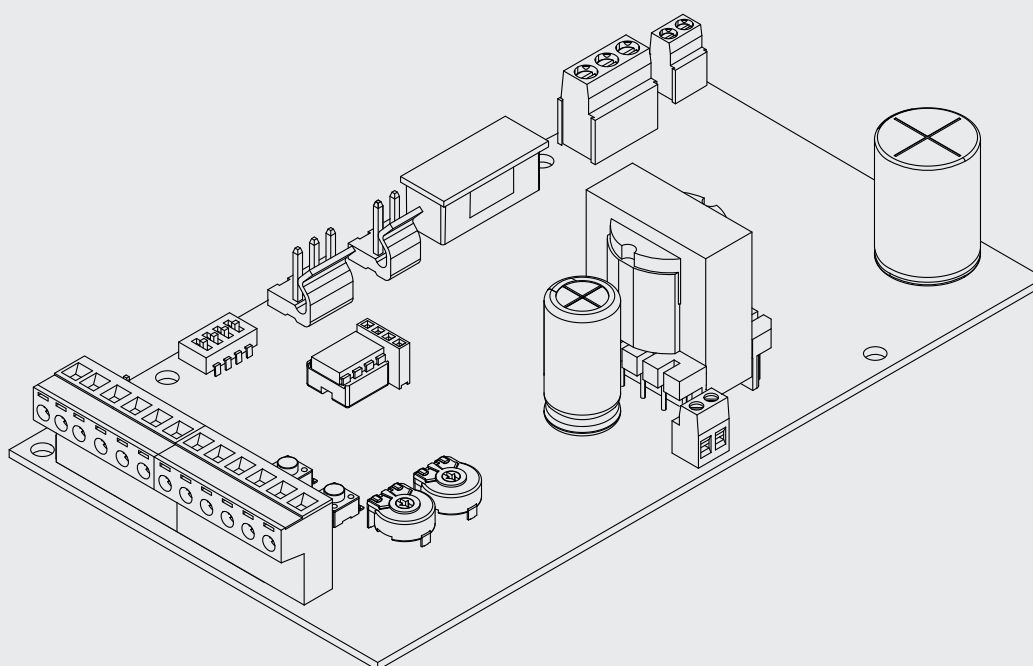


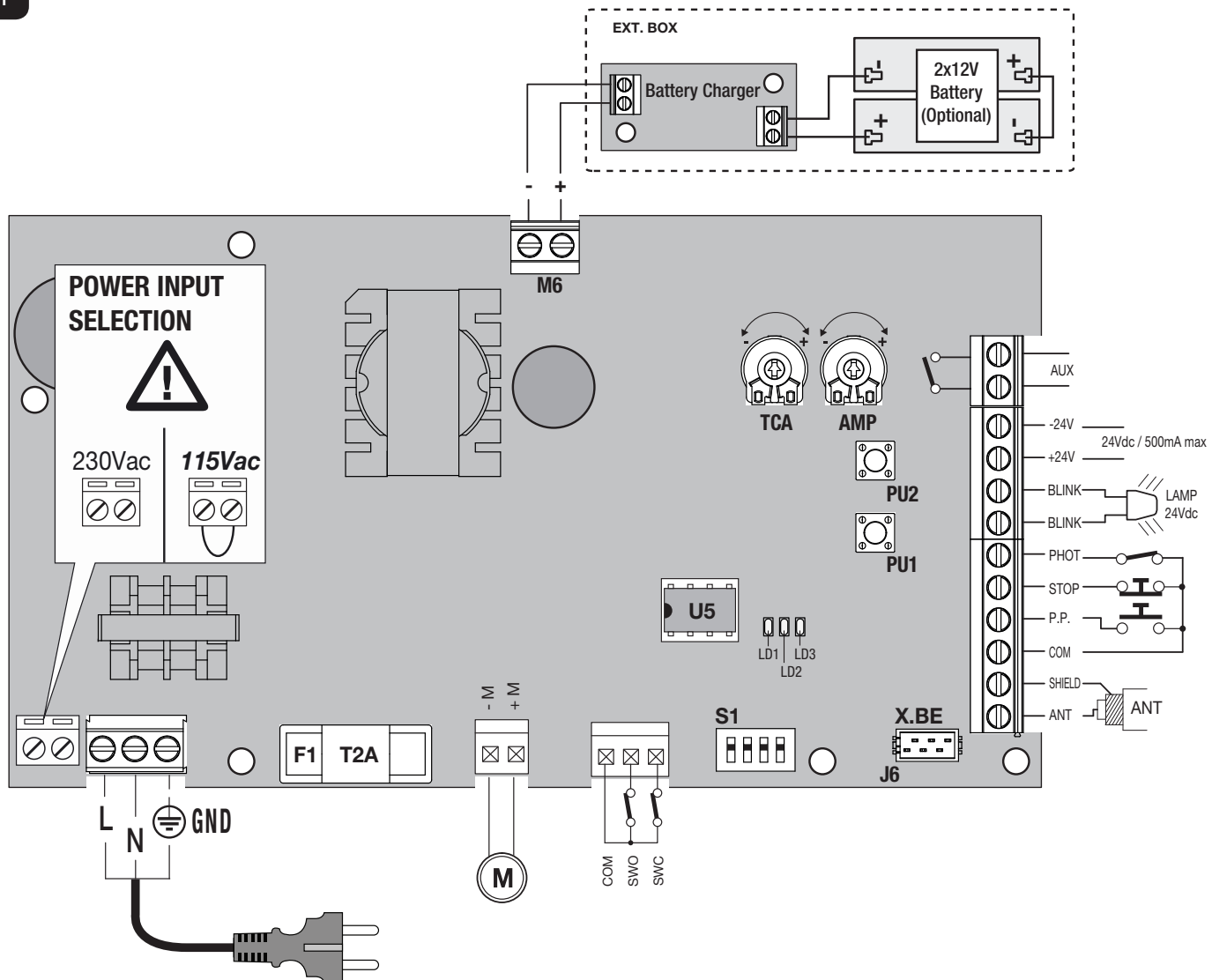
CP.B24-SW



BENINCA[®]
TECHNOLOGY TO OPEN



1



2

Functions Setup	PU2 PU1 LD1 ON	PU2 PU1 LD2 ON	PU2 PU1 LD3 ON
	PRE [ON/OFF]	AUX [SCA/2°Ch]	REM [ON/OFF]
	Photo Op [ON/OFF]	P.P. [ON/OFF]	STOP [STOP/PED]
	IBL [ON/OFF]	IBCA [ON/OFF]	SCL [ON/OFF]
Speed Setup	Close Speed PU2 PU1 LD3 50/75/100%	Open Speed PU2 PU1 LD1 50/75/100%	
	ESA Setup DIP 4 OFF: ESA ON	DIP 4 ON: ESA OFF	

**GENERAL INFORMATIONS**

The product shall not be used for purposes or in ways other than those for which the product is intended for and as described in this manual. Incorrect uses can damage the product and cause injuries and damages.

The company shall not be deemed responsible for the non-compliance with a good manufacture technique of gates as well as for any deformation, which might occur during use. Keep this manual for further use.

**INSTALLER GUIDE**

This manual has been especially written to be use by qualified fitters. Installation must be carried out by qualified personnel (professional installer, according to EN 12635), in compliance with Good Practice and current code.

Make sure that the structure of the gate is suitable for automation.

The installer must supply all information on the automatic, manual and emergency operation of the automatic system and supply the end user with instructions for use.

GENERAL WARNINGS

Packaging must be kept out of reach of children, as it can be hazardous.

For disposal, packaging must be divided the various types of waste (e.g. carton board, polystyrene) in compliance with regulations in force. Do not allow children to play with the fixed control devices of the product.

Keep the remote controls out of reach of children.

This product is not to be used by persons (including children) with reduced physical, sensory or mental capacity, or who are unfamiliar with such equipment, unless under the supervision of or following training by persons responsible for their safety.

Apply all safety devices (photocells, safety edges, etc.) required to keep the area free of impact, crushing, dragging and shearing hazard. Bear in mind the standards and directives in force, Good Practice criteria, intended use, the installation environment, the operating logic of the system and forces generated by the automated system.

Installation must be carried out using safety devices and controls that meet standards EN 12978 and EN 12453.

Only use original accessories and spare parts, use of non-original spare parts will cause the warranty planned to cover the products to become null and void.

All the mechanical and electrical parts composing automation must meet the requirements of the standards in force and outlined by CE marking.

**ELECTRICAL SAFETY**

An omnipolar switch/section switch with remote contact opening equal to, or higher than 3mm must be provided on the power supply mains.

Make sure that before wiring an adequate* differential switch and an overcurrent protection is provided.

Pursuant to safety regulations in force, some types of installation require that the gate connection be earthed. During installation, maintenance and repair, cut off power supply before accessing to live parts.

Also disconnect buffer batteries, if any are connected.

The electrical installation and the operating logic must comply with the regulations in force. The leads fed with different voltages must be physically separate, or they must be suitably insulated with additional insulation of at least 1 mm.

The leads must be secured with an additional fixture near the terminals.

During installation, maintenance and repair, interrupt the power supply before opening the lid to access the electrical parts

Check all the connections again before switching on the power. The unused N.C. inputs must be bridged.

* 16A Circuit breaker

**WASTE DISPOSAL**

As indicated by the symbol shown, it is forbidden to dispose this product as normal urban waste as some parts might be harmful for environment and human health, if they are disposed of incorrectly.

Therefore, the device should be disposed in special collection platforms or given back to the reseller if a new and similar device is purchased. An incorrect disposal of the device will result in fines applied to the user, as provided for by regulations in force.

Descriptions and figures in this manual are not binding. While leaving the essential characteristics of the product unchanged, the manufacturer reserves the right to modify the same under the technical, design or commercial point of view without necessarily update this manual.

TECHNICAL DATA

Power supply	115 o 230 Vac ±10% 50/60 Hz
Output	1 motor 24Vdc
Motor maximum power	100W (180W peak)
Standby absorbed power	0,5 W max.
Accessories power supply	24Vdc 500mA max.
Protection level	IP40
Operating temp.	-20°C / +50°C
Radio receiver	433,92 MHz incorporato e configurabile
Memory capacity	64 rolling-code ARC

CONTROL UNIT CP.B24-SW

ELECTRICAL CONNECTIONS

The following table shows the electrical connections in Fig. 1:

Terminals	Function	Description
SEL 115/230	Mains power supply selection	230 Vac 50/60 Hz (from 207 to 253 Vac) jumper M7 OPEN 115 Vac 50/60 Hz (from 102 to 125 Vac) jumper M7 CLOSED
L/N/GND	Power supply	Mains power supply input 115Vac/230Vac selectable via M7 jumper
MOT	Motor	Quick connector for the connection of 24 Vdc motor
COM/SWO/SWC	Adjustable	Quick connector for the connection of the limit switches COM: Common - SWO Limit Switch Opens (N.C. contact) - SWC Limit switch closes (N.C. contact)
ANT/SHIELD	Antenna	Built-in radio receiver antenna connection ANT: Signal / SHIELD: Display
COM	General	Common for all control inputs.
S.S.	Step-by-Step	Step-by-step key input (N.O. contact). The control unit executes a command at each S.S. impulse according to the sequence: OPENS>STOP>CLOSES>STOP>OPENS or OPENS>CLOSES>OPENS. See dip switch 2
STOP	STOP	STOP key input (N.C. contact) Settable as a PED key (N.O. contact) see dip switch 2
PHOT	Photocell	Photocell input (N.C. contact) active in the closure and opening phase according to the setting of dip switch 2
BLINK	Flashing	24Vdc flashing connection 15W max.
+ 24V -	24 Vac/dc	Power supply output accessories 24Vdc/500mA max.
AUX	Auxiliaries output	Clean contact (N.O.) configurable using Dip Switch 1 as SCA (gate open indicator light) or second radio channel.
J6	X.BE	Quick connector for KNX interface card (item X.BE - See paragraph KNX)
M6	Battery charger	Quick connector for optional battery charger card connection.

ARC TRANSMITTERS

IMPORTANT, PLEASE READ CAREFULLY:

The radio receiver in this product is compatible only with ARC (Advanced Rolling Code) transmitters which, thanks to 128 bit coding, guarantee superior anti-copying security.

AUTOSET

CAUTION! THE AUTOSET PROCEDURE DESCRIBED BELOW IS MANDATORY!

During the AUTOSET phase, the control unit performs a number of opening and closing movements during which essential operating parameters are set, including:

- Start- and end-of-run positions.
- Start of the slowing phases.
- Torque values applied during panel movement.
- Recognition of the device connected to the PHOT input.

Procedure:

- 1) Position the leaf in the CLOSURE position (check activation of the SWC limit switch)
- 2) With the control unit connected to the mains, press and hold down the PU1 + PU2 keys until the 3 red LEDs light up cyclically.
- 3) The AUTOSET procedure starts, some opening and closing movements are commanded.
- 4) At the end of the procedure the panel stops in the open position and the LED lights remain steady for 5s to confirm AUTOSET correctly carried out.

CHANGES TO SLOWING SPACES

During the AUTOSSET phase, a deceleration space can be set higher than the default space set by the control unit. Proceed as follows:

- 1) Bring the leaf in the CLOSURE position (check activation of the SWC limit switch)
- 2) Start-up an AUTOSSET procedure: press and hold down the PU1 + PU2 keys until the 3 red LEDs light up cyclically.
- 3) The door will start opening.
- 4) A CLOSING movement will then start at normal speed, during which the slowing starting point can be selected using an S.S. command. (transmitter, S.S. input, PU1) keys when needed.
- 5) An OPENING movement will then start at normal speed, during which the slowing starting point can be selected using an S.S. command. (transmitter, S.S. input, PU1) keys when needed.
- 6) At the end of the procedure the panel stops in the open position and the LED lights remain steady for 5s to confirm AUTOSSET correctly carried out.

Disabling the slowing phases

If you do not want the slowing phases, proceed as follows:

- 1) Bring the leaf in the CLOSURE position (check activation of the SWC limit switch)
- 2) Set DIP 1/2/3 ON
- 3) Start-up an AUTOSSET procedure: press and hold down the PU1 + PU2 keys until the 3 red LEDs light up cyclically.
- 4) The AUTOSSET procedure starts, some opening and closing movements are commanded
- 5) On completion of the autosest manoeuvres, bring the DIP OFF, slowing is now disabled.

TRIMMER FUNCTION

TCA Trimmer

Allows to adjust automatic closing time. Adjustment may vary from a minimum of 3s to a maximum of 180s.

With the TCA trimmer turned completely clockwise the TCA is disabled.

With TCA active and the panel open, the LD1 LED starts flashing quickly to indicate the counting of the TCA time in progress.

AMP Trimmer

Adjustment of the sensitivity of the amperometric sensor for obstacle detection during opening and closing.

Rotate the trimmer clockwise (+) to increase the torque, turn counter-clockwise (-) to decrease the torque.

In the case of obstacle detection:

- Stops movement during opening.
- Stops and reopens the panel for about 3s during closing .

CAUTION:

The AMP trimmer increases or decreases the value that the control unit has set in the various points of the run during AUTOSSET phase.

It should therefore be set **only after a complete AUTOSSET procedure** and in compliance with the regulations in force.

DIP-SWITCH FUNCTION (S1)

DIP 1

DIP 1 enables to:

- Enable/disable pre-flashing PRE
- Selection of the AUX output operating mode.
- Enable/disable remote transmitter acquisition REM

The procedure involves switching DIP 1 ON, carrying out the operations described, then switching it back to OFF to confirm programming.

PRE-FLASHING enabling/disabling (PRE)

Switching DIP1 ON with the PU2 key will enable or disable pre-flashing.

The LD1 LED indicates the status of the function:

LED LD1 on: Pre-flashing enabled. The flashing light activates 3s before the motor starts.

LED LD1 off: Pre-flashing disabled (default)

ATTENTION: Switch DIP 1 to OFF at the end of programming.

Selection of the AUX output operating mode

After bringing DIP1 On with key PU1, select the operating mode of the AUX output as SCA (Gate Open Indicator Light) or as Second Radio Channel.

The LD2 LED indicates the status of the function:

LED LD2 on: Second Radio Channel, the output is controlled by the second radio channel of the incorporated receiver (see radio menu).

LED LD2 off: Gate Open Indicator Light, the contact is open with the door closed, intermittent with the door in motion, closed with the door open (default)

ATTENTION: Switch DIP 1 to OFF at the end of programming.

Enabling/disabling of remote transmitter acquisition (REM)

Switching DIP1 to On by simultaneously pressing PU1 + PU2 enables or disables remote acquisition, as described in the paragraph "Remote acquisition of transmitters".

Please note: Reception of duplicate "AK" series transmitters is simultaneously enabled or disabled.

The LD3 LED indicates the status of the function:

LED LD3 on: Remote acquisition enabled (default)

LED LD3 off: Remote learning disabled

ATTENTION: Switch DIP 1 to OFF at the end of programming.

DIP 2

DIP 2 enables:

- Selection of the PHOTO input operating mode.
- Selection of the operating mode of the "S.S. key" and the transmitter. (S.S.)
- Enable the STOP input as the Pedestrian input (Partial opening) (STOP/PED)

The procedure involves switching DIP 2 ON, carrying out the operations described, then switching it back to OFF to confirm programming.

Selection of the PHOTO input mode

After switching DIP2 On with the PU2 key, the PHOTO input operating mode is set.

The LD2 LED indicates the status of the function:

LED LD2 on: PHOTO input enabled both in closure and opening.
In the opening phase: opening of the contact caused by stoppage of the motor, when the photocell is free, opening restarts.
In the closure phase: opening of the contact causes stoppage of the motor, when the photocell is free, the running direction inverts (opens).

LED LD2 off: PHOTO input enabled only in closure (default).
In the closure phase: opening of the contact causes stoppage of the motor and inversion of the running direction (opens).

ATTENTION: Switch DIP 2 to OFF at the end of programming.

Selection of the operating mode of the "SS key"

After switching DIP2 On with the PU1 key, the SS key and transmitter operating mode is set.

The LD2 LED indicates the status of the function:

LED LD2 on: OPENS>CLOSES>OPENS> operation
LED LD2 off: OPENS>STOP>CLOSES>STOP> (default) operation.

ATTENTION: Switch DIP 2 to OFF at the end of programming.

STOP input enabled/disabled as PEDESTRIAN INPUT

After switching DIP2 On, simultaneously pressing PU1+ PU2, the STOP input is enabled or disabled as the input for the PEDESTRIAN command (becoming a N.O. input)

The LD3 LED indicates the status of the function:

LED LD3 on: STOP input enabled as the PEDESTRIAN input (N.O.).
LED LD3 off: No change to the STOP input (default).

ATTENTION: Switch DIP 2 to OFF at the end of programming.

DIP 3

DIP 3 enables:

- Enable/disable the apartment complex function (IBL)
- Enable/disable the impulses block function in the TCA phase (IBCA)
- Enable/disable the rapid closure function (SCL)

The procedure involves switching DIP3 to ON, carrying out the operations described, then switching it back to OFF to confirm programming.

APARTMENT BLOCK FUNCTION (IBL) enabling/disabling

After switching DIP3 On with the PU2 key, the apartment complex function is enabled or disabled (The S.S. or transmitter impulse has no effect during the opening phase)

The LD1 LED indicates the status of the function:

LED LD1 on: Apartment complex function enabled.
LED LD1 off: Sharing function disabled (default).

ATTENTION: Switch DIP 3 to OFF at the end of programming.

Enable the impulses block function in the TCA phase (IBCA)

After switching DIP3 On with the PU1 key, the IBCA function is enabled or disabled (The S.S. or transmitter impulse has no effect during the TCA pause)

The LD2 LED indicates the status of the function:

LED LD2 on: IBCA function enabled.
LED LD2 off: IBCA function disabled (default).

ATTENTION: Switch DIP 3 to OFF at the end of programming.

RAPID CLOSURE (SCL) enabling/disabling

After switching DIP3 On, simultaneously pressing PU1+ PU2 enables or disables rapid closure (with the gate open or in motion, intervention of the photocell causes automatic closure after 3s. Active only with TCA enabled)

The LD3 LED indicates the status of the function:

LED LD3 on: Rapid closure enabled.
LED LD3 off: Rapid closure disabled (default).

ATTENTION: Switch DIP 3 to OFF at the end of programming.

DIP 4

Disabling of the ESA energy saving function.

With the ESA function enabled once opening or closing movements have been completed, the control unit is in maximum energy efficiency condition, reducing absorption to minimum and disconnecting accessory outputs.

On: ESA energy saving function disabled.

To use if you want to have the accessories power supply output always enabled, for example if using 24 Vdc keypads or other devices that need to be always powered

Off: ESA energy saving function enabled (default).

OPENING AND CLOSING MOVEMENT SPEED ADJUSTMENT

You can adjust the opening and closing movement speed following this procedure (the slowing speed remains unchanged):

Switch DIP 1 and DIP 2 ON.

with the PU1 key, select the CLOSURE speed, indicated by LED LD3

LD3 1 flashing	50% of maximum speed (Default)
LD3 2 flashes	75% of maximum speed
LD3 steady light	maximum speed

with the PU2 key, select the OPENING speed, indicated by LED LD1

LD1 1 flashing	50% of maximum speed
LD1 2 flashes	75% of maximum speed
LD1 steady light	maximum speed (Default)

ATTENTION: Switch DIP 1 and 2 OFF at the end of programming.

There is a label applied inside the central cover with the table in Fig. 2 which schematically summarises the functions described above.

OPERATOR PRESENT MODE

Switching DIP to ON changes the control unit to OPERATOR PRESENT mode.

The PHOT input takes on the CLOSE key function (connect key with N.O. contact).

The S.S. input takes on the OPEN key function (connect key with N.O. contact).

The OPEN/CLOSE keys must remain pressed during the movement.

Opening the STOP input stops the motor. Simultaneous pressing of OPEN/CLOSE keys stops the motor.

CONFIGURATION OF BUILT-IN RECEIVER (MANUAL STORAGE)

The control unit is equipped with a built-in radio module to receive ARC rolling-code remote controls, with a frequency of 433.92MHz.

Before using the remote control, please study the information with care, the storage procedure is shown as follows, the device is able to store up to 64 different codes.

Storage of a transmitter key with S.S. activation

- Press the PU2 key once for 1s, the LD1 LED emits 1 flash with 1s pause.
- Press the key of the transmitter to be memorised with S.S. function within 10s, the 3 red LEDs light up for 1s, then, after storing, the receiver automatically exits the programming phase.

Storage of a transmitter key with SECOND RADIO CHANNEL function enabling.

- Press the PU2 key once for 1s, the LD1 LED emits 1 flash with 1s pause.
- Press the PU2 key again, the LD1 LED flashes twice with 1s pause
- Press the key of the transmitter to be memorised the 2nd Radio Channel within 10s, the 3 red LEDs light up for 1s, then, after storing, the receiver automatically exits the programming phase.

The output enables for 1 second on each press of the memorised key.

To exit programming without storing the transmitter, wait 10s.

Storage of a transmitter key with PEDESTRIAN function enabling

- Press the PU2 key once for 1s, the LD1 LED emits 1 flash with 1s pause.
- Press the PU2 key twice more, the LD1 LED will flash 3 times with 1s pause
- Press the key of the transmitter to be memorised with the Pedestrian function within 10s, the 3 red LEDs light up for 1s, then, after storing, the receiver automatically exits the programming phase.

Pressing the key associated with the pedestrian function controls partial opening of the leaf (approx. 1.5m)

Deletion of a radio code

- Press the PU2 key once for 1s, the LD1 LED emits 1 flash with 1s pause.
- Press the PU2 key again 3 times, the LD1 LED will flash 4 times with 1s pause
- Press the key of the transmitter you want to delete within 10s, the 3 red LEDs light up for 1s, then, after deletion the receiver automatically exits the programming phase.

Remote acquisition of a transmitter

If you already have a memorised transmitter, others can be memorised without accessing the control panel. Remote storage must be performed with the panel completely open, regardless of the TCA setting. Proceed as follows:

- 1 Press the hidden key on the previously memorised transmitter.
- 2 Press the key of the memorised transmitter to be copied within 10s. The flashing light switches on to conform receipt.
- 3 Press the hidden key of the new transmitter to which the function is to be associated within 10s.
- 4 Press the key of the new transmitter to which you want to associate the function selected in point 2 within 10s. The flashing light switches on to conform receipt.
- 5 The new transmitter has been memorised, the receiver exits the programming phase.
E.g.: key 1 of TX "A" contains the S.S. function that you want to assign to key 2 of the new TX "B"; press in sequence:
hidden key of TX A >> key 1 of TX A >> hidden key of TX B >> key 2 of TX B.

Deleting all transmitters from memory

- Keep the PU2 key pressed for 15s, the LD1 / 2/3 LEDs and the service light start flashing quickly and turn off when cancellation is complete.
- Release the PU2 key, the memory has been erased.

PLEASE NOTE:

Transmitters may not be memorised during the opening/closing phases of the motor due to safety reasons.

KNX COMMUNICATION INTERFACE

Today, KNX is the open global standard, compliant with the main European and international standards, allowing the automated and decentralized management of technological systems of a wide range of structures: commercial buildings, industries, offices, homes, public premises, schools and many more.

This product is compatible with KNX standard and can be connected to a KNX network using the optional X.BE accessory.

For further information, please refer to the instructions supplied with the X.BE.

TOTAL RESET

This procedure takes the control panel back to factory default conditions.

ATTENTION: All memorised transmitters are also deleted.

Total reset procedure:

- Disconnect from the mains
- Press and hold PU1 + PU2 keys
- Connect to the mains
- Wait for LD1 / LD2 / LD3 LEDs to turn on in sequence, total reset is now complete.

LED DIAGNOSTICS

LEDs LD1/LD2/LD3 in normal operation give a number of indications:

LD1

Slow flashing: Mains supply present, no input active

Fast flashing: TCA pause count

LD2

on: motor at end-of-run CLOSING

LD3

on: motor at end-of-run OPENING

LD1+LD2+LD3

1 flash with pause: Inputs error Check connections SS/PHOT/STOP

2 flashes with pause*: Motor/safety error Check connection of the motor and the safety devices (photocells, stop)

3 flashes with pause: Amperometric sensor intervention

* If testing of the safety devices is unsuccessful, no manoeuvre is controlled and flashing switches on for 10s.

LD2+LD3

fast flashing thermal protection intervention

BENINCA'

AUTOMATISMI BENINCÀ SpA - Via Capitello, 45 - 36066 Sandrigo (VI) - Tel. 0444 751030 r.a. - Fax 0444 759728
