YACHTICA®
Automated Living on Board.

AMP 102I

2 CHANNELS EASYBUS AMPLIFIER/SEPARATOR

This installation manual has been written by the manufacturer and it is considered integrating part of this product.

The information included are intended for the expert technicians who execute the installation and the extraordinary maintenance of the product.

The expert technicians must have specific competences and particular abilities in order to carry out correctly and safely their work.

The constant observance of the information included in this manual guarantees safety of men, energy serving and a longer duration of product operative-life.

In order to avoid wrong handling and the consequent risk of accidents, it is important to read this manual carefully, keeping scrupulosly to guidelines according to the supplied information.

CONFORMITY DECLARATION

All the devices of the YACHTICA® system are designed in order to comply the directives:
- EN 60945 Maritime navigation and radiocommunication equipment and system.
- IEC 61000;
- IEC 60068;
- IEC 60695;
- Rules for the Classification of Ship - Part C - Machinery;
- Systems and Fire Protection - Ch. 3, Sec. 6, table 1.

TYPE APPROVAL RINA: N° DIP534725CS

All the devices of the YACHTICA® system are tested and found to comply with the specification of the CE marking.

CONTENTS

DESCRIPTION

The AMP 102I is a module with a built-in microcontroller that acts as an insulator and EasyBUS 2-channel signal amplifier.

There are 3 BUS connectors, one for connecting to the EasyBUS network inside the electrical panel, the other two for connecting EasyBUS lines from outside. C poles are optoisolaited. Positive pole on the output is not used.

FEATURES

2 Couples EasyBUS Outputs

The module allows you to isolate/amplify two EasyBUS branches.
The C poles of all 3 connectors are optoisolated.
The positive is not present on the Outputs connectors. It is used to link more switchboards into a unique loop of BUS.

EasyBUS communication

The module is able to communicate with other devices of the YACHTICA® automation system when connected inside an EasyBUS network. The removable EasyBUS connecting block is used to link the module to the other modules of the same EasyBUS network.

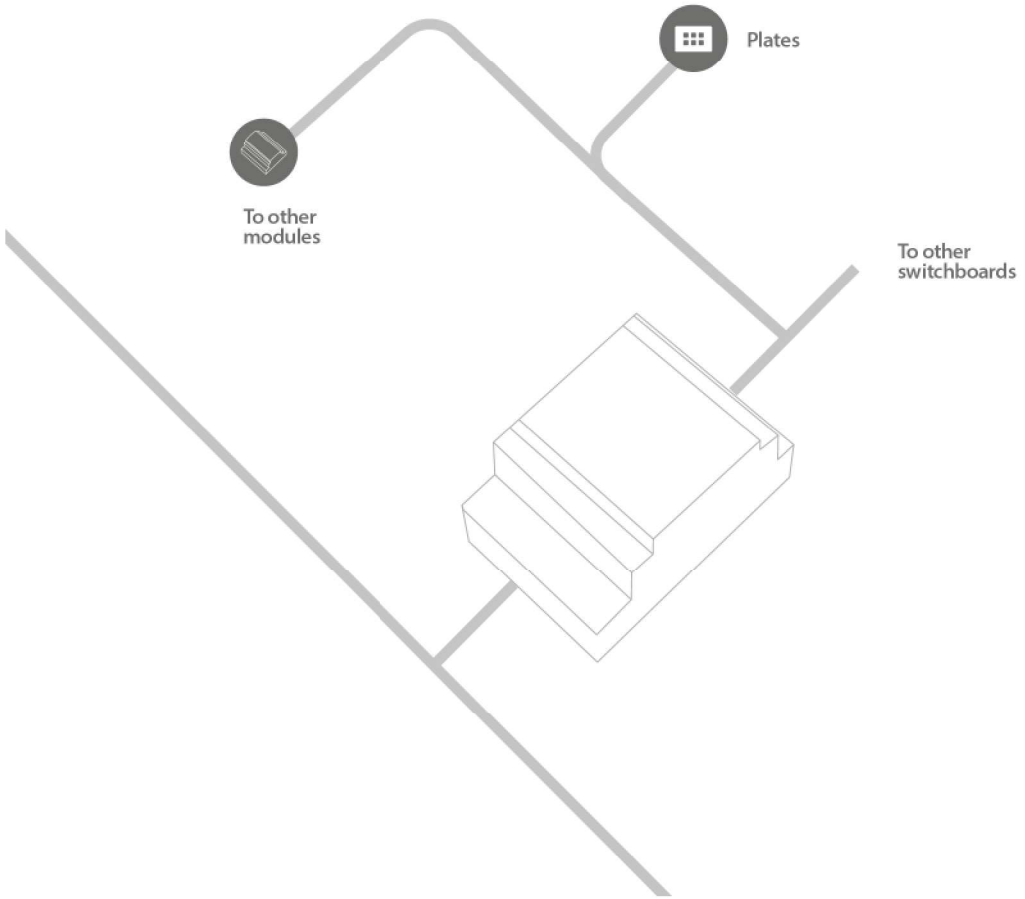
Detachable terminal block

All the terminal block of YACHTICA® modules are detachable, allowing a simple wiring and a quick replacement without the needed to disconnect any cable, with a high level of security and stability of the system.

Tropicalized electronic

All the YACHTICA® modules have a tropicalization treatment in order to prevent a deterioration due to the humidity and sea mist.

APPLICATION



TECHNICAL SPECIFICATIONS

SPECIFICA	DETTAGLI
Electronic power supply	11-28VDC
Electronic requirements	0,4W (16mA @24VDC, 32mA @12VDC)
Outputs power supply	Max 24VDC
EasyBUS Outputs	2 (C-A-B)
EsyBUS inputs	1
Working temperature	+5°/+50° C (41°/122° F)
Storage temperature	-40°/+70° C (-40°/+158° F)
Humidity	15%/90% senza condensa
Heat dissipation (@Ta=40°C, maximum load)	0,85W
IP Protection	IP20
Enclosure	Self-extinguishing UL94-V0
Color	RAL 7053
Dimensions (LxHxD)	50x44x15 mm (wiring excluded)
Weight	25g
Compliance	CE; EN60945; EN61000-4-2; EN61000-4-3; EN61000-4-4; EN61000-4-5; EN61000-4-6; EN61000-4-8; EN61000-4-11; CISPR 16-1-1; EN 60695-11-5; IEC60068-2; IEC60068-6; IEC60068-30; RINA Rules 2018 Pt. C, Ch. 3, Sec.6.

MODULE DESCRIPTION

AMP 102I

#	CONNECTORS, LED, INDICATORS	DESCRIPTION
1		**2 poles detachable connector;** **Maximum cable section: 2,5mm² (12AWG);** INPUT electronic power supply connector; **+:** positive 11-28VDC; **C:** negative 11-28VDC. Be sure that all the negative poles of all the power supplies used for electronic are in parallel. **NOTE: It suggests the use of a stabilized power supply dedicated to feeding the electronics of all modules in an electrical panel. It is, however, important that modules in different switchbpards linked to each other also have relative negatives in common.**
2		**2 poles detachable connector;** **Maximum cable section: 1,5mm² (15AWG);** INPUT EasyBUS connector; **A:** BUS A pole; **B:** BUS B pole. Be sure that cabling of BUS connector is consistent for all the modules in the network. This avoid bad working of the system.
3		**2 poles detachable connector;** **Maximum cable section: 2,5mm² (12AWG);** OUTPUT 1 electronic power supply connector; **+:** NOT USED; **C:** negative 11-28VDC. Be sure that all the negative poles of all the power supplies used for electronic are in parallel. **NOTE: It suggests the use of a stabilized power supply dedicated to feeding the electronics of all modules in an electrical panel. It is, however, important that modules in different switchbpards linked to each other also have relative negatives in common.**
4		**2 poles detachable connector;** **Maximum cable section: 1,5mm² (15AWG);** OUTPUT 1 EasyBUS connector; **A:** BUS A pole; **B:** BUS B pole. Be sure that cabling of BUS connector is consistent for all the modules in the network. This avoid bad working of the system.

#	CONNECTORS, LED, INDICATORS	DESCRIPTION
5		**2 poles detachable connector;** **Maximum cable section: 2,5mm² (12AWG);** OUTPUT 2 electronic power supply connector; **+:** NOT USED; **C:** negative 11-28VDC. Be sure that all the negative poles of all the power supplies used for electronic are in parallel. **NOTE: It suggests the use of a stabilized power supply dedicated to feeding the electronics of all modules in an electrical panel. It is, however, important that modules in different switchbpards linked to each other also have relative negatives in common.**
6		**2 poles detachable connector;** **Maximum cable section: 1,5mm² (15AWG);** OUTPUT 2 EasyBUS connector; **A:** BUS A pole; **B:** BUS B pole. Be sure that cabling of BUS connector is consistent for all the modules in the network. This avoid bad working of the system.
7		**Terminal resistences.** Used to regenerate impedence
8		**4 poles connector[3] to manage the module** (or the whole system) using the YACHTICA® MBC ETH o ICB 101X modules (not included).

(1) Contact YACHTICA® to receive the dedicated interface cable to be used.

INSTALLATION

Important notes

The following information are intended for the expert technicians who execute the installation and the extraordinary maintenance of the product. The installation and the maintenance of the module must be executed by qualified technicians, respecting the Norm of the installation country.

The expert technicians must have specific competences and particular abilities in order to carry out correctly and safely their work.

The constant observance of the information included in this manual guarantees safety of men, energy serving and a longer duration of product operative-life. Keep this manual and notes included.

In order to avoid wrong handling and the consequent risk of accidents, it is important to read this manual carefully, keeping scrupulosly to guidelines according to the supplied information.

Electrical tension may cause shock and severe burns. Be sure to turn off the electrical supply before carrying out any type of work on the connectors. Omission of observation of these safety measures may cause death or severe lesions to people as well as great material damages.

Before preceeding with the use of the modules, make sure that electric installation, carried out by a qualified technician in conformity with the Technical Norms, corresponding to the class of homologation of the electrical system, is provided with the devices prescribed for the protection against direct and indiriect contacts and electrical surcharges.

The modules of the YACHTICA® must be exclusively used in connection with other modules and external components which are conformed to the Norms comparative to the product.

Do not use the module if, upon visual inspection, it shows deterioration of the enclosing box or if the screening wraps of the feeding cables show any wear and tear or damage.

The YACHTICA® system may not be used to carry out safety and accident prevention functions since it does not have the redundancy requirements lawfully requested.

The installer must verify the correct installation and operation of the product.
It is prohibited to use the product for improper purposes or purposes different from those provided

V.Y.C. Srl shall not be held liable for any damage of any sort or kind in case of module used or installed incorrectly.

It is prohibited to tamper or to modify the product.

Before starting

Always switch off the electronic and outputs power supply before carrying out any type of electrical connection on the module.

NOTE: use a dedicated stabilized power supply for electronic modules installed into a switchboard. If into an EasyBUS network more than one power supply is used (for instance, one power supply for each switchboard containing YACHTICA® modules) be sure that all the negative poles of all the power supplies are in parallel (it is suggested to use YACHTICA® AMP 102D).

The module is intended for internal use. Install it in dry place in order to respect the specifications described in the TECHNICAL SPECIFICATIONS paragraph of this manual.

PROBLEM SOLVING

PROBLEM	POSSIBLE CAUSE	POSSIBILE SOLUTION
Module does not switch on	The module doesn't receive power supply on the electronic power supply connector	Check that dedicated power supply is working properly, providing right output voltage according to the specifications written in this manual.
	Positive and negative cabling poles inverted	Check that dedicated power supply positive and negative poles are connected in the right way.

REPAIR AND WARRANTY POLICIES

Merchandise returns

No V.Y.C. Srl merchandise may be returned for credit, exchange or service without prior authorization from V.Y.C. Srl. To obtain warranty service for V.Y.C. Srl products, contact V.Y.C. Srl or an authorized dealer. Request for an RMA (Return Merchandise Authorization) and fill it in properly all the fields, before returning the module. Shipments arriving freight collect or without RMA number shall be subject to refusal.

Return freight charges following repair of items under warranty shall be paid by V.Y.C. Srl, shipping by standard ground carrier. In the event repairs are found to be non-warranty, return freight costs shall be paid by the purchaser. V.Y.C. Srl will provide repairing costs in case the merchandise is not under warranty.

V.Y.C. Srl limited warranty

V.Y.C. Srl warrants YACHTICA® products to be free from manufacturing defects in materials and workmanship under normal use for a period of 2 years from the date of purchase.
This warranty extends to products purchased directly from V.Y.C. Srl or an authorized YACHTICA® dealer.

V.Y.C. Srl shall not be liable to honor the terms of warranty if the product has been used in any application other than that for which it was intended or if it has been subject to misuse, accidental damage, modification or improper installation procedures
Furthermore, this warranty does not cover any products that has had the warranty void label altered, defaced or removed.

V.Y.C. Srl shall, at its option, repair or replace any product found defective, without charge for parts or labor. Repaired or replaced equipment and parts supplied under this warranty shall be covered only by the unexpired portion of the warranty.

Except as expressly set forth in this warranty, V.Y.C. Srl makes no other warranties, expressed or implied, nor authorizes any other party to offer any warranty, including any implied warranties of merchantability or fitness for a particular purpose. Any implied warranties that may be imposed by law are limited to the terms of this limited warranty.

This warranty statement supersedes all previous warranties.

NOTE

NOTE

YACHTICA®
Automated Living on Board.

www.yachtica.com