High voltage test units

for insulation fault detection

GDG testsystems

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AC high voltage test unit (ACG)

DC high voltage test unit (UHP)

General

The high voltage testers for AC and DC enable the detection of insulation faults. Due to their compact design, they are suitable for mounting on 35 mm top-hat rail.

- insulation fault detection
- self-monitoring of the test voltage
- fast current detector (one-time flashover is detected)
- discontinuity and contacting monitoring system by two sensor leads
- LC display for showing status and measured value indication

- DC: an optional calibration resistor enables the device to be checked cyclically
- AC: synchronization of two devices for simultaneous testing of two insulation resistors with switchable partial discharge detection

Integration

- potential isolation between supply and test voltage allows usage of 24 V control voltage power supplies
- disjunction of the test sample by relay contacts when measurement is inactive
- internal memory for measuring process parameters
- remote control of the test parameters using RS232 interface possible

Setup

- the main adjustable parameters are: rise time, measure time, fall time, test voltage and current limit
- internal parameter sets can be edited using display and joystick on the front side of the tester
- external selection of different test parameter sets via 24 V I/O or RS232

- DC: adjustable delay time for the current detector allows measurement of high capacitive test samples

Safety

- signal contact for operating status

- AC : separate input for generator supply
- DC: active discharge circuit for the defined discharge of capacitive loads; active, redundant current limitation to the high voltage side I < 10 mA

Technical data	AC (ACG)	DC (UHP)
Power supply:	24 V ± 10 %	24 V ± 10 %
Power consumption test mode:	ca. 150 mA	ca. 140 mA
Power consumption test mode max.:	ca. 2,5 A	ca. 650 mA
Power consumption test mode on X16:	200 mA + load at the control outputs	
Control input (in relation to GND 24 V):	10-30 V / 3,3 mA	20-28 V / <2,5 mA
Output (high side switch):	24 V / 350 mA	24V / 500 mA
Test voltage adjustable:	100 - 5000 V	10 - 1050 V
Recommended application range:	500 - 5000 V	100 - 1000 V
Tolerance voltage:	± 0,3 % ± 5 V	± 0,1 % or ± 1,5 V
Internal resistance:		1 kΩ
Tolerance current:	±0,3 % ± 40 µA	± 0,1 % or ± 5 µA ± 0,1 % or ± 50 nA (50 µA range)
Filter:		0,1 - 25,6 ms (in steps)
Powerlimit:		I < 10 mA (8,5 - 9,7 mA)
Configurable threshold for leakage current:	0,1 - 8 mA	0,005 - 8 mA
Dimensions (w × h × d):	ca. 157 × 105 × 122 mm	ca. 87 × 105 × 40 mm

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