

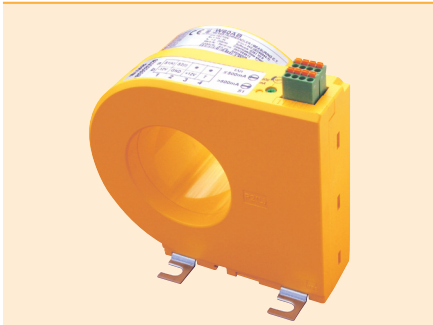
WAB Series

Current Transformers for AC/DC Systems

Used with Digital RCMA and RCMS Series Devices



W...AB Series



Current transformer W60AB



Current transformer W35AB on DIN rail

Device features

- W20AB...W60AB for RCMA420 digital ground fault monitor for grounded and high-resistance grounded AC/DC systems
- W20AB...W210AB for RCMS460 / RCMS490 digital, multi-channel ground fault monitors for grounded and high-resistance grounded AC/DC systems
- W20AB...W210AB for RCMA423 digital ground fault monitor for grounded and high-resistance grounded AC/DC systems

Approvals



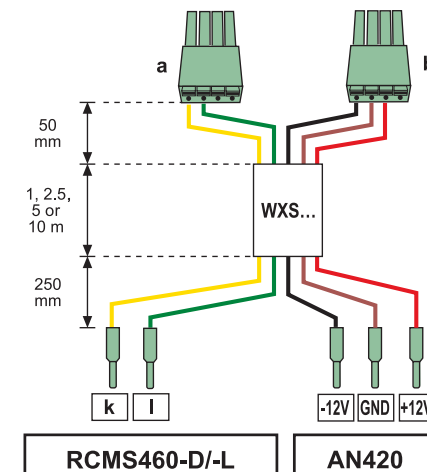
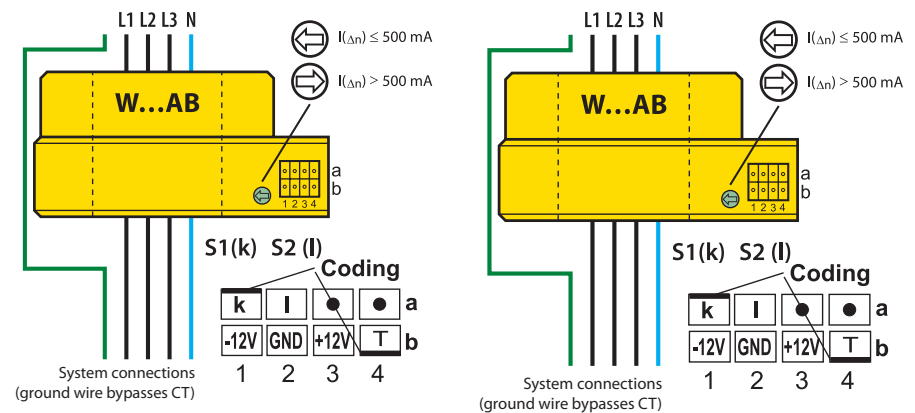
Product description

The W...AB series of current transformers convert AC and DC currents into evaluable measurement signals. These special current transformers are designed to work with the BENDER RCMA420, RCMA423, and RCMS460 / 490 series of ground fault monitors. The combination can detect ground faults on AC, pure DC, and mixed AC/DC systems.

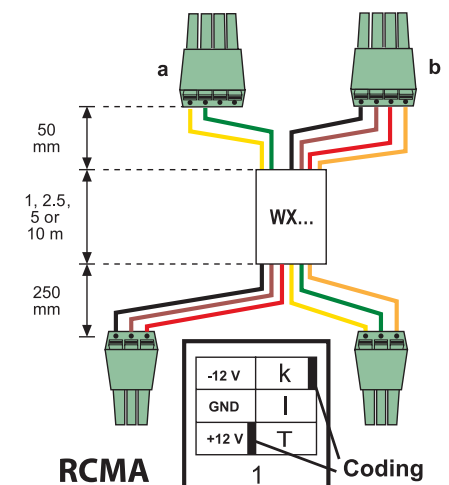
Installation instructions

- All conductors should pass through the current transformer, including the neutral if it is being used.
- The ground wire should not be routed through the current transformer.
- If the current transformer is being used in combination with an RCMS460 or RCMS490, an AN420 external power supply is required. One AN420 can power up to six current transformers. This power supply is not required if the current transformer is being used in conjunction with an RCMA420 or RCMA423 ground fault monitor.
- Special connection cables are required to connect the current transformer to the ground fault monitor. The WXS cable is required for connecting to an RCMS, while the WX cable is required for connecting to the RCMA420 / RCMA423.

Wiring diagram



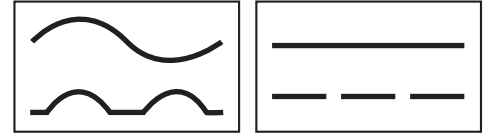
Connection to RCMS460 / RCMS490 using the WXS-... connecting cable.



Connection to RCMA420 or RCMA423 using the WX-... connecting cable.

Color coding for WXS... and WX...:

k = yellow, I = green, -12 V = black, GND = brown, +12 V = red, Test (T) = orange



Technical data

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

Rated insulation voltage	800 V
Rated impulse voltage / pollution degree	8 kV / III

Supply voltage

Supply voltage U_S	DC + / - 12 V
Operating range of U_S	0.95...1.05 x U_S
Power consumption	≤ 2.5 VA

CT circuit

Rated primary ground fault current	10 mA...10 A
Rated continuous thermal ground fault current I_{cth}	40 A
Rated short-time thermal ground fault current I_{th}	60 x I_{cth} = 2.4 kA / 1 s
Rated dynamic current I_{dyn}	2.5 x I_{th} = 6.0 kA / 40 ms

Environment / EMC

EMC	IEC 62020: 2003-11
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)	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 IEC 60721	
Stationary use (IEC 60721-3-3)	3M4
Transport (IEC 60721-3-2)	2M2
Long-time storage (IEC 60721-3-1)	1M3

Connection

Type of connection	connectors
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Connection RCMA/RCMS-measuring current transformer

refer to table "Connecting cables"

Other

Degree of protection, internal components (IEC 60529)	IP40, NEMA 1
Degree of protection, terminals (IEC 60529)	IP20, NEMA 1
Screw mounting	M5 with mounting bracket
DIN rail mounting	with snap-on mounting
Flammability class	UL94V-0
Standards	IEC 60044-1
Instruction leaflet	BP409012
Approval	UL, GOST

Ordering information

Type	Inside diameter		Fixing		Art. No.
	Ø	DIN rail	Screw mounting		
W20AB	Ø 20 mm	×	×		B 9808 0008
W35AB	Ø 35 mm	×	×		B 9808 0016
W60AB	Ø 60 mm	×	×		B 9808 0026
W120AB	Ø 120 mm	--	×		B 9808 0041
W210AB	Ø 210 mm	--	×		B 9808 0040

Power supply unit

Type	Supply voltage	Art. No.
AN420-2	DC 70...300 V / AC 42...460 Hz 70...276 V	B 9405 3100

Ordering information

Connecting cables

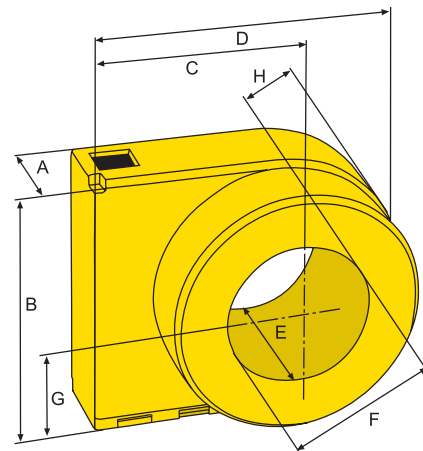
Type	Device	Length / m	Art. No.
WX-100	RCMA420 / RCMA423	1	B 9808 0503
WX-250	RCMA420 / RCMA423	2.5	B 9808 0504
WX-500	RCMA420 / RCMA423	5	B 9808 0505
WX-1000	RCMA420 / RCMA423	10	B 9808 0511
WXS-100	RCMS460 / 490	1	B 9808 0506
WXS-250	RCMS460 / 490	2.5	B 9808 0507
WXS-500	RCMS460 / 490	5	B 9808 0508
WXS-1000	RCMS460 / 490	10	B 9808 0509

Control cable LiYY flexible, 6 x AWG 20 (6 x 0.52 mm), approved acc. to UL 2464

Accessories

Type	Art. No.
Snap-on mounting for W20AB, W35AB	B 9808 0501
Snap-on mounting for W60AB	B 9808 0502

Dimension diagram



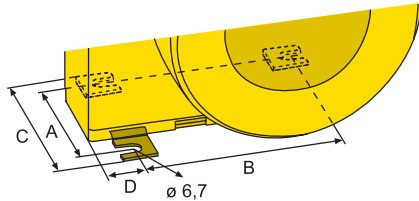
Dimensions

Type	A	B	C	D	E	F	G	H	Weight
W20AB	30	56.3	50	76.4	48.5	Ø 20	56.3	16.4	0.18 kg
W35AB	30	79.2	62	99.5	55	Ø 35	79.2	20	0.35 kg
W60AB	37	116.4	79	135	67	Ø 60	116.4	24	0.57 kg
W120AB	37	191.5	116.5	210	67	Ø 120	191.5	33.5	1.92 kg
W210AB	45	304.5	173	323	80	Ø 210	304.5	45	5.8 kg

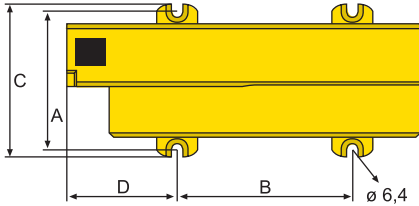
Dimensions in mm

Mounting details

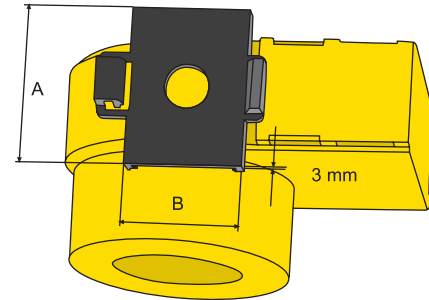
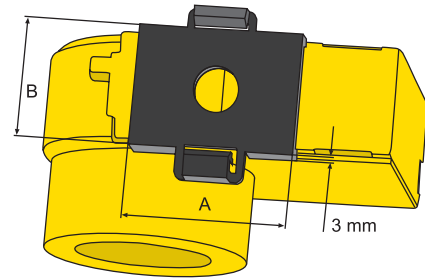
Screw mounting with mounting brackets: W20AB, W35AB, W60AB



Screw mounting: W120AB, W210AB



Snap-on mounting on DIN rail, for vertical or horizontal mounting: W20AB, W35AB, W60AB



Dimensions screw mounting				
Type	A	B	C	D
W20AB (fixing with two mounting brackets, diagonally)	47	29	63	20.35
W35AB (fixing with two mounting brackets, diagonally)	47	48.5	63	12.85
W60AB (fixing with max. three mounting brackets)	54	66	70	17
W120AB	51	103	61	65
W210AB	98	180	69	83

Dimensions in mm

Dimensions snap-on mounting		
Type	A	B
W20AB	43.5	32
W35AB	43.5	32
W60AB	50	39

Dimensions in mm

Selection list		
Type	RCMA420	RCMS460/490
W20AB	×	×
W35AB	×	×
W60AB	×	×
W120AB	--	×
W210AB	--	×



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