

D100

Insulation Diagnostic System

Insulation Diagnostic System D100 measures the capacitance and dissipation/power factor, excitation current, transformer turns ratio with the test voltage up to 12 kV.

For a more detailed analysis, the device makes it possible to obtain the dependence dissipation/power factor on frequency (frequency sweep) and voltage (tip-up)



FEATURES AND BENEFITS

- ▲ Dissipation/power factor and capacitance testing
- ▲ Test voltage up to 12 kV
- ▲ Output Power – 2400 VA
- ▲ Frequency 15...400 Hz
- ▲ High accuracy of field measurements with high-interference environments
- ▲ Temperature correction of dissipation/power factor
- ▲ Fast measurements with adaptive filtering of the interference currents
- ▲ Safe operation with safety switch, emergency stop, grounding control
- ▲ Small size and low weight (27 kg)

APPLICATIONS

Dissipation/power factor and capacitance testing of:

- ▲ Power transformers
- ▲ Reactors
- ▲ Instrument transformers
- ▲ Bushings
- ▲ Switches
- ▲ Surge arresters
- ▲ Capacitors

TECHNICAL SPECIFICATIONS

| Value | Range | Resolution | Accuracy |
|--------------------|---------------------|-------------|---|
| Dissipation Factor | 0...10 000 % | 0,001 % | $\pm (0,5 \% \text{ rdg} + 0,01 \%)^1$ |
| Power Factor | 0...100 % | 0,001 % | $\pm (0,5 \% \text{ rdg} + 0,01 \%)^1$ |
| Capacitance | 5 pF...6 μ F | 0,01 pF | $\pm (0,1 \% \text{ rdg} + 0,1 \text{ pF})$ |
| Inductance | 2 H...2 MH | 0,1 mH | $\pm (0,5 \% \text{ rdg} + 1 \text{ mH})$ |
| Test Voltage | 100...12 000 V | 1 V | $\pm (0,3 \% \text{ rdg} + 1 \text{ V})$ |
| Current | 20 μ A...200 mA | 0,1 μ A | $\pm (0,3 \% \text{ rdg} + 1 \mu\text{A})$ |
| Power Loss | 0...400 W | 0,1 mW | $\pm (0,8 \% \text{ rdg} + 0,1 \text{ mW})$ |
| Test Frequency | 15...400 Hz | 0,01 Hz | $\pm (0,1 \% \text{ rdg} + 0,1 \text{ Hz})$ |

¹Tolerances are determined for 45...70 Hz frequency range of the test voltage.

Output

| | |
|---------|---|
| Power | 2400 VA |
| Voltage | 100...12 000 V (45...70 Hz) 100...4000 V (15...400 Hz) |
| Current | <100 mA (continuously) <200 mA (2 min ON, 8 min OFF) |

Power mains

| | |
|-----------------|-------------|
| Rated Voltage | 100...240 V |
| Rated Frequency | 50/60 Hz |

Operating Temperature -20...50 °C

Relative Humidity up to 95 % non-condensing

Size (Main Unit) 546 × 347 × 247 mm

Weight (Main Unit) 27 kg

Standards


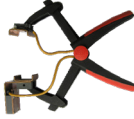







| | |
|--------|-----------------|
| Safety | EN 61010-1:2010 |
| EMC | EN 61326-1:2013 |

ORDERING INFORMATION

Scope of supply

The following items are supplied with the **standard D100 modification**:

| No | Item | Part no. | |
|----|---|------------|---|
| 1 | Insulation Diagnostic System D100 (Main Unit) | 411722.019 |  |
| 2 | High Voltage Cable HVC, 20 m | 685651.062 |  |
| 3 | Measuring Cable MC (blue), 20 m | 685612.129 |  |
| 4 | Measuring Cable MC (yellow), 20 m | 685612.130 |  |
| 5 | Grounding Cable GC, 10 m | 685615.012 |  |
| 6 | Safety Switch, 10 m | 418131.005 |  |
| 7 | Mains Cable 10 A EU (CEE 7/XVII - C13) | — |  |
| 8 | HV Cable Hook | 301531.039 |  |
| 9 | HV Cable Clamp | 301531.013 |  |
| 10 | Measuring Cable Clamp (range up to 32 mm) (2 pcs.) | 685614.136 |  |
| 11 | Measuring Cable Clamp (range up to 9,5 mm) (2 pcs.) | 685614.137 |  |
| 12 | Measuring Cable Bushing Tap Adapter | 685614.138 |  |

| No | Item | Part no. | |
|-------------------------------------|---|---------------|---|
| 13 | HV Cable Bushing Tap Adapter | 685614.139 |  |
| 14 | Extension Clamp (range up to 120 mm) (2 pcs.) | 685614.090 |  |
| 15 | USB Flash Drive | 408111.003 |  |
| 16 | Bag for cables and accessories | 323382.047 |  |
| 17 | Operations manual | 411213.014 OM | |
| 18 | Passport | 411213.014 P | |
| 19 | Applications Guide | 411213.014 AG | |
| Additional order² | | | |
| 20 | Safety Strobe Light (cable length 10 m) | 425132.004 |  |
| 21 | Reference Capacitor 12 kV | 411634.056 |  |
| 22 | TTR Test Capacitor | 411634.057 |  |
| 23 | FOC Fiber-optic cable (5 m) | 11808 |  |
| 24 | Flexible Conductive Band | D100.000.030 | |
| 25 | Interface Unit | 426477.003 |  |
| 26 | Instruction for using Tan Delta Test program | — | |

²Availability and quantity are determined when ordering.

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Development and production
of measurement devices

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