

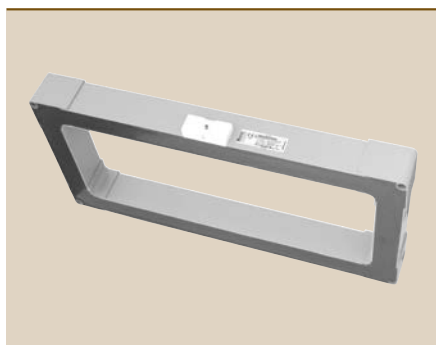
Measuring current transformers WR70x175S(P)...WR200x500S(P)



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Product description

The highly sensitive WR...S series measuring current transformers of rectangular type convert AC currents into evaluable measurement signals, in combination with RCM and RCMS series residual current monitors and evaluators.

In addition, the measuring current transformers can be used in combination with insulation fault location systems (EDS) for IT systems. They are designed to measure the locating current generated by a PGH locating current injector or an ISOMETER® IRDH. In combination with EDS series insulation fault locators the test current is converted into evaluable signals.

The WR...SP series measuring current transformers feature an integrated screening. This screening is intended to avoid false tripping of connected RCM... or EDS... devices, when high load currents or inrush currents occur in the system being monitored.

WR...SP series measuring current transformers are particularly suitable for use in busbar systems and are designed for load currents ≥ 500 A.

Connection to the respective device is via a two-wire cable.

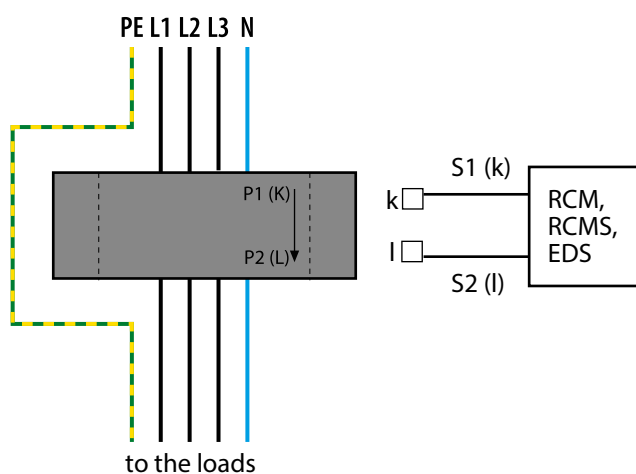
Standards

WR70x175S(P)...WR200x500S(P) measuring current transformers comply with the device standards: DIN EN 60044-1, IEC 61869.

Installation instructions

- Make sure that all live conductors are routed through the measuring current transformer
- Do not route shielded conductors through the measuring current transformer
- Never route a PE conductor through the measuring current transformer!

Wiring diagram



Device features

- For RCMS460/490 residual current monitoring systems
- For RCM420 residual current monitors
- For EDS470, EDS460/490 and EDS440 insulation fault locators in AC and DC systems
- The WR...SP measuring current transformers are particularly suitable for use in busbar systems. This series is to be used for load currents ≥ 500 A.

Approvals



Technical data

Insulation coordination acc. to IEC 61869-2

| | |
|---|----------|
| Highest system voltage for electrical equipment U_m | AC 720 V |
| Rated impulse withstand voltage U_{isol} | 3 kV |

Measuring circuit

| | |
|----------------------------------|----------------------------|
| Rated transformation ratio | 600/1 |
| Rated burden | 180 Ω |
| Rated primary current | ≤ 10 A (100 A) |
| Rated primary current | ≥ 10 mA |
| Nominal power | 50 mVA |
| Rated frequency | 50...400 Hz |
| Internal resistance | 5...8 Ω |
| Secondary overvoltage protection | suppressor diode P6KE6V8CP |
| Accuracy class | 5 |
| Rated continuous thermal current | 100 A |
| Rated short-time thermal current | 14 kA/1 s |
| Rated dynamic current | 35 kA/30 ms |

Environment

| | |
|--|------------------------|
| Shock resistance IEC 60068-2-27 (device in operation) | 15 g/11 ms |
| Bumping IEC 60068-2-29 (transport) | 40 g/6 s |
| Vibration resistance IEC 60068-2-6 (device in operation) | 1 g/10...150 Hz |
| Vibration resistance IEC 60068-2-6 (transport) | 2 g/10...150 Hz |
| Ambient temperature (during operation) | -10...+50 $^{\circ}$ C |
| Ambient temperature (during storage) | -40...+70 $^{\circ}$ C |
| Climatic class acc. to DIN IEC 60721-3-3 | 3K5 |

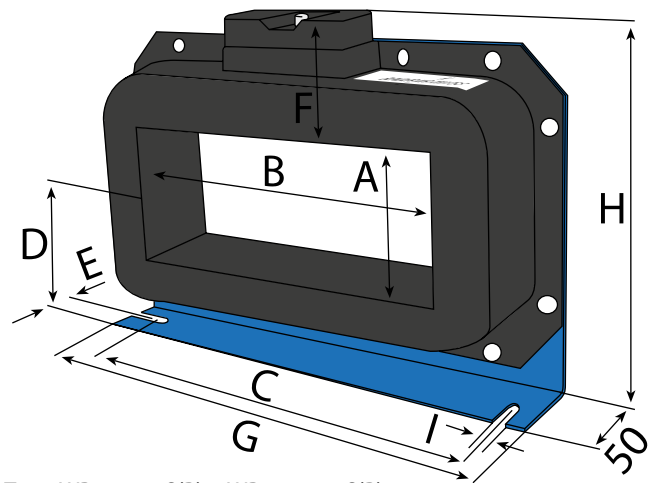
Connection

| | |
|---|------------------------------------|
| Connection | screw-type terminals |
| Connection rigid/flexible | 0.2...4/0.2...2.5 mm ² |
| flexible with ferrules with/without plastic sleeve | 0.25...2.5 mm ² |
| Conductor sizes (AWG) | 24...12 |
| Connection to the evaluator | |
| single wire ≥ 0.75 mm ² | 0...1 m |
| single wire, twisted ≥ 0.75 mm ² | 0...10 m |
| shielded cable ≥ 0.6 mm ² | 0...40 m |
| Shielded cable (shield on one side connected to PE) | recommended: J-Y(St)Y min. 2 x 0.6 |

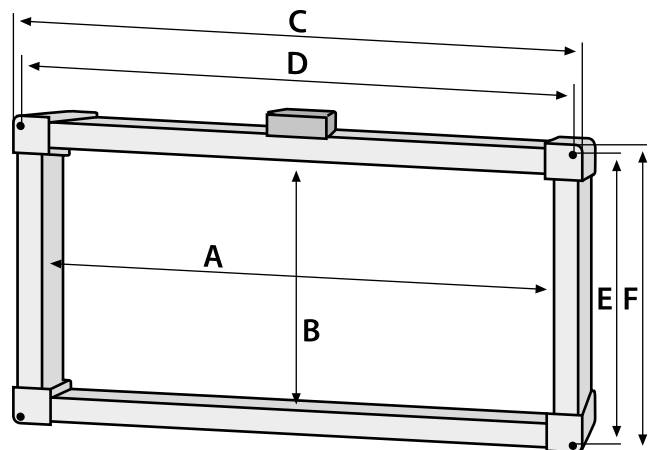
Other

| | |
|--|----------------------|
| Operating mode | continuous operation |
| Mounting | any position |
| Degree of protection, internal components (DIN EN 60529) | IP40 |
| Degree of protection, terminals (DIN EN 60529) | IP20 |
| Screw mounting | M5 |
| Flammability class | UL94 V-0 |
| Documentation number | D00144 |

Dimensions (mm) and weights (g)



Type WR70x175S(P)...WR150x350S(P)



Type WR200x500S(P)

| Type | Dimensions (mm) | | | | | | | | | Weight |
|---------------|-----------------|-----|-----|-------|-------|-----|-----|-----|-----|--------|
| | A | B | C | D | E | F | G | H | I | |
| WR70x175S(P) | 70 | 175 | 225 | 85 | 22 | 46 | 261 | 176 | 7.5 | 2900 g |
| WR115x305S(P) | 115 | 305 | 360 | 116 | 25 | 55 | 397 | 240 | 8 | 6300 g |
| WR150x350S(P) | 150 | 350 | 415 | 140 | 28 | 55 | 460 | 285 | 8 | 8250 g |
| WR200x500S(P) | 500 | 200 | 585 | 568.5 | 268.5 | 285 | - | - | - | 9000 g |

Ordering information

| Screening | Internal dimensions | Approvals | Type | Art. No. |
|----------------------|---------------------|-----------|-------------|----------|
| | | UL | | |
| without screening | 70 x 175 mm | ■ | WR70x175S | B911738 |
| | 115 x 305 mm | ■ | WR115x305S | B911739 |
| | 150 x 350 mm | ■ | WR150x350S | B911740 |
| | 200 x 500 mm | - | WR200x500S | B911763 |
| Screening integrated | 70 x 175 mm | - | WR70x175SP | B911790 |
| | 115 x 305 mm | - | WR115x305SP | B911791 |
| | 150 x 350 mm | - | WR150x350SP | B911792 |
| | 200 x 500 mm | - | WR200x500SP | B911793 |

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Optec AG | Guyer-Zeller-Strasse 14 | CH-8620 Wetzikon ZH

Telefon: +41 44 933 07 70 | Telefax: +41 44 933 07 77

E-Mail: info@optec.ch | Internet: www.optec.ch



Bender GmbH & Co. KG

P.O. Box 1161 • 35301 Gruenberg • Germany
Londorfer Strasse 65 • 35305 Gruenberg • Germany
Tel.: +49 6401 807-0 • Fax: +49 6401 807-259
E-Mail: info@bender.de • www.bender.de



BENDER Group