**WF... series flexible measuring current transformers**

**Consisting of an RCC420 signal converter and a W...F measuring current transformer**

**Device features**
- Flexible measuring current transformer in different lengths
- Allows quick and easy installation in hard to reach areas
- Easy retrofitting into existing installations
- Can be installed without the need to disconnect the conductors
- CT connection monitoring W...F
- For RCMS460/490 series residual current monitoring systems
- Analogue output (U, I) for external measuring devices
- RCC420 with push-wire terminals (two terminals per connection)

**Application**
- Residual, fault and nominal current monitoring of loads and systems which cannot be switched off
- EMC monitoring of TN-S systems for "stray currents" and additional N-PE connections in the central earthing point (CEP)
- Monitoring of PE and equipotential bonding conductors to ensure they are free of current

**Installation instructions**
- Make sure to pass all live conductors through the measuring current transformer
- Arrange the conductors so that they pass centrically at right angle through the opening
- Do not place the measuring current transformer close to strong magnetic fields

**Wiring diagram**

Connection to the respective RCMS460 / 490 series residual current evaluator

1 - Power On LED "ON": lights up when voltage is available and when the device is in operation.
2 - Alarm LED "ERR": lights in the event of a short-circuit and interruption of the W...F

* - Up to software version D233 V 2.21
Switch off CT monitoring
Software version D233 V 2.31 and higher
Set the CT type to "flex".

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**Approvals and certifications**
### Technical data

#### Electrical safety
- Standard: RCC420
- Pollution degree: 3
- Rated insulation voltage: 250 V
- Standard: WF…
- IEC 61010-1 and IEC 61010-2-032 CAT III
- Pollution degree: 2
- Rated insulation voltage (CAT III): 1000 Vrms or DC

#### Supply voltage
- Supply voltage $U_S$: see ordering information
- Power consumption: $\leq 3$ VA

#### Measuring circuit
- Measuring range: 100 mA…20 A
- Rated transformation ratio $K_n (U-I)$: 100 mV / A, $K_n (k-l)$: 1.67 mA / A
- Rated burden: (signal output $k$, $l$) 68 $\Omega$
- Rated frequency: 42…2000 Hz
- Rated continuous thermal current $I_{cth}$: 1 kA
- Rated short-time thermal current $I_{th}$: 60 kA / 1 s
- Rated dynamic current $I_{dyn}$: 150 kA / 40 ms

#### EMC
- Operating temperature: -25 °C…+ 55 °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) 2K3 (except condensation and formation of ice)
  - Long-time storage (IEC 60721-3-1) 1K4 (except condensation and formation of ice)
- Classification of mechanical conditions IEC 60721
  - Stationary use (IEC 60721-3-3) 3M4
  - Transport (IEC 60721-3-2) 2M2
  - Long-time storage (IEC 60721-3-1) 1M3

#### Connection RCC420
- Connection type: push-wire terminals
- Connection properties: rigid
- Stripping length: 10 mm
- Opening force: 50 N
- Test opening, diameter: 2.1 mm
- Connection measuring current transformer W…F: PS / 2 plug
- Cable length W…F: 2 m

#### Cable lengths RCMS-RCC420…
- Single wire $\geq 0.75$ mm$^2$: 0…1 m
- Single wire, twisted $\geq 0.75$ mm$^2$: 0…10 m
- Shielded cable $\geq 0.5$ mm$^2$: 0…40 m
- Recommended cable (shielded, shield to terminal l, not connected to earth): J-Y(St)Y min. 2x0.8

#### Other
- Operating mode: continuous operation
- Mounting: any position
- Degree of protection, internal components / terminal (DIN EN 60529): IP30 / IP20
- Enclosure material RCC420: polycarbonate
- Flammability class: UL94V-0
- DIN rail mounting acc. to: IEC 60715
- Screw mounting: 2 x M4 with mounting clip
- Operating manual: TBP409020
- Weight
  - RCR 420: $\leq 160$ g
  - WF500: $\leq 200$ g
  - WF170: $\leq 160$ g
  - WF800: $\leq 230$ g
  - WF250: $\leq 180$ g
  - WF1200: $\leq 310$ g

Note: The measuring current transformer is adapted to the associated signal converter RCC420.

### Ordering information

<table>
<thead>
<tr>
<th>Type</th>
<th>Length A</th>
<th>Supply voltage $U_S^*$</th>
<th>Art. No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>WF170-1</td>
<td>170 mm</td>
<td>DC 9.6…94 V / AC 42…460 Hz 16…72 V</td>
<td>B 7808 0201</td>
</tr>
<tr>
<td>WF170-2</td>
<td>170 mm</td>
<td>DC 70…300 V / AC 42…460 Hz 70…300 V</td>
<td>B 7808 0202</td>
</tr>
<tr>
<td>WF250-1</td>
<td>250 mm</td>
<td>DC 9.6…94 V / AC 42…460 Hz 16…72 V</td>
<td>B 7808 0203</td>
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<tr>
<td>WF250-2</td>
<td>250 mm</td>
<td>DC 70…300 V / AC 42…460 Hz 70…300 V</td>
<td>B 7808 0204</td>
</tr>
<tr>
<td>WF500-1</td>
<td>500 mm</td>
<td>DC 9.6…94 V / AC 42…460 Hz 16…72 V</td>
<td>B 7808 0205</td>
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<tr>
<td>WF500-2</td>
<td>500 mm</td>
<td>DC 70…300 V / AC 42…460 Hz 70…300 V</td>
<td>B 7808 0206</td>
</tr>
<tr>
<td>WF800-1</td>
<td>800 mm</td>
<td>DC 9.6…94 V / AC 42…460 Hz 16…72 V</td>
<td>B 7808 0207</td>
</tr>
<tr>
<td>WF800-2</td>
<td>800 mm</td>
<td>DC 70…300 V / AC 42…460 Hz 70…300 V</td>
<td>B 7808 0208</td>
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<tr>
<td>WF1200-1</td>
<td>1200 mm</td>
<td>DC 9.6…94 V / AC 42…460 Hz 16…72 V</td>
<td>B 7808 0209</td>
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<tr>
<td>WF1200-2</td>
<td>1200 mm</td>
<td>DC 70…300 V / AC 42…460 Hz 70…300 V</td>
<td>B 7808 0210</td>
</tr>
</tbody>
</table>

* Absolute values

### Accessories

<table>
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<tr>
<th>Type</th>
<th>Art. No.</th>
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<tr>
<td>Mounting clip for XM420 enclosure (RCC420) (one unit required per device)</td>
<td>B 9806 0008</td>
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</table>

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**Accessories**

- Mounting clip for XM420 enclosure (RCC420) (one unit required per device)

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**Dimension diagram XM420**

Dimensions in mm

Open the front plate cover in direction of arrow!

**Screw mounting**

Note: The upper mounting clip must be ordered separately (see "Accessories")

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**Dimension diagram W…F series measuring current transformers**

A = For details about the length of the measuring current transformer refer to ordering information

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**Locking connector measuring current transformer W500F…W1200F**

Keep the locking connector clean

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**Locking connector measuring current transformer W170F…W250F**