

MEDIUM VOLTAGE PRODUCT

TPU 5x.xx

Indoor supporting current transformers



Parameters	Values
Highest voltage for equipment	13.8 up to 17.5 kV
Power frequency test voltage, 1 min.	10 - 42 kV
Lighting impulse test voltage	up to 95 kV
Rated primary current	10 - 3 200 A
Rated short-time thermal current	2 - 100 kA/ 1s
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 and 7.2 kV versions have 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 TPU 5x.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 earthed 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).

Technical data

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.

Rated primary voltages

13.8 kV; 17.5 kV

Rated primary currents

10; 15; 20; 25; 30; 40; 50; 60; 75; 100; 150; 200; 300; 400; 500; 600; 750; 1 000; 1 250; 1 500; 2 000; 2 500; 3 000 and 3 200 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, IEEE, BS, GOST and CSN, others on request.

Cantilever strength

5 kN

Permissible torques for screw connections		
M5	max 3.5 Nm	min 2.8 Nm
M8	max 20 Nm	min 16 Nm
M12	max 70 Nm	min 56 Nm

01 Marking of current transformer outlets - example

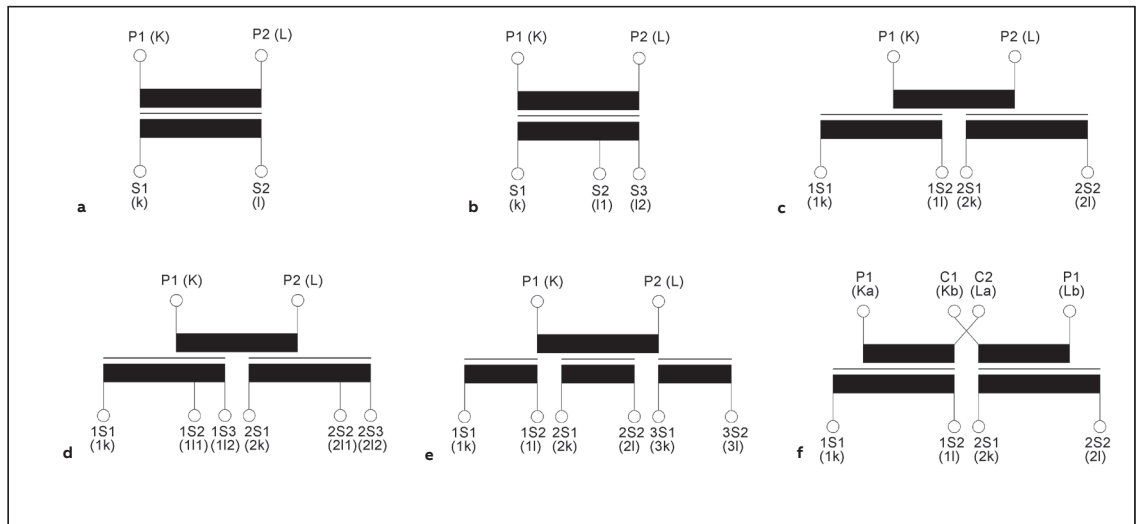
- a Single-core design
- b Single-core design, reconnectable on the secondary side
- c Double-core design
- d Double-core design, reconnectable on the secondary side
- e Three-core design
- f Double-core design, reconnectable on the primary side

02 Secondary terminal box (2 secondaries and voltage indicator)

Code designation - TPU current transformers

TPU	x	x	.	x	x
voltage	current	dimension	primary terminals		
5...up to 17.5 kV	0... to 600 A multitrn 1... to 1 250 A, combi multitrn, singleturn* 3...to 1 250 A singleturn 4...to 1 500 A singleturn 5...to 2 000 A singleturn 6...to 2 500 A singleturn 7...to 3 000 A singleturn 8...to 3 200 A singleturn	1..short 148 mm, DIN 2..long 148 mm, DIN 3..short, wide.. 184 mm 4..long, wide...184 mm 5..middle 148 mm, DIN	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/		

* TPU 51.41 and TPU 51.43 only



01

Standartized insulation levels of TPU 5x.xx transformers

- 15.5/34/95 kV
- 17.5/38/95 kV
- 17.5/42/95 kV

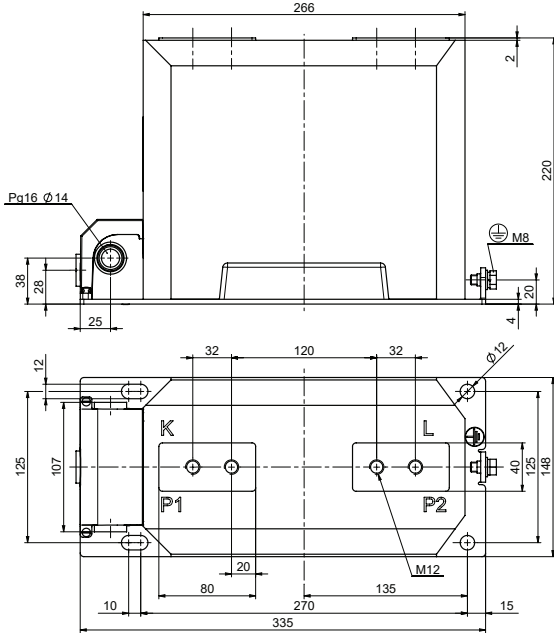


02

Dimensional Drawings

TPU 50.11
TPU 53.11

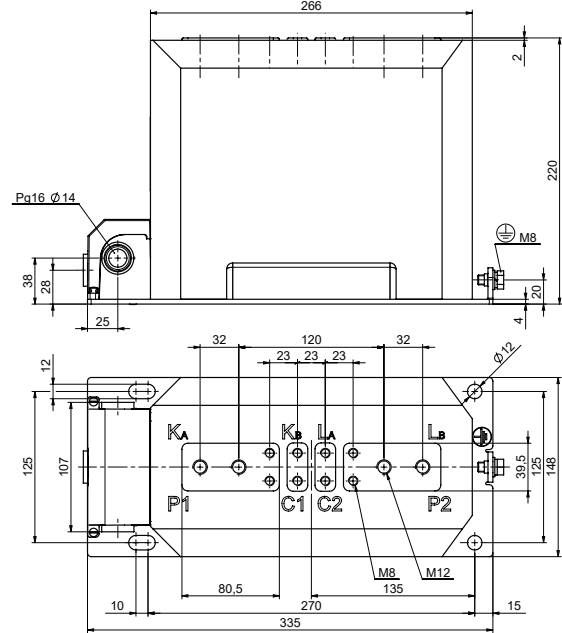
Weight: 20-24 kg
Creepage distance: 201 mm



Drawing n.	Polarity
44614550	P1 to secondary terminal
44614560	P2 to secondary terminal

TPU 50.12

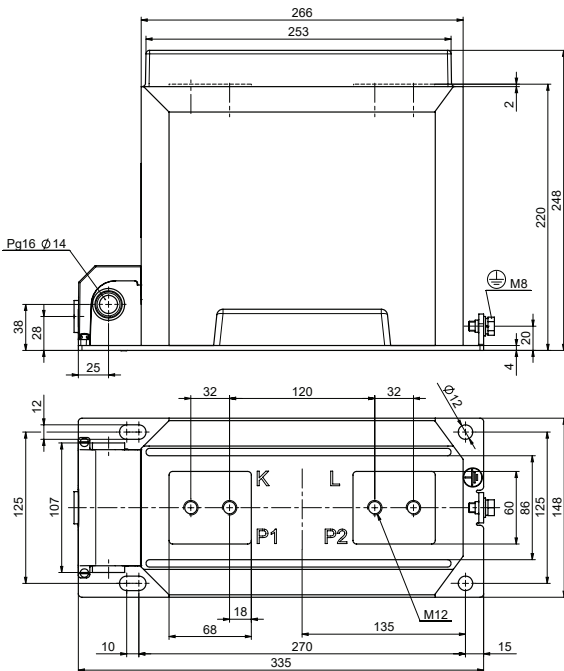
Weight: 19-25 kg
Creepage distance: 215 mm



Drawing n.	Polarity
44614570	P1 to secondary terminal
44614580	P2 to secondary terminal

TPU 50.13
TPU 53.13

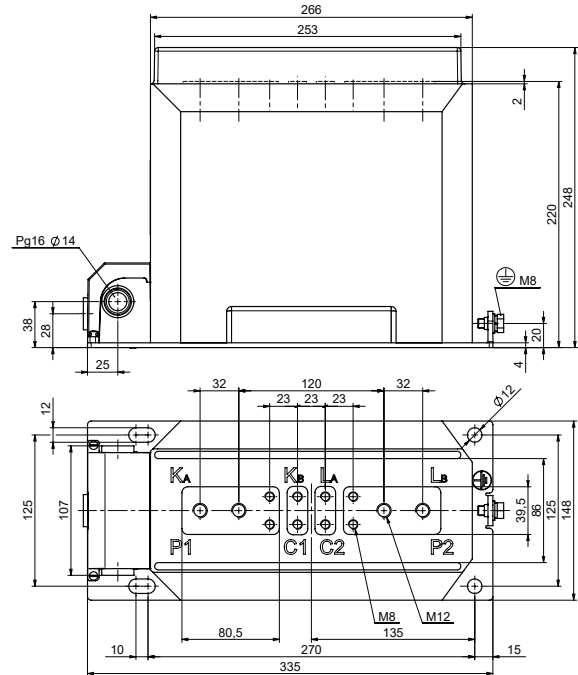
Weight: 20-24 kg
Creepage distance: 214 mm



Drawing n.	Polarity
44614590	P1 to secondary terminal
44614600	P2 to secondary terminal

TPU 50.14

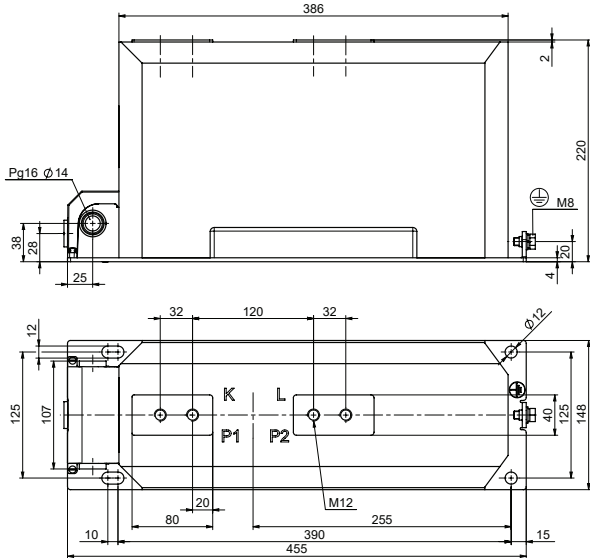
Weight: 19-25 kg
Creepage distance: 215 mm



Drawing n.	Polarity
44614610	P1 to secondary terminal
44614620	P2 to secondary terminal

TPU 50.21
TPU 53.21

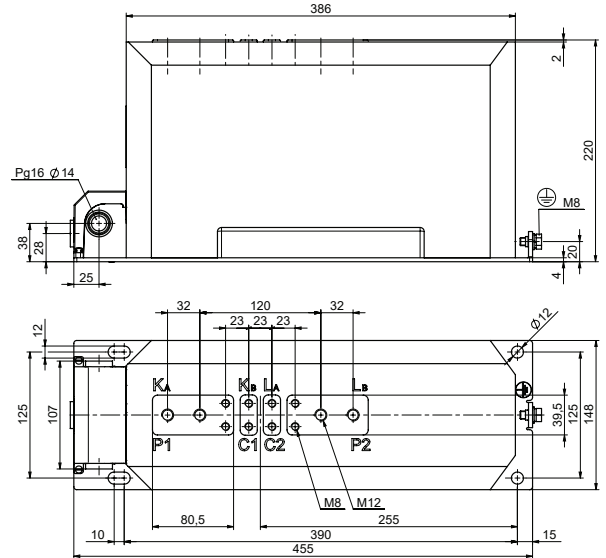
Weight: 29-37 kg
Creepage distance: 201 mm



Drawing n.	Polarity
44614630	P1 to secondary terminal
44614640	P2 to secondary terminal

TPU 50.22

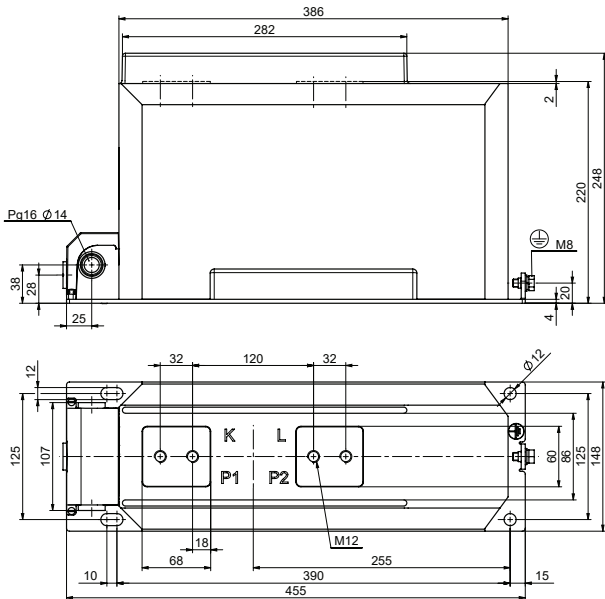
Weight: 29-37 kg
Creepage distance: 215 mm



Drawing n.	Polarity
44614650	P1 to secondary terminal
44614660	P2 to secondary terminal

TPU 50.23
TPU 53.23

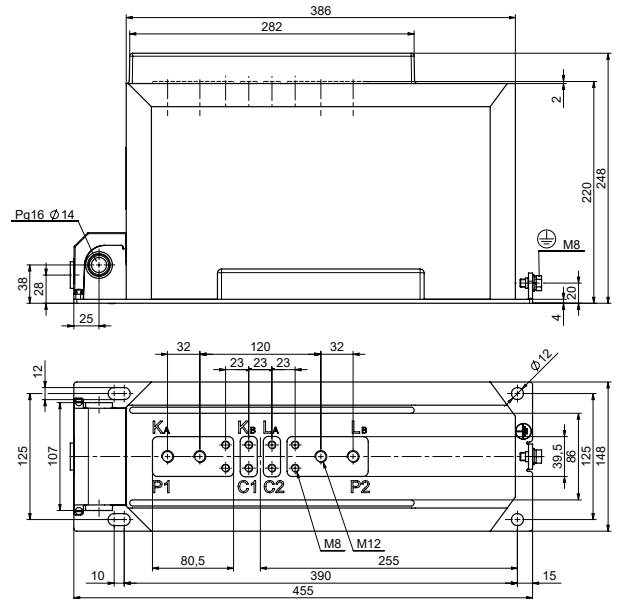
Weight: 29-37 kg
Creepage distance: 214 mm



Drawing n.	Polarity
44614670	P1 to secondary terminal
44614680	P2 to secondary terminal

TPU 50.24

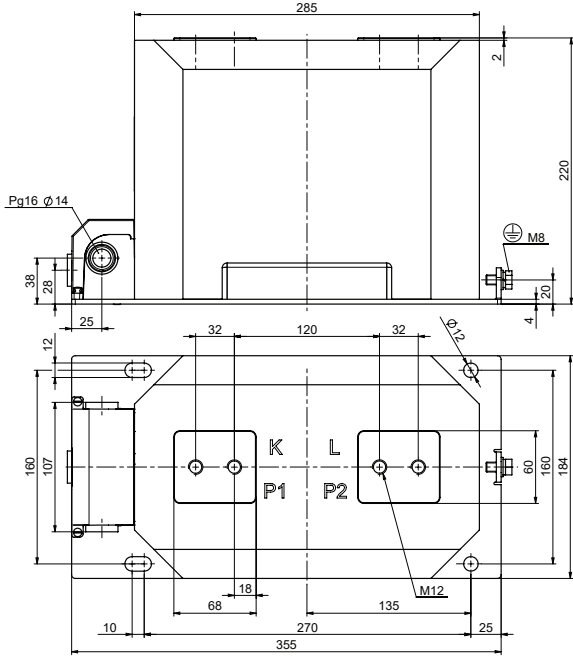
Weight: 29-37 kg
Creepage distance: 215 mm



Drawing n.	Polarity
44614690	P1 to secondary terminal
44614700	P2 to secondary terminal

TPU 50.31
TPU 53.31

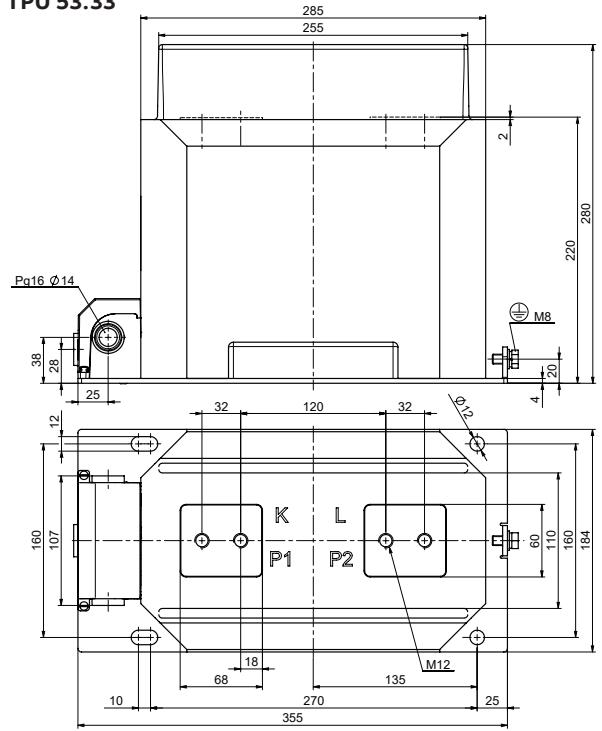
Weight: 31-39 kg
Creepage distance: 215 mm



Drawing n.	Polarity
44614710	P1 to secondary terminal
44614720	P2 to secondary terminal

TPU 50.33
TPU 53.33

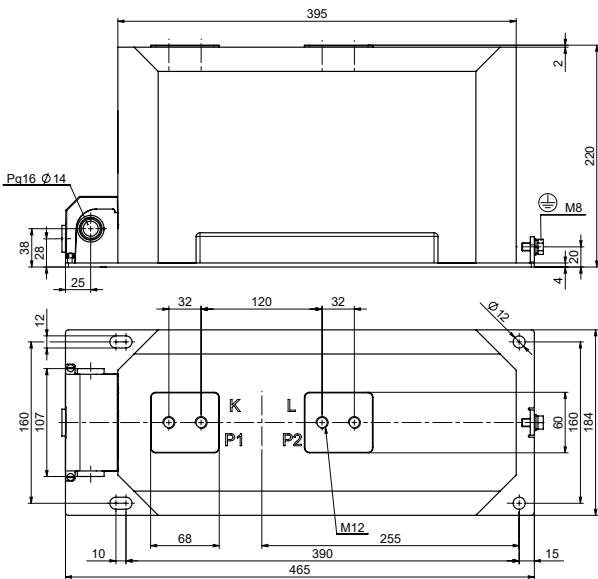
Weight: 31-39 kg
Creepage distance: 215 mm



Drawing n.	Polarity
44614730	P1 to secondary terminal
44614740	P2 to secondary terminal

TPU 50.41
TPU 51.41
TPU 53.41

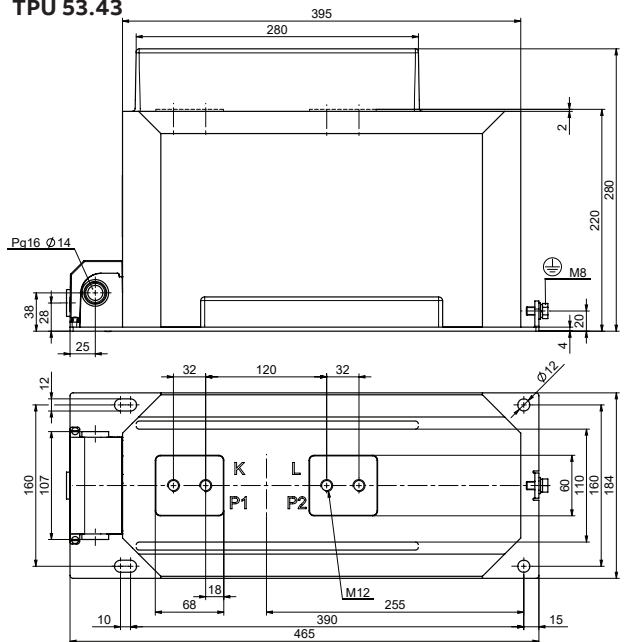
Weight: 45-55 kg
Creepage distance: 215 mm



Drawing n.	Polarity
44614750	P1 to secondary terminal
44614760	P2 to secondary terminal

TPU 50.43
TPU 51.43
TPU 53.43

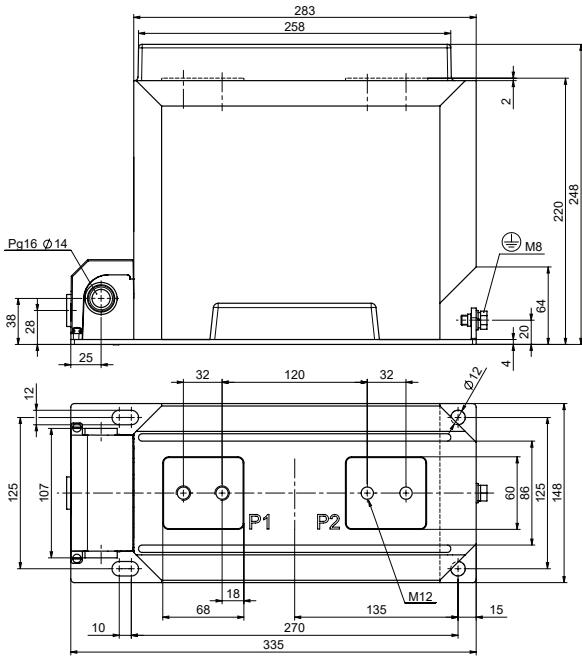
Weight: 45-55 kg
Creepage distance: 215 mm



Drawing n.	Polarity
44614770	P1 to secondary terminal
44614780	P2 to secondary terminal

TPU 50.53
TPU 53.53

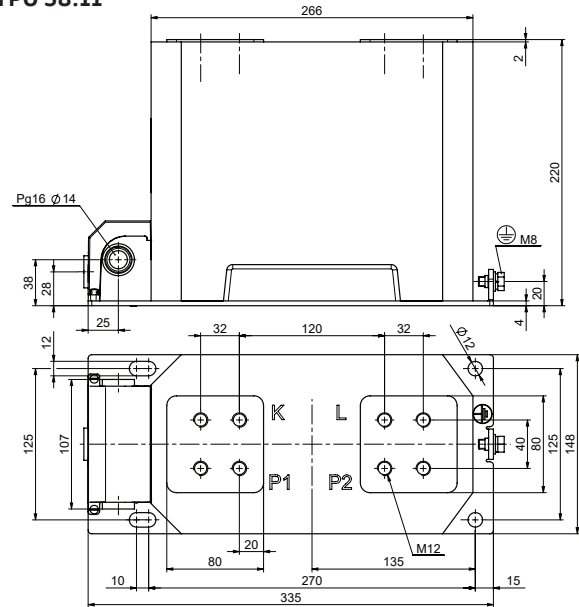
Weight: 28 kg
Creepage distance: 214 mm



Drawing n.	Polarity
1VL4600921R0201	P1 to secondary terminal
1VL4600921R0202	P2 to secondary terminal

TPU 54.11
TPU 55.11
TPU 56.11
TPU 57.11
TPU 58.11

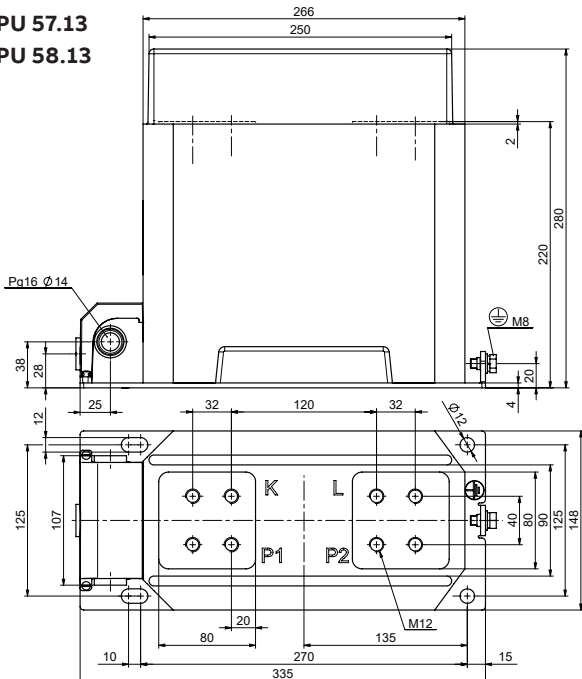
Weight: 25-31 kg
Creepage distance: 201 mm



Drawing n.	Polarity
1VL4600499P0101	P1 to secondary terminal
1VL4600499P0102	P2 to secondary terminal

TPU 54.13
TPU 55.13
TPU 56.13
TPU 57.13
TPU 58.13

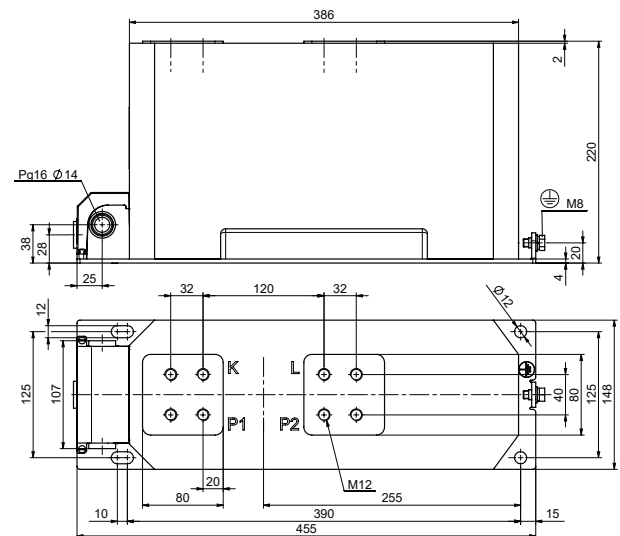
Weight: 25-31 kg
Creepage distance: 201 mm



Drawing n.	Polarity
1VL4600500P0101	P1 to secondary terminal
1VL4600500P0102	P2 to secondary terminal

TPU 54.21
TPU 55.21
TPU 56.21
TPU 57.21
TPU 58.21

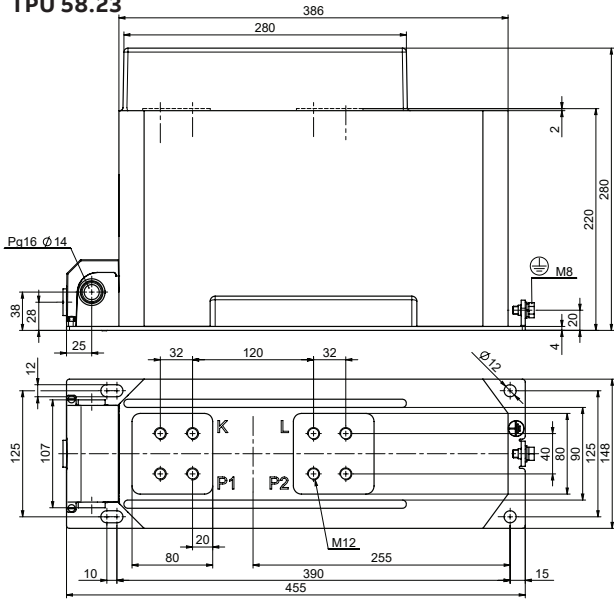
Weight: 40-45 kg
Creepage distance: 201 mm



Drawing n.	Polarity
1VL4600501P0101	P1 to secondary terminal
1VL4600501P0102	P2 to secondary terminal

TPU 54.23
 TPU 55.23
 TPU 56.23
 TPU 57.23
 TPU 58.23

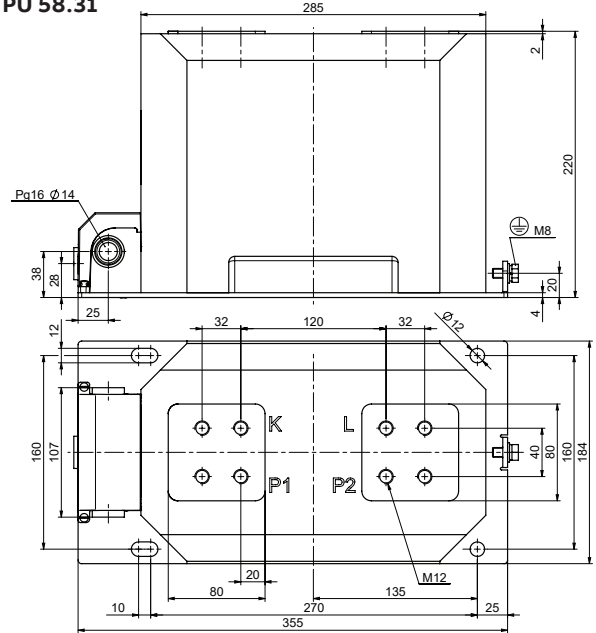
Weight: 40-45 kg
 Creepage distance: 201 mm



Drawing n.	Polarity
1VL4600502P0101	P1 to secondary terminal
1VL4600502P0102	P2 to secondary terminal

TPU 54.31
 TPU 55.31
 TPU 56.31
 TPU 57.31
 TPU 58.31

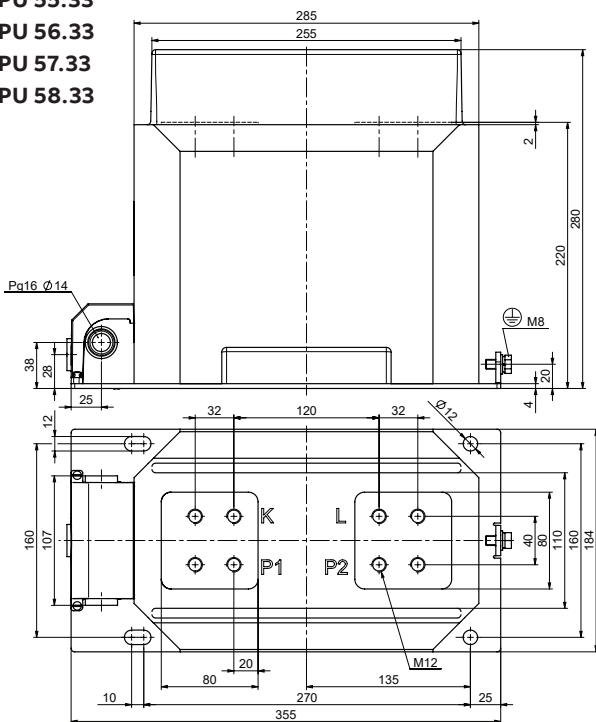
Weight: 34-42 kg
 Creepage distance: 210 mm



Drawing n.	Polarity
44614790	P1 to secondary terminal
44614800	P2 to secondary terminal

TPU 54.33
 TPU 55.33
 TPU 56.33
 TPU 57.33
 TPU 58.33

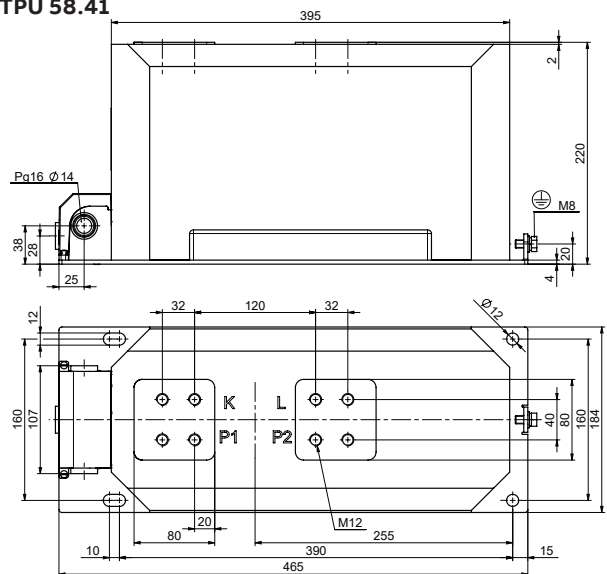
Weight: 34-42 kg
 Creepage distance: 210 mm



Drawing n.	Polarity
44614810	P1 to secondary terminal
44614820	P2 to secondary terminal

TPU 54.41
 TPU 55.41
 TPU 56.41
 TPU 57.41
 TPU 58.41

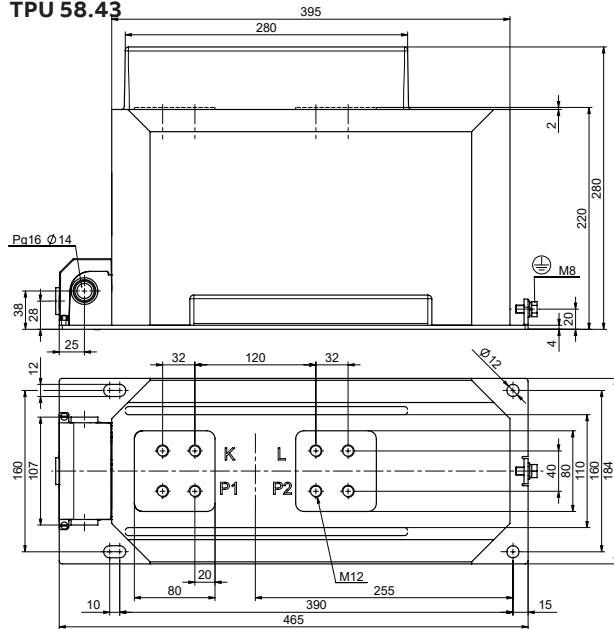
Weight: 46-58 kg
 Creepage distance: 210 mm



Drawing n.	Polarity
44614830	P1 to secondary terminal
44614840	P2 to secondary terminal

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TPU 54.43
TPU 55.43
TPU 56.43
TPU 57.43
TPU 58.43

Weight: 46-58 kg
 Creepage distance: 210 mm



Drawing n.	Polarity
44614850	P1 to secondary terminal
44614860	P2 to secondary terminal

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