

Measuring current transformers WR70x175S(P)...WR200x500S(P)

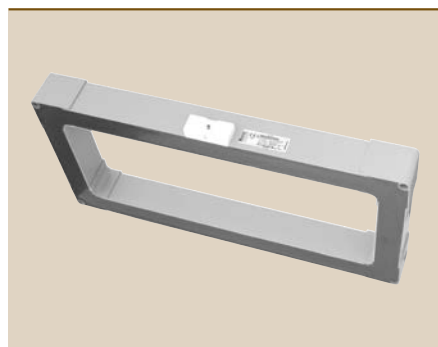


Measuring current transformers

WR70x175S(P)...WR200x500S(P)



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Measuring current transformers WR200x500S(P)

Product description

The highly sensitive WR...S 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.

The WR...SP series measuring current transformers feature an integrated screening. This screening is intended to avoid false tripping of connected RCM... or EDS... devices, when high load currents or inrush currents occur in the system being monitored.

WR...SP series measuring current transformers are particularly suitable for use in busbar systems and are designed for load currents ≥ 500 A.

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

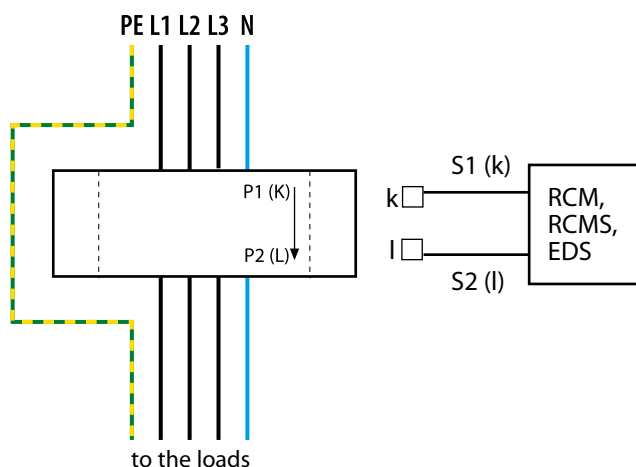
Standards

WR70x175S(P)...WR200x500S(P) measuring current transformers comply with the device standards: DIN EN 60044-1, IEC 61869.

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



Device features

- For RCMS460/490 residual current monitoring systems
- For RCM420 residual current monitors
- For EDS470, EDS460/490 and EDS440 insulation fault locators in AC and DC systems
- The WR...SP measuring current transformers are particularly suitable for use in busbar systems. This series is to be used for load currents ≥ 500 A.

Approvals

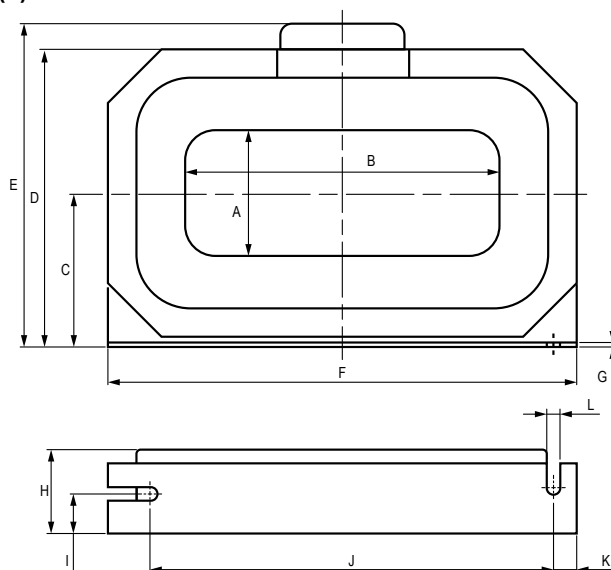


Ordering information

Screening	Internal dimensions	Approvals		Type	Art. No.
		UL	LR		
without screening	70 x 175 mm	■	■	WR70x175S	B911738
	115 x 305 mm	■	■	WR115x305S	B911739
	150 x 350 mm	■	■	WR150x350S	B911740
	200 x 500 mm	–	■	WR200x500S	B911763
Screening integrated	70 x 175 mm	–	■	WR70x175SP	B911790
	115 x 305 mm	–	■	WR115x305SP	B911791
	150 x 350 mm	–	■	WR150x350SP	B911792
	200 x 500 mm	–	■	WR200x500SP	B911793

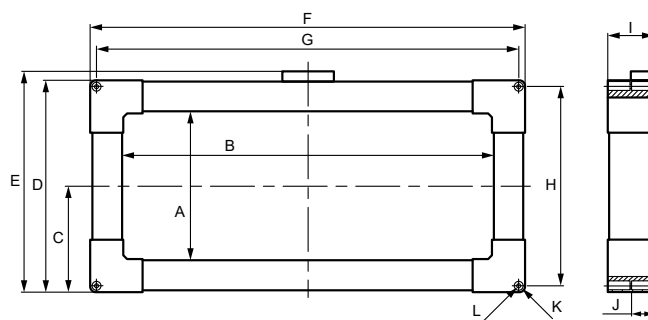
Dimensions (mm) and weights (g)

Typ WR70x175S(P)...WR150x350S(P)



Dimensions (mm)													Weight
Type	A	B	C	D	E	F	G	H	I	J	K	L	
WR70x175S(P)	70	175	85	165	180	261	2.5	46	22	225	13	7.5	2900 g
WR115x305S(P)	115	305	402	225	240	402	2.5	55	25	360	18.5	8	6300 g
WR150x350S(P)	150	350	460	272	286	460	2.5	55	28	418	23	8	8250 g

Typ WR200x500S(P)



Dimensions (mm)													Weight
Type	A	B	C	D	E	F	G	H	I	J	K	L	
WR200x500S(P)	200	500	142.5	285	297	585	567.9	267.9	62	30	ø 12	ø 5.5	9000 g

Technical data

Insulation coordination acc. to IEC 61869-2

Highest system voltage for electrical equipment U_m	AC 720 V
Rated impulse withstand voltage U_{iso}	3 kV

Measuring circuit

Rated transformation ratio	600/1
Rated burden	180 Ω
Rated primary current	≤ 10 A (100 A)
Rated primary current	≥ 10 mA
Nominal power	50 mVA
Rated frequency	50...400 Hz
Internal resistance	5...8 Ω
Secondary overvoltage protection	suppressor diode P6KE6V8CP
Accuracy class	5
Rated continuous thermal current	100 A
Rated short-time thermal current	14 kA/1 s
Rated dynamic current	35 kA/30 ms

Environment

Shock resistance IEC 60068-2-27 (device in operation)	15 g/11 ms
Bumping IEC 60068-2-29 (transport)	40 g/6 s
Vibration resistance IEC 60068-2-6 (device in operation)	1 g/10...150 Hz
Vibration resistance IEC 60068-2-6 (transport)	2 g/10...150 Hz
Ambient temperature (during operation)	-10...+50 °C
Ambient temperature (during storage)	-40...+70 °C
Climatic class acc. to DIN IEC 60721-3-3	3K23

Connection

Connection	screw-type terminals
Connection	
rigid/flexible	0.2...4/0.2...2.5 mm ²
flexible with ferrules with/without plastic sleeve	0.25...2.5 mm ²
Conductor sizes (AWG)	24...12
Connection to the evaluator	
single wire ≥ 0.75 mm ²	0...1 m
single wire, twisted ≥ 0.75 mm ²	0...10 m
shielded cable ≥ 0.6 mm ²	0...40 m
Shielded cable (shield on one side connected to PE)	recommended: J-Y(St)Y min. 2 x 0.6

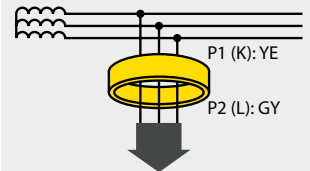
Other

Operating mode	continuous operation
Mounting	any position
Degree of protection, internal components (DIN EN 60529)	IP40
Degree of protection, terminals (DIN EN 60529)	IP20
Screw mounting	M5
Flammability class	UL94 V-0
Documentation number	D00144

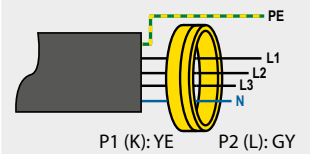
Installation instructions

- Do not pass shielded cables through the measuring current transformer.
- As a general principle, the PE conductor and low-resistance conductor loops must not be passed through the measuring current transformer!

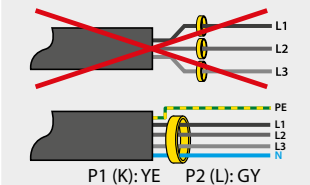
It is important that the leads are passed through the measuring current transformer in the right direction



Never pass a PE conductor through the measuring current transformer

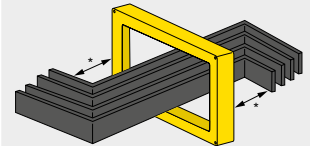


Make sure that all current-carrying leads are passed through the measuring current transformer

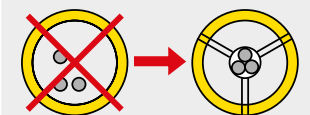


The primary conductors may only be bent from the specified minimum distance. The minimum bending radius specified by the manufacturers must be observed.

* Distance to 90° angle: 2x transformer height



The leads must be aligned with the centre of the measuring current transformer



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