

UGVCL/SP/III/308/Operating-Earthing Rod  
**SPECIFICATION OF OPERATING ROD**

**1. SCOPE :**

This specification covers the manufacture, testing at works and supply of Operating Rod for 11 KV to 33 KV system.

**2. APPLICABLE STANDARD :**

As per relevant IS with latest amendment (for materials used & testing).  
Like IS 1998 ,IS 2071, BS 27821 ,IS 867 ,IEC 60060 IEC 855 etc..

**3. GENERAL CONSTRUCTION REQUIREMENT OF OPERATING ROD**

**3.1 Material :**

**A :- Telescopic Stick**

The Telescopic Operating Rod should be manufactured from fully automatic pultrusion machine out of Fiber Reinforced Polyester (FRP)/Polyester Resin bonded, with boron free glass rowing. The glass content should be minimum 60 % .

**B:- D.O. Head**

The Top of stick be provided with Aluminum D.O. Head , with Die casted Aluminum alloy material. This aluminum head should properly designed to operate Drop out fuse barrels.

**C:- Bottom**

The bottom end of the telescopic stick should be dressed with rubber shoe for adequate grip & to prevent the penetration of the moisture from underneath, thus making the device completely moisture proof.

**3.2 Special Features.**

- (1) The Telescopic stick should be free from all the foreign bodies and without any pin holes.
- (2) The Inner & outer surface of Operating Rod (Telescopic stick) should be smooth & glossy..
- (3) The arrangement of locking between two section of Operating Rod will be of Nut-Bolt type locking with Telescopic design.
- (4) The joints are required vibration free and provided with complete fittings.
- (5) The Operating Rod shall have very good mechanical strength , excellent Dielectrical strength and free from the water absorption
- (6) The weight of Operating Rod should be very less & suitable for easier handling /Operation by single person.

**3.2 Colour :**

Natural White OR Grey

**3.3 Dimensions :-**

Total Height :- 18 Feet in four equal section

Assembled Height :- 14 Feet

Outer Diameter : 45 mm for Bottom section & 25 mm for Top Section

Telescopic Stick Wall thickness : 2.5mm

**4. MARKING :**

“UGVCL” and trade mark of supplier should be embossed on the Telescopic Stick at every meter length preferably at 50mm from one end.

Signature Of Tenderer

Company's Round Seal

Place

Date

**5. TYPE TEST CERTIFICATE :**

The Operating Rod sticks should be type tested for 110 KV voltage for power frequency voltage withstand test in Dry & wet condition preferably from any Govt. approved Lab like CPRI, ERDA etc..

**6. TENDER SAMPLE :**

Tenderer should submit two nos. of sample along with offer. Offer without sample will be straight way rejected.

**7. Guarantee:** - If the goods, stores and equipments found defective due to bad design or workmanship the same should be repaired or replaced by you free of charge if reported within 18 months of their receipt at site or 12 months from the date of commissioning of equipments whichever is earlier. You will be responsible for the proper performance of the equipments / materials for the respective guarantee period.

Signature Of Tenderer

Company's Round Seal

Place

Date

UGVCL/SP/III/308/Operating-Earthing Rod  
SPECIFICATION OF EARTHING ROD

**1. SCOPE :**

This specification covers the manufacture, testing at works and supply of Earthing/Discharge Rod for 11 KV to 33 KV system.

**2. APPLICABLE STANDARD :**

As per relevant IS with latest amendment (for materials used & testing).

Like IS 1998 ,IS 2071, BS 27821 ,IS 867 ,IEC 60060 IEC 855 etc..

**3. GENERAL CONSTRUCTION REQUIREMENT OF EARTHING ROD**

**3.1 Material :**

**A :- Telescopic Stick**

The Telescopic earthing Rod should be manufactured from fully automatic pultrusion machine out of Fiber Reinforced Polyester (FRP)/Polyester Resin bonded, with boron free glass rowing. The glass content should be minimum 60 %.

**B:- Conductor Clamp**

The Top of stick is be provided with Conductor clamp with Die casted Aluminum alloy clamp with adjustable jaw, to grip firmly any bus bar /Conductor of size from 10mm to 35mm diameter conductor. It should have rotating device arrangement for movement in all direction which hold the conductor tightly just by rotating the stick from bottom by hand without any jerk while holding or leaving the conductor.

**C:- Earthing Cable :-** The Earthing Rod should be provided with any ISI branded PVC Insulated Cable of at least seven ( 7 ) meter in length. Both end of earthing cable should be provided with copper lugs, which would be crimped with wire. The brass nut bolt should be fixed on the earthing clamp.

**D:- Bottom**

The bottom end of the telescopic stick should be dressed with rubber shoe for adequate grip & to prevent the penetration of the moisture from underneath, thus making the device completely moisture proof.

**3.2 Special Features.**

(1)The Telescopic stick should be free from all the foreign bodies and without any pin holes.

(2)The Inner & outer surface of Earthing Rod (Telescopic stick) should be smooth & glossy.

(3)The arrangement of locking between two sections of Earthing Rod will be of Nut-Bolt type locking with Telescopic design.

(4) The joints are required vibration free and provided with complete fittings.

(5) The Earthing Rod shall have very good mechanical strength , excellent Dialectical strength and free from the water absorption

(6) The weight of Earthing Rod should be very less & suitable for easier handling /Operation by single person.

**3.2 Colour : Natural White OR Grey**

**3.3 Dimensions :- Total Height :- 18 Feet in four equal section**

Assembled Height :- 14 Feet

Outer Diameter : 45 mm for Bottom section & 25 mm for Top Section

Telescopic Stick Wall thickness : 2.5mm

Signature Of Tenderer

Company's Round Seal

Place

Date

4. **MARKING :**  
“UGVCL” and trade mark of supplier should be embossed on the Telescopic Stick at every meter length preferably at 50mm from one end.
5. **TYPE TEST CERTIFICATE :**  
The Earthing Rod sticks should be type tested for 110 KV voltage for power frequency voltage withstand test in Dry & wet condition preferably from any Govt. approved Lab like CPRI, ERDA etc..
6. **TENDER SAMPLE :**  
Tenderer should submit two nos. of sample along with offer. Offer without sample will be straight way rejected.
7. **Guarantee:-**If the goods, stores and equipments found defective due to bad design or workmanship the same should be repaired or replaced by you free of charge if reported within 18 months of their receipt at site or 12 months from the date of commissioning of equipments whichever is earlier. You will be responsible for the proper performance of the equipments / materials for the respective guarantee period.

Signature Of Tenderer

Company's Round Seal

Place

Date

Signature Of Tenderer

Company's Round Seal

Place

Date