Energy measurement experts

BRIEF PRODUCT OVERVIEW

Janitza®

THE JANITZA 3-IN-1 SOLUTION

The UMG measurement devices, the GridVis® software and components combine three solutions in a common system environment (3-in-1):

1. Energy management (in accordance with DIN EN ISO 50001)

– Reduces CO_2 emissions
– Reduces energy costs
– Improves energy efficiency

2. Power quality monitoring

– Ensures availability
– Reduces downtimes
– Optimises maintenance

3. Residual current monitoring / leakage current monitoring (RCM)

– Reduction of the DGUV V3
– Improves supply reliability
– Rapidly identifies faults
– Improves fire protection

■ MADE
■ IN
■ GERMANY

| Energy management DIN EN ISO 50001 | Power quality DIN EN 50160 | Residual current monitoring (RCM) |

Janitza®

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Type	UMG 20CM **UMG 20CM**	20 CM-CT6 **20CM-CT6 module**
Item number	14.01.625	14.01.626
Supply voltages		
Use in three-phase 4-conductor systems with grounded neutral conductor up to a maximum of	277 / 480 V AC	only current measurement
Use in three-phase 3-conductor systems ungrounded up to a maximum of	-	-
Supply voltage	90 – 276 V AC; 90 – 276 V DC	-
Three-conductor / four-conductor (L-N, L-L)	• / •	- / •
Quadrants	4	4
Sampling rate 50/60 Hz	20 kHz	60 kHz
measuring points per second	20,000	60,000
Uninterrupted measurement	•	•
Effective value from periods (50/60 Hz)	10 / 12	10 / 12
Residual current monitoring	•	
Harmonics V / A	1st – 63rd	1st – 63rd
Distortion factor THD-U / THD-I in %	•	THD-I only
Unbalance	-	-
Short-term flicker / long-term flicker	-	-
Transients	-	-
Short term interruptions	-	-
Accuracy V; A	1 %; 1 %	– ; 0.5%
Class A according to EN 61000-4-30	-	-
Active energy class	1	2
Digital inputs	-	-
Digital / pulse output	2	-
Current measuring channels	20	6–96 (max. 16 modules)
Thermistor input	-	-
Integrated logic	Current threshold values per channel	Current threshold values per channel
Memory min. / max. values	•	•
Memory size	768 KB	768 KB
Clock	•	•
APPs: Measured value monitor, EN 50160 & IEC 61000-2-4 Watchdog, Push Service	-	-
Fault recorder function	-	-
Peak load optimization	-	-
Software for energy management and network analysis	GridVis® Basic	GridVis® Basic
Interfaces		
RS232	-	-
RS485	•	only via UMG 20CM
USB	-	-
Profibus DP	-	-
M bus	-	-
Ethernet	-	-
Web server / e-mail	-	-
Protocols		
Modbus RTU	•	only via UMG 20CM
Modbus gateway	-	-
Profibus DP V0	-	-
Modbus TCP/IP, Modbus RTU over Ethernet, SNMP	-	-
BACnet IP	-	-
Profinet	-	-

UMG 20CM

Compact UMG 20CM RCM and energy measurement device with 20 current measuring channels & 20CM-CT6 expansion module

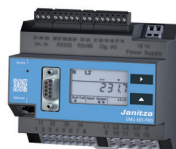**20 CM-CT6**

Modular expansion for the UMG 20CM measurement device

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	UMG 103-CBM	UMG 604-PRO	
Type	UMG 103-CBM	UMG 604-PRO	
		E	EP
Item number	52.28.001*1	52.16.202 *1	52.16.201 *1
Supply voltages			
Use in three-phase 4-conductor systems with grounded neutral conductor up to a maximum of	277 / 480 V AC	277 / 480 V AC	
Use in three-phase 3-conductor systems ungrounded up to a maximum of	-	480 V AC	
Supply voltage	-	95 – 240 V AC; 135 – 340 V DC*2	
Three-conductor / four-conductor (L-N, L-L)	- / ●	● / ●	
Quadrants	4	4	
Sampling rate 50/60 Hz measuring points per second	5.4 kHz 5,400	20 kHz 20,000	
Uninterrupted measurement	●	●	
Effective value from periods (50/60 Hz)	10 / 12	10 / 12	
Residual current monitoring	-	-	
Harmonics V / A	1st – 40th	1st – 40th	
Distortion factor THD-U / THD-I in %	●	●	
Unbalance	-	●	
Short-term flicker / long-term flicker	-	-	
Transients	-	50 μs	
Short term interruptions	-	●	
Accuracy V; A	0.2 %; 0.2 %	0.2 %; 0.25 %	
Class A according to EN 61000-4-30	-	-	
Active energy class	0.5S (.../5 A)	0.5S (.../5 A); 1 (.../1 A)	
Digital inputs	-	2	
Digital / pulse output	-	2	
Current measuring channels	3	4	
Thermistor input	-	1	
Integrated logic	Comparator	Jasic® (7 prg.)	
Memory min. / max. values	●	●	
Memory size	4 MB	128 MB	
Clock	●	●	
APPs: Measured value monitor, EN 50160 & IEC 61000-2-4 Watchdog, Push Service	-	●	
Fault recorder function	-	●	
Peak load optimization	-	●*3	
Software for energy management and network analysis	GridVis® Basic	GridVis® Basic	
Interfaces			
RS232	-	●	
RS485	●	●	
USB	-	-	
Profibus DP	-	-	●
M bus	-	-	
Ethernet	-	●	
Web server / e-mail	-	● / ●	
Protocols			
Modbus RTU	●	●	
Modbus gateway	-	●	
Profibus DP V0	-	-	●
Modbus TCP/IP, Modbus RTU over Ethernet, SNMP	-	●	
BACnet IP	-	●*3	
Profinet	-	-	

UMG 103-CBM — Compact energy measurement device with clock, battery and memory

UMG 604-PRO — Power analyzer with state-of-the-art communication capabilities

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	UMG 605-PRO	UMG 96RM						
Type	UMG 605-PRO		P	M	E	CBM	EL	PN
Item number	52.16.227*1	52.22.061*1	52.22.064*1	52.22.069*1	52.22.062*1	52.22.066*1	52.22.068*1	52.22.090*1
Supply voltages								
Use in three-phase 4-conductor systems with grounded neutral conductor up to a maximum of	277 / 480 V AC	277 / 480 V AC						
Use in three-phase 3-conductor systems ungrounded up to a maximum of	480 V AC	480 V AC						
Supply voltage	95 – 240 V AC; 135 – 340V DC*2	90 – 277 V AC; 90 – 250 V DC*2						
Three-conductor / four-conductor (L-N, L-L)	• / •	• / •						
Quadrants	4	4						
Sampling rate 50/60 Hz measuring points per second	20 kHz 20,000	21.33 / 25.6 kHz 21,330 / 25,600						
Uninterrupted measurement	•	•						
Effective value from periods (50/60 Hz)	10 / 12	10 / 12						
Residual current monitoring	-	-	-	-	•	-	-	•
Harmonics V / A	1st – 63rd	1st – 40th						
Distortion factor THD-U / THD-I in %	•	•						
Unbalance	•	-						
Short-term flicker / long-term flicker	•	-						
Transients	50 µs	-						
Short term interruptions	•	-	-	-	•	-	-	-
Accuracy V; A	0.2 %; 0.25 %	0.2 %; 0.2 %						
Class A according to EN 61000-4-30	-	-						
Active energy class	0.5S (.../5 A); 1 (.../1 A)	0.5S (.../5 A); 1 (.../1 A)						
Digital inputs	2	-	4	-	(3)*4	4	-	(3)*4
Digital / pulse output	2	2	6	2	(5)*4	6	-	(5)*4 *7
Current measuring channels	4	3	4	3	4+2	4	3	4+2
Thermistor input	1	-	-	-	2*5	-	-	2*5
Integrated logic	Jasic® (7 prg.)	Comparator						
Memory min. / max. values	•	•						
Memory size	128 MB	-	256 MB	-	256 MB	256 MB	-	-
Clock	•	-	•	-	•	•	-	-
APPs: Measured value monitor, EN 50160 & IEC 61000-2-4 Watchdog, Push Service	•	-						
Fault recorder function	•	-						
Peak load optimization	•*3	-						
Software for energy management and network analysis	GridVis® Basic	GridVis® Basic						
Interfaces								
RS232	•	-						
RS485	•	•	•	-	•	•	-	•
USB	-	-	•	-	-	•	-	-
Profibus DP	•	-	•	-	-	-	-	-
M bus	-	-	-	•	-	-	-	-
Ethernet	•	-	-	-	•	-	•	•
Web server / e-mail	• / •	-	-	-	• / •	-	-	• / -
Protocols								
Modbus RTU	•	•	•	-	•	•	-	•
Modbus gateway	•	-	-	-	•	-	-	-
Profibus DP V0	•	-	•	-	-	-	-	-
Modbus TCP/IP, Modbus RTU over Ethernet, SNMP	•	-	-	-	•	-	•*6	•*8
BACnet IP	•*3	-	-	-	•*3	-	-	-
Profinet	-	-	-	-	-	-	-	•

UMG 605-PRO — Power quality analyzer according to EN 50160

UMG 96RM — Cost-effective and multifunctional network analyzer

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	UMG 96-PA		UMG 96-PA modules	
Type	**Without MID**	**With MID**	**96-PA-RCM-EL**	**96-PA-RCM**
Item number	52.32.001 *1*2	52.32.003 *10	52.32.010	52.32.011
Supply voltages				
Use in three-phase 4-conductor systems with grounded neutral conductor up to a maximum of	417 / 720 V AC			
Use in three-phase 3-conductor systems ungrounded up to a maximum of	-			
Supply voltage	90 – 277 V AC; 90 – 250 V DC*2			
Three-conductor / four-conductor (L-N, L-L)	- / •			
Quadrants	4			
Sampling rate 50/60 Hz	8.33 kHz			
measuring points per second	8,330			
Uninterrupted measurement	•			
Effective value from periods (50/60 Hz)	10 / 12			
Residual current monitoring	-		•	
Harmonics V / A	1st – 40th	1st – 25th		
Distortion factor THD-U /THD-I in %	•			
Unbalance	-			
Short-term flicker / long-term flicker	-			
Transients	-			
Short term interruptions	-			
Accuracy V; A	0.2 %; 0.2 %			
Class A according to EN 61000-4-30	-			
Active energy class	0.5S (.../5 A); 1 (.../1 A)			
Digital inputs	3			
Digital / pulse output	3*9			
Current measuring channels	3		1	
Thermistor input	-		1	
Integrated logic	Comparator			
Memory min. / max. values	•			
Memory size	4 MB			
Clock	•			
APPs: Measured value monitor, EN 50160 & IEC 61000-2-4 Watchdog, Push Service	-			
Fault recorder function	-			
Peak load optimization	-			
Software for energy management and network analysis	GridVis® Basic			
Interfaces				
RS232	-			
RS485	•			
USB	-			
Profibus DP	-			
M bus	-			
Ethernet	-		•	-
Web server / e-mail	-			
Protocols				
Modbus RTU	•			
Modbus gateway	-		•	-
Profibus DP V0	-			
Modbus TCP/IP, Modbus RTU over Ethernet, SNMP	-		•*11	-
BACnet IP	-			
Profinet	-			

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Type	UMG 96-S2	UMG 96-S2	UMG 508	UMG 508
		UMG 96-S2		**UMG 508**
Item number		52.34.001		52.21.001 52.21.011*1
Supply voltages				
Use in three-phase 4-conductor systems with grounded neutral conductor up to a maximum of		230 / 400 V AC		417 / 720 V AC 347 / 600 V AC (UL listed)
Use in three-phase 3-conductor systems ungrounded up to a maximum of		-		600 V AC
Supply voltage		90 – 265 V AC; 90 – 250 V DC		95 – 240 V AC; 80 – 340 V DC*2
Three-conductor / four-conductor (L-N, L-L)		- / •		• / •
Quadrants		4		4
Sampling rate 50/60 Hz measuring points per second		8 kHz 8,000		20 kHz 20,000
Uninterrupted measurement		•		•
Effective value from periods (50/60 Hz)		16 / 16		10 / 12
Residual current monitoring		-		-
Harmonics V / A		1st – 15th		1st – 40th
Distortion factor THD-U / THD-I in %		•		•
Unbalance		-		•
Short-term flicker / long-term flicker		-		-
Transients		-		50 µs
Short term interruptions		-		•
Accuracy V; A		0.2 %; 0.2 %		0.1%; 0.2%
Class A according to EN 61000-4-30		-		-
Active energy class		0.5S (.../5 A); 1 (.../1 A)		0.2S (.../5 A)
Digital inputs		-		8
Digital / pulse output		1		5
Current measuring channels		3		4
Thermistor input		-		-
Integrated logic		-		Jasic® (7 prg.)
Memory min. / max. values		•		•
Memory size		-		256 MB
Clock		-		•
APPs: Measured value monitor, EN 50160 & IEC 61000-2-4 Watchdog, Push Service		-		-*3
Fault recorder function		-		•
Peak load optimization		-		•*3
Software for energy management and network analysis		GridVis® Basic		GridVis® Basic
Interfaces				
RS232		-		-
RS485		•		•
USB		-		-
Profibus DP		-		•
M bus		-		-
Ethernet		-		•
Web server / e-mail		-		• / •
Protocols				
Modbus RTU		•		•
Modbus gateway		-		•
Profibus DP V0		-		•
Modbus TCP/IP, Modbus RTU over Ethernet, SNMP		-		•
BACnet IP		-		•*3
Profinet		-		-

UMG 96-S2 — High-precision universal energy measurement device

UMG 508 — Multifunctional network analyzer

Janitza®

Type	UMG 509-PRO	UMG 511
	UMG 509-PRO	**UMG 511**
Item number	52.26.001[*1]	52.19.001 52.19.011[*1]
Supply voltages		
Use in three-phase 4-conductor systems with grounded neutral conductor up to a maximum of	417 / 720 V AC 347 / 600 V AC (UL listed)	417 / 720 V AC 347 / 600 V AC (UL listed)
Use in three-phase 3-conductor systems ungrounded up to a maximum of	600 V AC	600 V AC
Supply voltage	95 – 240 V AC; 80 – 300 V DC[*2]	95 – 240 V AC; 80 – 340 V DC[*2]
Three-conductor / four-conductor (L-N, L-L)	• / •	• / •
Quadrants	4	4
Sampling rate 50/60 Hz measuring points per second	20 kHz 20,000	20 kHz 20,000
Uninterrupted measurement	•	•
Effective value from periods (50/60 Hz)	10 / 12	10 / 12
Residual current monitoring	•	-
Harmonics V / A	1st – 63rd	1st – 63rd
Distortion factor THD-U / THD-I in %	•	•
Unbalance	•	•
Short-term flicker / long-term flicker	-	•
Transients	50 µs	50 µs
Short term interruptions	•	•
Accuracy V; A	0.1 %; 0.2 %	0.1 %; 0.2 %
Class A according to EN 61000-4-30	-	•
Active energy class	0.2S (.../5 A)	0.2S (.../5 A)
Digital inputs	2	8
Digital / pulse output	2	5
Current measuring channels	4 + 2	4
Thermistor input	1	-
Integrated logic	Jasic® (7 prg.)	Jasic® (7 prg.)
Memory min. / max. values	•	•
Memory size	256 MB	256 MB
Clock	•	•
APPs: Measured value monitor, EN 50160 & IEC 61000-2-4 Watchdog, Push Service	•	-[*3]
Fault recorder function	•	•
Peak load optimization	-	•[*3]
Software for energy management and network analysis	GridVis® Basic	GridVis® Basic
Interfaces		
RS232	-	-
RS485	•	•
USB	-	-
Profibus DP	•	•
M bus	-	-
Ethernet	•	•
Web server / e-mail	• / •	• / •
Protocols		
Modbus RTU	•	•
Modbus gateway	•	•
Profibus DP V0	•	•
Modbus TCP/IP, Modbus RTU over Ethernet, SNMP	•	•
BACnet IP	•[*3]	•[*3]
Profinet	-	-

UMG 509-PRO — Multifunctional network analyzer with RCM

UMG 511 — Class A power quality analyzer

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	UMG 512-PRO
Type	**UMG 512-PRO**
Item number	52.17.011*1
Supply voltages	
Use in three-phase 4-conductor systems with grounded neutral conductor up to a maximum of	417 / 720 V AC 347 / 600 V AC (UL listed)
Use in three-phase 3-conductor systems ungrounded up to a maximum of	600 V AC
Supply voltage	95 – 240 V AC; 80 – 300 V DC*2
Three-conductor / four-conductor (L-N, L-L)	• / •
Quadrants	4
Sampling rate 50/60 Hz measuring points per second	25.6 kHz 25,600
Uninterrupted measurement	•
Effective value from periods (50/60 Hz)	10 / 12
Residual current monitoring	•
Harmonics V / A	1st – 63rd
Distortion factor THD-U / THD-I in %	•
Unbalance	•
Short-term flicker / long-term flicker	•
Transients	> 39 µs
Short term interruptions	•
Accuracy V; A	0.1%; 0.1%
Class A according to EN 61000-4-30	•
Active energy class	0.2S (.../5 A)
Digital inputs	2
Digital / pulse output	2
Current measuring channels	4 + 2
Thermistor input	1
Integrated logic	Jasic® (7 prg.)
Memory min. / max. values	•
Memory size	256 MB
Clock	•
APPs: Measured value monitor, EN 50160 & IEC 61000-2-4 Watchdog, Push Service	•
Fault recorder function	•
Peak load optimization	-
Software for energy management and network analysis	GridVis® Basic
Interfaces	
RS232	-
RS485	•
USB	-
Profibus DP	•
M bus	-
Ethernet	•
Web server / e-mail	• / •
Protocols	
Modbus RTU	•
Modbus gateway	•
Profibus DP V0	•
Modbus TCP/IP, Modbus RTU over Ethernet, SNMP	•
BACnet IP	•*3
Profinet	-

*(Side label: **UMG 512-PRO** — **Class A power quality analyzer with RCM**)*

• : included
- : not included

*1 UL certified

*2 Other voltages are also optionally available

*3 Option

*4 Combination possibilities for the inputs and outputs:
a) 5 Digital outputs
b) 2 digital outputs and 3 digital inputs

*5 Combined function: Optionally analog / thermistor / residual current input

*6 No SNMP protocol

*7 2 pulse outputs

*8 SNMP only for internal Profinet communication

*9 With module + 1 current measuring channel

*10 MID-certified

*11 No SNMP

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