VERIFICATION OF OPERATION

The modules must be tested after installation and undergo periodic maintenance.

Before carrying out the operating tests, notify to the competent authority that maintenance tasks are being carried out in the fire detection system, and make sure that the automatic extinguishing tripping functions are disabled.

CONNECTION IN OPEN LOOP:

- Make a short circuit in the algorithmic loop.
  - The luminous indicator of the isolator will be activated.
  - The equipment connected after the isolator, in the installation stretch supervised by it, will cease to communicate, and the failure will be indicated in the Algorithmic Panel.

CONNECTION IN CLOSED LOOP:

- Make a short circuit in the algorithmic loop.
  - The luminous indicators of the two isolators nearest to the short circuit will be activated.
  - The equipment connected between the two isolators will cease to communicate with the Algorithmic Panel, and the failure will be indicated on the latter.

When the tests have been completed, reconnect the functions previously disabled, and notify the competent authority that the fire detection system is again in service.

MAINTENANCE

The minimum maintenance recommended for a module consists of a visual inspection, as well as a periodic operating test.

For the operating test, follow the previously indicated procedure. (See the operating manual of the corresponding algorithmic panel).

TECHNICAL CHARACTERISTICS

Power supply voltage:	18 ~27 V (AE/SA-CTL Algorithmic loop card).
Consumption when idle:	100 µA
Maximum permitted current:	200 mA.
Maximum current after detecting short circuit:	<50 mA
Algorithmic loop wiring	2-wire. Recommended cross-section 1.5 mm^2 Removable jacks for all connections
Temperature range:	0º - +50º C (ambient temperature)
Humidity range:	Relative humidity 10% - 90% without condensation.
Casing material:	ABS
Luminous indicator:	Activation: red permanent
Size:	105 x 82 x 25 mm
Fastening:	4 holes, diam. 3.5 mm
Weight:	100 g

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BIDIRECTIONAL ISOLATING MODULE
MOD.: AE/SA-AB

The bidirectional isolating module AE/SA-AB allows short circuits to be controlled and isolated in the algorithmic detection loop, leaving the affected zone out of service between 2 plant isolators implemented in closed loop, or that which depends on this isolator for open loop facilities.

The operation of the isolator is associated with that of the line control card AE/SA-CTL, and with the actual operation of the algorithmic loop and the equipment connected thereto, acting jointly for the detection of the short circuit.

The bidirectional isolating module does not occupy a position in the algorithmic loop, for which reason it does not need coding.

No more than 32 items should be connected after an isolator, or between 2 isolators in an installation section.

It incorporates the following functions:

- Bidirectional switch, allows the loop to be cut safely, without causing voltage drops when continuity is given.
- Voltage detector. It supervises the loop voltage, impeding operation until the voltage has not passed the lower limit established.
- Luminous indicator, it is activated when a short circuit is detected in the loop, or excessive current consumption.
- Removable jacks for input and output connection, to facilitate installation in the field.
- The circuit's protective case leaves the status LED of the unit visible.

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WIRING SCHEMATIC

Assembly

For the installation of the modules , open the module cover by pressing on its central part. Secure the module with 4 screws using the fastening holes foreseen for this purpose.

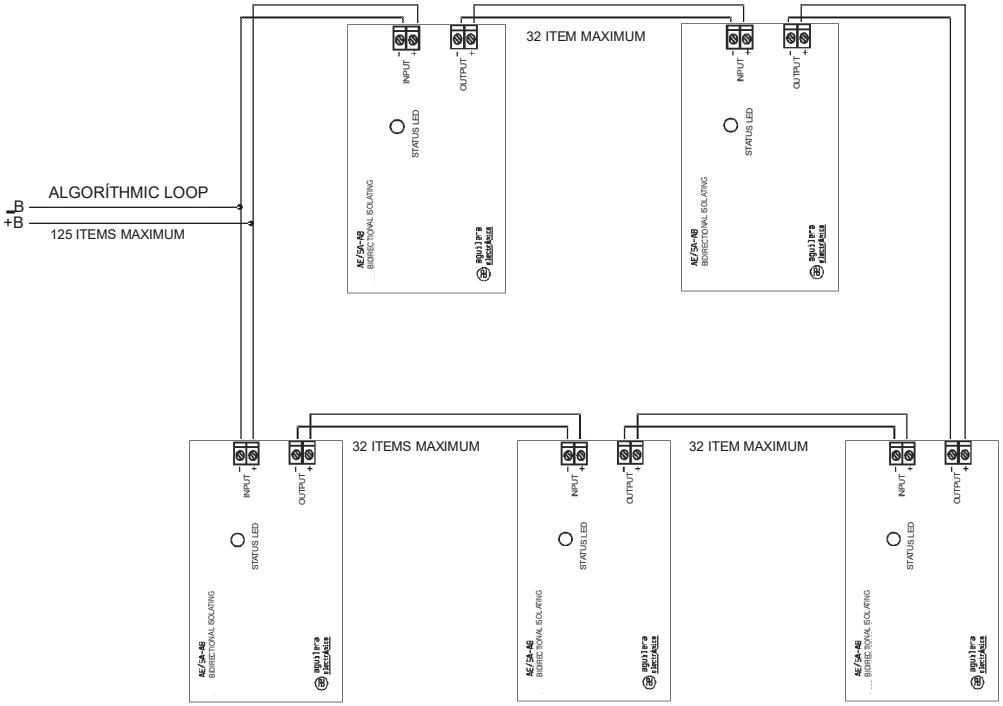
Wiring

Disconnect the supply voltage of the detection loop before installing the module.

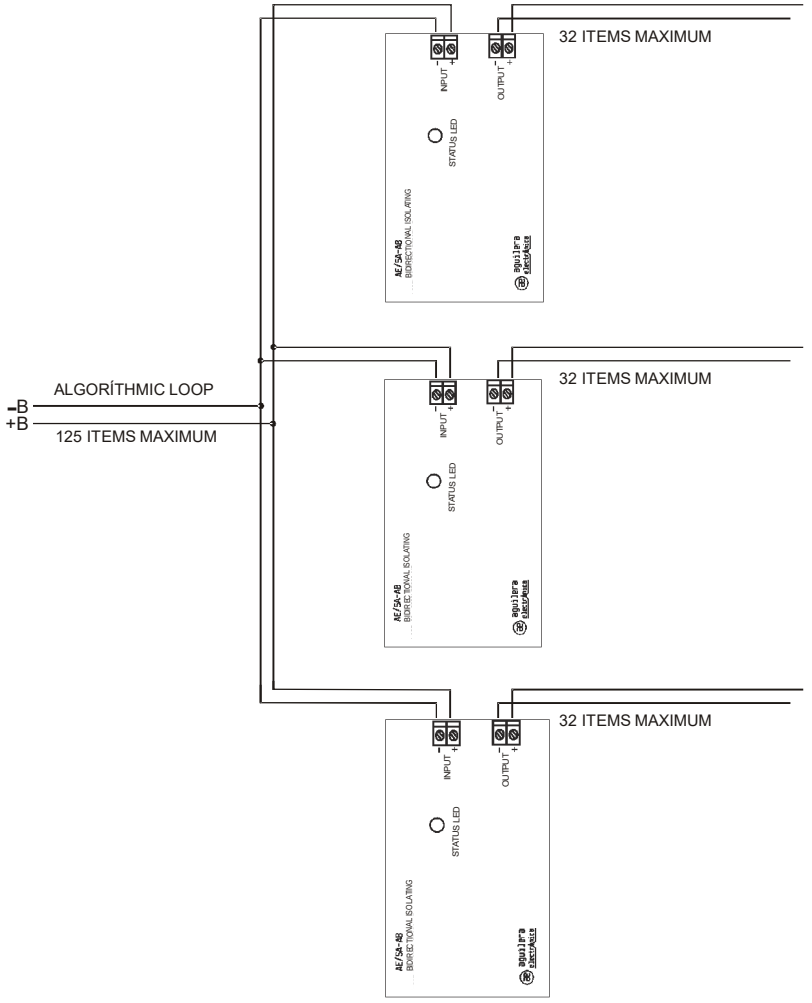
§ Connect the positive input of the detection loop to the + terminal of the input jack.
§ Connect the negative input of the detection loop to the - terminal of the input jack.
§ Connect the positive output of the detection loop to the + terminal of the output jack.
§ Connect the negative output of the detection loop to the - terminal of the output jack.

Wiring examples

1.- Installation in closed loop



2.- Installation in open loop



3.- An installation is allowed mixing the above two types of facility, provided the maximum number of items connected after an isolator in open loop or between isolators in closed loop is 32.

Once the connections have been made, close the module, taking care that the status LED remains visible.

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