KONGSGAARDEN INSTRUMENT

Overview of UMG measurement devices

Janitza®

Overview of UMG measurement devices

Type	UMG 103*1	UMG 104		UMG 20CM	UMG 604		UMG 605	UMG 96L	UMG 96	UMG 96 RM						UMG 96RM-PN	UMG 508	UMG 509	UMG 511	UMG 512	Type
			P		E	EP				↯	P*7	M	E*7	CB	EL						
Item number	52.18.001	52.20.201	52.20.202	14.01.625	52.16.202	52.16.201	52.16.227	52.14.001	52.09.001	52.22.051	52.22.053	52.22.055	52.22.052	52.22.054	52.22.056	52.22.090	52.21.011	52.26.001	52.19.011	52.17.011	Item number
Network voltages																					Network voltages
Rated voltage L-N, AC	240 V	277 V		230 V	277 V		277 V	255 V*6	275 V*6	277 V						277 V	347 V	417 V	347 V	347 V	Rated voltage L-N, AC
Rated voltage L-L, AC	415 V	480 V		400 V	480 V		480 V	442 V*6	476 V*6	480 V						480 V	600 V	720 V (3-phase 600 V)	600 V	600 V	Rated voltage L-L, AC
Overvoltage category	300 V CAT III	300 V CAT III		300 V CAT III	300 V CAT III		300 V CAT II	300 V CAT III	300 V CAT III	300 V						300 V CAT III	600 V CAT	600 V CAT II	600 V CAT III	600 V CAT III	Overvoltage category
Operating voltage L-N, AC	115 – 240 V						196 – 255 V*6	196 – 275 V*6		-						-	-	-	-	-	Operating voltage L-N, AC
Auxiliary voltage	-	95 – 240 V AC; 135 – 340 V DC*1		90 – 276 V AC / DC	95 – 240 V AC; 135 – 340 V DC*		95 – 240 V AC; 135 – 340 V	-	-	20 – 250 V						90 – 277 V AC; 90 – 250 V DC	95 – 240 V AC:-	95 – 240 V AC:	95 – 240 V AC:	95 – 240 V AC; 80 – 300 V DC*	Auxiliary voltage
Three wire / four wire (L-N, L-L)	- / •	• / •		- / •	• / •		• / •	- / •	- / •	• / •						• / •	• / •	• / •	• / •	• / •	Three wire / four wire (L-N, L-L)
Quadrants	4	4		4	4		4	4*6	4*6	4						4	4	4	4	4	Quadrants
Sampling frequency 50/60 Hz Measurement points per second	5.4 kHz	20 kHz 20,000		20 kHz	20 kHz 20,000		20 k	2. 5 /	2.5 / 3 kHz 50	21.33 / 25.6						21,33 / 25,6 kHz 21.330 / 25.600	20 kHz 20,000	20 kHz 20,000	20 kHz 20,000	21.33 / 25.6kHz 21.330 / 25.600	Sampling frequency 50/60 Hz Measurement points per second
Uninterrupted measurement	•	•		•	•		•	-	-	•						•	•	•	•	•	Uninterrupted measurement
Measurement results per second	5	5		2	5		5	1	1	5						5	5	5	5	5	Measurement results per second
Effective value from periods (50 / 60 Hz)	10 /	10 / 12		10 / 12	10 / 12		10 / 12	1 / 1	1 / 1	10 / 12						10 / 12	10 / 12	10 / 12	10 / 12	10 / 12	Effective value from periods (50 / 60 Hz)
Residual current measurement	-	-		-	•		-	-	-	-	-	-	•	-		•	-	•	-	•	Residual current measurement
Harmonics V/A	1st – 25th	1st – 40th		1st – 63rd	1st – 40th		1st – 63rd	-	-	1st – 40th						1. – 40.	1st –	1st – 63rd	1st – 63rd	1st – 63rd	Harmonics V/A
Distortion factor THD-U in %	•	•		•	•		•	-	-	•						•	•	•	•	•	Distortion factor THD-U in %
Distortion factor THD-I in %	•	•		•	•		•	-	-	•						•	•	•	•	•	Distortion factor THD-I in %
Unbalance	-	•		-	•		•	-	-	-						•	•	•	•	•	Unbalance
Positive / negative / zero sequence component	•	•		-	•		•	-	-	•						•	•	•	•	•	Positive / negative / zero sequence component
Present flicker strength	-	-		-	-		•	-	-	-						-	-	-	-	•	Present flicker strength
Short-/long-term flicker	-	-		-	-		•	-	-	-						-	-	-	•	•	Short-/long-term flicker
Transients	-	-		-	50 µs		50 µs	-	-	-						-	50 µs	50 µs	50 µs	39 µs	Transients
Short-term interruptions, events	-	-		-	•		•	-	-	-	-	-	•	-		•	•	•	•	•	Short-term interruptions, events
Accuracy V / A	0.2 / 0.5 %	0.2	0.5 %		0.2 %		0	1 %	1 %	0.2 % /						0.2 % / 0.2 %	0.1 % / 0.2	0.1 % / 0.2 %	0.1 % / 0.2 %	0.1	Accuracy V / A
Effective power class	0.5 (…/5 A)	0.5 (…/5 A)		1	0.5 (…/5 A)		0.5 (…/5 A)	2	2	0.55						0.55 (…/5 A)	0.25 (…/5	0.25 (…/5 A)	0.25 (…/5 A)	0.25 (…/5 A)	Effective power class
Operating hours counter	•	•		-	•		•	•	•	•						•	•	•	•	•	Operating hours counter
Weekly timer	-	-		-	Jasic		Jasic	-	-	-						•	•	•	•	•	Weekly timer
Digital inputs	-	2		-	2		2	-	-	-	#	-	(3)*	4		(3)*	8	2	8	2	Digital inputs
Digital / pulse output	-	2		2	2		2	-	•	2	#	2	(5)*	6		(5)*,*10	5	2	5	2	Digital / pulse output
Current measurement channel	3	4		20	4		4	3	3	3	#	3	4+2	4	3	4+2	4	4+2	4	4+2	Current measurement channel
Temperature input	-	1		-	1		1	-	-	-			2*7	-		2*7	-	1	-	1	Temperature input
Integrated logic	-	Comparator		-	Jasic (7 Prg.)		Jasic (7 Prg.)	-	Comparator	-					Compar	Vergleicher	Jasic	Jasic	Jasic	Jasic	Integrated logic
Minimum and maximum values for memory	•	•		•	•		•	•	•	•						•	•	•	•	•	Minimum and maximum values for memory
Memory size for onboard recording	-	4 MB Flash		-	128 MB Flash		128 MB Flash	-	-	-	-	10,000 x 256MB	-	10,000 x 256MB	-	-	256 MB	256 MB	256 MB	256 MB	Memory size for onboard recording
Number of memory values	-	156 k		-	5,000 k		5,000 k	-	-	-	-	10,000 k	-	10,000 k	-	-	10,0 00 k	10,000 k	10,000 k	10,000 k	Number of memory values
Clock	-	•		•	•		•	-	-	-			•	•		•	•	•	•	•	Clock
Bi-metallic function	•	•		-	•		•	•	•	•						•	•	•	•	•	Bi-metallic function
Error / event recorder function	-	-		-	•		•	-	-	-						-	•	•	•	•	Error / event recorder function
Peak demand management	-	-		-	•*5		•*5	-	-	-						-	•*5	-	•*5	-	Peak demand management
Software for energy management & power quality analysis	GridVis-Basic	GridVis-Basic		GridVis-Basic	GridVis-Basic		GridVis-Basic	-	-	-					GridVis-Basic	GridVis-Basic	GridVis-Basic	GridVis-Basic	GridVis-Basic	GridVis-Basic	Software for energy management & power quality analysis
Interfaces																					Interfaces
RS232	-	•	•	-	•		•	-	-	-						-	-	-	-	-	RS232
RS485	•	•	•	-	•		•	-	-	•			•	•		•	•	•	•	•	RS485
USB	-	-	-	-	-		-	-	-	-			-	•		-	-	-	-	-	USB
Profibus DP	-	-	•	-	-	•	•	-	-	-			-	-		•	•	•	•	•	Profibus DP
M-Bus	-	-	-	-	-		•	-	-	-			•	-		-	-	-	-	-	M-Bus
Ethernet	-	-	-	-	•		•	-	-	-			-	•	•	•	•	•	•	•	Ethernet
Webserver / email	-	-	-	-	• / •		• / •	-	-	-			-	• / •		• / -	• / •	• / •	• / •	• / •	Webserver / email
Protocols																					Protocols
Modbus RTU	•	•	•	•	•		•	-	-	•			-	•	•	•	•	•	•	•	Modbus RTU
Modbus gateway	-	-	-	-	•		•	-	-	-			-	•	-	-	•	•	•	•	Modbus gateway
Profibus DP V0	-	-	•	-	-	•	•	-	-	-			-	-		-	•	•	•	•	Profibus DP V0
ModbusTCP/IP, Modbus RTU over Ethernet, SNMP	-	-	-	-	•		•	-	-	-			-	•	•*9	•	•	•	•	•	ModbusTCP/IP, Modbus RTU over Ethernet, SNMP
BACnet (optional)	-	-	-	-	-*4		•*5	-	-	-			•*5	-		-	•*5	•*5	•*5	•*5	BACnet (optional)
Profinet	-	-	-	-	-		-	-	-	-			-	•		•	-	-	-	-	Profinet
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Comment: For detailed technical information please refer to the respective operation manual and the Modbus address list.

• : Included - : Not included

*1 UL-certified devices on request
*2 ETL-certified devices on request
*3 Other voltages are also available as options
*4 Option
*5 Not for effective energy and reactive energy
*6 In the 230 V version
*7 Combination options for the inputs and outputs: a) 5 Digital outputs; b) 2 Digital outputs and 3 Digital inputs
*8 Combined function: Selectable analogue / temperature / residual current input
*9 No SNMP protocol
*10 2 pulse outputs