

# POWER ANALYZER

## UMG 96RM-EL

Item No.: 422.142; 422.143



### DESCRIPTION OF FUNCTIONS

The power analyzer UMG 96RM-EL is used for the measurement and calculation of electrical variables such as voltage, current, power, energy, harmonics (up to the 40th order) etc. in electrical installations.

The measurement results can be displayed, stored, read out and further processed via the device's interfaces.

- 422.142 UMG 96RM-EL (230 V AC)
- 422.143 UMG 96RM-EL (24 V DC)

### TECHNICAL DATA

Power supply	
Option 230 V AC (422.142):	90 ... 277 V AC (45 ... 65 Hz)
Option 24 V DC (422.143):	24 ... 90 V DC
Power consumption:	max. 2 W
Operating temperature:	-10 ... 55 °C
Degree of protection:	IP 40 (Front), IP 20 (Back), IP 54 (Front with seal)
Installation:	Front panel integration (Cutout dimensions: 92 x 92 mm), Top-rail hat (35 mm) mounting via top-hat rail set (included in the scope of delivery)
Dimensions (H x W x D):	104 x 97 x 42 mm
Weight:	300 g

### VOLTAGE MEASUREMENT

Transformer measurement	
Voltage transformer, primary:	0 ... 1,000,000 V (default setting: 400 V)
Voltage transformer, secondary:	1 ... 400 V (default setting: 400 V)
Direct measurement	
4-conductor system (L-N/L-L):	max. 277 V / 480 V
3-conductor system (L-L):	max. 480 V
Resolution, voltage:	0.01 V
Overvoltage category:	300 V CAT III
Sampling rate:	21.33kHz (50Hz), 25.6 kHz (60Hz)
Frequency of the fundamental oscillation:	45 ... 65 Hz
Resolution, frequency:	0.01 Hz

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## CURRENT MEASUREMENT

Transformer measurement	
Current transformer, primary:	0 ... 1,000,000 A (default setting: 5 A)
Current transformer, secondary:	1 ... 5 A (default setting: 5 A)
Overvoltage category:	300 V CAT II
Sampling rate:	21.33kHz (50Hz), 25.6 kHz (60Hz)

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## MEASUREMENT UNCERTAINTY

Voltage:	± 0.2 %	(IEC 61557-12)
Current L:	± 0.2 %	(IEC 61557-12)
Current N:	± 1 %	(IEC 61557-12)
Active power:	± 0.5 %	(IEC 61557-12)
Reactive power:	± 1	(IEC 61557-12)
Harmonics U, I:	Class 1	(IEC 61000-4-7)
Active energy		
Current transformer ... / 5 A:	Class 0.5S	(IEC 62053-22)
Current transformer ... / 1 A:	Class 1	(IEC 62053-21)
Reactive energy		
Current transformer ... / 5 A:	Class 1	(IEC 61557-12)
Current transformer ... / 1 A:	Class 1	(IEC 61557-12)
Frequency:	± 0.01 Hz	

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## POWER QUALITY

Harmonics V / A:	1st ... 40th order
Interharmonics:	No
Distortion factor THD-U /-I:	Yes
Unbalance:	No
Flicker:	No
Transients:	No
Events:	No
Measurement data memory:	No
Event recorder:	No
IEC 61000-4-30 Class A:	No

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## COMMUNICATION

Interface:	Ethernet
Protocol:	Modbus TCP
Refreshing time, measurements:	200 ms

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