

RCMA-B22-D175-6.0**Weidmüller Interface GmbH & Co. KG**

Klingenbergstraße 26

D-32758 Detmold

Germany

www.weidmueller.com

**Rogowski coil**

A Rogowski coil is a closed air coil without a ferromagnetic core used for floating potential measurement of AC and pulse currents. Measurement with the Rogowski coil is used widely in technology, as it can be retroactively integrated without separating the primary electric circuit in existing systems. Because this method shows no saturation effect, even the smallest currents and high-frequency harmonics can be measured without loss of accuracy.

General ordering data

| | |
|------------|---|
| Version | Rogowski coil, Diameter: 175 mm, Cable length: 6 m, 100...5000 A, Output : Pulse, mV signal |
| Order No. | 2831110000 |
| Type | RCMA-B22-D175-6.0 |
| GTIN (EAN) | 40646754 14902 |
| Qty. | 1 pc(s). |

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Technical data

Dimensions and weights

| | | | |
|----------|--------|------------|-------|
| Diameter | 175 mm | Net weight | 326 g |
|----------|--------|------------|-------|

Temperatures

| | | | |
|-----------------------------------|---------------------------|-----------------------|----------------|
| Storage temperature | -40 °C...80 °C | Operating temperature | -40 °C...80 °C |
| Humidity at operating temperature | 5 - 90 %, no condensation | | |

Dimensions of live conductors

| | | | |
|-----------------------|--------------------------|-----------------|--------|
| Type of conductor | Insulated conductor only | Round conductor | 175 mm |
| Installation location | Indoor use | | |

Electrical attributes

| | | | |
|---------------------|------------|-------------------|---|
| Frequency band | 50...60 Hz | Measurement error | $\leq \pm 0.5\%$ (of measuring range limit) |
| Nominal turns ratio | 44.44 kA/V | Phase shift | 0.004 ° |
| Primary current | 5,000 A | Secondary voltage | 22,5 mV (@ 50Hz $I_{\text{primary}} = 1 \text{ kA}$), 30 V (max) |
| Tolerance class | 0,5 | | |

Technical properties

| | | | |
|-----------------|-------------|-------------------|------|
| Cable diameter | 6.1 mm | Cable length | 6 m |
| Coil resistance | 81 Ω | Protection degree | IP57 |

Input

| | |
|----------------------------|--------|
| Outer cable diameter, max. | 175 mm |
|----------------------------|--------|

General data

| | | | |
|-----------|--------------------|-------------------|------|
| Linearity | no linearity error | Protection degree | IP57 |
|-----------|--------------------|-------------------|------|

Insulation coordination

| | | | |
|---------------------------|---------------------|--------------------------|--|
| Impulse withstand voltage | 12.8 kV (1.2/50 ms) | Insulation voltage | 7.4 kV _{RMS} (50 Hz, 1 min) |
| Pollution severity | 2 | Rated insulation voltage | 1000V reinforced insulation according to IEC 61010-1, CAT III, PD2, 1000V basic insulation according to IEC 61010-1, CAT IV, PD2, 600V reinforced insulation in accordance with IEC 61010-1, CAT IV, PD2 |
| Surge voltage category | III | Tolerance class | 0,5 |
| Tracking resistance (CTI) | 600 | | |

Classifications

| | | | |
|-------------|-------------|-------------|-------------|
| ETIM 6.0 | EC002475 | ETIM 7.0 | EC002475 |
| ETIM 8.0 | EC002475 | ETIM 9.0 | EC002475 |
| ECLASS 9.0 | 27-21-01-23 | ECLASS 9.1 | 27-21-01-23 |
| ECLASS 10.0 | 27-21-01-23 | ECLASS 11.0 | 27-21-01-23 |
| ECLASS 12.0 | 27-21-01-23 | ECLASS 13.0 | 27-21-01-23 |

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Technical data**Environmental Product Compliance**

REACH SVHC /

Important note

Product information

The Rogowski coil **RCMA-B22-DXX** is intended for the electronic measurement of alternating current. The Rogowski coil must only be used in conjunction with a Weidmüller transducer RCMC-5000-XX.

Functional description

The primary circuit (power circuit) and the secondary circuit (measurement circuit) are galvanically isolated by the Rogowski coil.

As there is no saturation effect, currents can be measured over a wide primary current range without any losses in accuracy.

Features

- Conductor diameter of the measuring coil: 6.1 mm
- Housing tabs for attachment with cable ties
- Sealable bayonet fastening

Approvals

Approvals



| | |
|-------------------------|------------|
| ROHS | Conform |
| UL File Number Search | UL Website |
| Certificate No. (cURus) | E469563 |

Downloads

| | |
|---|---|
| Approval/Certificate/Document of Conformity | Declaration of Conformity |
| User Documentation | Instruction sheet |
| Catalogues | Catalogues in PDF-format |

Data sheet

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Drawings

