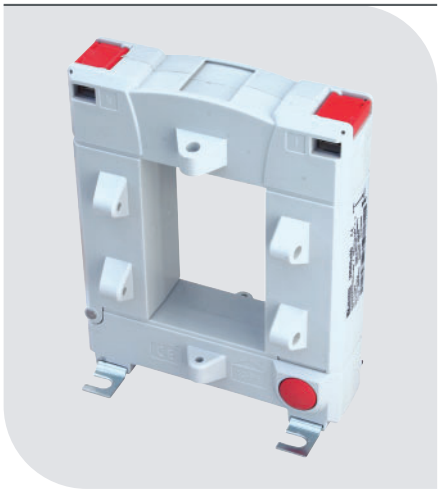
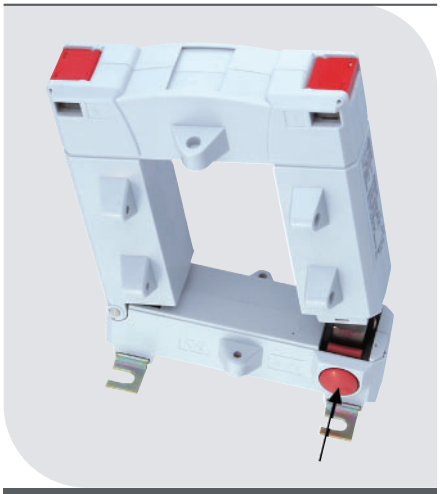
Measuring current transformers of the WS... series
Measuring current transformers of the WS...-8000 series



Measuring current transformers of the WS50x80 series
Measuring current transformers of the WS50x80-8000 series



Measuring current transformers of the WS50x80 series, split-core type
Measuring current transformers of the WS50x80-8000 series, split-core type

Device features

Measuring current transformer WS...

- 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

Measuring current transformer WS...-8000

- For insulation fault evaluators of the EDS473(E)-12, EDS474(E)-12, EDS461 and EDS491 series

Approvals

AE25

Product description

Split-core type measuring current transformers of the WS… and WS…-8000 series can be opened using the interlock knob to enclose the conductors to be monitored. That allows easy retrofitting in existing installations.

Measuring current transformers of the WS… und WS…-8000 series are highly sensitive measuring current transformers of split-core type which in combination with residual current monitors and evaluators of the RCM and RCMS series convert AC currents into evaluable measurement signals.

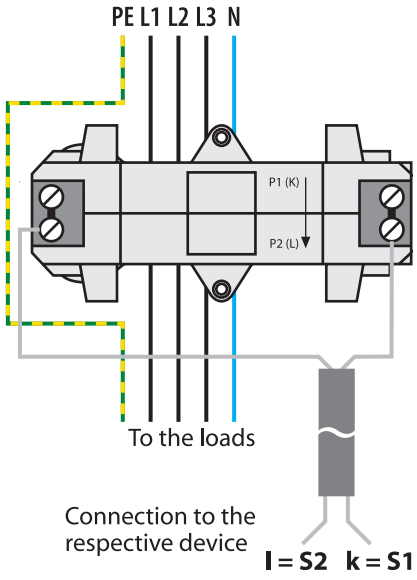
In addition, the measuring current transformers can be used in combination with insulation fault location systems (EDS) for IT systems. They are designed to measure the test current generated by a PGH insulation fault test device or an A-ISOMETER® IRDH. In combination with insulation fault evaluators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

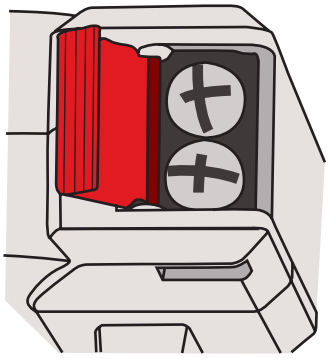


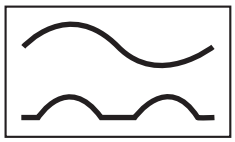
Measuring current transformer of the WS... series

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.

Measuring current transformer WS...-8000

Connection to the respective insulation fault evaluators EDS473(E)-12, EDS474(E)-12, EDS461 ánd EDS491.





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 WS…

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 kA/1 s
Rated dynamic current I_{dyn}	2.5 x I_{th} = 6.0 kA/40 ms

CT circuit WS…-8000

Rated primary residual current	30 mA…1 A
Rated secondary residual current	0.000125 A
Rated transformation ratio K_n	10/0.000125 A
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 x I_{cth} = 0.36 kA/1 s
Rated dynamic current I_{dyn}	2.5 x I_{th} = 0.9 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

Connection properties	screw-type terminals
rigid/flexible/conductor sizes	0.08…2,5/0,08…2.5 mm²/2812 AWG
Stripping length	8…9 mm

Connection EDS, RCM(S) measuring current transformers

Single wire ≥ 0.75 mm²	0…1 m
Single wire, twisted ≥ 0.75 mm²	0…10 m
Shielded cable ≥ 0.5 mm²	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

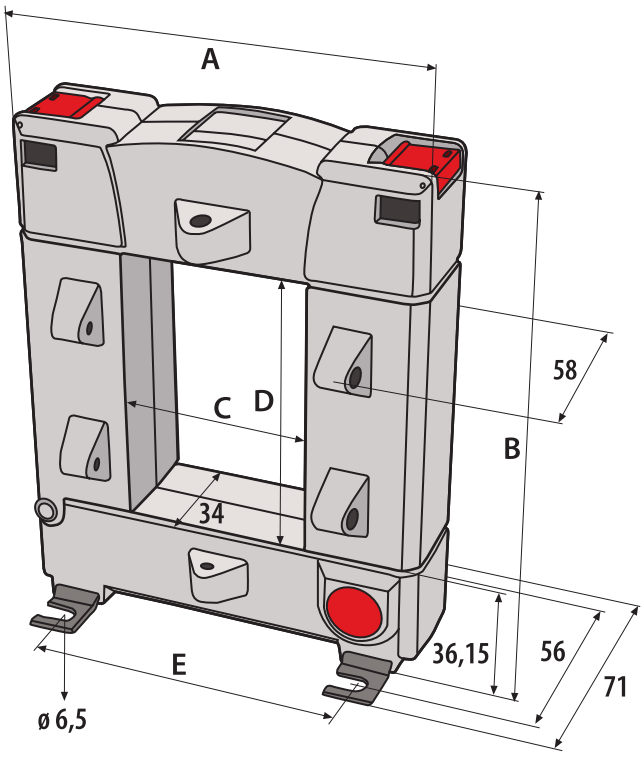
Degree of protection, internal components (DIN EN 60529)	IP40
Degree of protection, terminals (IEC 60529)	IP20
Screw mounting	M5 with mounting brackets
Flammability class	UL94V-0
Product standards	IEC 60044-1
Operating Manual WS…	BP409015
Operating Manual WS…-8000	BP108018
Approval	UL under consideration, GOST

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

Ordering information

Type	Inside dimensions	Mounting Mounting bracket	Art. No.
WS20x30	20 x 30 mm	×	B 9808 0601
WS50x80	50 x 80 mm	×	B 9808 0603
WS80x120	80 x 120 mm	×	B 9808 0606
WS20x30-8000*	20 x 30 mm	×	B 9808 0602
WS50x80-8000*	50 x 80 mm	×	B 9808 0604

Dimension diagram



Dimensions

Type	A	B	C	D	E	Weight
WS20x30	93	106.15	23	33	64	≤ 0.6 kg
WS50x80	125	158.15	55	85	96	≤ 1.04 kg
WS80x120	155	198.15	85	125	126	≤ 1.4 kg
WS20x30-8000*	93	106.15	23	33	64	≤ 0.63 kg
WS50x80-8000*	125	158.15	55	85	96	≤ 1.08 kg

Dimensions are given in mm

Selection list

Type	RCM420	RCM470	RCMS460 RCMS490	RCMS470	EDS460 EDS490	EDS461 EDS491	EDS470	EDS473	EDS474
WS20x30	×	×	×	×	×	--	×	--	--
WS50x80	×	×	×	×	×	--	×	--	--
WS80x120	×	×	×	×	×	--	×	--	--
WS20x30-8000*	--	--	--	--	--	×	--	×	×
WS50x80-8000*	--	--	--	--	--	×	--	×	×

* For insulation fault locations systems of the EDS461/491 and EDS473/474 series