



# ZM4R-H

## Modules for electrical measurements with Rogowski coils for Modbus/RTU

### Application

Flexible electric metering for the 400 VAC level:

- active electrical loads and energies
- effective voltages and currents
- power factors
- grid frequency
- total of 59 different parameters that can be monitored in parallel
- data acquisition:
  - periodical data acquisition via Modbus/RTU or
  - via event-based mode (with configurable filter for each channel)

### Technology

The ZM4R-H provides inputs for four Rogowski coils via standard USB-A slots, as well as signal inputs for the line voltages. deZem ZM8C add-on modules can be connected to the ZM4R-H. A ZM4R-H supplies the voltage references for up to 20 ZM8C (powered by an external 5VDC supply). To this end, the modules are placed next to each other on a DIN rail, connected via the H-Bus inside the DIN rail. Thus, these modules can process the above application data from up to 4 Rogowski coils and 160 current transformers respectively in a very compact installation.

### Characteristics

- practical plug connection for deZem Rogowski coils of different sizes (typically 1000/3000 A nominal current and 19/28.6 cm diameter)
- standard DIN rail mounting
- data exchange, power supply and transmission of data and analogue signals over H-Bus inside the DIN rail **or** via cable (10-pin slot)
- configuration via software tool for the modbus version **or** with two buttons and LED feedback
- wide range of input voltages

### Technical data

- supply voltage: 5 VDC
- current consumption: typ. 125 mA, max. 180 mA per unit
- dimensions ZM4R-H: 90 x 108 x 61 mm
- operating temperature: -5 – 55°C (non-condensing)

### phys. interfaces:

- 1 x 16-pin H-Bus inside DIN rail
- 1 x 10-pin plug to connect ZM8C by cable
- 1 x screw-type terminal for RS485 (Modbus/RTU or event-based mode)
- 1 x screw-type terminal for 5 VDC

### ZM4R-H voltage connection:

- input voltages: L1 to N: 90 – 440 VAC / 120 – 585 VDC, L2/L3 to N: 0 – 440 VAC / 0 – 585 VDC
- load L1/L2/L3 to N: max. 0.2 VA

## ZM4R-H electrical measurement modules

subject to technical modifications  
Rev. FW April 2019



deZem  
energy controlling

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