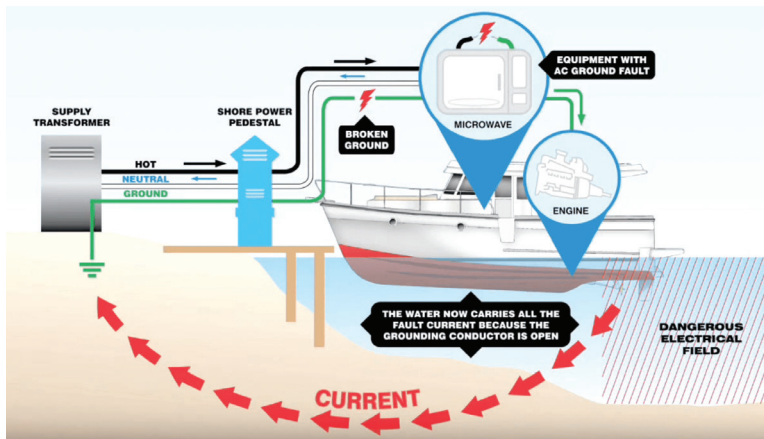


ELCI - SENSOR AND BREAKERS - Electric Shock Drowning (ESD) – according to Industry Sources, 100's of drownings or near drownings have occurred in the US in the last 20 years. Many more are thought to have occurred and are recorded as “unknown cause” drownings. Electric Shock Drowning is the result of the passage of a typically low-level AC current through the body with sufficient force to cause skeletal muscular paralysis. This renders the victim unable to help themselves, resulting in drowning of the victim. Higher levels of AC current in the water will also result in electrocution. Electric Shock Drowning (ESD) has become the catch all phrase that encompasses all in-water shock casualties and fatalities.



ABYC CODE - E-11 AC AND DC ELECTRICAL SYSTEMS ON BOATS

11.11 GROUND FAULT PROTECTION – AC SYSTEMS

11.11.1 An Equipment Leakage Circuit Interrupter (ELCI) or Type A Residual Current Device (RCD) shall be installed with or in addition to the main shore power disconnect circuit breaker(s) or at the additional overcurrent protection as required by E-11.10.2.8.3 whichever is closer to the shore power connection.

EXCEPTION: Installations where an isolation transformer is installed within 10 ft (three meters) of the shore power inlet or the electrical attachment point of a permanently installed shore power cord and supported according to 11.14.4.1.3

11.11.1.1 The trip level shall be a maximum of 30mA. The trip time shall be a maximum of 100ms.

In an effort to reduce or eliminate this hazard from existing in New Boats, and based on ABYC's assessment of existing technology, ABYC recommends compliance with the E-11 standard for all systems and associated equipment manufactured and/or installed in all vessels produced after July 31, 2019.

The technology provided by ELCI's help prevent electrical shock drowning. ELCI's measure current flow in the hot and neutral wires and immediately switch the electricity off if an imbalance of current flow is detected. ELCI protection on each shore power line will reduce risk to those on the boat, the dock, and in the water surrounding the boat.

SmartPlug Systems offer ELCI Solutions that meet the ABYC E-11 Code for all US bound boats. Easy to install, our two-part system matches the Patented SmartPlug Shore Power inlets for a seamless and coordinated installation. Available in 316 Stainless steel or White non-metallic cases, all units offer an IP56 rated waterproof door/face.

SMARTPLUG ELCI FEATURES

- Power and fault status indicators
- Provides identification of a ground fault vs. short circuit trip
- Chemical and UV resistant enclosure
- IP56 rated case doors
- Trip level of sensing device < 30mA (27mA nominal) at trip time of <100mS (60mS nominal) per ABYC E-11
- Power range and operating voltage: 0 - 50 Amps, 120 / 240 VAC
- Unit operating temperature is -35° C to +66° C
- Accommodates up to 3 wires, 6 AWG
- Available in 30A and 50A systems
- Available in 316 Stainless Steel or White non-metallic cases
- **IMPORTANT NOTE:** ELCI internal electrical components and connections are not waterproof, and the back of these units must be mounted into a dry location no further than 10 feet/3mtr from the inlet



STAINLESS COMBO KITS - ELCI SENSOR / BREAKER

PART NUMBER	DESCRIPTION	MATERIAL	COLOR
ELCIBRKR30SS	Combo Kit - ELCI Sensor & 30 Amp Breaker / Stainless Steel	Stainless Steel	Stainless
ELCIBRKR50SS	Combo Kit - ELCI Sensor & 50 Amp Breaker / Stainless Steel	Stainless Steel	Stainless

WHITE NON-METALLIC COMBO KITS - ELCI SENSOR / BREAKER

PART NUMBER	DESCRIPTION	MATERIAL	COLOR
ELCIBRKR30PW	Combo Kit - ELCI Sensor & 30 Amp Breaker / White Non-Metallic	Non-Metallic	White
ELCIBRKR50PW	Combo Kit - ELCI Sensor & 50 Amp Breaker / White Non-Metallic	Non-Metallic	White

INDIVIDUAL COMPONENTS - STAINLESS STEEL / ELCI SENSOR / BREAKER

Designed to work specifically with ELCI30BRKERSS & ELCI50BRKERSS

PART NUMBER	DESCRIPTION	MATERIAL	COLOR
ELCISENORSS	30 Amp / 50 Amp - ELCI Sensor - Stainless Steel	Stainless Steel	Stainless
ELCI30BRKERSS	30 Amp Breaker - Stainless Steel Special 30 Amp trip breaker to work with ELCI sensor ELCISENORSS	Stainless Steel	Stainless
ELCI50BRKERSS	50 Amp Breaker - Stainless Steel Special 50 Amp trip breaker to work with ELCI sensor ELCISENORSS	Stainless Steel	Stainless
ELCI50BRKERSS240	50 Amp Breaker / 240 AC Only - Stainless Steel Special 50 Amp trip breaker to work with ELCI sensor ELCISENORSS	Stainless Steel	Stainless

INDIVIDUAL COMPONENTS - NON-METALLIC / ELCI SENSOR / BREAKER

Designed to work specifically with ELCI30BRKERNMW & ELCI50BRKERNMW

PART NUMBER	DESCRIPTION	MATERIAL	COLOR
ELCISENORNMW	30 Amp / 50 Amp - ELCI Sensor - White Non-Metallic	Non-Metallic	White
ELCI30BRKERNMW	30 Amp Breaker - White Non-Metallic Special 30 Amp trip breaker to work with ELCI sensor ELCISENORNMW	Non-Metallic	White
ELCI50BRKERNMW	50 Amp Breaker - White Non-Metallic Special 50 Amp trip breaker to work with ELCI sensor ELCISENORNMW	Non-Metallic	White