

MAGNUS

Step-up transformer



- **Quick and easy preparation of excitation curves for instrument transformers**
- **Demagnetize current transformer cores**
- **Conduct turn-ratio tests on voltage transformers**
- **Two-hand control enhances personal safety**

Description

When power systems are put into operation or when faults occur, it becomes necessary to check the instrument transformers to make sure that they are providing test instruments and protective relay equipment with the correct outputs.

MAGNUS™ permits you to prepare excitation curves for instrument transformers quickly and easily.

MAGNUS is also used to demagnetize current transformer cores and to conduct turn-ratio tests on voltage transformers. Even though it weighs only 16 kg (35 lbs), it provides 1 A at 2.2 kV. Two-hand control enhances personal safety.

As standard, MAGNUS is delivered with a special high-voltage cable and a robust transport case.

Application example

IMPORTANT

Read the User's manual before using the instrument.

Prepare an excitation curve

1. Connect MAGNUS to the secondary side of the current transformer being tested and also to an ammeter and voltmeter.
2. Increase the voltage with the dial.
3. Jot down the values of U (voltage) and I (current).
4. Repeat steps 2 and 3 until the current (I) rises sharply without any significant rise in voltage (U).
5. Conclude the test by reducing U (voltage) slowly to zero, thereby providing demagnetization.

Specifications

Specifications are valid at nominal input voltage and an ambient temperature of +25°C, (77°F). Specifications are subject to change without notice.

Environment

Application field The instrument is intended for use in high-voltage substations and industrial environments.

Temperature

Operating 0°C to +50°C (32°F to +122°F)

Storage & transport -40°C to +70°C (-40°F to +158°F)

Humidity

5% – 95% RH, non-condensing

CE-marking

EMC 2004/108/EC

LVD 2006/95/EC

General

Mains voltage 115/230 V AC, 50/60 Hz

Power consumption 2300 VA (max)

Protection Thermal cut-outs

Dimensions

Instrument 356 x 203 x 241 mm
(14" x 8" x 9.5")

Transport case 610 x 290 x 360 mm
(24" x 11,4" x 14,2")

Weight

16.3 kg (35,9 lbs)
26.7 kg (58.9 lbs) with accessories
and transport case

High voltage cables

2 x 5 m (16.4 ft) / 1,5 mm², 15 kV

Measuring outputs

Voltage 100/1, (max load of 1 MΩ)

Inaccuracy ±1,5%

Current 10/1

Inaccuracy ±1,5% at 2 A output current
±3% at 0,5 A output current

Outputs

Voltage outputs, AC

230 V mains voltage

(I) *High voltage output* ¹⁾ 0 – 2200 V AC

(II) *Variable transformer, not isolated from mains* ¹⁾ 0 – 250 V AC

Voltage	Current	Max. load time	Rest time
2200 V AC	1 A	30 s ²⁾	10 minutes ²⁾
250 V AC	6 A	Continuous	–

115 V mains voltage

(I) *High voltage output* ¹⁾ 0 – 2000 V AC

(II) *Variable transformer, not isolated from mains* ¹⁾ 0 – 110 V AC

Voltage	Current	Max. load time	Rest time
2000 V AC	1 A	30 s ²⁾	10 minutes ²⁾
110 V AC	10 A	Continuous	–

1) The outputs I and II must not be loaded at the same time.

2) The load time and rest time for the high voltage output is calculated at the maximum output voltage and current. During an excitation test the voltage and current is only at their maximum level at the end of the test.



Cable set GA-00090

Ordering information

Item	Art. No.
MAGNUS	
Complete with:	
Cable set GA-00090	
Transport case GD-00182	
115 V mains voltage	BT-11190
230 V mains voltage	BT-12390

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