



Protection from
Galvanic corrosion:

- Marine galvanic isolator
- Corrosion tester

Protection from
atmospheric discharge:

- Lightning rods



ProMariner

GALVANIC ISOLATORS

ProMariner



ProSafe 30

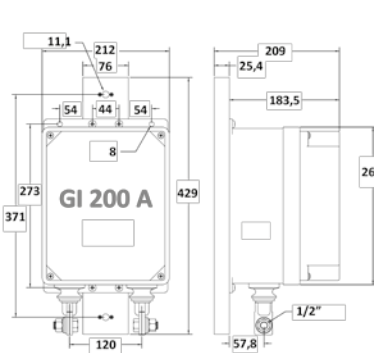
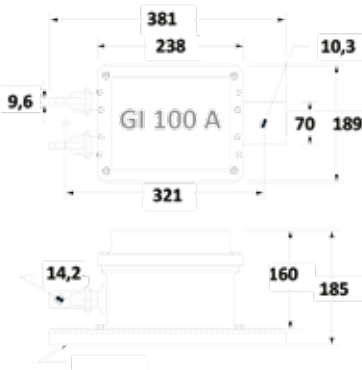
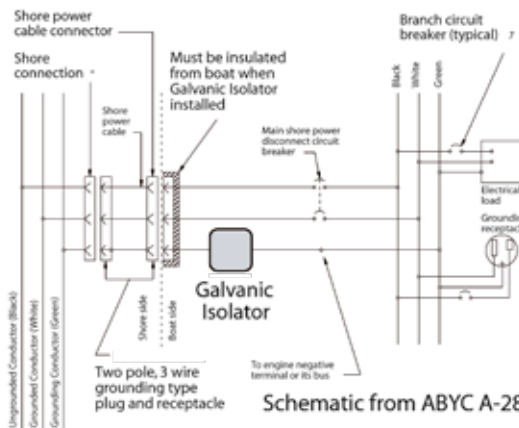


ProSafe 60

GALVANIC ISOLATOR

The power of galvanic isolator must be higher than current of shore power connections
 No maintenance required and easily to be tested with digital multimeter
 They must be installed in series with the shore grounding conductors
 They protect the vessels from galvanic corrosions
 Rated for high levels of lightning current

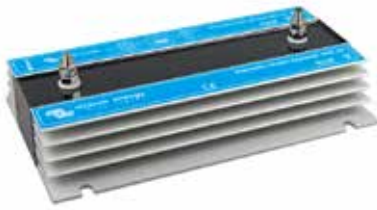
Model	Voltage V ac	Frequency Hz	Current A	Max operating temp. °C	Dimensions mm	Code
ProSafe 30	120 - 240	50 - 60	30	-50	6,98x18,45x32,71	RE 70080
ProSafe 60	120 - 240	50 - 60	50 one cable 60 double cable	-50	10,16x18,45x32,38	RE 70081



Model	Max power A	AC fault rating kA	Lightning rating kA	Operating temperature °C	Degree of protections IP	Code
GI-100A FSM	100 A	5kAx198cycles	100kA peak	-45°C +65°C	NEMA 4X	RE 70082
GI-200A FSM	200 A	5kAx198cycles	100kA peak	-45°C +65°C	NEMA 4X	RE 70083

CORROSION TESTER

GALVANIC



GALVANIC ISOLATOR VDI-16, VDI-32 AND VDI-64

The galvanic isolator prevents electrolytic corrosion. It blocks low voltage DC currents that enter your boat via the shore power earth wire. These currents can cause corrosion to the boat's underwater metals, like the hull, propeller, shaft and so on.

The galvanic isolator consists internally of two diodes which are connected in anti-parallel fashion. When they are connected in this way, the diodes allow current in both directions but only above a certain threshold voltage. The voltage at which diodes conduct is about 1.4 Vdc.

Model	Maximum current	Peak current (20 ms)	Connection	Material	Dimensions mm	Weight	Code
VDI-16	16 A	1600 A	M6	Anodized aluminium	60x120x200	1 kg	RE 70084
VDI-32	32 A	3200 A	M6	Anodized aluminium	63x164x200	2 kg	RE 70091
VDI-64	64 A	6000 A	M6	Anodized aluminium	63x164x335	3,2 kg	RE 70094



RE 70086

GALVANIC CORROSIONS: PROCESS THAT DEGRADE ELECTROCHEMICALLY THE METAL

The corrosion happens when two different metals come into contacts with an electrolyte, such as salt water, creating a galvanic cell.

One cell can be created even when the same metal is affected by two different concentrations of the electrolyte.

The electrochemical potential creates an electric current (positive and negative ions) which dissolves the less noble material (typical problem of metal vessels).



RE 70085

CORROSION TEST METER

An instrument allowing an easy control of the efficiency state of the cathodic protection system.

Supplied with:

One millivoltmeter with three graded scale

Ag/Ag Cl reference electrode

One negative contacts.

The graded scale read the state of protection and corrosion of the three metal commonly used on the hull: BRONZE, STEEL, ALUMINIUM.

Model	Corrosion state mV			Protection state mV			Overvoltage mV			Code
	Bronze	Steel	Aluminium	Bronze	Steel	Aluminium	Bronze	Steel	Aluminium	
Analog	0-500	0-750	0-950	500-700	750-950	950-1000	700-1200	950-1200	1000-1200	RE 70085
Digital	0-50	0-750	0-950	500-700	750-950	950-1000	700-1200	950-1200	1000-1200	RE 70086

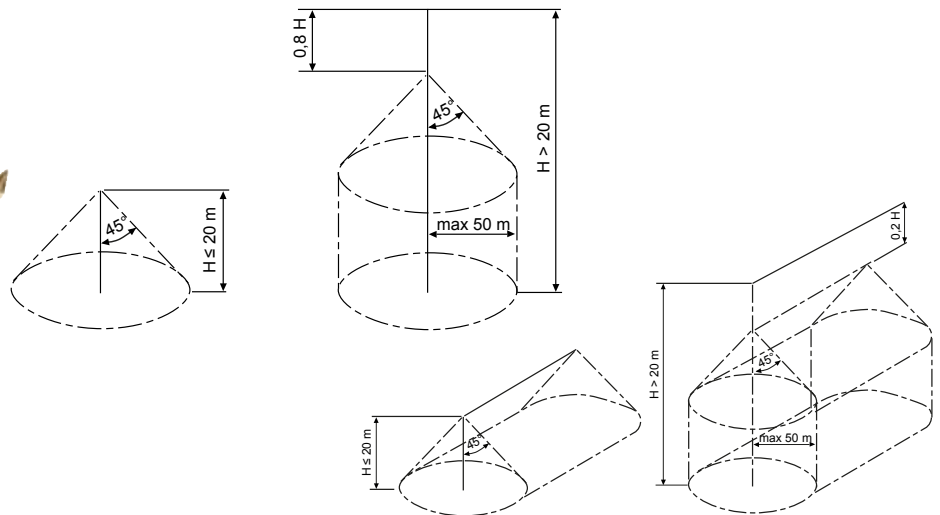
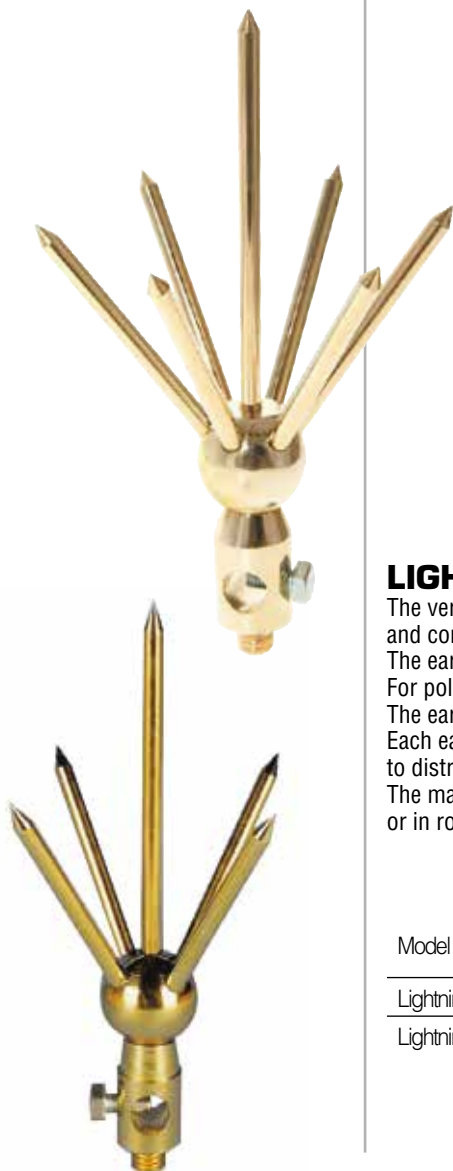
PROTECTION AGAINST ATMOSPHERIC DISCHARGES

GROUND PLATES

Produced by micro-spheres of pure bronze.
Ground plates for electric installation on board.
Provided with nuts, screws and spacers.



Description	Model	Dimensions mm	Ground area equivalent	Weight Kg	Code
Ground plated	0	155x51x13	1 m ²	0,53	RE 83047
Ground plated	1	205x64x13	1,8 m ²	0,8	RE 83048
Ground plated	2	300x80x13	3 m ²	1,65	RE 83049
Ground plated	Round shaped	Ø 128	1,5 m ²	0,60	RE 83050



LIGHTING RODS

The vertical lightning rods – Franklin model – are fixed in their upper part in a protective structure and connected to the earth plates through conductor cables.
The earth plates are resistant to the electro-dynamics and thermal effects caused by the lightning discharge. For pole up to 20mt - The area is protected by a cone with the vertex at 45°.
The earth plates are made by copper or zinc-plated or cadmium-plated ropes.
Each earth plate must be connected to one or more plates linked by a conductor to distribute the atmospheric discharges in an uniform way.
The materials and the dimensions of the plates are in copper or in round steel copper of 1.5 mt laid down in suitable basin.

Model	Single point	Number of point	Dimensions mm	Material	Code
Lightning conductor rod	NO	5 points	-	Brass	RE 70092
Lightning conductor rod	NO	7 points	-	Brass	RE 70093