



Multilink Net System

Installation and User manual

Modular Stand-Alone Management Electronics - General Characteristics

Electronic Control System for the Stand-Alone management of one door or through a serial network RS-485 for the connection up to 120 doors controlled by a PC by means of a specific software (item code 55622Net).

Connection to n° 2 reading terminals (input and output) such as code keyboards (items code 55612 and 55612SS), magnet badge readers (item code 55613 and 55613AL), transponders readers RFID (item code 55614).

Grey ABS box for wall anchoring on DIN bar.

Box dimensions: mm. 160 x 95 x 65.

Remote distance from the reading terminal: up to 10 meters using a provided flat cable and up to 500 meters with the connection to the peripherals by means of a serial line 4 cables RS-485 (specific accessory circuit to be ordered separately).

Power Supply: 230 Vac

Internal power supply with battery pack chargers.

Power supply output for electric locks: 12 Vdc / 500 mA

Backup battery to be externally combined upon request 12 V / 1,2 Ah – item code 00112

Electric lock command: output relay with C/NO/NC contacts to be selected in monostable, with set timing from 1 to 99 sec or in bistable (ON/ OFF switch).

NO input for opening by a switch operating according to the pre-set timings.

NO input for the door sensor.

NO input for the monitoring of the electric lock bolt status.

NO input for the blocking of the enabled codes.

Alarm relay actionable by means of a forced door sensor (it can be disabled by a software from the menu).

Storable users: 2000 with badges or different codes.

Users storage on Eeprom solid state memory (minimum retention 10 years).

Important : memory data can be copied and transferred on possible further Stand Alone Multilink system extensions.

Real Time Clock Circuit (RTC) for date and time setting.

LCD display 16 x 2 for the programming and visualisation of the operational status of the system

1. - Polycarbonate membrane keyboard with 4 programming keys and the following functions:

1. – **Programming** (M key)
2. – **Enter** (E key)
3. – **Up Arrow**
4. – **Down Arrow**

Network port: RS-485 serial line to be connected to a PC for the network connection.

USB port: to download on a key data present in the events memory, in the users list and in the Multilink configuration.

- Possibility to store PIN codes in ISO2 emulation (with code keyboard item code 55612 – 55612SS).
- Possibility to store encoded magnetic badges in a pre-existing 2nd trace such as credit cards, tax codes or badges belonging to other access control systems on the ISO 2 standard (with badges reader item code 55613 and 55613AL).
- Possibility to store RFID transponders in ISO2 emulation (with transponder reader item code 55614)

FUNCTIONS

Multilink is an access control stand alone system for a single door, easy to be installed and programmed. A personal computer for the management of the functions is not required as, once used as a stand alone device, it is equipped with a own LCD display. The main and most innovative characteristic of the system is given by the high performances and the many functions that make the electronics management a real computer that can be compared more to systems handled by a PC rather than a traditional stand alone system.

The electronics itself can be set up in a Net mode and, by means of a serial line RS-485, can be connected to a PC for the management and the control.

Hereunder the system functions:

- Menus programming by keyboard – 2000 storables codes*
 1. - Cards programming by a reader using Master, Programming and Cancellation badges
 2. - Programming access using a Master code
 3. - Programming of always enabled badges/transponders/codes
 4. - Programming of always enabled in sequence badges/transponders/codes
 5. - Cancellation of badges/transponders /codes in sequence
 6. - Programming of 3 different time slots for each user
 7. - Programming of pay per use cards
 8. - Users data entry with expiry date
 9. - Cancellation of a user with code/badge
 - 10.- Cancellation of a user position without code/badge
- Complete cancellation of the general users list
 1. - Date and time visualisation
 2. - Current time set up
 3. - Current date set up
 4. - Selection of the lock opening time
 5. - Anti Pass-Back selection
- Door lock selection
 1. - Alarm set up selection
 2. - Set up readers lock selection
 3. - Users archive visualisation
 4. - Last 200 events archive visualisation
 5. - Download the last 500 events on a Usb key
 6. - Download of the users list on a Usb key
 7. - Download of the configurations on a Usb key
 8. - PIN password programming
- Constraint code programming
 1. - Service voltage visualisation
 2. - ISO2 badge trace reader with code writing on display.
 3. - "Offset" function to choose which and how many characters of the magnetic card to read.
 4. - General reset function to restore the default settings
 5. - Anti pass-back memory reset function
 6. - Anti tampering function programming for code keyboard and transponder reader.
 7. - Adjustment of the relay lock activation time in mono or bistable
 8. - Forced door function programming by door sensor activation
 9. - Prolonged door opening function programming
 - 10.- Special cards programming (Programming/Cancellation)
 - 11.- Entry and relay exit control
 - 12.- Connection from a PC for all functions management

N.B. : * When in this manual we mention CODES, we mean NUMERIC CODES if we are talking about a keyboard or BADGES PROGRAMMED CODES if we are talking about magnetic badges or RFID transponders.

SYSTEM PARAMETERS PROGRAMMING AND VISUALISATION.

Hereunder functions and procedures as they are displayed once entered in the programming system:

Programming keyboard operation.

To enter into the programming function (**P**), press the key for about 1 sec and to display the first caption "VIEW DATE AND TIME" .

To exit from the programming function or from the menus, press the **M** key.

To confirm you wish to enter into the displayed function, press the green key **ENTER**.

To scroll into the menus, press the black keys (Up Arrow – Down Arrow).

N.B. : During the programming steps, the reader/keyboard is not operating but the red led light remains on but blocked. When, on the contrary, the green led light of the reader is on, it means the stand-by function is on.

1 -VIEW DATE AND TIME

Enter into the function to display current date and time stored.

For example:

Ore 12:00:00 (ore:minuti:secondi)
di Lun 13/05/13

12,00 hours (hours:minutes:seconds)
of Monday 13/05/13

Press the **M** key to go back to the main menu.

2 –DATE AND TIME EDITING.

Enter into the function to display stored date and time - data that can be edited are high-lightened by a cursor (_).

For example:

Ore 12:00:00 (ore:minuti:secondi)
di Lun 13/05/13

12,00 hours (hours:minutes:seconds)
of Monday 13/05/13

Press the Up and Down Arrows to increase or decrease numbers. To accept the set digit, press **ENTER** and the minutes digit is ready to be modified the same way.

Press the **ENTER** key again: year, month and day are displayed in sequence and can be edited. Once the edit operations finished, press the **M** key you go back to the main menu.

3 – EVENTS LOGGER VISUALISATION / CANCELLATION

This function enables to display or cancel memory events.

Enter into the function to display for about 2 seconds total quantity of the stored events.

For example:

Totale Eventi
N=015

Total Events
N=015

Then:

N = 000 Porta

N= 000 Door (events quantity in the memory)

Tipo di evento

Kind of event (ex: Opening Button /Net, Entry, etc)

If the event is **Entrata (Entry)**, press the **Enter** key: time, date and entered code of the event are displayed.

For example:

08:45 del 11/Mag
Cod=0153628994

8 hours 45 of May the 11th
Cod=0153628994

Press the Up and Down Arrows to display all the events stored in the memory.
Press the **M** key to exit. The first displayed caption is:

Canc. Memoria
Logger Eventi NO

Cancel Memory
EventsLogger NO

Press the **Enter** key to go back to the main menu without cancelling the stored events.

Press the Up Arrow to display **SI (YES)** and then press the **Enter** key again: the cancellation of the events is accepted and system goes back to the main menu.

4 – ARCHIVE VISUALISATION

This function enables the users visualisation stored in the memory.
Enter into the function to display for about 2 seconds total quantity of the stored users.
For example:

Visualizza
Num Utenti=0015

Display
Users Quantity=0015

Then:

Pos = 0000

Position=0000 (user code position inside the memory)

St = ?

St = ? (state)

Cod = 0605200488

Code= 0605200488 (stored code) . N.B. this code is only an example.

Press the Up Arrow to read all memory positions and related codes. Empty memory positions are indicated by **Cod=nessuno (Code=none)**.

Once the required memory position is found, press the **ENTER** key to enter into the identifying parameters of that specific code.

For example:

Scade NO
A scalare NO

Expires NO
Pay per Use NO

Press Enter again:

Time Slot 1
From NO to

Or press the Up Arrow to display the following caption

Time Slot 1
From __ to __

Press Enter again:

Time Slot 2
From NO to

Or press the Up Arrow to display the following caption

Time Slot 2
From __ to __

Press Enter again:

Time Slot 3
From NO to

Or press the Up Arrow to display the following caption

Time Slot 3
From __ to __

Press Enter again:

Weekly Restriction

Week LMMGVSD
0= no 1 1 1 1 1 1 1

(days of the week Monday, Tuesday, Wednesday...)

Press the **Enter** key again to go back to the initial position.

Once the visualisation operations finished, press the **M** key to go back to the main menu.

5 – ARCHIVE ENTERING OR EDITING

This function enables to enter or edit users and the parameters stored in the memory.

Press the **Enter** key for about 2 seconds to enter into the function and total quantity of stored users is displayed.

For example:

Insert o Modif
Num Utenti = 0015

Enter or Edit
Quantity of Users = 0015

Then:

Pos = 0000 (user code position into the memory)

Ncar =10 **Quantity of characters=10** (characters quantity of the code)

Cod = 0605200488 (characters that form the stored code)

Press the Up Arrow to read all memory positions and the related codes. Empty memory positions are indicated by **Cod=nessuno (Code=none)** . The cursor line under the parameter means it can be edited by pressing the arrows keys. Once the data is edited, press the **Enter** key to confirm. The cursor line underlines next data.

N.B. : digits can be edited two by two scrolling with the Arrows until the correct digit is composed. Press then the **Enter** key to confirm and repeat the procedure until the complete code is achieved. Press the Enter key again to enter into the identifying parameters of that specific code.

For example:

Scade NO - Expires NO or, with the Up Arrow, display the following caption
Scade 01/01/00 - Expires 01/01/00 Use the arrows to create the date.

A scalare NO – Pay per Use NO or, with the Up Arrow, display the following caption
A scalare 0000 – Pay per Use 0000. Use the arrows to create the maximum openings quantity allowed.

Press the **Enter** key again to display:

Fascia Oraria 1
da NO a

Time slot 1
from NO to

Press the **Enter** key to skip to **Time slot 2** and press the Up Arrow to display:

da 00:00 a 00:00
from 00:00 to 00:00

beginning and end time of the time slot

Set the required time schedules by confirming time by time with the Enter key, then go to:

Fascia Oraria 2
Time Slot 2

repeat above indicated operations, then go to:

Fascia Oraria 3
Time Slot 3

repeat above indicated operations.

Summary

Time Slot 1 or with the Up Arrow
from NO to

The following
caption is
displayed

Time Slot 1

00:00 a 00:00

Use the arrows to create
beginning and end time of the
time slot.

N.B. : Time slots must be programmed in sequence. For example: time slot 2 of a card cannot be programmed if time slot 1 hasn't been programmed first. In the entered time slot, card appears to be active until the entered minute expires (for example: if time slot is from 15,35 hours to 16,00 hours – card is valid until 16,01 hours).

Press the **Enter** key again and weekly operation restrictions are displayed as follows:

Week LMMGVSD
0 = no 1 1 1 1 1 1 1

(days of the week Mond Tues Wedn ...)

Press the Arrows to select **0** (non authorized day) or **1** (authorized day). It is possible to enter weekly restrictions.

Press the **Enter** key again to move the cursor and display the following caption:

Pos=0001 Modif.
Confermare NO

Pos=0001 Edit
Confirm NO

Press the **Enter** key directly and cancellation of the modifications is confirmed.
If the **Up Arrow** is pressed instead, the following caption is displayed:

Confermare SI

Confirm YES

Press the **Enter** key to confirm modifications. System goes back to the main menu and is ready for further modifications.

Once the operations are finished, press the **M** key to go back to the main menu.

– **CARDS/CODES ENTERING DIRECTLY FROM A READER/KEYBOARD**

To make cards/codes programming easier and immediate, storage operations can be done directly from the cards reader/keyboard. Follow below procedure:

- 1- enter the Master card/code (red and green led light begin to flash alternatively)
- 2- enter the Programming card/code (only the green led flashes)
- 3- enter one or more users cards/codes to store (for each stored card/code, the green led turns on for about 1 second) . If the card/code is not readable or already stored in the memory, a red led turns on for about 1 second.
- 4 Once the programming operations are finished, enter the Master card/code to confirm.

The card and code are automatically stored in the first free memory position available.

- **CARDS/CODE CANCELLATION DIRECTLY FROM A READER/KEYBOARD**

Follow the same programming method previously described. Cancellation operations of a code or a card can be done directly from a keyboard or a cards reader. Follow below procedure:

- 1- enter the Master card/code (red and green led light begin to flash alternatively)
- 2- enter the Cancellation card/code (only the red led flashes)
- 3- enter one or more user cards/codes to cancel (for each card/code cancelled, the green led turns on for about 1 second). If the card/code is not stored or has already been cancelled, the red light turns on for about 1 second.
- 4- Once the Cancellation operations are finished, enter the Master card/code to confirm.

6 – FIND/CANCEL A CODE

This function enables to cancel “known” codes stored in the memory.
Press the Enter key to enter the function and display the following caption:

Cancell. Ncar = 01
Cod = 0

Cancel Characters quantity=01
Code=0

Set with the arrows the characters quantity of the code that has to be deleted. For example: 10.
It appears as follows:

Cancell. Ncar = 10
Cod = 0000000000

Delete Characters quantity=01
Cod = 0000000000

Press the arrows to set the characters quantity of the code you wish to find. Press then the Enter key to digit the code by moving the arrows on the digits couples underlined until the code is complete.

Press the Enter key and display the following caption:

Pos=0000 Ncar = 01
Cod = 0

Position=0000 Characters Quantity=01
Code=0

If the code is already stored, its position into the memory, the characters quantity and the code are shown on the display. Press the Enter key to display all code settings in sequence.

Expires
Pay per Use
Time Slot 1
Time Slot 2
Time Slot 3
Weekly restrictions

Press the M key and systems asks for:

Cancellazione
Confermare NO

Cancellation
Confirm NO

Press the Enter key directly to confirm the cancellation of the modifications. If the Up Arrow is pressed instead, the following caption is displayed:

Confermare SI

Confirm YES

Press the Enter key to confirm the modifications; system goes back to the main menu and is ready for further modifications.

Once the operations are finished, press the M key you go back to the main menu.

7 – ENTERING CODES IN SEQUENCE

This function enables to store in 1 programming operation only up to 999 different codes but progressive. It is very useful when there are many codes to program.

Enter into the function and for about 2 seconds the following caption is displayed:

Definire
Opzioni Accesso

Determine
Access Options

Enter then into the identifying parameters of that specific group of codes. For example:

Scade NO
Expires NO or with the Up Arrow the following caption is displayed
Use the arrows to compose the date

Scade 01/01/00
Expires 01/01/00.

A scalare NO
Pay per Use NO or with the Up Arrow the following caption is displayed
Use the arrows to compose the maximum openings allowed.

A scalare 0000.
Pay per Use 0000

Press the Enter key again:

Fascia Oraria 1
da NO a

Time Slot 1
from NO to

Press the Enter key again to go to **Time Slot 2** . If the Up Arrow is pressed instead, the following caption is displayed:

da 00:00 a 00:00
Beginning and end time of the time slot .

from 00:00 to 00:00

Set the required timetable and always confirm with the Enter key, then go to:

Fascia Oraria 2
Repeat the same operations described above, then go to:

Time Slot 2

Fascia Oraria 3
Repeat the same operations described above.

Time slot 3

N.B. : time slots must be programmed in sequence. For example: time slot 2 of a card cannot be accepted if time slot 1 hasn't been programmed first.

Press the Enter key again and weekly restrictions are displayed:

Week LMMGVSD (days of the week Mond Tuesd Wedn.....)
0= no 1 1 1 1 1 1

Move the arrows where the cursor is and select 0 (non authorized day) or 1 (authorized day).
Press the Enter key to move the cursor and the following caption is displayed:

Press the Enter key again:

Cod Iniz Ncar=01 **InitialCode / Characters quantity=01**
With the Up Arrow, characters quantity to store is increased.

Press the Enter key to begin the initial code composition which belongs to the users code group that has to be stored in sequence, then press Enter and the following caption is displayed:

Quanti codici
Num=000

How many codes
Quantity=000

With the Up Arrow, achieve the quantity of cards that have to be automatically stored in sequence, then press the Enter key:

Confermare
Impostazioni NO

Confirm
Configurations NO

Press the Enter key directly to confirm the cancellation of the modifications; if the Up Arrow is pressed instead the following caption is displayed:

Confermare
Impostazioni SI

Confirm
Configurations YES

Press the Enter key to confirm modifications and all cards with sequential codes are stored in one operation only.

N.B. : if a code is already stored in the memory, the following caption is displayed:

Esiste ! Pos=0000 (position number where the code is stored)	It exists! Pos=0000
Cod=1369992451 (this code in only an example)	Code= 1369992451
M=Uscita Enter=Continua	M=Exit Enter=Continue

Press the **Enter** key to confirm you wish to continue; press the **M** key to exit from the function and go back to the main menu.

N.B. : To store more the 999 codes in sequence, the operation has to be repeated.

8 – CANCELLATION OF CODES IN SEQUENCE

This function enables to cancel up to 999 different but progressive codes in one single programming operation. It is very useful when there are several codes to cancel.
Press the Enter key:

Cod Iniz Ncar=01 Cod=0	InitialCode CharactersQuantity=01 Code=0
---	--

With the Up Arrow, quantity of characters to cancel is increased. Press then the Enter key to compose the initial code belonging to the users code group that has to be cancelled in sequence. Then press the Enter key and the following caption is displayed:

Quanti codici Num=000	How Many Codes Num=000
--	---

Use the Up Arrow to achieve the cards quantity that have to be automatically cancelled in sequence. Then press the Enter key and the following caption is displayed:

Confermare Impostazioni NO	Confirm Configurations NO
---	--

Press the Enter key directly to confirm the modifications cancellation. Then press the Up Arrow and the following caption is displayed:

Confermare Impostazioni SI	Confirm Configurations YES
---	---

Press the Enter key and keep it hold for about 3 seconds to confirm the operation.
Once the operation is finished, press the M key to exit.

9 – TOTAL USERS CANCELLATION

ATTENTION !

This function enables to cancel all the users codes in one single operation. Enter into the function and the following caption is displayed:

**Cancellazione
Confermare NO**

**Cancellation
Confirm NO**

Press the Up Arrow to select **SI/YES** then press Enter and keep it hold for about 3 seconds to confirm. For a few seconds, the following caption is displayed:

Cancellazione in corso

Cancellation in progress

Once the operation is finished, system goes back to the menu.

10 – PIN MODIFICATION

This function enables to modify the PIN code (**P**ersonal **I**dentification **N**umber), the personal access code to the system. If set, it will be required before entering into the programming menu. Once into the function, the following caption is displayed:

**Cod. PIN Ncar = 00
Cod=nessuno**

**PIN code CharactersQuantity=00
Code=none**

Press the Up Arrow to set the characters quantity then press Enter to compose the code and Enter to confirm. The following caption is displayed:

**Cod = XXXXXXXX
Confermare NO**

**Cod = XXXXXXXX (PIN code number)
Confirm NO**

Press the Up Arrow to select **SI / YES** then press Enter to confirm, or press Enter and NO to go back.

Press the M key to exit and go back to the menu.

11 – CONSTRICTION CODE MODIFICATION

This function enables to enter the constriction code. This code commands the door opening activating the constriction alarm by an Alarm Relais.

By entering into the function, the following caption is displayed:

**C. Minac. Ncar = 00
Cod = nessuno**

**DangerCode CharactersQuantity=00
Code=00**

Press the Up Arrow to set the characters quantity then press Enter to compose the code. Press Enter to confirm and the following caption is displayed:

**Cod = XXX (es. 113)
Confermare NO**

**Code=XXX (ex 113)
Confirm NO**

Press the Up Arrow to choose **SI/YES** and the following caption is displayed:

**C. Minac. Ncar = XX (es. 03)
Cod = XXX (es. 113)**

**DangerCode CharactersQuantity=XX (ex 03)
Code=XXX (ex 113)**

Press the **M** key to exit and go back to the main menu.

12 – CARD / MASTER CODE MODIFICATION

This function enables to enter or modify the Master code, the code allowing to safely operate on the programming of some important parameters.

Enter into the function and the following caption is displayed:

C. Master Ncar = 00
Cod = nessuno

MasterCode CharactersQuantity = 00
Code = none

Press the Up Arrow to set the characters quantity then press Enter to confirm and the following caption is displayed:

Cod = XXXXXXXX
Confermare NO

Code = XXXXXXXX
Confirm NO

Press the Up Arrow to select **SI/YES** then press Enter to confirm, or press Enter + **NO** to go back, ESC to exit.

N.B. : Master code is entered directly during production

Press the **M** key to exit and go back to the main menu.

13 – ENTER OR MODIFY CARDS / SPECIAL CODES

This function enables the control and modification of the cards/special codes (“Programming” and “Cancellation”) which can be used to program or cancel the cards/codes directly from the reader/keyboard without having to operate on the programmer. Cards supplied with the system when the MultilinkNet with magnetic cards reader is used, have alphanumeric codes to make it impossible to use those cards as users cards. Memory positions are 2002 and 2003, different thus from the users cards positions.

Pos = 2002 Ncar = 10

Position = 2002 CharactersQuantity = 10
Programming Card

Cod = AACCAAAAAA

Cod = AACCAAAAAA

Pos = 2003 Ncar = 10

Position = 2003 CharactersQuantity = 10
Cancellation Card

Cod = AACCCACACAC

Cod = AACCCACACAC

In the standard supplied system, Programming and Cancellation special cards are programmed in positions 2002 and 2003. If the MultilinkNet is connected to the code keyboard 55612 or 55612SS, special codes are entered directly during production.

14 – BLOCK ACTIVATION – ATTEMPT ALARM – ANTIPASSBACK

This function enables the following operations:

- Block to disable any operation function of connected reader or key board. Memory codes do not allow door opening until the function is disconnected.
- 3 attempts alarm: after 3 attempts with wrong or unknown codes (off hour authorization or unprogrammed code) executed in 30 seconds and from any reader, the system is blocked for 30 seconds and the alarm relay is activated.
- **Anti pass-back.** This function can be activated when there are 2 readers/keyboards (internal and external) on the same electronics. Code enabled in sequence can be used on an external reader/keyboard (to enter); it is then enabled on the internal reader/keyboard (to exit). The same code cannot this way be used by different users to enter.

Enter into the function and the following caption is displayed:

Bloc=NO AL_3T= NO
AntiPassBack =NO

Block=NO 3 attempts alarm=NO
AntiPassBack =NO

To choose the function to modify, press the Enter key. Press the Up and Down arrows instead to modify the authorizations from NO to YES and vice versa.

Press the M key to exit. If any modification has been done, the following caption is displayed:

Porta modificata
Confermare NO

Modified door
Confirm NO

Press the Up Arrow to select YES, then press Enter to confirm and go back to the main menu.

15 – MULTILINK INSTALLATION

This function enables to modify system parameters. Special codes set after installation are cancelled and system is brought back to default (Master, Constriction, Programming and Cancellation cards are entered again). Relay activation time and door sensor function are brought back to the original hardware configuration.

Press the Enter key and the following caption is displayed:

Reset Config.
di Multilink NO

Reset Configuration
of the Multilink NO

Press the Up Arrow to select **YES**, then press Enter for about 3 seconds to confirm. This function enables to bring all the parameters back to default (first programming during production).

Press the Enter key again and the following caption is displayed:

Reset Registro
AntiPassBack NO

Register Reset
AntiPassBack NO

Press the Up Arrow to select **YES**, then Enter for about 3 seconds to confirm.

Press the Enter key again and the following caption is displayed:

Relè Porta = 02 sec
Serr = Base

Door Relay = 02
Lock = Base

Put the cursor on 02 (relay default activation time). With the Up and Down Arrows, relay activation time of the lock can be regulated between 1 and 99 seconds. Beyond 99 seconds, the following caption is displayed: "BiStab". It means the relay becomes bistable. By entering a code/badge once, the relay contact is activated and by entering it again it is disabled (switch function).

Put the cursor on Base. With the Up Arrow, the following caption is displayed:

Relè Porta = 02 sec
Serr = sAnta ALoff

Door Relay = 02
Lock=DoorSensor Aloff
(door sensor activation)

Put the cursor on Base. With the Up Arrow the following captions are displayed:

sAnta ALoff

Door Sensor Aloff

Door sensor activated without alarm (only opening door control function in the PC connection)

Press the Up Arrow again:

sAnta AL01s

Door Sensor AL01s

(prolonged door opening alarm to be adjusted from 01 to 99 seconds).

If this function is adjusted over 99 seconds, the following caption is displayed:

Serr = Catenaccio

Lock = Bolt

(Door sensor and bolt status activated (only control function of the door and bolt opening in the PC connection))

Press the Enter key again and the following caption is displayed:

Offset Code=0 Offset Code=0

This function enables to regulate from 2 to 36 the characters that during the reading of the magnetic stripe, have to be rejected to calculate how many and which characters have to be analysed for the door opening. This function is very important when using pre-existing cards with magnetic stripe track 2 encoded. Storing the Multilink system codes with a maximum of 10 characters, if the offset function is not selected, during the programming function of the user card, systems stores the first 10 read characters. Maximum quantity of characters that can be found in track 2 of a card is 40. Reading the first 10 characters only, they can be in common with other cards used by the same system (for example: ministry, bank, hospital staff cards). Storing thus one single card only, all others with the same initial characters which generally are not those who identify the person, would be authorized. If the characters quantity written on a magnetic stripe is known, by selecting the Offset function, the common codes can be rejected and only those identifying the user can be stored (they are generally found at the end of the code).

when 2 (or more) pre-existing cards are read, it is clear that codes are made of 30 characters as indicated below:

	rejected	stored
- Card 1	Stored Code 0000000000000000101010225473931	
- Card 2	Stored Code 0000000000000000101010225468127	

If the Offset function is set at 20, the first 20 common characters are not read. System stores, then recognises, the last 10 only having different characters.

If for example characters were 40 and the ones to be read only those in the middle of the code, the Offset function would reject the first characters, store the 10 identifying ones and reject the rest as in the following example:

		rejected	stored	rejected
- Card 1	Stored Code	0000000000000000	101010225473931010101010101	
- Card 2	Stored Code	0000000000000000	101010225468127010101010101	

ATTENTION : once the Offset function is selected, it disables the magnetic cards with Master functions standard supplied together with the Multilink as these cards are encoded and stored with 10 characters. The Offset function operates indeed also on system cards. Should it be the case, it will be necessary to create cards with a greater characters quantity such as users cards.

Press Enter again and the following caption is displayed:

Anti Tampering

Int=NO Est=NO

(INT = exit reader or keyboard EST = entry reader or keyboard)

Press the Enter key to confirm **NO**.

Press the Up Arrow when the cursor is on **Int** to activate the anti-tamper function of the transponder reader or the code keyboard. If the micro switch of the circuit is removed by force from the wall, the circuit is blocked and the alarm relay is activated.

If this function has to be activated on an external reader, press the Enter key and the cursor on **Est** (external) and proceed as indicated above

If any modification has been made, the following caption is displayed:

Porta modificata

Confermare NO

Modified Door

Confirm NO

Press the Up Arrow to select **SI/YES**, then press Enter to confirm. Display goes back to the main menu.

16 – Net485 CONFIGURATION

This function enables to set the required parameters for the data transmission with the PC by RS-485

Press the Enter key and the following caption is displayed:

NET=NO	Add=000
Bd=38400	Tim=020

Selectable parameters are:

NET : use the Up Arrow (**SI/YES**) to confirm if the system has to be connected to a PC

Add: use the Up Arrow to select the terminal address (this abbreviation is the one identifying the Multilink in the software configurations).

Tim : entered default value is 020 – this value CANNOT for any reason be modified.

If any modification has been made, the following caption is displayed:

NET modificata	NET modified
Confermare NO	Confirm NO

Press the Up Arrow to select **SI/YES**, then press Enter to confirm. Display goes back to the main menu.

If any modification has been made, press the M key to go back to the main menu.

17 – USB DISK FUNCTIONS

This function enables the storage of events, of all the entered users and of the MultilinkNet configuration on a USB key.

Press the Enter key and the following caption is displayed:

Salva Eventi	Save Events
su UsbDisk NO	on UsbDisk NO

Press the Enter key to go to next function (users list backup) or the Up Arrow to select **SI/YES**, then Enter to confirm.

The following captions are displayed :

Disk=NO (if the USB hasn't been entered yet)

Disk=OK (with the USB key entered) XXXevent (ex. 200 events = events in the Multilink) ,

File=Mevent00 (with the Up and Down Arrows, it is possible to change the numbering from 00 to 90 to make it possible to save different events with different captions. Ex: mevent01: the name of the file saved on the USB key is mevent01).

Press the Enter key and events are downloaded on the USB key. The following caption is then displayed:

Mevent00 save OK	Mevent00 save OK
Canc Memoria? NO	Cancel Memory? NO

Press the Enter key if the Multilink events memory cancellation is not required or Up Arrow to select

SI/YES, then Enter to confirm the cancellation.

Once the operation is finished, display goes back to the main menu.

To make a copy of the users stored in the Multilink database, it is necessary to enter in the menu:

**Salva Eventi
su UsbDisk NO**

**Save Events
on UsbDisk NO**

Press the Enter key and the following caption is displayed:

**Copia UTENTI
su UsbDisk NO**

**USERS Copy
on UsbDisk NO**

Press the Enter key to go to next function (Multilink configuration storage) or Up Arrow to select **SI/YES**, then Enter to confirm.

On the display, the following captions are visualised:

Disk=NO (if the USB key hasn't been entered yet)

Disk=OK (if the USB key has been entered) XXXXUser (ex. 1200 users = users in the Multilink)

File=MLuser00 (with the Up and Down Arrows, it is possible to change the numbering from 00 to 99 to make it possible to save different users with different captions. Ex: MLuser 01: the name of the file saved on the USB key is MLuser01)

Press the Enter key and the users list is downloaded on the USB key. The following caption is then displayed:

**Lista Utenti su
MLuser00.txt**

**Users List on
MLuser00.txt**

Once the operation is finished, display goes back to the main menu.

By entering again from USB DISK Functions and confirming NO on "Save Events" and "Copy Users", the following caption is displayed:

**Copia MLINK CFG
su Usb Disk NO**

**Copy MLINK CFG
on Usb Disk NO**

This function enables to copy the Multilink configuration on a USB key.

Press the Enter key to go back to the main menu, or the Up Arrow to select **SI/YES**, then Enter to confirm.

On the display the following captions are visualised:

Disk=NO (if the USB key hasn't been entered yet)

Disk=OK (if the USB key has been entered) save in

File=MLkCfg00 (with the Up and Down Arrows, it is possible to change the numbering from 00 to 99 to make it possible to save different configurations with different captions. Es: MLkCfg 01: the name of the file saved on the USB key is MLkCfg01)

Press the Enter key and the configuration is downloaded on the USB key. The following caption is then displayed:

**MLink CFG in
MikCfg00.txt**

**MLink CFG in
MikCfg00.txt**

Once the operation is finished, display goes back to the main menu.

18 – CARDS READING DIAGNOSIS

This function enables to read and state on the display the code on the magnetic card. Press the Enter key and the following captions are displayed:

**Err= Ncar=
Cod=**

**Mistake= CharactersQuantity=
Code=**

The red and green led flash alternatively waiting for the card passage. Pass the card on the display and the following captions are visualised:

**Err=00 Ncar=10
Cod=1732184309**

**Mistake=00 CharactersQuantity=10
Code= 1732184309**

If the entered card has more then 10 characters, the display spaces the characters in different parts, mentioning them as B and C.

Ex. : **12314322451242495324332421** is displayed as follows:

Ncar : 26 (characters quantity 26)
Code = 1231432245
B = 12424953243324
C = 21

Maximum quantity of characters that can be visualised for the reading on the MultilinkNet display is 38, details as follows: Code= 10 characters, B = 14 characters, C = 14 characters

Press the **M** key to go back to the main menu.

19 – KEYS AND VOLT DIAGNOSIS

Press the Enter key and the following caption is displayed:

**Key___ 12Ve=13.7
Vb=13.8 5Ve=04.9**

Press the 4 keys to control their correct functioning and next to the word Key the following captions are displayed:

- **M** (Ok Menu Key) **ENT** (Ok Enter Key) **INC** (Ok Up Arrow Key) **DEC** (Ok Down Arrow Key)

Press the **M** key for 2 seconds to go back to the main menu.

20 – ENTRY DIAGNOSIS

This function enables to check the closing of the following contacts and indicate the results on a display:

- ⤴ Opening
- ⤴ Block
- ⤴ Door
- ⤴ Locking device

Press the **M** key for 2 seconds to go back to the main menu.

21 – RELAY AND EXIT DIAGNOSIS

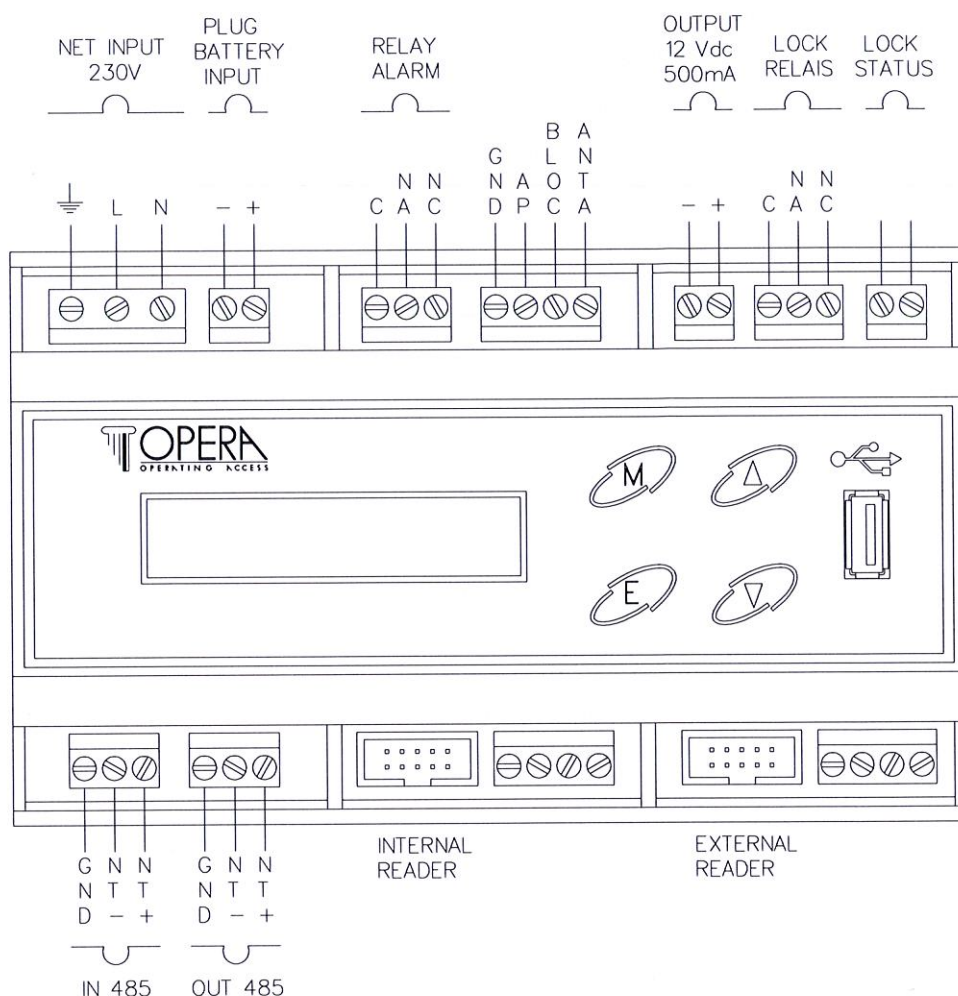
This function enables to check the correct functioning of the output relay and indicate the result on a display.

The following caption is displayed:

RL=0 RA=0 12PE=0
Leds PI=10 PE=10

Press the **M** key for 2 seconds to go back to the main menu.

Multilink Net CONNECTION CHARACTERISTICS



Upper Connectors (from left to right)

230 Vac : mains supply input.

-/+BATT: connection for the linking to the power supply /charge of the plug battery art. 00112

RELAY ALARME: dry contact for the exit alarm signaling.

GND: ground signal.

AP: N.O contact to be connected in a pulse mode to the ground signals for the lock opening by a knob, keeping the same programming time of the code.

BLOC: N.O contact to be connected to the ground signal to block codes functioning and momentary disactivate usagers.

DOOR: N.O door position contact to be connected to the ground signals to activate the forced door alarm, the prolonged opening function and to give the PC the door opening information (to be used if these fonctions are required)

12 Vdc OUTPUT: lock power supply at max 12 Vdc/500mA.

LOCK RELAY: dry contacts to activate the locks.

LOCK STATUS: N.O lock status contact locked /unlocked o be connected to ground signals and give the PC the lock opening information (to be used if these fonctions are required).

N.C. LOCK: N.C pole lock relay.

Lower connectors (from left to right)

IN 485: RS-485 network connection input (to be used for the PC connection).

OUT 485: RS-485 network connection output (to be used for the PC connection).

INTERNAL READER: 10 poles connector with flat cable to connect the reader/keyboard in the internal side of the door.

EXTERNAL READER: 10 poles connector with flat cable to connect the reader/keyboard in the external side of the door.

Front panel (from left to right)

LCD DISPLAY: backlit display to picture the operative fonctions of the unit.

M Key (Menu): enables to enter into the control menu and fonctions programming.

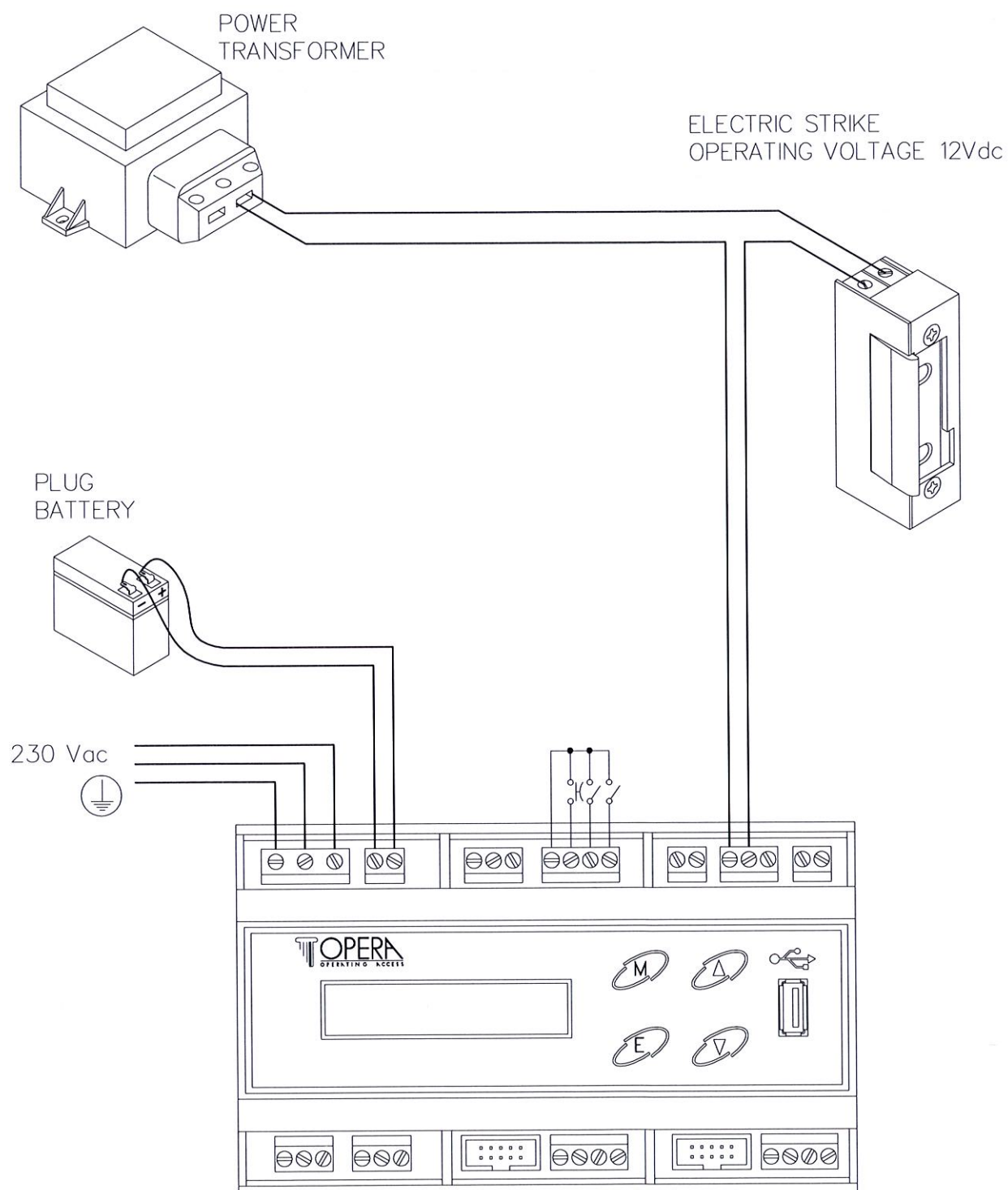
E Key (Enter): enables to enter into the menu different fonctions and confirm the entered operations.

Up Arrow: enables to scroll up the menu fonctions visualized on the display.

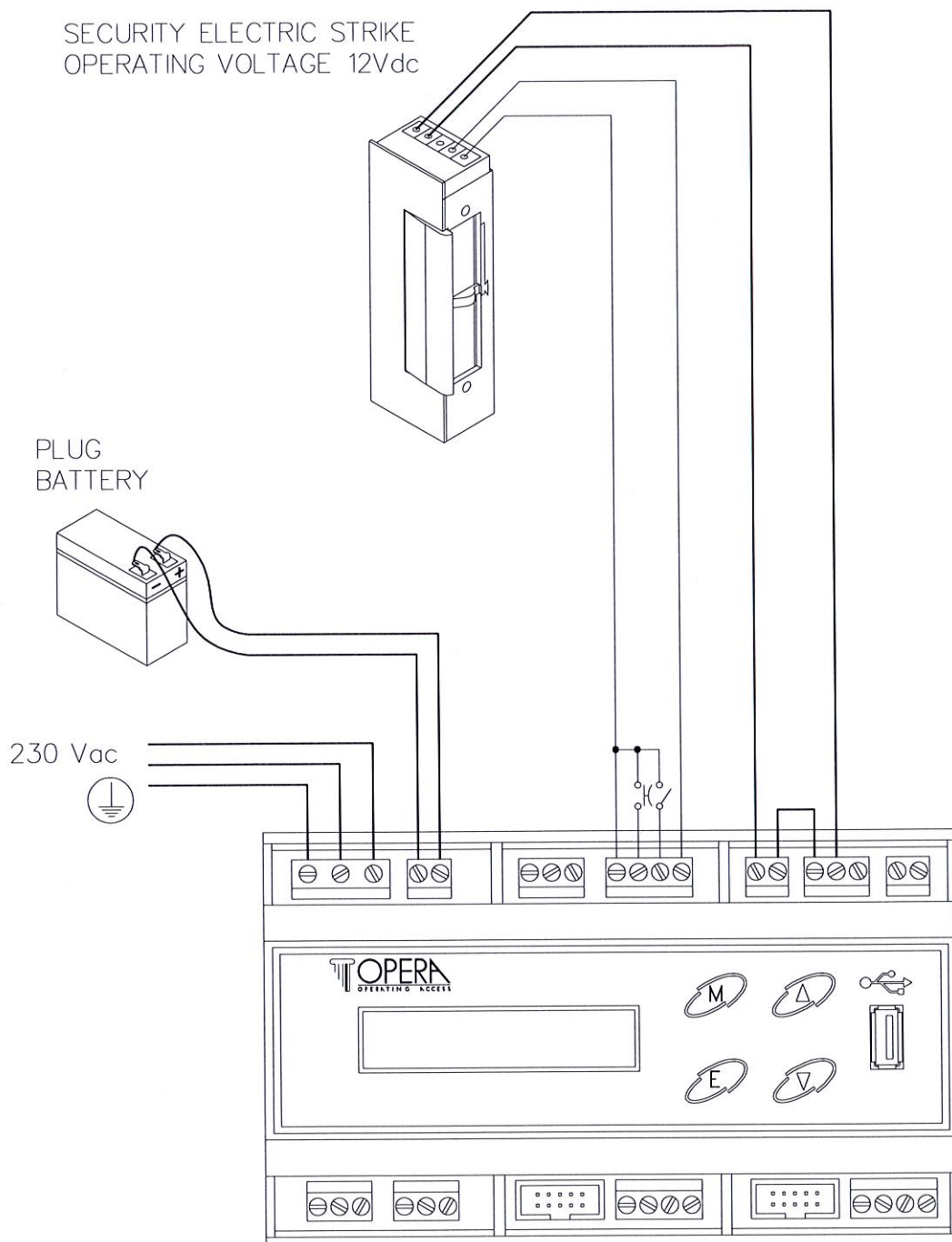
Down Arrow: enables to scroll down the menu fonctions visualized on the display.

USB PORT: enables to download on a USB Key the events storage, the usagers list and the Multilink Net configuration.

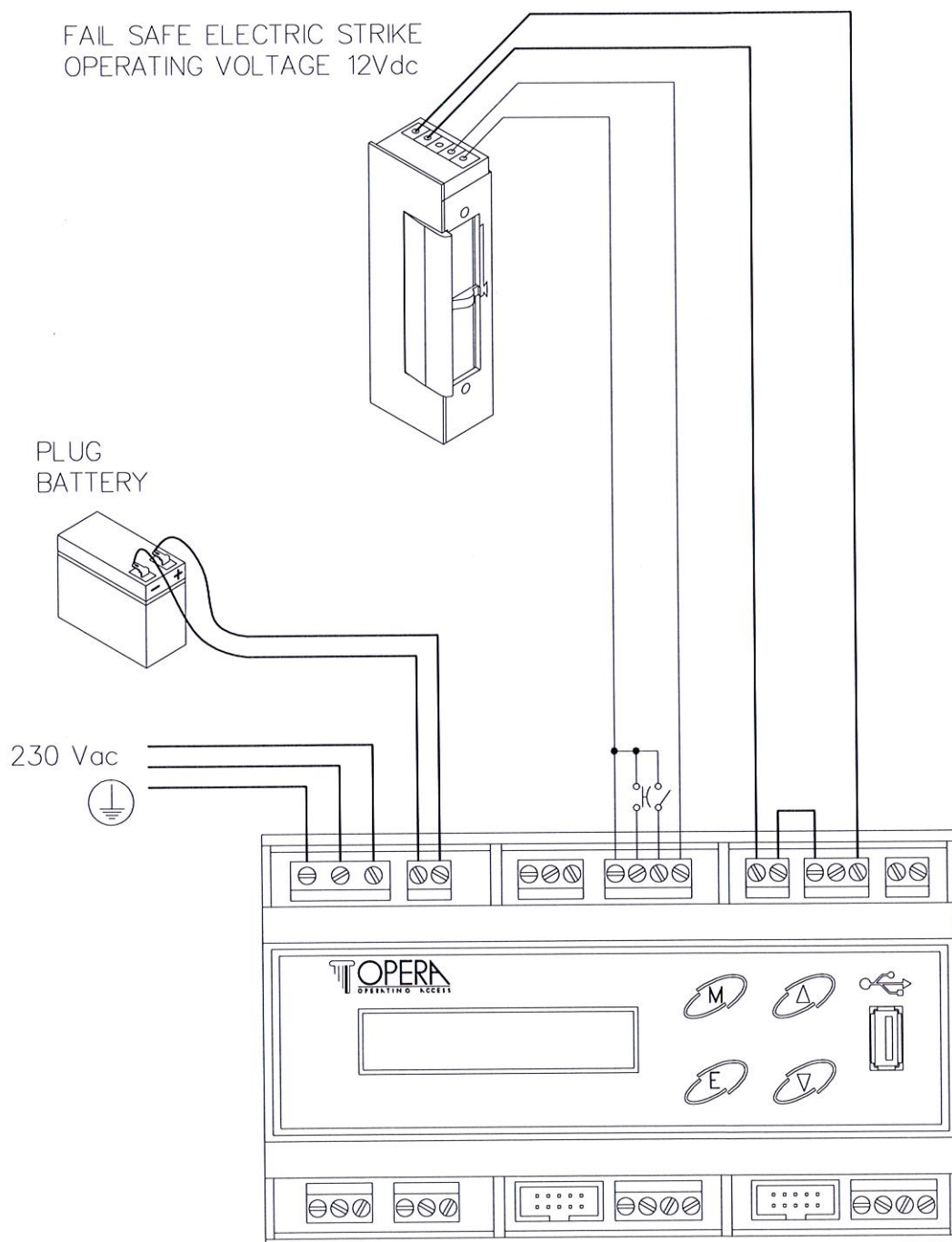
Multilink Net WIRING DIAGRAM WITH STANDARD ELECTRIC STRIKE



Multilink Net WIRING DIAGRAM WITH SECURITY ELECTRIC STRIKE

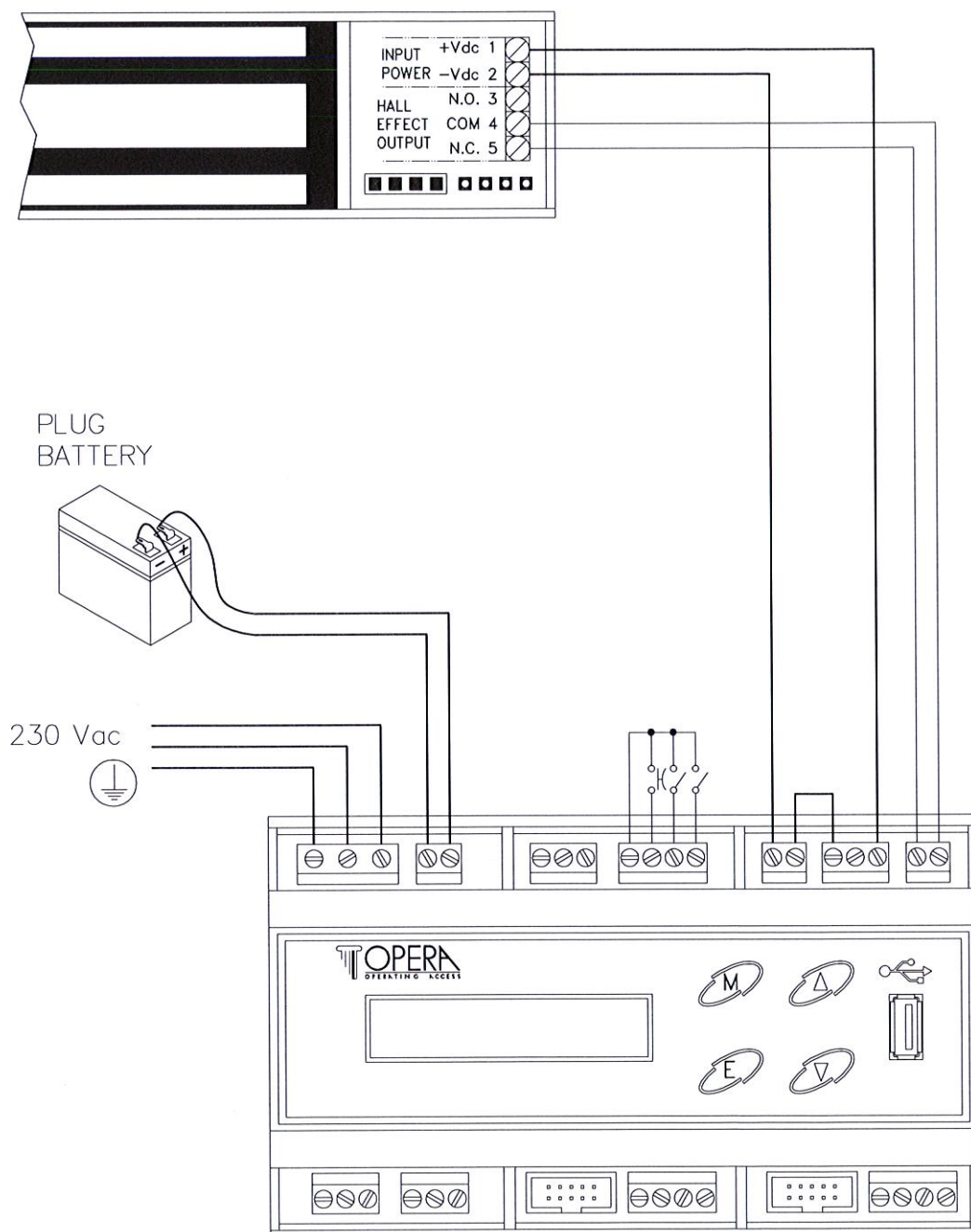


Multilink Net WIRING DIAGRAM WITH FAIL SAFE ELECTRIC STRIKE

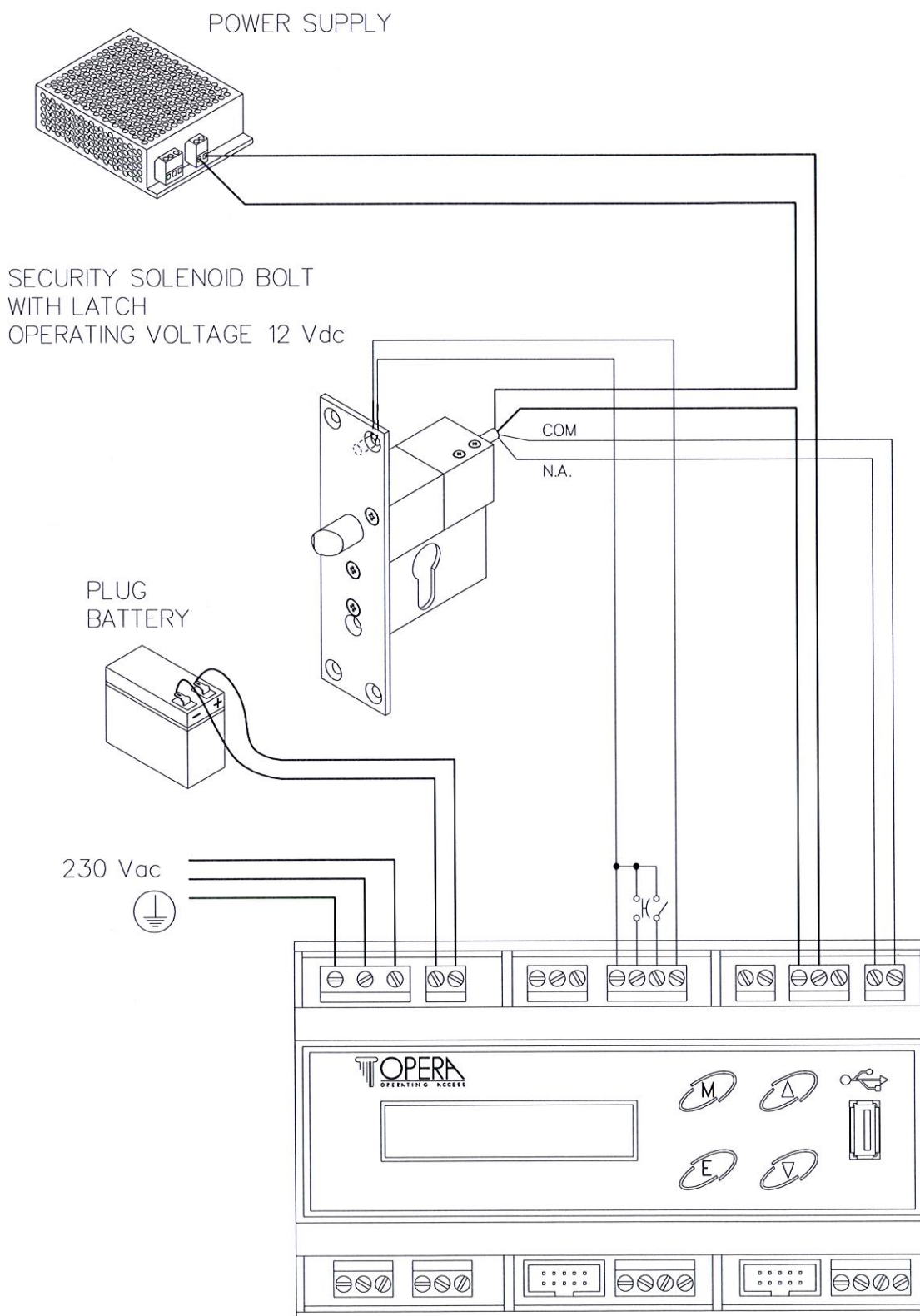


Multilink Net WIRING DIAGRAM WITH SECURITY FAIL SAFE ELECTROMAGNET

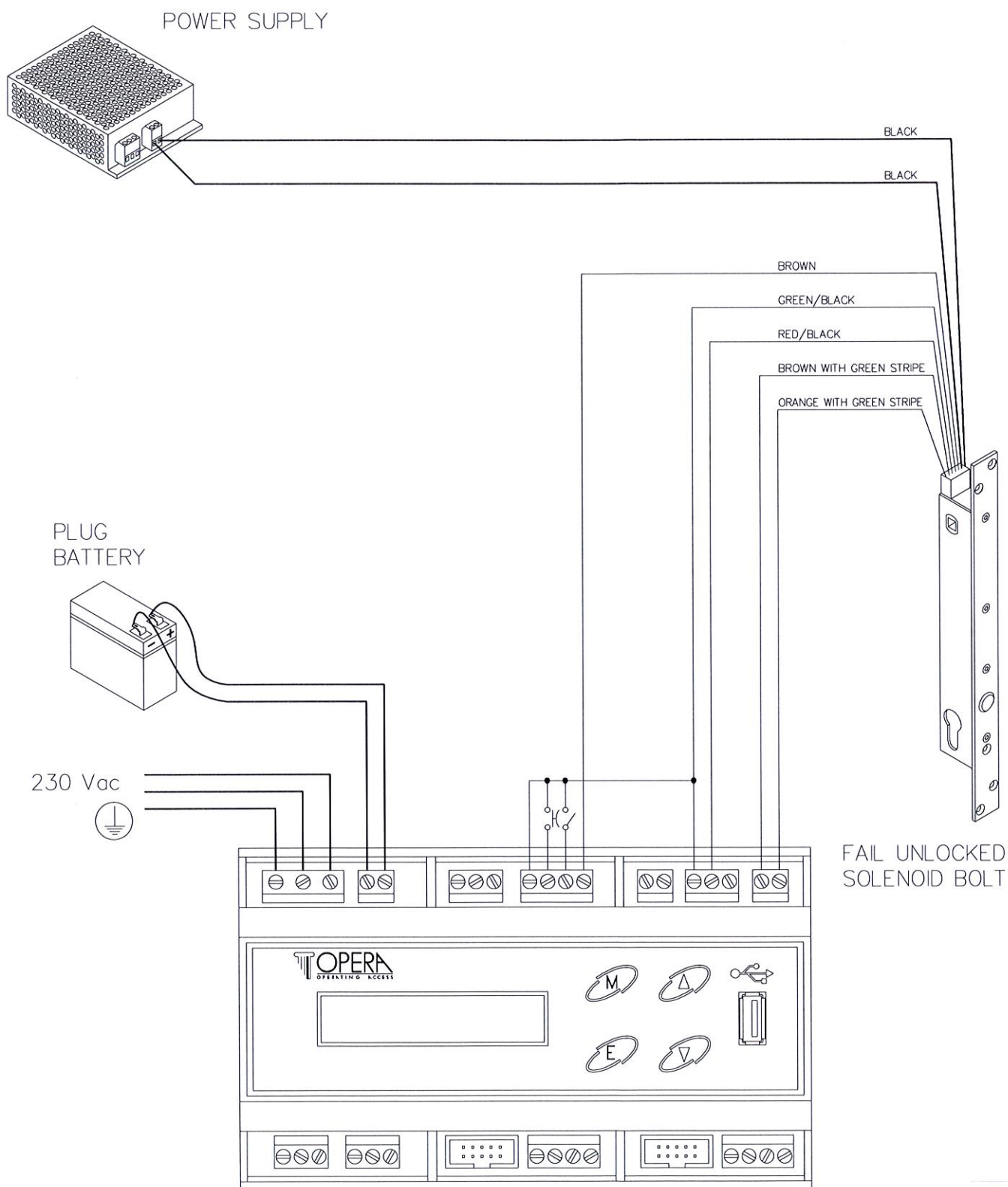
SECURITY FAIL
UNLOCKED SOLENOID BOLT
OPERATING VOLTAGE 12Vdc



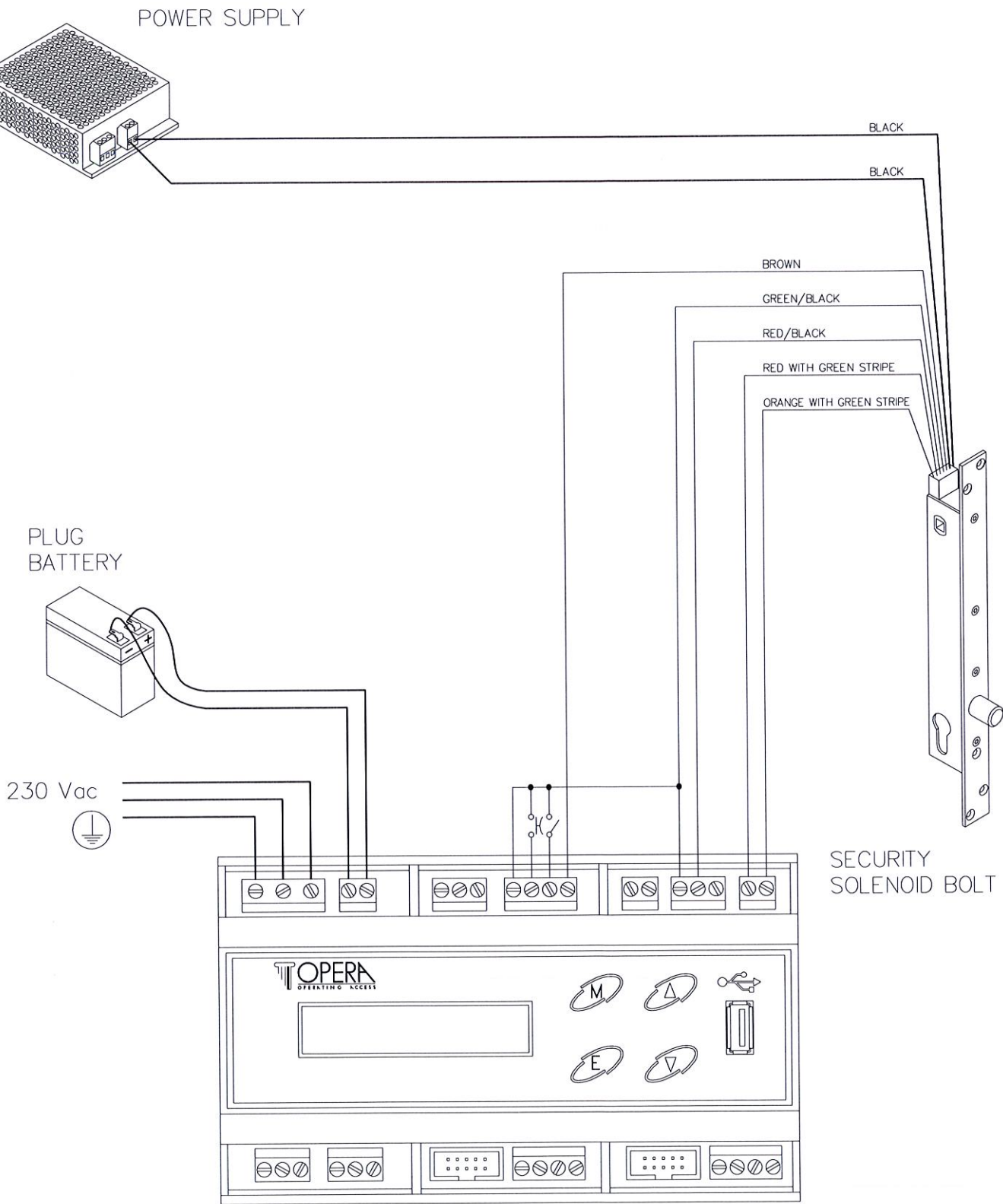
Multilink Net WIRING DIAGRAM WITH SECURITY SOLENOID BOLT WITH LATCH



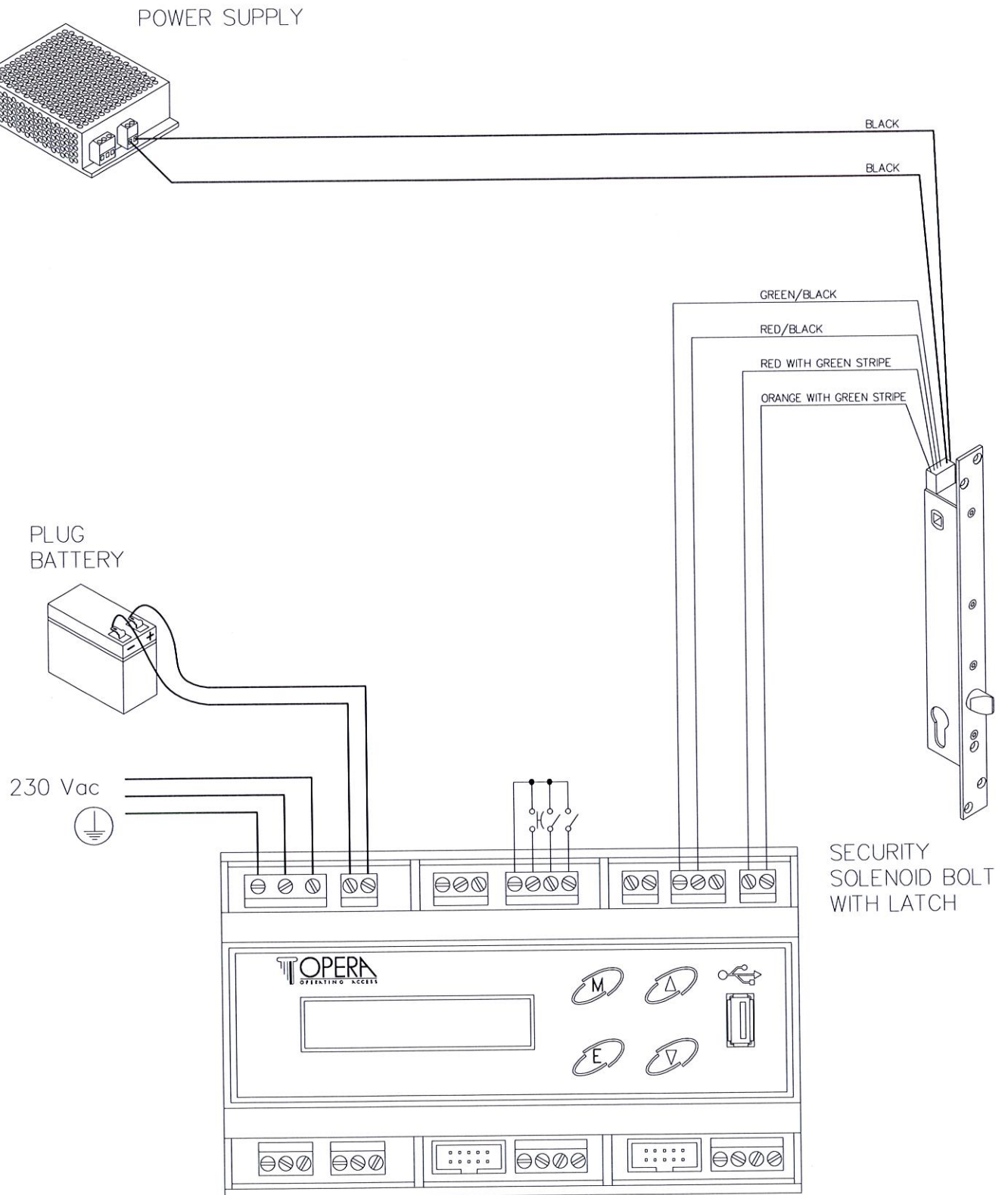
Multilink Net WIRING DIAGRAM **WITH SECURITY SOLENOID BOLT PRIMA SERIE** **Version 246 – 256**



Multilink Net WIRING DIAGRAM
WITH SECURITY SOLENOID BOLT PRIMA AND CLASSICA SERIES
Version 248 – 258 – 268 - 278



**Multilink Net WIRING DIAGRAM
WITH SECURITY SOLENOID BOLT WITH LATCH
Version 259**



Multilink Net WIRING DIAGRAM WITH BUS RS-485/USB LINE

