

Highest voltage for equipment	[kV]	13,8 up to 17,5
Power frequency test voltage, 1 min.	[kV]	34 up to 42
Lighting impulse test voltage	[kV]	up to 95
Rated primary current	[A]	10 - 3200
Rated short-time thermal current	[kA]	2 up to 100...1s
Burdens, classes	[VA/cl]	5-30 / 0.2-5 / 5P ; 10P (acc. to other param. - lth)
Reconnectable (primary till 400-800 A)		primary. or secondary



Description

The TPU 5x.xx transformers are cast in epoxy resin and designed for insulation voltages up to 17,5 kV. The 13,8 kV version has the same dimensions as the 17,5 kV. For certain types of panels there is a need for extra long creepage distance on the transformers. For this purpose you can order current transformers with „ribs on the top”. The transformers are manufactured in conformity with dimensions stated hereunder. The TPU5x.xx transformers are designed as single-turn or multi-turn versions, with one transformer ratio or with double ratio having the possibility to be reconnectable on the primary or on the secondary side. The number of secondary windings (from 1 to 6 – max. 12 secondary terminals - 2 rows), depends on the combination of the technical parameters (such as the accuracy class, burden, short-circuit current, overcurrent factor...) and the transformer dimensions size.

When agreed between the manufacturer and the customer the TPU transformers can be provided with the voltage indication system. For this purpose, however, it is necessary to know in what insulation level the transformers shall operate. The secondary windings are used for measurement or protection purposes, or for special use (testing winding, „X” class windings). One terminal of each secondary winding used and one terminal of short-circuited and not used winding have to be earth during the transformer operation. The secondary windings are lead out into a cast-type secondary terminal box with plastic cover. The terminal cover is sealable. The terminals are provided with M5 screws for the termination and with throughgoing holes for direct earthing (first row of secondary terminals).

The transformer can be mounted in any position. The transformer body is fixed by using four screws. Earth clamp M8 is on the transformer base plate.

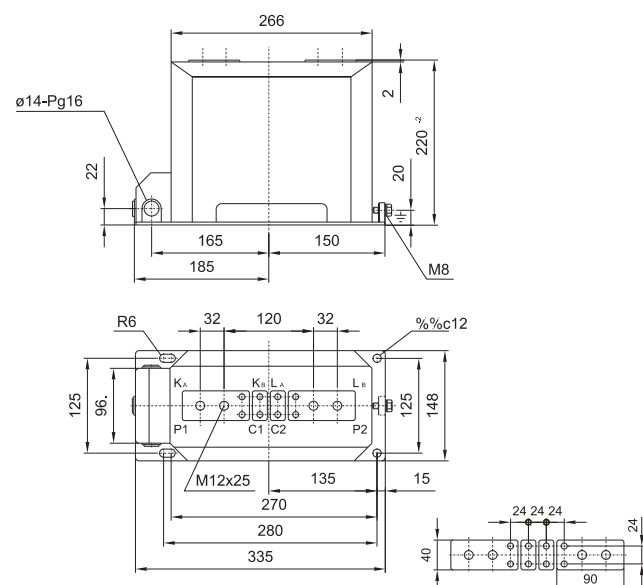
Technical data

Rated primary voltages are 13,8 kV; 17,5 kV
 Rated primary currents are 10;15;20;25;30;40;50;60;75;100; 150;200;300;400;500;600;750;1000;1250;1500; 2000;2500; 3000 and 3200 A;
 primary reconnectable modification max till 400-800 A.
 Other primary currents can also be agreed upon with the customer.
 Rated secondary currents...5 A; 1 A , others on request (possibility to combine different values in one transformer)
 Accuracy classes: 0,2, 0,2S, 0,5, 0,5S, 1, 3, 5 5P10, 5P15, 5P20, 10P10, 10P15, 10P20, others on request.
 Rated frequency ... 50 Hz or 60 Hz, others on request
 The transformers are designed and manufactured in conformity with the following standards and recommendations: IEC, VDE, ANSI, BS, GOST and CSN, others on request.
 Cantilever strength: 5 kN
 Permissible torques for screw connections

M5	max /Nm/ ...3,5	min /Nm/...2,8
M8	max /Nm/ ...20	min /Nm/...16
M12	max /Nm/ ...70	min /Nm/...56

TPU 53.11

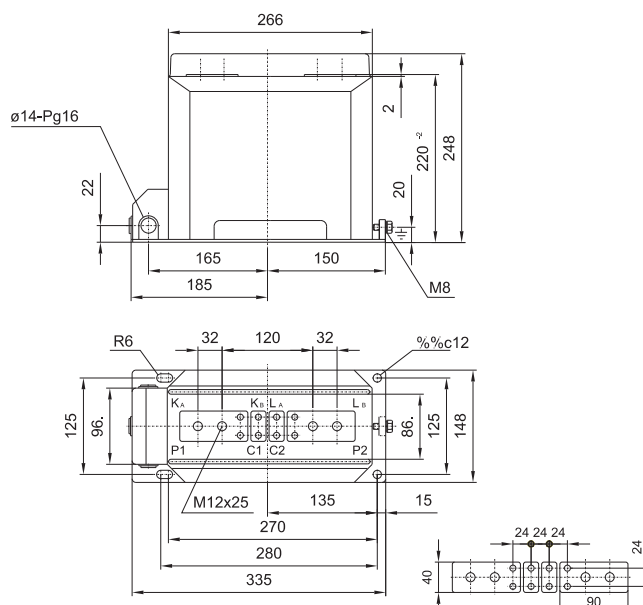
Weight: 20-24 kg



drawing N:	polarity
44614570	P1 to sec. term.
44614580	P2 to sec. term.

TPU 53.13

Weight: 20-24 kg

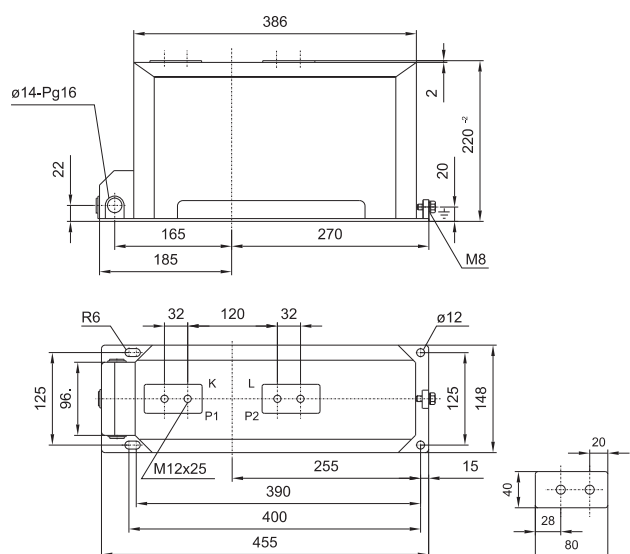


drawing N:	polarity
44614610	P1 to sec. term.
44614620	P2 to sec. term.

TPU 50.21

Weight: 32-35 kg

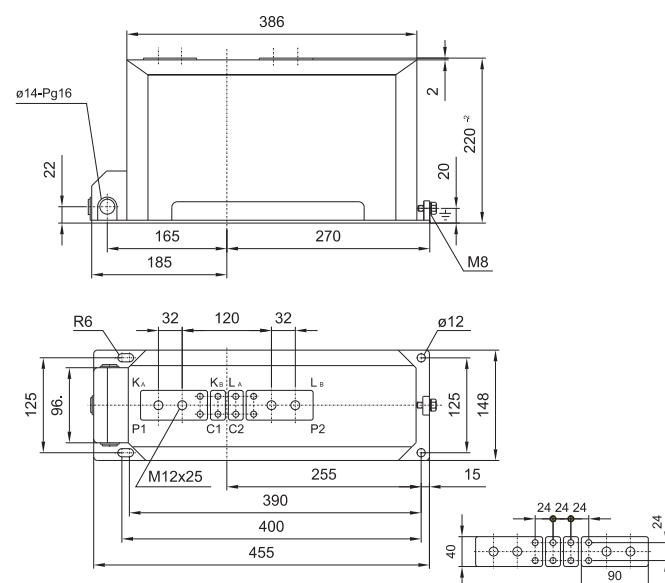
TPU 53.21



drawing N:	polarity
44614630	P1 to sec. term.
44614640	P2 to sec. term.

TPU 50.22

Weight: 32-35 kg

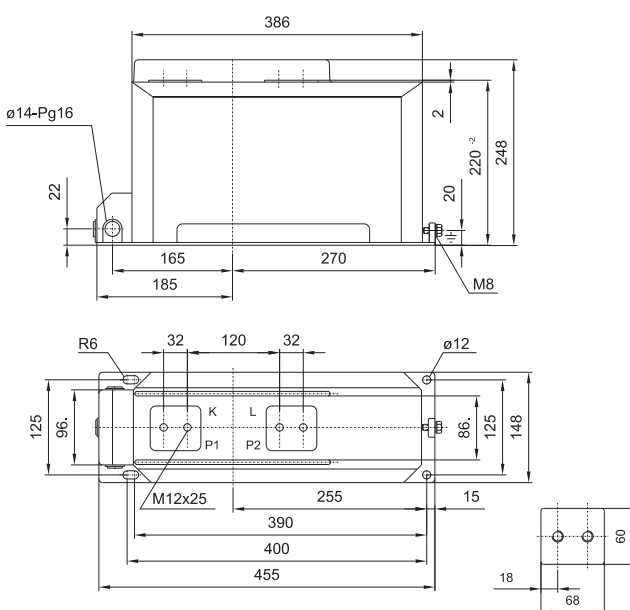


drawing N:	polarity
44614650	P1 to sec. term.
44614660	P2 to sec. term.

TPU 50.23

Weight: 32-35 kg

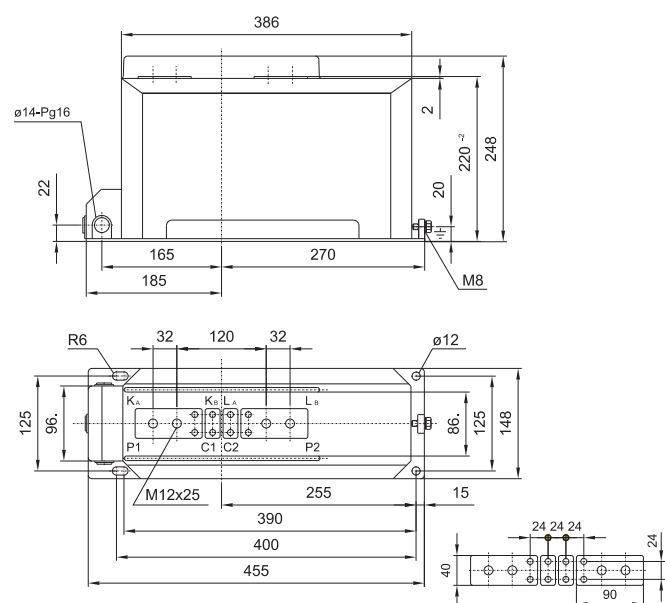
TPU 53.23



drawing N:	polarity
44614670	P1 to sec. term.
44614680	P2 to sec. term.

TPU 50.24

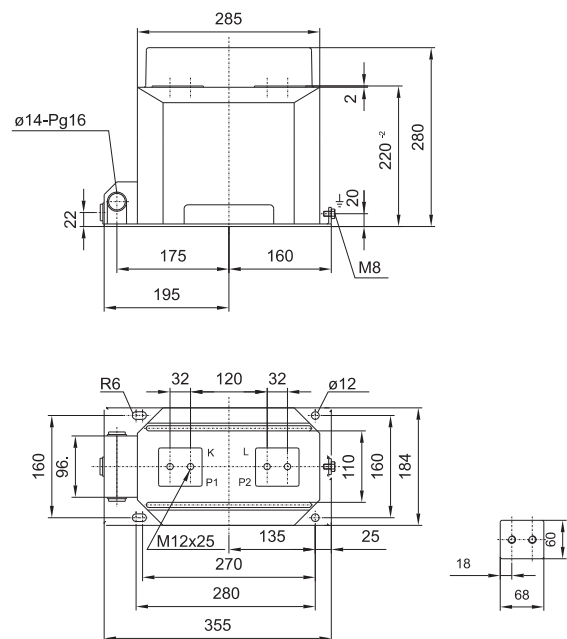
Weight: 32-35 kg



drawing N:	polarity
44614690	P1 to sec. term.
44614700	P2 to sec. term.

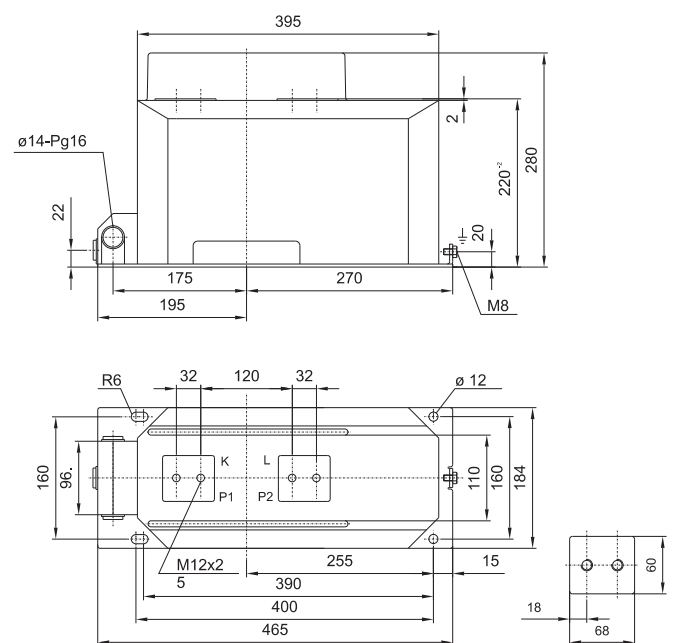
4

Weight: 23-27 kg



drawing N:	polarity
44614730	P1 to sec. term.
44614740	P2 to sec. term.

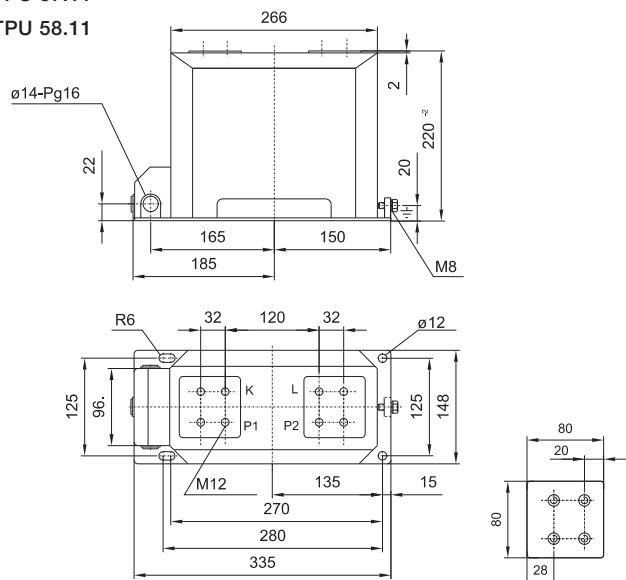
Weight: 35-38 kg



drawing N:	polarity
44614770	P1 to sec. term.
44614780	P2 to sec. term.

TPU 54.11
TPU 55.11
TPU 56.11
TPU 57.11
TPU 58.11

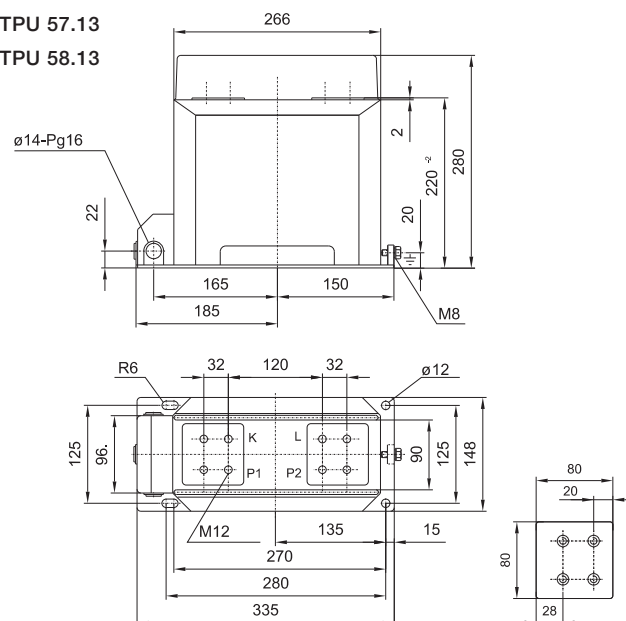
Weight: 25-28 kg



drawing N:	polarity
1VL4600499P0101	P1 to sec. term.
1VL4600499P0102	P2 to sec. term.

TPU 54.13
TPU 55.13
TPU 56.13
TPU 57.13
TPU 58.13

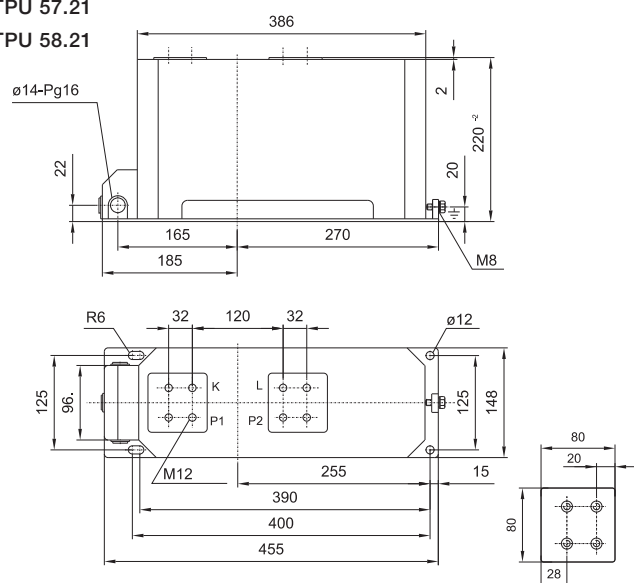
Weight: 25-28 kg



drawing N:	polarity
1VL4600500P0101	P1 to sec. term.
1VL4600500P0102	P2 to sec. term.

TPU 54.21
TPU 55.21
TPU 56.21
TPU 57.21
TPU 58.21

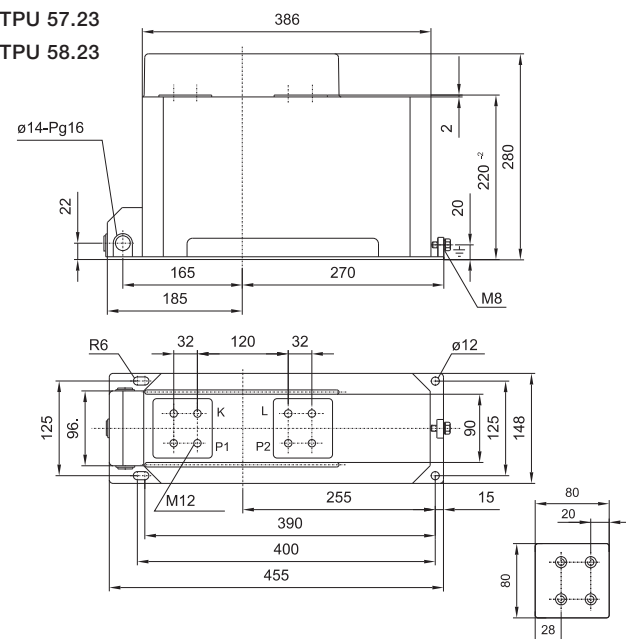
Weight: 40-45 kg



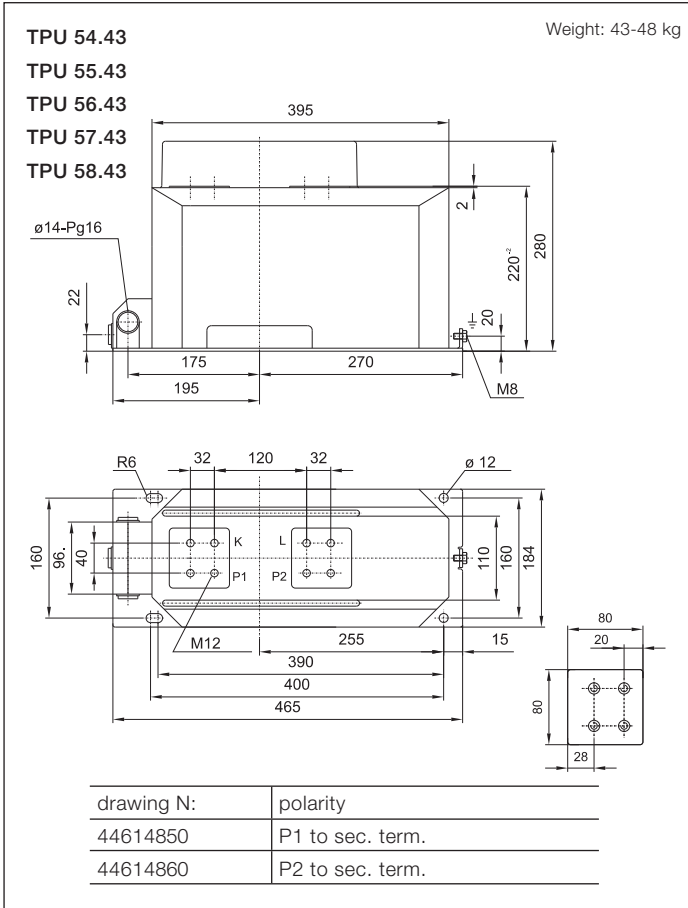
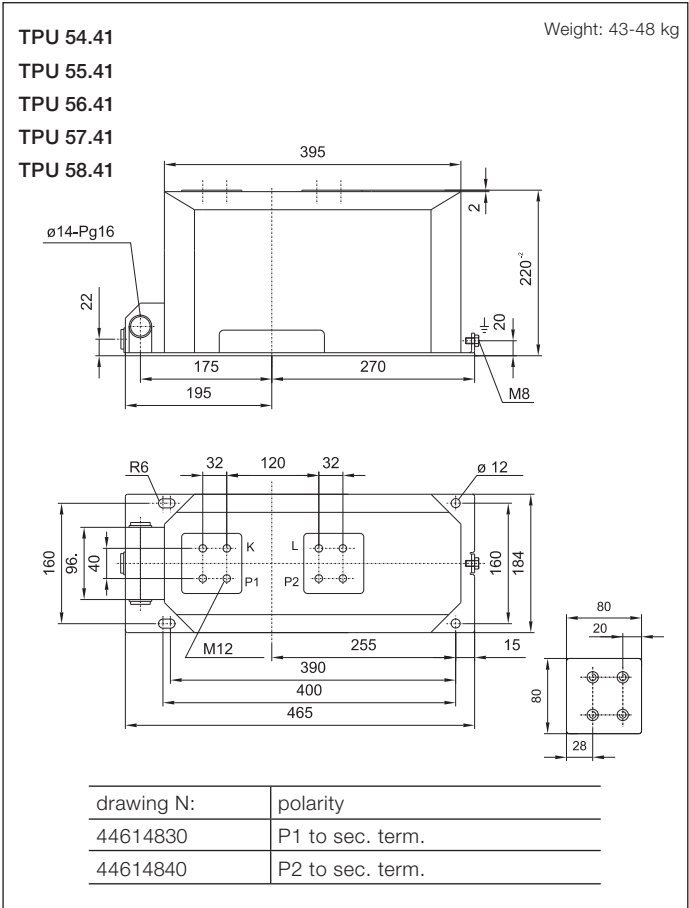
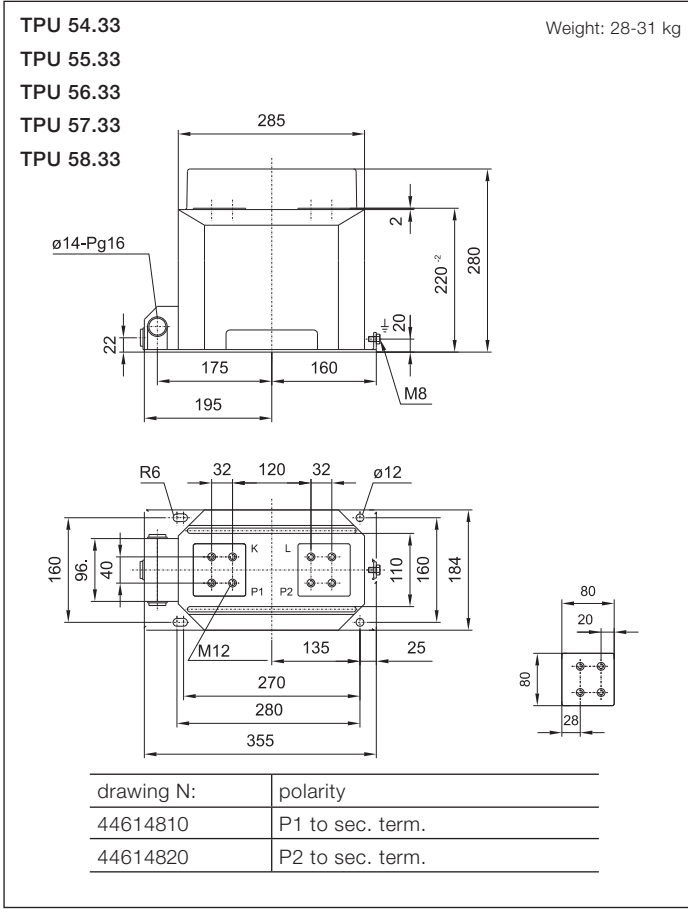
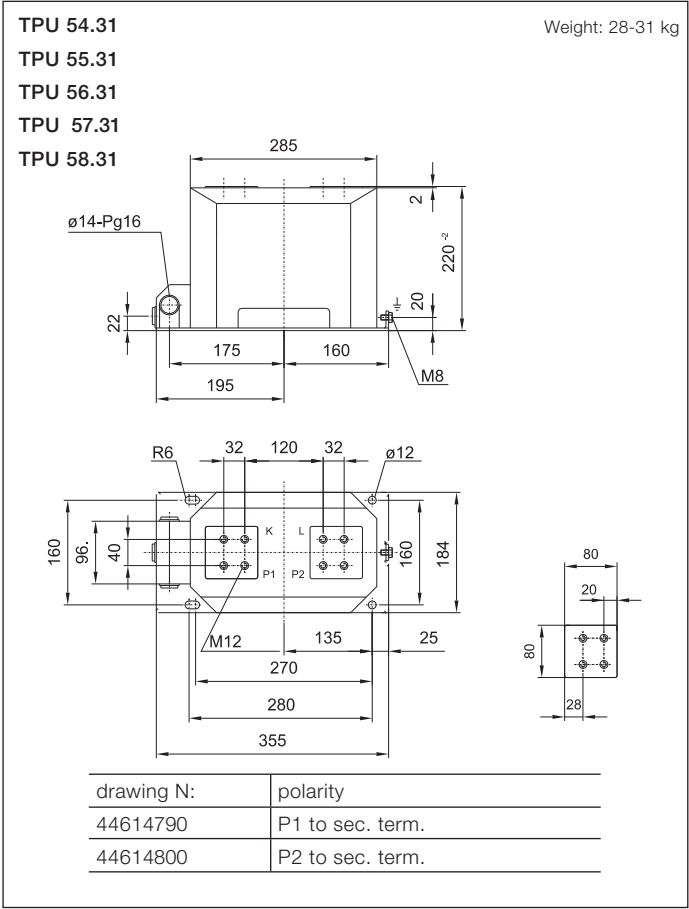
drawing N:	polarity
1VL4600501P0101	P1 to sec. term.
1VL4600501P0102	P2 to sec. term.

TPU 54.23
TPU 55.23
TPU 56.23
TPU 57.23
TPU 58.23

Weight: 40-45 kg



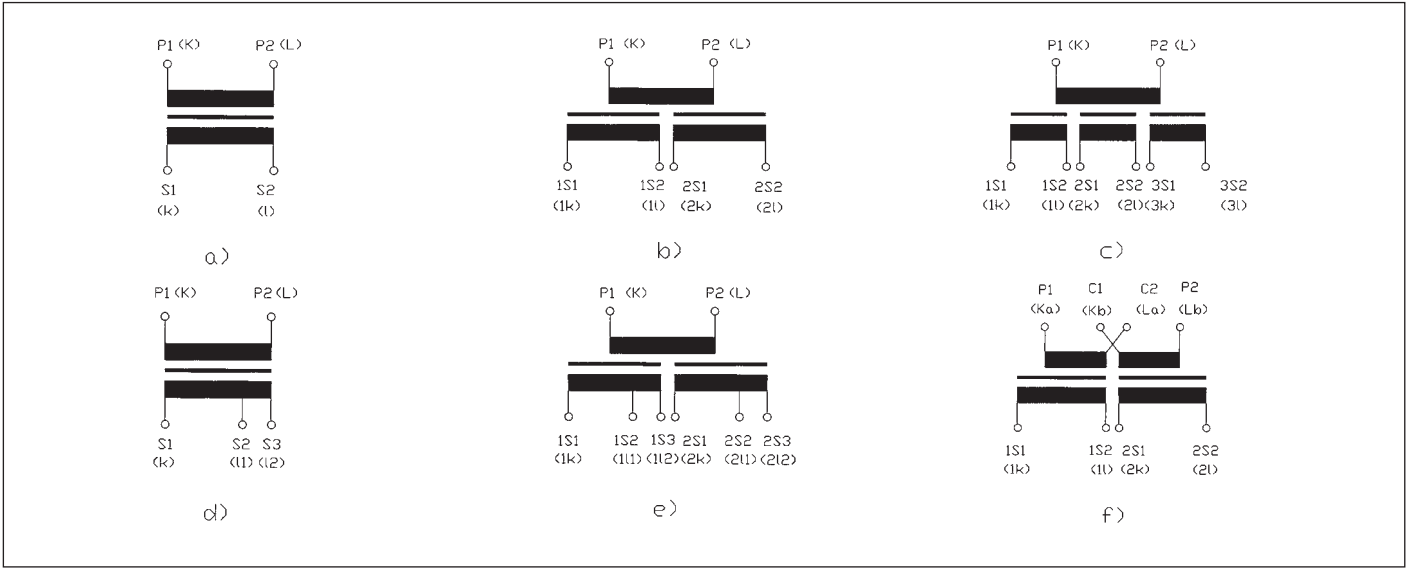
drawing N:	polarity
1VL4600502P0101	P1 to sec. term.
1VL4600502P0102	P2 to sec. term.



ode designation - TPU current transformers

TPU	5	x	.	x	x
	voltage	current		dimension	primary terminals
	5..up to 17,5 kV	0... to 600 A multiturn 3...to 1250 A singleturn 4...to 1500 A singleturn 5...to 2000 A singleturn 6...to 2500 A singleturn 7...to 3000 A singleturn 8...to 3200 A singleturn		1..short 148 mm, DIN 2..long 148 mm, DIN 3..short,wide.. 184 mm 4..long, wide...184 mm	1..no pr.rec., no ribs /40x80mm, 80x80mm/ 2..prim. rec., no ribs /40x80mm, 80x80mm/ 3..no pr.rec., with ribs /60x68mm, 80x80mm/ 4..prim. rec., with ribs /40x80mm, 80x80mm/

Marking of current transformer outlets - example



a) Single-core design | b) Double-core design | c) Three-core design | d) Single-core design, reconnectable on the secondary side | e) Double-core design, reconnectable on the secondary side | f) Double-core design, reconnectable on the primary side

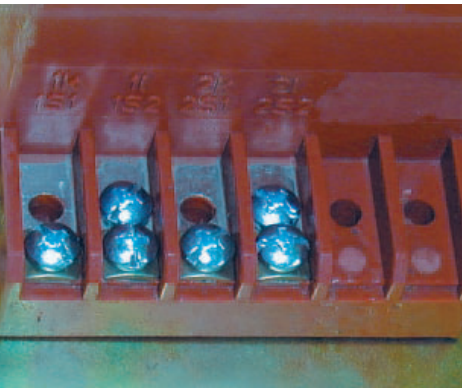
Standartized insulation levels of TPU 5x.xx transformers

13,8 / 34 / 95 kV
17,5 / 38 / 95 kV
17,5 / 42 / 95 kV

1 Secondary terminal box
(3 secondaries and voltage indicator)



2 Secondary terminal box
(2 secondaries and grounding screw)



3 TPU transformer with and without ribs



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