

Data Sheet no. 1.13/1

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.

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.

HIGHVOLT provides two sizes of these transformers, as shown in the table below. The values of current and voltage can be modified in such a way that the product of the values of current and voltage will be constant for each type. The suitable type for a certain cable depends on the cable length and 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 switching cubicle with IP 23 protection degree.

Special features are available on request.

Table: Nominal parameters for typical systems

	Type A	Type B	
	HCT- A xx/15 ¹⁾	HCT- B xx/15 ¹⁾	
Maximum cable diameter	150	250	mm
Rated power	30 ... 60	30 ... 90	kVA
Typical output voltage	15	15	V
Typical output current	2000 ... 4000	2000 ... 7000	A
Typical input voltage	400	400	V
Rated compensation power	30 ... 60	30 ... 105	kvar
Frequency	50 / 60	50 / 60	Hz
Dimensions	900 x 600 x 1000	900 x 600 x 1000	mm
Total weight	900	1200	kg

¹⁾ xx stand for the output current of the system

Remark: typical application of type A: medium voltage cable
 typical application of type B: high voltage cable



Principle view of a HCT-B 3000/15

For further information please contact:

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