

## LINETRAXX® Serie WF...

Consisting of an RCC420 signal converter and a WF... measuring current transformer  
Flexible WF170, WF250, WF500, WF800, WF1200, WF1800 measuring current transformers



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WF... series measuring current transformers

## Device features

- Flexible measuring current transformer in different lengths
- Space-saving design, quick installation
- Easy retrofitting into existing installations
- Can be installed without the need to disconnect the conductors
- Connection monitoring WF... measuring current transformers
- For RCMS460/490 series residual current monitoring systems
- For RCM420 series residual current monitors
- Analogue output ( $U, I$ ) for external measuring devices
- RCC420 with push-wire terminals (two terminals per connection)

## Product description

Flexible WF... series measuring current transformers are highly sensitive measuring current transformers, which measure AC currents in conjunction with a RCMS460/490 series residual current monitoring system and convert them into an evaluable measuring signal.

They consist of one flexible WF... measuring current transformer and one RCC420 signal converter.

Connection to the respective residual current monitor is via a two-wire cable.

## Application

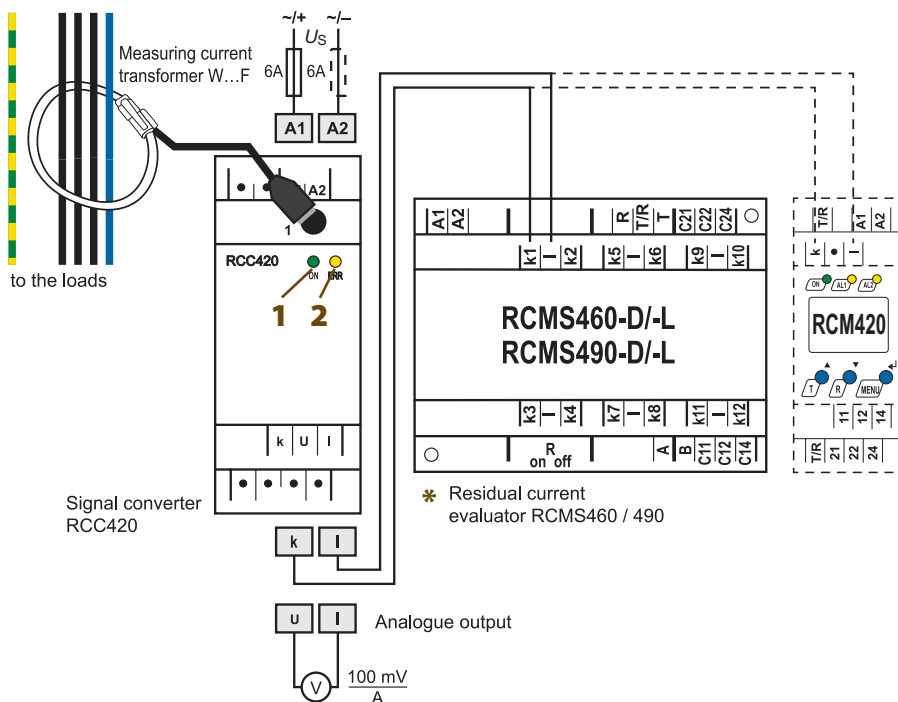
- Residual, fault and nominal current monitoring of loads and systems which cannot be switched off
- EMC monitoring of TN-S systems for "stray currents" and additional N-PE connections in the central earthing point (CEP)
- Monitoring of PE and equipotential bonding conductors to ensure they are free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

## Installation instructions

- Make sure to pass all live conductors through the measuring current transformer
- Arrange the conductors so that they pass centrally 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 residual monitoring system or to an RCM420 residual current monitor.



- 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 WF...

- \* - When using software version D233 V 2.21 or an earlier version, switch off CT monitoring
- When using software version D233 V 2.31 or higher, set the CT type to "flex".



**Technical data**

**Electrical safety**

Standard: RCC420	IEC 61010-2-030: 2004-05-01
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 V <sub>rms</sub> or DC

**Supply voltage**

Supply voltage $U_S$	see ordering information
Power consumption	≤ 3 VA

**Measuring circuit**

Measuring range	100 mA...20 A
Rated transformation ratio	$K_N (U - I): 100 \text{ mV/A}, K_N (k - I): 1.67 \text{ mA/A}$
Rated burden (signal output k, I)	68 Ω
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

**Environment/EMC**

EMC	IEC 62020
Operating temperature	- 25... + 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 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 RCC420**

Connection type	push-wire terminal
Connection properties	
rigid	0.2...2.5 mm <sup>2</sup> (AWG 24...14)
flexible without ferrule	0.2...2.5 mm <sup>2</sup> (AWG 24...14)
flexible with ferrule	0.2...1.5 mm <sup>2</sup> (AWG 24...16)
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 WF...	2 m

**Cable lengths RCMS-RCC420...**

Single wire ≥ 0.75 mm <sup>2</sup>	0...1 m
Single wire, twisted ≥ 0.75 mm <sup>2</sup>	0...10 m
Shielded cable ≥ 0.5 mm <sup>2</sup>	0...40 m
Shielded cable (shield to terminal I, not connected to earth)	recommended: J-Y(St)Y min. 2x0.8

**Other**

Operating mode	continuous operation
Mounting	any position
Degree of protection, internal components (IEC 60529)	IP30
Degree of protection, terminals (IEC 60529)	IP30
Enclosure material RCC420	polycarbonate
Screw mounting	2 x M4 with mounting clip
DIN rail mounting acc. to	IEC 60715
Flammability class	UL94V-0
Documentation number	D00072
Weight	RCC 420 ≤ 160 g
	WF170 ≤ 160 g    WF800 ≤ 230 g
	WF250 ≤ 180 g    WF1200 ≤ 310 g
	WF500 ≤ 200 g    WF1800 ≤ 430g

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

**Ordering information**

Length A measuring current transformer	Supply voltage $U_S^{1)}$		Type	Art. No.
	DC	AC		
170 mm	9.6...94 V	16...72 V, 42...460 Hz	WF170-1	B 7808 0201
	70...300 V	70...300 V, 42...460 Hz	WF170-2	B 7808 0202
250 mm	9.6...94 V	16...72 V, 42...460 Hz	WF250-1	B 7808 0203
	70...300 V	70...300 V, 42...460 Hz	WF250-2	B 7808 0204
500 mm	9.6...94 V	16...72 V, 42...460 Hz	WF500-1	B 7808 0205
	70...300 V	70...300 V, 42...460 Hz	WF500-2	B 7808 0206
800 mm	9.6...94 V	16...72 V, 42...460 Hz	WF800-1	B 7808 0207
	70...300 V	70...300 V, 42...460 Hz	WF800-2	B 7808 0208
1200 mm	9.6...94 V	16...72 V, 42...460 Hz	WF1200-1	B 7808 0209
	70...300 V	42...460 Hz, 70...300 V	WF1200-2	B 7808 0210
1800 mm	9.6...94 V	16...72 V, 42...460 Hz	WF1800-1	B 7808 0221
	70...300 V	42...460 Hz, 70...300 V	WF1800-2	B 7808 0222

<sup>1)</sup> Absolute values

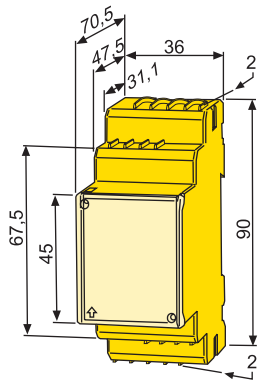
**Accessories**

Type designation	Type	Art. No.
Mounting clip for screw mounting (1 piece per device)	XM420 (RCC420)	B 9806 0008

### Dimension diagram XM420

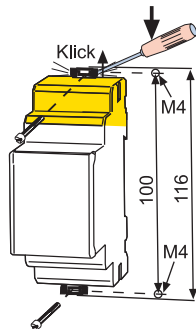
Dimensions in mm

Open the front plate cover in direction of arrow!



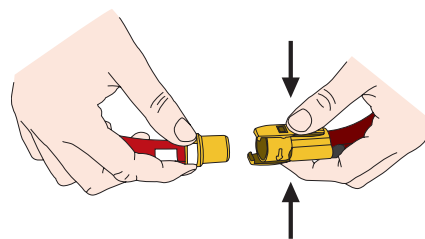
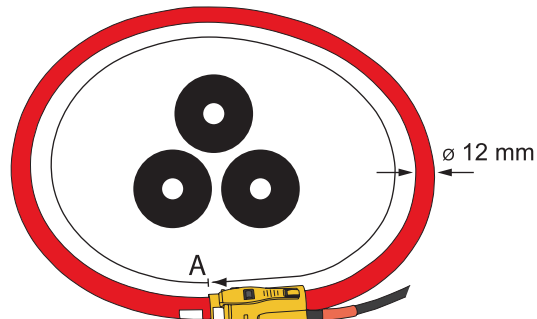
### Screw mounting

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

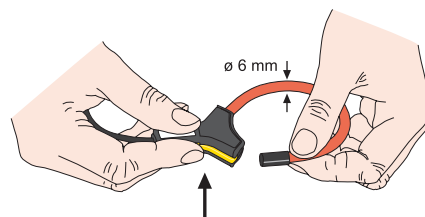


### Dimension diagram WF... series measuring current transformers

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



Locking connector measuring current transformer W500F...W1800F  
Keep the locking connector clean



Locking connector measuring current transformer W170F...W250F

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