



BRIEF OVERVIEW OF UMG MEASUREMENT DEVICES

Type	UMG 103-CBM (UL certified)	UMG 20CM	UMG 20CM	Module 20CM-CT6	UMG 604-PRO	UMG 605-PRO	UMG 800	UMG 800	UMG 801	UMG 801	Module 800-CT8-LP	Module 800-CT8-A	Module 800-D114	Module 800-D114	Module 800-D124	UMG 806	UMG 806	Module 806-EC1	Module 806-EC1
Part number	5228001	1401625	1401626	1401626	5216202	5216227	5238001	5231003	5231234	5231230	5231214	5231247	1402041	1402042	1402051				
Use in three-phase 4-conductor systems with grounded neutral conductor up to max.	277 V / 480 V AC	230 / 400 V AC	-	-	277 / 480 V AC	277 / 480 V AC	277 / 480 V AC	347 / 600 V AC (UL) 480 / 830 V AC (IEC)	Current measurement only	Current measurement only	Current measurement only	Current measurement only	230 / 400 V AC	400 V AC	230 / 400 V AC	80 – 270 V AC; 90 – 276 V DC	80 – 270 V AC; 80 – 270 V DC	-	-
Use in three-phase 3-conductor systems ungrounded up to max.	-	-	-	-	480 V AC	480 V AC	480 V AC	690 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 – 340 V DC ¹⁾	24 V DC, PELV	24 V DC, PELV	via basic device	via basic device	via basic device	via basic device	-	-	-	-	-	-	-
Three conductor / four conductor (L-N, L-L)	- / •	• / •	- / •	- / •	• / •	• / •	• / •	• / •	-	-	-	-	-	-	-	-	-	-	-
Quadrants	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
Sampling frequency 50/60 Hz	5.4 kHz	20 kHz	60 kHz	60 kHz	20 kHz	20 kHz	51.2 kHz	51.2 kHz (V) / 25.6 kHz (A)	8.33 kHz	8.33 kHz	8.33 kHz	8.33 kHz	8 kHz	8 kHz	8 kHz	8 kHz	8 kHz	8 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	10 / 12	10 / 12	10 / 12	10 / 12	10 / 12	10 / 12	10 / 12	10 / 12	10 / 12	10 / 12
Residual current inputs	-	20 ^{III}	6 ^{III}	6 ^{III}	-	-	-	4 ⁴	-	-	-	-	1	1	1	1	1	1	1
Current measuring channels	3	20 ^{III}	6–96 (max. 16 modules) ¹¹⁾	6–96 (max. 16 modules) ¹¹⁾	4	4	8	8	8–80 (max. 10 modules)	8–80 (max. 10 modules)	8–80 (max. 10 modules)	8–80 (max. 10 modules)	4	4	4	4	4	4	4
Thermistor input	-	-	-	-	1	1	4 ⁴	4 ⁴	-	-	-	-	1	1	1	1	1	1	1
Harmonics current V / A	1 – 40.	1 – 63.	1 – 63.	1 – 63.	1 – 40.	1 – 63.	1 – 63.	1 – 127 / 1 – 63.	1, 3, 5 ... 15.	1, 3, 5 ... 15.	1, 3, 5 ... 15.	1, 3, 5 ... 15.	1, 3, 5 ... 15.	1, 3, 5 ... 15.	1, 3, 5 ... 15.	1 – 31.	1 – 31.	1 – 31.	1 – 31.
Distortion factor THD-U / THD-I in %	•	•	only THD-I	only THD-I	•	•	only THD-U	•	•	•	•	•	•	•	•	•	•	•	•
Unbalance	-	-	-	-	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Short / long-term flicker	-	-	-	-	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Transients	-	-	-	-	> 50 µs	> 50 µs	18 µs (V)	18 µs (V)	-	-	-	-	-	-	-	-	-	-	-
Short-term interruptions	-	-	-	-	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Accuracy V; A	0.2%; 0.5%	1%; 1%	- 0.5%	- 0.5%	0.2%; 0.25%	0.2%; 0.25%	0.2%; -	0.2%; 0.2%	0.2%	0.5%	0.5%	0.5%	0.2%; 0.2%	0.2%; 0.2%	0.2%; 0.2%	0.2%; 0.2%	0.2%; 0.2%	0.2%; 0.2%	0.2%; 0.2%
IEC 61000-4-30	-	-	-	-	-	-	Class S	Class S	-	-	-	-	-	-	-	-	-	-	-
Active energy class	0.5S (.../5 A)	1	2	2	0.5S (.../5 A)	0.5S (.../5 A)	-	0.2S (.../5 A)	0.5S (.../333 mV)	0.5S (.../5 A)	0.5S (.../5 A)	0.5S (.../5 A)	0.5S (.../5 A)	0.5S (.../5 A)	0.5S (.../5 A)	0.5S (.../5 A)	0.5S (.../5 A)	0.5S (.../5 A)	0.5S (.../5 A)
Digital inputs	-	-	-	-	2	2	-	4	-	-	-	-	14	-	-	-	-	-	-
Digital / pulse output	-	2	-	-	2	2	-	4	-	-	-	-	-	-	-	-	-	-	-
Analog output	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-
Memory for min. / max. values	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Memory size / recording duration (according to factory setting)	4 MB / approx. 3 months	768 KB / approx. 1 month	Only via UMG 20CM	Only via UMG 20CM	128 MB / approx. 47.97 months	128 MB / approx. 2.37 months	4 GB / no factory setting	4 GB / no factory setting	•	•	•	•	•	•	•	4 MB	4 MB	•	•
Clock	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Integrated logic	Comparator	Current limit values per channel	Current limit values per channel	Current limit values per channel	Jasic® (7 Prg.)	Jasic® (7 Prg.)	Comparator	-	-	-	-	-	-	-	-	-	-	-	-
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®-Essential	GridVis®-Essential	GridVis®-Essential	GridVis®-Essential	GridVis®-Essential	GridVis®-Essential	GridVis®-Essential	GridVis®-Essential
GridVis® items	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	0
RS-232	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
RS-485	-	-	-	-	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
USB	-	-	-	-	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
D-Sub 9 plug (Profibus)	-	-	-	-	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
M-Bus	-	-	-	-	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Ethernet	-	-	-	-	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Modbus RTU	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Modbus gateway	-	-	-	-	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Profibus DP V0	-	-	-	-	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Modbus TCP/IP, Modbus RTU over Ethernet	-	-	-	-	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
SNMP	-	-	-	-	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
OPC UA	-	-	-	-	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
BACnet IP	-	-	-	-	• ²⁾	• ²⁾	•	•	•	•	•	•	•	•	•	•	•	•	•
Profinet	-	-	-	-	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•

- : included
- : not included
- *1 Other voltages are also optionally available
- *2 Option
- *3 Combination possibilities for the inputs and outputs:
a) 5 Digital outputs
b) 2 digital outputs and 3 digital inputs
- *4 Combined function: optionally analog / thermistor / residual current input
- *5 2 pulse outputs
- *6 SNMP only for internal Profinet communication
- *7 With module + 1 current measuring channel
- *8 MID-certified
- *9 On the basic device
- *10 For polling the slave device
- *11 Combined function: optionally operating and residual current
- *12 These are 4...20 mA signal inputs
- *13 289 / 500 V AC with MID+ models
- *14 Item no. 5236021, 5236025 and 5236026 Class S ex works, item no. 5238001, 5238005 and 5238006 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. 5236006 and 5236026: Class 0.5S (... A/333 mV) and 0.5S for Rogowski coils (... mV/kA)
- *18 Refers to the item no. 1402042
- *19 Only with UMG 800, item no. 5238001 & 5238002



SHORT PRODUCT OVERVIEW



Type	UMG 96-S2	UMG 96-EL	UMG 96RM	UMG 96-PA & 96-PO-L	Module 96-RCM-E	UMG 509-PRO	UMG 512-PRO
Part number	5234002	5235001	5222061 5222064 5222069 5222062 5222066 5222090	96-PA 5232001 ¹¹ 96-PA-MID+ 5232004 ¹⁸	PQ-L 5236001 ¹¹ PQ-L-LP 5236021 ¹¹ PQ-L-LP 5236006 PQ-L-LP 5236005 PQ-L-LP 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	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)	95 – 240 V AC; 80 – 300 V DC ¹¹	347 / 600 V AC (UL) 417 / 720 V AC (IEC)
Use in three-phase 3-conductor systems ungrounded up to max.	-	480 V AC	480 V AC	-	600 V AC	95 – 240 V AC; 80 – 300 V DC ¹¹	600 V AC
Supply voltage	90 – 265 V AC; 90 – 250 V DC	90 – 277 V AC; 90 – 250 V DC ¹¹	90 – 277 V AC; 90 – 250 V DC ¹¹	90 – 277 V AC; 90 – 250 V DC ¹¹	90 – 277 V AC; 90 – 250 V DC ¹¹	95 – 240 V AC; 80 – 300 V DC ¹¹	95 – 240 V AC; 80 – 300 V DC ¹¹
Three conductor / four conductor (L-N, LL)	- / •	• / •	• / •	• / •	• / •	• / •	• / •
Quadrants	4	4	4	4	4	4	4
Sampling frequency 50/60 Hz	8 kHz	21.33/25.6 kHz	21.33/25.6 kHz	8.13 kHz	13.67 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	10 / 12
Residual current inputs	-	-	-	-	-	-	-
Current measuring channels	3	3	3 4 3 4 4 4	3 ⁷	3 ⁷ 3 ⁷ 4 3 ⁷ 3 ⁷	4	4
Thermistor input	-	-	-	-	-	1	1
Harmonics current V / A	1. – 15.	1. – 40.	1. – 40.	1. – 40.	1. – 65.	1. – 63.	1. – 63.
Distortion factor THD-U / THD-I in %	•	•	•	•	•	•	•
Unbalance	-	-	-	-	-	•	•
Short / long-term flicker	-	-	-	-	-	•	•
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%	0.2%; 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)	0.5S (.../5 A)	0.2S (.../5 A)	0.2S ¹⁷	0.2S (.../5 A)	0.2S (.../5 A)
Digital inputs	-	-	-	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)	-	-	-	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	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	GridVis®-Essential	GridVis®-Essential	GridVis®-Essential
GridVis® items	1	1	1	1	1	1	1
RS-232	-	-	-	-	-	-	-
RS-485	•	-	-	-	-	•	•
USB	-	-	-	-	-	-	-
D-Sub 9 plug (Profibus)	-	-	-	-	-	-	-
M-Bus	-	-	-	-	-	-	-
Ethernet	-	•	•	-	-	-	•
Modbus RTU	•	•	•	•	•	•	•
Modbus gateway	-	-	-	-	-	•	•
Profibus DP V0	-	-	-	-	-	•	•
Modbus TCP/IP, Modbus RTU over Ethernet	-	•	•	-	-	•	•
SNMP	-	-	-	-	-	•	•
OPC UA	-	-	-	-	-	•	•
BACnet IP	-	-	-	-	-	•	•
Profinet	-	-	-	-	-	• ²	• ²

GridVis® NETWORK VISUALISATION SOFTWARE

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



SYSTEM FUNCTIONS	Essentials	Standard	Expert	Cloud
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	-	-	•	•

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%



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