

High voltage discharge rod EST For damped discharge and direct, visible earthing



- Available for multiple voltage ranges
- For safe discharging and earthing of cables and test units

DESCRIPTION

When conducting dielectric tests on cables or doing fault location measurements with high DC voltages, the cable capacitance is charged and represents a dangerous amount of energy. The charging energy is calculated by the formula:

$$P = U^2 \cdot \frac{C}{2}$$

Hence, after a measurement, the cable under test must be subjected to a damped discharge and a direct, visible earthing. Instructions and recommendations for discharging, earthing and short circuiting can be found in the following VDE regulations:

- DIN EN 50191 / VDE 0104 01/01
- DIN VDE 0105-100 06/2000
- DIN EN 61230 91/96
- DIN EN 61219 01/95

The discharge time is calculated by the formula:

$$\tau = R C \text{ (s / M}\Omega \text{ / }\mu\text{F)}$$

After 5 - 10 τ (max. 5 s) the voltage drops to a harmless value. Now the cable can be visibly short-circuited by means of the earthing hook.

The Megger discharge rod touches the live wire with a tip that features a discharge resistor that limits the discharge current and ensures a damped discharge. Within a split second most of the cable's charge has flown off, eliminating the post-charging effect. The discharge rods are made of GFK (fibre-glass strengthened plastic). They are equipped with grip protection with extra-long safety clearance against physical contact with high voltage.

Application

Take care that the correct number of discharge resistors are screwed together. Before using the discharge rod, the earthing cable has to be connected to safety or an operational earth. Before using the hook to earth the cable, it should be discharged via the tip of the rod for a couple of seconds.

Important note

The Megger discharge rods are designed only for the discharge of high voltage cables within the framework of cable tests. After use, allow a cooling period of 30 minutes to avoid a thermal overload of the built-in discharge resistors.

TECHNICAL DATA*

	Voltage	Length	Weight	max. Capacity	Resistance
EST 0	–	152 cm / 59,84 in.	1.40 kg / 3,09 lb.	–	–
EST 35	35 kV	50 cm / 19,69 in.	0.95 kg / 2,09 lb.	6 μ F	10 k Ω
EST 50	50 kV	136 cm / 53,54 in.	1.90 kg / 4,19 lb.	6 μ F	100 k Ω
EST 75	75 kV	156 cm / 61,42 in.	2.20 kg / 4,85 lb.	3 μ F	150 k Ω
EST 100	100 kV	176 cm / 29,92 in.	2.50 kg / 5,51 lb.	3 μ F	200 k Ω
EST 150	150 kV	208 cm / 81,89 in.	2.85 kg / 6,28 lb.	2 μ F	300 k Ω

ORDERING INFORMATION

Product	Order no.
EST 0	81 000 0058
EST 35	81 0300
EST 50	81 000 3725
EST 75	81 0326
EST 100	81 0327
EST 150	81 000 0059

SALES OFFICE

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Discharge-Rod_DS_EN_V02

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