Janitza®

UMG 96-S2 – Entry-level universal energy measurement device
UMG 96RM – Multifunctional power analyzer
UMG 96-PA & 96-PQ-L – Modularly expandable energy measurement device (MID)
& RCM-EL module – Modular expansion for the UMG 96-PA & UMG 96-PQ-L
UMG 509-PRO – Multifunctional power quality analyzer
UMG 512-PRO – Certified power quality analyzer (Class A according to IEC 61000-4-30)







Type	UMG 96-S2	UMG 96RM (UL certified)						UMG 96-PA (UL certified)		UMG 96-PQ-L (UL certified)					RCM-EL module (UL certified)	UMG 509-PRO (UL certified)	UMG 512-PRO (UL certified)
			P	M	E	CBM	PN	96-PA	96-PA-MID+	PQ-L		PQ-L-LP	PQ-L-IT				
Part number	5234002	5222061	5222064	5222069	5222062	5222066	5222090	5232001*1	5232004*8	5236001*1	5236021*1	5236006	5236005	5236025	5232010	5226001	5217011
Use in three-phase 4-conductor systems with grounded neutral conductor up to max.	230 / 400 V AC	277 / 480 V AC						347 / 600 V AC (UL)*13 417 / 720 V AC (IEC)*13		347 / 600 V AC (UL) 417 / 720 V AC (IEC)						347 / 600 V AC (UL) 417 / 720 V AC (IEC)	347 / 600 V AC (UL) 417 / 720 V AC (IEC)
Use in three-phase 3-conductor systems ungrounded up to max.	-	480 V AC						-		-			600 V AC			600 V AC	600 V AC
Supply voltage	90 – 265 V AC; 90 – 250 V DC	90 – 277 V AC; 90 – 250 V DC*1						90 – 277 V AC; 90 – 250 V DC*1								95 – 240 V AC; 80 – 300 V DC*1	95 – 240 V AC; 80 – 300 V DC*1
Three conductor / four conductor (L-N, L-L)	- / •	• / •						• / •		• / •						• / •	• / •
Quadrants	4	4						4		4						4	4
Sampling frequency 50/60 Hz	8 kHz	21.33/25.6 kHz						8.13 kHz		13,67 kHz			13,97 kHz			20 kHz	25.6 kHz
Meter reading cycle as per PTB-A 50.7	-	-						-	•	-						-	-
Effective value from periods (50/60 Hz)	16 / 16	10 / 12						10 / 12		10 / 12						10 / 12	10 / 12
Residual current inputs	-	-	-	-	2	-	2	-		-					2	2	2
Current measuring channels	3	3	4	3	4	4	4	3*7		3*7	3*7	4	3*7	3*7	1	4	4
Thermistor input	-	-	-	-	2*4	-	2*4	-		-					1	1	1
Harmonics current V / A	1. – 15.	1. – 40.						1. – 40.		1. – 65.						1. – 63.	1. – 63.
Distortion factor THD-U / THD-I in %	•	•						•		•						•	•
Unbalance	-	-						-		-						•	•
Short / long-term flicker	-	-						-		•*14						-	•
Transients	-	-						-		-						> 50 µs	> 39 µs
Short-term interruptions	-	-	-	-	•	-	-	-		•						•	•
Accuracy V; A	0.2%; 0.2%	0.2%; 0.2%						0.2%; 0.2%		0.2%; 0.2%						0.1%; 0.2%	0.1%; 0.1%
IEC 61000-4-30	-	-						-		Class S*14						Class S	Class A
Active energy class	0.5S (.../5 A)	0.5S (.../5 A)						0.2S (.../5 A)		0.2S*17						0.2S (.../5 A)	0.2S (.../5 A)
Digital inputs	-	-	4	-	(3)*3	4	(3)*3	3		3						2	2
Digital / pulse output	1	2	6	2	(5)*3	6	(5)*3 *5	3		3						2	2
Analog output	-	-	-	-	-	-	-	1		1						-	-
Memory for min. / max. values	•	•						•		•						•	•
Memory size / recording duration (according to factory setting)	-	-	256 MB*16	-	256 MB*15	256 MB*16	-	8 MB / approx. 3 months (MID+ load profile: approx. 24 months)		64 MB / partition A: approx. 45 months, part. B: approx. 20 months						256 MB / approx. 95.95 months	256 MB / approx. 3.11 months
Clock	-	-	•	-	•	•	-	•		•						•	•
Integrated logic	-	Comparator						Comparator		Comparator						Jasic® (7 Prg.)	Jasic® (7 Prg.)
Web server / Email	-	-	-	-	• / •	-	• / -	-		-						• / •	• / •
APPs: Measured value monitor, EN 50160 & IEC 61000-2-4 Watchdog	-	-						-		-						•	•
Fault recorder function	-	-						-		-						•	•
Peak load optimisation	-	-						-		-						-	-
GridVis® software for energy management and network analysis	GridVis®-Essential	GridVis®-Essential						GridVis®-Essential		GridVis®-Essential					Essential	GridVis®-Essential	GridVis®-Essential
GridVis® items	1	1						1		1					0	1	1
Interfaces																	
RS-232	-	-						-		-						-	-
RS-485	•	•	•	-	•	•	•	•		•						•	•
USB	-	-	•	-	-	•	-	-		-						-	-
D-Sub 9 plug (Profibus)	-	-	•	-	-	-	-	-		-						•	•
M-Bus	-	-	-	•	-	-	-	-		-						-	-
Ethernet	-	-	-	-	•	-	2	-		-					•	•	•
Protocols																	
Modbus RTU	•	•	•	-	•	•	•	•		•						•	•
Modbus gateway	-	-	-	-	•	-	-	-		-					•	•	•
Profibus DP V0	-	-	•	-	-	-	-	-		-						•	•
Modbus TCP/IP, Modbus RTU over Ethernet	-	-	-	-	•	-	•	-		-					•	•	•
SNMP	-	-	-	-	•	-	-*6	-		-						•	•
OPC UA	-	-	-	-	-	-	-	-		-						-	-
BACnet IP	-	-	-	-	•*2	-	-	-		-						•*2	•*2
Profinet	-	-	-	-	-	-	•	-		-						-	-

GridVis®

Our scalable GridVis® software brings your energy flows to life, helping you to analyze different parameters and discover potential energy savings. The software also offers various tools, such as data exports, standard-compliant reports or a report editor, which allow you to evaluate and document data. This makes GridVis®, which is available in 4 versions, perfect for setting up monitoring systems for energy management, power quality monitoring and residual current measurement.

GridVis® Essentials is a free entry-level version, offering all of the basic functions for setting up and configuring your measurement device. GridVis® Standard offers everything you need for ISO 50001 certified energy management, plus lots of other functions to simplify your life. GridVis® Expert offers the full range of functions from our power grid monitoring software.

GridVis® Cloud gives you access to a stand-alone energy monitoring portal for analyzing your energy consumption costs. Standard dashboards and pre-configured analysis options provide a quick overview of all of your company's consumption levels via PC or tablet, from anywhere, at anytime. Energy costs and carbon footprints can be calculated and displayed automatically.

OVERVIEW OF GridVis® EDITIONS

More info at:
www.gridvis.com

	GridVis® Essentials	GridVis® Standard	GridVis® Expert	GridVis® Cloud
SYSTEM FUNCTIONS				
Device configuration	•	•	•	–
Server-based service	–	•	•	–
Software as a service (SaaS)	–	–	–	•
TLS encryption	–	•	•	•
User administration	–	•	•	•
Alarm management	–	–	•	–
Monitoring of the device communication	–	•	•	•
Database (MySQL, MSSQL)	–	•	•	–
Key figures	–	–	•	–
Automation	–	•	•	–
E-mail dispatch	–	–	•	–
Software-based measured value recording	–	•	•	•
VISUALIZATION				
Customized dashboards	–	•	•	–
Static dashboards	–	–	–	•
Sankey diagram	–	–	•	–
Hierarchy management	–	•	•	•
Customized list function	–	•	•	–
Energy & measured value analysis	•	•	•	–
Event & transient analysis	•	•	•	–
REPORTS & EXPORTS				
Basic package	•	•	•	–
RCM (Residual Current Monitoring)	•	•	•	–
Power Quality	•	•	•	–
Energy monitoring	–	•	•	•
Energy management	–	•	•	–
Customized reports	–	–	•	–
CONNECTIVITY				
Data import (CSV & MSCONS)	–	•	•	–
Data export (MSCONS)	–	–	•	–
REST API	–	•	•	–
OPC UA client	–	–	•	–
Modbus devices from third-party suppliers	–	–	•	•

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Janitza®

Smart Energy & Power Quality Solutions

SHORT PRODUCT OVERVIEW

Janitza®

Janitza®

Brief overview of UMG measurement devices

		UMG 103-CBM	UMG 20CM	&	Module 20CM-CT6	UMG 604-PRO	UMG 605-PRO	UMG 801	&	Module 800-CT8-A	&	Module 800-CT8-LP	&	Module 800-DI14	UMG 806	&	Modules 806-EC1/ED1/EI1
Type		UMG 103-CBM (UL certified)	UMG 20CM		Module 20CM-CT6	UMG 604-PRO (UL certified) E / EP	UMG 605-PRO (UL certified)	UMG 801 (UL certified)		Module 800-CT8-A (UL certified)		Module 800-CT8-LP (UL certified)		Module 800-DI14 (UL certified)	UMG 806		UMG 806 modules 806-EC1 / 806-ED1 / 806-EI1
Part number		5228001	1401625		1401626	5216202 / 5216201	5216227	5231003		5231230		5231234		5231214	1402025		1402016 / 1402019 / 1402020
Use in three-phase 4-conductor systems with grounded neutral conductor up to max.		277 V / 480 V AC	230 / 400 V AC		Current measurement only	277 / 480 V AC	277 / 480 V AC	347 / 600 V AC (UL) 480 / 830 V AC (IEC)		Current measurement only		Current measurement only		Digital inputs only	230 / 400 V AC		
Use in three-phase 3-conductor systems ungrounded up to max.		-	-		-	480 V AC	480 V AC	690 V AC							400 V AC		
Supply voltage		-	90 – 276 V AC; 90 – 276 V DC		-	95 – 240 V AC; 135 – 340 V DC*1	95 – 240 V AC; 135 – 340V DC*1	24 V DC, PELV		via basic device		via basic device		via basic device	80 – 270 V AC; 80 – 270 V DC		
Three conductor / four conductor (L-N, L-L)		- / •	• / •		- / •	• / •	• / •	• / •							• / •		
Quadrants		4	4		4	4	4	4		4		4			4		
Sampling frequency 50/60 Hz		5.4 kHz	20 kHz		60 kHz	20 kHz	20 kHz	51.2 kHz (V) / 25.6 kHz (A)		8.33 kHz		8.33 kHz			8 kHz		
Meter reading cycle as per PTB-A 50.7		-	-		-	-	-	-		-		-			-		
Effective value from periods (50/60 Hz)		10 / 12	10 / 12		10 / 12	10 / 12	10 / 12	10 / 12		10 / 12		10 / 12			10 / 12		
Residual current inputs		-	20*11		6*11	-	-	4*4							1		
Current measuring channels		3	20*11		6–96 (max. 8 modules)*11	4	4	8		8–80 (max. 10 modules)		8–80 (max. 10 modules)			4		4*12
Thermistor input		-	-		-	1	1	4*4							1		
Harmonics current V / A		1. – 40.	1. – 63.		1. – 63.	1. – 40.	1. – 63.	1.–127. / 1.–63.		1., 3., 5. ... 15. only THD-I		1., 3., 5. ... 15. only THD-I			1. – 31.		
Distortion factor THD-U / THD-I in %		•	•		only THD-I	•	•	•							•		
Unbalance		-	-		-	•	•	•							•		
Short / long-term flicker		-	-		-	-	•	•							-		
Transients		-	-		-	> 50 µs	> 50 µs	•							-		
Short-term interruptions		-	-		-	•	•	•							-		
Accuracy V; A		0.2%; 0.5%	1%; 1%		– ; 0.5%	0.2%; 0.25%	0.2%; 0.25%	0.2%; 0.2%		0.5%		0.2%			0.2%; 0.2%		
IEC 61000-4-30		-	-		-	-	Class S	Class S							-		
Active energy class		0.5S (.../5 A)	1		2	0.5S (.../5 A)	0.5S (.../5 A)	0.2S (.../5 A)		0.5S (.../5 A)		0.5S (..../333 mV)			0.5S (.../5 A)		
Digital inputs		-	-		-	2	2	4						14	-		4
Digital / pulse output		-	2		-	2	2	4							1		2 2
Analog output		-	-		-	-		1							-		
Memory for min. / max. values		•	•		•	•	•	•		*9		*9		*9	•		
Memory size / recording duration (according to factory setting)		4 MB / approx. 3 months	768 KB / approx. 1 month		Only via UMG 20CM	128 MB / approx. 47.97 months	128 MB / approx. 2.37 months	4 GB / no factory setting							4 MB		
Clock		•	•		Only via UMG 20CM	•	•	•		*9		*9		*9	•		•
Integrated logic		Comparator	Current limit values per channel		Current limit values per channel	Jasic® (7 Prg.)	Jasic® (7 Prg.)	-							-		•
Web server / Email		-	-		-	• / •	• / •	-							-		• / -
APPs: Measured value monitor, EN 50160 & IEC 61000-2-4 Watchdog		-	-		-	•	•	-							-		
Fault recorder function		-	-		-	•	•	-							-		
Peak load optimisation		-	-		-	•*2	•*2	-							-		
GridVis® software for energy management and network analysis		GridVis®-Essential	GridVis®-Essential		GridVis®-Essential	GridVis®-Essential	GridVis®-Essential	GridVis®-Essential		GridVis®-Essential		GridVis®-Essential		GridVis®-Essential	GridVis®-Essential		GridVis®-Essential
GridVis® items		1	1		1	1	1	1		1		1		1	1		0
RS-232	Interfaces	-	-		-	•	•	-							-		
RS-485	Interfaces	•	•		Only via UMG 20CM	•	•	•		*9		*9		*9	•		
USB	Interfaces	-	-		-	-	-	•							-		
D-Sub 9 plug (Profibus)	Interfaces	-	-		-	- •	•	-							-		
M-Bus	Interfaces	-	-		-	-	-	-							-		
Ethernet	Interfaces	•	•		•	•	•	2		*9		*9		*9	•		•
Modbus RTU	Protocols	•	•		Only via UMG 20CM	•	•	•		*9		*9		*9	•		
Modbus gateway	Protocols	-	-		-	•	•	•*10							-		•
Profibus DP V0	Protocols	-	-		-	- •	•	-							-		
Modbus TCP/IP, Modbus RTU over Ethernet	Protocols	-	-		-	•	•	ModbusTCP/IP		*9		*9		*9	-		•
SNMP	Protocols	-	-		-	•	•	-							-		•
OPC UA	Protocols	-	-		-	-	-	•		*9		*9		*9	-		
BACnet IP	Protocols	-	-		-	•*2	•*2	-							-		
Profinet	Protocols	-	-		-	-	-	-							-		

Compact energy analyzer | Multi-channel operating current and residual current monitoring device | Modular expansion for the UMG 20CM | Functionally expandable network analyzer | Power quality analyzer (Class S according to IEC 61000-4-30) | Modularly expandable network analyzer | Modular expansion for the UMG 801 | Modular expansion for the UMG 801 | Modular expansion for the UMG 801 | Modularly expandable universal measurement device | Modular expansions for the UMG 806

• : Included
- : Not included

*1 Other voltages are also available optionally

*2 Option

*3 Possible combinations of inputs and outputs:
a) 5 digital outputs
b) 2 digital outputs and 3 digital inputs

*4 Combined function: Optional analog / temperature / residual current input

*5 2 pulse outputs

*6 SNMP for internal Profinet communication only

*7 With module + 1 current measurement channel

*8 MID certified

*9 On the basic device

*10 To query the slave devices

*11 Combined function: Optionally operating or residual current

*12 These are 4...20 mA signal inputs

*13 289 / 500 V AC for MID+ models

*14 Item no. 5236021 and 5236025 Class S ex works, item no. 5236001 and 5236005 Class S can be activated subsequently

*15 Partition A: approx. 106 months, partition B: approx. 26 months

*16 approx. 2 months

*17 The following applies to item no. 52.36.006: Class 0.5S (... A/333 mV) and 0.5S for Rogowski coils (... mV/kA).

Comment: For detailed technical information, please refer to the respective operating manuals and the Modbus address lists.

LOAD MANAGEMENT SOLUTIONS

Load management for the energy and mobility transition

Modern load management is becoming increasingly important in the context of the energy and mobility transition. Intelligent load management facilitates the avoidance of production downtimes, the development of energy strategies and the reduction of costs.

Load management engineering

Janitza electronics supports you from the analysis of your system environment to the integration of a modern load management approach. Let us assist you in optimizing your systems to achieve your energy goals. With our cross-manufacturer networking, we can integrate your existing production environment and ensure transparency.

Your advantages at a glance:

- Optimize your energy supply
- Detect and reduce peak loads
- One overarching system for all applications
- A uniform data basis for cost analysis
- Future-proof thanks to a wide range of expansion options

Your savings potential in figures:

- Reduction of expensive peak loads by up to 40%
- Reduction of charging costs for electric cars by up to 50%
- Increase the efficiency of your PV system in conjunction with an electric storage unit by up to 100%