



# MULTIFUNCTION POWER METERS WITH UNIVERSAL INPUT

## R203 / R204 Series



## R203 / R204 Series MULTIFUNCTION POWER METERS WITH UNIVERSAL INPUT



R203/R204 three-phase power meters accept voltage measurements up to 600 Vac and current measurements for 5A CTs or TVs and Rogowski sensors with voltage outputs up to 250 mV, single-phase, three-phase 3/4-wire, and Aron insertion types. R203/R204 support ModBUS RTU/ASCII/TCP-IP, Profinet, Ethernet/IP, and OPC UA protocols (switchable with FLEX technology). The analyzers have Ethernet ports that can also be used for daisy chain connections with automatic bypass protection. R203 provides an output signal in voltage (0..10Vdc) or current (0/4..20mA), while R204 is UL – CSA certified. Both models also offer measurement and recording of voltage/current harmonics up to the 55th order with THD (total harmonic distortion) calculation. The instruments also operate as Edge/IoT devices (with MQTT protocol), web servers, energy meters, and data loggers for reading key parameters and downloading data and events.



### ALL-IN-ONE MULTIFUNCTION SYSTEM

R203 and R204 are complete solutions for monitoring and optimizing electricity use. It operates as an analyzer, meter, data logger, gateway, and measurement converter. It can also be integrated with MES, ERP, IoT/Cloud platforms, and SSD visualization systems.



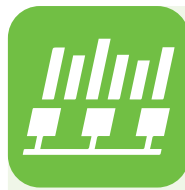
### UNIVERSAL MEASUREMENT INPUT

R203 and R204 are three-phase power meters enabling universal input signals with adjustable scales up to 600 Vac (voltage), 5A(CT with current output), 250 mV (CT with voltage output or Rogowski sensors)



### MEASURED VALUES AND HARMONICS

The analyzers return single-phase and three-phase values of the main electrical quantities, as well as harmonics up to the 55th order and THD. The configurable analog output (R203) allows the analyzer to be used as a measurement converter.



### FIELDBUS

Seneca R203 and R204 power meters support ModBUS RTU/ASCII/TCP-IP, ProfiNet, OPC UA and Ethernet/IP protocols, which can be switched thanks to FLEX technology. The variety of models guarantees maximum flexibility and integration into industrial networks for efficient energy monitoring and management.



### DATALOGGER

With support for MQTT, HTTP, and FTP protocols for data transmission, the R203 and R204 operate as data loggers (up to 30 variables per tag and approximately 55,296 samples) and event loggers with recording of up to 32,768 samples.



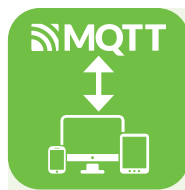
### ENERGY COUNTER

The analyzers are equipped with a digital pulse output and retentive memory for accounting for active, reactive, and apparent energy. Both digital inputs have a filter and a 32-bit incremental counter.



### OPC UA

Thanks to the OPC UA standard, analyzers guarantee interoperability between devices and can provide and exchange data directly with higher-level systems (SCADA, MES, ERP).



### DATA TRANSMISSION VIA MQTT(s), FTP, HTTP(s)

The values acquired by the data logger can be sent directly to the cloud using the MQTT(s), Http(s), or FTP protocols. Transmission via MQTT also includes timestamps and thresholds.T



### ACCURACY

The instruments ensure an accuracy of 0.2% for TA/ voltage current measurements and 0.5% for active/ reactive power and Rogowski currents.



### FLEXIBLE PROGRAMMING

From Web Server integrated in the instrument or EDS configuration file, it is possible to perform basic and advanced settings, diagnostics, configuration of I/O, measurements, communication, data, and logs for easy and intuitive use.



### DIGITAL CERTIFICATES

X.509 authentication of the IoT device at the physical level as part of the standard TLS (Transport Layer Security) connection definition.

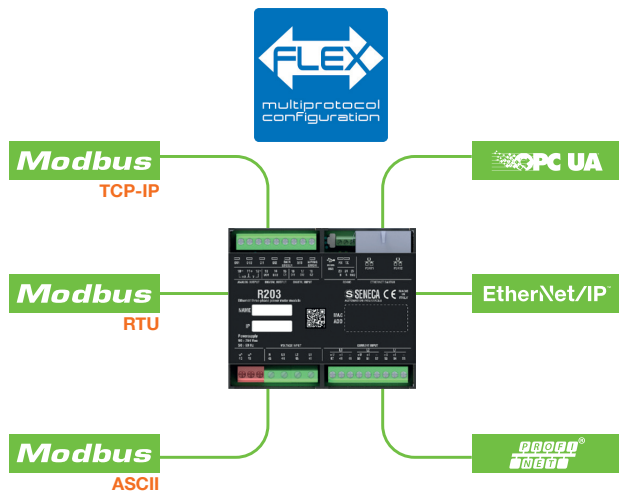


### NETWORKING

From Web Server integrated in the instrument or EDS configuration file, it is possible to perform basic and advanced settings, diagnostics, configuration of I/O, measurements, communication, data, and logs for easy and intuitive use.

## FLEX TECHNOLOGY

**SENECA's FLEX** technology allows a single device to be transformed into multiple communication and analysis devices, reconfigurable between different industrial protocols without having to change hardware.



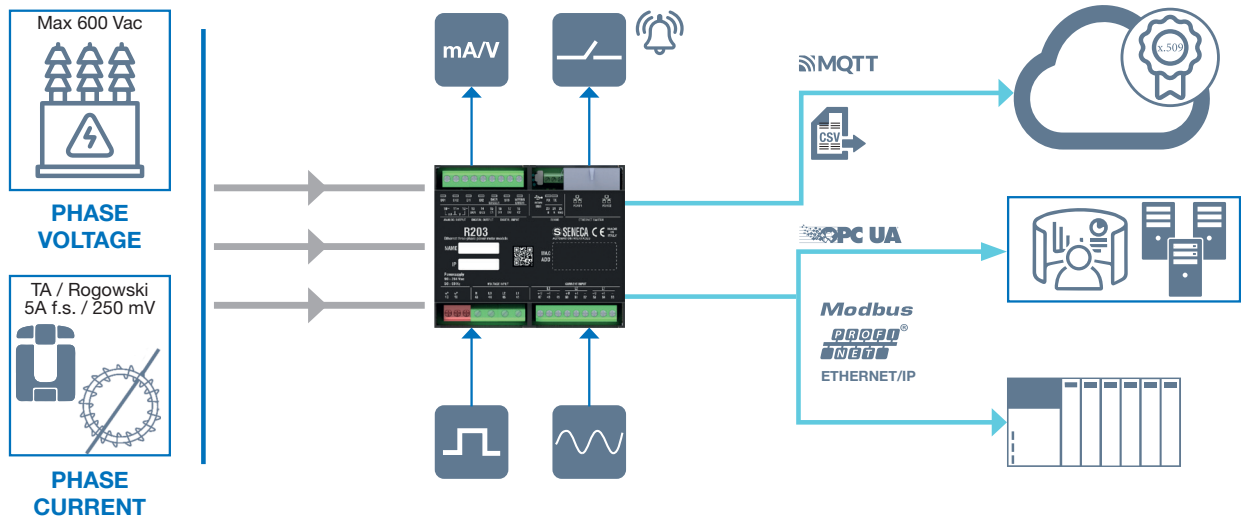
### STRENGTHS

- ✓ A single multifunctional device, reusable for multiple protocols..
- ✓ Easy to update and reduced inventory costs.
- ✓ Simple and immediate protocol change (via software and DIP switch).
- ✓ Wide compatibility (ModBUS, Profinet, Ethernet/IP, OPC UA, etc.).

### RECONFIGURATION PROCEDURE

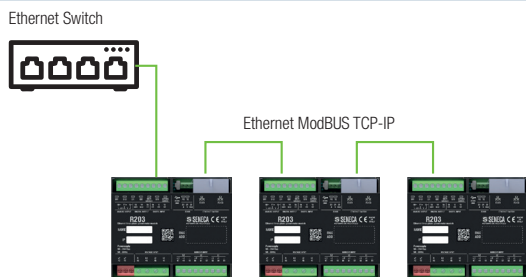
1. Connect the FLEX device to the PC via Ethernet.
2. Start SENECA Discovery Device software.
3. Select the new protocol.
4. Set the DIP Switch to programming mode.
5. Reconfigure and save the new protocol.
6. Restart the device, ready for use.

## CONNECTION DIAGRAM

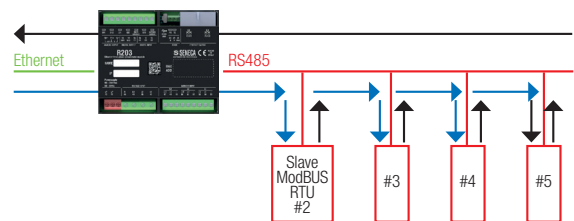


## NETWORKING

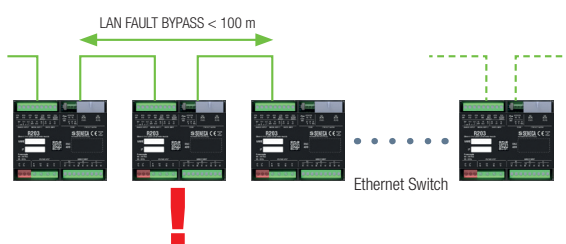
### DAISY CHAIN



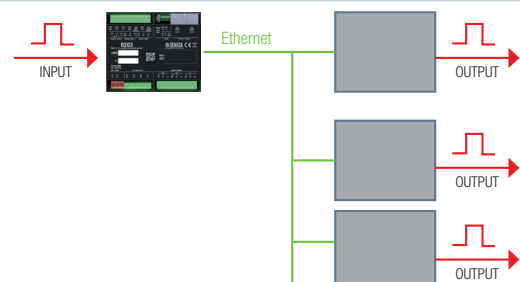
### ModBUS Pass-Through



### Fault By-Pass



### Peer-To-Peer I/P copy



# MULTIFUNCTION POWER METERS WITH UNIVERSAL INPUT - R203 / R204 Series

|                                                              | R203-2-L                                                                                                                                                                                                                                              | R203-2-H                                                                                                                                                                                                                                                                                                                                                                                                                                    | R203-2-L-P                                                                                                                                                                                                                                                 | R203-2-H-P                                                                                                                                                                                                                                                  |
|--------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                              |    |                                                                                                                                                                                          |    |    |
|                                                              | Three-phase network analyzer with 2xETH, 10-30 Vdc, ModBUS RTU/TCP-IP                                                                                                                                                                                 | Three-phase network analyzer with 2xETH, 90-264 Vac, ModBUS RTU/TCP-IP                                                                                                                                                                                                                                                                                                                                                                      | Three-phase network analyzer with 2xETH, 10-30 Vdc, Profinet IO                                                                                                                                                                                            | Three-phase network analyzer with 2xETH, 90-264 Vac, Profinet IO                                                                                                                                                                                            |
| GENERAL DATA                                                 |                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                             |
| Power Supply                                                 | 10-30 Vdc                                                                                                                                                                                                                                             | 90-264 Vac (50-60 Hz)                                                                                                                                                                                                                                                                                                                                                                                                                       | 10-30 Vdc                                                                                                                                                                                                                                                  | 90-264 Vac (50-60 Hz)                                                                                                                                                                                                                                       |
| Max Consumption                                              |                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                             | 2.5 W                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                             |
| Max isolation                                                |                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                             | 3,500 Vac                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                             |
| Status Indicators                                            |                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                             | Input/Output status<br>I/O address status<br>Wiring error<br>Ethernet Data Transit/Connection                                                                                                                                                              |                                                                                                                                                                                                                                                             |
|                                                              |                                                                                                                                                                                                                                                       | RX/TX RS485<br>Datalogger                                                                                                                                                                                                                                                                                                                                                                                                                   | Profinet communication active                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                             |
| Installation category                                        | 300 V CAT III                                                                                                                                                                                                                                         | 600 V CAT III                                                                                                                                                                                                                                                                                                                                                                                                                               | 300 V CAT III                                                                                                                                                                                                                                              | 600 V CAT III                                                                                                                                                                                                                                               |
| Type of insertion / Connection mode                          |                                                                                                                                                                                                                                                       | Single-phase, three-phase 3-wire, three-phase 4-wire, Aron                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                             |
| Front protection level                                       |                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                             | IP20                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                             |
| Precision class                                              |                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                             | 0.5                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                             |
| Flash Memory (data)                                          |                                                                                                                                                                                                                                                       | 8 MB                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                            | -                                                                                                                                                                                                                                                           |
| Mounting                                                     |                                                                                                                                                                                                                                                       | DIN 35mm IEC EN60715 rail mounting, wall or panel mounting with screws                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                             |
| Connections                                                  |                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                             | Screw terminals                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                             |
| Operating Temperature                                        |                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                             | -25...+65°C                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                             |
| Storage temperature                                          |                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                             | -30...+ 85°C                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                             |
| Humidity                                                     |                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                             | 30% ÷ 90% non-condensing                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                             |
| Dimensions                                                   |                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                             | 90 x 107 x 32 mm                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                             |
| Weight                                                       |                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                             | 170 g                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                             |
| Enclosure                                                    |                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                             | Self-extinguishing PC/ABS UL94-V0 material, black color                                                                                                                                                                                                    |                                                                                                                                                                                                                                                             |
| Certifications                                               |                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                             | CE, UKCA                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                             |
| MEASUREMENT AND CALCULATION TIMES                            |                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                             |
| Sampling time                                                |                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                             | 8,000 sps (for voltage/current channels)                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                             |
| Bus scan time                                                |                                                                                                                                                                                                                                                       | 10 ms                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                            | >2 ms                                                                                                                                                                                                                                                       |
| RMS values settling time                                     |                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                             | 580...700 ms                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                             |
| Harmonic update times                                        |                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                             | 30 s                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                             |
| PROGRAMMING                                                  |                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                             |
| EASY SETUP 2                                                 |                                                                                                                                                                                                                                                       | Communication parameters, I/O, datalogging                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                            | -                                                                                                                                                                                                                                                           |
| WEB SERVER                                                   |                                                                                                                                                                                                                                                       | Connection diagnostics, device configuration, alarm and I/O configuration, datalogger, special functions (ModBUS Pass Through), firmware update                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                            | Connection diagnostics, firmware update                                                                                                                                                                                                                     |
| GSD/GSDML/EDS                                                |                                                                                                                                                                                                                                                       | -                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                            | Configuration, project and I/O management                                                                                                                                                                                                                   |
| SPECIAL FEATURES                                             |                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                             |
| Datalogger data                                              |                                                                                                                                                                                                                                                       | Max 30 variables per tag and approx. 65504 samples storable in internal flash; sampling time between 1s and 24h                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                            | -                                                                                                                                                                                                                                                           |
| Event Datalogger                                             |                                                                                                                                                                                                                                                       | Recording up to 4096 samples with respective time tag, threshold, time window, date/time                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                            | -                                                                                                                                                                                                                                                           |
| ENERGY METER                                                 |                                                                                                                                                                                                                                                       | Active/reactive energy metering on digital output<br># 2 incremental 32-bit counters on digital inputs @5kHz                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                            | -                                                                                                                                                                                                                                                           |
| Integrated monitoring system                                 |                                                                                                                                                                                                                                                       | Configuration, viewing, and simultaneous monitoring on SSD for up to 40 units connected in daisy-chain mode                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                            | -                                                                                                                                                                                                                                                           |
| COMMUNICATION                                                |                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                             |
| RS485 / ModBUS RTU                                           |                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                             |
| Interfaces                                                   |                                                                                                                                                                                                                                                       | #1 RS485 port                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                            | -                                                                                                                                                                                                                                                           |
| Protocol                                                     |                                                                                                                                                                                                                                                       | ModBUS RTU slave                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                            | -                                                                                                                                                                                                                                                           |
| Distance                                                     |                                                                                                                                                                                                                                                       | Up to 1,200 m                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                            | -                                                                                                                                                                                                                                                           |
| Speed                                                        |                                                                                                                                                                                                                                                       | 1,200...115,200 baud                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                            | -                                                                                                                                                                                                                                                           |
| Connections                                                  |                                                                                                                                                                                                                                                       | Max 128 Seneca device nodes                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                            | -                                                                                                                                                                                                                                                           |
| Ethernet / Profinet                                          |                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                             |
| Ports                                                        |                                                                                                                                                                                                                                                       | #2 Ethernet 100BaseT ports                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                             |
| Speed                                                        |                                                                                                                                                                                                                                                       | 100 Mbps                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                             |
| Protocols                                                    |                                                                                                                                                                                                                                                       | ModBUS TCP-IP (switchable with FLEX technology), Seneca P2P I/O Mirror with broadcast (UDP based)                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                            | Profinet IO (switchable with FLEX technology)                                                                                                                                                                                                               |
| Multi-protocol Configuration (ModBUS, Profinet, Ethernet/IP) |                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                             | yes                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                             |
| CONNECTIVITY                                                 |                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                             |
| Daisy Chain                                                  |                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                             | x                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                             |
| LAN Fault By-Pass                                            |                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                             | x                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                             |
| Peer-To-Peer                                                 |                                                                                                                                                                                                                                                       | x                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                            | -                                                                                                                                                                                                                                                           |
| ModBUS Pass-Through                                          |                                                                                                                                                                                                                                                       | x                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                            | -                                                                                                                                                                                                                                                           |
| IT/IIoT Protocols                                            |                                                                                                                                                                                                                                                       | http(s), Ftp, MQTT(s)                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                            | -                                                                                                                                                                                                                                                           |
| MEASUREMENTS AND I/O                                         |                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                             |
| Number of channels                                           |                                                                                                                                                                                                                                                       | #1 measurement input, #2 DI (Digital Inputs), #2 DO (Digital Outputs), #1 AO (Analog Output)                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                             |
| Measurement Input                                            |                                                                                                                                                                                                                                                       | PHASE VOLTAGE<br>Up to 600 Vac, frequency 45 ÷ 65 Hz / Minimum voltage: 5 V (Full Scale 150 Vac); 20 V (Full Scale 600 Vac) / Voltage Transformer (VT) output up to 600 Vac relative to neutral<br>PHASE CURRENT<br>Current input for CT (Current Transformer): 1 ÷ 5A full scale / Voltage input (mV) for CT with voltage output or Rogowski: up to 250 mV / Network Frequency: 50 ÷ 60Hz Voltmeter: 0.2% / Ammeter: 0.2%, Wattmeter: 0.5% |                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                             |
| Analog output                                                |                                                                                                                                                                                                                                                       | VOLTAGE OUTPUT 0...10 Vdc, minimum load resistance: 2 kΩ<br>CURRENT OUTPUT (active/passive): 0...20, 4...20 mA, maximum load resistance: 500 Ω<br>Transmission Error: 0.1% of the maximum range<br>Thermal Drift: 100 ppm/K                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                             |
| Digital Inputs                                               |                                                                                                                                                                                                                                                       | Digital Inputs: #2, activated by 12 to 24V                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                             |
| DIGITAL OUTPUTS                                              |                                                                                                                                                                                                                                                       | Digital Outputs: #2, capacity: I <sub>max</sub> = 50 mA, V <sub>max</sub> = 28V                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                             |

Technical data and diagrams in this document are indicative and not binding.

|                                     | R203-2-L-E                                                                                                                                   | R203-2-H-E                                                                                                                                   | R203-2-L-U                                                                                                                               | R203-2-H-U                                                                                                                                |
|-------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------|
|                                     | <div><div><div>ETHERNET/IP</div><div>FLEX</div></div></div> | <div><div><div>ETHERNET/IP</div><div>FLEX</div></div></div> | <div><div><div>OPC UA</div><div>FLEX</div></div></div> | <div><div><div>OPC UA</div><div>FLEX</div></div></div> |
|                                     | Three-phase Network Analyzer,<br>2xETH, 10-30 Vdc, OPC UA                                                                                    | Three-phase Network Analyzer,<br>2xETH, 90-264 OPC UA                                                                                        | Three-phase Network Analyzer,<br>2xETH, 10-30 Vdc, OPC UA                                                                                | Three-phase Network Analyzer,<br>2xETH, 90-264 OPC UA                                                                                     |
| GENERAL DATA                        |                                                                                                                                              |                                                                                                                                              |                                                                                                                                          |                                                                                                                                           |
| Power Supply                        | 10-30 Vdc                                                                                                                                    | 90-264 Vac (50-60 Hz)                                                                                                                        | 10-30 Vdc                                                                                                                                | 90-264 Vac (50-60 Hz)                                                                                                                     |
| Max Consumption                     | 2.5 W                                                                                                                                        |                                                                                                                                              |                                                                                                                                          |                                                                                                                                           |
| Max isolation                       | 3,500 Vac                                                                                                                                    |                                                                                                                                              |                                                                                                                                          |                                                                                                                                           |
| Status Indicators                   | Input/Output Status, I/O address status, wiring error, Ethernet data transit/connection, active Ethernet communication,                      |                                                                                                                                              |                                                                                                                                          |                                                                                                                                           |
| Installation category               | 300 V CAT III                                                                                                                                | 600 V CAT III                                                                                                                                | 300 V CAT III                                                                                                                            | 600 V CAT III                                                                                                                             |
| Type of insertion / Connection mode | Single-phase, three-phase 3-wire, three-phase 4-wire, Aron                                                                                   |                                                                                                                                              |                                                                                                                                          |                                                                                                                                           |
| Front protection level              | IP20                                                                                                                                         |                                                                                                                                              |                                                                                                                                          |                                                                                                                                           |
| Precision class                     | 0.5                                                                                                                                          |                                                                                                                                              |                                                                                                                                          |                                                                                                                                           |
| Mounting                            | DIN 35mm IEC EN60715 rail mounting, wall or panel mounting with screws                                                                       |                                                                                                                                              |                                                                                                                                          |                                                                                                                                           |
| Connections                         | Screw terminals                                                                                                                              |                                                                                                                                              |                                                                                                                                          |                                                                                                                                           |
| Operating Temperature               | -25...+65°C                                                                                                                                  |                                                                                                                                              |                                                                                                                                          |                                                                                                                                           |
| Storage temperature                 | -30...+ 85°C                                                                                                                                 |                                                                                                                                              |                                                                                                                                          |                                                                                                                                           |
| Humidity                            | 30% ÷ 90% non-condensing                                                                                                                     |                                                                                                                                              |                                                                                                                                          |                                                                                                                                           |
| Dimensions                          | 90 x 107 x 32 mm                                                                                                                             |                                                                                                                                              |                                                                                                                                          |                                                                                                                                           |
| Weight                              | 170 g                                                                                                                                        |                                                                                                                                              |                                                                                                                                          |                                                                                                                                           |
| Enclosure                           | Self-extinguishing PC/ABS UL94-V0 material, black color                                                                                      |                                                                                                                                              |                                                                                                                                          |                                                                                                                                           |
| Certifications                      | CE, UKCA                                                                                                                                     |                                                                                                                                              |                                                                                                                                          |                                                                                                                                           |
| MEASUREMENT AND CALCULATION TIMES   |                                                                                                                                              |                                                                                                                                              |                                                                                                                                          |                                                                                                                                           |
| Sampling time                       | 8,000 sps (for voltage/current channels)                                                                                                     |                                                                                                                                              |                                                                                                                                          |                                                                                                                                           |
| Bus scan time                       | >2 ms                                                                                                                                        |                                                                                                                                              | >10 ms                                                                                                                                   |                                                                                                                                           |
| RMS values settling time            | 580..700 ms                                                                                                                                  |                                                                                                                                              |                                                                                                                                          |                                                                                                                                           |
| Harmonic update times               | 30s                                                                                                                                          |                                                                                                                                              |                                                                                                                                          |                                                                                                                                           |
| PROGRAMMING                         |                                                                                                                                              |                                                                                                                                              |                                                                                                                                          |                                                                                                                                           |
| WEB SERVER                          | Connection diagnostics, firmware update                                                                                                      |                                                                                                                                              | firmware diagnostics, device configuration, firmware update                                                                              |                                                                                                                                           |
| GSD/GSDML/EDS                       | Configuration, project and I/O management                                                                                                    |                                                                                                                                              | -                                                                                                                                        | -                                                                                                                                         |
| INTERFACES                          |                                                                                                                                              |                                                                                                                                              |                                                                                                                                          |                                                                                                                                           |
| Ports                               | #2 Ethernet 100BaseT ports                                                                                                                   |                                                                                                                                              |                                                                                                                                          |                                                                                                                                           |
| Speed                               | 100 Mbps                                                                                                                                     |                                                                                                                                              |                                                                                                                                          |                                                                                                                                           |
| Protocols                           | Ethernet/IP                                                                                                                                  |                                                                                                                                              | OPC UA Server                                                                                                                            |                                                                                                                                           |
| Connectivity                        | Daisy Chain, LAN Fault By-Pass                                                                                                               |                                                                                                                                              |                                                                                                                                          |                                                                                                                                           |
| MEASUREMENTS AND I/O                |                                                                                                                                              |                                                                                                                                              |                                                                                                                                          |                                                                                                                                           |
| Number of channels                  | #1 measurement input, #2 DI (Digital Inputs), #2 DO (Digital Outputs), #1 AO (Analog Output)                                                 |                                                                                                                                              |                                                                                                                                          |                                                                                                                                           |
| Voltage Measurement Input           | Up to 600 Vac, frequency: 45 ÷ 65 Hz                                                                                                         |                                                                                                                                              |                                                                                                                                          |                                                                                                                                           |
|                                     | Minimum voltage 5 V (Full Scale 150 Vac); 20 V (Full Scale 600 Vac)                                                                          |                                                                                                                                              |                                                                                                                                          |                                                                                                                                           |
|                                     | Voltage Transformer (VT) output up to 600 Vac relative to neutral                                                                            |                                                                                                                                              |                                                                                                                                          |                                                                                                                                           |
| Current Measurement Input           | Current input for CT (Current Transformer): 1 ÷ 5A full scale                                                                                |                                                                                                                                              |                                                                                                                                          |                                                                                                                                           |
|                                     | Voltage input (mV) for CT with voltage output or Rogowski: up to 250 mV                                                                      |                                                                                                                                              |                                                                                                                                          |                                                                                                                                           |
|                                     | Network Frequency: 50 ÷ 60Hz                                                                                                                 |                                                                                                                                              |                                                                                                                                          |                                                                                                                                           |
|                                     | Accuracy: Volt Meter: 0.2%; Ampere Meter: 0.2%, Wattmeter: 0.5%                                                                              |                                                                                                                                              |                                                                                                                                          |                                                                                                                                           |
| Analog output                       | VOLTAGE 0..10 Vdc, min load resistance 2kΩ                                                                                                   |                                                                                                                                              |                                                                                                                                          |                                                                                                                                           |
|                                     | CURRENT (active/passive): 0..20, 4..20 mA, maximum load resistance: 500 Ω                                                                    |                                                                                                                                              |                                                                                                                                          |                                                                                                                                           |
|                                     | Transmission Error: 0.1% of the maximum range                                                                                                |                                                                                                                                              |                                                                                                                                          |                                                                                                                                           |
|                                     | Thermal drift: 100 ppm/K                                                                                                                     |                                                                                                                                              |                                                                                                                                          |                                                                                                                                           |
| Digital Inputs                      | Digital Inputs: #2, activated by 12 to 24V                                                                                                   |                                                                                                                                              |                                                                                                                                          |                                                                                                                                           |
| DIGITAL OUTPUTS                     | Digital Outputs: #2, capacity: I <sub>max</sub> = 50 mA, V <sub>max</sub> = 28V                                                              |                                                                                                                                              |                                                                                                                                          |                                                                                                                                           |

Technical data and diagrams in this document are indicative and not binding.

# MULTIFUNCTION POWER METERS WITH UNIVERSAL INPUT - R203 / R204 Series

|                                   | R204-2-L                                                                                                                                                                                                        | R204-2-L-P                                                                        | R204-2-L-E                                                                         | R204-2-L-U                                                                          |
|-----------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
|                                   |                                                                                                                                |  |  |  |
|                                   | Three-phase power meter, 2xETH,10-30 Vdc, ModBUS RTU/ TCP-IP, UL                                                                                                                                                | Three-phase power meter, 2xETH,10-30 Vdc, Profinet IO, UL                         | Three-phase power meter, 2xETH,10-30 Vdc, Ethernet/IP, UL                          | Three-phase power meter, 2xETH,10-30 Vdc, OPC UA, UL                                |
| GENERAL DATA                      |                                                                                                                                                                                                                 |                                                                                   |                                                                                    |                                                                                     |
| Power supply                      | 10-30 Vdc                                                                                                                                                                                                       |                                                                                   |                                                                                    |                                                                                     |
| Maximum power consumption         | 2.5 W                                                                                                                                                                                                           |                                                                                   |                                                                                    |                                                                                     |
| Maximum insulation                | 3.500 Vac                                                                                                                                                                                                       |                                                                                   |                                                                                    |                                                                                     |
| Status indicators                 | Input / Output status<br>I/O address status<br>Wiring error<br>Ethernet data transit<br>Active Ethernet communication                                                                                           |                                                                                   |                                                                                    |                                                                                     |
|                                   | Datalogger<br>Rx/Tx485                                                                                                                                                                                          |                                                                                   |                                                                                    |                                                                                     |
| Installation category             | 300 V CAT III                                                                                                                                                                                                   |                                                                                   |                                                                                    |                                                                                     |
| Insertion                         | Monofase, trifase 3 fili, trifase 4 fili, Aron                                                                                                                                                                  |                                                                                   |                                                                                    |                                                                                     |
| Grado di protezione frontale      | IP20                                                                                                                                                                                                            |                                                                                   |                                                                                    |                                                                                     |
| Protection degree                 | 1; Active energy measurement in accordance with EN 62053-21                                                                                                                                                     |                                                                                   |                                                                                    |                                                                                     |
| Flash Memory (dati)               | 8 MB                                                                                                                                                                                                            | -                                                                                 | -                                                                                  | -                                                                                   |
| Mounting                          | DIN 35mm IEC EN60715 guide, wall or panel mounting with 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                                                                                                                                                                                                           |                                                                                   |                                                                                    |                                                                                     |
| Case                              | UL94-V0 self-extinguishing PC/ABS, black color                                                                                                                                                                  |                                                                                   |                                                                                    |                                                                                     |
| Approvals                         | CE, UKCA, UL                                                                                                                                                                                                    |                                                                                   |                                                                                    |                                                                                     |
| MEASUREMENT AND CALCULATION TIMES |                                                                                                                                                                                                                 |                                                                                   |                                                                                    |                                                                                     |
| Sampling times                    | 8.000 sps (for volyage / current channels)                                                                                                                                                                      |                                                                                   |                                                                                    |                                                                                     |
| Bus scan time                     | 10 ms                                                                                                                                                                                                           | >2 ms                                                                             |                                                                                    | >10 ms                                                                              |
| RMS value settling time           | 580..700 ms                                                                                                                                                                                                     |                                                                                   |                                                                                    |                                                                                     |
| Harmonic update times             | 30 s                                                                                                                                                                                                            |                                                                                   |                                                                                    |                                                                                     |
| PROGRAMMING                       |                                                                                                                                                                                                                 |                                                                                   |                                                                                    |                                                                                     |
| Web Server                        | Connection diagnostics, device configuration, alarm and I/O configuration, data logger, special functions (ModBUS Pass Through), firmware update                                                                | Connection diagnostics, device configuration, firmware update                     |                                                                                    |                                                                                     |
| GSD/GSDML/ EDS                    | -                                                                                                                                                                                                               | Configuration, project management, and I/O                                        |                                                                                    | -                                                                                   |
| SPECIAL FUNCTIONS                 |                                                                                                                                                                                                                 |                                                                                   |                                                                                    |                                                                                     |
| Data logger                       | Max 30 variables per tag and approximately 65,504 samples storable in internal flash memory; sampling time between 1s and 24h                                                                                   | -                                                                                 | -                                                                                  | -                                                                                   |
| Event logger                      | Recording of up to 4,096 samples with relative time tag, threshold, time window, date/time                                                                                                                      | -                                                                                 | -                                                                                  | -                                                                                   |
| Energy meter                      | Active energy, reactive energy, and digital output energy metering 2 x 32-bit incremental meters on digital inputs @5kHz                                                                                        | -                                                                                 | -                                                                                  | -                                                                                   |
| COMMUNICATION                     |                                                                                                                                                                                                                 |                                                                                   |                                                                                    |                                                                                     |
| RS485 / ModBUS RTU                |                                                                                                                                                                                                                 |                                                                                   |                                                                                    |                                                                                     |
| Interfaces                        | Nr.1 RS485 port                                                                                                                                                                                                 | -                                                                                 | -                                                                                  | -                                                                                   |
| Protocol                          | ModBUS RTU Slave                                                                                                                                                                                                | -                                                                                 | -                                                                                  | -                                                                                   |
| Distance                          | Up to 1,200 m                                                                                                                                                                                                   | -                                                                                 | -                                                                                  | -                                                                                   |
| Speed                             | 1,200..115,200 baud                                                                                                                                                                                             | -                                                                                 | -                                                                                  | -                                                                                   |
| Connections                       | Max 128 Seneca device nodes                                                                                                                                                                                     | -                                                                                 | -                                                                                  | -                                                                                   |
| Ethernet                          |                                                                                                                                                                                                                 |                                                                                   |                                                                                    |                                                                                     |
| Ports                             | Nr.2 Ethernet 100BaseT ports                                                                                                                                                                                    |                                                                                   |                                                                                    |                                                                                     |
| Protocols                         | ModBUS TCP-IP, Seneca P2P I/O Mirror with broadcast (UDP based)                                                                                                                                                 | Profinet IO                                                                       | Ethernet/IP                                                                        | OPC-UA SERVER                                                                       |
| Connectivity                      | Daisy Chain, LAN Fault By-Pass, Peer-To-Peer, ModBUS Pass Through                                                                                                                                               | Daisy Chain, LAN Fault By-Pass                                                    | Daisy Chain, LAN Fault By-Pass                                                     | Daisy Chain, LAN Fault By-Pass                                                      |
| FLEX (protocol switching)         | Daisy Chain, LAN Fault By-Pass, Peer-To-Peer, ModBUS Pass Through                                                                                                                                               | Daisy Chain, LAN Fault By-Pass                                                    | Daisy Chain, LAN Fault By-Pass                                                     | Daisy Chain, LAN Fault By-Pass                                                      |
| IT/IIoT protocols                 | Yes                                                                                                                                                                                                             |                                                                                   |                                                                                    |                                                                                     |
| Protocol IT/IIoT                  | http(s), Ftp, MQTT(s)                                                                                                                                                                                           | -                                                                                 | -                                                                                  | -                                                                                   |
| MEASUREMENTS AND I/O              |                                                                                                                                                                                                                 |                                                                                   |                                                                                    |                                                                                     |
| Number of channels                | Nr.1 measurement input, No. 2 DI, No. 2 DO                                                                                                                                                                      |                                                                                   |                                                                                    |                                                                                     |
| Voltage measurement input         | Up to 600 Vac, frequency 45 ÷ 65Hz<br>Minimum voltage 5 V (F.S. 150 Vac); 20 V (F.S. 600 Vac)<br>TV with output up to 600 Vac relative to neutral                                                               |                                                                                   |                                                                                    |                                                                                     |
| Current measurement input         | Current input for CT: 1 to 5A full scale<br>Voltage input (mV) for CT with voltage output or Rogowski: up to 250 mV<br>Mains frequency: 50 to 60Hz<br>Accuracy: voltmeter: 0.2%; ammeter: 0.2%, wattmeter: 0.5% |                                                                                   |                                                                                    |                                                                                     |
| Digital inputs                    | 2 digital inputs that can be activated with voltage from 12 to 24V                                                                                                                                              |                                                                                   |                                                                                    |                                                                                     |
| Digital outputs                   | 2 digital outputs, capacity Imax = 50 mA Vmax = 28V                                                                                                                                                             |                                                                                   |                                                                                    |                                                                                     |

I dati tecnici e gli schemi su questo documento sono indicativi e non vincolanti.



## MAIN MEASUREMENTS

### INSTANTANEOUS VALUES

|                                            |                                             |
|--------------------------------------------|---------------------------------------------|
| Voltage                                    | VL1-L2, VL2-L3, VL3-L1, VL1-N, VL2-N, VL3-N |
| Current (+/-)                              | IL1, IL2, IL3, IN                           |
| Active Power (+/-)                         | P1, P2, P3, Ptot                            |
| Reactive Power (+/-)                       | Q1, Q2, Q3 and Qtot                         |
| Apparent Power (+/-)                       | S1, S2, S3 and Stot                         |
| Power Factor (inductive and capacitive)    | PF1, PF2, PF3 and PFtot                     |
| Frequency                                  | F1, F2, F3                                  |
| Period                                     | PER1, PER2, PER3                            |
| Voltage-Current Phase Angle [°]            | Delta VIL1, VIL2, VIL3                      |
| Line Voltage Phase Angle [°]               | Delta VL1-L2, VL2-L3, VL3-L1                |
| Total Harmonic Distortion of Voltage (THD) | THD % VL1-N, VL2-N, VL3-N                   |
| Total Harmonic Distortion of Current (THD) | THD % IL1, IL2, IL3                         |

### AVERAGE VALUES IN DEMAND TIME

|                                                 |                                                                                       |
|-------------------------------------------------|---------------------------------------------------------------------------------------|
| Average Voltage                                 | VL1-N, VL2-N, VL3-N, VL1-N MIN, VL1-N MAX, VL2-N MIN, VL2-N MAX, VL3-N MIN, VL3-N MAX |
| Average Current (+/-)                           | IL1, IL2, IL3, IL1 MIN, IL1 MAX, IL2 MIN, IL2 MAX, IL3 MIN, IL3 MAX                   |
| Average Active Power (+/-)                      | P1, P2, P3, P1 MIN, P1 MAX, P2 MIN, P2 MAX, P3 MIN, P3 MAX, Ptot                      |
| Average Reactive Power (+/-)                    | Q1, Q2, Q3, Q1 MIN, Q1 MAX, Q2 MIN, Q2 MAX, Q3 MIN, Q3 MAX, Qtot                      |
| Average Apparent Power (+/-)                    | S1, S2, S3, S1 MIN, S1 MAX, S2 MIN, S2 MAX, S3 MIN, S3 MAX, Stot                      |
| Average Power Factor (inductive and capacitive) | PF1, PF2, PF3, PF1 MIN, PF1 MAX, PF2 MIN, PF2 MAX, PF3 MIN, PF3 MAX, PFtot            |

### MAXIMUM / MINIMUM / ABSOLUTE VALUES

|                                         |                                                                  |
|-----------------------------------------|------------------------------------------------------------------|
| Voltage                                 | VL1-N MIN, VL1-N MAX, VL2-N MIN, VL2-N MAX, VL3-N MIN, VL3-N MAX |
| Current (+/-)                           | IL1 MIN, IL1 MAX, IL2 MIN, IL2 MAX, IL3 MIN, IL3 MAX             |
| Active Power (+/-)                      | P1 MIN, P1 MAX, P2 MIN, P2 MAX, P3 MIN, P3 MAX, Ptot             |
| Reactive Power (+/-)                    | Q1 MIN, Q1 MAX, Q2 MIN, Q2 MAX, Q3 MIN, Q3 MAX, Qtot             |
| Apparent Power (+/-)                    | S1 MIN, S1 MAX, S2 MIN, S2 MAX, S3 MIN, S3 MAX, Stot             |
| Power Factor (inductive and capacitive) | PF1 MIN, PF1 MAX, PF2 MIN, PF2 MAX, PF3 MIN, PF3 MAX, PFtot      |

### Counters

|                        |                                          |
|------------------------|------------------------------------------|
| Active Energy [Wh]     | ACTIVE ENERGY IMPORTED L1 (+) Q1/Q4      |
|                        | ACTIVE ENERGY IMPORTED L2 (+) Q1/Q4      |
|                        | ACTIVE ENERGY IMPORTED L3 (+) Q1/Q4      |
|                        | ACTIVE ENERGY EXPORTED L1 (-) Q2/Q3      |
|                        | ACTIVE ENERGY EXPORTED L2 (-) Q2/Q3      |
|                        | ACTIVE ENERGY EXPORTED L3 (-) Q2/Q3      |
|                        | ACTIVE ENERGY IMPORTED TOTAL (+) Q1/Q4   |
|                        | ACTIVE ENERGY EXPORTED TOTAL (-) Q2/Q3   |
|                        | ACTIVE ENERGY BALANCE TOTAL (+/-)        |
| REACTIVE ENERGY [VARH] | REACTIVE ENERGY IMPORTED L1 (+) Q1/Q2    |
|                        | REACTIVE ENERGY IMPORTED L2 (+) Q1/Q2    |
|                        | REACTIVE ENERGY IMPORTED L3 (+) Q1/Q2    |
|                        | REACTIVE ENERGY EXPORTED L1 (-) Q3/Q4    |
|                        | REACTIVE ENERGY EXPORTED L2 (-) Q3/Q4    |
|                        | REACTIVE ENERGY EXPORTED L3 (-) Q3/Q4    |
|                        | REACTIVE ENERGY IMPORTED L1 (+) Q1       |
|                        | REACTIVE ENERGY IMPORTED L2 (+) Q1       |
|                        | REACTIVE ENERGY IMPORTED L3 (+) Q1       |
|                        | REACTIVE ENERGY IMPORTED L1 (-) Q2       |
|                        | REACTIVE ENERGY IMPORTED L2 (-) Q2       |
|                        | REACTIVE ENERGY IMPORTED L3 (-) Q2       |
|                        | REACTIVE ENERGY IMPORTED L1 (+) Q3       |
|                        | REACTIVE ENERGY IMPORTED L2 (+) Q3       |
|                        | REACTIVE ENERGY IMPORTED L3 (+) Q3       |
|                        | REACTIVE ENERGY IMPORTED L1 (-) Q4       |
|                        | REACTIVE ENERGY IMPORTED L2 (-) Q4       |
|                        | REACTIVE ENERGY IMPORTED L3 (-) Q4       |
|                        | REACTIVE ENERGY IMPORTED TOTAL (+) Q1/Q2 |
|                        | REACTIVE ENERGY EXPORTED TOTAL (-) Q3/Q4 |
|                        | REACTIVE ENERGY BALANCE TOTAL (+/-)      |
| APPARENT ENERGY [VAH]  | APPARENT ENERGY BALANCE TOTAL (+/-)      |

### HARMONIC ANALYSIS

|                                                                               |                     |
|-------------------------------------------------------------------------------|---------------------|
| Voltage Harmonics from the fundamental to the 55th [V]                        | VL1-N, VL2-N, VL3-N |
| Current Harmonics from the fundamental to the 55th [A]                        | IL1, IL2, IL3       |
| Voltage Harmonics from the 2nd to the 55th<br>[% relative to the fundamental] | VL1-N, VL2-N, VL3-N |
| Current Harmonics from the 2nd to the 55th<br>[% relative to the fundamental] | IL1, IL2, IL3       |

# MULTIFUNCTION POWER METERS WITH UNIVERSAL INPUT - R203 / R204 Series

## RANGE

### Modbus

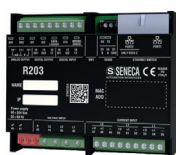
#### R203-2-L

Three-phase Power Meter, 2xETH, 10-30 Vdc, ModBUS RTU/TCP-IP



#### R203-2-H

Three-phase Power Meter, 2xETH, 90-264 Vac, ModBUS RTU/TCP-IP



#### R204-2-L

Three-phase Power Meter, 2xETH, 10-30 Vdc, ModBUS RTU/TCP-IP, UL



#### R203-2-L-P

Three-phase Power Meter, 2xETH, 10-30 Vdc, Profinet



#### R203-2-H-P

Three-phase Power Meter, 2xETH, 90-264 Vac, Profinet



#### R204-2-L-P

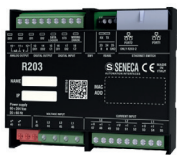
Three-phase Power Meter, 2xETH, 10-30 Vdc, Profinet IO, UL



### EtherNet/IP

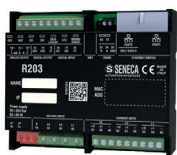
#### R203-2-L-E

Three-phase Power Meter, 2xETH, 10-30 Vac, Ethernet/IP



#### R203-2-H-E

Three-phase Power Meter, 2xETH, 90-264 Vac, Ethernet/IP



#### R204-2-L-E

Three-phase Power Meter, 2xETH, 10-30 Vdc, Ethernet/IP, UL



#### R203-2-L-U

Three-phase Power Meter, 2xETH, 10-30 Vdc, OPC UA



#### R203-2-H-U

Three-phase Power Meter, 2xETH, 90-264 Vac, OPC UA



#### R204-L-U

Three-phase Power Meter, 2xETH, 10-30 Vdc, OPC/UA, UL



## ACCESSORIES AND CONFIGURATION

### CE-RJ45-RJ45-R

Straight RJ45-RJ45 Ethernet cable



### SERIE RC150

Rogowski Sensor 100 mV/kA @ 50Hz, Ø coil 80..580 mm



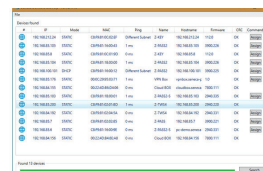
### SERIE RC190

Rogowski Sensor 333 mV/kA @ 50Hz, Ø coil 100..580 mm



### SDD

SENECA Discovery Device



### TAA SERIES

Open Core CTs



### TAC SERIES

Primary Wound CTs



### TAC SERIES

Through-bar CTs



### WEB SERVER



## ORDER CODE

| Code                | Description                                                      |
|---------------------|------------------------------------------------------------------|
| <b>POWER METERS</b> |                                                                  |
| R203-2-L            | Three-phase power meter 2xETH, 24 Vdc, ModBUS RTU/TCP-IP         |
| R203-2-H            | Three-phase power meter, 2xETH, 90-264 Vac, ModBUS RTU/TCP-IP    |
| R203-2-L-P          | Three-phase power meter, 2xETH, 24 Vdc, Profinet IO              |
| R203-2-H-P          | Three-phase power meter, 2xETH, 90-264 Vac, Profinet IO          |
| 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          |
| R203-2-L-U          | Three-phase power meter, 2xETH, 90-264 Vac, OPC UA               |
| R203-2-L-U          | Three-phase power meter, 2xETH, 90-264 Vac, OPC UA               |
| R204-2-L            | Three-phase power meter, 2xETH, 10-30 Vdc, ModBUS RTU/TCP-IP, UL |
| R204-2-L-P          | Three-phase power meter, 2xETH, 10-30 Vdc, Profinet IO, UL       |
| R204-2-L-E          | Three-phase power meter, 2xETH, 10-30 Vdc, Ethernet/IP, UL       |
| R204-L-U            | Three-phase power meter, 2xETH, 10-30 Vdc, OPC UA, UL            |



ORDER CODES AND INFORMATION - RC150 AND RC190 SERIES



ORDER CODES AND INFORMATION - TAA / TAC SERIES



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