Energy measurement experts



BRIEF PRODUCT OVERVIEW



### 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<sub>2</sub> 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







Energy management DIN EN ISO 50001

Power quality DIN EN 50160 Residual current monitoring (RCM)

Profinet





Туре	S	UMG 20CM	см-ст6	20CM-CT6 module				
Item number	UMG 20CM	14.01.625	14.01.626					
Supply voltages			11					
Use in three-phase 4-conductor systems with grounded neutral		077 / 400 / 4.0						
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	ŧ.	_		-				
Transients	<u> </u>	_		-				
Short term interruptions	6 7	_	Φ	_				
Accuracy V; A	<u>1.5 9</u>	1 %; 1 %	<u>:</u> 2	- ; 0.5%				
Class A according to EN 61000-4-30	E	-	_ •	, 0.370				
Active energy class	o ĕ ⊆	1	0	2				
Digital inputs	urement device wi expansion module	<u>.</u>	Ħ	-				
Digital / pulse output	er Sc	2	₫					
Current measuring channels	<u> </u>	20	Ε	6–96 (max. 16 modules)				
Thermistor input	<u>a</u>	20	0–30 (max. 10 modules)					
•	5 @	Current threehold values nor showned	- Current threshold values per channel					
Integrated logic	as 9-	Current threshold values per channel	current threshold values per channel					
Memory min. / max. values	è 5	•	measurement device	•				
Memory size	energy measurement device with & 20CM-CT6 expansion module	768 KB	20CM n	768 KB				
Clock		•	2	•				
APPs: Measured value monitor, EN 50160 & IEC 61000-2-4 Watchdog, Push Service	19 K	-	2	-				
Fault recorder function		-	UMG	-				
Peak load optimization	RCM and channels	_	₹	-				
Software for energy management and network analysis	RCM and channels	GridVis® Basic	5	GridVis® Basic				
Interfaces	= =	Citavio Buoio	Ф	Griavio Bacio				
RS232		_	the	-				
RS485	क्ट छ		Ξ	only via UMG 20CM				
USB	<b>5</b> 0	_	<b>₽</b>	-				
Profibus DP	20CM suring	_	_	_				
M bus		_	<u>.</u> 2					
Ethernet	Se	_	_S	_				
Web server / e-mail	e g		ੁਲ					
Protocols	$\leq \epsilon$	-	×					
Modbus RTU	교병	•	Ð	only via UMG 20CM				
Modbus gateway	<u> </u>	•	a	Office Via Olvid 200101				
Profibus DP V0	<u>a</u> <u>-</u>	-	Ħ	-				
Modbus TCP/IP, Modbus RTU over Ethernet, SNMP	Compact UMG 20CM 20 current measuring	-	Modular expansion for	-				
BACnet IP	00	-	9	-				
DAGIECI	0 0	-	2	-				





Туре	BM	UMG 103-CBM	8	UMG 604-PRO E EP						
Item number	UMG 103-CBM	52.28.001* <sup>1</sup>	UMG 604-PRO	52.16.202						
Supply voltages	Σ		≥							
Use in three-phase 4-conductor systems with grounded neutral conductor up to a maximum of	5	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)		- <b>/ •</b>		•/•						
Quadrants		4		4						
Sampling rate 50/60 Hz		5.4 kHz		20 kHz						
measuring points per second		5,400		20,000						
Uninterrupted measurement		•		•						
Effective value from periods (50/60 Hz)		10 / 12		10 / 12						
Residual current monitoring		-		-						
Harmonics V / A	and memory	1st – 40th		1st – 40th						
Distortion factorTHD-U /THD-I in %	2	•		•						
Unbalance	등	-		•						
Short-term flicker / long-term flicker	Ĕ	-	Se	-						
Transients		-	#	50 µs						
Short term interruptions	2	-		•						
Accuracy V; A	Ø	0.2 %; 0.2 %	유	0.2 %; 0.25 %						
Class A according to EN 61000-4-30	_ ≥	-	ă	-						
Active energy class	哥	0.5S (/5 A)	capabilities	0.5S (/5 A); 1 (/1 A)						
Digital inputs	듩	0.33 (/3 A)	_	0.33 (/3 A), 1 (/1 A) 2						
	ق	-	ō	2						
Digital / pulse output	<u>پ</u>	-	핗	4						
Current measuring channels	힣	3	မ	1						
Thermistor input	片용	-	<u>'</u>	•						
Integrated logic	<u> </u>	Comparator	2	Jasic® (7 prg.)						
Memory min. / max. values	主	•		•						
Memory size	Compact energy measurement device with clock, battery	4 MB	communication	128 MB						
Clock	<u>:</u>	•	t	•						
APPs: Measured value monitor, EN 50160 & IEC 61000-2-4 Watchdog, Push Service	<b>δ</b>	-	state-of-the-art	•						
Fault recorder function	ਰ	-	ψ	•						
Peak load optimization	Ħ	_	두	•*3						
Software for energy management and network analysis	e e	GridVis® Basic	냪	GridVis® Basic						
Interfaces	Ε	GITAVIS DASIC	9	GITUVIS DASIC						
RS232	ā		먁	•						
RS485	<u>                                   </u>	•	ta	•						
USB	as	·	S	·						
	ē	•	동	, -						
Profibus DP	=		with	- •						
M bus	≥	•		-						
Ethernet	5,	-	<u>ā</u>	•						
Web server / e-mail	<b>E</b>	-	analyzer	• / •						
Protocols	Ф		a							
Modbus RTU	벙	•	E	•						
Modbus gateway	Ö	-								
Profibus DP V0	ㄹ	-	Ð	-						
Modbus TCP/IP, Modbus RTU over Ethernet, SNMP		-	<b>§</b>	•						
BACnet IP	ပ	-	Power	<b>•</b> *3						
Profinet		-		-						

## Janitza<sup>®</sup>

Туре	SO.	UMG 605-PRO	R	UMG 96RM P M E CBM EL PN							
Item number	UMG 605-PRO	52.16.227* <sup>1</sup>	UMG 96RM	52.22.061*1	52.22.064*1	52.22.069*1	52.22.062*1	1,000	52.22.056	52.22.090*1	
Supply voltages	15										
Use in three-phase 4-conductor systems with grounded neutral conductor up to a maximum of		277 / 480 V AC	277 / 480 V AC 277 / 480 V								
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					1	0 / 1	2		
Residual current monitoring		-		-	-	-	•			•	
Harmonics V / A		1st – 63rd					1st	t – 40	0th		
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 9	%; 0	.2 %		
Class A according to EN 61000-4-30		-				-		-			
Active energy class		0.5S (/5 A); 1 (/1 A)							1 (/		
Digital inputs		2	급	-	4		(3)*		4 -	(0)	
Digital / pulse output		2	analyzer	2	6		(5)*		6 -	(5)*4	
Current measuring channels		4	=	3	4		4+2		4 3		
Thermistor input	0	1	Ĕ	-	-	-	2*5			2*5	
Integrated logic	19	Jasic® (7 prg.)	G .	Comparator							
Memory min. / max. values	Ò	•	춫					•	_		
Memory size	EN 50160	128 MB	multifunctional network	-	256 MB	-	256 MB	0 10	256 MB	-	
Clock		•	e	-	•	-	•		• -	-	
APPs: Measured value monitor, EN 50160 & IEC 61000-2-4 Watchdog, Push Service	analyzer according to	•	=					-			
Fault recorder function	] G	•	n n					-			
Peak load optimization	등	<b>●</b> *3	.º					-			
Software for energy management and network analysis	5	GridVis® Basic	ᄫ			G	\rid	/is®	Basic		
Interfaces	ĕ										
RS232	ä	•						-			
RS485	6)	•	=	•	•	-	•	(	• -	•	
USB	Ň	-	Ē	-	•	-	-	,	• -	-	
Profibus DP	<u>a</u>	•		-	•	-	-			-	
M bus	Ĩ	-	and	-	-	•	-	1		-	
Ethernet	. 60	•	00	-	-	-	•		- •	•	
Web server / e-mail	E	•/•	>	-	-	-	• / •			• / -	
Protocols	a		늉								
Modbus RTU	긆	•	ē	•	•	-	•	•	• -	•	
Modbus gateway	L	•	e f	-	-	-	•			-	
Profibus DP V0	Power quality	•	Cost-effective	-	•	-	-			-	
Modbus TCP/IP, Modbus RTU over Ethernet, SNMP	8	•	So	-	-	-	•		- •*	6 •*8	
BACnet IP	<u> </u>	<b>●</b> *3	S	-	-	-	•*3			-	
Profinet		-		-	-	-	-	-		•	

## Janitza<sup>®</sup>





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Туре	ן		96-PA	es	UMG 96-PA	
1950	96-PA	Without MID	With MID	3	96-PA-RCM-EL	96-PA-RCM
	6	001	003	po	010	.011
Item number	UMG	52.32.001	52.32.003	96-PA modules	52.32.010	52.32.011
Supply voltages	$\supset$	Δ,	Δ,	<b>₽</b>		
Use in three-phase 4-conductor systems with grounded neutral				<b>9</b>		
conductor up to a maximum of		417 / 7	20 V AC			
Use in three-phase 3-conductor systems ungrounded up to a maximum of			-	Z		
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 measuring points per second			3 kHz 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			-	L		
Accuracy V; A		0.2 %	; 0.2 %	.0		
Class A according to EN 61000-4-30			-	ੂ ਤ		
Active energy class			A); 1 (/1 A)	<u> </u>		
Digital inputs			3	_ 4		
Digital / pulse output			3*9	ਰ		
Current measuring channels		;	3	_ 5	1	
Thermistor input			-	<b>I</b> ; <b>I</b>	1	
Integrated logic		Com	parator	<u></u>		
Memory min. / max. values			•	ᄝ		
Memory size	4	41	МВ	96-PA (additional functions		
Clock	ပိ		•	<u>.</u>		
APPs: Measured value monitor, EN 50160 & IEC 61000-2-4 Watchdog, Push Service	\ <u>\s_{\s}_{\s}_{\s}_{\sq}</u>		-			
Fault recorder function	Ö		-	the UMG		
Peak load optimization	벋		-	Σ		
Software for energy management and network analysis	e	GridVi	s® Basic			
Interfaces	Ε			<u> </u>		
RS232	5		-	<b>+</b>		
RS485	ng	,	•	for		
USB	a		-	<u> </u>		
Profibus DP	a e		-	modules		
M bus	-		-	3		
Ethernet	6		-	bo	•	-
Web server / e-mail	ē		-	Ē		
Protocols	Modular energy measurement device					
Modbus RTU	L		•	.0		
Modbus gateway	<u>_a</u>		-	3	•	-
Profibus DP V0	믕		-	ā		
Modbus TCP/IP, Modbus RTU over Ethernet, SNMP	0		-	Expansion	<b>●</b> *11	-
BACnet IP	Σ		-	ш		
Profinet			-			

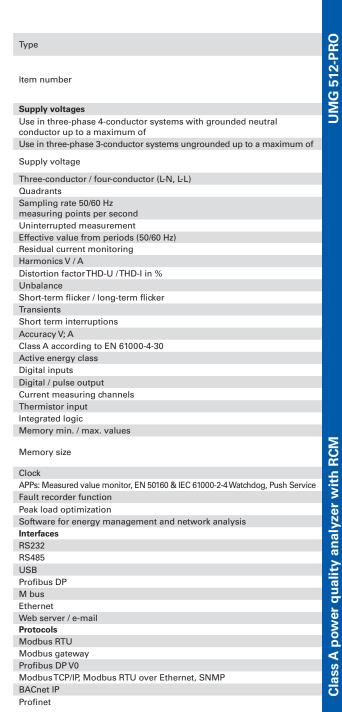




Туре	-S2	UMG 96-S2	508	UMG 508
Item number	UMG 96-S2	52.34.001	UMG	52.21.001 52.21.011*1
Supply voltages				
Use in three-phase 4-conductor systems with grounded neutral conductor up to a maximum of		230 / 400 V AC		417 / 720 V AC 347 / 600 V AC (UL listed)
Use in three-phase 3-conductor systems ungrounded 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		8 kHz		20 kHz
measuring points per second		8,000		20,000
Uninterrupted measurement		40/40		40.440
Effective value from periods (50/60 Hz)		16 / 16		10 / 12
Residual current monitoring Harmonics V / A		- 1st – 15th		- 1st – 40th
		ist – istn		1St – 40th
Distortion factor THD-U /THD-I in %		·		•
Unbalance		-		•
Short-term flicker / long-term flicker Transients		-		- 50 µs
		-		50 µs
Short term interruptions		0.2 %; 0.2 %		0.1%; 0.2%
Accuracy V; A		0.2 /0, 0.2 /0		0.1%; 0.2%
Class A according to EN 61000-4-30		0.5S (/5 A); 1 (/1 A)		- 0.2S (/5 A)
Active energy class	ø	0.55 (/5 A), 1 (/1 A)		0.25 (/5 A) 8
Digital inputs	ુ .은	1		o 5
Digital / pulse output Current measuring channels	ซ์	3		4
	ਰ	-		4
Thermistor input Integrated logic	<b>1</b>	_		- !:-® (7 )
Memory min. / max. values	ē			Jasic® (7 prg.)
Memory size	uren	-		256 MB
Clock	as			
APPs: Measured value monitor, EN 50160 & IEC 61000-2-4 Watchdog, Push Service	e	_		_*3
Fault recorder function	5	-	e	
Peak load optimization	<u> </u>	_	Ž	•*3
Software for energy management and network analysis	9	GridVis® Basic	<u>a</u>	GridVis® Basic
Interfaces	Ę	Grid Vio Busio	Ë	GIIUVIS BASIC
RS232	o o	-	<i>a</i>	_
RS485	Ö	•	Ť	-
USB	<u> </u>	-	Ž	-
Profibus DP	.≝	_	<b>1</b>	
M bus	2	-	=	·
Ethernet		_	<del>_</del>	•
Web server / e-mail	<u> </u>	-	Ë	•/•
Protocols	Si		.0	,
Modbus RTU	<u>ပ</u>	•	당	•
Modbus gateway	<u> </u>	-	=	•
• ,				-
Protipus DP VU	Ĭ	_		•
Profibus DP V0 Modbus TCP/IP, Modbus RTU over Ethernet, SNMP	g-4g	-	툍	•
Modbus TCP/IP, Modbus RTU over Ethernet, SNMP BACnet IP	High-precision universal energy measurement device	-	Multifunctional network analyzer	

		Janiza Marita na		Power Quelley Analyses
Туре	RO	UMG 509-PRO	511	UMG 511
Item number	UMG 509-PRO	52.26.001* <sup>1</sup>	OMG	52.19.001 52.19.011*1
Supply voltages	Σ			
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		4 4 22 4		-
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		0.1 %; 0.2 %		0.1 %; 0.2 %
Accuracy V; A Class A according to EN 61000-4-30		0.1 %, 0.2 %		0.1 %; 0.2 %
Active energy class		0.2S (/5 A)		0.2S (/5 A)
Digital inputs		0.23 (/5 A) 2		0.23 (/3 A) 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	Į	•		•
Memory size	Multifunctional network analyzer with RCM	256 MB		256 MB
Clock	星			
	}			_*3
APPs: Measured value monitor, EN 50160 & IEC 61000-2-4 Watchdog, Push Service Fault recorder function	i i	•		•
Peak load optimization	Ň	•	<u>_</u>	•*3
Software for energy management and network analysis	<u>a</u>	- GridVis® Basic	ze	GridVis® Basic
Interfaces	Ĕ	Gridvis Basic		Gridvis Basic
RS232	0	_	E a	_
RS485	둗	•	ल	•
USB	ĭĕ	-	ţ	-
Profibus DP	넒	•	== ==	•
M bus	Ĕ	-	Ĕ	-
Ethernet	व	•		•
Web server / e-mail	듣	•/•	ē	•/•
Protocols	ŧ		power quality analyzer	
Modbus RTU	5	•	ğ	•
Modbus gateway	٦	•	₫	•
Profibus DP V0	#	•	Class /	•
Modbus TCP/IP, Modbus RTU over Ethernet, SNMP	3	•	as	•
BACnet IP	≥	•*3	ပ	•*3
Profinet		-		-

#### **Janitza**<sup>®</sup>





**UMG 512-PRO** 

■ MADE IN GERMANY

417 / 720 V AC 347 / 600 V AC (UL listed) 600 V AC

52.17.011\*1

- 95 240 V AC; 80 300 V DC\*2 •/• 4 25.6 kHz 25,600 10 / 12 1st - 63rd

  - $> 39 \mu s$

  - 0.1%: 0.1%
  - 0.2S (.../5 A)
    - 2
    - 2
  - 4 + 2
  - Jasic® (7 prg.)
  - - 256 MB

  - GridVis® Basic
  - - •/•

- : included
- : not included
- \*1 UL certified
- 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
- \*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.