Smart Energy & Power Quality Solutions

BCM Power Analyser

UMG 804

Data sheet

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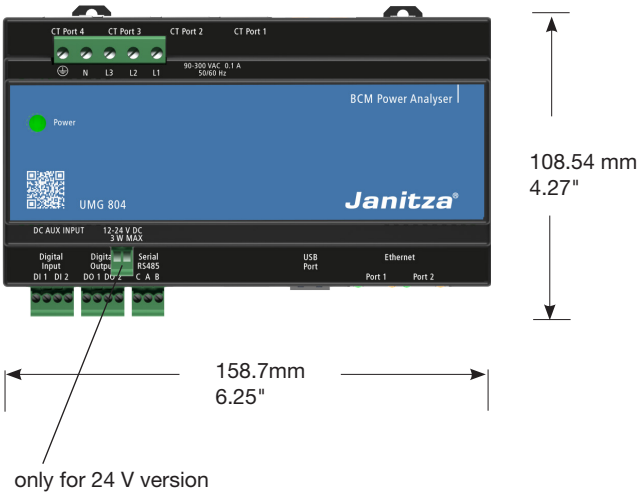
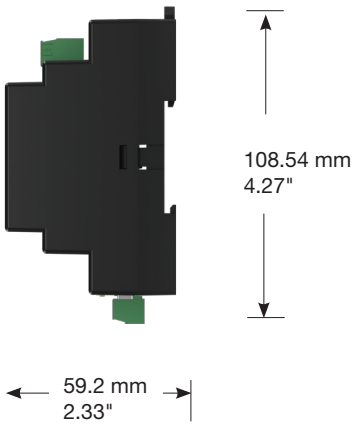
DEVICE VIEWS

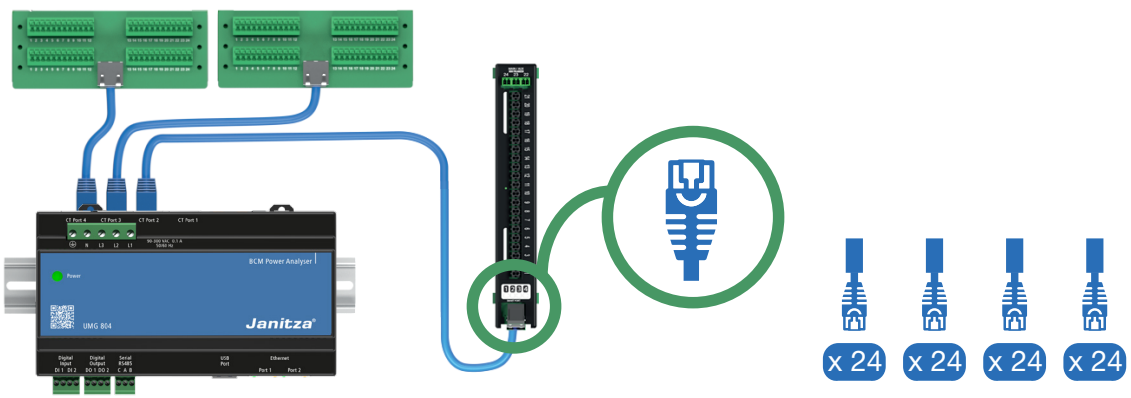
Front view



Side 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)
Horizontal pitch	9 HP

Transport and storage The following information applies to devices which are transported or stored in the original packaging.	
Temperature	-40 °C to 70 °C (-40 °F 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 °C to 60 °C (32 °F to 140 °F)
Relative humidity	< 95 % RH (without condensation)
Operating altitude	0 .. 2000 m (0 ...1.24 mi) max.
Pollution degree	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

AC Power Supply	
Installations of overvoltage category	internally fused; install external fuse as required by code
Protection of the supply voltage (fuse)	1 A @ 300 V AC
Overvoltage category	II, degree 2
Operating range	90 .. 300 V AC (50-60 Hz)
Power consumption	<0.1 A @ 277 V AC (< 3W)
24 V DC Power Supply	
Installations of overvoltage category	internally fused; install external fuse as required by code
Protection of the supply voltage (fuse)	0.5 A @ 24 V DC
Overvoltage category	III, degree 2
Operating range	12 .. 24 V DC
Power consumption	<0.5 A @ 12 .. 24 V (< 3 W)

Terminal connection capacity (AC 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.

Terminal connection capacity (DC supply voltage)	
Rigid/flexible	22-16 AWG / 0.324-1.31 mm^2
Flexible with core end sheath without plastic sleeve	22-16 AWG / 0.324-1.31 mm^2
Flexible with core end sheath with plastic sleeve	22-16 AWG / 0.324-1.31 mm^2
Tightening torque	5.0 Lb-In / 0.56 Nm
Stripping length	5 mm (0.2 in) recommeded

Current measurement on modules	
Rated current	0 .. 600 A (external current transducer dependant)
Resolution	0.01 A
Overload for 1 s	200 %

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	230 V: CAT II	24 V: CAT III
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 MΩ	
Power consumption	<0.1 A @ 277 VAC (< 3 W)	
Sampling rate	40 kHz	
Frequency range of the fundamental oscillation	40 .. 70 Hz.	

Digital inputs	
Quantity	2

Note: two inputs for dry contacts

Digital outputs	
Quantity	2
Switching voltage	30 V DC
Switching current	100 mA maximum
Cable lenght	screw in terminal block

Terminal connection capacity (digital inputs and outputs)	
Rigid/flexible	22-16 AWG / 0.324-1.31 mm^2
Flexible with core end sheath without plastic sleeve	22-16 AWG / 0.324-1.31 mm^2
Flexible with core end sheath with plastic sleeve	22-16 AWG / 0.324-1.31 mm^2
Tightening torque	5.0 Lb-In / 0.56 Nm
Stripping length	5 mm (0.2 in) recommeded

RS485 interface x-wire connection	
Protocol	MODBUS-RTU
Transmission rate	9600, 19200, 38400, 57600, 115200 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, BACnet IP

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

ACCURACY

Measurement uncertainty Measurement uncertainty on the device applies when using the following metering ranges. The measured value must be within the specified limits. The measurement uncertainty is not specified outside of these limits.	
Power/Energy - DIN Rail CT Interface Floating Board - DIN Rail CT Interface Card	IEC 61557-12 Class 0.5; IEC 62053-22 Class 0.5S
Current transformers - CT-SC-010 - CT-SC-012 - CT-SC-024 - CT-SC-036	IEC 61869-10 Class 0.5*
Voltage	± 0.5 % of reading 90 to 277 VAC line-to-neutral
Current	Subject to external CT accuracy
Minimum ON Current	50 mA
Circuit capacity	24 x 4 channels (96 circuits total)

AC SPLIT CORE CURRENT TRANSFORMERS

Specifications
Voltage outputs @ 0.333 V
Frequency 50 Hz - 400 Hz
Operating temperature -40 °C to 70 °C (-40 °F to 158 °F)
Storage temperature -45 °C to 85 °C (-49 °F to 185 °F)
UL certified

Modul	Art. no.	Input Current	Ø mm (in)	Cable lenght m (in)	Accuracy class	Usable for Interface board
CT-SC-010-50-JZ	15.03.170	50 A	10 (0.394)	0.25 (0.394)	0.5*	Floating
CT-SC-010-50	15.03.133	50 A	10 (0.394)	2,0 (78.74)	0.5*	DIN-Rail
CT-SC-010-75-JZ	15.03.130	75 A	10 (0.394)	0.25 (0.394)	0.5*	Floating
CT-SC-010-75	15.03.134	75 A	10 (0.394)	2,0 (78.74)	0.5*	DIN-Rail
CT-SC-012-100-JZ	15.03.131	100 A	12 (0.472)	0.25 (0.394)	0.5*	Floating
CT-SC-012-100	15.03.172	100 A	12 (0.472)	2,0 (78.74)	0.5*	DIN-Rail
CT-SC-024-100	15.03.135	100 A	24 (0.945)	2,0 (78.74)	0.5*	DIN-Rail
CT-SC-024-200	15.03.136	200 A	24 (0.945)	2,0 (78.74)	0.5*	DIN-Rail
CT-SC-024-250	15.03.137	250 A	24 (0.945)	2,0 (78.74)	0.5*	DIN-Rail
CT-SC-036-400	15.03.138	400 A	36 (1.420)	2,0 (78.74)	0.5*	DIN-Rail
CT-SC-036-600	15.03.139	600 A	36 (1.420)	2,0 (78.74)	0.5*	DIN-Rail

* in combination with the UMG 804 and the DIN Rail CT Interface Floating Board / DIN Rail CT Interface Card

Further information can be found in the separate data sheet for the current transformers.

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