ANODE ENGINEERING

SPECIALIST ENGINEERING SUPPLIERS

DEI MARINE

ALWAYS RUGGED. ALWAYS RELIABLE.

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IN EVERY PORT, when connected to shore AC power, you may be placing your boat at risk due to galvanic corrosion as well as risking your safety due to inadequate AC grounding. Rely on DEI fail-safe Galvanic Isolators to address safety grounding and DC isolation with a proven, extensively tested, conservative design.

. . . Providing the ultimate in safety grounding and corrosion prevention.

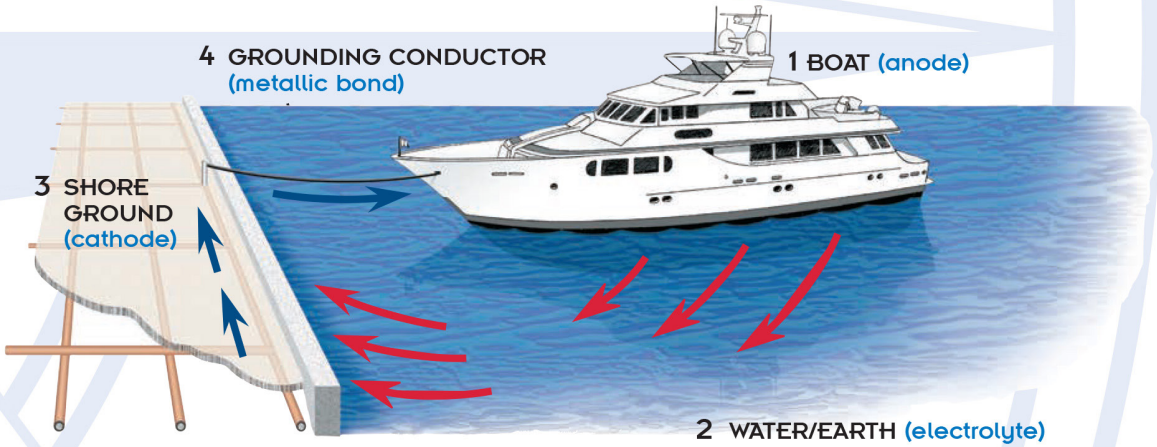
Why is fail-safe construction important? Grounding systems are expected to conduct AC fault current and lightning current without compromise, otherwise a person on the boat or in the water nearby could be subject to a serious shock hazard. Fail-safe construction assures that the galvanic isolator will not compromise the integrity of the AC safety grounding path — even if failed. DEI developed the first fail-safe isolation/grounding products in 1983, and leads the industry with proven designs more extensively tested than any device on the market, including certification to ABYC standard A-28.

A luxury yacht or commercial boat is an important asset worthy of the best corrosion protection available. While protective coatings and anodes can assist, a sure method is required to deal with the galvanic corrosion circuit created by the shore power connection.

SHORE POWER BONDS YOUR BOAT...

via the safety grounding conductor, tying the hull and drive system to the shore grounding system and to other adjacent boats also connected to shore power. This connection, while required for safety, creates a galvanic corrosion cell involving the dissimilar metals between boats and between a boat and the shore grounding system — as shown in the following diagram.

GALVANIC CORROSION SHOULD CONCERN YOU.



FOUR COMPONENTS ARE NEEDED FOR CORROSION...

1 anode – a metal surface which gives up metal ions (corrodes)

2 electrolyte – a medium which conducts ionic current between the anode and cathode

3 cathode – a metal surface that picks up metal ions

4 metallic bond – a continuous metallic path that allows current to flow from cathode to anode

Fail-safe galvanic isolators

DEI offers fail-safe galvanic isolators matched to the nominal shore power service: 30A, 50/60A, 100A, and 200A. Only DEI takes "fail-safe" to the next level, by offering both Fail-Safe Plus® models that meet the A-28 definition of fail-safe, as well as Fail-Safe MAX® models that have even higher fault current ratings. With Fail-Safe MAX®, the unit will still be fully functional when fault current causes the grounding conductor to reach its melt temperature. DEI has also tested and rated all models to high levels of lightning surge current even though lightning current ratings are not required in A-28. A benefit to users is that galvanic isolators certified as "fail-safe" do not require monitoring systems, thereby eliminating nuisance alarms.

Features and Characteristics

- Highest AC fault ratings
- Rated for lightning surge current
- Ignition protected
- Fail-safe certified construction
- Meets ABYC A-28
- No monitoring system needed
- Sealed, solid-state design — no moving parts
- Unique design runs cool, no heat sinks required
- Easily tested, no maintenance required

Model	AC Fault Rating	Lightning Rating	Product Class
GI-30A-FSP	3kA for 13 cycles	75kA	Fail-Safe Plus
GI-30A-FSM	3kA for 34 cycles	100kA	Fail-Safe MAX
GI-50/60A-FSP	5kA for 10 cycles	100kA	Fail-Safe Plus
GI-50/60A-FSM	5kA for 31 cycles	100kA	Fail-Safe MAX
GI-100A-FSM	5kA for 198 cycles	100kA	Fail-Safe MAX
GI-200A-FSM*	5kA for 198 cycles	100kA	Fail-Safe MAX

FAIL-SAFE+®

FAIL-SAFE MAX®

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