

Current Sensor HCME 1000A-0-00-CPA-0



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

| | |
|--------------------|---|
| Part number | 20 32 100 0201 |
| Specification | Current Sensor HCME 1000A-0-00-CPA-0 |
| HARTING eCatalogue | https://b2b.harting.com/20321000201 |

Identification

| | |
|-------------------|--|
| Category | Current measurement |
| Series | HCME |
| Element | Current sensor |
| Sensor technology | Hall-Effekt Open loop |
| Features | Measurable currents: AC, DC, pulsed, mixed ... Galvanic insulation between primary and secondary current Switchboard mounting Housing material and potting mass have a flammability rating UL 94 V-0 Applications: frequency converters, electrical drives, auxiliary converters |

Version

| | |
|----------------------|--------------------|
| Termination | Molex 5045-04A |
| Field of application | Industrial version |

Technical characteristics

| | |
|---|-----------------------|
| I_{PN} Nominal primary current | 1,000 A |
| I_{PM} Primary current, measuring range | 0 ... $\pm 3,000$ A |
| U_C Power supply | ± 15 V ± 5 % |
| U_{OUT} Output voltage @ I_{PN} | 4 V |
| R_L Load resistance | >1 k Ω |
| I_C Current consumption @ $U_{C\ min}$ | 17 mA |
| R_{IN} Insulation resistance | $>500,000$ k Ω |



Technical characteristics

| | |
|---|--|
| X Overall accuracy @ I_{PN} , $T_A = 25\text{ °C}$ | $\pm 0.5\%$ |
| E_L Linearity | $< 0.7\%$ |
| U_O Offset voltage @ $I_P = 0\text{ A}$, $T_A = 25\text{ °C}$ | $\pm 20\text{ mV}$ |
| U_{OOL} Offset after I_{Pmax} | $\pm 30\text{ mV}$ |
| U_{OT} maximum temperature drift of U_O | $\pm 1\text{ mV/K}$ |
| U_{outT} thermal gain drift | $\pm 0,1\%/K$ |
| t_r Response time @ I_{PN} | $< 3\text{ }\mu\text{s}$ |
| di/dt with optimal coupling | $> 50\text{ A}/\mu\text{s}$ |
| f Frequency | 0 ... 50 kHz |
| T_A Ambient temperature | $-40\text{ ... }+85\text{ °C}$ |
| T_S Storage temperature | $-45\text{ ... }+90\text{ °C}$ |
| U_D Test voltage, effective (50 Hz, 1 min) | 5 kV Primary - secondary |
| U_B Rated voltage | 690 V |
| L_S Clearance distance | 11.5 mm |
| K_S Creepage distance | 16.6 mm |
| Tightening torque | 3.2 Nm (2x steel screw M4 - Vertical) 3.2 Nm (2x steel screw M4 - 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 |
| REACH ANNEX XIV substances | Not contained |
| REACH SVHC substances | Not contained |

Specifications and approvals

| | |
|----------------|-----------------------|
| Specifications | EN 50178 IEC 61373 |
|----------------|-----------------------|



Commercial data

| | |
|--------------------------------|------------------------------|
| Packaging size | 1 |
| Net weight | 451.9 g |
| Country of origin | Germany |
| European customs tariff number | 90303370 |
| eCl@ss | 27210902 Current transformer |

Remark

- If I_P flows in the direction of the arrow I_S is positive.
- Over currents ($\gg I_{PN}$) or the missing of the supply voltage can cause an additional permanent magnetic offset.
- The temperature of the primary conductor may not exceed 100 °C.

Safety note



These transformers may only be used in electrical or power electronic applications which fulfill the relevant regulations (standards, EMC requirements,...).

This transformer must be used in limited-energy secondary circuits according to IEC 61010-1.

Caution, risk of electric shock



- Pay attention to protect non-insulated high-power current carrying parts against direct contact (e.g. with a protective enclosure).
- When installing this sensor please make sure that the safe separation (between primary circuit and secondary circuit) is maintained over the whole circuits and their connections.
- The sensor may only be connected to a power supply respecting the SELV/PELV protective regulations according to EN 50 178. The installation of the power supply must be short-circuit-proof.
- Disconnecting the main power must be possible.
- The current sensors support a safe separation. The creepage and clearance distances are taken as a basis for the rated voltage. They are the shortest distance between the secondary connection and the sensor's window. The actual clearance and creepage distances depend on the position of the primary conductor respectively on the actual shortest distance between the primary conductor and the secondary connection.