



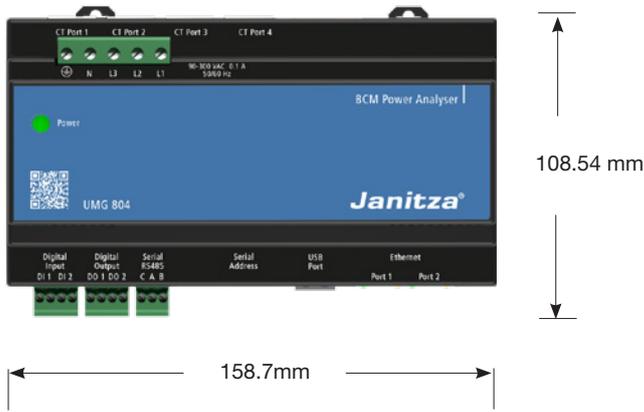
BCM Power Analyser

UMG 804

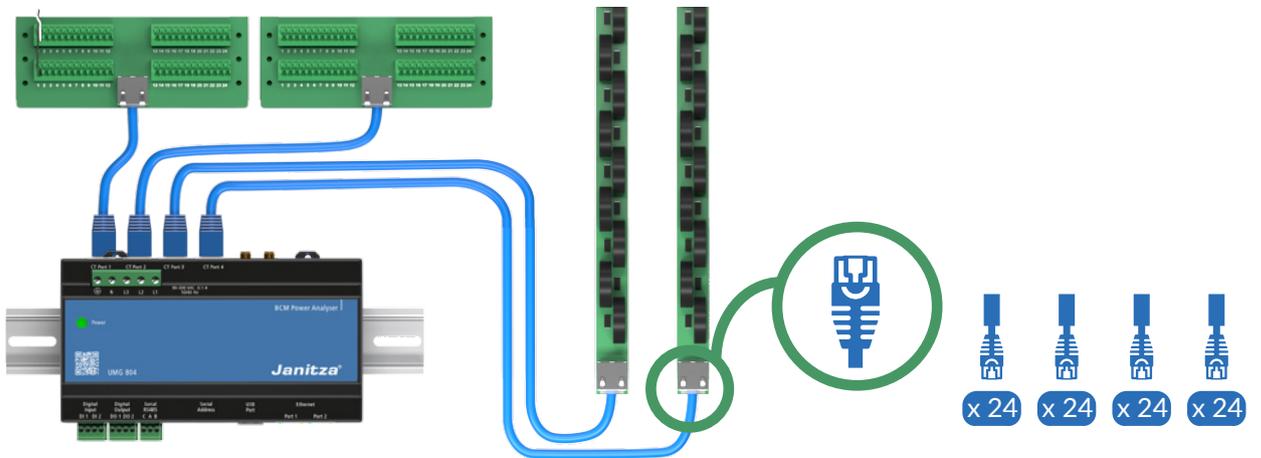
Data sheet

DEVICE VIEWS

Front view



SYSTEM OVERVIEW



TECHNICAL DATA

General	
Device dimensions (approx.)	w=158.7 mm, h=108.5 mm, d=59.2 mm (w=6.248 in, h=4.271 in, d=2.330 in)

Transport and storage	
The following information applies to devices which are transported or stored in the original packaging.	
Temperature	-40° to 70 °C (-40 to 158° F)

Ambient conditions during operation	
The device is intended for weatherproof, fixed installation and must be connected to the ground wire connection! Protection class I in acc. with IEC 60536 (VDE 0106, Part 1).	
Working temperature range	0° to 60 °C (32 to 140 °F)
Relative humidity	< 95% RH (without condensation)
Operating altitude	0 .. 2000 m (6561 ft) max.
Pollution degree	Cat II, pollution degree 2
Mounting position	any orientation
Ventilation	Not required; 3 W heat rejection
Protection against ingress of solid foreign bodies and water	requires secondary enclosure

Supply voltage	
Installations of overvoltage category	internally fused; install external fuse as required by code
Protection of the supply voltage (fuse)	1 A @ 250 / 300 VAC
Nominal range	90 .. 300 VAC line-to-neutral, 50/60 Hz
Operating range	120 .. 240 VAC (50-60 Hz)
Power consumption	<0.1 A @ 277 VAC (< 3W)

Terminal connection capacity (supply voltage)	
Connectable conductors. Only one conductor can be connected per terminal!	
Single core, multi-core, fine-stranded	24-12 AWG / 0.205-3.31 mm ²
Terminal pins, core end sheath	slot screw type
Tightening torque	5.0 Lb-In / 0.56 Nm
Stripping length	5.5 mm (0.22 in) max.

Current measurement	
Rated current	0 .. 32000 A (external current transducer dependant)
Resolution	0.01 A
Metering range	0 .. 32000 A
Measurement range exceeded (overload)	N/A
Crest factor	3.75 @ 100% of 0.333 V signal
Overvoltage category	Cat II
Power consumption	N/A
Overload for 1 s	200%
Sampling rate	2560 Hz

Voltage measurement	
The voltage measurement inputs are suitable for measurements in the following power supply systems	
Three-phase 4-conductor systems with nominal voltages up to	480 VAC
Three-phase 3-conductor systems, unearthed, with nominal voltages up to	277 VAC
From a safety and reliability perspective, the voltage measurement inputs are designed as follows	
Overvoltage category	Cat II
Protection of voltage measurement	Impedance limited plus clamping diodes / MOV
Measurement range L-N	0 .. 277 VAC*
Measurement range L-L	0 .. 480 VAC
Resolution	0.01 VAC
Crest factor	1.9 @ 240 VAC
Impedance	2.5 M Ω
Power consumption	<0.1 A @ 277 VAC (< 3 W)
Sampling rate	40 kHz
Frequency range of the fundamental oscillation - Resolution	40 .. 70 Hz.

Measurement precisions phase angle	0,5 %
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Terminal connection capacity (voltage and current measurement)	
Connectable conductors. Only one conductor can be connected per terminal!	
Single core, multi-core, fine-stranded	16-20 AWG (0.5 .. 1.5 mm)
Tightening torque	n/a (cage connector / push in connector type)
Stripping length	8 mm (0.315 In)

Digital inputs	
Quantity	2

Note: two inputs for dry contacts

Digital outputs	
Quantity	2
Switching voltage	24 V DC
Switching current	100 mA
Cable lenght	screw in terminal block

Terminal connection capacity (digital inputs and outputs)	
Rigid/flexible	24-14 AWG / 0.205-3.31 mm ²
Flexible with core end sheath without plastic sleeve	24-14 AWG / 0.205-3.31 mm ²
Flexible with core end sheath with plastic sleeve	24-14 AWG / 0.205-3.31 mm ²
Tightening torque	5.0 Lb-In / 0.56 Nm
Stripping length	5 mm recommended

RS485 interface x-wire connection	
Protocol	MODBUS-RTU
Transmission rate	9600, 19200, 38400, 57600, 76800 Baud
Termination resistor	120 Ω (consult manual on master device)

Ethernet interface	
Connection	10/100
Function	Supports Modbus output as well as direct polling of HTML web pages from onboard server
Protocols	Modbus TCP/IP, HTTP

Note: dual Ethernet ports to allow for connection of multiple devices without the requirement of switch. REST protocols is supported.

FUNCTION PERFORMANCE CHARACTERISTICS

Function	Symbol	Precision class	Metering range
Total active power	P	Class 0.5	1 .. 100 %
Total reactive power	QA ¹⁾ , Qv ¹⁾	Class 2	1 .. 100 %
Total apparent power	SA, Sv ¹⁾	Class 0.5	1 .. 100 %
Total active energy	Ea	Class 0.5	1 .. 100 %
Total reactive energy	ErA ¹⁾ , ErV ¹⁾	Class 2	1 .. 100 %
Total apparent energy	EapA, EapV ¹⁾	Class 0.5	1 .. 100 %
Frequency	f	±0.01Hz	40 .. 70 Hz
Phase current	I	Class 0.5	1 .. 100 %
Measured neutral conductor current	IN	Class 0.5	1 .. 100 %
Voltage	U L-N	Class 0.5	90 .. 300 V
Voltage	U L-L	Class 0.5	120 .. 480 V
Power factor	PFA, PFV	Class 0.5	+/- 0.5 .. 1.0

¹⁾ Calculation from fundamental oscillation.

Janitza electronics GmbH
Vor dem Polstück 6
35633 Lahnau, Germany
Support Tel. +49 6441 9642-22
Fax +49 6441 9642-30
e-mail: info@janitza.com
www.janitza.com

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