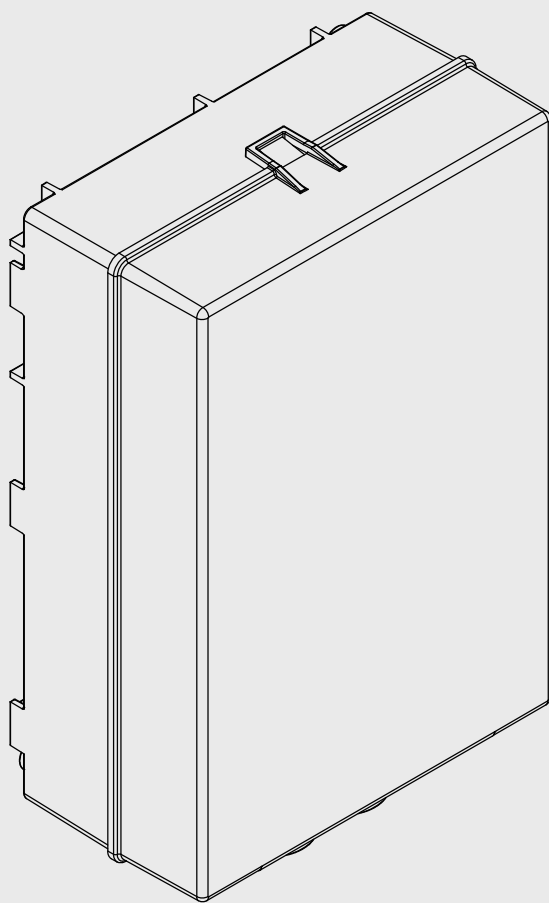
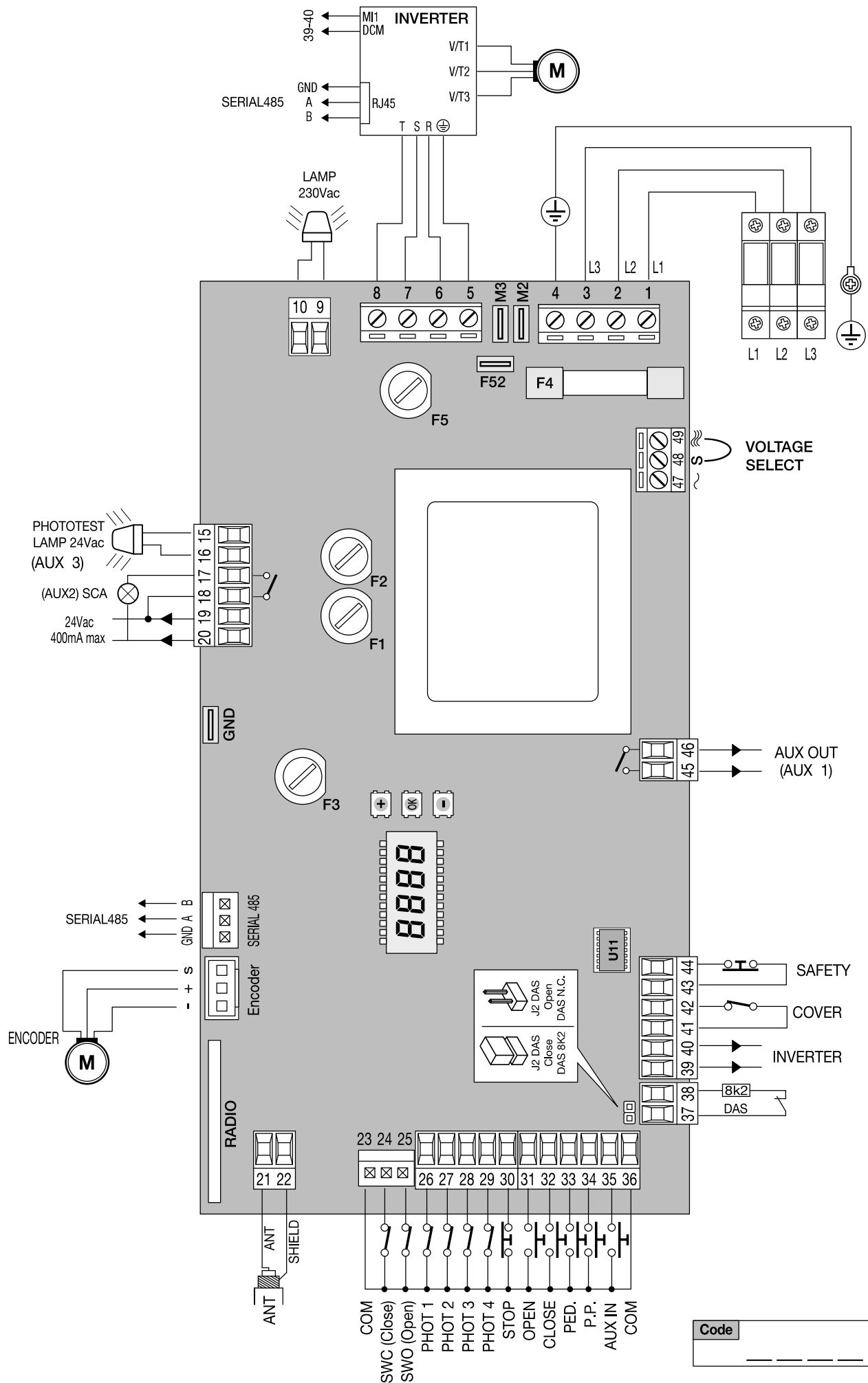


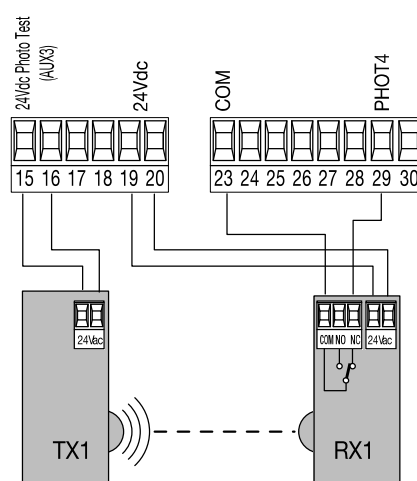
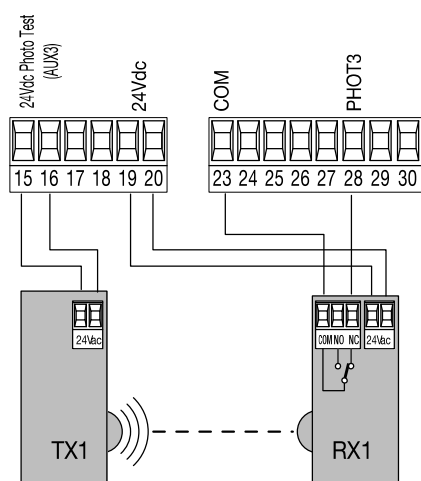
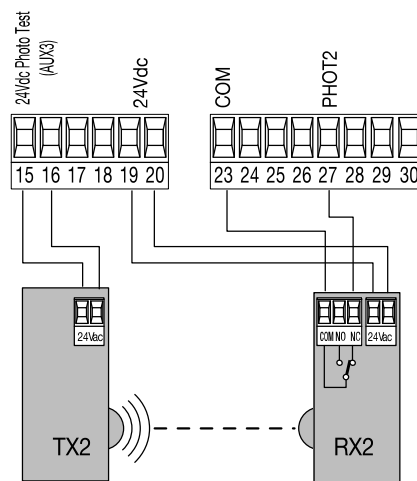
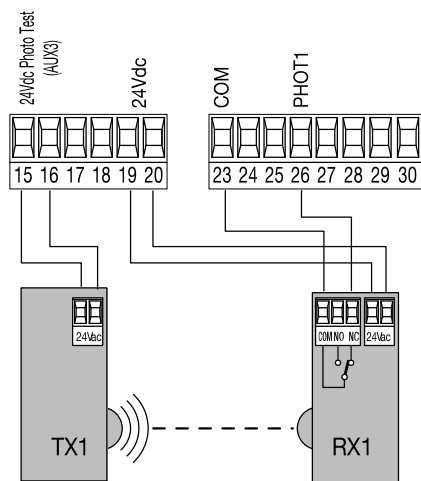
CP.BISON OTI



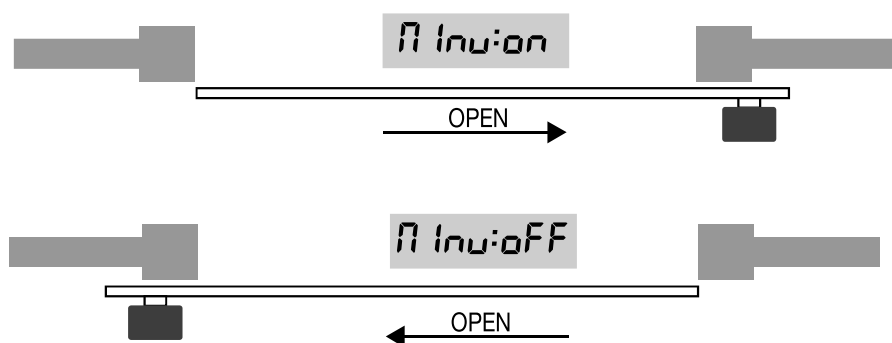
BENINCA[®]
TECHNOLOGY TO OPEN



3



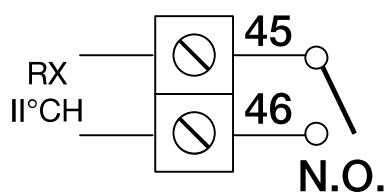
4



5

II°CH RADIO

AUX: 1



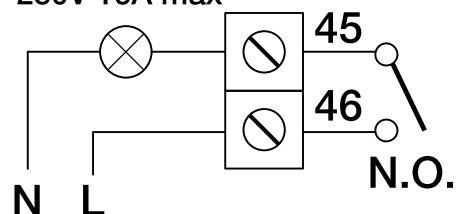
SERVICE LIGHT

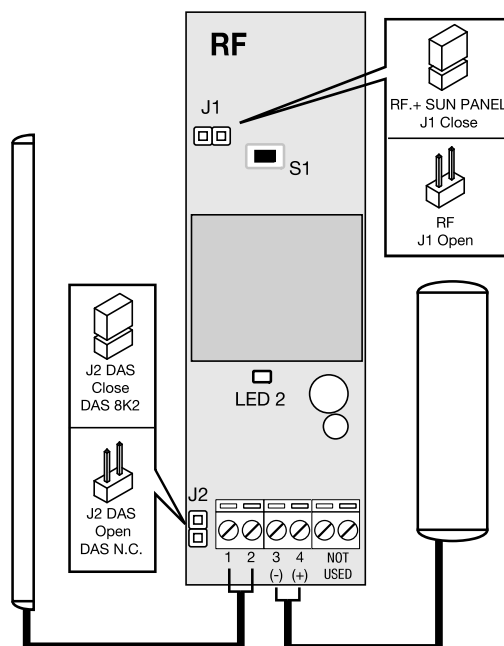
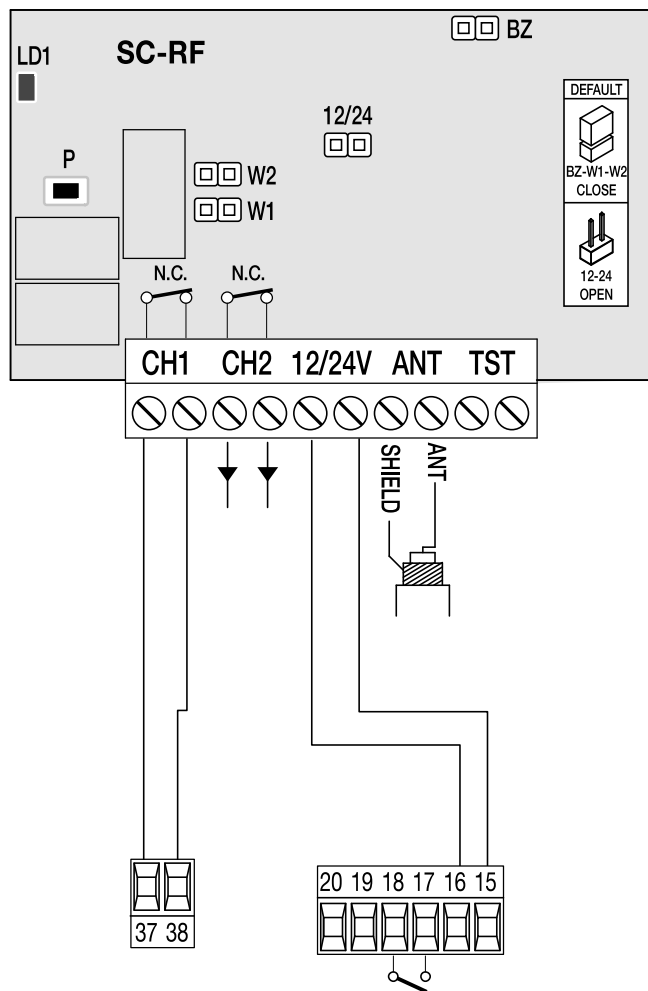
AUX: 2

LIGHT ZONE

AUX: 3

LIGHT
250V 16A max







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.



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

Mains power supply	Single-phase: (BISON 25 OTI) 230 VAC 50/60 Hz Three-phase: (BISON 35/45 OTI) 400 VAC 50/60 Hz
Output, Motor	1 motor, 230 V three-phase or 400 VAC three-phase
Motor max current	BISON 25 OTI: 8A - BISON 40 OTI 2.6 A
Output, power supply of accessories	24VAC 0.4 A max.
Protection level	IP54
Operating temperature	-20°C / +50°C
Radio receiver	433,92 MHz, incorporated and configurable (rolling-code or fixed+rolling-code+ ARC Advanced Rolling Code)
No. of codes storable in memory	64

CP.BISON OTI CONTROL UNIT

INPUT/OUTPUT FUNCTIONS



CAUTION!: The CP.BISON OTI control unit is equipped with an embedded anti-crash device (amperometric sensor). Given the overall dimensions of the door leaves for which the device is intended, the latter cannot be considered a safety device. It is therefore **STRICTLY MANDATORY** to install activated protection sensitive edges according to regulations in force.

N° Terminals	Function	Description
1-2-3-4	Power supply	Single-phase or three-phase mains power supply. The unit is powered through a mains filter applied before the control unit. Single-phase 1: Phase - 2: Neutral - 3: Not in use - 4: GND Three-phase 1:L1 - 2:L2 - 3:L3 - 4:GND.
5-6-7-8	INVERTER	Single-phase or three-phase INVERTER connection Single-phase 6: Phase - 7: NEUTRAL Three-phase 5:GND - 6:R - 7:S - 8:T.
9-10	Flashing light	Connection of flashing light, 230VAC 40W max, or 115VAC 40W max, for BISON TI 115.
15-16	24V Flashing light or Phototest (AUX 3)	Connection to 24VAC flashing light or Phototest output for checked photocells.
17-18	SCA (AUX 2)	Normally open, voltage-free contact for open gate indicator light, 24VAC 0.5A max
19-20	24 VAC	Output, power supply of accessories, 24Vac/400mA max
SERIAL 485	Serial, inverter	485 serial communication between control logics and Inverter.
Encoder	Encoder	Connection to motor Encoder.
21-22	Antenna	Connection to built-in radio receiver module of the antenna (21-signal/22-monitor).
23-36	COM	Common, for all control inputs.
24	SWC	Input, CLOSE limit switch (Normally Closed contact)
25	SWO	Input, OPEN limit switch (Normally Closed contact)
26	PHOT 1	Input, Limit switch 1 (NC contact). It can be disconnected in the opening phase, see PH01 logics.
27	PHOT 2	Input, Limit switch 2 (NC contact). It can be disconnected in the opening phase, see PH02 logics.
28	PHOT 3	Input, Limit switch 3 (NC contact). It can be disconnected in the opening phase, see PH03 logics.
29	PHOT 4	Input, Limit switch 4(NC contact). It can be disconnected in the opening phase, see PH04 logics.
30	STOP	Input, STOP push-button (Normally Closed contact)
31	OPEN	Input, push-button for OPEN contact (Normally Open contact)
32	CLOSE	Input, CLOSE push-button (Normally Open contact)
33	PED	Input, push-button for pedestrian opening (Normally Open contact)
34	Step-by-Step	Input, Step-by-Step push-button (Normally Open contact)
35	AUX IN	Input for Dead man function By connecting this output to 36-COM terminal, dead man function is enabled. To be used by means an appropriately marked N.O. contact for controlling the automation even in case of encoder failure.
37-38	SAFETY	Input, sensitive safety edge. When the safety edge is activated, the door movement is stopped and reversed (see SPIN Parameters). Safety edge of the resistive type: Jumper "DAS" closed. Safety edge of the mechanical type: Jumper "DAS" open.
39-40	INVERTER	Safety connection provides control of the hardware emergency stop to the inverter. It is always open with stopped motor.
41-42	COVER	Safety switch, pre-wired to the micro-switch on the removable front side of the automatic system. It is activated when the cover is opened. Any operation is blocked.
43-44	SAFETY	Optional safety switch. Connect the self-locking emergency push-button. Leave terminals short-circuited if not in use.
45-46	AUX 1	Auxiliary output, configurable through the AUX 1 parameter. Voltage-free contact, 250VAC 16A max.
47-48-49	VOLTAGE SELECTOR	The power supply voltage is selected through a wire jack. 47 and 48 for single-phase power (230VAC). 48 and 49 for three-phase power (400VAC). In the motors with thermal switch, its activation opens the contact and cuts off the power supply to the board. Follow connections shown if the board is removed or replaced.

Fuse	Type	Description
F1	250V T1A	Protection, power supply of accessories
F2	250V T400mA	Protection, logics of board
F3	250V T630mA	Protection, common inputs and serial of inverter
F4	500V T125mA	Protection, transformer primary
F5	250V T500mA	Protection, lashing light, 230V

HOW TO CHECK CONNECTIONS

- 1) Cut off power supply.
- 2) Manually release the door/gate and push it for about half stroke. Lock the door again.
- 3) Restore power supply.
- 4) Send a step-by-step command through push-button <-> on the control unit (LCD display off). To stop the door/gate press <-> once more.
- 5) The door/gate should open. If not, use the MINV logics to change the opening direction.

INVERTER

The CP.BISON OTI control unit is provided with serial connections for the control of a pre-installed inverter on the gear motors of the BISON series.

The inverter allows to enhance the functional performance of the motor as regards control of the torque, speed and safety.

Although the pre-installed inverter is provided with programming functions, none of them must be changed by the installer because the CP.BISON control unit directly controls all the operating parameters. If the device is to be replaced, ask an original spare part to the manufacturer and carry out its wiring in compliance with connections shown in the handbook supplied with the spare part itself. Do not use inverters which are not supplied by the manufacturer for any reason whatsoever.

PROGRAMMING

The programming of the various functions of the control unit is carried out using the LCD display on the control unit and setting the desired values in the programming menus described below.

The parameters menu allows you to assign a numerical value to a function, in the same way as a regulating trimmer.

The logic menu allows you to activate or deactivate a function, in the same way as setting a dip-switch.

Other special functions follow the parameters and logic menus and may vary depending on the type of control unit or the software release.

TO ACCESS PROGRAMMING

- 1 – Press the button <OK>, the display goes to the first menu, Parameters “PAR”.
- 2 – With the <+> or <-> button, select the menu you want.
- 3 – Press the button <OK>, the display shows the first function available on the menu.
- 4 – With the <+> or <-> button, select the function you want.
- 5 – Press the button <OK>, the display shows the value currently set for the function selected.
- 6 – With the <+> or <-> button, select the value you intend to assign to the function.
- 7 – Press the button <OK>, the display shows the signal “PRG” which indicates that programming has been completed.

NOTES

Pressing <-> with the display turned off means an impulse of P.P.

Simultaneously pressing <+> and <-> from inside a function menu allows you to return to the previous menu without making any changes.

Hold down the <+> key or the <-> key to accelerate the increase/decrease of the values.

After waiting 30s the control unit quits programming mode and switches off the display.

PARAMETERS, LOGIC AND SPECIAL FUNCTIONS

The tables below describe the individual functions available in the control unit.

PARAMETERS (PAr)			
MENU	FUNCTION	MIN-MAX-(Default)	MEMO
tAR	Automatic closure time. It is activated only with "TCA" logics:ON At the end of the preset time, the control unit starts a new closing operation.	1-240-(40s)	
tPEd	The passage left open by the door/gate leaf during the partial opening controlled by the pedestrian input, is adjusted. The value is expressed in percentage on the aggregate value of the stroke.	5-100-(20%)	
tSnO	Braking during opening is adjusted. The value is expressed in percentage on the aggregate value of the stroke. See section "How to adjust speed and braking".	10-100-(20%)	
tSnc	Braking during closing is adjusted. The value is expressed in percentage on the aggregate value of the stroke. See section "How to adjust speed and braking".	10-100-(20%)	
tT	Motor operating time. It has effect only if ENC logics is OFF. The maximum duration of the opening and closing operation is adjusted. It should be preset at around 4sec more compared to the actual stroke time of the system.	5-240-(240s)	
FSto	The opening speed is adjusted. IMPORTANT: Change the values of this parameter only by keeping to the weight limits shown in Table 1. See section "How to adjust speed and braking".	20-90-(45)	
FStc	The closing speed is adjusted. IMPORTANT: Change the values of this parameter only by keeping to the weight limits shown in Table 1. See section "How to adjust speed and braking".	20-90-(45)	
SLdo	Speed during opening braking is adjusted. See section "How to adjust speed and braking".	10-40-(25)	
SLdc	Speed during closing braking is adjusted. See section "How to adjust speed and braking".	10-40-(25)	
PNo	The torque applied to motor 2 in the opening* phase is adjusted.	1-99-(70%)	
PNc	The torque applied to motor 2 in the closing* phase is adjusted.	1-99-(70%)	
SEARu	The trigger time of the anti-crash device (Encoder) is adjusted during the normal speed phase*. 0:Off-90: maximum sensibility - 1: minimum sensitivity	0-90-(0%)	
SEARr	The trigger time of the anti-crash device (Encoder) is adjusted during the braking phase*. 0:Off-90: maximum sensibility - 1: minimum sensitivity	0-90-(0%)	
bLco	Stop space is adjusted after reaching the opening limit switch. This value is expressed in centimetres. See section "How to adjust speed and braking".	1-10-(3)	
bLcc	Stop space is adjusted after reaching the closing limit switch. This value is expressed in centimetres. See section "How to adjust speed and braking".	1-10-(3)	
tLS	It is activated with AUX1/AUX2 parameter only, preset to value 2. The activation time of the service light is adjusted.	1-240-(60s)	
t2ch	Only active when parameter AUX1/AUX2 is set to value 1. Adjusts the activation time of the second radio channel. With the value set to 0, the contact switches to bistable mode.	0-250-(1s)	
ALrT	Activates the alarm output when at least one of the following inputs (STOP - PHO-TA - PHOTC - BAR - SWO+SWC) remains active for the set time. One of the AUX parameters must be set to 7 (Alarm output)Value in seconds.	10-240 (60s)	
tAcc	Ramp during acceleration. Value expressed in tenths of seconds. See section "How to adjust speed and braking".	1-25-(20)	
tDec	Ramp during deceleration. Value expressed in tenths of seconds. See section "How to adjust speed and braking".	50-99-(50)	
tbr	Emergency braking, after the activation of PHOT/BAR/STOP inputs, or lack of INVERTER connection, the value is expressed in tenths of seconds.	1-20-(3)	

SP In	It regulates the reversal space that the leaf runs as consequence a result of the safety edge action. During the reversal phase any further action of safety edge or photocells is ignored. The minimum value "1" corresponds to about 20 cm, the maximum value "4" is equivalent to about 60 cm.	1-4 (2)	
AUX 1	Sets the operating mode of the AUX1 output (N.O. contact) 0: SCA output (gate open indicator light). The light is off when the door is closed, flashes when the door is moving, is on when the door is open. 1: 2CH radio output. The output is controlled by the second radio channel of the built-in receiver (see RADIO menu) 2: courtesy light output (activation time is set by parameter TLS) 3: Zone light output. The contact closes for the duration of the manoeuvre and for the duration of the TCA, it only reopens when the gate is closed. 4: accessory power supply output (for photocell verification - sensitive edge, in combination with logics TST1-TST2-TST3) 5: flashing output 6: gate open alarm output (gate open for twice the set TCA time) 7: NC input alarm output or card error (NC=alarm not active, NO=alarm active)	0 - 7 - (1)	
AUX2	Same settings as parameter AUX1 but referring to output AUX2 (N.O contact)	0-7 - (0)	
AUX3	Same settings as parameter AUX1 but referring to output AUX3. Attention: the AUX3 output has a voltage of 24Vdc. Only values 0-4-5 can be set	0-4 - 5 (5)	

***CAUTION:**

A wrong presetting of these parameters may be dangerous. Comply with regulations in force!

It should be noted that the anti-crash device is disabled by default and that, given the size of the door leaves for which this type of system is intended, the use of activated safety sensitive edges are mandatory pursuant to regulations in force. When FSTS and SLDS parameters are changed, the SEAV and SEAR parameters are automatically set to 0.

LOGIC (LOG)			
MENU	FUNCTION	ON-OFF-(Default)	MEMO
tcA	Enables or disables automatic closing On: automatic closing enabled Off: automatic closing disabled	(OFF)	
ibL	Enables or disables multi-flat function. On: multi-flat function enabled. The step-by-step and pedestrian commands have no effect during the opening phase. Off: multi-flat function disabled.	(OFF)	
ibcA	During the TCA phase, the PP controls are enabled or disabled. On: PP controls are disabled. Off: PP controls are enabled.	(OFF)	
ScL	The rapid closure is enabled or disabled. It can be activated only if TCA:ON On: enabled rapid closure. With open gate, the photocell activation causes the automatic closure after 3 s. If the photocell is activated during the opening phase, the operation is completed and closure starts after 3s Off: disabled rapid closure.	(OFF)	
PP	The operating mode of "P.P. Push button" and of the transmitter are selected. On: Operation: OPEN > CLOSE > OPEN > Off: Operation: OPEN > STOP > CLOSE > STOP >	(OFF)	
PrE	Forewarning flashing light enabled or disabled. On: enabled forewarning flashing light. The flashing light is activated 3 s before the starting of the motor. Off: disabled forewarning flashing light.	(OFF)	
htr	The Service Man function is enabled or disabled. On: Service Man operation. The OPEN/CLOSE push buttons should be kept pressed for the entire operating time. Off: Automatic operation.	(OFF)	
LtcA	During the TCA time, the blinker is enabled or disabled. On: Enables blinker. Off: Disables blinker.	(OFF)	

FlH	Sets the operating mode of the AUX outputs set as flashing output (5). On: Flashing (1s On and 1s Off) Off: Steady flashing (to be used with flashing outputs already equipped with an intermittent circuit).	(OFF)	
Enc	The Encoder is enabled or disabled. On: Activated Encoder. Off: Not activated Encoder. The encoder only detects the door/gate stroke. In the event of maintenance operations, it is advisable to deactivate it only temporarily.	(ON)	
Pho 1	The PHOT 1 input is enabled or disabled in the opening phase. On: Photocell 1 activated only in the closing phase. Off: Photocell 1 activated in both opening and closing phases.	(OFF)	
Pho2	As per PH01, but referred to PHOT 2 input.	(OFF)	
Pho3	As per PH01, but referred to PHOT 3 input.	(OFF)	
Pho4	As per PH01, but referred to PHOT 4 input.	(OFF)	
tSt 1	The check on the photocell connected to PHOT1 input is activated or deactivated Before operation, the control unit checks the switching of the photocell contact. If the checks are not successful, the door/gate will not move. On: activated check on photocell. Off: deactivated check on photocell.	(OFF)	
tSt2	As for TST1, but referred to PHOT2 input	(OFF)	
tSt3	As for TST1, but referred to PHOT3 input	(OFF)	
tSt4	As for TST1, but referred to PHOT4 input	(OFF)	
tSt5	Enable or disable the BAR input TEST. The activation of the TEST function is only possible with the use of the articles SC.RF and RF / RF.SUN, consult the specific instructions. On: Test is enabled. If the test is negative, no operation is performed. See Fig.6 "BAR- TEST". Off: Test is disabled.	(OFF)	
PScL	Sets the PHOT 4 input operating mode On: The intervention of the photocell stops the movement of the leaf in both opening and closing, after 1s from the moment it is released, it starts closing again. Off: Standard operation.	OFF	
bar	Changes the operating mode of the PHOT1 input (photocell in OPEN) and BAR if sensitive edges are installed in the opening and closing movable edges. On: The PHOT1 input assumes the same function as the BAR input, but reverses the motion for the space set with parameter SPIN if the sensitive edge to which it is connected is pressed during the OPEN phase (if photocells in CLOSE occupied it reverses for 10 cm). The edge connected to the BAR input is only active during the CLOSE phase. Off: The intervention of the sensitive bar connected to the BAR input stops the movement of the leaf and reverses the movement for the space set with parameter spin (if the photocell in the direction of reversal is occupied it reverses for 10cm) , both in OPEN and CLOSE. The PHOT OPEN input resumes active photocell operation in OPEN.	(OFF)	
n Inu	The opening direction of the motor is selected (see Fig. 4): On: Right side motor mount Off: Left side motor mount	(OFF)	
cuAr	The code programmable transmitters is enabled or disabled. On: Radio receiver enabled only for rolling-code transmitters. Off: Receiver enabled for rolling-code and programmable code transmitters (self-learning and Dip Switch).	(ON)	
rEN	The remote storage of the radio transmitter codes is enabled or disabled (see par. REMOTE LEARNING). On: Enabled remote storage Off: Disabled remote storage.	(ON)	
chtr	The Service man function is enabled or disabled in the closing phase. Off: Automatic function. On: Service Man operation. The OPEN button operation is of the impulsive type. Closure is carried out only by keeping the CLOSE push-button pressed (Man present).	(OFF)	

RADIO (rRd)	
MENU	FUNCTION
<i>PP</i>	By selecting this function, the receiver is waiting for (Push) a transmitter code to be assigned to the step-by-step function. Press the transmitter key, which is to be assigned to this function. If the code is valid, it will be stored in memory and OK will be displayed. If the code is not valid, the Err message will be displayed.
<i>2ch</i>	By selecting this function, the receiver is waiting for (Push) a transmitter code to be assigned to the second radio channel. Press the transmitter key, which is to be assigned to this function. If the code is valid, it will be stored in memory and OK will be displayed. If the code is not valid, the Err message will be displayed.
<i>PED</i>	When this function is selected, the receiver awaits (Push) a transmitter code to be assigned to the PED function. Press the transmitter key, which is to be assigned to this function. If the code is valid, it will be stored in memory and OK will be displayed. If the code is not valid, the Err message will be displayed.
<i>clr</i>	By selecting this function, the receiver is waiting for (Push) a transmitter code to be erased from memory. If the code is valid, it will be stored in memory and OK will be displayed. If the code is not valid, the Err message will be displayed.
<i>rer</i>	The memory of the receiver is entirely erased. Confirmation for the operation is asked.

NUMBER OF CYCLES (nRRn)
The number of cycles (open+close) completed by the system is displayed. When the push-button <OK> is pressed once, the first 4 digits are displayed, if the push-button is pressed once more, the last 4 digits are displayed. E.g. <OK> 0012 >>> <OK> 3456: 123.456 cycles were performed.

MAINTENANCE (nRc i)
This function allows to activate the indication of maintenance required after a certain number of operations, preset by the installer. To activate and select the number of operations, proceed as follows: Press the <OK> button, OFF is displayed, indicating that the function is disabled (default). Select one of the numbers shown (from OFF to 100) by using the <+> and <-> keys . The figures express the value of hundreds of cycles (e.g.: the number 50 means 5000 operations). Press OK to activate the function. The PROG message is displayed. When the flashing light flashes for around 10 sec at end of operation, this means that maintenance operations are needed.

RESET (rE5)
RESET of the control unit. WARNING: Returns the control unit to the default values. When the <OK> push-button is pressed once, the RES wording begins to flash, if the push-button<OK> is pressed once more, the control unit is reset. Note: neither the transmitter codes nor the position and stroked of the gate leaf will be erased from the receiver.

AUTOSET (RUto)
The automatic system stroke is self learned. See section "STROKE SELF-LEARNING"

PASSWORD (codE)

It allows to type in an access protection code to the programming of the control unit.

A four-character alphanumeric code can be typed in by using the numbers from 0 to 9 and the letters A-B-C-D-E-F.

The default value is 0000 (four zeros) and shows the absence of a protection code.

While typing in the code, this operation can be cancelled at any moment by pressing keys + and – simultaneously. Once the password is typed in, it is possible to act on the control unit by entering and exiting the programming mode for around 10 minutes in order to allow adjustments and tests on functions.

By replacing the 0000 code with any other code, the protection of the control unit is enabled, thus preventing the access to any other menu. If a protection code is to be typed in, proceed as follows:

- select the Code menu and press OK.
- the code 0000 is shown, also in the case a protection code has been previously typed in.
- the value of the flashing character can be changed with keys + and -.
- press OK to confirm the flashing character, then confirm the following one.
- after typing in the 4 characters, a confirmation message “CONF” appears.
- after a few seconds, the code 0000 appears again
- the previously stored protection code must be reconfirmed in order to avoid any accidental typing in.

If the code corresponds to the previous one, a confirmation message “OK” appears.

The control unit automatically exits the programming phase. To gain access to the Menus again, the stored protection code must be typed in. **IMPORTANT: TAKE NOTE of the protection code and KEEP IT IN A SAFE PLACE for future maintenance operations. To remove the code from a protected control unit, enter the programming mode with the password and reset the code to the 0000 default value.**

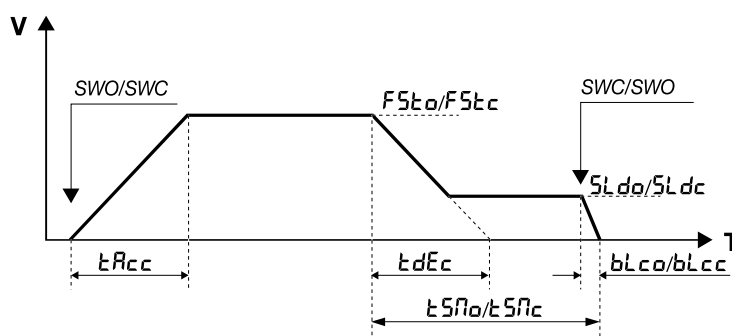
IF YOU LOOSE THE CODE, PLEASE CONTACT THE AUTHORISED SERVICE CENTER FOR THE TOTAL RESET OF THE CONTROL UNIT.

TABLE 1

FSTO/FSTC Value	Speed (m/min)	Recommended values			Leaf max. weight (kg)		
		TBR	TDEC	TSMO/TSMC	BISON 25	BISON 35	BISON 45
30	7	3	50	10	2500	3500	4500
35	8	3	50	10	2500	3500	4500
40	9	3	50	10	2500	3500	4500
45 (DEFAULT)	10	3	50	10	2500	3500	4500
50	11	3	60	12	2000	3000	3600
55	12	4	65	13	1700	2500	3050
60	13	5	70	13	1450	2250	2600
65	14	6	80	14	1250	1800	2250
70	15	7	85	15	1100	1600	2000
75	16	8	89	16	950	1350	1700
80	17	9	93	17	850	1200	1500
85	18	10	96	19	750	1000	1350
90	19	10	99	20	650	850	1150

HOW TO ADJUST SPEED AND BRAKING

The door/gate stroke is shown in the following scheme:



The V axis is the gate/door speed, T axis is the time required by the door/gate to move from a limit switch to the other (SWO to SWC and vice versa). The opening and closing phases have separate parameters, speed and decelerations can be adjusted differently.

At gate/door stopped on any SWO (or SWC) limit switch, when a control key is pressed the gate/door starts moving and reaches the standard operating speed, which can be adjusted by FSTO/FSTC parameter.

The TACC time sets how rapidly the gate/door should reach the standard speed.

Before meeting the SWC (or SWO) stop limit switch, braking preset by TSMO/TSMC time will start.

Braking leads the gate/door from standard speed (FSTS) to braking speed, adjusted by SLDO/SLDC parameter.

The TDEC time sets how rapidly the gate/door should reach the braking speed.

The TDEC time is theoretical by reason of the fact that as soon as the speed reaches the value preset by SLDS, braking at constant speed starts until reaching the SWC (or SWO) limit switch.

Once the limit switch is reached, the gate/door continues its movement for a period of time adjusted by BLC parameter, until entire stop.

IMPORTANT:

- For the correct operation of parameters it is mandatory that the stroke learning be carried out correctly (see STROKE LEARNING).
- If the FSTO/FSTC speed is increased, TSM, TACC and TDEC values must be increased proportionally in order to avert any mechanical stress to the gear motor.

A TSO/TSMCM value, which is too short, combined with a TDEC value, which is too high, might result in the cancellation of the SLDO/SLDC braking phase due to the gate leaf friction and the triggering of the limit switches when the speed is still high.

This situation must be absolutely avoided.

- It should be noted that the FSTO/FSTC value can be changed only in compliance with the limits shown in Table 1.
- The AUTO function does not change the default values of the above-mentioned parameters. The latter must be preset by the installer according to the gate/door specifications.

STROKE LEARNING (LOGIC ENC:ON)

For a correct operation of braking it is essential that the stroke is memorised. This can be performed either using the above described AUTO function or when the first operation is completed (then carried out without interruptions) from open limit switch to close limit switch (or viceversa).

However, these values can be manually modified at a second time.

If the encoder is activated, the position of the gate leaf is stored in memory and reset also in case of power failure.

If the encoder is disabled, in case of power failure a new complete operation will be required to memorise the stroke and reset braking.

Note: If the automatic system is released and manually operated, the following operation might not perform braking correctly. Also in this case a new complete operation will be required to reset the regular operation of the system.

If the encoder is disabled, the stroke self-learning cannot be carried out.

If the stroke self-learning is carried out with disabled encoder, the ERR message is shown.

To disable the Encoder, it is MANDATORY to adjust the TM parameter by subtracting the TSM braking time (normal speed time= TM-TSM).

In case of adjustment of limit switch brackets is necessary do a new AUTOSSET

TRANSMITTER REMOTE LEARNING

If the transmitter code is already stored in the receiver, the remote radio learning can be carried out (without accessing the control unit). The REM logics must be ON.

IMPORTANT: The procedure should be carried out with gate in the opening phase, during the TCA dwell time.

Proceed as follows:

- 1 Press the hidden key of the transmitter, the code of which has already been stored in memory.
- 2 Within 5 seconds, press the already memorised transmitter key corresponding to the channel to be matched to the new transmitter. The flashing light switches on.
- 3 Within 10 seconds, press the hidden key of the new transmitter.
- 4 Within 5 seconds, press the key of the new transmitter to be matched to the channel selected at item 2. The flashing light switches off.
- 5 The receiver stores the new transmitter code and exits from the programming mode immediately.

ERROR MESSAGES

Some messages that are displayed in the event of malfunctions are shown hereunder:

<i>Err</i>	Error, self-calibration	If the error occurs during self-learning, check the PP/STOP/PED/BAR inputs or whether frictions occur during the door leaf stroke.
<i>Err1</i>	Error, Inverter/Cover/Safety	It occurs in the following cases: - the SAFETY contact is open. - the COVER contact is open. - The inverter is faulty. Contact the technical assistance centre.
<i>Err2</i>	Error, photocells (Autotest)	Check that photocells are correctly operating.
<i>Err3</i>	Error, encoder	Check connections to the encoder.
<i>Err4</i>	Error, sensitive edge	Check connections to sensitive edge
<i>Err5</i>	Error, phototest/ sensitive edge	Check that photocells/ sensitive edge connections (Fig.3/6)
<i>Err7</i>	Error, inverter communication	Check connections to 485 serial between control unit and inverter
<i>ANP</i>	Triggering of the amperometric sensor	An obstacle or a point of friction has caused the triggering of the amperometric sensor. Remove the obstacle or check the door stroke.
<i>F 00</i> <i>F 15</i>	Inverter, error/alarm	Take note of the error number and contact the technical assistance

LCD DISPLAY

The LCD display can be turned by 180°.

- Cut off mains power supply
- Press OK
- While keeping OK pressed, reset the mains power supply
- Keep OK pressed (around 5 sec) until the software version appears, turned by 180°.

Normally proceed with programming.

DIAGNOSTICS

In the event of malfunctions, by pressing key + or - the status of all inputs (limit switches, control and safety) can be displayed. One segment of the display is linked to each input. In the event of failure it switches on according to the following scheme.

