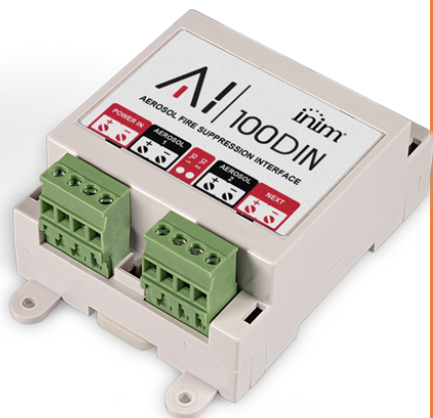


CE



AI100DIN

Interface module for condensate aerosol extinguishing devices

Installation manual

inim

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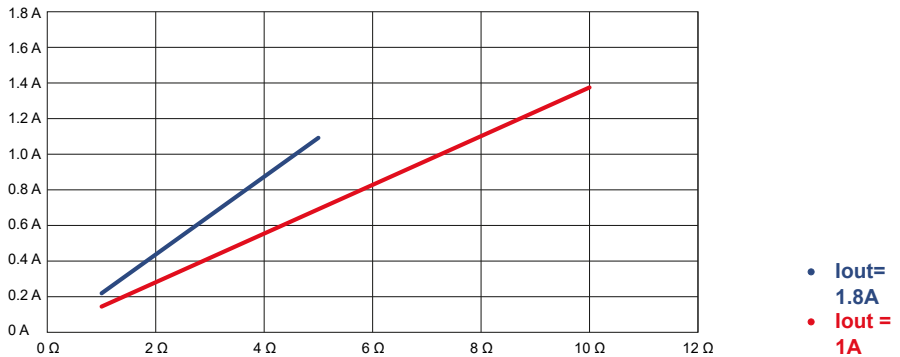
1. Description of AI100DIN

The AI100DIN module converts the output for solenoid valves of Previdia control panels, from constant voltage output with overload protection, into a series of constant current outputs (current limited outputs).

The output current value is determined by the jumper (*Description of parts, [A]*):

- Jumper not cut, Iout= 1.8A
- jumper cut, Iout = 1A

The diagram shows the maximum absorption from the control panel terminals based on the sum of the resistances of the two “AEROSOL” outputs:



In stand-by conditions (solenoid valve output with reversed polarity) the module lets the supervisory current flow inside all the extinguishing devices and to the 1kOhm end-of-line resistor connected in series.

When the solenoid valve output activates, supplying 24V with the polarity indicated on the terminals, the first module in the series isolates the downstream modules by disconnecting the “NEXT” terminals and activates its own current generator by causing the activation current to flow inside the extinguishing devices connected to its terminals.

The current is supplied for a maximum of 2 seconds. This duration can be reduced to 1 second from the moment the module detects that the resistance of the two shutdown devices in series exceeds 80hm (with 1.8A drive) or 160hm (with 1A drive).

Once the current discharge is complete, the internal current generator switches off and the voltage is transferred to the next module via the “NEXT” terminals.

1.1 Aerosol sizing

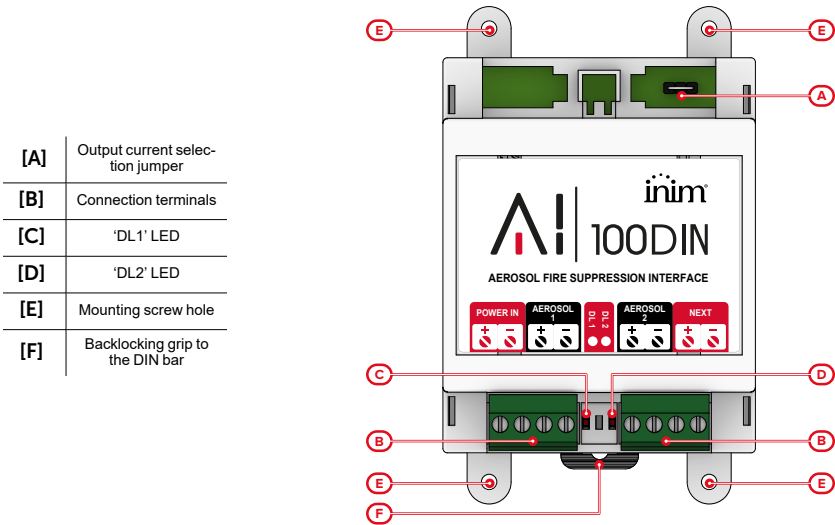
The activation current of the aerosols must be set (via the jumper, *Description of parts, [A]*) in accordance with the specifications of the manufacturer of the aerosol extinguishing devices (1.8 A or 1 A).

Two aerosols in series, using both terminals “AEROSOL 1” and “AEROSOL 2”, or more aerosols in series, may only be connected if the manufacturer of the aerosol extinguishing devices permits such connections.

The maximum number of aerosols connected in series must respect the following limits:

- The maximum number of aerosols connected in series must be less than or equal to the maximum allowed in the specifications of the manufacturer.
- The resistance of the series of aerosols, added to the resistance of the cables from the solenoid valve output to the aerosols themselves, **MUST** be less than:
 - 5 Ohm with 1.8A drive
 - 10 Ohm with 1 A drive

1.2 Description of parts



Terminals	connection
POWER IN	24V power input terminals from solenoid valve or previous module
AEROSOL 1	Connection terminals with aerosol device 1
AEROSOL 2	Connection terminals with aerosol device 2
NEXT	Connection terminals with successive module

LEDs	signalling
DL1	Red light On: current discharging complete
DL2	Red light On: current discharging in progress

1.3 Technical specifications

Power supply		from 19 to 30 V 
Activation voltage on the terminals for the control panel solenoid valve		
Consumption of the AI100DIN module only	in activation status	40mA
	in supervisory status	0.1mA
Consumption from the terminals for the solenoid valve		refer to the graph
Activation time of shutdown devices	Device voltage < 18V	1 second
	Device voltage > 18V	2 seconds
Activation current for shutdown devices	Closed jumper	1.8 A
	Cut jumper	1A
Output voltage on “AEROSOL” outputs		10V maximum
AI100DIN in-series		6 maximum
Temperature		from -10° to +40° C
Maximum humidity		75% (without condensation)
Dimensions	Height, flanges included	113 mm
	Height, flanges not included	90 mm
	Width	71 mm
	Depth, terminals included	43 mm
	Depth, terminals not included	40.5mm
Weight		130 g

2. Installation

The plastic box can be fitted on a standard 35mm DIN bar or in any electrical box by means of the flanges with the fixing holes.

Programming

The sizing of the cables and the electrical characteristics of the extinguishing devices utilized must be carefully verified with this manual.

Adaptive thresholding of output faults

Warning

The presence of a bias diode in the module supervisory circuit determines the need to adapt the output fault detection thresholds for solenoid valves.

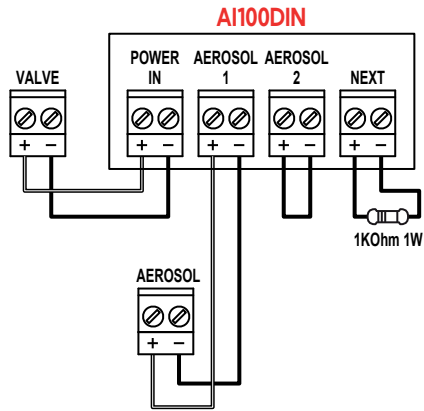
Through control panel programming, it is therefore necessary to set the fault threshold values for the solenoid valve output as follows:

number of AI100DIN	Fault threshold	
	standby/open	standby/short-circuit
1	1400	600
2	1550	800
3	1700	1000
4	1900	1200
5	2200	1500
6	2400	1800

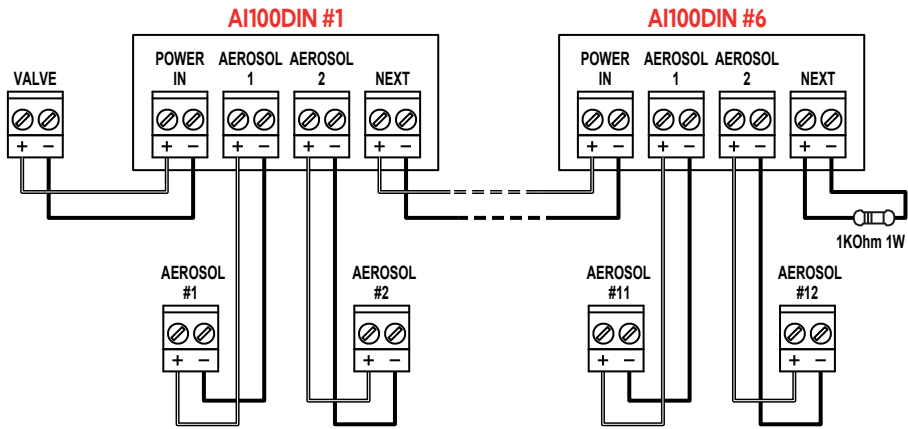
2.1 Connection

The two “AEROSOL” shutdown terminals of each AI100DIN are connected in series.
Of these, the terminals of the unused terminal must be short-circuited with a jumper.

1 aerosol



12 aerosol (maximum)



3. General information

3.1 About this manual

Manual code: DCMIINE0AI100DIN

Revision: 100

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3.2 Manufacturer's details

Manufacturer: Inim Electronics S.r.l.

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Web: inim.it

The persons authorized by the manufacturer to repair or replace the parts of this system have authorization to work only on devices marketed under the brand Inim Electronics.

3.3 Warranty

Inim Electronics S.r.l.. (Seller, Our, Us) warrants the original purchaser that this product shall be free from defects in materials and workmanship under normal use for a period of 24 months.

As Inim Electronics does not install this product directly, and due to the possibility that it may be used with other equipment not approved by Us; Inim Electronics does not warrant against loss of quality, degradation of performance of this product or actual damage that results from the use of products, parts or other replaceable items (such as consumables) that are neither made nor recommended by Inim Electronics. Seller obligation and liability under this warranty is expressly limited to repairing or replacing, at Seller's option, any product not meeting the specifications. In no event shall Inim Electronics be liable to the purchaser or any other person for any loss or damage whether direct or indirect or consequential or incidental, including without limitation, any damages for lost profits, stolen goods, or claims by any other party caused by defective products or otherwise arising from the incorrect or otherwise improper installation or use of this product.

This warranty applies only to defects in parts and workmanship relating to normal use. It does not cover damage arising from improper maintenance or negligence, damage caused by fire, flood, wind or lightning, vandalism, fair wear and tear.

Inim Electronics S.r.l. shall, at its option, repair or replace any defective products. Improper use, that is, use for purposes other than those mentioned in this manual will void the warranty. Contact Our authorized dealer, or visit our website for further information regarding this warranty.

3.4 Limited warranty

Inim Electronics S.r.l. shall not be liable to the purchaser or any other person for damage arising from improper storage, handling or use of this product.

Installation of this Product must be carried out by qualified persons appointed by Inim Electronics. Installation of this Product must be carried out in accordance with Our instructions in the product manual.

3.5 Documents for the users

Declarations of Performance, Declarations of Conformity and Certificates concerning to Inim Electronics S.r.l. products may be downloaded free of charge from the web address inim.it, getting access to Extended Access and then selecting "Certifications" or requested to the e-mail address info@inim.it or requested by ordinary mail to the address shown in this document.

Manuals may be downloaded free of charge from the web address inim.it, getting access to the reserved area, after the login, and then to the section of each product.

3.6 Disposal of the product



Informative notice regarding the disposal of electrical and electronic equipment (applicable in countries with differentiated waste collection systems)

The crossed-out bin symbol on the equipment or on its packaging indicates that the product must be disposed of correctly at the end of its working life and should never be disposed of together with general household waste. The user, therefore, must take the equipment that has reached the end of its working life to the appropriate civic amenities site designated to the differentiated collection of electrical and electronic waste. As an alternative to the autonomous-management of electrical and electronic waste, you can hand over the equipment you wish to dispose of to a dealer when purchasing new equipment of the same type. You are also entitled to convey for disposal small electronic-waste products with dimensions of less than 25cm to the premises of electronic retail outlets with sales areas of at least 400m², free of charge and without any obligation to buy. Appropriate differentiated waste collection for the subsequent recycling of the discarded equipment, its treatment and its environmentally compatible disposal helps to avoid possible negative effects on the environment and on health and favours the re-use and/or recycling of the materials it is made of.



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