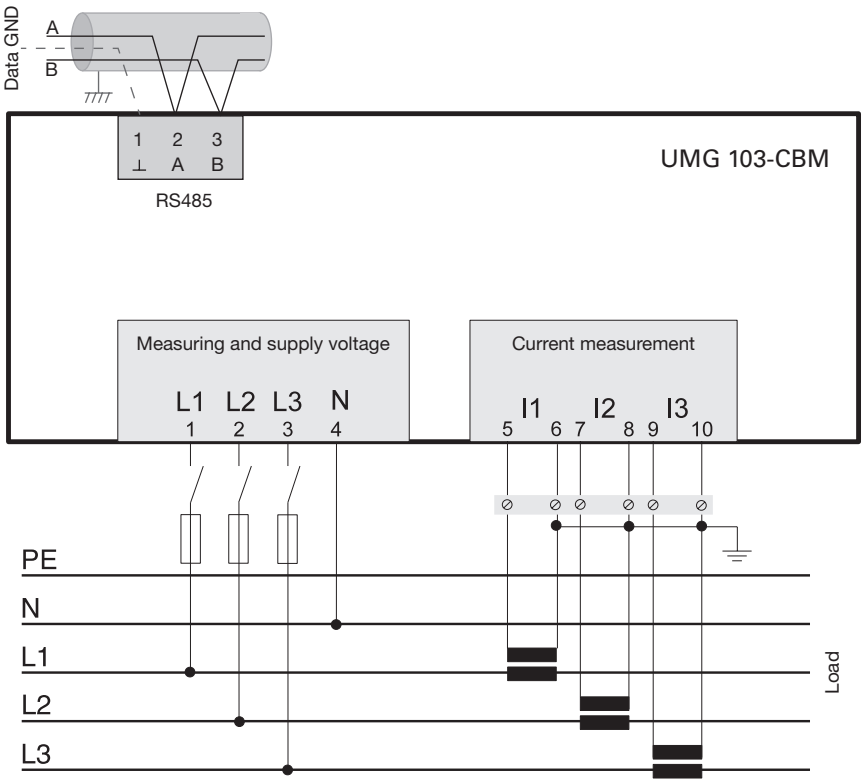
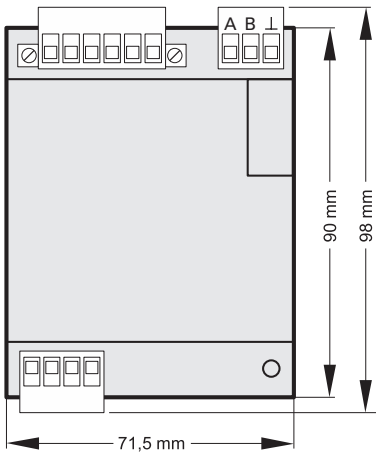
UMG 103-CBM energy meter with memory

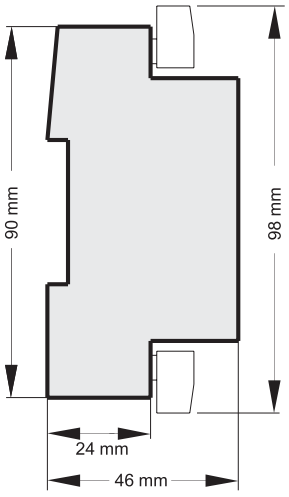
Connection diagram



Dimension diagrams

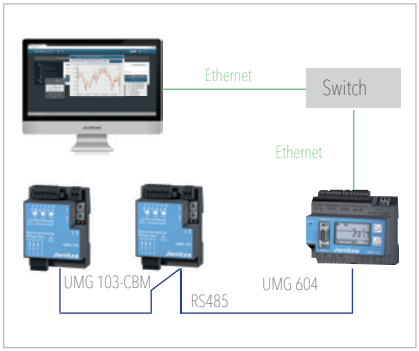


Front view

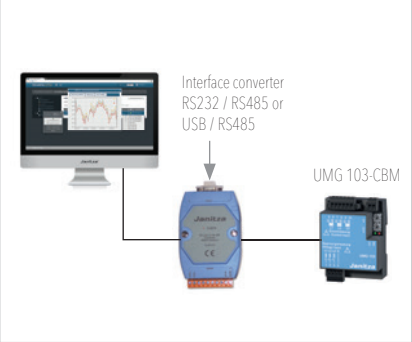


Side view

UMG 103-CBM energy meter with memory



Connection of multiple UMG 103-CBMs to a PC via a UMG 604 (with Ethernet option)



Connection of a UMG 103-CBM to a PC via an interface converter

UMG 103-CBM	Item no. 52.28.001
Auxiliary voltage	
Supply from single phase	115 – 277 V AC (+- 10%), 50/60 Hz
Supply from three phases	80 – 277 V AC (+- 10%), 50/60 Hz
General	
Use in low and medium voltage networks	•
Accuracy of voltage measurement	0.2 %
Accuracy of current measurement	0.5 %
Accuracy of active energy (kWh, .../5 A) measurement	Class 0.5S
Number of measurement points per period	108
Uninterrupted measurement	•
RMS - momentary value	
Current, voltage, frequency	•
Active, reactive and apparent power / total and per phase	•
Power factor / total and per phase	•
Energy measurement	
Active, reactive and apparent energy [L1,L2,L3, ∑ L1-L3]	•
Number of tariffs	4
Recording of the mean values	
Voltage, current / actual and maximum	•
Active, reactive and apparent power / actual and maximum	•
Frequency / actual and maximum	•
Requirement calculation mode (bi-metallic function) / thermal	•
Other measurements	
Operating hours measurement	•
Measurement of the power quality	
Harmonics per order / current	1. – 25th.
Harmonics per order / voltage	1. – 25th.
Distortion factor THD-U in %	•
Distortion factor THD-I in %	•
Current and voltage, positive, zero and negative sequence component	•
Measured data recording	
Current measurement channel	3
Recording period	Up to 144 days
Memory (Flash)	4 MB
Battery	BR1632 A
Clock	•
Online readout with GridVis®	•
Mean, minimum, maximum values	•
Interfaces	
RS485: Autobaud, 9.6 – 115.22 kbps (Screw-type terminal)	•
Protocols	
Modbus RTU	•
Databases (Janitza DB, Derby DB) supported by GridVis®-Basic	•
Manual reports (energy, power quality)	•
Topology views	•
Manual read-out of the measuring devices	•
Graph sets	•
Programming / threshold values / alarm management	
Comparator (2 Groups with 3 comparators each)	•

Janitza®

UMG 103-CBM energy meter with memory

Technical data

Type of measurement	Continuous real effective value measurement up to the 25th harmonic
Nominal voltage, three-phase, 4-conductor	Up to max. 277 / 480 V AC (+ 10%)
Measurement in quadrants	4
Networks	TN, TT

Measured voltage input

Overvoltage category	300 V CAT III
Metering range, voltage L-N, AC (without transformer)	80 - 277 Vrms (+- 10%)
Metering range, voltage L-L, AC (without transformer)	80 - 480 Vrms (+- 10%)
Resolution	0.01 V
Frequency measuring range	45 to 65 Hz
Power consumption	1,5 VA
Measurement surge voltage	4 kV
Sampling rate	5.4 kHz / phase

Measured current input

Rated current	1 / 5 A
Resolution	0.1 mA
Metering range	0.001 - 6 Amps
Overvoltage category	300 V CAT II
Measurement surge voltage	2 kV
Power consumption	approx. 0.2 VA (Ri = 5 mOhm)
Overload for 1 sec.	60 A (sinusoidal)
Sampling rate	5.4 kHz / phase

Mechanical properties

Weight	200 g
Device dimensions in mm (H x W x D)	Approx. 98 x 71.5 x 46
Protection class per EN 60529	IP20
Assembly per IEC EN 60999-1 / DIN EN 50022	35-mm DIN rail
Connecting phase (U / I), Single core, multi-core, fine-stranded Terminal pins, core end sheath	 0.08 to 2.5 mm² 1.5 mm²

Environmental conditions

Temperature range	Operation: K55 (-10 ... +55 °C)
Relative humidity	Operation: 5 to 95 % (at 25 °C)
Operating altitude	0 to 2,000 m above sea level
Pollution degree	2
Mounting position	any

Software GridVis® Basic*1

Online graphs	•

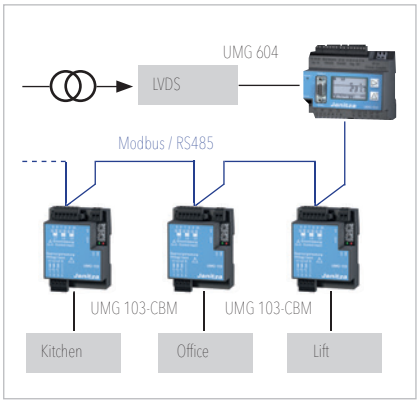
Firmware

Firmware update	Update via GridVis® software. Firmware download (free of charge) from the website: http://www.janitza.de

Comment:
For detailed technical information, please refer to the operation manual and the Modbus address list.

• = included - = not included

*1 Optional additional functions with the packages GridVis®-Professional, GridVis®-Enterprise GridVis®-Service and GridVis®-Ultimate.



Topology example UMG 604 (Master) – UMG 103-CBM (Slave)