

Measuring current transformers of the W..., W...-8000 series



Measuring current transformers of the W..., W...-8000 series



W60 – W60-8000 measuring current transformers



W20 – W20-8000 mounted on DIN rail

Device features

Measuring current transformers W...

- For RCMS460/490 residual current monitoring systems
- For RCM420 residual current monitors
- For EDS470, EDS460/490 insulation fault locators

W...-8000 measuring current transformers

- For EDS461 and EDS491 insulation fault locators

Approvals



Product description

The highly sensitive W... and W...-8000 series measuring current transformers convert AC currents into evaluable measurement signals, in combination with RCM resp. 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.

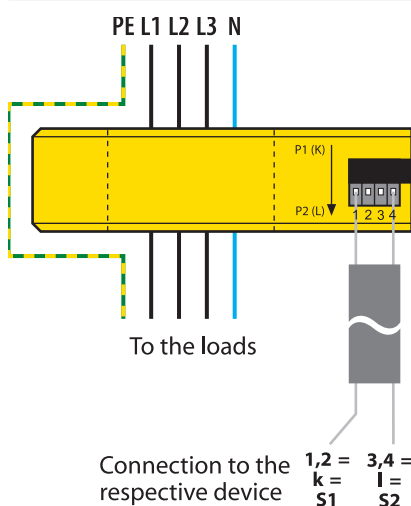
Standards

WS... and WS...-8000 measuring current transformers comply with the device standards: 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



W... measuring current transformers

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

W...-8000 measuring current transformers

Connection to the respective EDS473(E)-12, EDS474(E)-12, EDS461 and/or EDS491 series insulation fault locator.



Technical data

Insulation coordination acc. to IEC 60664-1

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

CT circuit W...

Rated primary residual current	10 mA... 10 A
Rated secondary residual current	0.0167 A
Rated transformation ratio K_n	10/0.0167 A
Rated burden	$\leq 180 \Omega^*$
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_{th}	$60 \times I_{cth} = 2.4 \text{ kA}/1 \text{ s}$
Rated dynamic current I_{dyn}	$2.5 \times I_{th} = 6.0 \text{ kA}/40 \text{ ms}$

CT circuit W...-8000

Rated primary residual current	1 A
Rated secondary residual current	0.125 mA
Rated transformation ratio K_n	1 A/0.125 mA
Rated burden	2400 Ω
Nominal power	0.0375 VA
Frequency range	42 Hz... 3 kHz
Rated continuous thermal current I_{cth}	6 A
Rated short-time thermal current I_{th}	$60 \times I_{cth} = 0.36 \text{ kA}/1 \text{ s}$
Rated dynamic current I_{dyn}	$2.5 \times I_{th} = 0.9 \text{ kA}/40 \text{ ms}$

Environment

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 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 ² (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. 2 x 0.8

Other

Degree of protection, internal components (DIN EN 60529)	IP40
Degree of protection, terminals (IEC 60529)	IP20
Screw mounting	lens head screw M5 acc. to DIN 7985 with mounting bracket
Flammability class	UL94 V-0
Operating manual W..., W...-8000	TBP409013
Approvals and certifications	UL under development, GOST

* The rated burden may vary depending on the respective device data sheet.

Ordering information

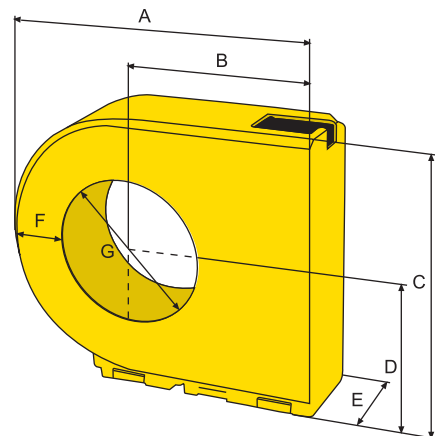
Mounting	Inside diameter	Type	Art. No.
Mounting brackets, DIN rail	20 mm	W20	B 9808 0003
		W20-8000 ¹⁾	B 9808 0009
	35 mm	W35	B 9808 0010
		W35-8000 ¹⁾	B 9808 0017
	60 mm	W60	B 9808 0018
		W60-8000 ¹⁾	B 9808 0027
Mounting brackets	120 mm	W120	B 9808 0028
	210 mm	W210	B 9808 0034

¹⁾ For EDS461/491 and EDS473/474 insulation fault locators

Accessories

Type designation	Width	Art. No.
Snap-on mounting for W20-W35, W20-W35-8000	43.5 mm	B 9808 0501
Snap-on mounting for W60, W60-8000	50 mm	B 9808 0502

Dimension diagram



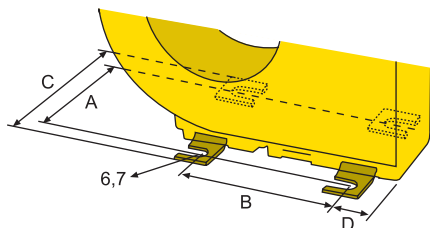
Type	Dimensions (mm)							Weight
	A	B	C	D	E	F	G	
W20	76.4	50	56.3	29.8	30	16.4	$\varnothing 20$	$\leq 130 \text{ g}$
W35	99.5	62	79.2	41.7	30	20	$\varnothing 35$	$\leq 175 \text{ g}$
W60	135	79	116.4	60.4	37	24	$\varnothing 60$	$\leq 315 \text{ g}$
W120	210	116.5	191.5	98	37	33.5	$\varnothing 120$	$\leq 960 \text{ g}$
W210	323	173	304.5	154.5	45	45	$\varnothing 210$	$\leq 2900 \text{ g}$
W20-8000*	76.4	50	56.3	29.8	30	16.4	$\varnothing 20$	$\leq 150 \text{ g}$
W35-8000*	99.5	62	79.2	41.7	30	20	$\varnothing 35$	$\leq 205 \text{ g}$
W60-8000*	135	79	116.4	60.4	37	24	$\varnothing 60$	$\leq 355 \text{ g}$

Tolerance: $\pm 0.5 \text{ mm}$

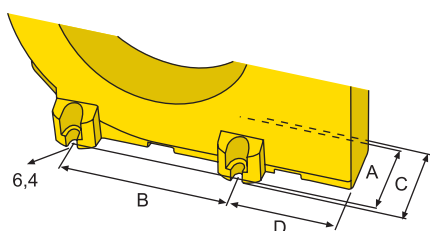
* For EDS461/491 insulation fault locators

Mounting details

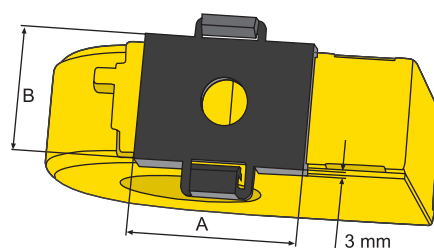
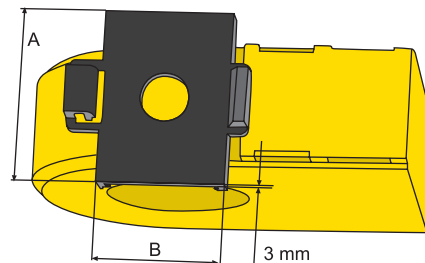
Screw mounting with mounting brackets: W20, W35, W60 and W20-8000, W35-8000, W60-8000



Screw mounting: W120, W210



Snap-on mounting on DIN rail: for vertical or horizontal mounting: W20, W35, W60 und W20-8000, W35-8000, W60-8000



Dimensions (mm)				
Type	A	B	C	D
W20/W20-8000 (fixing with two mounting brackets, diagonally)	49	31.4	65	18.6
W35/W35-8000 (fixing with two mounting brackets, diagonally)	49	49.8	65	12.1
W60/W60-8000 (fixing with four mounting brackets)	56	66	72	17.7
W120 (screw mounting)	51	103	60.6	65
W210 (screw mounting)	59	180	68.6	83

Dimensions (mm)		
Type	A	B
W20/W20-8000	43.5	32
W35/W35-8000	43.5	32
W60/W60-8000	50	39

Tolerance for screw mounting with mounting brackets: ± 1.5 mm

Selection list

Type	RCM420	RCMS460/490	EDS460/490	EDS461/491
W20	■	■	■	—
W35	■	■	■	—
W60	■	■	■	—
W120	■	■	■	—
W210	■	■	■	—
W20-8000	—	—	—	■
W35-8000	—	—	—	■
W60-8000	—	—	—	■



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