

DE1 Portable Cable Fault Testing System



- An integrated portable testing system, featuring light weight, durability, and ease for transportation;
- Built-in DC High-Voltage Output: 0–32 kV negative polarity, Maximum output current: 30 mA;
- Pulse capacitor: 35 kV/4 μ F, energy: 2,450 J;
- Portable high-power pulse reflectometer, output voltage: 200 V, can be used independently at the test site;
- Noise-reduction cable fault Pinpointer;

Components:

- 1. DE1 Integrated Portable High-Voltage Generator**
- 2. DR1 Multiple Pulse Processing Unit**
- 3. DMC 35 kV/4 μ F/15 kA Lightweight Dry-Type Pulse Capacitor**
- 4. D4000B Cable Fault TDR**
- 5. DD3 Cable Fault Pinpointer**

Uses:

Rapid location and pinpointing of short-circuit, low-resistance, open-circuit, high-resistance leakage, and flashover faults in low-, medium-, and high-voltage grade power cables.

Ranging:

- An integrated high-voltage generator design, featuring small size and light weight.
- Equipped with a special high-voltage cable and built-in high-voltage output terminals, ensuring convenient use, simple wiring, and reliable safety.
- Testing methods:
 - Arc Reflection Method/Multiple Pulse Method;
 - DC Arc Reflection Method/DC Multiple Pulse Method;
 - Current Sampling Method;
 - DC Current Sampling Method;
 - DC Output Mode.
- Types of sampling signals: arc reflection/multiple pulses, current sampling, low-voltage pulses.
- DC High-Voltage Output: 0–32 kV negative polarity, Maximum output current: 30 mA
- A ball gap with an adjustment range > 25 mm
- Ball Gap Breakdown Voltage: 2–3 kV/mm
- High-Voltage Impact Frequency: 3-10 times per second
- 10.4-inch industrial-grade wide-temperature touch screen, more intuitive display, more convenient operation, battery life of more than 8 hours.
- Test pulse: pulse width 0.1-9.9 μ s, amplitude 0-200V, arbitrarily adjustable;
- Pulse method error:
 - Rough measurement relative error: no more than $\pm 0.2\%$;
 - Absolute error of rough measurement: not more than 1 meter for cables of lengths below 2 kilometers;
Not more than 2 meters for cables of length above 5 km.
- Protection:
 - Zero-Voltage Position Protection: Prevents misoperation and safeguards the safety of personnel and the test cable;

Pinpoint Features:

- Test Methods: 1. Electromagnetic Direction Method; 2. Electromagnetic Intensity Method; 3. Acoustic Listening Method; 4. Acoustic-Magnetic Synchronization Method; 5. Step Voltage Method.
- Distance Measurement Range: 00.0–25 ms, 3-bit digital display
- Synchronization measurement: magnetic field/acoustic wave
- Filters: (Four Bands) 100Hz–1.5kHz (acoustic wave);
270Hz–1.5kHz (acoustic wave);
150Hz–1 kHz (acoustic wave);
270Hz–1 kHz (acoustic wave)
- Sound/magnetic field/audio signal measurement: 1, waveform 2, amplitude bar 3, digital display
- Sound/Magnetic Field/Audio Signal Adjustment: Via Pushbuttons
- Amplification range: Sound channel >95dB (with maximum volume limit) Magnetic channel >80dB
- Testing accuracy: 0.1 meters
- Display: 320 × 240 dot matrix high-resolution large screen LCD, visible in strong sunlight during the day, with backlight at night.
- Probe length: 480-800mm adjustable.

