

## Measuring current transformers of the WR... series



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WR115x305 measuring current transformer

### Device features

- For RCMS460/490 residual current monitoring systems
- For RCM420 residual current monitors
- For EDS460/490 insulation fault locators

### Approvals



### Product description

The highly sensitive WR... 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.

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

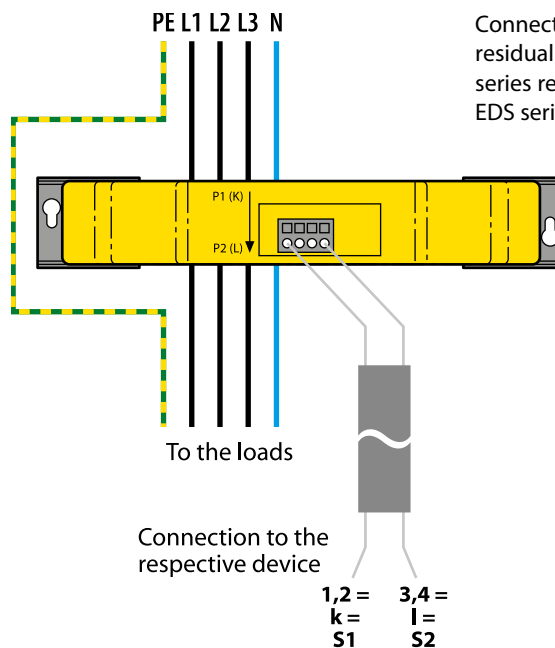
### Standards

WR... series measuring current transformers comply with the device standards: IEC 60044-1, DIN EN 60044-1, IEC 60044-1.

### 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



Connection to the respective RCMS series residual current monitoring system, RCM series residual current monitor or to an EDS series insulation fault location system.



**Technical data**

**Insulation coordination acc. to IEC 60664-1/IEC 60664-3**

|  |        |
|--|--------|
| Rated insulation voltage               | 800 V  |
| Rated impulse voltage/pollution degree | 8 kV/3 |

**CT circuit**

|  |   |
|--|---|
| Rated primary residual current             | 10 A  |
| Rated secondary residual current           | 0.0167 A  |
| Rated transformation ratio $K_n$           | 10/0.0167 A   |
| Rated burden                               | max. 180 $\Omega$                                   |
| Nominal power                              | 0.05 VA   |
| Frequency range                            | 42 Hz...3 kHz                                       |
| Rated continuous thermal current $I_{cth}$ | 40 A  |
| Rated short-time thermal current $I_{tth}$ | $60 \times I_{cth} = 2.4 \text{ kA}/1 \text{ s}$    |
| Rated dynamic current $I_{dyn}$            | $2.5 \times I_{tth} = 6.0 \text{ kA}/40 \text{ ms}$ |

**Environmental conditions**

|                       |              |
|-----------------------|--------------|
| Operating temperature | -25...+70 °C |
|-----------------------|--------------|

**Climatic class acc. to IEC 60721**

|                                   |  |
|-----------------------------------|--|
| Stationary use (IEC 60721-3-3)    | 3K5 (except condensation and formation of ice) |
| Transport (IEC 60721-3-2)         | 2K5 (except condensation and formation of ice) |
| Long-time storage (IEC 60721-3-1) | 1K5 (except condensation and formation of ice) |

**Classification of mechanical conditions acc. to IEC 60721**

|                                   |     |
|-----------------------------------|-----|
| Stationary use (IEC 60721-3-3)    | 3M4 |
| Transport (IEC 60721-3-2)         | 2M2 |
| Long-time storage (IEC 60721-3-1) | 1M3 |

**Connection**

|                                |   |
|--------------------------------|---|
| Connection                     | cage clamp spring terminal                          |
| Connection                     |   |
| rigid/flexible/conductor sizes | 0.08...2.5/0.08...2.5 mm <sup>2</sup> (AWG 28...12) |
| Stripping length               | 8...9 mm  |

**Connection EDS, RCM(S) measuring current transformers**

|  |                                  |
|--|----------------------------------|
| Single wire $\geq 0.75 \text{ mm}^2$   | 0...1 m                          |
| Single wire, twisted $\geq 0.75 \text{ mm}^2$  | 0...10 m                         |
| Shielded cable $\geq 0.5 \text{ mm}^2$   | 0...40 m                         |
| Shielded cable (shield on one side connected to L-conductor, not connected to earth) |                                  |
|  | recommended: J-Y(St)Y min. 2x0.8 |

**Other**

|  |                           |
|--|---------------------------|
| Degree of protection, internal components (DIN EN 60529) | IP40                      |
| Degree of protection, terminals (DIN EN 60529)           | IP20                      |
| Screw mounting   | M5 with mounting brackets |
| Flammability class                                       | UL94 V-0                  |
| Documentation number                                     | D00076                    |

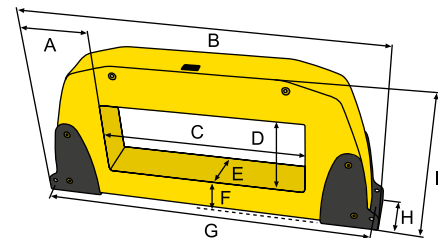
**Ordering information**

| Mounting          | Internal dimensions | Type      | Art. No.  |
|-------------------|---------------------|-----------|-----------|
| Mounting brackets | 70 x 175 mm         | WR70x175  | B98080609 |
|                   | 115 x 305 mm        | WR115x305 | B98080610 |

**Selection list**

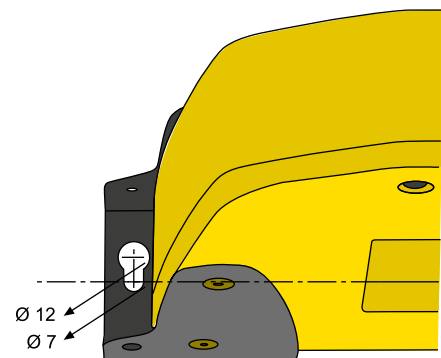
| Type      | RCM420 | RCMS460<br>RCMS490 | EDS460<br>EDS490 |
|-----------|--------|--------------------|------------------|
| WR70x175  | ■      | ■                  | ■                |
| WR115x305 | ■      | ■                  | ■                |

**Dimension diagram**



| Type      | Dimensions (mm) |       |     |     |      |      |       |      |       | Weight |
|-----------|-----------------|-------|-----|-----|------|------|-------|------|-------|--------|
|           | A               | B     | C   | D   | E    | F    | G     | H    | I     |        |
| WR70x175  | 90.75           | 357.5 | 176 | 71  | 56.5 | 51.5 | 337.5 | 61   | 190   | 2960 g |
| WR115x305 | 110             | 526   | 306 | 116 | 67   | 53   | 506   | 72.5 | 242.5 | 5560 g |

**Mounting**





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