



Cu/CuSo₄ Reference Electrode

Routine potential monitoring is an important part of cathodic protection maintenance program, an accurate, reliable, and consistent reference electrode is crucial for the potential monitoring.

YUXI offers high level reference electrode which complies to the highest industry standards, our reference electrodes including Copper/Copper Sulfate, Silver/Silver Chloride, High Purity Zinc, both of them is available in buried and portable type.

Copper sulfate reference electrodes (CSE) are the most commonly used reference electrode for measuring potentials of underground structures and also for those exposed to fresh water. It is not suitable for use in a chloride electrolyte as the chloride ions will migrate through the porous plug and contaminate the CSE. The electrode is composed of a copper rod, immersed in a saturated solution of copper sulfate, held in a non-conducting cylinder with a porous plug at the bottom. The copper ions in the saturated solution prevent corrosion of the copper rod and stabilize the reference electrode.

Permanent buried CSE provide accurate and reliable potential measurements on buried metallic structures.

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FEATURES

- ▶ The electrode with stable potential is not easy to polarize.
- ▶ The specially formulated backfill not only has excellent electrical conductivity, but also overcomes the disadvantage that the traditional backfill is easy to agglomerate and lead to anode failure in the alternating dry and wet environment.
- ▶ Packed with easily absorbent and degradable environmentally friendly materials, it can be installed directly on site without any need to deal with any plastic waste.

PARAMETERS

Life	≥20 years
Electrode Potential	+316mV (25°C, vs, SHE)
Operating Temperature	0-55°C
Potential Stability	Potential Drift ≤ ±10mV / ±5 mV at 0.3 mA
Temperature Coefficient	0.96mV/°C

SPECIFICATIONS

Model	YX-CSE-1	YX-CSE-2	YX-CSE-3
Type	Portable	Stationary	Stationary
Size	32mm Diameter 150mm Length	200mm Diameter 300mm Length	200mm Diameter 300mm Length
Shell Material	High Impact Strength ABS	Ceramic Jar	Cotton Bag
Potential Stability	±5 mV at 0.3 mA	±5 mV at 0.3 mA	±5 mV at 0.3 mA
Water Tightness	/	196kPa water pressure ≥15min	/
Insulation	Resistance > 1MΩ	Resistance > 1MΩ	Resistance > 1MΩ
Lifes	/	30 years	30 years
Recommended Environment	Soil, Fine Sand, Fresh Water	Fresh Water	Soil, Fine Sand

