

Data Sheet 1.13-1/1¹⁾

High-Current Transformer, Type HCT

Application

High-current transformers are used for the inductive heating of medium- and high-voltage power cables during the voltage tests. Together with regulating transformer, control and measuring system they ensure the tests according to IEC 60840: 2004-04 and IEC 62067: 2001-10. They can also be used for general purpose high-current applications.

Brief description

High-current transformers are characterized by only one winding. The second winding is the cable to be tested. In order to easily move the cable under test into the high-current transformer, the upper yoke can be moved by a motor-driven system (depending on type).

HIGHVOLT provides two sizes of these transformers, as shown in the table below.

The suitable type for a certain cable depends on the cable geometry. The current depends on the cable cross-section and insulation. The necessary voltage increases with the cable length. If the tested cables have to be longer it is easily possible to combine several units. The voltage of the resulting system will be the sum of all transformers.

As the tested cable is mainly an inductive load, a capacitive compensation is realized at each high-current transformer to minimize the feeding power.

High-current transformers are designed for continuous operation at a maximum ambient temperature of 40 °C.

The high-current transformers are equipped with castors for easy movement within the test field. They are designed for indoor operation. The power connection, the compensation capacitors and the switches for the motor drive are built into a cabinet with IP 23 protection degree.

Special features are available on request.

Table 1: Main parameters

Type	Rated power	Rated output voltage	Rated output current	Rated input voltage	Rated compensation power	Frequency
	kVA	V	A	V	kvar	Hz
HCT 2000/15	30	15	2000	400	30	50 / 60
HCT 3000/15	45	15	3000	400	45	50 / 60
HCT 4000/15	60	15	4000	400	60	50 / 60
HCT 5000/15	75	15	5000	400	75	50 / 60
HCT 6000/15	90	15	6000	400	90	50 / 60
HCT 7000/15	105	15	7000	400	105	50 / 60

¹⁾ The prior version of the Data Sheet was 1.13/1.

Table 2: Design and dimensions

Design type / size	Core type	Core lifting	Maximum cable diameter	Length x Width x Height (approx.)	Total weight (approx.)
			mm	mm	kg
A1	cast resin	not liftable	150	900 x 600 x 1000	900
A2	cast resin	not liftable	250	900 x 600 x 1000	1200
B1	iron	manually liftable	150	900 x 600 x 1000	900
B2	iron	manually liftable	250	900 x 600 x 1000	1200
C1	iron	motor-driven liftable	150	900 x 600 x 1000	900
C2	iron	motor-driven liftable	250	900 x 600 x 1000	1200



Figure 1: High-current transformer HCT 3000/15 B2

Type designation

HCT a/b xy

a = rated output current in A

b = rated output voltage in V

x = design type (A, B or C)

y = design size (1 or 2)