

MEDIUM VOLTAGE PRODUCT

## **TPU 7x.xx**

Indoor supporting current transformers



Parameters	Values
Highest voltage for equipment, $U_m$	36; 38.5; 40.5 kV
Rated power-frequency withstand voltage	70; 80; 90 kV
Rated lightning impulse withstand voltage	170; 180; 200 kV
Rated primary current	10 - 2 500 A
Rated short-time thermal current	up to 100 kA/1s
Reconnectible (primary till 600-1 200 A)	prim. or sec.

### Description

The transformers are cast in epoxy resin and designed for insulation voltages from 36 kV to 40.5 kV. The transformers are designed as single-or-multiple turn transformers, with one transformer ratio, or with the possibility to be switched over on the secondary or primary side. The number of secondary windings are from 1 to 8 (usually 2 secondary windings), depending on the combination of parameters (such as the accuracy class, shortcircuit current, overcurrent factor...). The secondary windings are used for measurement or protection purposes, or for special use (testing winding, „PX“ 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 casted secondary terminal board. The transformer can be mounted in any position. The transformer are fixed by four screws, the M8 bolted earthing clamp finds itself on the transformer base plate.

### 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; A.

Other primary currents can be agreed with the manufacturer.

### Rated secondary currents

5 A; 1 A (possibility to combine different values in one transformer).

### 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

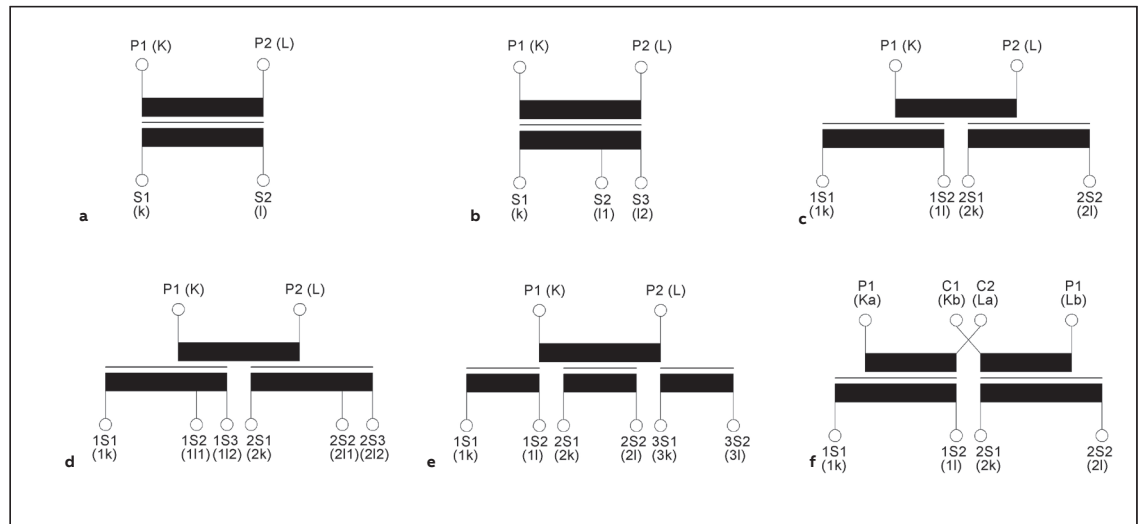
01 Marking of current transformer outlets - example

- 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**

<b>TPU    x                                    x                                    .                                    x                                    x</b>			
voltage	current	dimension	primary terminals
7..up to 36 (40.5) kV	0... 5 A - 600 A multeturn 3...to 1 250 A singleturn 4...to 1 500 A singleturn 5...to 2 000 A singleturn 6...to 2 500 A singleturn	4..shortest, 335 x 250 x 390 mm 5..short, 365 x 220 x 390 mm 6..long, 446 x 260 x 390 mm 7..middle, 380 x 250 x 390 mm	1..no prim. rec., no ribs /40 x 80 mm; 80 x 80 mm/ 2..prim. rec., no ribs /40 x 80 mm/ 3..no prim. rec., with ribs /40 x 80 mm; 60 x 67 mm; 80 x 80 mm/ 4..prim. rec., with ribs /40 x 80 mm/



01



02

## Standardized transformers

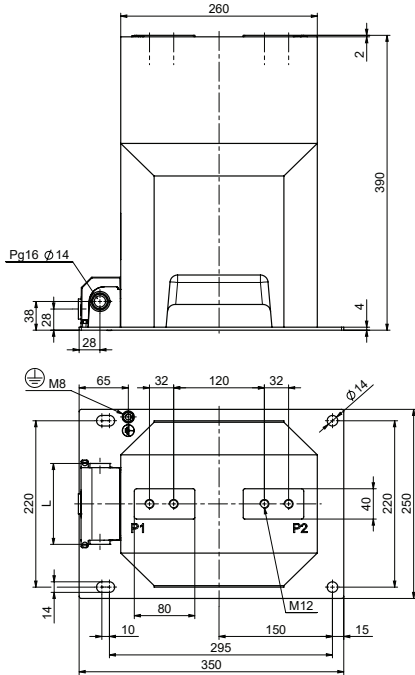
Type	Ithn/dyn [kA]	Ratio [A]	Burden [VA]	Class	FS/ALF
TPU 70.51	6.3/16	10//5	30	10P	5
TPU 70.51	6.3/16	10//5	30	10P	5
TPU 70.51	6.3/16	10//5	15	0.5	FS5
TPU 70.51	6.3/16	10//5/5	10/15	0.5/10P	FS5/5
TPU 70.51	6.3/16	10//5/5	15/15	3/10P	5/5
TPU 70.51	10/25	10//5	15	10P	5
TPU 70.51	10/25	10//5/5	5/10	0.5/10P	FS5/5
TPU 70.51	10/25	10//5/5	15/10	3/10P	5/5
TPU 70.51	10/25	15//5	15	10P	5
TPU 70.51	10/25	15//5/5	10/15	0.5/10P	FS5/5
TPU 70.51	10/25	15//5/5	15/15	3/10P	5/5
TPU 70.51	16/40	15//5	15	10P	5
TPU 70.51	16/40	15//5/5	5/10	0.5/10P	FS5/5
TPU 70.51	16/40	15//5/5	15/10	3/10P	5/5
TPU 70.51	16/40	20//5	30	10P	5
TPU 70.51	16/40	20//5/5	10/15	0.5/10P	FS5/5
TPU 70.51	16/40	20//5/5	15/15	3/10P	5/5
TPU 70.51	31.5/80	20//5	15	10P	5
TPU 70.51	31.5/80	20//5/5	5/10	0.5/10P	FS5/5
TPU 70.51	31.5/80	20//5/5	15/10	3/10P	5/5
TPU 70.51	20/50	25//5	30	10P	5
TPU 70.51	20/50	25//5/5	10/15	0.5/10P	FS5/5
TPU 70.51	20/50	25//5/5	15/15	3/10P	5/5
TPU 70.51	40/100	25//5	15	10P	5
TPU 70.51	40/100	25//5/5	5/10	0.5/10P	FS5/5
TPU 70.51	40/100	25//5/5	15/10	3/10P	5/5
TPU 70.51	25/63	30//5	30	10P	5
TPU 70.51	25/63	30//5/5	10/15	0.5/10P	FS5/5
TPU 70.51	25/63	30//5/5	15/15	3/10P	5/5
TPU 70.51	31.5/80	30//5	30	10P	5
TPU 70.51	31.5/80	30//5/5	15/15	3/10P	5/5
TPU 70.51	40/100	30//5	15	10P	5
TPU 70.51	40/100	30//5/5	5/10	0.5/10P	FS5/5
TPU 70.51	40/100	30//5/5	15/10	3/10P	5/5
TPU 70.51	31.5/80	40//5	30	5P	5
TPU 70.51	31.5/80	40//5/5	15/15	0.5/10P	FS5/5
TPU 70.51	50/125	40//5	15	10P	5/5
TPU 70.51	50/125	40//5/5	5/10	0.5/10P	FS5/5
TPU 70.51	50/125	40//5/5	15/10	3/10P	5/5
TPU 70.51	31.5/80	50//5	30	5P	5
TPU 70.51	31.5/80	50//5/5	15/15	0.5/10P	FS5/10
TPU 70.51	50/125	50//5	30	10P	5
TPU 70.51	50/125	50//5/5	10/15	0.5/10P	FS5/5

Type	Ithn/dyn [kA]	Ratio [A]	Burden [VA]	Class	FS/ALF
TPU 70.51	50/125	50//5/5	15/15	3/10P	5/5
TPU 70.51	31.5/80	60//5	30	5P	5
TPU 70.51	31.5/80	60//5/5	15/15	0.5/10P	FS5/10
TPU 70.51	50/125	60//5	30	10P	5
TPU 70.51	50/125	60//5/5	10/15	0.5/10P	FS5/5
TPU 70.51	50/125	60//5/5	15/15	3/10P	10/5
TPU 70.51	31.5/80	75//5	30	5P	10
TPU 70.51	31.5/80	75//5/5	15/15	0.5/10P	FS5/10
TPU 70.51	50/125	75//5	30	5P	5
TPU 70.51	50/125	75//5/5	10/15	0.5/10P	FS5/5
TPU 70.51	31.5/80	100//5	30	5P	5
TPU 70.51	31.5/80	100//5/5	15/15	0.5/10P	FS5/10
TPU 70.51	50/125	100//5	20	5P	10
TPU 70.51	50/125	100//5/5	10/15	0.5/10P	FS5/10
TPU 70.51	31.5/80	150//5	30	5P	10
TPU 70.51	31.5/80	150//5/5	15/15	0.5/10P	FS10/10
TPU 70.51	50/12	150//5	30	5P	5
TPU 70.51	50/12	150//5/5	10/15	0.5/10P	FS10/10
TPU 70.51	50/12	200//5	30	5P	10
TPU 70.51	50/12	200//5/5	15/15	0.5/10P	FS10/10
TPU 70.51	50/12	200//5	30	5P	10
TPU 70.51	50/12	200//5/5	15/15	0.5/10P	FS10/10
TPU 70.51	50/12	300//5	30	5P	10
TPU 70.51	50/12	300//5/5	15/15	0.5/10P	FS10/10
TPU 70.51	50/12	400//5	30	5P	10
TPU 70.51	50/12	400//5/5	15/15	0.5/10P	FS10/10
TPU 70.51	50/12	500//5	30	5P	15
TPU 70.51	50/12	500//5/5	15/15	0.5/10P	FS10/10
TPU 70.51	50/12	600//5	30	5P	15
TPU 70.51	50/12	600//5/5	15/30	0.5/10P	FS10/10
TPU 73.51	63/160	750//5	30	5P	10
TPU 73.51	63/160	750//5/5	15/15	0.5/10P	FS10/10
TPU 73.51	80/200	1 000//5	30	5P	15
TPU 73.51	80/200	1 000//5/5	30/15	0.5/10P	FS5/10
TPU 73.51	80/200	1 250//5	30	5P	15
TPU 73.51	80/200	1 250//5/5	30/30	0.5/10P	FS10/10
TPU 74.51	100/250	1 500//5	30	5P	15
TPU 74.51	100/250	1 500//5/5	30/30	0.5/10P	FS10/10
TPU 75.51	100/250	2 000//5	60	5P	10
TPU 75.51	100/250	2 000//5/5	30/30	0.5/10P	FS10/10
TPU 76.51	100/250	2 500//5	30	5P	15
TPU 76.51	100/250	2 500//5/5	30/60	0.5/10P	FS10/10
other on request					

# Dimensional Drawings

**TPU 70.41**  
**TPU 73.41**

Weight: 41 kg  
Creepage distance: 380 mm

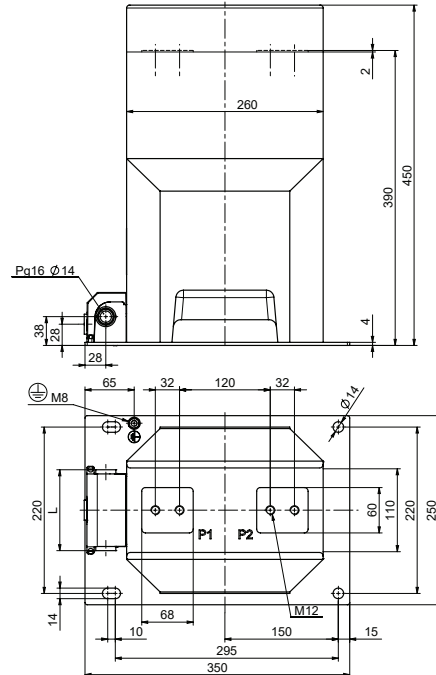


L=107mm for 6 or 12 clamps  
L=134mm for 16 clamps

Drawing n.	Polarity
1VL4600986R0101	P1 to secondary terminal
1VL4600986R0102	P2 to secondary terminal

**TPU 70.43**  
**TPU 73.43**

Weight: 41 kg  
Creepage distance: 380 mm

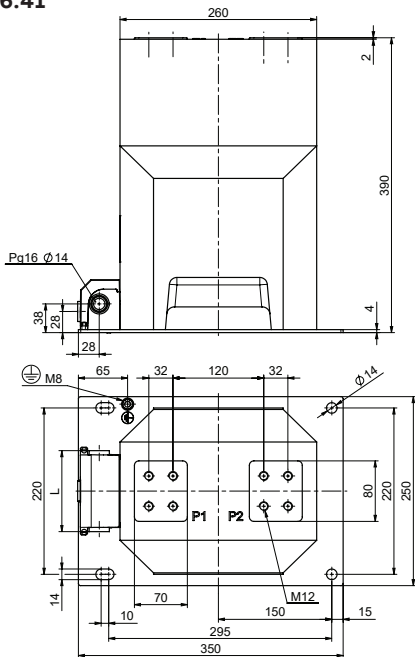


L=107mm for 6 or 12 clamps  
L=134mm for 16 clamps

Drawing n.	Polarity
1VL4600985R0101	P1 to secondary terminal
1VL4600985R0102	P2 to secondary terminal

**TPU 74.41**  
**TPU 75.41**  
**TPU 76.41**

Weight: 43 kg  
Creepage distance: 377 mm

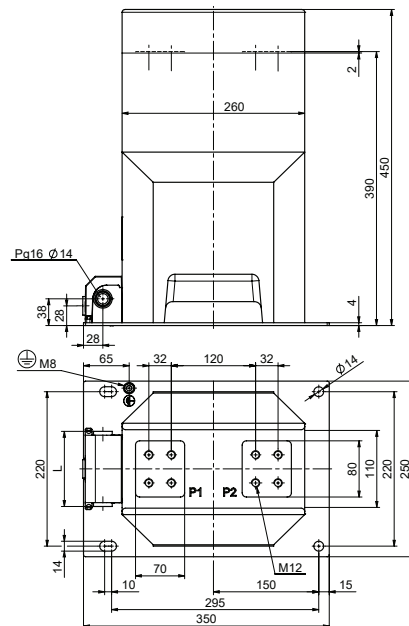


L=107mm for 6 or 12 clamps  
L=134mm for 16 clamps

Drawing n.	Polarity
1VL4600988R0101	P1 to secondary terminal
1VL4600988R0102	P2 to secondary terminal

**TPU 74.43**  
**TPU 75.43**  
**TPU 76.43**

Weight: 43 kg  
Creepage distance: 377 mm

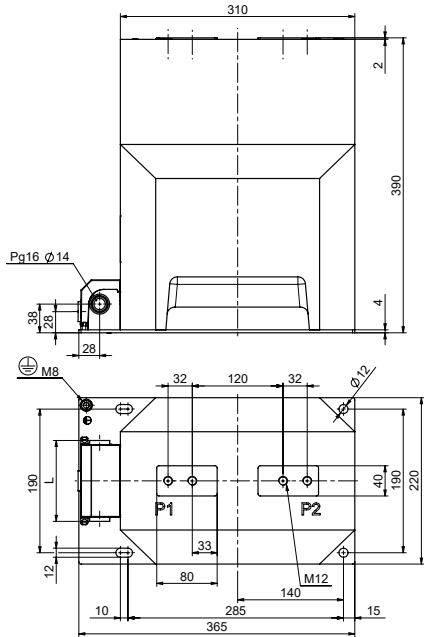


L=107mm for 6 or 12 clamps  
L=134mm for 16 clamps

Drawing n.	Polarity
1VL4600987R0101	P1 to secondary terminal
1VL4600987R0102	P2 to secondary terminal

**TPU 70.51**  
**TPU 73.51**

Weight: 44-54 kg  
Creepage distance: 400 mm

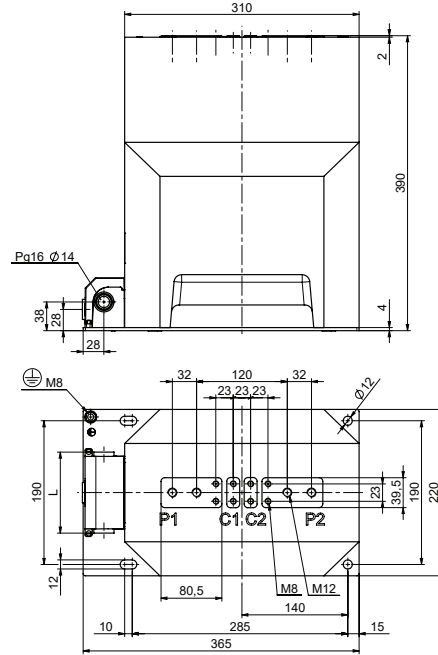


L=107mm for 6 or 12 clamps  
L=134mm for 16 clamps

Drawing n.	Polarity
44615730	P1 to secondary terminal
44615740	P2 to secondary terminal

**TPU 70.52**

Weight: 44-54 kg  
Creepage distance: 409 mm

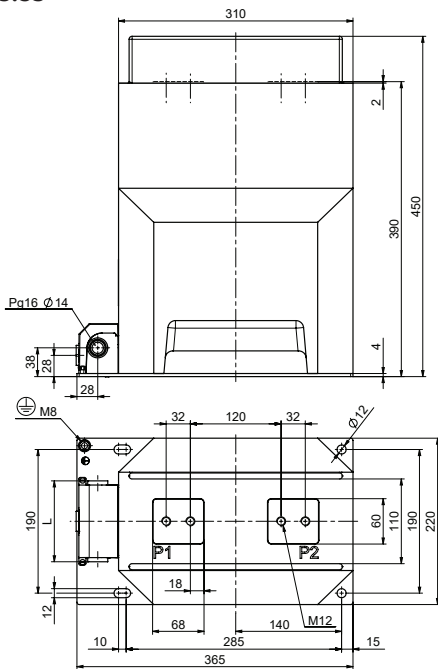


L=107mm for 6 or 12 clamps  
L=134mm for 16 clamps

Drawing n.	Polarity
44615750	P1 to secondary terminal
44615760	P2 to secondary terminal

**TPU 70.53**  
**TPU 73.53**

Weight: 44-54 kg  
Creepage distance: 397 mm

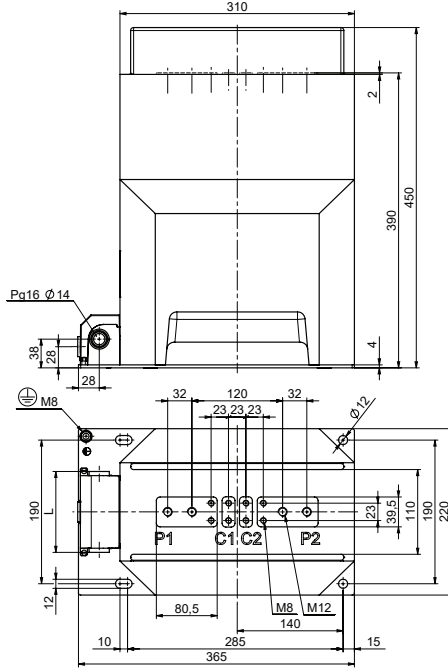


L=107mm for 6 or 12 clamps  
L=134mm for 16 clamps

Drawing n.	Polarity
44615650	P1 to secondary terminal
44615660	P2 to secondary terminal

**TPU 70.54**

Weight: 44-54 kg  
Creepage distance: 409 mm

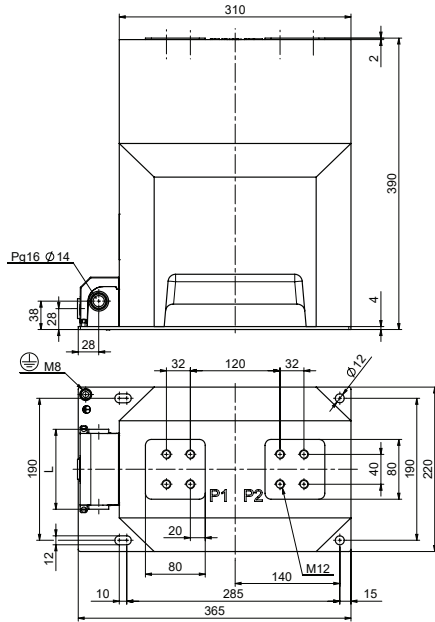


L=107mm for 6 or 12 clamps  
L=134mm for 16 clamps

Drawing n.	Polarity
44615710	P1 to secondary terminal
44615720	P2 to secondary terminal

**TPU 74.51**  
**TPU 75.51**  
**TPU 76.51**

Weight: 46-58 kg  
 Creepage distance: 386 mm

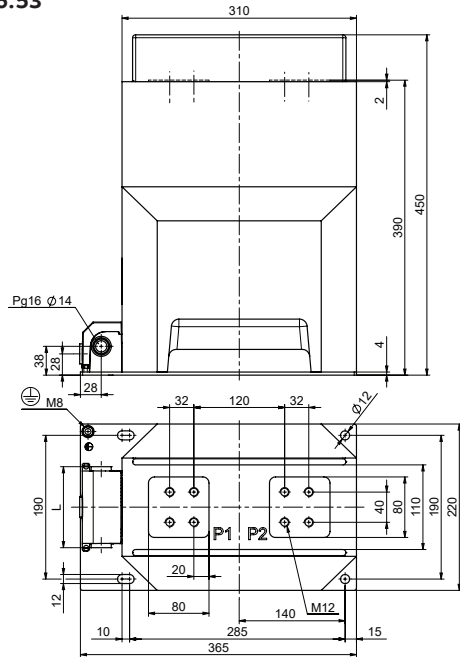


L=107mm for 6 or 12 clamps  
 L=134mm for 16 clamps

Drawing n.	Polarity
44615690	P1 to secondary terminal
44615700	P2 to secondary terminal

**TPU 74.53**  
**TPU 75.53**  
**TPU 76.53**

Weight: 46-58 kg  
 Creepage distance: 386 mm

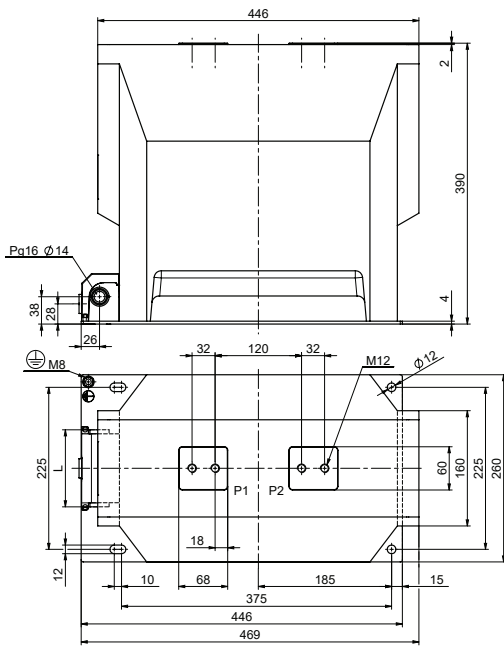


L=107mm for 6 or 12 clamps  
 L=134mm for 16 clamps

Drawing n.	Polarity
44615670	P1 to secondary terminal
44615680	P2 to secondary terminal

**TPU 70.61**  
**TPU 73.61**

Weight: 70-86 kg  
 Creepage distance: 475 mm

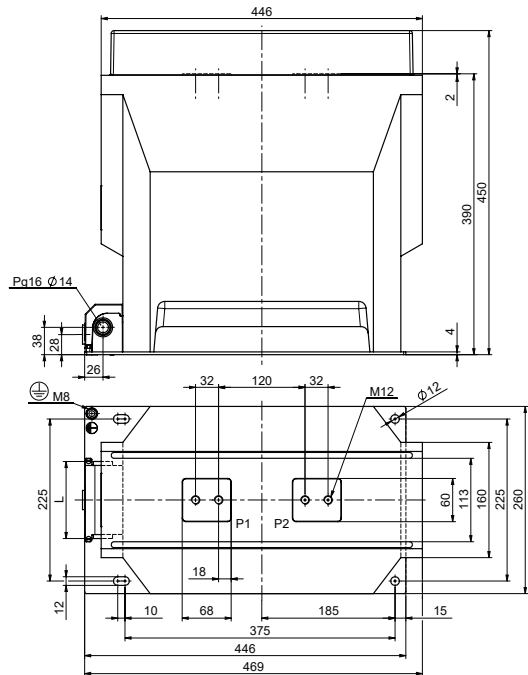


L=107mm for 6 or 12 clamps  
 L=134mm for 16 clamps

Drawing n.	Polarity
1VL4600846R0101	P1 to secondary terminal
1VL4600846R0102	P2 to secondary terminal

**TPU 70.63**  
**TPU 73.63**

Weight: 70-86 kg  
 Creepage distance: 475 mm

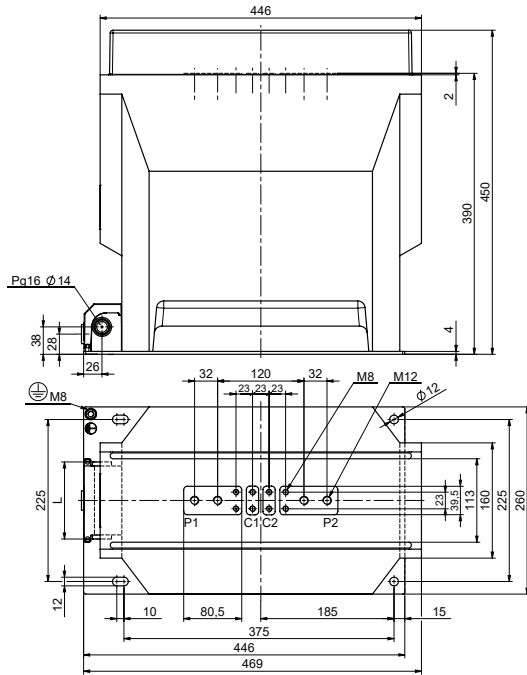


L=107mm for 6 or 12 clamps  
 L=134mm for 16 clamps

Drawing n.	Polarity
44615570	P1 to secondary terminal
44615580	P2 to secondary terminal

**TPU 70.64**  
**TPU 73.64**

Weight: 70-86 kg  
Creepage distance: 488 mm

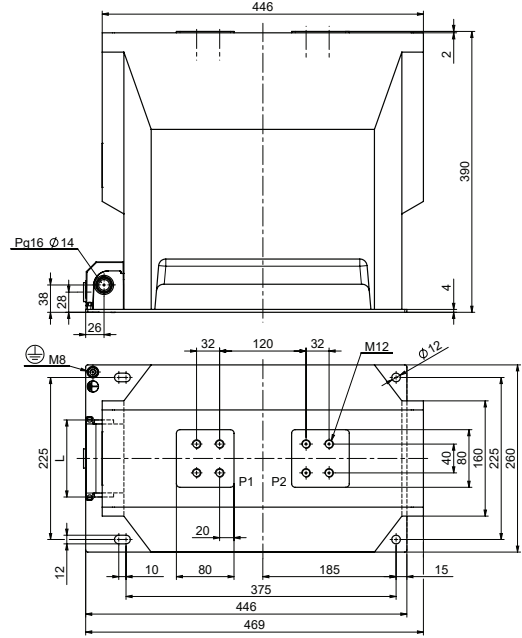


L=107mm for 6 or 12 clamps  
L=134mm for 16 clamps

Drawing n.	Polarity
44615610	P1 to secondary terminal
44615620	P2 to secondary terminal

**TPU 74.61**  
**TPU 75.61**  
**TPU 76.61**

Weight: 72-88 kg  
Creepage distance: 465 mm

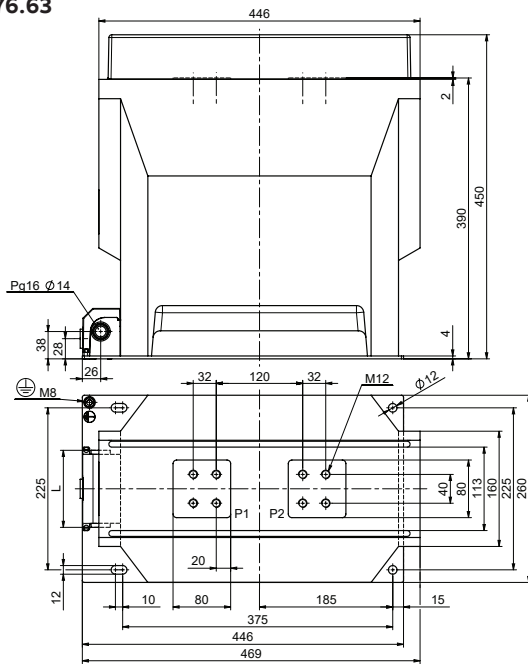


L=107mm for 6 or 12 clamps  
L=134mm for 16 clamps

Drawing n.	Polarity
1VL4600847R0101	P1 to secondary terminal
1VL4600847R0102	P2 to secondary terminal

**TPU 74.63**  
**TPU 75.63**  
**TPU 76.63**

Weight: 72-88 kg  
Creepage distance: 465 mm



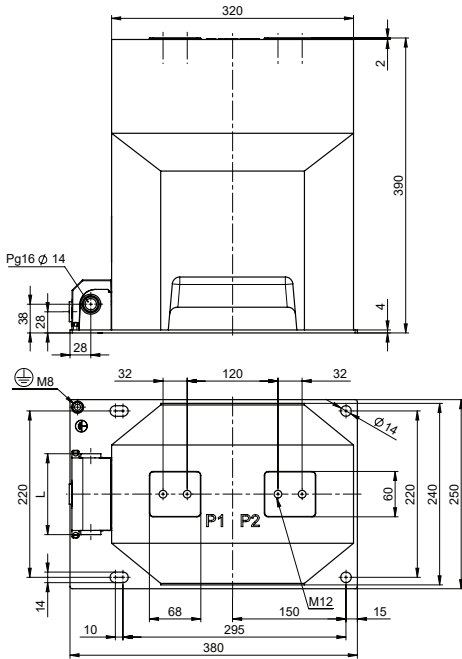
L=107mm for 6 or 12 clamps  
L=134mm for 16 clamps

Drawing n.	Polarity
44615590	P1 to secondary terminal
44615600	P2 to secondary terminal



**TPU 70.71**  
**TPU 73.71**

Weight: 56 kg  
Creepage distance: 410 mm

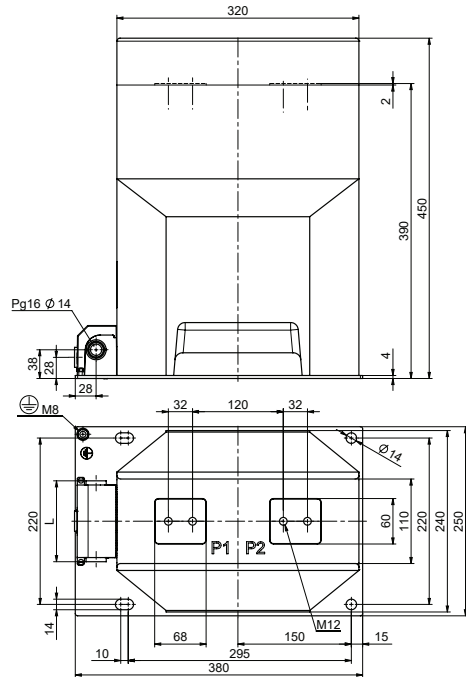


L=107mm for 6 or 12 clamps  
L=134mm for 16 clamps

Drawing n.	Polarity
1VL4600992R0101	P1 to secondary terminal
1VL4600992R0102	P2 to secondary terminal

**TPU 70.73**  
**TPU 73.73**

Weight: 56 kg  
Creepage distance: 410 mm

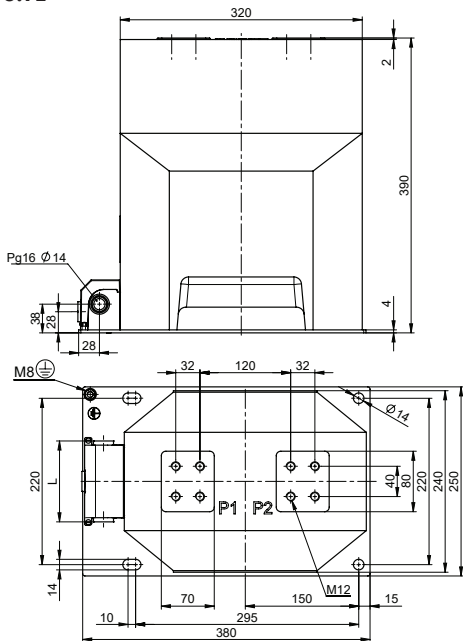


L=107mm for 6 or 12 clamps  
L=134mm for 16 clamps

Drawing n.	Polarity
1VL4600991R0101	P1 to secondary terminal
1VL4600991R0102	P2 to secondary terminal

**TPU 74.71**  
**TPU 75.71**  
**TPU 76.71**

Weight: appr. 58 kg  
Creepage distance: 410 mm

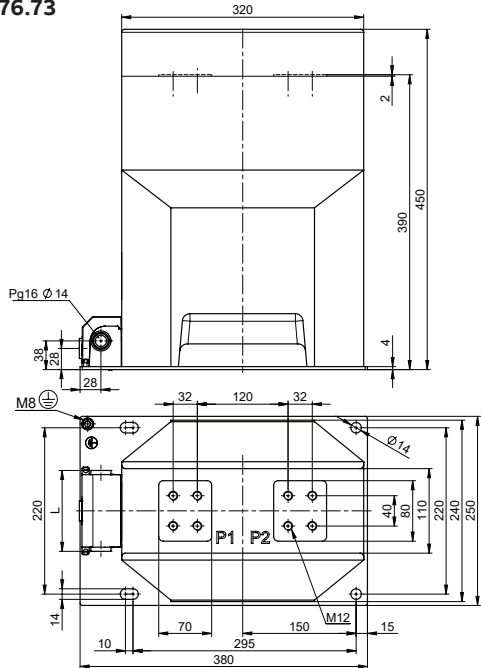


L=107mm for 6 or 12 clamps  
L=134mm for 16 clamps

Drawing n.	Polarity
1VL4600994R0101	P1 to secondary terminal
1VL4600994R0102	P2 to secondary terminal

**TPU 74.73**  
**TPU 75.73**  
**TPU 76.73**

Weight: appr. 58 kg  
Creepage distance: 410 mm



L=107mm for 6 or 12 clamps  
L=134mm for 16 clamps

Drawing n.	Polarity
1VL4600993R0101	P1 to secondary terminal
1VL4600993R0102	P2 to secondary terminal

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