

Measuring current transformers of the WR... series



Measuring current transformer WR115x305

Device features

- For residual current monitoring systems of the RCMS460/490 series
- For residual current monitors of the RCM420, RCM460 and RCM470 series
- For insulation fault location systems of the EDS460/490 and EDS470 series

Approvals



Product description

The measuring current transformers of the WR... series are highly sensitive measuring current transformers of rectangular type which in combination with residual current monitors and evaluators of the RCM and RCMS series convert AC currents into evaluable measurement signals.

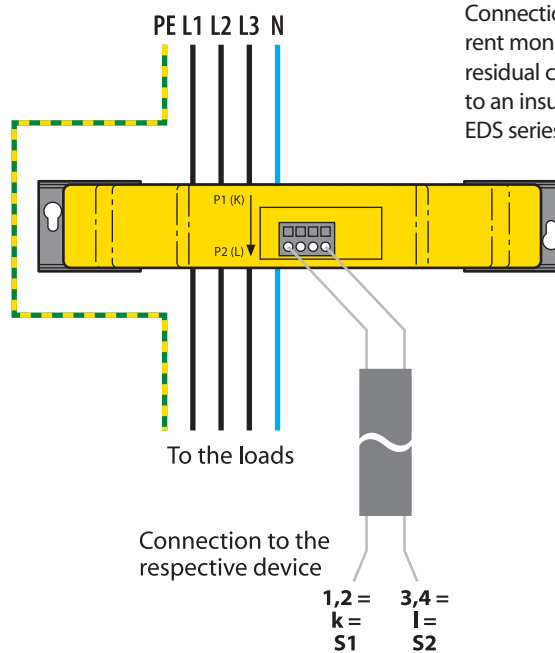
In addition, the measuring current transformers can be used in combination with insulation fault location systems (EDS) for IT systems. They are designed to measure the test current generated by a PGH insulation fault test device or an A-ISOMETER® IRDH. In combination with insulation fault evaluators of the EDS series, the test current is converted into evaluable signals.

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

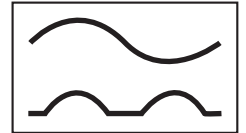
Installation instructions

- 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



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



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
CT circuit	
Rated primary residual current	30 mA...10 A
Rated secondary residual current	0.0167 A
Rated transformation ratio K_n	10/0.0167 A
Rated burden	max. 180 Ω^*
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 x $I_{cth} = 2.4 \text{ kA/1 s}$
Rated dynamic current I_{dyn}	2.5 x $I_{th} = 6.0 \text{ kA/40 ms}$

Environmental conditions	
Operating temperature	-25 °C...+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	
Type of connection	cage clamp spring terminal
rigid/flexible/conductor sizes	0.08...2.5/0.08...2.5 mm ² /28...12 AWG
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
Recommended cable	J-Y (ST) Y min. 2 x 0.8
(shielded, shield on one side connected to L-conductor, not connected to earth)	

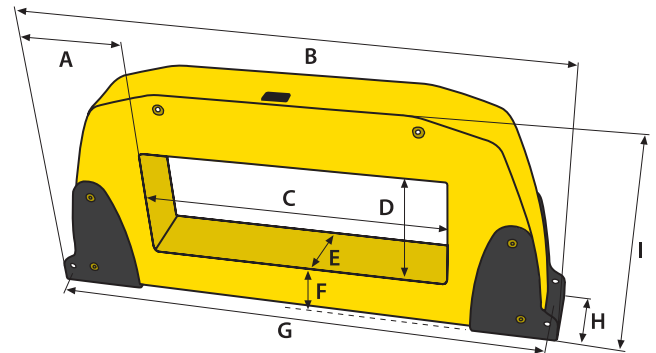
Other	
Degree of protection, internal components (DIN EN 60529)	IP40
Degree of protection, terminals (IEC 60529)	IP20
Screw mounting	M5 with mounting brackets
Flammability class	UL94V-0
Product standards	IEC 60044-1
Operating Manual	BP409014
Approval	UL under consideration, GOST

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

Ordering information

Type	Inside dimensions	Mounting Mounting bracket	Art. No.
WR70x175	70 x 175 mm	×	B 9808 0609
WR115x305	115 x 305 mm	×	B 9808 0610

Dimension diagram

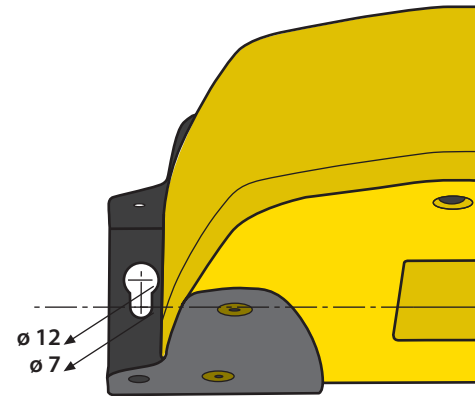


Dimensions

Type	A	B	C	D	E	F	G	H	I	Weight
WR70x175	90.75	357.5	176	71	56.5	51.5	337.5	61	190	$\leq 2.96 \text{ kg}$
WR115x305	110	526	306	116	67	53	506	72.5	242.5	$\leq 5.56 \text{ kg}$

Dimensions are given in mm

Mounting



Selection list

Type	RCM420	RCM470	RCMS460 RCMS490	EDS460 EDS490	EDS470
WR70x175	×	×	×	×	×
WR115x305	×	×	×	×	×