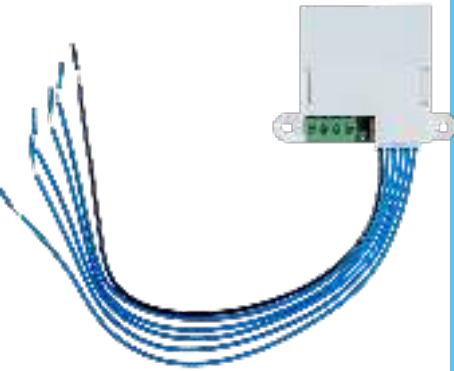




EN 50131-1
EN 50131-3
EN 50130-4
EN 50130-5
CEB T031



UM105H

5 inputs/outputs universal module

Installation and programming manual

The logo for 'inim' features the letters 'i', 'n', 'i', and 'm' in a dark blue, lowercase, sans-serif font. Above the 'i's, there are three small blue dots of varying sizes, arranged in a slight arc.



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1. Description of UM105H

UM105H is a universal expansion device for INIM control panels, mainly for applications of home-automation such as switch-status control or the driving of outputs.

The device provides 6 expansion terminals through 6 wires: an earth terminal and 5 configurable I/O terminals.

Terminals 'T1, T2, T3, T4 and T5' can be configured as:

- Input (NC or NO)
- Open-Collector output
- Supervised output

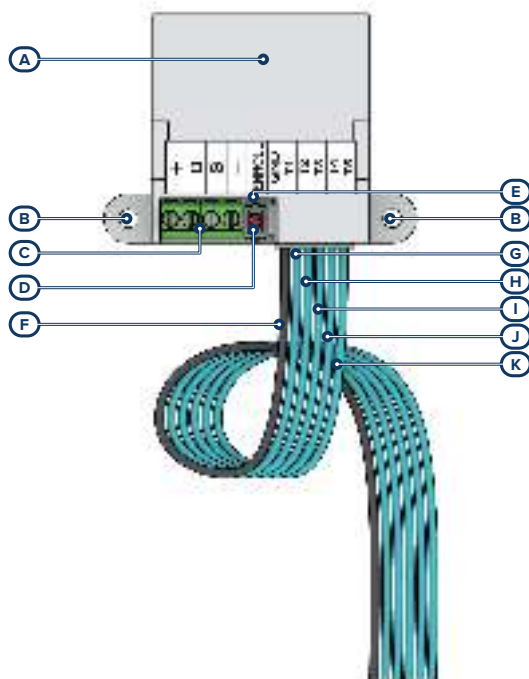
As a control panel peripheral, UM105H requires connection via I-BUS as well as an address.

Via the UM105H control panel it receives the power supply and the use mode of the terminals, through programming.

Its particularly compact size makes the UM105H suitable to be placed directly inside junction or gang boxes for easy connection to buttons or devices, thus providing flexibility and adaptability to various uses.



1.1 Description of parts



[A]	Module
[B]	Removable flanges with fixing holes
[C]	I-BUS terminals
[D]	"ENROLL" button
[E]	Green LED
[F]	"GND" terminal/wire
[G]	"T1" terminal/wire
[H]	"T2" terminal/wire
[I]	"T3" terminal/wire
[J]	"T4" terminal/wire
[K]	"T5" terminal/wire

LEDs

There are no luminous signals during normal operation. The LED is activated only by pressing the “ENROLL” button and will blink quickly for 30 seconds.

When assigning the address as a peripheral, the LED will blink slowly.

1.2 Technical specifications of UM105H

Voltage	from 9 to 15V 
Current absorption	
typical	20 mA
maximum	30 mA
Maximum current draw available for OC terminal	250 mA
Operating environmental conditions	
temperature	from -10 to +40°C
relative humidity	≤75% without condensation
Security rating	3
Environmental class	II
Dimensions	
Flanges included	54 x 40 x 15 mm
Flanges not included	38 x 40 x 15 mm
wires	180 mm
Weight	15 g



(EN IEC 62368-1)

Terminal type	+ D S -	ES1, PS2
	T1, ..., T5	ES1, PS1



2. Installation of UM105H

2.1 Installation of UM105H

UM105H does not have integrated tamper protection and exposes the cables in use to possible tampering.

It is therefore advisable to protect the connections and also the device by installing it inside an enclosure, which can be:

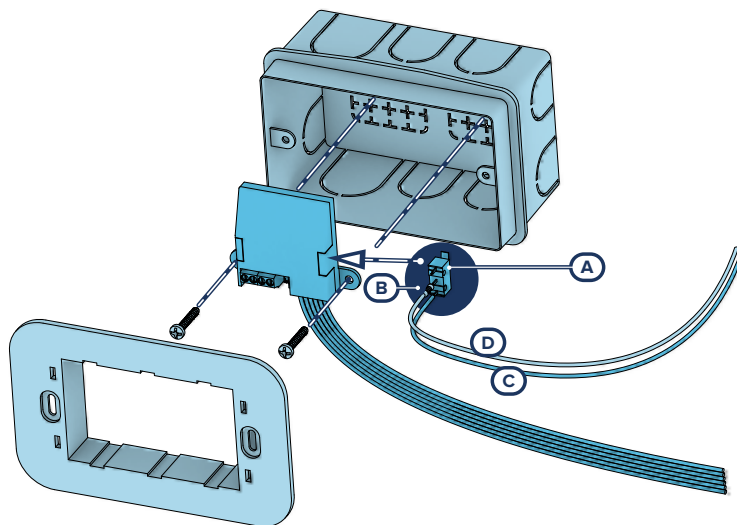
- control panel cabinet, using the appropriate holes on the back plate
- junction box
- electrical cabinet

Note

In order to comply with standard 50131, the enclosure used and the device must be equipped with tamper protection.

1. Choose a suitable mounting placement.
If the control panel cabinet is used, the control panel must be disconnected completely from both the primary-power source (230V~) and the buffer battery.
2. Secure the device enclosure inside the box.
If the control panel cabinet is used, secure the plastic enclosure via the threaded holes on the back plate.
3. Pull the wires through the cable entry and wire up the device.
4. Install the device *tamper* protection.
5. Enroll the device.
6. Close the box.
7. If the control panel cabinet is used, power up the control panel again by connecting the primary-power source (230V~) and the buffer battery.

2.2 Anti-tamper



The peripherals with visible terminals and which do not have an anti-tamper device can still be equipped with protection by intervening on the assembly procedure.

Please note that in order to comply with security standards, all the control panel peripherals must be protected against tamper.

Here we provide information on one of the possible procedures that can be adopted. This involves the assembly of a microswitch on the device, which signals any attempted tamper, and the consequent programming of the terminal used for this contact.

1. Procure a microswitch with at least two normally-open contacts [A] (preferably with 3 contacts: COM-NO-NC).
2. Employ a terminal and program it as a '24H' input, whose description type is 'Tamper', balanced with a single 6K8Ω [B] resistance, unlimited alarm cycles and belonging to a partition that is viewable on at least one keypad.
3. Using 2 wires, connect the microswitch to the '24H' input terminal.
4. On the microswitch:
 - identify the common contact (COM) and connect it using one of the two wires, to the GND terminal of the '24H' terminal [C].
 - identify the normally open contact (N.O., which is the contact that generates a short-circuit between the contact itself and the COM contact when the switch lever is compressed) and connect one end of the 6k8Ω resistor to it [D].

Connect the other end of the resistance to the wire which is connected to the '24H' input terminal.

Note

If the terminal in use belongs to the UM105H module, a balance other than NC or NO is not allowed.



The terminal and wiring must remain inside the protected box.

5. Install the microswitch in such a way that under normal conditions the switch lever is compressed. If a tamper attempt occurs, the lever will release thus generating the opening of the contact and an immediate alarm on the '24H' terminal.

Note

This wiring method can be applied in most situations, however, it is only a point of reference. In order to ensure proper protection, you must always take into account the specific mechanical and electrical conditions of the device you are working on.

For compliance with grade 3 of the EN 50131-3 safety standard, the device must be fastened inside an enclosure which is in turn must be protected against forced opening and removal from the wall (for example the control panel enclosure).

2.3 Connecting to the I-BUS line

The peripheral devices of Inim Electronics control panels are to be connected to the control panel via the I-BUS.

The connection between the control panel and its peripherals is achieved through a shielded 4 wire (or more) cable.

Attention!

The shield must be connected to one of the ground terminals (or GND) only on the control panel side and must follow the entire BUS without being connected to ground in other points.

The control panel connection is done using terminals '+ D S -' on the motherboard.

Sizing

The sizing of the I-BUS line, i.e. the distribution of peripherals and the use of cables to connect them, must be done on the basis of various project factors, in order to ensure the diffusion of the signals of conductors "D" and "S" and the power supplied by conductors "+" and "-".

The factors are:

- The current absorption of the connected devices.

In the case of insufficient power supply from the BUS line to peripherals and detectors (refer to the Technical specifications table), this can also be supplied by external power supplies.

- Cable type

The cable section used affects the dispersion of the conductor signals.

Recommended cable

Cable AF CEI 20-22 II	number of conductors	section (mm ²)	I-BUS terminal
4 wire cable + shield	2	0.5	+ -
	2	0.22	D S

Cable AF CEI 20-22 II	number of conductors	section (mm2)	I-BUS terminal
6 wire cable + shield	2	0.5	+ -
	2	0.22	D S
	2	0.22	available
6 wire cable + shield	2	0.75	+ -
	2	0.22	D S
	2	0.22	available

- Communication speed over the BUS
- This parameter can be changed by means of the programming software (38.4, 125 or 250kbs).

BUS sizing	
BUS speed	maximum admissible length (sum of the sections downstream of the control panel or of an isolator)
38.4kbs	500m
125kbs	350m
250kbs	200m

- Number and distribution of isolators.
- To increase the reliability and the extension of the BUS, it is necessary to use isolators.

2.4 Addressing of UM105H

After installing the control panel peripherals and connecting them to the BUS, it is necessary to allow the control panel to recognize and distinguish one from another in order for them to be placed in the configuration.

This is possible firstly by assigning an address to each peripheral.

The addressing procedure changes in accordance with the type of peripheral. The types available are:

- keypads (both with keys and LCD display and also with touch-screens)
- proximity readers (both stand-alone and integrated into keypads)
- expansions (both with input/output and relay terminals)
- sounder/flasher
- home-automation modules
- thermostats
- wireless transceivers
- power-supply stations

Warning

Peripherals of different types can have the same address, whereas peripherals of the same type must always have different addresses.

Wireless transceivers must have different addresses from those of readers and expansions.

After assigning all the addresses, it is necessary for the control panel to carry out the peripheral enrolling procedures in order to include them in the system configuration that the control panel will manage.



2.4.1 Addressing via serial code

Via keypad

Type in Code (Installer), PROGRAMMING EnrolPeripherals Peripherals

It is possible to carry out the enrolling process with one of the following alternative ways:

- enter manually the 14-digit serial code shown on the device package
- press the 'ENROLL' button on the device

Following this operation, the device will transfer the serial code to the control panel.

The control panel will put forward the first free address for the type of peripheral identified. The installer can change this address as desired or confirm it by pressing the **OK** button.

Warning

All the letters entered for the code must be uppercase.

Address '1'

If you want to reset address '1' you must press and hold the 'ENROLL' button for 25 seconds, until the LED lights up and remains on for 5 seconds.

2.4.2 Enrolling of UM105H

Inim Electronics control panels allow the enrolling of peripherals in different ways, with a choice between automatic or manual procedures, depending on installer access to the system.

Automatic, from control panel in 'service' mode

Placing the control panel in 'maintenance' mode activates automatic enrolling of peripherals on the BUS at intervals of 10 seconds.

If the installer assigns addresses to peripherals connected to the BUS, at 10 second intervals, the control panel will enroll in the configuration the peripherals it finds.

Automatic, from keypad

Alternatively, it is also possible to start an automatic enrolling process by means of the following installer menu options:

Type in Code (Installer), PROGRAMMING Default settings, Auto enrolPeriph

Manual, via Prime/STUDIO software application

Once the solution for the system to be designed has been opened, click on the **System Layout** button on the menu on the left. Then in the section on the right click on the **Add device on BUS** button.



A window opens where you can select the devices to be configured and add them to the configuration.

In the section on the left you can increase the number using the button corresponding to the selected device type.

To remove a device from the structure, work through the Add device procedure, but instead deselect the device you want to remove

Alternatively, you can access the programming section by clicking on the relevant button on the menu on the left, and from the list that appears click on the **Delete** button that corresponds to the line of the device to be removed.

Manual, from keypad

The enrollment of addressed peripherals is possible by enabling the menu options after reaching the installer menu section:

Type-in Code (Installer), PROGRAMMING Expansions, Enable/Disable

In this section it is possible to add/remove readers from the configuration, by means of keys  and .



3. Programming of UM105H

The programming of UM105H devices, as peripherals of the Inim Electronics control panel, can be carried out either via software or from a keypad.

3.1 Programming the expansion boards

Via software

By clicking on the 'Expansions' button on the menu on the left, the section on the right will show a list of the configured expansions.

Selecting one of the options will allow you to configure the parameters of the single peripheral by clicking on the  button.



Via keypad

Type in Code (Installer), PROGRAMMING Expansions, ChoosePeripheral

This section allows the programming of the various options of the selected expansion.

Note

Although available via the keypad, the following terminal settings are not to be used on the UM105H module:

- *single balancing*
 - *double balancing*
 - *double zone*
 - *double zone with EOL*
 - *detector type*
-

4. General information

4.1 About this manual

Manual code: DCMIINE0UM105H

Revision: 100

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4.2 Manufacturer's details

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Tel.: +39 0735 705007

Fax: +39 0735 734912

E-mail info@inim.biz

Web: www.inim.biz

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.

4.3 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.

4.4 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.

4.5 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 www.inim.biz, getting access to Extended Access and then selecting "Certifications" or requested to the e-mail address info@inim.biz or requested by ordinary mail to the address shown in this document.

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

4.6 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.



Evolving Security

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