

## Current Sensor HCMR 2000A-S-50-SB5-C



Image is for illustration purposes only. Please refer to product description.

|                    |   |
|--------------------|---|
| Part number        | 20 31 200 9201  |
| Specification      | Current Sensor HCMR 2000A-S-50-SB5-C  |
| HARTING eCatalogue | <a href="https://b2b.harting.com/20312009201">https://b2b.harting.com/20312009201</a> |

### Identification

|                   |  |
|-------------------|--|
| Category          | Current measurement  |
| Series            | HCMR   |
| Element           | Current sensor   |
| Sensor technology | Hall-Effekt<br>Closed loop   |
| Features          | Hall effect compensated current sensor<br>Measurable currents: AC, DC, pulsed, mixed ...<br>High accuracy over the entire measuring range<br>Galvanic insulation between primary and secondary current<br>Internal screen between primary and secondary circuit<br>Switchboard mounting<br>Housing material and potting mass have a flammability rating UL 94 V-0<br>Applications: frequency converters, electrical drives, auxiliary converters |

### Version

|                      |  |
|----------------------|--|
| Termination          | 4x screw lock with Faston (6.3 x 0.8 mm) |
| Field of application | Railway version                          |
| Pack contents        | Connecting cable included                |

### Technical characteristics

|   |  |
|---|--|
| $I_{PN}$ Nominal primary current  | 2,000 A  |
| $I_{PM}$ Primary current, measuring range                               | 0 ... $\pm 3,600$ A                                      |
| $R_M$ Measuring resistance<br>@ $I_{PM \max}$ , $U_C \max$ , $T_A \max$ | 1 ... 5 $\Omega$ For other primary currents see diagram. |
| $I_{SN}$ Nominal secondary current                                      | 400 mA   |
| $K_N$ Turns ratio   | 1 : 5000   |



## Technical characteristics

|   |  |
|---|--|
| $U_C$ Power supply  | $\pm 15 \dots \pm 24 \text{ V} \pm 5 \%$   |
| $I_C$ Current consumption<br>@ $U_C \text{ min}$                                  | $20 \text{ mA} + I_S$  |
| X Overall accuracy<br>@ $I_{PN}$ , $T_A = 25 \text{ }^\circ\text{C}$              | $\pm 0.3 \%$   |
| $E_L$ Linearity   | $< 0.1 \%$   |
| $I_O$ Offset current<br>@ $I_P = 0 \text{ A}$ , $T_A = 25 \text{ }^\circ\text{C}$ | $\pm 0.5 \text{ mA}$   |
| $I_{OT}$ maximum temperature drift of $I_O$                                       | $\pm 1 \text{ mA}$   |
| $t_r$ Response time<br>@ $I_{PN}$   | $< 1 \mu\text{s}$  |
| di/dt with optimal coupling   | $> 100 \text{ A}/\mu\text{s}$  |
| f Frequency   | $0 \dots 100 \text{ kHz}$  |
| $T_A$ Ambient temperature   | $-40 \dots +85 \text{ }^\circ\text{C}$   |
| $T_S$ Storage temperature   | $-45 \dots +90 \text{ }^\circ\text{C}$   |
| $R_S$ Secondary coil resistance<br>@ $T_{A \text{ max}}$                          | $28 \Omega$  |
| $U_D$ Test voltage, effective (50 Hz, 1 min)                                      | 12 kV Primary - secondary<br>1.5 kV Secondary - screen                           |
| $U_{St}$ Rated impulse voltage (1,2/50 $\mu\text{s}$ )                            | 20 kV  |
| $U_B$ Rated voltage   | 2,000 V  |
| Overvoltage category  | III  |
| Pollution degree  | 2  |
| $L_S$ Clearance distance  | 52.9 mm  |
| $K_S$ Creepage distance   | 54.9 mm  |
| Tightening torque   | 4.2 Nm (4x steel screw M6 - Vertical)<br>4.2 Nm (4x steel screw M6 - Horizontal) |

## Material properties

|   |                    |
|---|--------------------|
| Material (hood/housing)                   | Polycarbonate (PC) |
| Material flammability class acc. to UL 94 | V-0                |
| RoHS                                      | compliant          |
| ELV status                                | compliant          |
| China RoHS                                | e                  |
| REACH Annex XVII substances               | Not contained      |



## Material properties

|                                      |               |
|--------------------------------------|---------------|
| REACH ANNEX XIV substances           | Not contained |
| REACH SVHC substances                | Not contained |
| California Proposition 65 substances | Yes           |
| California Proposition 65 substances | Nickel        |

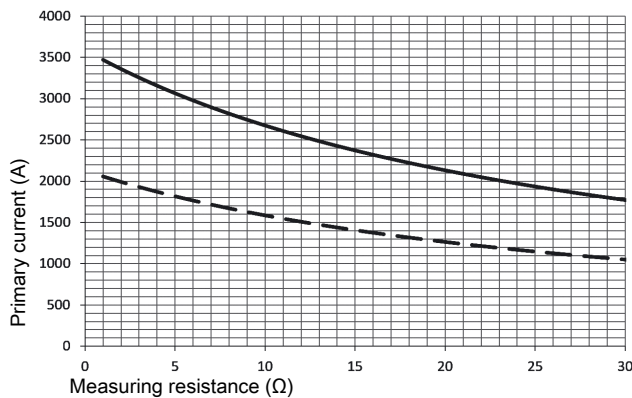
## Specifications and approvals

|                |                       |
|----------------|-----------------------|
| Specifications | EN 50155<br>IEC 61373 |
| Approvals      | DNV GL                |
| CE             | Yes                   |

## Commercial data

|                                |                              |
|--------------------------------|------------------------------|
| Packaging size                 | 1                            |
| Net weight                     | 1,545 g                      |
| Country of origin              | Germany                      |
| European customs tariff number | 90303370                     |
| eCl@ss                         | 27210902 Current transformer |

## Measuring resistance



—  $U_C = \pm 24 V - 5 \%$ ,  $T_A = 85 \text{ °C}$

- - -  $U_C = \pm 15 V - 5 \%$ ,  $T_A = 85 \text{ °C}$

Primary currents higher than  $I_{PM}$  only for peak!