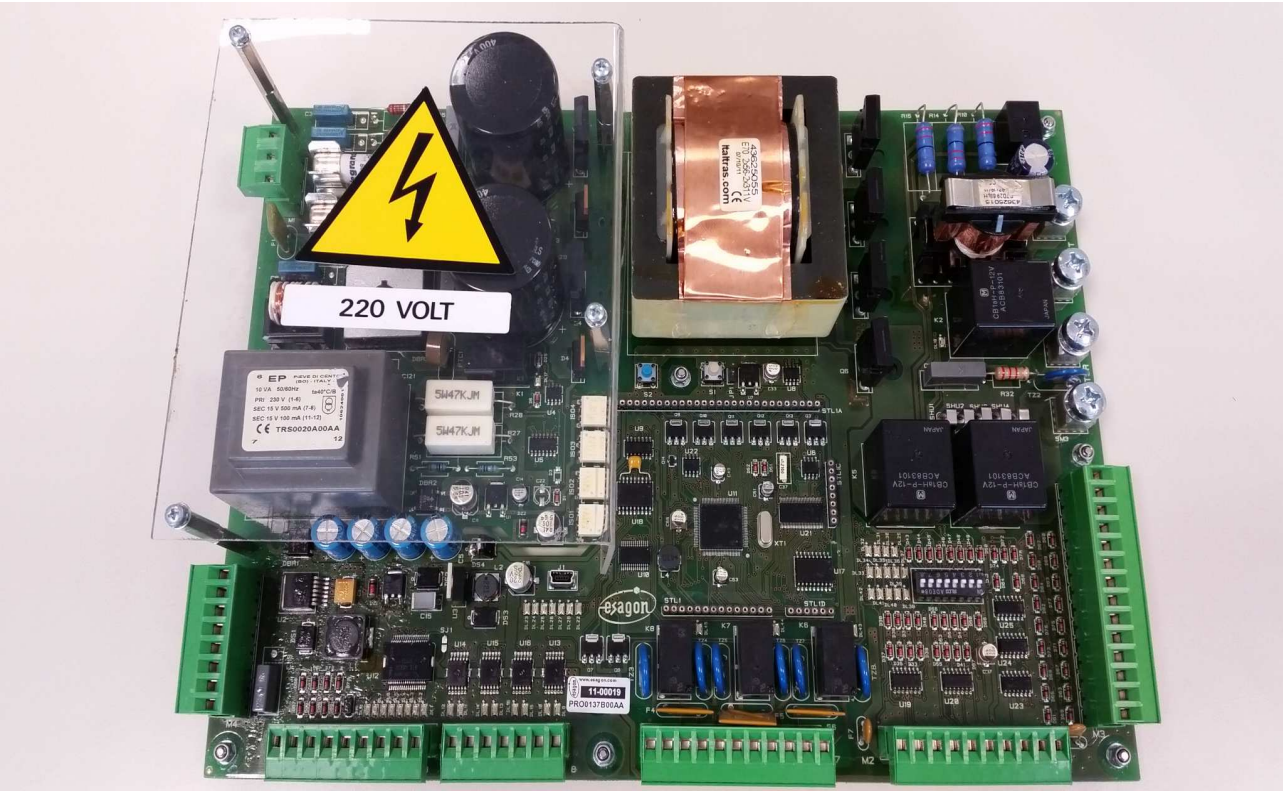
Sheet

14

Mc Marine

Control unit for naval bulkhead doors

MC Marine is a control unit designed to handle the movements of naval bulkhead doors. It is basically the answer to a set of demands ranging from the control of a DC motor, management of local and remote commands, management of some communication protocols, to the management of back-up batteries for maintaining the service even in absence of mains voltage. It is a very special control unit which incorporates a high frequency 1,5 KV/A AC / DC converter, followed by a PWM (Pulse Width Modulation) modulator for the drive of a DC permanent magnets motor. It relies on an intermediate voltage supported by a batteries pack with lead and gelatin. The management of motor, batteries and local system is aimed at safety and reliability, in order to assure the eventual closing movement which is necessary in case of flooding of the ship compartments. The communication channels, as well as the remote commands, allow the management from the safety-room of the ship.



Mc Marine

- Integrated motor control, commands management and batteries back-up system.
- High frequency 1,5KV/A AC/DC converter.
- Integration possibility of multiprotocol cards for communication network.
- Management from safety-room.

Working conditions

Supply voltage:	**230V AC / 48V DC**
Operational absorption logic circuit:	**< 0.5A**
Operational absorption power circuit 230V:	**< 7A**
Operational absorption power circuit 48V:	**< 35A**
Working temperature:	**-20°C - +60°C**
Maximum working temperature:	**-40°C - +105°C**
Relative moisture without condensation**:**	**90%**
Dimensions:	**290x215x80 mm**

Communication door

Communication door:	**USB**
Maximum data speed:	**115.2 Kbit/sec.**

Motor control

Power output with PWM (Pulse Width Modulation)	
speed control:	**48V nominal**
Current limitation:	**25A max**

Batteries recharge and control

Batteries pack 4 x 12V:	**48V nominal**
Operational rate:	**16 MHz**
Flash memory program:	**128 Kbytes**

Processing

Microprocessor:	**16 bit**
Operational rate:	**56 MHz**
Flash memory program:	**288 Kbytes**
EEprom memory program:	**32 Kbytes**

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