

**APPLICATION**

These transformers are used to separate measuring and protection equipment from high voltages and to transform the currents measured to the values required by the measuring and protection equipment.

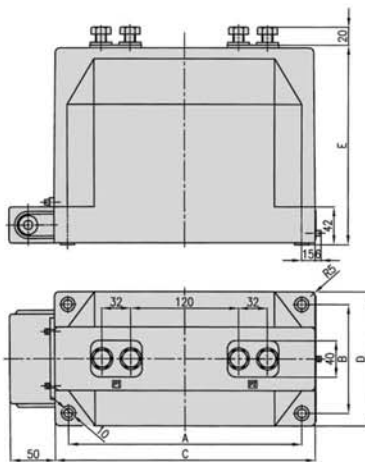
**STANDARDS**

These transformers are produced in compliance with IEC, VDE, ANSI, BS and other standards.

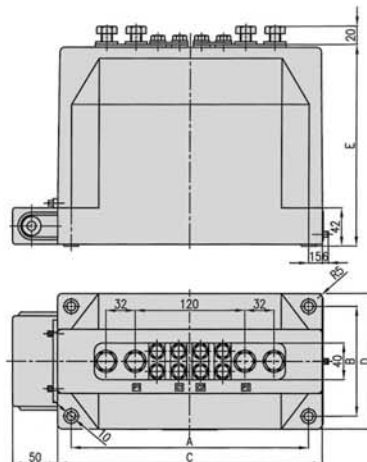
**DESCRIPTION OF MAIN PARTS**

- The transformers are made with 1:2 primary reconnection or without primary reconnection. Reconnection is very simple by re-arrangement of links at HV-terminals.
- Cores used in current transformers are made either of quality cold-rolled grain-oriented magnetic steel sheets or a high-quality soft magnetic material (Mumetal) depending on the required accuracy class.
- Low voltage winding, designed as

- multilayer winding, is wound on the core with additional insulation between layers.
- High voltage winding is designed in such a way, that mechanical stresses due to thermal dilatation in case of short circuit currents are not transmitted to the main insulation of the transformer. The conductors used for windings are made of electrolytic copper.
- Main insulation of these instrument transformers is epoxy-resin compound cast in high vacuum, with superior dielectric and mechanical properties.
- Primary terminals are made of copper or yellow brass.
- Secondary terminals are closed with an appropriate cover with rubber glands for connection cable of 16 mm diameter by means of special "sealing" screws. The terminal situated beside the secondary terminals and marked with symbol  $\perp$  must be properly earthed. Secondary connections are connected by M5 screws.

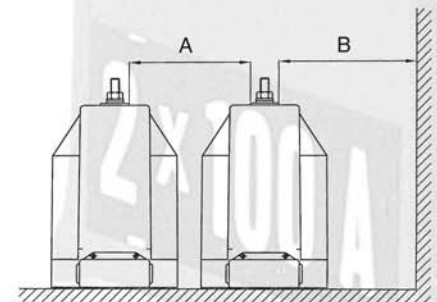


Without primary reconnection



With primary reconnection

Minimum distances from high-voltage connections



**TABLE I**

Size	A mm	B mm	C mm	D mm	E mm	Weight (kg)
1	200	120	230	148	220	17
2	260	120	290	148	220	20
3	300	120	330	148	220	22
4	205	150	235	178	265	22
5	265	150	295	178	265	27
6	315	150	345	178	265	32
7	205	165	235	195	325	30
8	315	165	345	195	325	40

Um (kV)	A (mm)	B (mm)
12	100	110
24	190	210
36	270	290

**TABLE II**

Rated primary current $I_n(A)$	Short-time thermal current $I_{th}$	One core for measuring			One core for protection			Two cores			Three cores			
		Rated output (VA)	Accuracy class	$U_m$ 12 24 36 Transformer's size designation	Rated output (VA)	Transformer's size designation	$U_m$ 12 24 36	Rated output (VA)	Accuracy class	Transformer's size designation	$U_m$ 12 24 36	Transformer's size designation		
5*...40*	100 x $I_n$	15	0.5	1 4 7	15	1 4 7	15	0.5	1 4 7	15	1 4 7	15	0.5	1 4 7
	100 x $I_n$	15	0.5	1 4 7	15	1 4 7	15	0.5	1 4 7	15	1 4 7	15	0.5	1 4 7
	200 x $I_n$	15	0.5	1 4 8	15	1 4 8	15	0.5	1 4 8	15	2 5 8	15	0.5	2 5 8
	300 x $I_n$	15	0.5	1 4 8	15	1 4 8	15	0.5	1 4 8	15	2 5 8	15	0.5	2 5 8
50*	400 x $I_n$	15	0.5	1 4 8	10	2 5 8	10	1	2 5 8	10	3 6 8	10	1	3 6 8
	500 x $I_n$	10	1	1 4 8	10	2 5 8	10	1	2 5 8	10	3 6 8	10	1	3 6 8
	600 x $I_n$	10	1	1 4 8	10	2 5 8	10	1	2 5 8	10	3 6 8	10	1	3 6 8
	100 x $I_n$	15	0.5	1 4 7	15	1 4 7	15	0.5	1 4 7	15	1 4 7	15	0.5	1 4 7
	200 x $I_n$	15	0.5	1 4 8	15	1 4 8	15	0.5	1 4 8	15	2 5 8	15	0.5	2 5 8
75*	300 x $I_n$	15	0.5	1 4 8	15	1 4 8	15	0.5	1 4 8	15	2 5 8	15	0.5	2 5 8
	400 x $I_n$	15	0.5	1 4 8	15	1 4 8	15	0.5	2 5 8	10	3 6 8	15	0.5	3 6 8
	500 x $I_n$	10	1	1 4 8	10	2 5 8	10	1	2 5 8	10	3 6 8	10	1	3 6 8
100*	100 x $I_n$	15	0.5	1 4 7	15	1 4 7	15	0.5	1 4 7	15	1 4 7	15	0.5	1 4 7
	200 x $I_n$	15	0.5	1 4 8	15	1 4 8	15	0.5	1 4 8	15	2 5 8	15	0.5	2 5 8
	300 x $I_n$	15	0.5	1 4 8	15	1 4 8	15	0.5	1 4 8	15	2 5 8	15	0.5	2 5 8
	400 x $I_n$	15	0.5	1 4 8	10	2 5 8	10	1	2 5 8	10	3 6 8	15	0.5	3 6 8
150*	100 x $I_n$	15	0.5	1 4 7	15	1 4 7	15	0.5	1 4 7	15	1 4 7	15	0.5	1 4 7
	200 x $I_n$	15	0.5	1 4 8	15	1 4 8	15	0.5	1 4 8	15	2 5 8	15	0.5	2 5 8
	100 x $I_n$	15	0.5	1 4 7	15	1 4 7	15	0.5	1 4 7	15	1 4 7	15	0.5	1 4 7
200*	200 x $I_n$	15	0.5	1 4 8	15	1 4 8	15	0.5	1 4 8	15	2 5 8	15	0.5	2 5 8
300*	100 x $I_n$	15	0.5	1 4 7	15	1 4 7	15	0.5	1 4 7	15	1 4 7	15	0.5	1 4 7
400*	100 x $I_n$	15	0.5	1 4 7	15	1 4 7	15	0.5	1 4 7	15	1 4 7	15	0.5	1 4 7
600	70 x $I_n$	15	0.5	1 4 7	15	1 4 7	15	0.5	1 4 7	15	1 4 7	15	0.5	1 4 7
800	50 x $I_n$	15	0.5	1 4 7	15	1 4 7	15	0.5	1 4 7	15	1 4 7	15	0.5	1 4 7
1000	40 x $I_n$	15	0.5	1 4 7	15	1 4 7	15	0.5	1 4 7	15	1 4 7	15	0.5	1 4 7
1250	30 x $I_n$	15	0.5	1 4 7	15	1 4 7	15	0.5	1 4 7	15	1 4 7	15	0.5	1 4 7
1500	25 x $I_n$	15	0.5	1 4 7	15	1 4 7	15	0.5	1 4 7	15	1 4 7	15	0.5	1 4 7

\*On request, transformers can be produced with primary reconnection (1:2).

**INSTRUCTIONS FOR CHOICE OF CURRENT TRANSFORMER**

The given table is guide for choice of current transformer size. For correct choice it is necessary to know the voltage level, primary current, short-circuit current and core number and their characteristics, e.g.

- Maximum voltage  $U_m = 24$  kV
- Rated primary current  $I_n = 100$  A
- Short-time thermal current  $I_{th} = 20$  kA/1 s
- Number of cores 2

$$\frac{I_{th}}{I_n} = \frac{20}{0.1} = 200 \times I_n$$

The core for measuring rated output 10VA, accuracy class 0,5, instrument security factor 10  
The core for measuring rated output 15VA, accuracy class 1, instrument security factor 10  
The core for protection rated output 10VA, accuracy class 10P, accuracy limit factor 10

The core for measuring: instrument security factor 10  
The core for protection: accuracy class 10P, accuracy limit factor 10

Accuracy class 10P, accuracy limit factor 10

NOTE: On request we design and produce transformers with different technical characteristics (rated secondary current, output, accuracy class, rated thermal and dynamic currents etc.).  
Data given in this prospect are for informative purpose only. In constant aim to improve our products we reserve the right of change.