

EPOXY RESIN CAST CURRENT TRANSFORMERS

for highest voltage of equipment up to 24 kV

UNA

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.

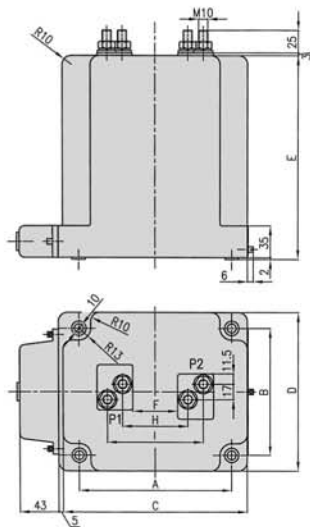
- High voltage winding is designed in such a way, that mechanical stresses due to thermal dilatation in case of short circuit currents are not transmitted to the main insulation of the transformer. The conductors used for windings are made of electrolytic copper.
- Main insulation of these instrument 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.



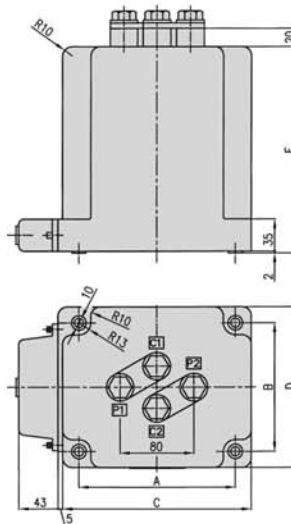
With primary reconnection



Without primary reconnection



Without primary reconnection



With primary reconnection

Minimum distances from high-voltage connections

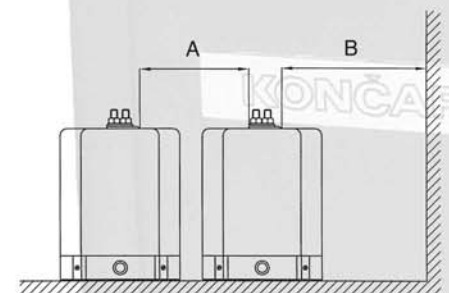


TABLE I

Size	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	weight (kg)
1	105	140	140	175	225	11
2	145	140	180	175	225	16
3	170	140	205	175	225	18
4	190	155	225	190	250	20
5	230	155	225	190	250	24
6	260	155	295	190	250	28

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

TABLE II

Rated primary current I_n (A)	One core for measuring		One core for protection		Two cores		Three cores	
	Rated output (VA)	Accuracy class	Rated output (VA)	Transformer's size designation	Rated output (VA)	Accuracy class	Transformer's size designation	Transformer's size designation
5*...40*	15	0.5	15	1 1	15	0.5	2 2	3 3
	15	0.5	15	1 1	15	0.5	2 2	3 3
	15	0.5	15	4 4	15	0.5	5 5	6 6
	15	0.5	15	4 4	15	0.5	5 5	6 6
	10	1	10	4 4	10	1	6 6	-
	10	1	10	4 4	10	1	6 6	-
50*	10	1	10	4 4	10	1	6 6	-
	10	1	10	4 4	10	1	6 6	-
	15	0.5	15	1 1	15	0.5	2 2	3 3
	15	0.5	15	4 4	15	0.5	5 5	6 6
	15	0.5	15	4 4	15	0.5	5 5	6 6
	10	1	10	4 4	10	1	6 6	-
75*	10	1	10	4 4	10	1	6 6	-
	15	0.5	15	1 1	15	0.5	2 2	3 3
	15	0.5	15	4 4	15	0.5	5 5	6 6
	15	0.5	15	4 4	15	0.5	5 5	6 6
	10	1	10	4 4	10	1	6 6	-
	10	1	10	4 4	10	1	6 6	-
100*	15	0.5	15	1 1	15	0.5	2 2	3 3
	15	0.5	15	4 4	15	0.5	5 5	6 6
	15	0.5	15	4 4	15	0.5	5 5	6 6
	10	1	10	4 4	10	1	6 6	-
	10	1	10	4 4	10	1	6 6	-
	15	0.5	15	1 1	15	0.5	2 2	3 3
150*	15	0.5	15	4 4	15	0.5	5 5	6 6
	15	0.5	15	4 4	15	0.5	5 5	6 6
	15	0.5	15	1 1	15	0.5	2 2	3 3
	10	1	10	4 4	10	1	6 6	-
	10	1	10	4 4	10	1	6 6	-
	15	0.5	15	1 1	15	0.5	2 2	3 3
200*	15	0.5	15	4 4	15	0.5	5 5	6 6
	15	0.5	15	4 4	15	0.5	5 5	6 6
	15	0.5	15	1 1	15	0.5	2 2	3 3
	10	1	10	4 4	10	1	6 6	-
	10	1	10	4 4	10	1	6 6	-
	15	0.5	15	1 1	15	0.5	2 2	3 3
300*	15	0.5	15	1 1	15	0.5	2 2	3 3
	15	0.5	15	1 1	15	0.5	2 2	3 3
	15	0.5	15	1 1	15	0.5	2 2	3 3
	10	1	10	1 1	10	1	2 2	3 3
	10	1	10	1 1	10	1	2 2	3 3
	15	0.5	15	1 1	15	0.5	2 2	3 3
400*	15	0.5	15	1 1	15	0.5	2 2	3 3
	15	0.5	15	1 1	15	0.5	2 2	3 3
	15	0.5	15	1 1	15	0.5	2 2	3 3
	10	1	10	1 1	10	1	2 2	3 3
	10	1	10	1 1	10	1	2 2	3 3
	15	0.5	15	1 1	15	0.5	2 2	3 3
600	15	0.5	15	1 1	15	0.5	2 2	3 3
	15	0.5	15	1 1	15	0.5	2 2	3 3
	15	0.5	15	1 1	15	0.5	2 2	3 3
	10	1	10	1 1	10	1	2 2	3 3
	10	1	10	1 1	10	1	2 2	3 3
	15	0.5	15	1 1	15	0.5	2 2	3 3
800	15	0.5	15	1 1	15	0.5	2 2	3 3
	15	0.5	15	1 1	15	0.5	2 2	3 3
	15	0.5	15	1 1	15	0.5	2 2	3 3
	10	1	10	1 1	10	1	2 2	3 3
	10	1	10	1 1	10	1	2 2	3 3
	15	0.5	15	1 1	15	0.5	2 2	3 3

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

Instrument security factor 10

*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.

From Table II, columns for the rated primary current 100 A, short-time thermal current 200 In for 2 cores and $U_m = 24$ kV it follows that the right size is 5. In Table I, under size 5, please find the CT dimensions according to the above data.

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

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.