischungsgetränke
 - ✓ Weser EMS Erfrischungsgetränke
 - ✓ Solent Schokolade
 - ✓ Bonack Feine Backwaren



Total: 1.045 UMGs

- ✓ UMG 511, UMG 604, UMG 104, UMG 103, ProData, RESI Mbus to Modbus Gateway



Requirements to the system

- ✓ Monitoring and supervision of the Power Quality
- ✓ Recording of all energy data





Zeiss Oberkochen – Enterprise wide EnMS Project Manager: H. Dietz



HQs Oberkochen



Factory Wetzlar

Total: 495 UMGs

- ✓ Introduction of an EMS for the HQ in Oberkochen and the Wetzlar site



UMG 96RM 469 pcs

- ✓ UMG 96RM (349 pcs) & UMG 96RM-M (120 pcs) for Energy data recording



UMG 511 1 pcs UMG 508 25 pcs

- ✓ Energy management system and PQ supervision



Combined PQ-Solution

- ✓ Monitoring and supervision of all energy data and power quality information





Technikcenter DFS Campus Langen 2013
Project Manager: G. Fritzen



Total: 882 UMGs

- ✓ German air aviation
New data centre and technic center



UMG 511 61 pcs

- ✓ Primary and secondary supply
plus important key knots



UMG 96RM-E 81 pcs

- ✓ Monitoring of sub-distribution
branches



UMG 604E 28 pcs UMG 103 712 pcs

- ✓ IT-Subdistribution and current bus
bars for A/B-System





T-Systems Cloud-RZ Magdeburg und Biere 2013
Project Manager: G. Fritzen



Total: 810 UMGs

✓ Cloud data center of T-Systems



UMG 507E 50 pcs

✓ Primary – and secondary supply



UMG 96RM-E 760 pcs

✓ Feeders of main distribution panels



Maximum Extension

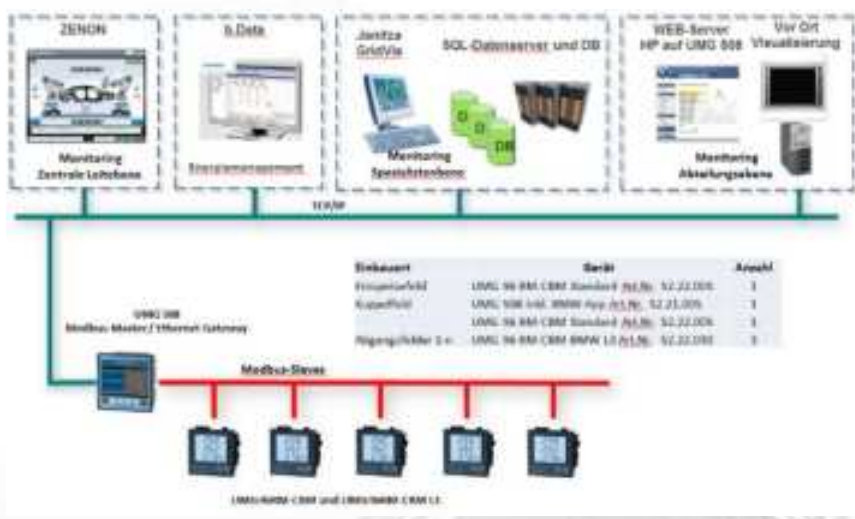
✓ Actually with first extension phase 1 „only“ 5.400 m² realized



✓ In total with all phases: 150.000 m²



BMW – Trafostationen / Hauptverteilungen (S-Stationen)
Project Manager: J. Beier



Energie- und Netzqualitätsüberwachung

- Total: 2.903 UMGs**
 - ✓ BMW (alle German sites) Potential 2014 + 2015 add. 2.000 pcs
- UMG 508 416 pcs**
 - ✓ Coupler field
- UMG 96RM-CBM L3 1.657 pcs**
 - ✓ Feeder fields 1-phase measurement
- UMG 96RM-CBM 830 pcs**
 - ✓ Supply



Qatar Petroleum
Project Manager: G. Kutschki



Total: > 900 UMGs

- ✓ UMG 96RM-CBM und UMG 508



Requirements to the System

- ✓ Monitoring of the Power Quality and cost centre management
- ✓ Open interface of the measurement data to a superordinate SCADA-Software



Nile Cornich Project (Cairo)
Project Manager: G. Kutschki



Total: > 900 UMGs

- ✓ Project is ongoing 2013 and 2014



UMG 511 incl. BACnet 22 pcs

- ✓ UMG 511 with BACnet for Power Quality Monitoring



UMG 96RM 285 pcs

- ✓ Cost centre management for appartements, offices, and shopping malls



UMG 96RM-CBM 617 pcs

- ✓ Monitoring and supervising of all energy data in appartements, offices, and shopping malls





Endesa (Spanien)
Project Manager: G. Kutschki



Total: 900 UMGs

- ✓ Endesa: Power Utility in Spain



UMG 605 900 pcs

- ✓ Power Quality Monitoring and interfacing superordinate software
- ✓ Enhancing supply reliability
- ✓ Reduction of downtimes





AGRAVIS

194 Sites (Agricultural)
Project start 2012: in Querfurt and
in Fürstenwalde



App. 5.000 UMG devices

UMG 604 as master devices
UMG 104P as slave devices
- Actually their are app. 100 devices installed
- Further sites are in planing stage
- Project end planed for 2015



ISO 50001

AGRAVAIS was our partner for GridVis
ISO 50001 Certification





EZB

European Centralbank
0,36 UMGs per employee



App. 900 UMGs

UMG 96RM-E-RCM in the sub-distribution panels

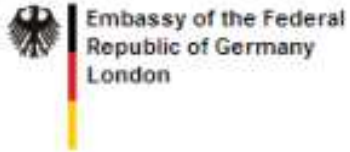


RCM-Monitoring



Projekt manager: G. Fritzen





German Embassies Worldwide



Introduction of an EMS

- ✓ For all sites:
- ✓



Total: ? UMGs

- ✓ 1x UMG 604, 1 x FBM,
2 x UMG 20CM per Embassy

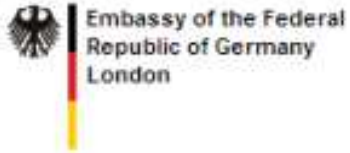


Requirements to the system

- ✓ Monitoring and supervision of the Power Quality
- ✓ Recording of all energy data

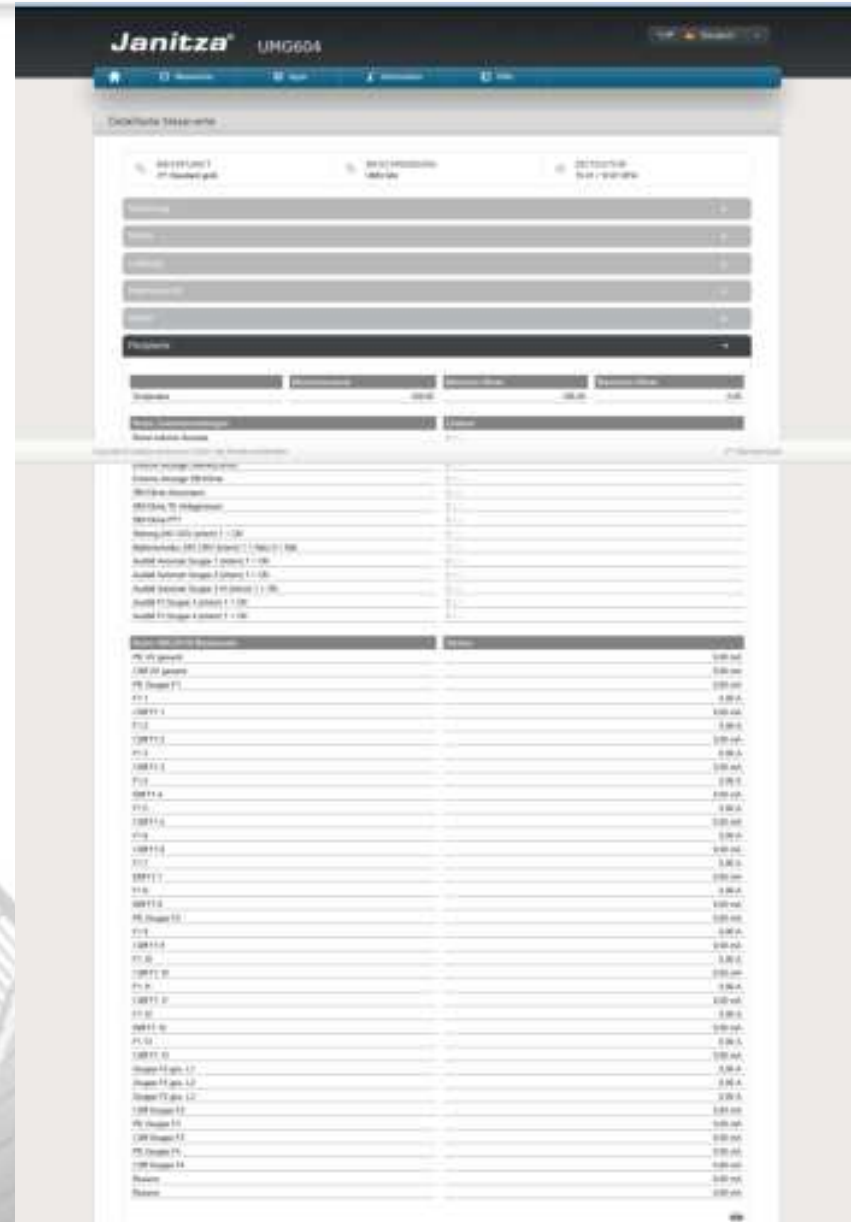


Major Reference Projects 2014



German Embassies Worldwide:

Visualizing of UMG 20 CM and FBM Modules via UMG 604 Homepage





Hermes Transportation



Introduction of an EMS

- ✓ For all sites:
 - ✓



Total: ... UMGs

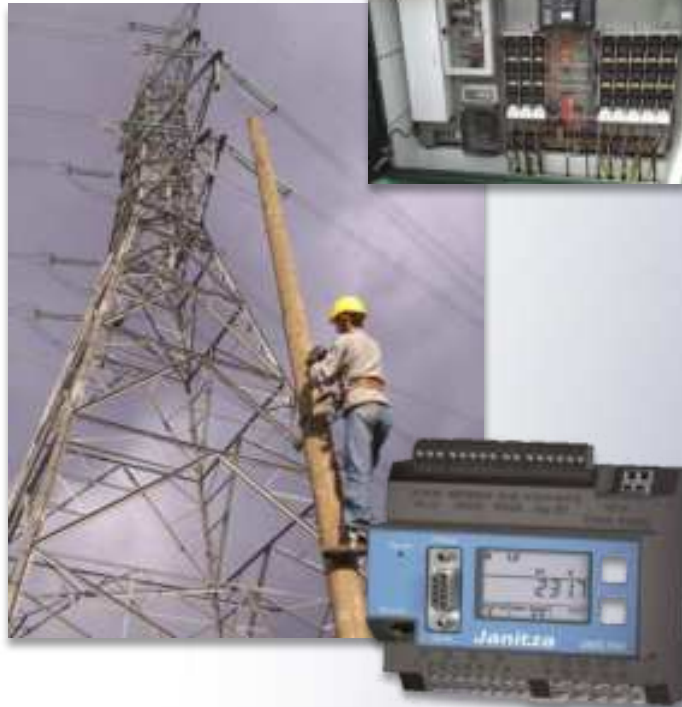
- ✓ UMG 511, UMG 604, UMG 104, UMG 103, ProData, RESI Mbus to Modbus Gateway



Requirements to the system

- ✓ Monitoring and supervision of the Power Quality
- ✓ Recording of all energy data





SEDAS

Power Utility Turkey



2.400 UMG devices

UMG 605
2012: 800 devices
2013: 1.600 devices

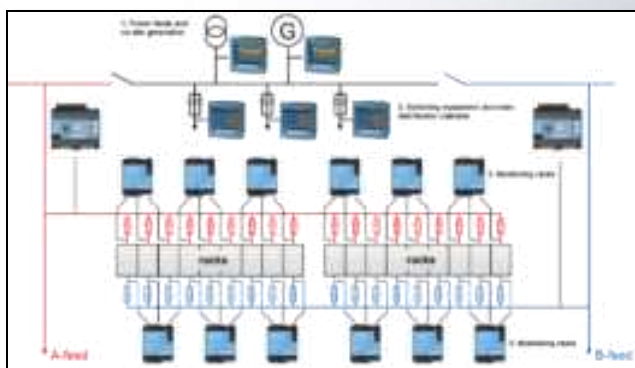


Power Quality EN 50160



Partner: EPKOM





Dutch Tax Departement



2.250 Messgeräte

- UMG 511: 150 pcs
- UMG 604: 100 pcs
- UMG 104: 2.000 pcs



Redundant protocols, data bases and Alarm tabells
Online Monitoring with e-control
Web-based Front-End-Application

Partner: forTop





Telecity Goup

Telecity datacenter AMS5



7.500 UMG Devices

UMG 511: 10
UMG 508: 60
UMG 507: 200
UMG 96S: 7.230 (app. 1.500 pcs in 2012;
5.730 in 2013/2014)



Redundant protocols, data bases and
Alarm tabells
Online Monitoring with e-control
Web-based Front-End-Application

Partner: forTop



- ✓ **Automobile Industry:** Audi, BMW, Mercedes, VW, ... 
- ✓ **Automobile Supplier:** Delphi Automotive System, Bosch , ... 
- ✓ **Banks:** Deutsche Bank, Commerzbank, Credit Suisse Basel, ... 
- ✓ **Chemical Industry:** BASF, Merck, Dow Chemical, Clariant (CH), ... 
- ✓ **Data Centers & Telecommunication:** IBM, KPN, British Telecom, ... 
- ✓ **Retailer:** Aldi, Edeka, Penny, Ikea, McDonalds, ... 
- ✓ **Power Utilities:** RWE; EON, Areva, ... 
- ✓ **Consumer electronic chains:** Media Markt, Saturn, ... 
- ✓ **Electrical wholesalers:** Sonepar, Hagemeyer, ... 
- ✓ **Semiconductors:** Advanced Micro Devices (AMD), Infineon, ... 

References

✓	Switch gear manuf. & panel builders: Siemens, GE, Areva, ...	
✓	Industry: Rittal, Buderus-Edelstahl, Leica Microsystems, Linde, ...	
✓	Infrastructure: Lufthansa-Systems-Infratec, Berlin Subway, Deutsche Bahn...	
✓	Institutes: Max-Planck-Institut, Fraunhofer, ...	
✓	Hospitals: Military Hospital Hamburg, Klinikum Düsseldorf, ...	
✓	Food Industry: Danone, Bauer, Lindt + Sprüngli, ...	
✓	Lighting Industry: Osram, Zumtobel, ...	
✓	Fair grounds: Messe Frankfurt, Messe Köln, ...	
✓	Truck Industry: MAN, Daimler AG, ...	
✓	Public: Police BKA Wiesbaden, German federal court ...	
✓	Pharmacies: Roche Pharma, Penzberg Pharma, ...	
✓	Broadcasting: ZDF, RTL, WDR, Pro7, ...	
✓	Solar- / Wind: SMA, Padcon, Enercon, SKET, ...	
✓	Insurances: Allianz, D.A.S., Münchener Rück., HUK, ...	

We are specialists for ...

Janitza®



Monitoring and Analysis of Power Quality



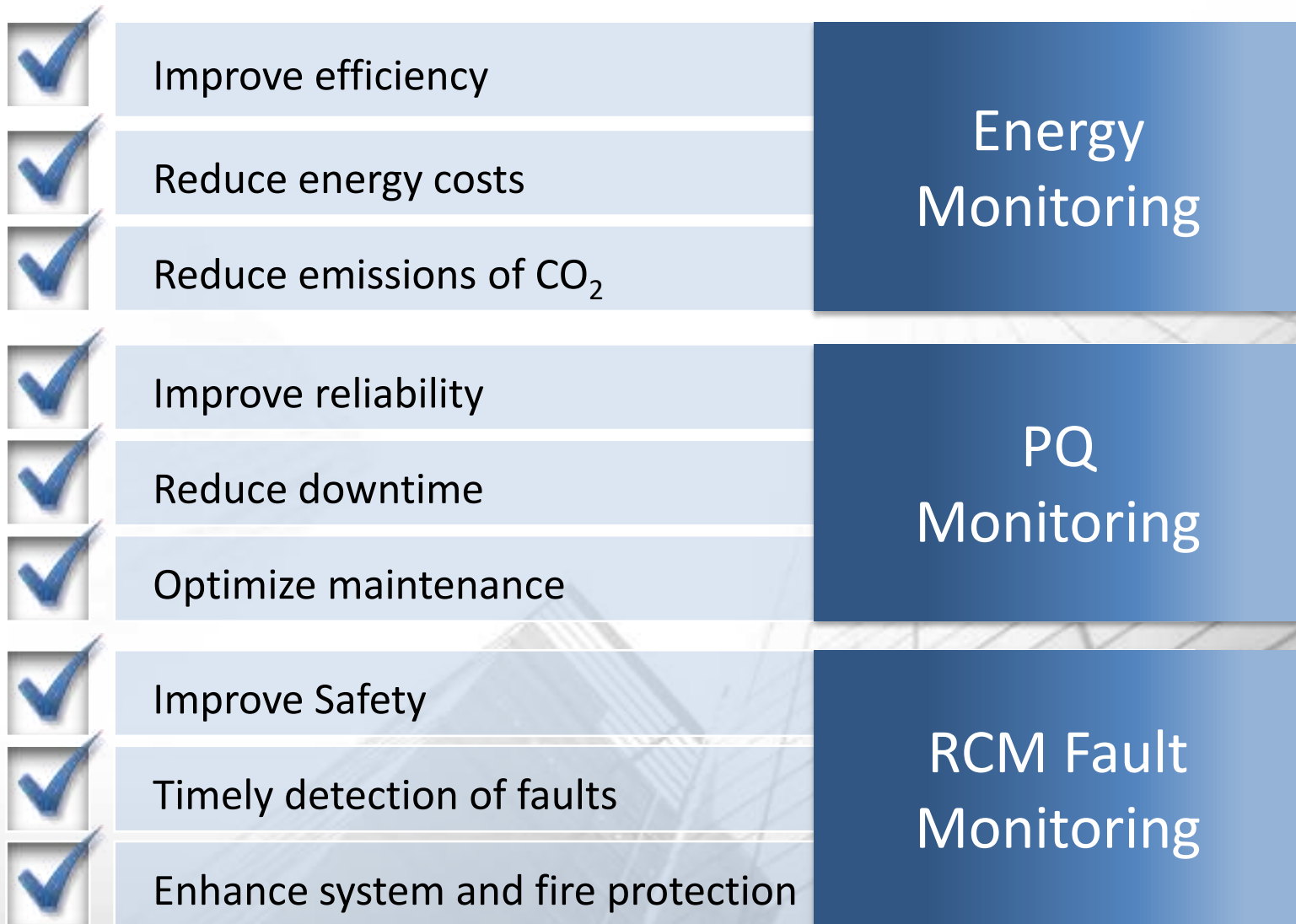
Energy Management- and Monitoring Systems



RCM Fault Current Monitoring



Peak Demand Management and Power Factor Correction Systems



Value of Energy Intelligence
What you cannot measure, you cannot manage!

“UMGs are key components in realizing ISO 50001!”



3in1

Janitza GridVis software, measurement devices and components unite 3 solutions - energy management, power quality monitoring and high electrical availability - within a common system environment.

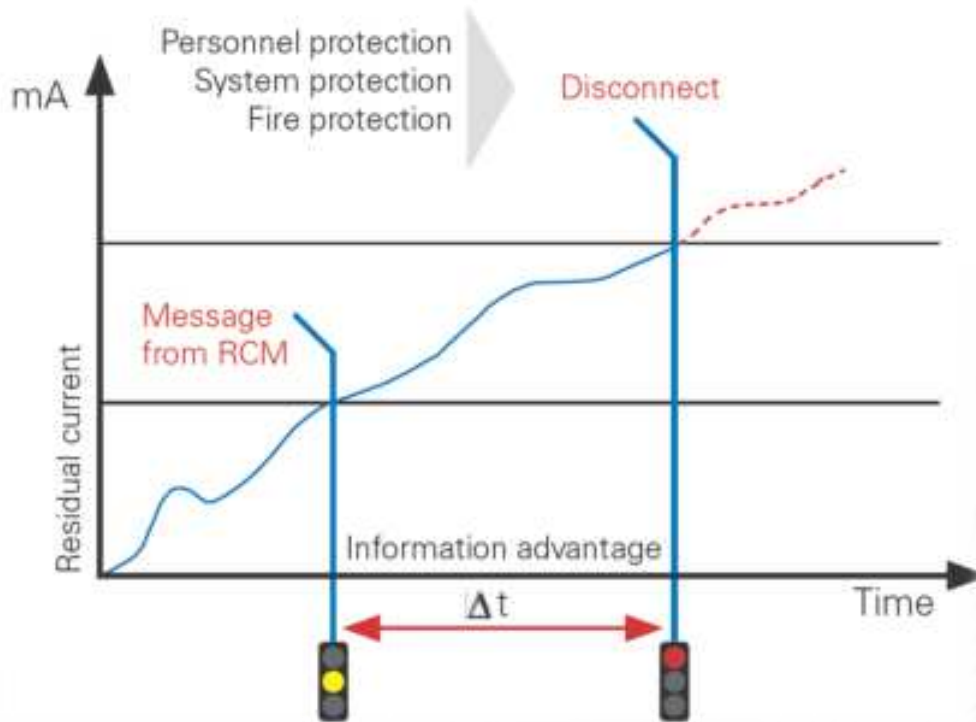
Energy data acquisition
(EnMS per ISO 50001)

RCM –
residual current monitoring

PQ – monitoring for the
optimisation of supply
security

3 solutions integrated into a single system

I.e.: On a certain measurement point only ONE meter is required instead of three units!



GridVis
Janitza®

NEUER ALARM

ALARM FELD	DESCRIPTION
Ereignis	14.11.2015 14:28
Aktualisiert	14.11.2015 14:28
Name des Alarms	Überspannung
Eskalationsstufe	0
Zeitpunkt der letzten Eskalation	
Quellort	Yes
Kommunikation zur Quellierung	
quellensender Bezeichnung	
Zurück zum Normalzustand	Yes

ALARM DETAILS

VfB GERÄT UMGEBL JANITZA ELECTRONICS GMBH

Spannung effektiv L2 (223,000 V) von 14.11.15 14:28:57178 bis effie

Copyright © Janitza electronics GmbH
14.11.2015 14:28

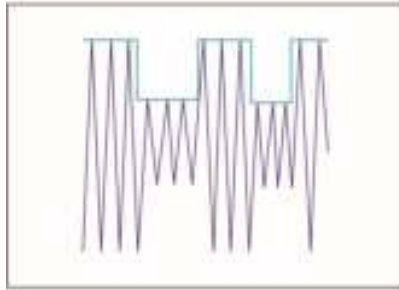
✓ Complete solutions for Energy management, Power Quality and RCM Monitoring



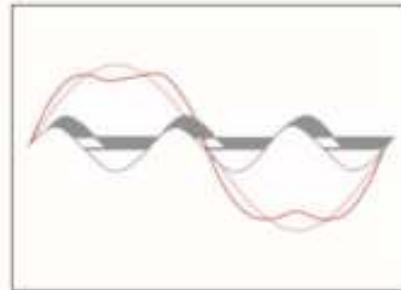
- ✓ EMS technology
- ✓ PQM technology
- ✓ RCM technology
- ✓ Flexible and scalable system architecture
- ✓ Recording of all media: such as electricity, gas, water, steam, ...
- ✓ Solutions for Communication and Software

Current, Voltage, Power, Active Energy, Reactive Energy, Power Factor, and much more ...

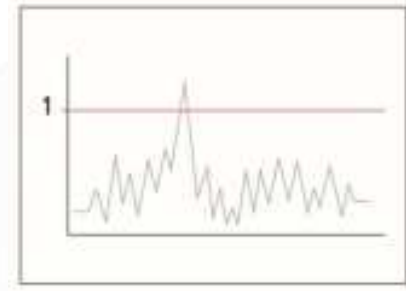
Voltage fluctuations



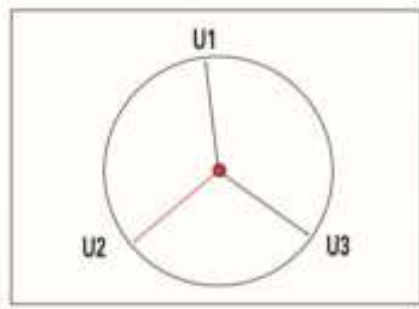
Harmonics



Flicker



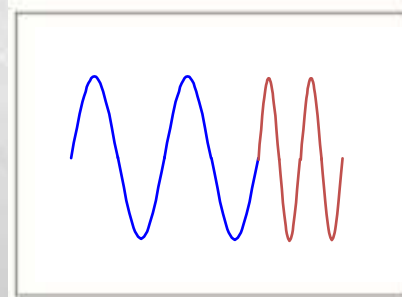
Unbalance



Transients



Frequency fluctuations





Description	GridVis				Energy-Portal	Energy-Expert
	Basic	Professional	Enterprise	Service		
Installations (Desktop)	1	3	5	5	-	-
Installations (Service / virtual Server)	0	0	0	2	-	1
Web-based (via Browser)	-	-	-	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Cloud Solution	-	-	-	-	<input checked="" type="checkbox"/>	-
Number of meters	5	not limited	not limited	not limited	50	not limited
Application	Setting up a monitoring system, graph display, basic analysis	Monitoring solution, basic analysis	Extensive analysis and reporting	Fully auto Monitoring solution	Easy energy data visualization	SCADA
Target customers	Smaller applications	Medium applications	Large enterprises	Large enterprises	Multiple sites, medium size applications	Large enterprises
Data pushing	-	-	-	-	<input checked="" type="checkbox"/>	-
Graphs	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Topology, Graphical user interface	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Data bases MS-SQL / MySQL	-	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Not required	<input checked="" type="checkbox"/>
Automatic reading	-	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Not required	<input checked="" type="checkbox"/>
Virtual device	-	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Planned (Q4)	<input checked="" type="checkbox"/>
User administration	-	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Planned (Q4)	<input checked="" type="checkbox"/>
Automatic Excel-Export	-	-	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	-	<input checked="" type="checkbox"/>
Automatic Reports	-	-	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Planned (Q4) per Email	<input checked="" type="checkbox"/>
Generic Modbus device	-	-	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	-	<input checked="" type="checkbox"/>
Online-recording (e.g. meter without memory)	-	-	-	<input checked="" type="checkbox"/>	-	<input checked="" type="checkbox"/>
Service	-	-	-	<input checked="" type="checkbox"/>	Not required	<input checked="" type="checkbox"/>
Alarm management	-	-	-	<input checked="" type="checkbox"/>	-	<input checked="" type="checkbox"/>
Rest Interface	-	-	-	<input checked="" type="checkbox"/>	-	-



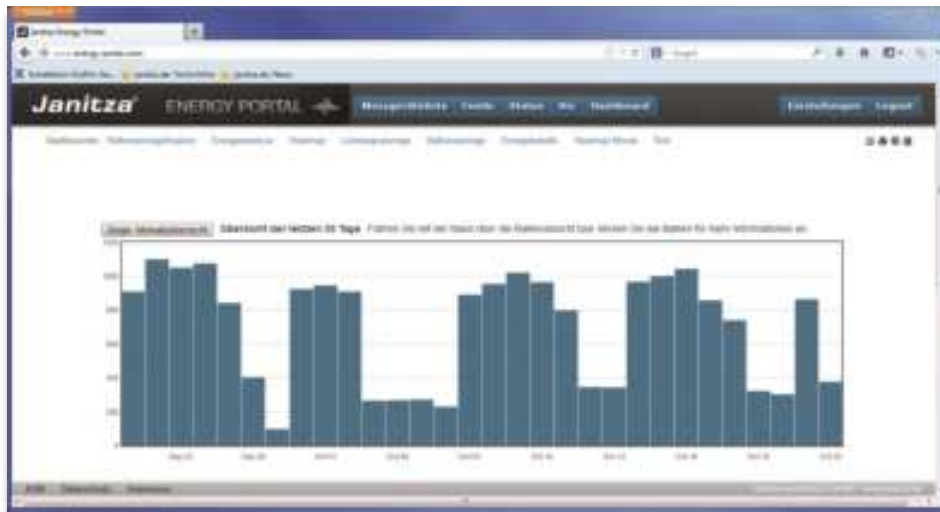
GridVis

- ✓ Grid Visualization Software
- ✓ License model: different versions with different features
- ✓ Instruments management
- ✓ Automatic or manual data download
- ✓ Recording of data in a data base incl. data base management (MySQL /MS SQL/Derby/JanDB)
- ✓ Graphical display of measured values
- ✓ Statistical analyzes
- ✓ Extensive export functions i.e. CSV-file
- ✓ Animated topology views
- ✓ Report generator
- ✓ ISO 50001-certified





www.energy-portal.com



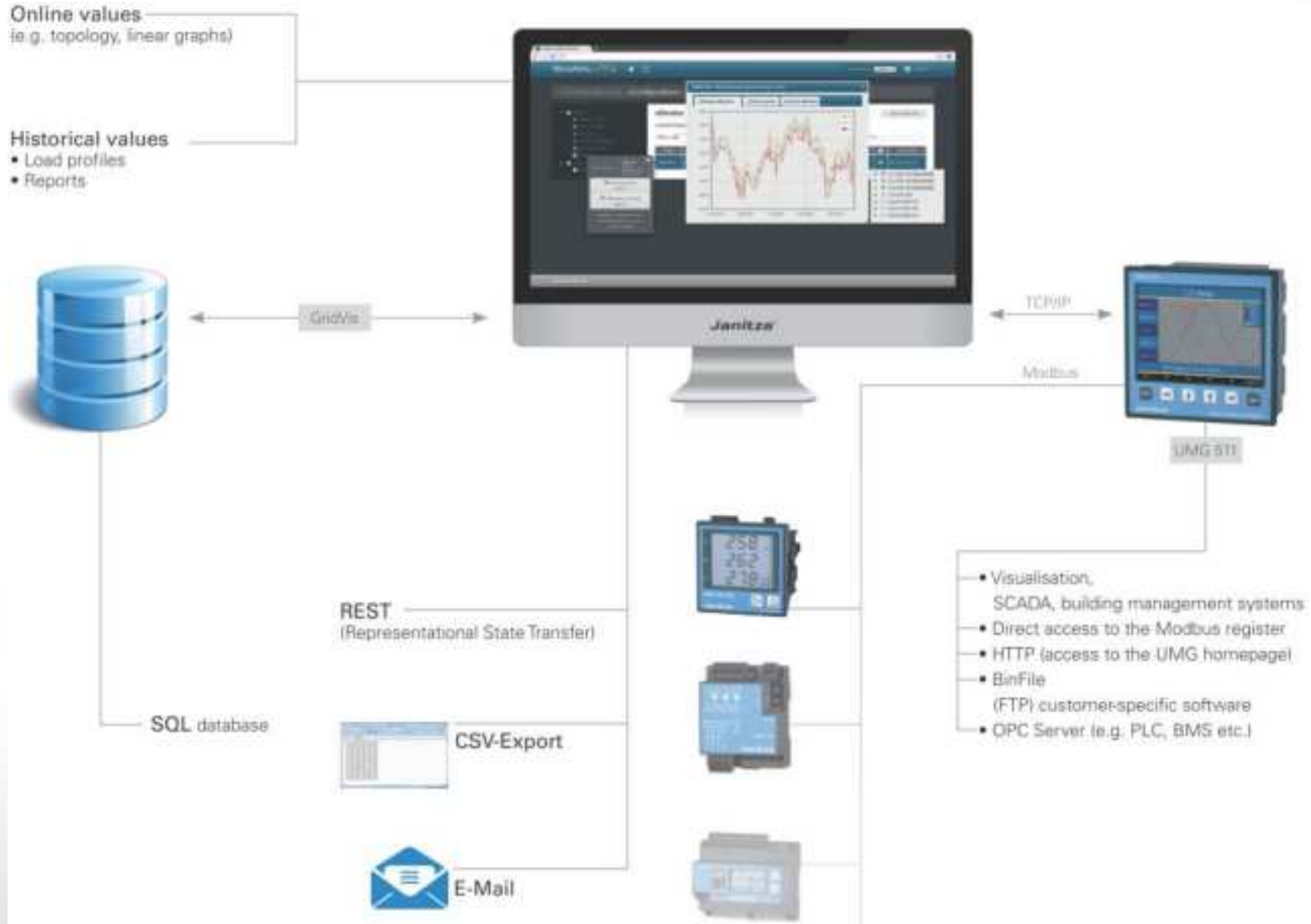


Be in control with SEMS!

- Connect across the globe
- Benchmark:
 - energy costs
 - downtime costs
- Share best practices



Open system architecture ...



We are specialists for ...

Janitza[®]



Monitoring and Analysis of Power Quality



Energy Management- and Monitoring Systems



RCM Fault Current Monitoring



Peak Demand Management and Power Factor Correction Systems



UMG 103

- ✓ Universal measuring instrument for DIN rail mounting without display
- ✓ 3 voltage- and 3 current inputs
- ✓ Continuous sampling rate of 5,4 kHz
- ✓ Measurement of harmonics up to the 40th harmonics for voltage and current
- ✓ High accuracy: active energy cl. 0,5S, voltage and current 0,2%
- ✓ Modbus-RS485-Interface





UMG 104

- ✓ Power analyzer for DIN rail mounting
- ✓ More than 800 different parameters
- ✓ 4 voltage- and 4 current inputs with a continuous sampling rate of 20 kHz
- ✓ Harmonics up to the 40th, THD U/I
- ✓ Modbus-RS485-Interface
- ✓ PROFibus interface
- ✓ Temperature input
- ✓ Memory(4 MB Flash)
- ✓ High accuracy: active energy cl. 0,5S, voltage and current 0,2%





UMG 20CM

- ✓ Operating current and RCM fault current
- ✓ 20 Current Inputs
- ✓ 4 Voltage Inputs
- ✓ Modbus-RS485-Interface up to 115200 baud
- ✓ 20 analysis LEDs – for each current channel one LED (green = ok, red = Threshold exceeded)
- ✓ High accuracy: Effective Energy 0,5%
Current and Voltage 0,5%
- ✓ RCM Monitoring 10mA – 1000mA
- ✓ Current inputs for max. 150mA, Operating current possible up to 300A
- ✓ Standard measurements: V, A, kW, kVA, kWh, PF
- ✓ Harmonics up to 63. for analysis channel
- ✓ Min and Max value for each channel with time stamp





UMG 604 and UMG 605

- ✓ Power analyzer for DIN rail mounting
- ✓ More than 800 different parameters
- ✓ 4 voltage- and 4 current inputs with a continuous sampling rate of 20 kHz
- ✓ Harmonics up to the 40. / 63. (604 / 605)
- ✓ Detection of short-term interruptions >20ms/10ms, Transients >50µs and Flicker (only UMG 605)
- ✓ Ethernet, BACnet, Modbus, Profibus, RS232, RS485
- ✓ Built-in Web server and e-mailing
- ✓ Integrated Modbus-Gateway for the connection of max. 31 slave devices (i.e. UMG 103)
- ✓ Expandable up to 7 user programs (graphical programming)
- ✓ Large memory(128 MB Flash)
- ✓ High accuracy: active energy cl. 0,5S, voltage and current 0,2%





UMG 96RM / -P / -M / -E / -CBM / -EL

- ✓ Compact and powerful multi-function meter for power measurement
- ✓ Harmonic up to the 40th
- ✓ LCD-Display with back light
- ✓ Profibus, Modbus, M-Bus, Ethernet, Bacnet ...
- ✓ 2 analogue inputs (UMG 96RM-E) for RCM-measurement or Temperature
- ✓ Webserver, E-Mail and SNMP (UMG 96RM-E)
- ✓ Large memory (256 MB) for -E, -CBM, -P
- ✓ High accuracy: active energy cl. 0,5S, voltage and current 0,2%
- ✓ Symmetrical components
- ✓ Ethernet version: Gateway functionality
- ✓ Wide range power supply for





UMG 508 und UMG 511

- ✓ PQ analyzer acc. EN 50160 and EN 61000-2-4
- ✓ More than 2000 different parameters
- ✓ 4 voltage- and 4 current inputs with a continuous sampling rate of 20 kHz
- ✓ Harmonics up to the 40. / 63. (508 / 511)
- ✓ THD, Flicker, short-term interruptions >20ms/10ms, Transients >50µs, unbalance, ...
- ✓ Incl. software GridVis-Basic with report generator for the EN 50160 report
- ✓ Large memory (256 MB Flash)
- ✓ High accuracy: active energy cl. 0,2, voltage and current 0,1%



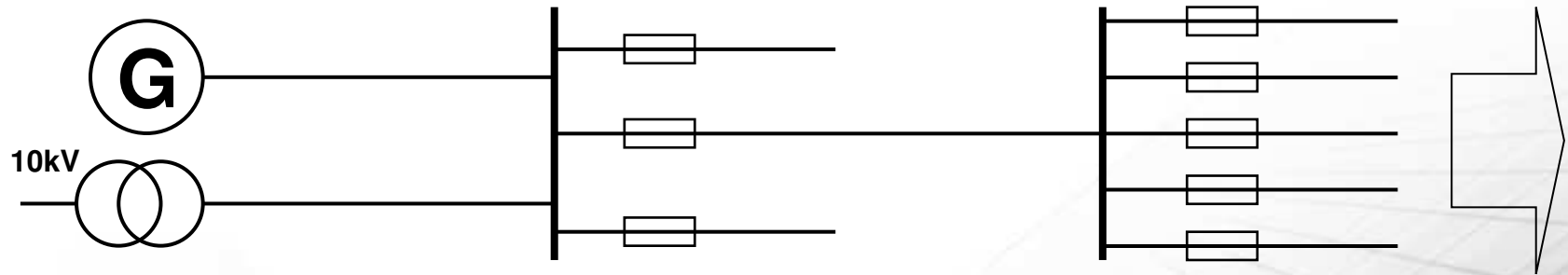


ProData II

- ✓ Data logger
- ✓ 15 digital- / impulse inputs
- ✓ 3 digital outputs, switchable via Modbus
- ✓ 64 Week base timers
- ✓ Limit. and temperature monitoring
- ✓ 1 Temperature input
- ✓ Ethernet (Modbus TCP, NTP, ...),
- ✓ Modbus-Ethernet-Gateway
- ✓ 32 MB Flash-Memory
- ✓ DIN rail mounting
- ✓ Recording of min- and max values with time stamp

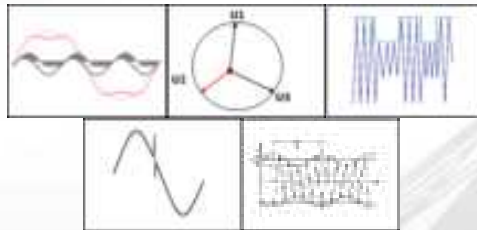


Monitoring On Three Levels



PCC / Power feeds and At site generation

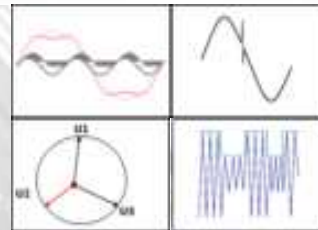
- Meter for PQ analysis EN50160
- Class A Measurements IEC61000-4-30
- Short interruptions and transient analysis
- Flicker and harmonic analysis up to 63rd
- Accuracy 0,1 U/I and 0,2S for kWh



UMG511

Switching equipment and main distribution cabinets (e.g. refrigeration)

- Short interruptions and transient analysis
- Harmonic analysis up to 40th
- Accuracy 0,2 U/I and 0,2/0,5S for kWh
- Modbus / IP gateway function integrated



UMG508



UMG604

Monitoring racks, lighting, tenants & others

- Reliable rack monitor without display (UMG103)
- Energy consumption and harmonics per phase
- Fast communication by close Modbus addressing
- Low power technology and low start value



UMG103

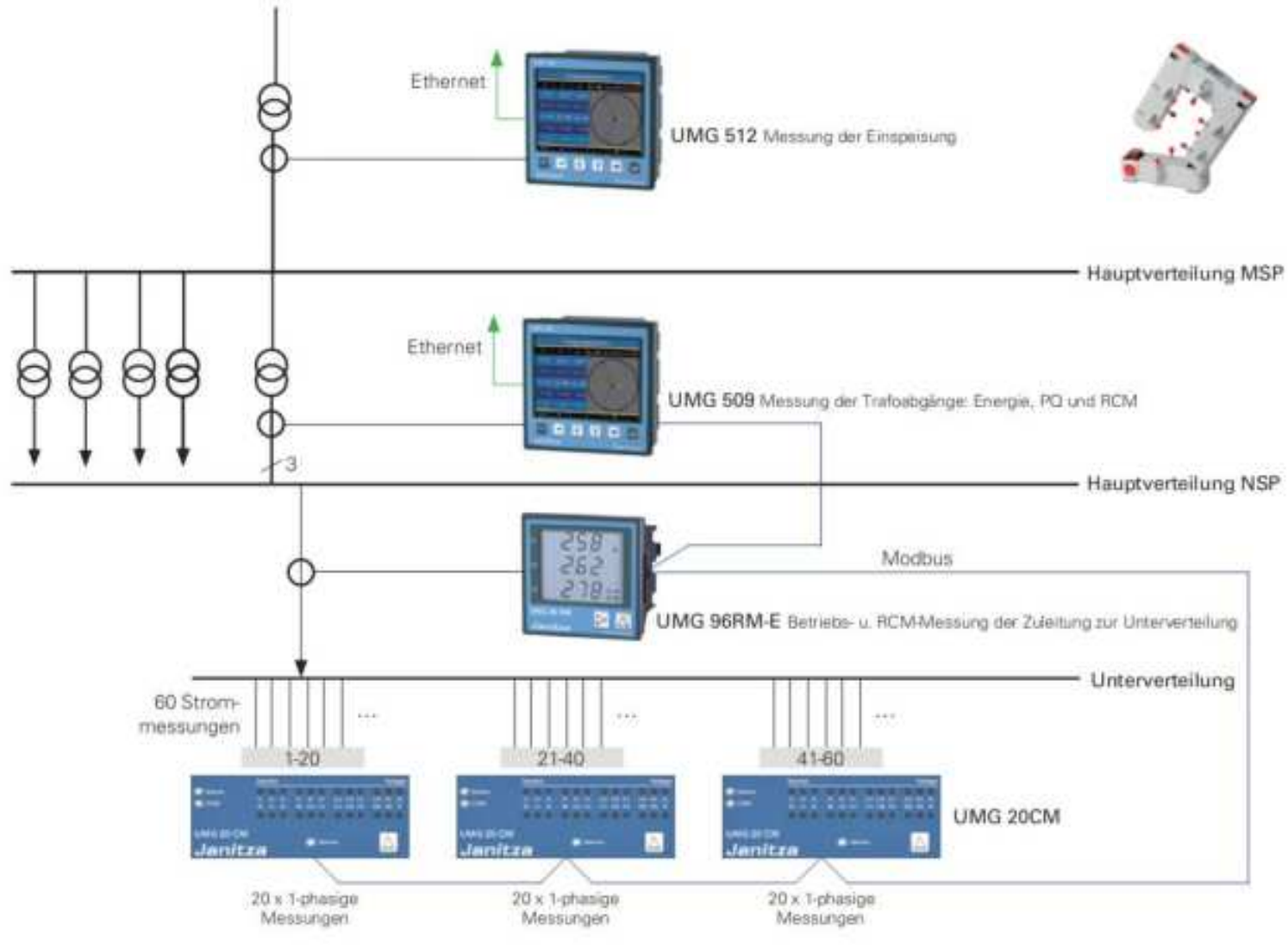


UMG104

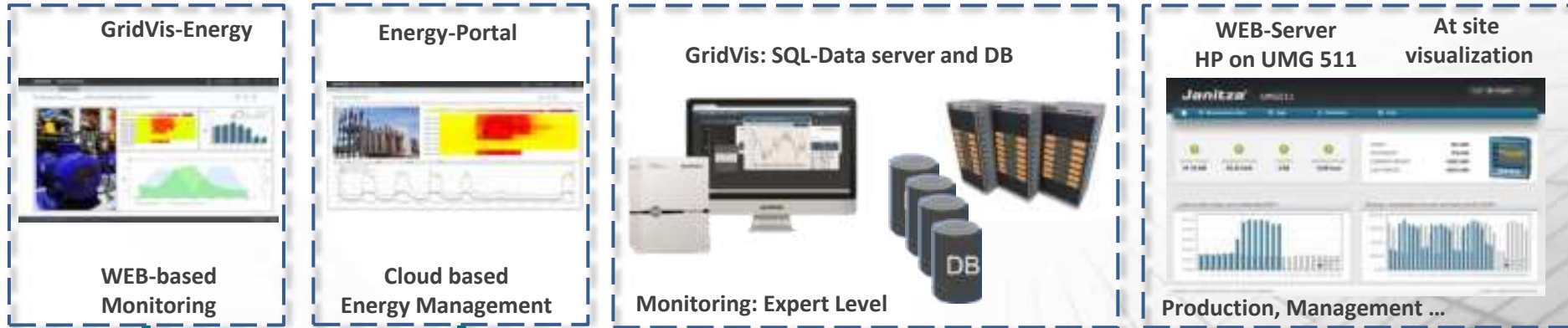


UMG96RM

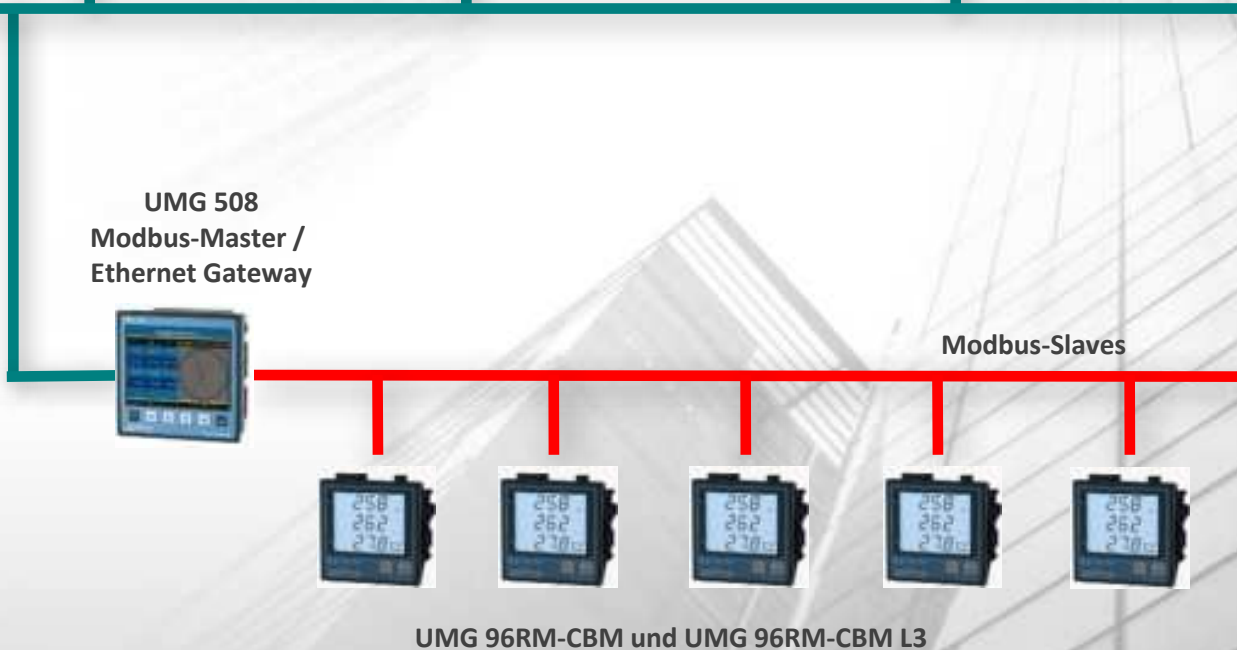
RCM across 4 levels!

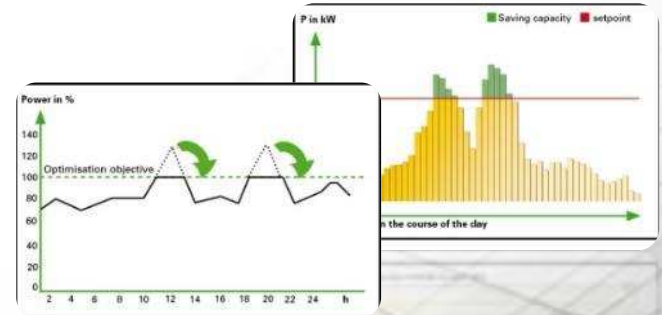


Energy Transparency on 4 Levels



TCP/IP







Power quality solutions

- ✓ Reduction of electricity costs through low reactive Energy
- ✓ Reduced ohmic losses, means lower kWh consumption
- ✓ Discharge of transformers, cables and fuses
- ✓ Increase the life of electrical distribution equipment
- ✓ Active environmental protection by reducing CO₂
- ✓ Improved utilization of networks i.e. additional consumers (kWh) can be connected
- ✓ Voltage stabilization (reduced apparent current reduces the voltage drop across the network impedances)





Complete Servers

- ✓ Janitza electronics GmbH offers a powerful server as a complete solution
- ✓ 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
- ✓ Powerful tower or rack server from Dell
- ✓ A RAID-10 system with hot-plug hard drives and latest components guarantees a high standard of data security
- ✓ Access to measurement data via the Rest interface by any number of client systems possible
- ✓ For extensive monitoring systems with a large number of measurement devices



Fig.: Server (tower)



Fig.: Server (rack)



OPC Top Server

- ✓ OPC stands for "OLE for Process Control, Object Linking and Embedding (OLE) for Process Control
- ✓ Standardised interface in the field of automation technology
- ✓ Universal possibility of optimal communication between industrial bus systems and protocols
- ✓ User-friendly and simple integration of OPC drivers in control and monitoring systems
- ✓ Integration of UMG Modbus measurements in SCADA systems via OPC server
- ✓ OPC-drivers for building management systems are available from almost all manufacturers of building
- ✓ With Top Server support in conjunction with the UMG measurement devices by Janitza electronics GmbH is guaranteed automation systems





App including Mini PC

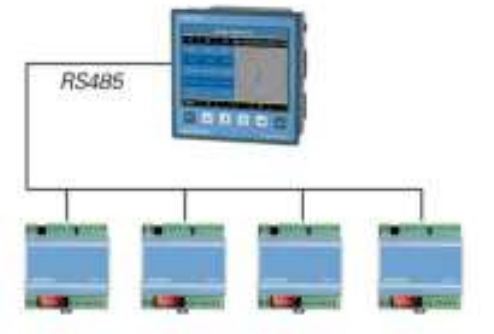
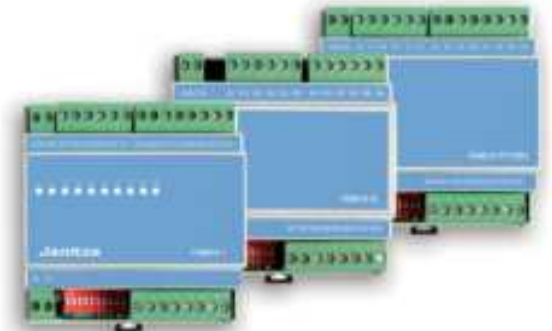
- ✓ Realisation of a remote display via Ethernet, e.g. large screen in the entrance area of a building
- ✓ The Mini-PC will be delivered ready-to-use incl. an SD card (8 GByte)
- ✓ Suitable for: UMG 604 / UMG 605 / UMG 508 / UMG 511 / 512
- ✓ APP installation, a configuration page (monitor) can be seen on the measurement devices
- ✓ The APP installs a standardised display with power and real energy
- ✓ The measured values are updated every 2 ... 5 seconds
- ✓ The APP will be delivered, encrypted with the serial number of the device





FBM Series

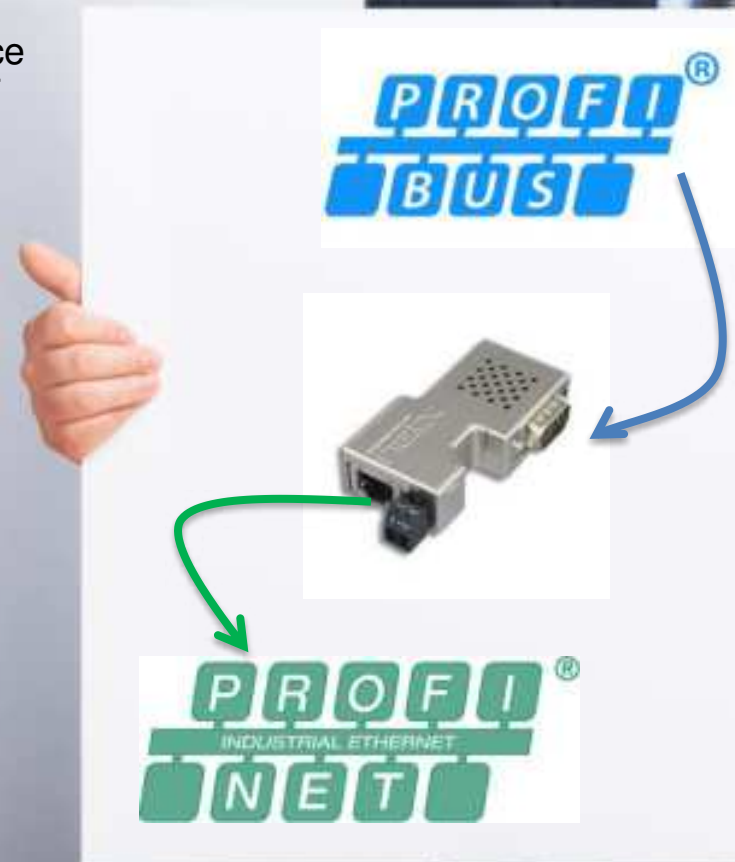
- ✓ FBM10I with 10 digital inputs
- ✓ FBM DI8-AI8 with 8 digital inputs and 8 analogue inputs
- ✓ FBM10PT1000 with 10 temperature inputs for PT100 and PT 1000 sensors
- ✓ FBM10R with 10 relay outputs
- ✓ 24V supply voltage required
- ✓ RS485 Modbus RTU interface
- ✓ Integration of FBM modules with jasic in backfin devices or generic modbus device in GridVis
- ✓ Detection of a wide range of key variables such as process data, statuses, temperature, threshold values, alarm outputs, etc.
- ✓ Archiving and visualisation via the software GridVis





Profinet interface netLink

- ✓ Integrates a DP slave in a superordinate PROFINET-RT network
- ✓ Is plugged directly on the PROFIBUS-DP interface of the DP slave and connected to the PROFINET network via the RJ45 socket
- ✓ Compatible with every UMG meter that have a PROFIBUS interface
- ✓ The netLINK interface is PROFINET-certified
- ✓ Automatic GSDML file generation
- ✓ External power with 24 V required
- ✓ Transmission rate is 10/100 MBit/s
- ✓ Max. 16 TCP connections simultaneously





Gateway to IEC 60870-5-104 protocol

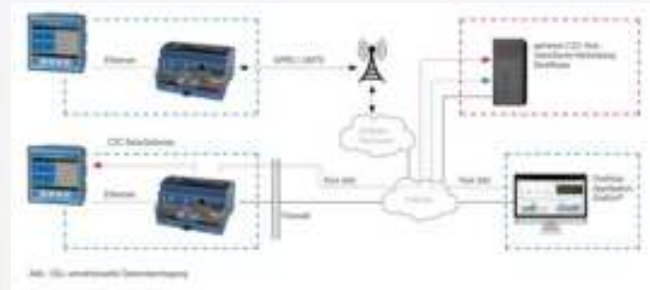
- ✓ Ethernet-Modbus TCP/IP to IEC 60870-5-104 Gateway substation automation protocol
- ✓ Suitable for measuring devices UMG 604 / UMG 605 / UMG 508 / UMG 511 / UMG 512 / UMG 96RM-E
- ✓ 1 device per gateway
- ✓ Transfer of 60 measurement variables to IEC 60870-5-104 protocol
- ✓ Measured value read-out every 5,000 ms from the UMG measuring device
- ✓ Scope of supply: gateway, SD card with janitza UMG setup, 12V power supply
- ✓ The Gateway is supplied with complete settings





Easy Gateway EG400 and C2C Service

- ✓ Communication Gateway for wireless and hard-wired communication over a mobile network or the internet
- ✓ The gateway is suitable for the blackfin devices, UMG 96RM-E will be added
- ✓ 15 -20 devices can be connected to one gateway
- ✓ Setting up the measuring device in GridVis® and selection of the EasyGateway communication
- ✓ Activation of the connection via GridVis necessary
- ✓ Connect-2-Control (C2C) is a simple and secure managed solution
- ✓ Simple access to the measuring device is guaranteed via public IP networks (internet, mobile data networks, company networks)
- ✓ No VPN tunnel required





PowerToStore buffer and extension module

- ✓ Typically serves to bridge short term interruptions
- ✓ Operates with integrated ultra-capacitors for energy storage
- ✓ Nominal input voltage: 115-230VAC
- ✓ Output Voltage 24DC
- ✓ Buffer time ca. 4min for one device, UMG 508/511/512 require the extension module
- ✓ Lifelong maintenance-free
- ✓ Rapid availability because short charging time after discharging
- ✓ Compact housing and dinrail mounting
- ✓ No gas generation, therefore installation in hermetically-sealed housings possible



Current Transformer: Types for every Installation

Janitza®



Current Transformer for Dinrail mounting up to 64A and voltage tap



Split Core Current Transformer for bus bars up to 2000A



Moulded Case Current Transformer up to 2500A



Split Core Current Transformer up to 1000A



Summation Current Transformer



Residual Current Transformer



Flex core CT /Rogowski Coil up to 4000A





- ✓ Janitza has an energy management system certified to ISO 50001
- ✓ Software GridVis is ISO 50001 certified
- ✓ Janitza is certified to ISO 9001 Quality Management
- ✓ BACnet certification for devices UMG 604/605/508/511/UMG512/UMG96RM-E
- ✓ UL-Certification for all UMG devices
- ✓ Registered brand name „GridVis®“
- ✓ Member of the central union electrical engineering “ZVEI”





UMG 103 ✓

UMG 104 ✓

UMG 604 ✓

UMG 605 ✓

UMG 508 ✓

UMG 511 ✓

Janitza develops, produces and tests its measurement devices and power quality solutions according to international valid standards!



Setting up concrete customer projects incl.
device tree and the UMG-devices
into an existing IT-structure

Defining of a cost centre management, with
virtual devices and specific reports

APPs and Jasic programming

Power Quality Analysis

Demand analysis



Trainings and qualifications for representatives,
solution partners and customers

GridVis-Basic training for newcomers

GridVis intensive for „Power-Users“

Jasic/App programming

Training at Janitza or at customer site



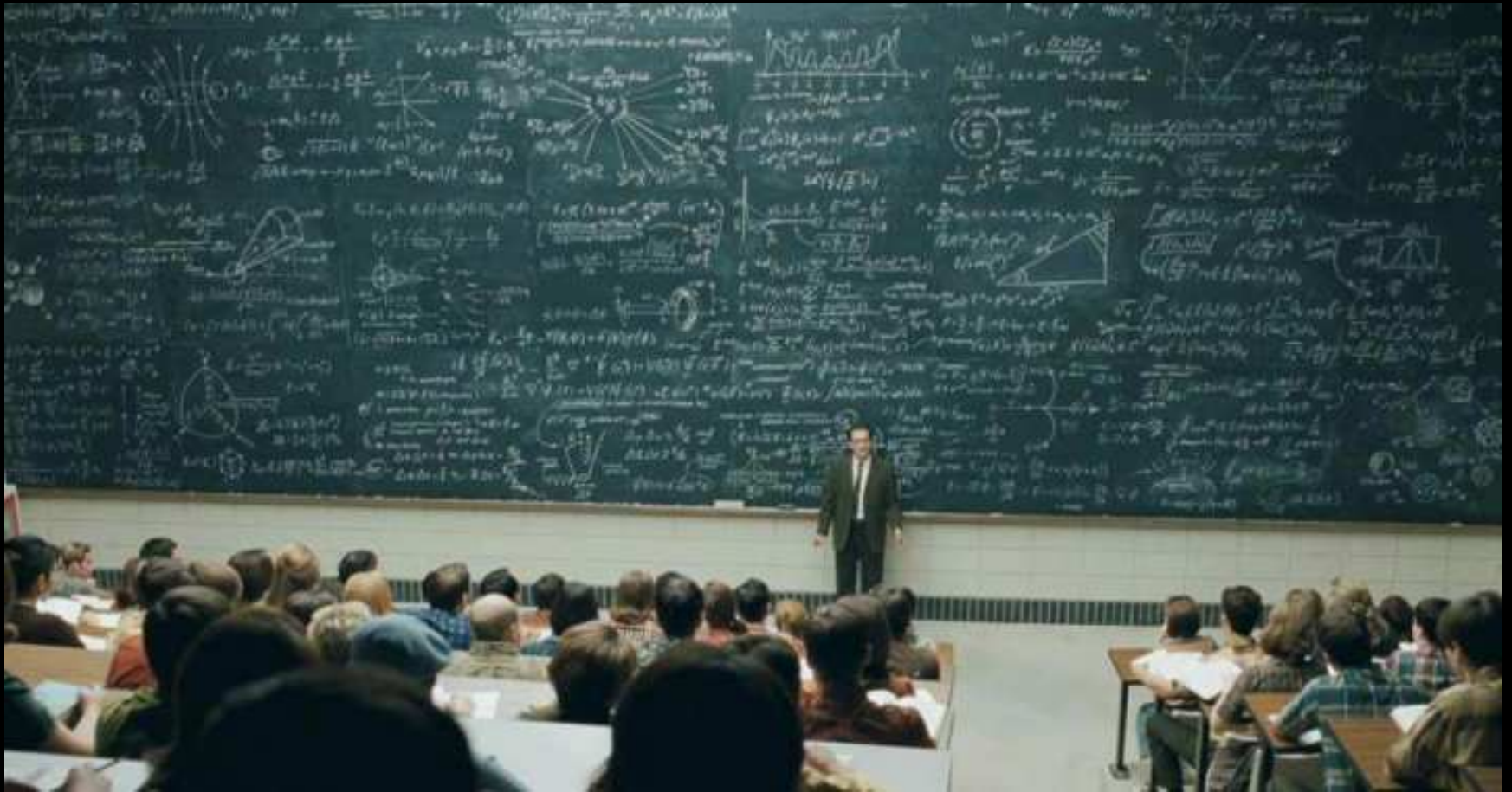
Many Reasons to Meter and Monitor!

- Reduce electricity cost and overall energy cost
- Optimize infrastructure loading and increase overall efficiency
- Fast and focused root cause analysis in case of failures
- Reduction of maintenance time, cutting down times
- Increase of nonlinear loads → monitoring PQ
- Enhancement of supply reliability
- Duty for documentation (e.g. grid regulation authorities)
- Proactive maintenance
- Create awareness with employees → Human Factor



- EMS-Holistic solution (EMS, PQ, RCM) out of one hand
- Product- and application know how of a market leader
- Broad product range of measurement instruments
- GridVis: Comprehensive system software
- Open system architecture
- High level of innovation
- Multilevel approach across 4 levels (PCC, transformer, sub-distribution, load)
- Cost optimized master-slave-architecture
- Customer specific solutions (high level of flexibility)
- Cost optimized solutions, scalable solutions for system entry

MORE
QUESTIONS?



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