# TECHNICAL MANUAL



# IZENITH and IZENITHB
## Sectorizable key points
090030806

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EL.MO. SpA
Global Security Solutions

# WARNING

**FOR THE INSTALLER:**
Please follow carefully the specifications relative to electric and security systems realization further to the manufacturer's prescriptions indicated in the manual provided.
Provide the user the necessary indication for use and system's limitations, specifying that there exist precise specifications and different safety performances levels that should be proportioned to the user needs. Have the user view the directions indicated in this document.

**FOR THE USER:**
Periodically check carefully the system functionality making sure all enabling and disabling operations were made correctly.
Have skilled personnel make the periodic system's maintenance. Contact the installer to verify correct system operation in case its conditions have changed (e.g.: variations in the areas to protect due to extension, change of the access modes, etc…)

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This device has been projected, assembled and tested with the maximum care, adopting control procedures in accordance with the laws in force. The full correspondence to the functional characteristics is given exclusively when it is used for the purpose it was projected for, which is as follows:

## Sectorizable key points

Any use outside of this area is not provided and it is not possible to guarantee its proper operation, and therefore it is expressly forbidden to the holder of this manual to use it for other reasons than those indicated.
The manufacturing process is carefully controlled to prevent defects and malfunctions; nevertheless the components used is subjected to faults extremely low percentage, as indeed it does for every other electronic or mechanical.
Given the target of this article (property and persons protection) invite the user to proportion the protection level offered by the system to the actual risk (considering the possibility that the system it is operating in degraded mode due to faults or other), reminding that there are clear rules for the design and construction of equipment to this type of application.

The system's operator is hereby advised to see regularly to the periodic maintenance of the system, at least in accordance with the provisions of current legislation, as well as to carry out checks on the correct running of said system on as regular a basis as the risk involved requires, with particular reference to the control unit, sensors, sounders, dialler(s) and any other device connected. The user must let the installer know how well the system seems to be operating, based on the results of periodic checks, without delay.

Design, installation and servicing of systems which include this product, should be made by skilled staff with the necessary knowledge to operate in safe conditions in order to prevent accidents. These systems' installation must be made in accordance with the laws in force. Some equipment's inner parts are connected to electric main and therefore electrocution may occur if servicing was made before switching off the main and emergency power. Some products incorporate rechargeable or non rechargeable batteries as emergency power supply. Their wrong connection may damage the product, properties and the operator's safety (burst and fire).

Your dealer:

# 1. GENERALS

IZENITH is a key point, which occupies the space of a module, for the command, partialization and control compatible with all the control unit that include the use of the ETRZENITH model.

IZENITH incorporates in front: four tiny buttons for the selection of four system partition, four LEDs for displaying of the insertion states and partialization, at the center is positioned the PROXI proximity key reader equipped with two side LEDs to foster closeness.

For the connection on RS485 bus, is required the address identifier programming that is made possible by acting on the side dipswitch, the electrical connections are allowed by a terminal properly relate to the product dimensions.

The inserter is equipped by an open collector output for applications involving the transit function, where it is necessary to the electric lock control, see the chapter "WARNINGS AND CONNECTIONS" on p. 4.

The inserter conformation allows the flange insertion of the TICINO-MAGIC series, for flanges insertion of other series are usable the adapter of the I8 inserter.

The IZENITH model is equipped with dark gray color case, the IZENITHB model is equipped with white case.

# 2. FEATURES

## 2.1 General features

• **Microprocessor sectorizable inserter.**

• **4 system partition settable with frontal tiny buttons.**

• **Multi-functional LEDs for operative status reports and partialization.**

• **On board buzzer for functional signaling programmable with specific powered sequences.**

• **All the programming performed are held in non-volatile memory.**

• **Dipswitch of address programming for RS485 bus connection.**

• **Synchronization possibility of two near IZENITH using the two input and output terminals.**

• **Terminal output usable for the "Varco" software function from the ETR and Titania control unit.**

• **Installable in TICINO-MAGIC plaques.**

• **Can be used also with other plaques through special I8 series adapters**

• **Immediately installable in installations using the ETRZENITH key point.**

• **Compatible with NET, Villeggio, ETR, TITANIA control units and compatible control units.**

• **Compliance with EN50131-1 and EN50131-3 standards.**

• **Not compatible such control units accessory that use ZENITH key point.**

• **Not suitable for proximity key learning and control unit that manage multi-area systems.**

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## 2.2 Technical features

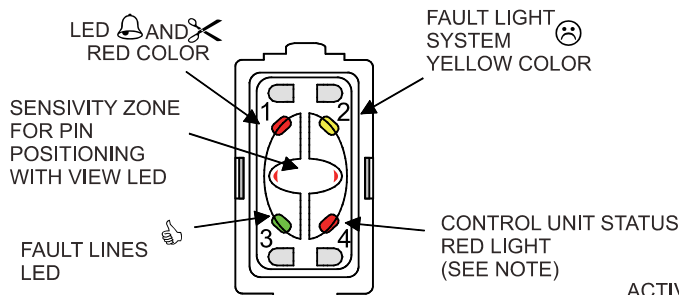| | | | |
|---|---|---|---|
| **Mod:** | IZENITH | **Input:** | depending on the control unit firmware. Alternative connection for "Sync". |
| **Performance level EN50131-3 compliance:** | III° level II, environmental class II. | **Programming:** | Miniature selector placed on the right side of the inserter for identification code programming and for the display LEDs functionality. Reports scheduling with buzzer using special powered sequences. |
| **Power supply:** | 12V ▬▬▬ taken from the control unit serial line (from 10V to 15V) | | |
| **Power consumption:** | 36mA, 46mA max. | | |
| **Connections:** | terminal connection | **Operating temp.:** | -10/+45°C certified by the manufacturer, 93% UR. |
| **Output:** | O.C. 40mA max with 100Ohm, usable depending on the control unit firmware. Alternative connection for "Sync". | **Dimensions:** | W 21 x H 42 x D 46 mm |
| | | **Weight:** | 20g. |
| | | **Parts supplied:** | Technical manual. |

### EU DECLARATION OF CONFORMITY

The product complies with current European EMC and LVD directives. The full text of the EU declaration of conformity is available at the following Internet address: elmospa.com – registration is quick and easy.

**Note:** the inserter placed inside the box must be protected against removal and tampering of the cable connection with a suitable tamper protection of the flange to be carried out with the installer's responsibility.
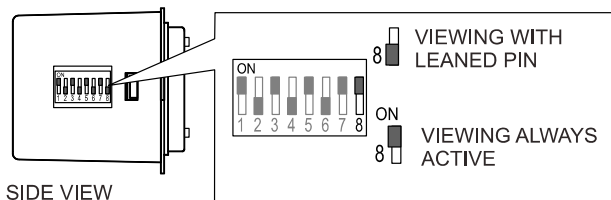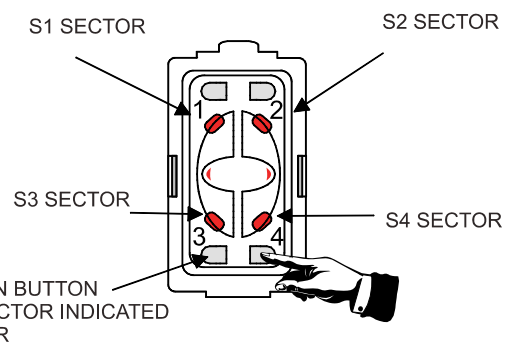
# 3. SEGNALINGS AND CONNECTIONS

Inserter front view



OPERATIVE SIGNALINGS

LED 🔔 AND ✂ RED COLOR

FAULT LIGHT SYSTEM ☹ YELLOW COLOR

SENSIVITY ZONE FOR PIN POSITIONING WITH VIEW LED

CONTROL UNIT STATUS RED LIGHT (SEE NOTE)

FAULT LINES LED

**NOTE:** CONTROL UNIT STATUS SIGNALINS IS DISCONNECTABLE WITH SELECTOR 8 IN OFF AND REFLECTS THE En50131 STANDARD

SIDE VIEW

VIEWING WITH LEANED PIN

VIEWING ALWAYS ACTIVE

INSERTION SIGNALINGS

S1 SECTOR
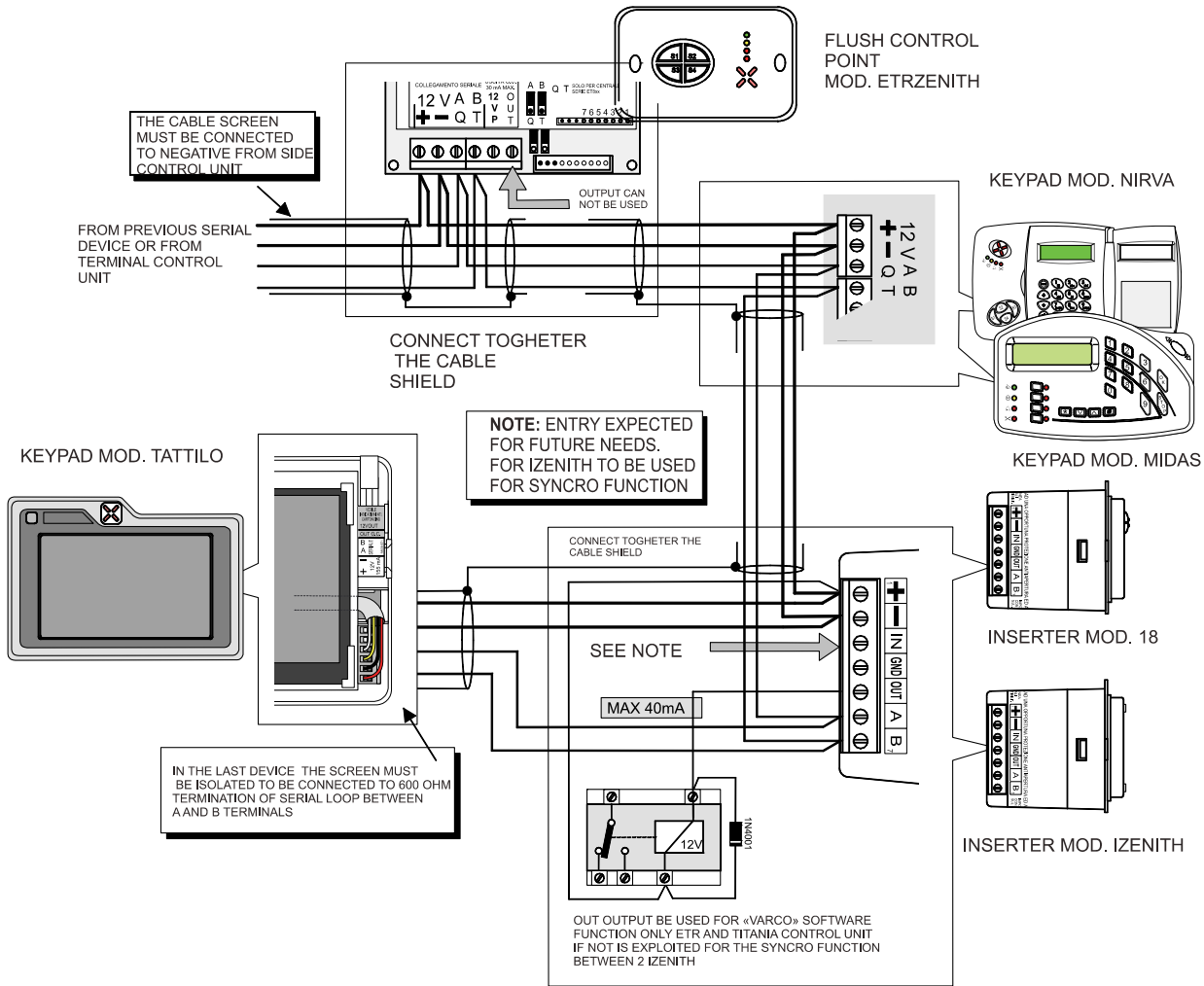
S2 SECTOR

S3 SECTOR

S4 SECTOR

ACTIVATION BUTTON OF THE SECTOR INDICATED BY NUMBER

ATTENTION: SOME CONTROL UNIT ALLOW THE FAST INSERTER SECTOR PRESSING THE CORRESPONDENT BUTTON. IT IS RECOMMENDED TO USE THE FUNCTION WISELY TO AVOID PARTIAL OR TOTAL ENTRIES NOT INTENDED.

## Serial line connections



FLUSH CONTROL POINT MOD. ETRZENITH

COLLEGAMENTO SERIALE 40 mA MAX.

12 V A B   12   A B   Q T SOLO PER CENTRALI
+ − Q T   V U P T   Q T   SERIE ETRxx
7 6 5 4 3 2

THE CABLE SCREEN MUST BE CONNECTED TO NEGATIVE FROM SIDE CONTROL UNIT

OUTPUT CAN NOT BE USED

FROM PREVIOUS SERIAL DEVICE OR FROM TERMINAL CONTROL UNIT

CONNECT TOGHETER THE CABLE SHIELD

KEYPAD MOD. NIRVA

12 V A B
+ − Q T

KEYPAD MOD. TATTILO

KEYPAD MOD. MIDAS

NOTE: ENTRY EXPECTED FOR FUTURE NEEDS. FOR IZENITH TO BE USED FOR SYNCRO FUNCTION

CONNECT TOGHETER THE CABLE SHIELD

SEE NOTE

+ − IN GND OUT A B

INSERTER MOD. 18

IN THE LAST DEVICE THE SCREEN MUST BE ISOLATED TO BE CONNECTED TO 600 OHM TERMINATION OF SERIAL LOOP BETWEEN A AND B TERMINALS

MAX 40mA

12V

1N4001

INSERTER MOD. IZENITH

OUT OUTPUT BE USED FOR «VARCO» SOFTWARE FUNCTION ONLY ETR AND TITANIA CONTROL UNIT IF NOT IS EXPLOITED FOR THE SYNCRO FUNCTION BETWEEN 2 IZENITH

**Note:** the inserter located inside the box must be protected against tampering and the removal of the connecting cables with a suitable flange tamper protection to be carried out with the installer's responsibility.

Use in non-conductive plastic material plaques. Always avoid the use of metal plaques or with other conductive material.

Do not install in the same plaque another proximity keys inserter Ixx series.

In case of installation of two IZENITH see the "Connections with 'Sync' function" chapter, on p. 6.

Do not install in close proximity to other readers that generate a magnetic fields at 125KHz frequencies (eg. badge readers).

For the Legrand series, the inserter with its adapter must be strictly be positioned in the central hole of the plaque, in the two side holes you can insert other components of the Legrand series.
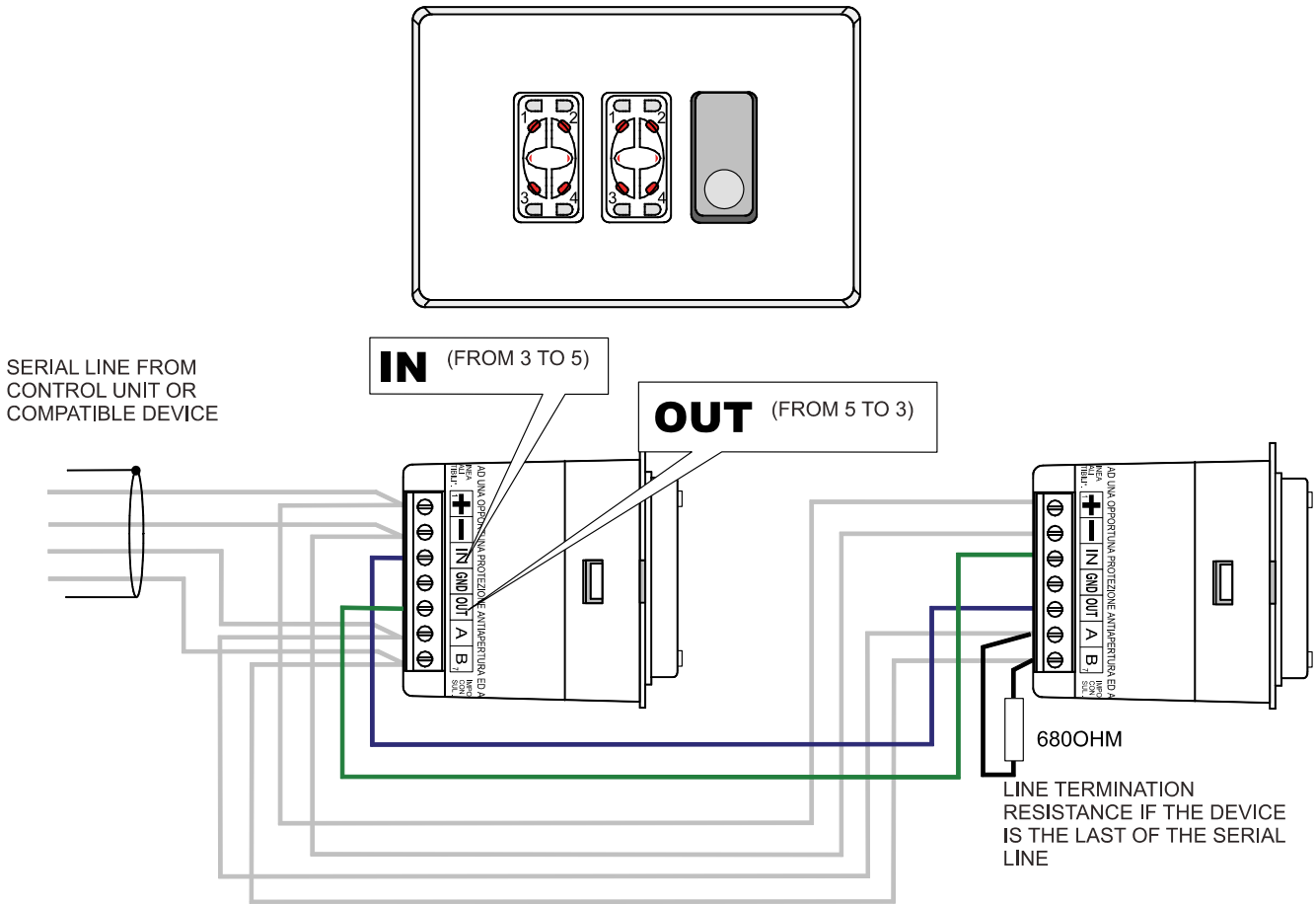
If IZENITH is mounted outside must be strictly protected with transparent door and tin.

The inserter case **MUST NOT BE OPENED**. Its opening will void the warranty.

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## 3.1 Connection with "Sync" function

In case of installation of two IZENITH within the same plaque box mod. 503, must be performed the following wiring:



SERIAL LINE FROM CONTROL UNIT OR COMPATIBLE DEVICE

**IN** (FROM 3 TO 5)

**OUT** (FROM 5 TO 3)

680OHM

LINE TERMINATION RESISTANCE IF THE DEVICE IS THE LAST OF THE SERIAL LINE

The "Sync" function must be enabled by the specific programming sequence. See the specific paragraph in functions programming chapter.

**Note:** the "Sync" function prevents the use of input and output options of the IZENITH pair programmed.

# 4. FUNCTION PROGRAMMING

## 4.1 "LEDs luminosity" function

The function allows to see the light indications produced by IZENITH even in great lighting situations. The use of this function causes an absorption increase up to the maximum specified in the product characteristics. The operations to perform:

- **Press and hold the S1 small button, powered IZENITH or make a reset of the control unit that manages IZENITH, release the S4 small button when the internal buzzer issues a twice beeps.**
- **The operation can also be performed in the laboratory holding pressed the S1 small button and powered IZENITH, then release the S1 small button when the internal buzzer issues a twice beeps.**
- **To complete the "LEDs  brightness" programming, it is necessary that the internal buzzer is enabled.**

The function can be disabled as follows:

- **Use one of the ways described above, but release the S1 small button after hearing only a beep.**

## 4.2 "Exclusion onboard buzzer" function

This function allows to IZENITH no audible buzzer with on-board operational states as: Time of entry, time of exit, error/confirmation messages generated by the control unit.
The exclusion operations are the following:

- **"Press and hold the S2 small button, powered IZENITH or give a reset to the control unit that manages IZENITH, release the S2 small button when the internal beeper issue only a beep.**
- **"The operation can also be performed in the laboratory holding pressed the S2 small button and nurturing IZENITH, then release the S2 small button when the internal beeper issue only a beeps.**

The function can be disables as follows:

- **"Use one of the ways described above, but release the S2 small button after hearing a double beep.**

## 4.3 "Syncro" function

The "Syncro" function must be activated in one of the following ways:

- **"Press and hold the S4 small button, powered IZENITH or give a reset to the control unit that manages IZENITH, release the S4 small button when the internal beeper issue a double beep.**
- **"The operation can also be performed in the laboratory holding pressed the S4 small button and powered IZENITH, then release the S4 small button when the internal beeper issue a double beep. Program the address and mark appropriately the IZENITH for the next wiring.**
- **"To complete the programming of  the "Syncro" function it is necessary that the internal buzzer is enabled.**

The "Syncro" function can be disabled as follows:

- **"Use one of the ways described above, but the release S4 small buttun after hearing only a beep.**
- **"Continuing to hold the S4 small button does not return to the previous selection.**

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# 5. PROGRAMMING TABLE

Sequence of the programming switches and their identification codes.

ATTENTION: Due to the selector miniature size is essential to work with a properly pointed tool to avoid damage.



THE SELECTOR N°8 IS NOT USED FOR CODING

**Note:** The number to be set must not already be in use by another serial device, the maximum number of inserter can be connected is 128 but it depends on the characteristics of compatible control unit.
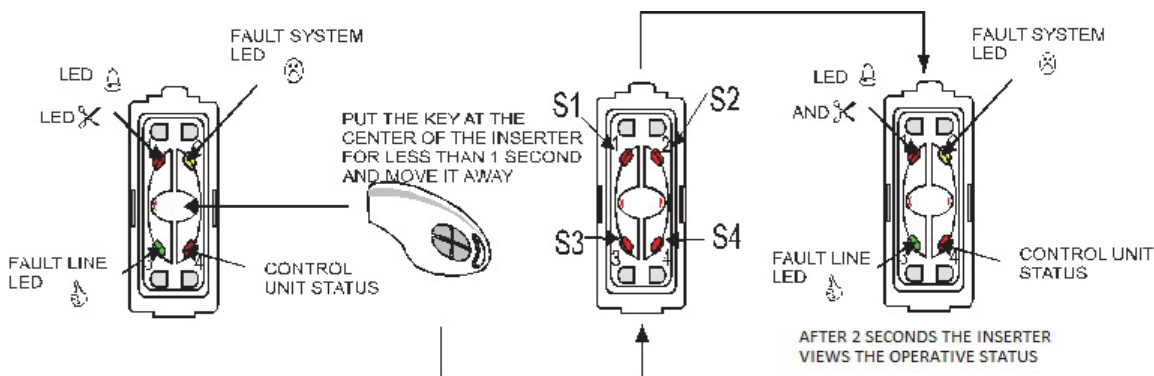
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# 6. USAGE NOTES

The code recognition of the piston pin with PROXY technology occurs without electrical contact as the learning process is performed through the electromagnetic field generated; this makes sure the key recognition and brilliantly solves the difficult situations of the micro vandalism that may damage the electrical contacts of the contact traditional inserter.
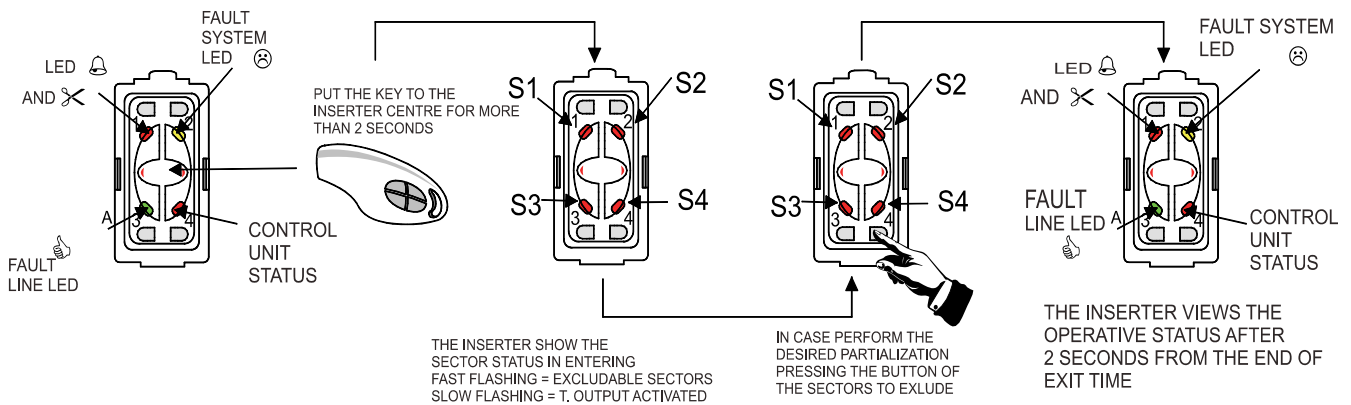
The proper operation to recognize the piston pin with the valid code consists to support the piston pin at the centre of the sensitive part at the inserter centre identifiable with the oval shape having two dimly lit LEDs to allow the proper collimation, when the piston pin is backed this switch to full illumination.

This inserter **is not usable for the memory operations of the piston pin code if connected to the control unit managing separate areas,** for the purpose you must use a keyboard compatible with the control in use.

Checking the status of the control unit.

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**Note:** to view the area status you can also press one of any frontal small button without having to necessarily use the proximity key; if the DIP 8 is in the ON position (display allowed) the state of all sectors will be displayed for 2 seconds, then you will see the operational status of the control unit. Insertion example.

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## 6.1 Special cases of viewing with programmed control unit according to EN50131

### 6.1.1 Example with NET Series control unit

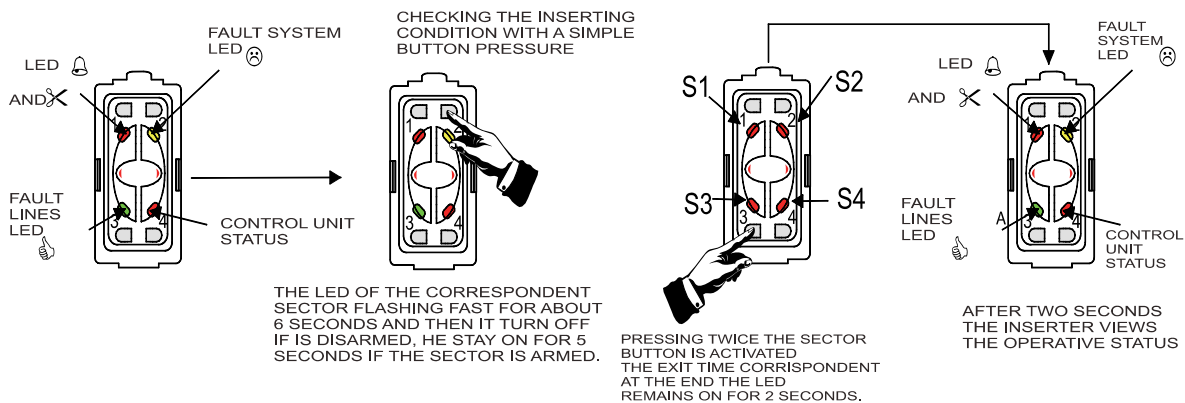-If all areas are off the behavior is as described above.

-If at least one sector is inserted all the LEDs IZENITH are OFF (except the backlight for the key positioning), approaching the proximity key for less than 2s you will in sequence before the areas viewing for 2s and then automatically viewing of the control unit status for other 2s, in the event that the approach persists for more than 3s the desired action is performed.

### 6.1.2 Insertion quickly function

The function can be enabled only with NET832 V4.x higher control unit, NET9 V3.x or higherm, VILLEGGIO series.

The special programming to be carried out with management software of the control unit allows to insert one or more sectors only pressing two times the corresponding button.

Example:



**Note:** in case of fast insertion without entry status viewing (Dip 8 Off), the sectors viewing will be inhibited by pressing the buttons only on the sectors already entered, pressing on not entered sectors will be displayed, however, the all sectors status.

## 6.2 Maximum security insert function

The description refers only to operation with ETR and VILLEGGIO series.

If one or more sectors are placed in maximum security, the viewing sectors will remain for 5 seconds after the conclusion of Exit Time (Max security sectors flashing fast) and then move automatically in states viewing.

The LEDs insertion general status (Dip 8 On) will flash until at least one sector will be placed in maximum security.

As with regular entries the viewing of the sectors status is also available without the use of proximity key if the Dip 8 is ON and enable the state insertion viewing. In this case just press any key to display the insertion status of all sectors for 2s, then is proposed operative condition of the control unit.

# 7. DISPOSAL INSTRUCTIONS

Dispose of IZENITH in compliance with current city regulations and by leaving the device in a dumping ground which is authorized for the disposal of electronic products; if required, please contact the appropriate city office for additional information.

The material used for this product is very harmful and polluting if dispersed in the environment.

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# 8. INDICE