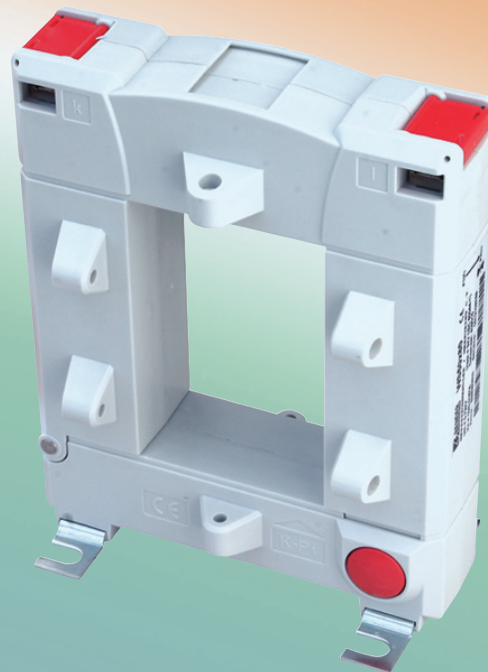
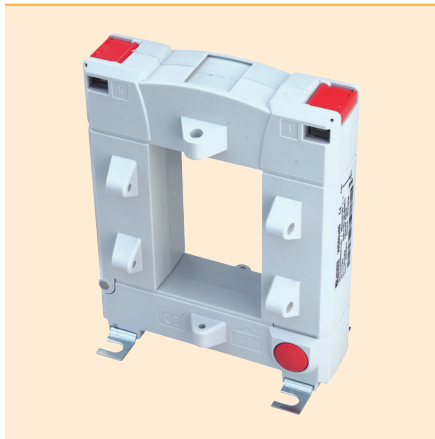


## WS Series

Split-Core Current Transformers for AC Systems  
Used with RCM, RCMS, and EDS Series Devices



## WS... and WS...-8000 Current Transformers



Current transformer WS50x80  
Current transformer WS50x80-8000

### Description

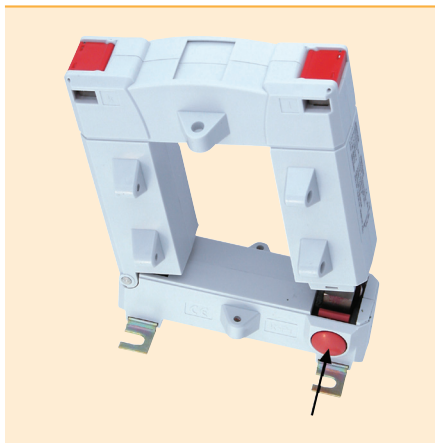
The WS and WS-8000 series of current transformers are highly sensitive measuring tools which measure AC currents and convert them into evaluable signals. These are specially designed to work with BENDER RCM and RCMS series ground fault monitors for grounded and high-resistance grounded systems, as well the EDS series of ground fault location evaluators for ungrounded systems.

WS series current transformers are a split-core type, connected via an interlocking knob. This allows for simple retrofitting into existing applications.

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

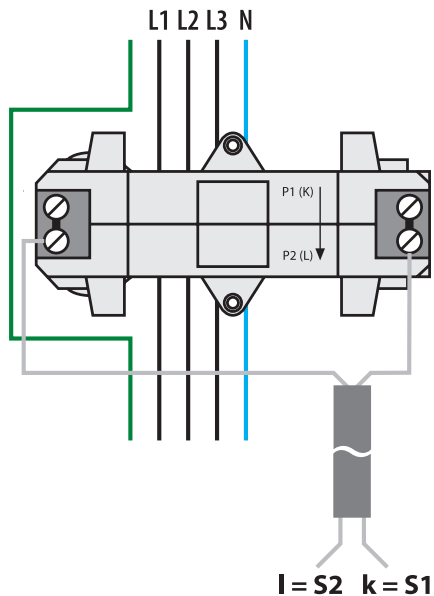
### Installation instructions

- All conductors, including the neutral if it is being used, should be routed through the current transformer.
- The ground wire should not be routed through the current transformer.



Current transformer WS50x80  
Current transformer WS50x80-8000

### Wiring diagram



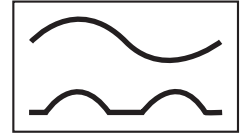
### Features

#### Current transformer WS...

- For RCM and RCMS series ground fault monitors for grounded systems
- For EDS460 and EDS490 series ground fault location modules for ungrounded systems

#### Measuring current transformer WS...-8000

- For EDS461 and EDS491 series ground fault location modules for ungrounded systems



**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 ground fault current	30 mA... 10 A
Rated secondary ground fault current	0.0167 A
Rated transformation ratio $K_n$	10 / 0.0167 A
Rated burden	max. 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 $I_{tth}$	$60 \times I_{cth} = 2.4 \text{ kA} / 1 \text{ s}$
Rated dynamic current $I_{dyn}$	$2.5 \times I_{tth} = 6.0 \text{ kA} / 40 \text{ ms}$

**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 $\Omega$
Nominal power	0.0375 VA
Frequency range	42 Hz... 3 kHz
Rated continuous thermal current $I_{cth}$	6 A
Rated short-time thermal current $I_{tth}$	$60 \times I_{cth} = 0.36 \text{ kA} / 1 \text{ s}$
Rated dynamic current $I_{dyn}$	$2.5 \times I_{tth} = 0.9 \text{ kA} / 40 \text{ ms}$

**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	screw terminals
Rigid / flexible / conductor sizes	0.08...2.5 / 0.08...2.5 mm / 28...12 AWG
Stripping length	8...9 mm

**Connection EDS, RCM(S) measuring current transformers**

Single wire $\geq 0.75 \text{ mm}$	0...1 m
Single wire, twisted $\geq 0.75 \text{ mm}$	0...10 m
Shielded cable $\geq 0.5 \text{ mm}$	0...40 m
Recommended cable	
(shielded, shield on one side connected to line conductor, not connected to PE)	J-Y(ST)Y min. 2 x 0.8

**Other**

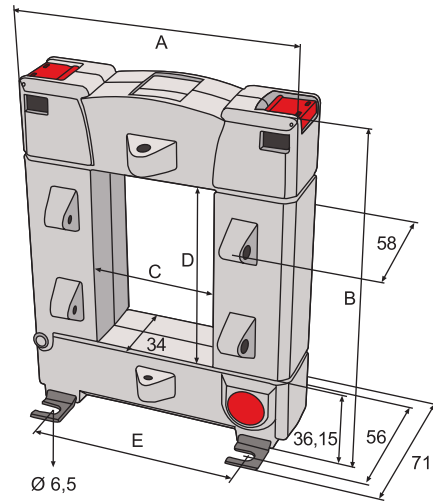
Degree of protection, internal components (IEC 60529)	IP40
Degree of protection, terminals (IEC 60529)	IP20
Screw mounting	M5 with mounting brackets
Flammability class	UL94V-0
Standards	IEC 60044-1
Instruction leaflet WS...	BP409015
Instruction leaflet WS...-8000	BP108018
Approval	UL under consideration, GOST

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

**Ordering information**

Type	Inside dimensions	Fixing 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

**Dimensions (mm)**



**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 in mm

**Selection list**

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

\* For ground fault location systems of the EDS461 / 491 and EDS473 / 474 series.



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