



# 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 5 VDC 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



30 cm Rogowski coil with USB cable



### Technical Data

supply voltage: 5 VDC  
 current consumption: typ. 125 mA, max. 180 mA per unit  
 dimensions ZM4R-H: 90x108x61 mm  
 operating temperature: -5 – 55 °C (non-condensing)  
 measurement tolerance of +/-1,0 %, corresponding to Class 1 of standard IEC 61557-12

### Phys. interfaces:

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

### 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

Subject to technical modifications  
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