MEDIUM VOLTAGE PRODUCT

TTR 4x.xx

Indoor Bushing Current Transformer



Technical parameters	Value
Highest voltage for equipment	12 kV
Power frequency test voltage, 1 min.	28 kV
Lighting impulse test voltage	75 kV
Rated continous thermal current	100 - 2 500 A
Rated short-time thermal current	60 -100 kA
Burdens, classes	5-30/0.2 - 1/5P;10P VA/cl
Reconnectible	Secondary reconnectible for 1 core type

Description
The TTR 4x.xx current transformers are cast in epoxy resin and designed for insulation voltages up to 12 kV. The TTR 4x.xx transformers are configurated as bar-type, with only one or more ratios (secondary side to be changeover) and perform the function of a bushing when installed in the switchboard. The transformer is designed with either 1 or 2 secondary windings and, depending on the combination of parameters (accuracy class, burden, shortcircuit current, overcurrent factor…) with the possibility to choose from various sizes of the transformer. The secondary windings are used for measurement or protection purposes. One terminal of each secondary winding in use 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 board, covered with plastic cover which may be sealed. The transformer can be mounted in any position. The transformer position is fixed by using four screws.

Rated primary voltages
3.6 kV; 7.2 kV; 12 kV

Rated primary currents
100; 150; 200; 300; 400; 500; 600; 750; 1 000; 1 250; 1 500; 2 000; 2 500 A
Primary currents different from the above can also be agreed upon with the customer.

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 manufactured conformably to the following requirements and standards: IEC, VDE, ANSI, BS,GOST and CSN

Basic marking

TTR 4 x . x x

- 1…up to 600 A (smaller parameters)
- 2…up to 600 A (higher parameters)
- 3…up to 1 250 A
- 4…up to 1 500 A
- 5…up to 2 000 A
- 6…up to 2 500 A

1…bar-type outlet

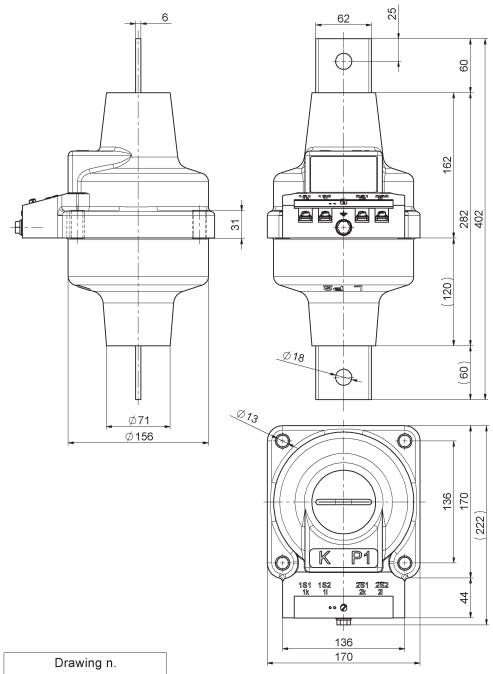
1…model series

Insulation levels of TTR 4x.xx transformer

3.6/21/45 kV	7.2/27/60 kV	12/28/75 kV
3.6/10/40 kV	7.2/20/60 kV	

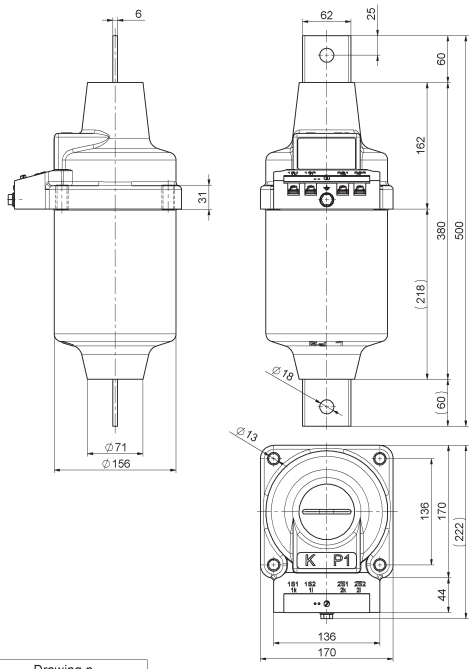
Dimensional Drawings

TTR 41.11 Weight: 10 kg



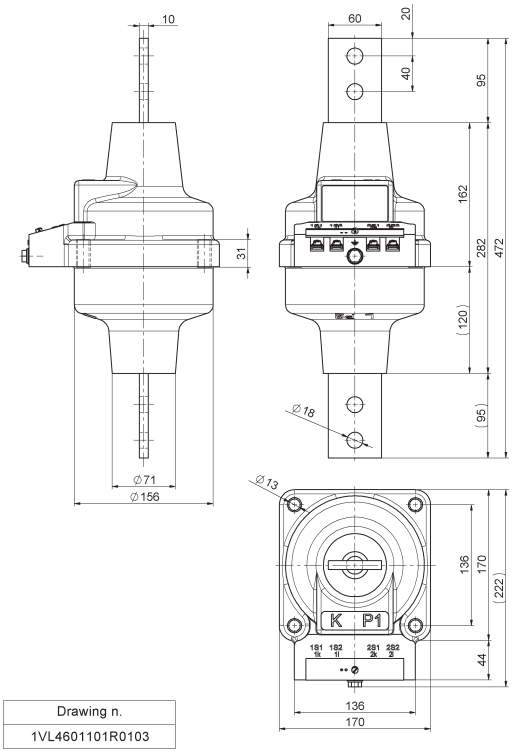
Drawing n.
1VL4601101R0101

TTR 42.11 Weight: 17 kg



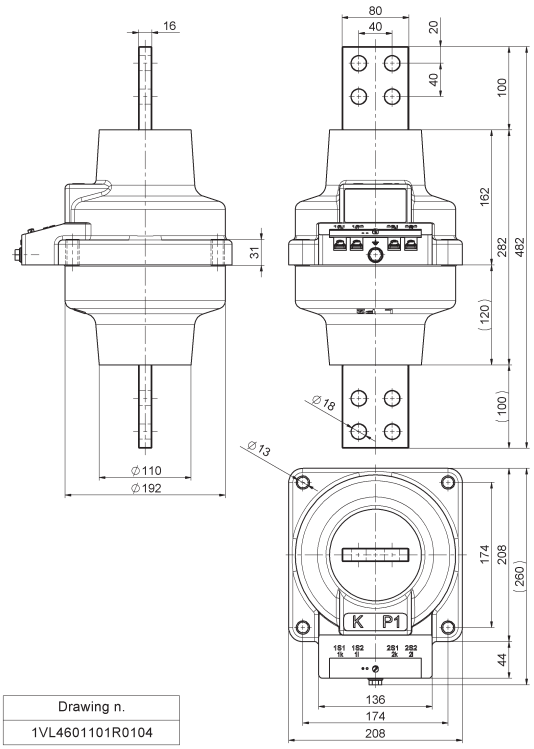
Drawing n.
1VL4601101R0102

TTR 43.11 Weight: 11 kg



Drawing n.
1VL4601101R0103

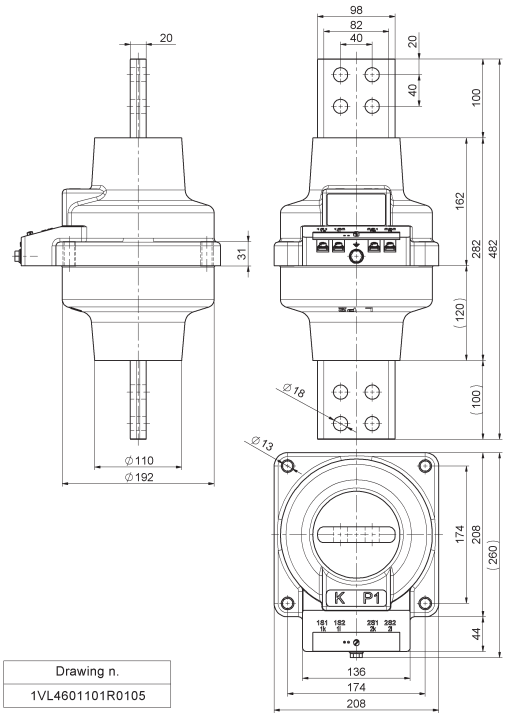
TTR 44.11 Weight: 15 kg



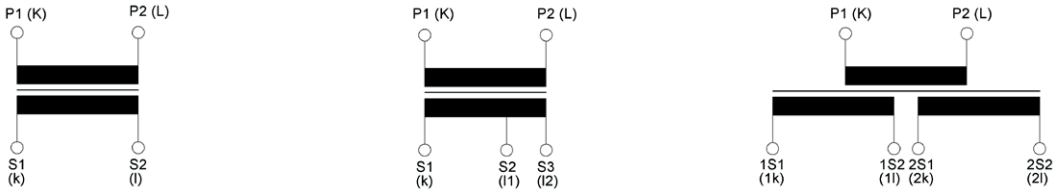
Drawing n.
1VL4601101R0104

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TTR 45(6).11 Weight: 21-24 kg



Marking of current transformer outlets - example



a) b) c)

a) Single-core design | b) Double-core design | c) Three-core design

Core selection table for types KOKS 24 D11 and _D21
Rated continuous thermal current: 1.2 x I_{pn} except for 6 000 A where rated continuous thermal current is 1.0 x I_{pn}

Type	Ratio [A]	I_{thn} [kA]	Burden [VA]	accuracy	FS/ALF
41.11	100//5	60	5	1	5
41.11	100//5	60	15	3	5
41.11	100//5	60	10	10P	5
41.11	125//5	60	5	1	5
41.11	125//5	60	15	3	5
41.11	125//5	60	5	10P	10
41.11	125//5	60	10	10P	5
41.11	150//5	60	10	0,5	5
41.11	150//5	60	15	3	5
41.11	150//5	60	5	10P	10
41.11	150//5	60	10	10P	5
41.11	200//5	60	15	0,5	5
41.11	200//5	60	30	3	5
41.11	200//5	60	5	10P	15
41.11	200//5	60	15	10P	5
41.11	200//5/5	60	10/10	3/10P	5/5
41.11	200//5/5	60	5/10	0.5/10P	5/5
41.11	250//5	60	15	0.5	5
41.11	250//5	60	45	3	5
41.11	250//5	60	10	10P	10
41.11	250//5	60	15	10P	5
41.11	250//5/5	60	5/5	0.5/10P	5/10
41.11	250//5/5	60	5/10	0.5/10P	5/5
41.11	250//5/5	60	10/5	3/10P	5/10
41.11	250//5/5	60	10/10	3/10P	5/5
41.11	300//5	60	30	0.5	5
41.11	300//5	60	60	3	5
41.11	300//5	60	5	5P	25
41.11	300//5	60	15	5P	10
41.11	300//5/5	60	5/5	0.5/10P	5/10
41.11	300//5/5	60	5/10	0.5/10P	5/5
41.11	300//5/5	60	10/5	3/10P	5/10
41.11	300//5/5	60	10/10	3/10P	5/5
41.11	400//5	60	30	0.5	5
41.11	400//5	60	60	1	5
41.11	400//5	60	15	5P	10
41.11	400//5	60	30	5P	5
41.11	400//5/5	60	10/5	0.5/10P	5/15
41.11	400//5/5	60	10/15	0.5/10P	5/5
41.11	400//5/5	60	15/5	3/10P	5/15
41.11	400//5/5	60	15/15	3/10P	5/5
41.11	500//5	60	30	0.5	5
41.11	500//5	60	90	1	5
41.11	500//5	60	15	5P	15
41.11	500//5	60	30	5P	5
41.11	500//5/5	60	15/5	0.5/5P	5/20
41.11	500//5/5	60	15/10	0.5/5P	5/10
41.11	500//5/5	60	15/15	0.5/5P	5/5
41.11	500//5/5	60	15/5	3/5P	10/20
41.11	500//5/5	60	15/10	3/5P	10/10
41.11	500//5/5	60	15/15	3/5P	10/5
41.11	600//5	60	30	0.5	5
41.11	600//5	60	120	1	5
41.11	600//5	60	15	5P	15
41.11	600//5	60	30	5P	10
41.11	600//5/5	60	15/5	0.5/5P	10/20
41.11	600//5/5	60	15/10	0.5/5P	10/10
41.11	600//5/5	60	15/30	0.5/5P	10/5
41.11	600//5/5	60	30/5	5/5P	5/20
41.11	600//5/5	60	30/10	5/5P	5/10
41.11	600//5/5	60	30/30	5/5P	5/5
42.11	100//5	60	10	10P	10
42.11	100//5	60	15	10P	5
42.11	100//5/5	60	5/5	1/10P	5/10
42.11	100//5/5	60	5/10	1/10P	5/5
42.11	100//5/5	60	15/5	3/10P	5/10
42.11	100//5/5	60	15/10	3/10P	5/5
42.11	125//5	60	10	10P	10
42.11	125//5	60	15	10P	5
42.11	125//5/5	60	5/5	1/10P	5/10
42.11	125//5/5	60	5/10	1/10P	5/5
42.11	125//5/5	60	15/5	3/10P	10/10
42.11	125//5/5	60	15/10	3/10P	10/5
42.11	150//5	60	15	10P	10
42.11	150//5	60	30	10P	5
42.11	150//5/5	60	10/5	0.5/10P	5/15
42.11	150//5/5	60	10/15	0.5/10P	5/5
42.11	150//5/5	60	15/5	3/10P	5/15
42.11	150//5/5	60	15/15	3/10P	5/5
42.11	200//5	60	15	10P	15
42.11	200//5	60	30	10P	5
42.11	200//5/5	60	15/10	0.5/10P	5/10
42.11	200//5/5	60	15/15	0.5/10P	5/5
42.11	200//5/5	60	15/10	3/10P	10/10
42.11	200//5/5	60	15/15	3/10P	10/5
42.11	250//5	60	15	10P	15
42.11	250//5	60	30	10P	10
42.11	250//5/5	60	15/10	0.5/10P	10/10
42.11	250//5/5	60	15/15	0.5/10P	10/5
42.11	250//5/5	60	15/10	3/10P	10/10
42.11	250//5/5	60	15/15	3/10P	10/5
42.11	300//5	60	15	10P	20
42.11	300//5	60	30	10P	10
42.11	300//5/5	60	30/10	0.5/10P	5/15
42.11	300//5/5	60	30/15	0.5/10P	5/10
42.11	300//5/5	60	15/10	3/10P	10/15
42.11	300//5/5	60	15/15	3/10P	10/10
43.11	750//5	100	60	1	10
43.11	750//5	100	30	5P	10
43.11	750//5/5	100	15/30	0.5/5P	5/5
43.11	1 000//5	100	60	0.5	10
43.11	1 000//5	100	30	5P	10
43.11	1 000//5/5	100	30/15	0.5/5P	5/10
43.11	1 000//5/5	100	30/30	0.5/5P	5/5
43.11	1 250//5	100	120	0.5	5
43.11	1 250//5	100	30	5P	15
43.11	1 250//5/5	100	30/15	0.5/5P	5/10
43.11	1 250//5/5	100	30/30	0.5/5P	5/5
44.11	1 500//5	150	120	0.5	10
44.11	1 500//5	150	60	5P	10
44.11	1 500//5/5	150	60/30	0.5/5P	5/10
44.11	1 500//5/5	150	60/60	0.5/5P	5/5
45.11	2 000//5	200	120	0.5	10
45.11	2 000//5	200	60	5P	10
45.11	2 000//5/5	200	60/30	0.5/5P	5/10
45.11	2 000//5/5	200	60/60	0.5/5P	5/5
46.11	2 500//5	250	120	0.5	10
46.11	2 500//5	250	60	5P	15
46.11	2 500//5/5	250	60/30	0.5/5P	5/15
46.11	2 500//5/5	250	60/60	0.5/5P	5/5

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