

ELECTROCHEMICAL DEVICES INC.

Reference Electrodes

Electrochemical Devices, Inc. (EDI) specializes in the design and manufacture of a variety of products for monitoring and controlling corrosion.

EDI's expertise is permanent reference electrodes which are used for continually monitoring the potential of a structure. Changes in potential readings will alert the user to possible corrosion problems.

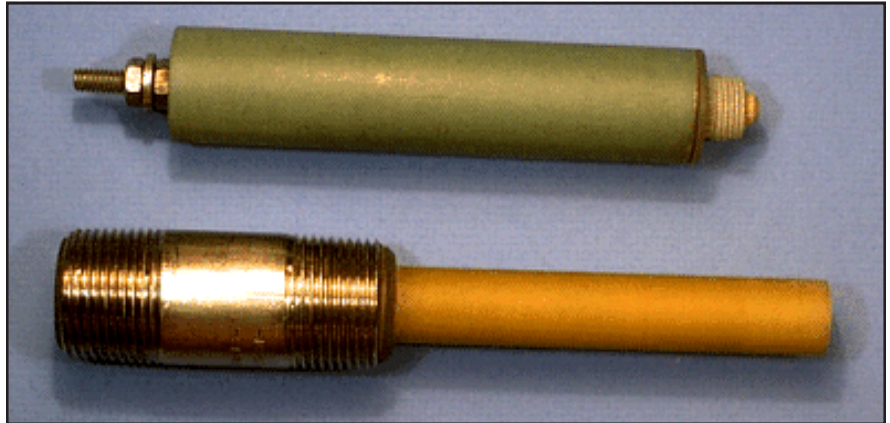
Standard EDI electrodes are designed for easy installation, and they have the longest demonstrated service lives in the industry.



Sales Office: Belmont, MA
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Main Office: Albion, RI
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www.edi-cp.com



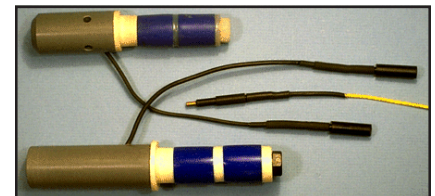
FE Model: Fixed reference for elevated temperature or pressure environments.

EDI products are grouped into series and can be easily identified by their intended application, such as U Series for underground or I Series for immersion. Custom configurations are available in each series and are denoted by adding an X to the series (i.e. UX, IX, etc). Call for details.

F Series

Reference electrodes for **FIXED**, through-wall applications such as waterboxes and process vessels (wire side is dry). Available with Cu/CuSO₄, Ag/AgCl, or Zn elements.

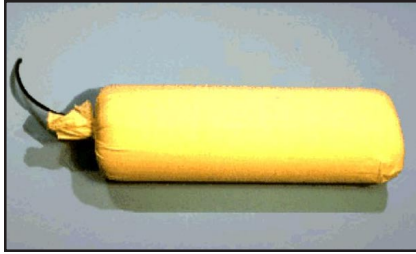
- **FS - Standard Probe:** 3/4" NPT PVC nipple. Termination end threads into a Condulet-type fitting
- **FH - Heavy Duty Probe:** Stainless steel nipple and G-10 GRE element housing.
- **FA - Adjustable Probe:** Smooth 3/4" dia. body intended for installation through a Conax-type gland
- **FE - Extreme Environment:** Unique two-piece reference. Bridge is permanently installed while reference can be permanently or temporarily inserted into bridge to obtain potentials.



T Series

Reference electrodes mounted directly on condenser and heat exchanger **TUBE** sheets. Available with Cu/CuSO₄, Ag/AgCl, or Zn elements. Reference and lead wire join with an underwater connector.

- **TE - Tube Sheet Mounted** (U.S. Patent 4,957,616): Non-metallic tube mounting plug. 6" lead wire with socket underwater connector.
- **TW - Lead Wire:** Type EE Teflon® insulated lead wires (25 or 50' long) and underwater mating pin for connection to the electrode.



UL Model: For use in new construction where a premium underground reference is required.

U Series

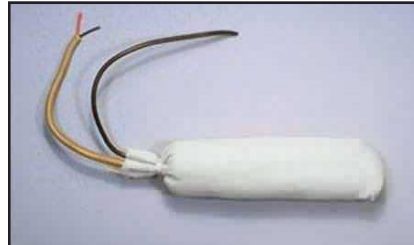
Reference electrodes for **UNDERGROUND** use. Available with Cu/CuSO₄ or Ag/AgCl elements. Standard termination is 50 ft. #14 AWG HMWPE wire.

- **US - Reduced Diameter (Slim-Line™):** 30 year design life. Can be installed in a 2" dia. hole.
- **UL - Extended Life:** 30 year design life. Contained in a bentonite-gypsum backfilled cotton bag.
- **UR - Standard:** 15 year design life. Contained in a bentonite-gypsum backfilled cotton bag.
- **UD - Dual Element:** 30 year design life. Includes zinc element.
- **UI - IR Drop Sensor:** Permits IR drop to be measured on sacrificial & impressed current CP systems. Fitted to UL or US Models at time of manufacture.

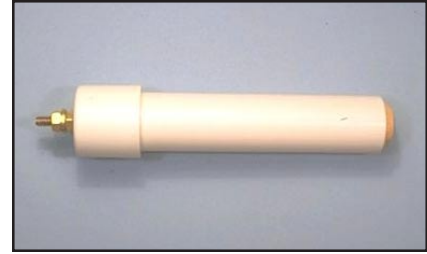
C Series

Reference electrodes, probes, and potential wells for use in reinforced **CONCRETE**.

- **CB - Permanent Embedded Reference:** Ag/AgCl reference is encased in a bag containing a compliant backfill to ensure good bonding to the structure. Shielded cable lead wires eliminate electronic interference.
- **CP - Concrete Probes:** Graphite and MMO Probes are used for relative potential readings. Rebar Probes monitor corrosion rate by linear polarization resistance technique.
- **CW - Potential Wells:** Allows accurate reproducible potential readings by eliminating errors normally associated with surface readings. Extensions available for remote location measurements.



CB Model: For bridge decks and sub-structures, parking garages, docks, and buildings.



IT Model: Maintenance-free portable reference contains gel rather than liquid. Offers antifreeze protection to -37°C (-35°F), will not leak, and does not require refilling or cleaning.

I Series

Reference electrodes for full **IMMERSION** service (wire side is wet) or for portable use. Available with Cu/CuSO₄, Ag/AgCl, or Zn elements.

- **IR - Regular Immersion:** Available with gelled elements and custom wire length terminations. Anti-freeze and mounting magnet are optional.
- **IP - Pipe-Type:** Available with dry-type Ag/AgCl or Zn elements. Terminations include wire or stud ends. Housing allows it to be cemented to 12" PVC conduit.
- **IT - Transportable:** Available with gelled Cu/CuSO₄ or gelled Ag/AgCl elements. Termination is standard 1/4-20 stud end with a knurled finger nut.

For additional information, please contact the Corrosion Service or Electrochemical Devices office nearest you.

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