



DAUGHTER BOARD

# MMB 02



The MMB 02 daughter board is a universal device especially designed for aids-to-navigation equipment monitoring, in particular lighthouses and beacons. Due its versatility, it is ideal for offshore platforms, since all the aids to navigation can be controlled by it.

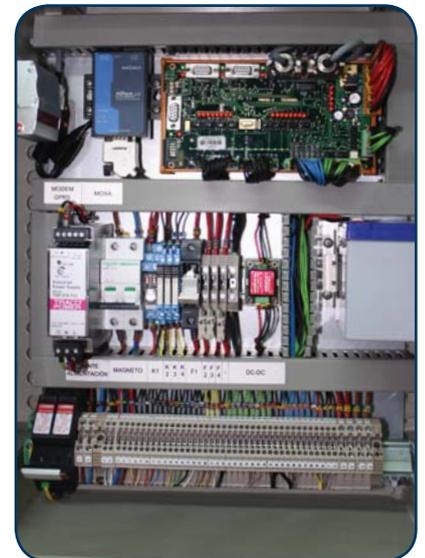
It allows external beacon monitoring and also conversion to Standard IEC protocol, to be connected to an AIS AtoN unit.

Fitted with 6 nos. RS-232 serial ports for data acquisition, other equipment interface and programming. Besides, this device can be connected to any communication means (GSM-GPRS, radio, satellite, IP broadband, microwaves technology, optical fibre, etc.). Additionally, it includes a RS-485 serial port to connect all type of sensors, analogical or digital, in order to obtain meteorologic or oceanographic data.

Designed with a low power consumption, in order to be solar powered.

## FEATURES

- ✓ Large number of digital and analogical inputs and outputs.
- ✓ Equipment controlled by last generation microprocessor, with CMOS of 32-bit technology, which allows data transmission in real time.
- ✓ E2PROM memory for all parameters of configuration.
- ✓ Input and output signals protected through an optocoupled collector.
- ✓ 6 nos. RS-232 serial ports and a RS-485 serial port.
- ✓ Daily average power consumption of 25mA at 12V.
- ✓ A configurable “sleep” mode is available to save energy.
- ✓ PC programming software for timing and parameter editing.
- ✓ Firmware able to be updated in site.
- ✓ Protected against reverse-polarity and atmospheric surges.
- ✓ Housed in a support with DIN rail fixation, which allows to be replaced very easily and fast.

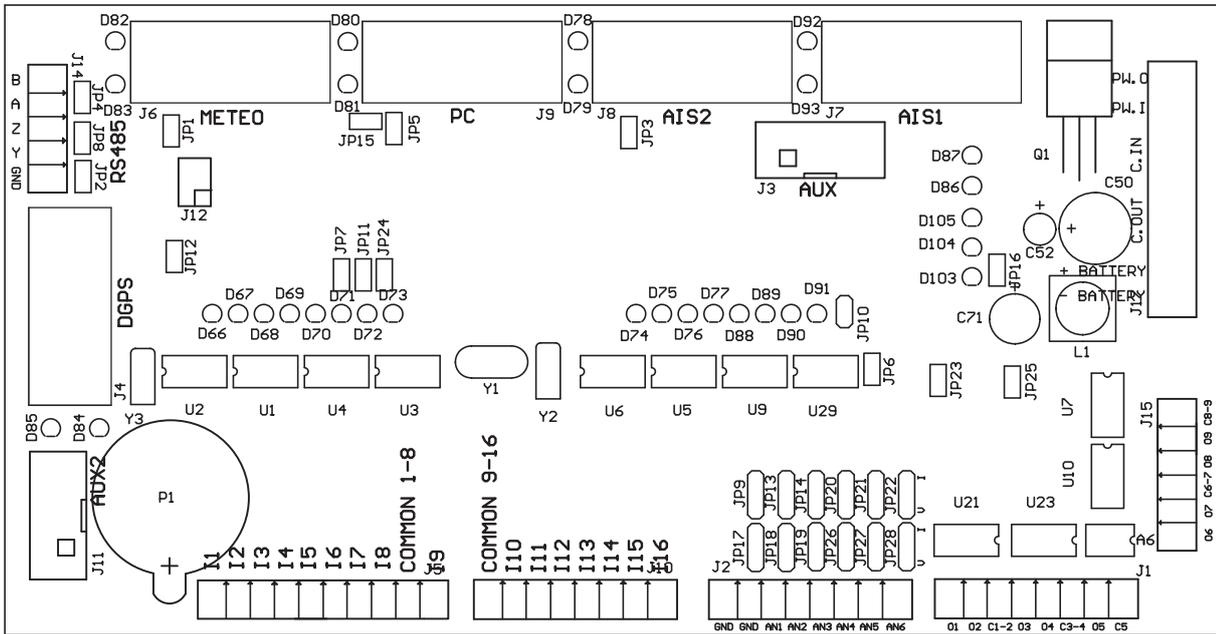


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Specifications subject to change without previous notice.



Drawing of a MMB 02 Daughter Board.  
Dimensions: 191 x 100 mm.

### Technical specifications

Power range:	From 10 to 36V d.c.
Daily average consumption:	25mA (12V).
Temperature range:	From -30° to 60°C.
Control Unit:	CMOS 32-bit microprocesor.
Data storage:	E2PROM memory.
Fixings:	DIN rail.

### Inputs and outputs

Digital inputs:	16 nos. opto-coupled inputs of alarms or status, configurable logic and timer.
Digital outputs:	9 nos. Mosfet outputs, 3A maximum. 1 no. 10A Mosfet power output for emergency beacon or racon.
Analogical Inputs:	8 nos. V or I inputs with ranges from 0-36V / 0-100mA with programmable alarms. 1 no. current profiler up to 15A (up to 50A as an option).

### Options

Current profiler HTP50 up to 50A d.c. and a.c.
GPS and DGPS module (MFGPS).
GSM (MFGSM), VHF, UHF (MFUHF), Iridium, ADSL modem.
AIS Transponder (MTU AIS).
Input/Output expanding MMB-E module.
Meteo/Oceanographic Sensors (availability to include MSM sensors).

### Communication ports

AIS:	2 nos. RS-232 serial ports for modem or AIS unit connexion.
PC:	1 no. RS-232 serial port for PC programming.
METEO:	1 no. RS-232 serial port for sensors or modems.
DGPS:	1 no. RS-232 serial port for DGPS module.
RS-485:	1 no. RS-485 serial port for bus topology connection.
AUX.:	1 no. RS-232-TTS* serial port for MF12 flasher or IDC10 modem.



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