

PRODUCT DATA / PROCUREMENT CONTROL

Permanent and Long-Life Reference Electrodes

Project-selected Cu/CuSO₄, Ag/AgCl, zinc and other reference systems for fixed CP monitoring locations.



DOCUMENT STATUS	Public technical summary for enquiry and supplier prequalification. It is not an order-specific approved datasheet.
PRODUCT SCOPE	Reference cell, electrolyte/interface, protective housing, cable and termination selected for the actual soil, water, concrete or marine environment.
FINAL ACCEPTANCE	The signed quotation, approved drawing/datasheet, purchase order and agreed ITP take precedence over this document.

Selection principle

Service life cannot be stated responsibly without the selected chemistry, environment, housing, installation, storage and acceptance basis. Each model must carry its own approved data and limitations.

Applicable standards and project references

Reference	How it is used
ISO 15589-1 / ISO 15589-2	Pipeline CP measurement context for onshore/offshore systems when adopted.
ISO 12473	Marine CP system context where applicable.
Project monitoring specification	Controls chemistry, potential basis, tolerance, design/service assumptions and installation.
Approved model datasheet	Defines model-specific values; the label long-life does not create a universal service-life guarantee.

Available product configurations

Permanent Cu/CuSO₄

Soil-side reference assembly with fixed lead and controlled installation interface.

Permanent Ag/AgCl

Project-selected reference chemistry for compatible water or marine service.

Zinc reference

Zinc system where selected by the CP design and environment.

Protected reference assembly

Reference cell with mechanical housing, cable and installation accessories to drawing.

Technical data fields

Values are confirmed per selected model, approved drawing and project test basis. Blank or project-defined fields are intentional; they prevent unsupported catalogue guarantees.

Field	Required definition	Acceptance evidence
Chemistry/reference	Element/electrolyte system and potential reference scale	Approved model datasheet
Potential tolerance	Value, tolerance, reference basis, temperature and conditions	Verification report when specified
Service electrolyte	Soil, fresh water, seawater, concrete or process environment	Application review
Temperature/storage	Operating, storage and conditioning limits	Handling/model instruction
Housing/interface	Body, sensing interface, dimensions and protection	GA/detail drawing
Cable	Conductor, insulation, color, length, tags and termination	Cable schedule/continuity record

Inspection and release plan

Control point	Verification	Acceptance basis
Identity/chemistry	Model and assembly components	Approved datasheet/BOM
Potential verification	Specified comparison method and conditions	Approved tolerance
Cable/continuity	Cable identity, length and electrical continuity	Approved schedule/ITP
Housing/interface	Dimensions, seal and visual condition	GA/detail drawing
Marking/packing	Model, batch/serial and storage label	Packing/identification plan

Documents available when included in the order

Model datasheet

Chemistry, reference scale and environment.

GA/detail drawing

Housing, interface and cable exit.

Verification record

Potential comparison when ordered.

Cable/continuity record

Lead identity, length and path.

Handling instruction

Conditioning, storage and installation.

Packing list

Model/batch identity and quantities.

Information required for quotation

- Application, electrolyte, chloride/soil condition, temperature and access.
- Required reference chemistry, scale, potential tolerance and verification method.
- Installation location, orientation, protective housing and service assumptions.
- Cable type, length, tag, termination and test-station interface.
- Quantity, documents, packing, destination and required date.

IMPORTANT

Do not select or install cathodic-protection components from this public summary alone. The CP designer or responsible engineer must confirm service environment, design criteria, applicable standard edition, geometry, quantity, interfaces and acceptance tests.

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Product configuration and documentation support for international cathodic-protection procurement.