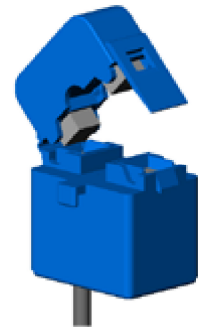


## AC Current transformer TT 50-SD

Split core transducer for the electronic measurement of AC waveform currents, with galvanic isolation between the primary circuit (power) and the secondary circuit (measurement).



**$I_{PN} = 50\text{ A}$**



### Electrical data

$I_{PN}$	Primary nominal current rms	50	At
$I_{OUT}$	Output current	16.66	mA
$V_{SZ}$	Output clamping voltage	7.5	V
$\hat{I}_p$	Overload capability - continuous	100	A
	- 1 min	1200	A

### Performance data

$X_G$	Overall accuracy @ $I_{PN}$ , $T_A = 25^\circ\text{C}$	$< \pm 1$	%
$\varepsilon_L$	Linearity error	0.1	%
$TCI_{OUT}$	Temperature coefficient of $I_{OUT}$	60	ppm/K
$\Delta\phi$	Phase shift	$1.5^\circ \pm 1^\circ$	
<b>BW</b>	Frequency bandwidth ( $\pm 1\text{dB}$ )	50/60	Hz

### General data

$T_A$	Ambient operating temperature	$-25 \dots +70$	$^\circ\text{C}$
$T_S$	Ambient storage temperature	$-30 \dots +90$	$^\circ\text{C}$
$m$	Mass	80	g
<b>IPxx</b>	Protection degree	IP40	

### Isolation characteristics

$V_b$	Rated isolation voltage rms <sup>1)</sup> with IEC 61010-1 standards and following conditions : - Reinforced isolation - Over voltage category CAT III - Pollution degree PD2 - Heterogeneous field	300	V
$V_d$	Rms voltage for AC isolation test <sup>2)</sup> , 50Hz, 1min	3.5	kV
$\hat{V}_w$	Impulse withstand voltage 1.2/50ms	6.5	kV
<b>dCp</b>	Creepage distance	6	mm
<b>dCl</b>	Clearance distance	6	mm
<b>CTI</b>	Comparative tracking index (Group I)	600	

**Notes :** <sup>1)</sup> If insulated cable is used for the primary circuit, the voltage category could be improved according to the primary cable insulation category (please refer to the cable manufacturer's indications)

<sup>2)</sup> between primary (completely filling the hole) and secondary.

### Features

- Split core type
- $\varnothing 8\text{ mm}$  sensing aperture for non-contact measurement
- Cable output (1m)
- Isolated plastic case recognized according to UL 94-V0.

### Advantages

- High accuracy and low phase shift
- High isolation between primary and secondary circuits
- Compact case
- Cost-effective solution
- Easy installation.

### Applications

- **Power meters**  
Current measurement for active power calculation
- **Energy sub-meters**  
For energy efficiency monitoring, consumption analysis and costs allocation
- **Power quality monitoring**
- **Condition monitoring**  
(e.g. motor loads such as conveyers, pumps or HVAC)
- **Distributed measurement systems**

### Application domain

- Energy and Automation

## Current transformer TT 50-SD

### Safety and warning notes

In order to guarantee safe operation of the transducer and to be able to make proper use of all features and functions, please read these instructions thoroughly!

Safe operation can only be guaranteed if the transducer is used for the purpose it has been designed for and within the limits of the technical specifications.

Ensure you get up-to-date technical information that can be found in the latest associated datasheet under [www.lem.com](http://www.lem.com).



#### Caution! Risk of danger

Ignoring the warnings can lead to serious injury and/or cause damage!

The electric measuring transducer may only be installed and put into operation by qualified personnel that have received an appropriate training.

The corresponding national regulations shall be observed during installation and operation of the transducer and any electrical conductor.

The transducer shall be used in electric/electronic equipment with respect to applicable standards and safety requirements and in accordance with all the related systems and components manufacturers' operating instructions.



#### Caution! Risk of electrical shock

When operating the transducer, certain parts of the module may carry hazardous live voltage (e.g. primary conductor, power supply).

The user shall ensure to take all measures necessary to protect against electrical shock.

The transducer is a built-in device containing conducting parts that shall not be accessible after installation.

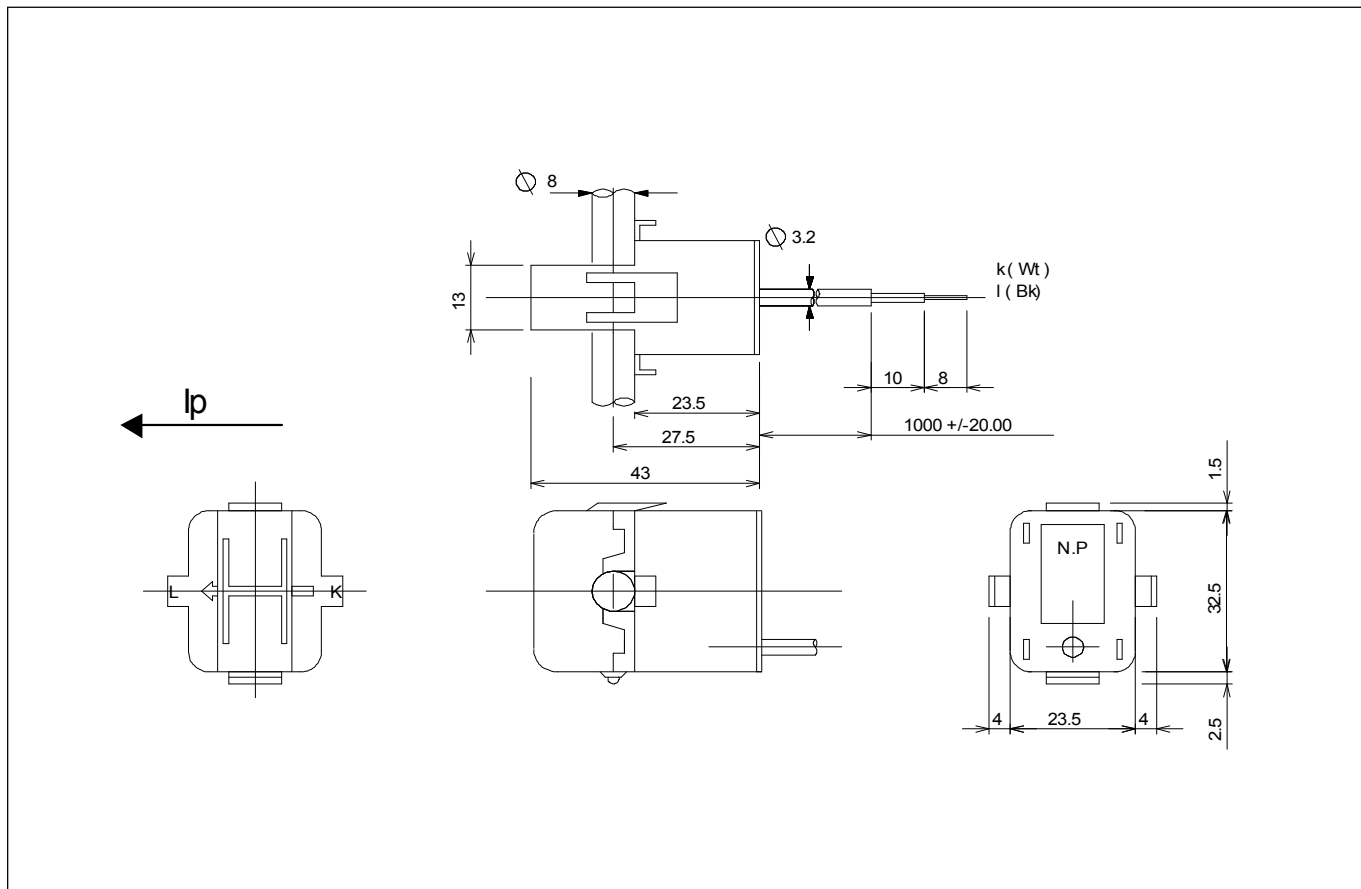
A protective enclosure or additional insulation barrier may be necessary.

The transducer shall not be put into operation if the jaw opening is open (split core version) or the installation is not completed.

Installation and maintenance shall be done with the main power supply disconnected except if there are no hazardous live parts in or in close proximity to the system and if the applicable national regulations are fully observed.

Safe and trouble-free operation of this transducer can only be guaranteed if transport, storage and installation are carried out correctly and operation and maintenance are carried out with care.

## Dimensions TT 50-SD (in mm. 1 mm = 0.0394 inch)



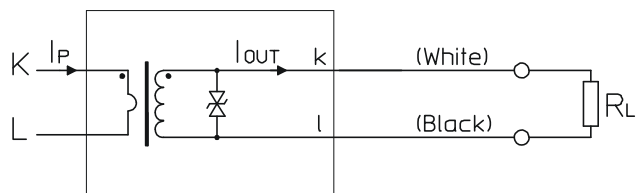
### Mechanical characteristics

- General tolerance  $\pm 1$  mm
- Primary aperture  $\varnothing 8$  mm
- Fastening Cable tie
- Output cable length 1000 mm

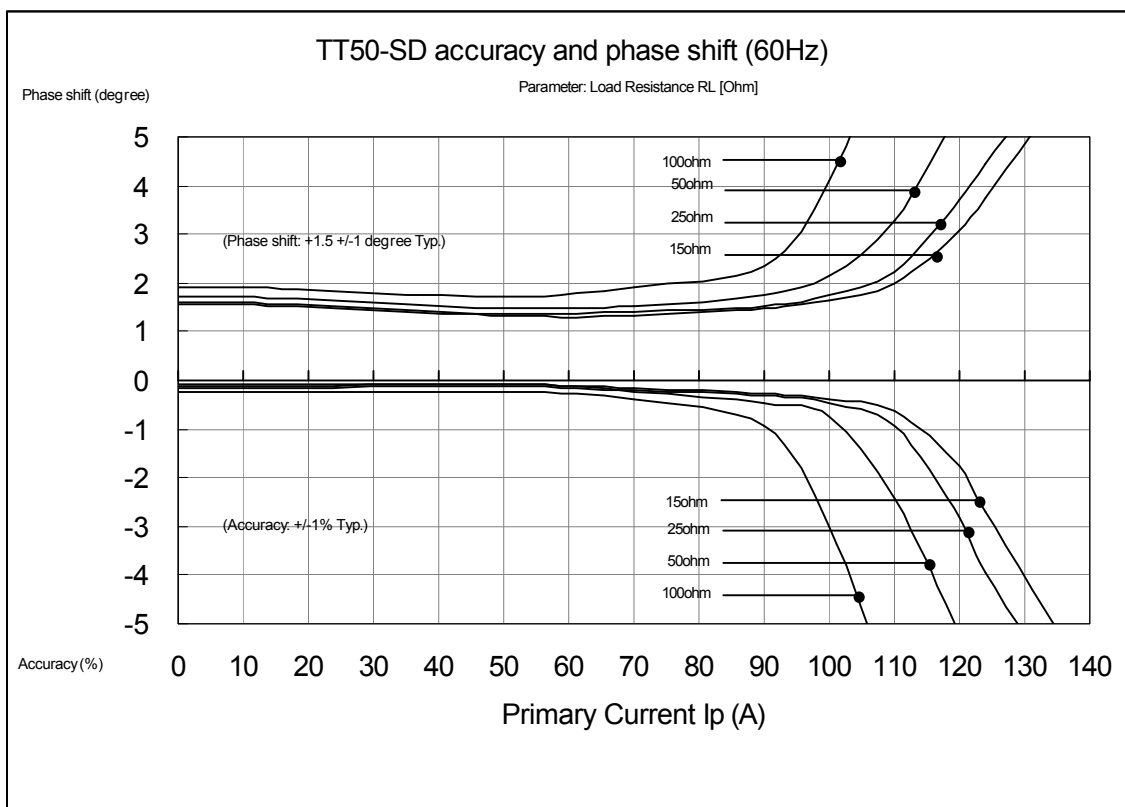
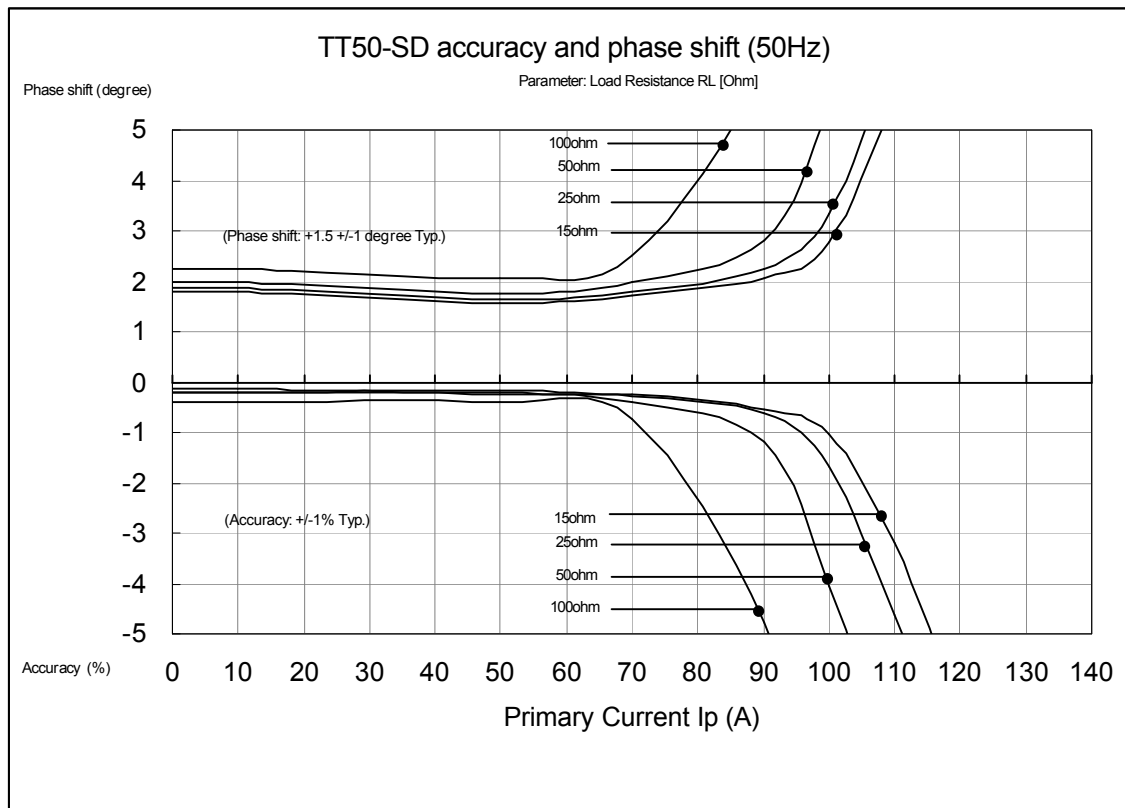
### Remark

- ATTENTION: contact areas (air gap) must be kept clean (particle free) to ensure proper performance

### Connections



## Electrical output characteristics



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