

Data Sheet no. 2.11/1

**DC Voltage Extension & Test Systems up to 400 kV,  
Series L, Types GZ/GP.../...L****Description:****Application**

- as extensions to existing AC test systems (Types GZ .../... L) or separate DC test systems (Types GP .../... L).
- for isolation tests on dry HV insulations with output currents of 10 mA - 20 mA, and
- for charging of capacitive loads up to 1  $\mu$ F.

**DC Voltage Generator****Circuitry:**

Single-stage doubler circuitry acc. Greinacher

**Stage no-load voltage:** 200, 300 or 400 kV**Mechanical construction:**

Two-column structure with a vertical and horizontal rectifier column, example see Fig. 1

**Polarity change-over:**

operated per hand within some min.

**Discharging/earthing:**

automatically and with additional earthing bars

**Feeding for GP**

Voltage	230/400 V
Power	max. 10 kVA
Frequency	50/60 Hz

**Regulation unit for GP:**

voltage regulating transformer with a cubicle

**HV transformer:**

single-phase, cylinder-type HV transformer, type PEOI or T 100, see Data Sheets 1.11 and 4.5

**Voltage measurement**

<b>Voltage divider:</b>	resistive divider, 0.5 mA
<b>Peak voltmeter:</b>	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 for GP**

Basic control BC 5 (Data 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, type CMS 22 or 23 G (Data Sheet 1.52) with Software GMS (Data Sheet 1.55), is available.

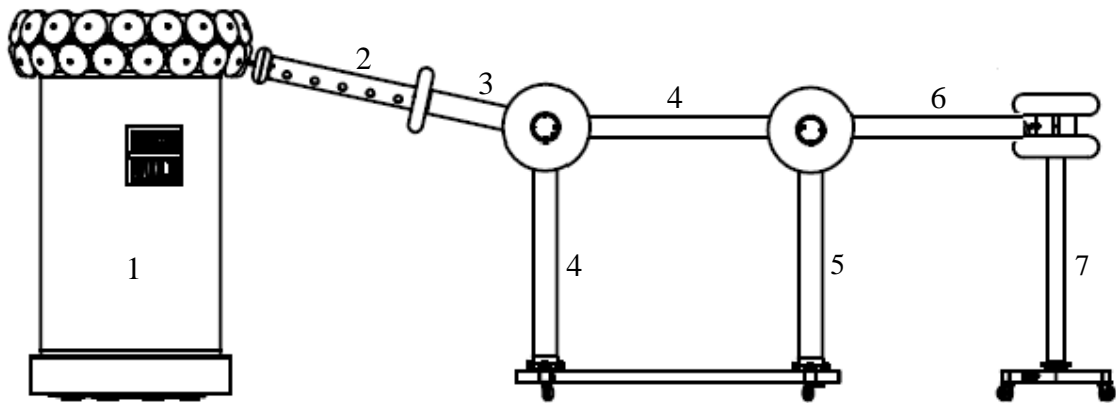
**Technical data**

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

<b>Type designation:</b>	GP x/y L
	x - Nominal current in mA
	y - Nominal voltage in kV
	L - Series

For more details regarding a smaller technical solution, refer also to our DC Module Systems (Data Sheet 4.02).

GZ-Type GP-Type	Nominal voltage	Continuous operation			Dimensions (without transformer)		Weight (without transformer)	Feeding for Type GP
		Nominal current	at a voltage	with a ripple	Height	Floor area		
	kV	mA	kV	%	m	m x m	kg	
GZ/GP 20/200 L	200	20	200	< 3	1.4	2 x 1.5	200	T 100
GZ/GP 14/300 L	300	14	300	< 3	1.8	3 x 2.0	250	PEOI 20/140
GZ/GP 10/400 L	400	10	400	< 3	2.2	4 x 2.5	300	PEOI 20/200



- |   |                    |   |                           |
|---|--------------------|---|---------------------------|
| 1 | HV transformer     | 5 | Smoothing capacitor       |
| 2 | Damping resistor   | 6 | HV lead                   |
| 3 | Doubling capacitor | 7 | Resistive voltage divider |
| 4 | Rectifier units    |   |                           |

**Fig 1: DC test system GP 10/400 L ( $I_{DC} = 10 \text{ mA}$  ,  $U_{DC} = 400 \text{ kV}$  , Series L)**

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  
internet http://www.highvolt.de