

EtherNet/IP

R203-E

3-PHASE ENERGY POWER METER WITH 2 ETHERNET PORTS AND ETHERNET/IP PROTOCOL

Highlights

- **Universal input in voltage, current, TA with A/mV output, TV, Rogowski sensors**
- **Full scale input: 600 Vac (voltage), 5A (TA), TA with voltage output, Rogowski (250 mV)**
- **Output: mA/V**
- **Accuracy Class: 0.2% for voltage/ current; 0.5% for power**
- **Operating temperature: -25..+75°C**
- **Ethernet Daisy Chain connection**
- **Configuration: EDS, Web Server**

The three-phase energy power meter R203-E accepts current measurement inputs for CTs with current/voltage output, TVs and Rogowski sensors (with voltage output up to 333 mV), with single-phase, three-phase 3/4-wire, Aron and Ethernet/IP protocol support. Thanks to the Ethernet interface, a daisy chain connection to the next Ethernet device can be realised, avoiding expensive industrial switches and simplifying wiring. The R203-E returns single-phase and three-phase values of the main electrical quantities: voltage, current, active, reactive, apparent power, frequency, period, power factor and harmonics. The configurable analog output in voltage or current allows the analyser to also be used as a measurement converter. The R203-E also offers measurement and recording of harmonics in voltage/current up to 55th order with THD (total harmonic distortion) calculation.

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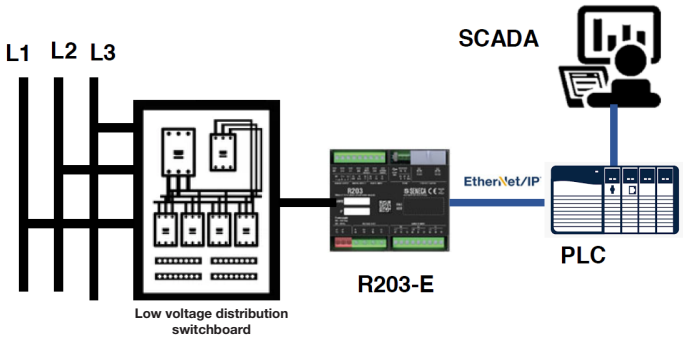
R203-E | 3-PHASE POWER METER WITH ETHERNET/IP

3-PHASE POWER METER - ETHERNET/IP

	R203-2-L-E	R203-2-H-E
	 Three-phase power meter, 2xETH, 10-30 Vdc, Ethernet/IP	 Three-phase power meter, 2xETH, 90-264 Vdc, Ethernet/IP
GENERAL DATA		
Power supply	10..30 Vdc	90-264 Vac (50-60Hz)
Max Power consumption	2.5 W max	
Max Isolation	3.500 Vac	
Installation category	300 V CAT III	600 V CAT III
Insertion mode	Single-phase, three-phase 3/4-wire, Aron	
Front protection degree	IP20	
Accuracy class	0.2% Voltage 0.5% Current	
Mounting	IEC EN60715 35mm DIN rail, wall or panel mounted wiyh screws	
Connections	Screw terminals	
Operating temperature	-25…+65°C	
Storage temperature	-30…+85°C	
Humidity	30% ÷ 90% non condensing	
Dimension	90 x 107 x 32 mm	
Weight	170 g	
Housing	PC/ABS self-extinguishing UL94-V0, black color	
Approvals	CE, UKCA	
MEASUREMENT AND CALCULATION TIMES		
Sampling times	8.000 sps (for voltage/current channels)	
Bus scan time	>2 ms	
RMS value settling time	580..700 ms	
Harmonic tuning time	30s	
PROGRAMMING		
Web Server	Connection diagnostics, firmware update	
GSD/GSDML/ EDS	Configuration, project design and I/O	
COMMUNICATION		
Ethernet comm.		
Ports	2 porte Ethernet 100BaseT	
Speed	100 Mbps	
Supported Protocol	Ethernet/IP	
Connectivity		
Daisy Chain	Yes	
LAN Fault By-Pass	Yes	
MEASUREMENT AND I/O CHANNELS		
Number of channels	1 ingresso di misura, 2DI, 2DO, 1AO	
Measurement Input	PHASE VOLTAGE	
	Up to 600 Vac, frequency 45 ÷ 65Hz	
	Minimum voltage 5 V (F.S. 150 Vac); 20 V (F.S. 600 Vac)	
	TV with output up to 600 Vac to neutral	
	PHASE CURRENT	
	Current input for CT: 1 ÷ 5A full scale	
	Voltage input (mV) for CT with voltage or Rogowski output: up to 250 mV	
	Main frequency: 50 to 60Hz	
	Accuracy: voltmeter : 0.2 %; amperometer: 0.2%, wattmeter: 0.5%	
Analog Output	VOLTAGE 0..10 Vdc, min load resistance 2kΩ CURRENT (active/passive): 0..20, 4..20 mA, max load resistance 500Ω Transmission error: 0.1 % of maximum range Thermal drift: 100 ppm/K	
Digital Inputs	2 digital inputs activated with voltage from 12 to 24V	

CONNECTION SCHEMES

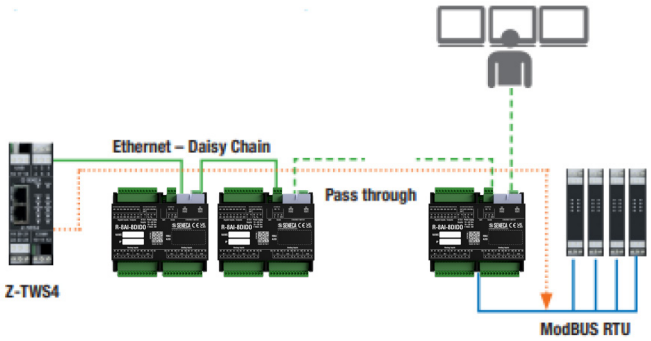
ENERGY MONITORING



SPECIAL FUNCTIONS

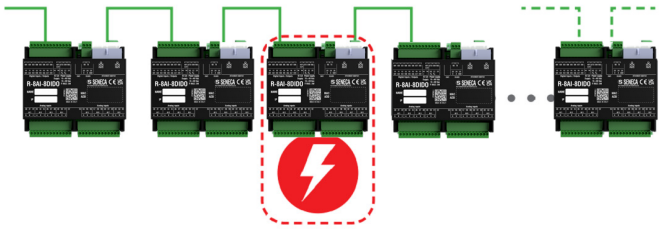
DAISY-CHAIN CONNECTION

REDUCED WIRING, MINIMUM INFRASTRUCTURE COSTS AND INSTALLATION FLEXIBILITY



FAULT BYPASS

MAINTAINING THE ETHERNET CHAIN CONNECTION EVEN IN THE EVENT OF A MODULE FAILURE



ORDER CODES

Codes	Description
R203-2-L-E	Three-phase power meter, 2xETH, 24 Vdc, Ethernet/IP
R203-2-H-E	Three-phase power meter, 2xETH, 90-264 Vac, Ethernet/IP
ROGOWSKI COILS	
RC150-025-100-3M	Rogowski coil L=25cm Øint. 8cm 100mV/1kA-50Hz, cable L 3m
RC150-035-100-3M	Rogowski coil L=35cm Øint. 11cm 100mV/1kA-50Hz, cable L 3m
RC150-040-100-3M	Rogowski coil L=40cm Øint. 12cm 100mV/1kA-50Hz, cable L 3m
RC150-060-100-3M	Rogowski coil L=60cm Øint. 19cm 100mV/1kA-50Hz, cable L 3m
RC150-090-100-3M	Rogowski coil L=90cm Øint. 28cm 100mV/1kA-50Hz, cable L 3m
RC150-180-100-3M	Rogowski coil L=180cm Øint. 57cm 100mV/1kA-50Hz, cable L 3m
RC190-030-333-3M	Rogowski coil L=30cm, Øint. 9cm, 333mV/1kA-50Hz, cable L 3m
RC190-035-333-3M	Rogowski coil L=35cm, Øint. 11cm, 333mV/1kA-50Hz, cable L 3m
RC190-060-333-3M	Rogowski coil L=60cm, Øint. 19cm, 333mV/1kA-50Hz, cable L 3m
RC190-090-333-3M	Rogowski coil L=90cm, Øint. 28cm, 333mV/1kA-50Hz, cable L 3m
RC190-160-333-3M	Rogowski coil L=160cm, Øint. 50cm, 333mV/1kA-50Hz, cable L 3m

22C0344 - Pubblicazione R203-E - 2404_BOBEN - April 2024

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