

Data Sheet no. 2.12/2

DC Voltage Test Systems up to 2000 kV, Series K, Type GP.../...K

Description

Application

for isolation tests on dry or wet HV insulations with output currents of some 10 mA

DC Voltage Generator

Circuitry

Multi-stage multiplier circuitry acc. to Greinacher

Stage No-Load Voltage 500 kV

Mechanical Construction

Four-column structure with a vertical rectifier column, example see Fig.1

Polarity Change-Over

automatically within some sec.,
on request below 500 ms at reduced voltage

Discharging/Earthing

automatically and with additional earthing bars

Feeding

Voltage 230/400 V

Power max. 50 kVA

Frequency 50/60 Hz

Regulation Unit

power module with thyristor controller in a cubicle

HV Transformer

single-phase, cylinder-type HV transformer, type PE01, see Data Sheet 1.11

Voltage Measurement

Voltage Divider

resistive divider, 0.5 mA

Peak Voltmeter

MU 18, see Data Sheet 5.56,
integrated in the BG 5 G

Remark: For systems with fast polarity reversal mixed resistive capacitive dividers can be quoted.

Control

Basic control BC 5 (Catalog Sheet 1.52) with operator device BG 5 G (Data Sheet 2.53). Operator device using SIMATIC components, separate buttons for the main switch, the operation switch and the emergency switch-off, contacts for warning lamps and safety loop.

Optionally, a Computer-aided Control and Measuring System CMS 22 or 23 (Data Sheet 1.52) with the related software GMS (Data Sheet 1.55) is available.

Technical Data

For the nominal data and main dimensions of the standard types of DC voltage test systems series K see the table below.

Type Designation

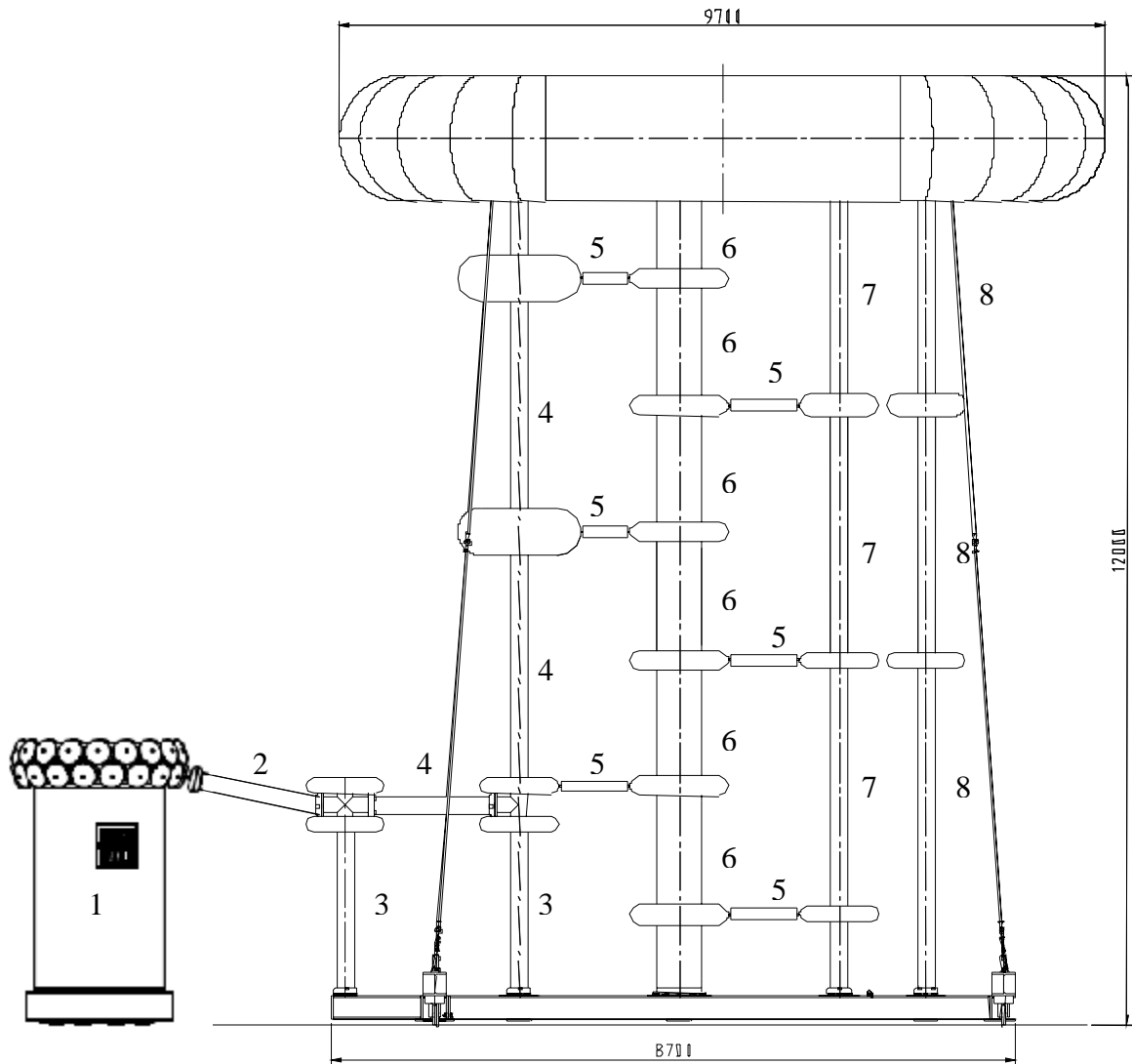
GP x/y K

x - Nominal current in mA

y - Nominal voltage in kV

K - Series

Type	Stage number	Nominal voltage	Continuous operation			Dimensions (without transformer)		Weight (without transformer)	Feeding
			Nominal current	at a voltage	with a ripple	Height	Floor area		
		kV	mA	kV	%	m	m x m	kg	
GP 50/ 500 K	1	500	50	500	< 3	5.6	5.5 x 2.5	2900	PEOI 100/220
GP 30/1000 K	2	1000	30	1000	< 3	8.8	7 x 4	5800	PEOI 100/220
GP 20/1500 K	3	1500	20	1500	< 3	12	8.5 x 5.5	8700	PEOI 100/220
GP 10/2000 K	4	2000	10	2000	< 3	15.2	10 x 7	11600	PEOI 100/220



- | | | | |
|---|---------------------|---|---------------------------|
| 1 | HV transformer | 5 | Damping resistors |
| 2 | HV lead | 6 | Rectifier units |
| 3 | Post insulators | 7 | Smoothing capacitors |
| 4 | Doubling capacitors | 8 | Resistive voltage divider |

Fig 1: Three-stage DC test system GP 20/1500 K ($I_{DC} = 20 \text{ mA}$, $U_{DC} = 1500 \text{ kV}$, Series K)

For further information please contact:

or our local representative:

HIGHVOLT Prüftechnik Dresden GmbH
Marie-Curie-Strasse 10

D-01139 Dresden / Germany

Tel. +49 351 8425-648
 Fax +49 351 8425-679
 e-mail dresden@highvolt.de
 website <http://www.highvolt.de>