![quiko opening solutions logo]

QK-CE24A User Manual

Control board for 1 24V gearmotor

V01

www.quikoitaly.com

CE
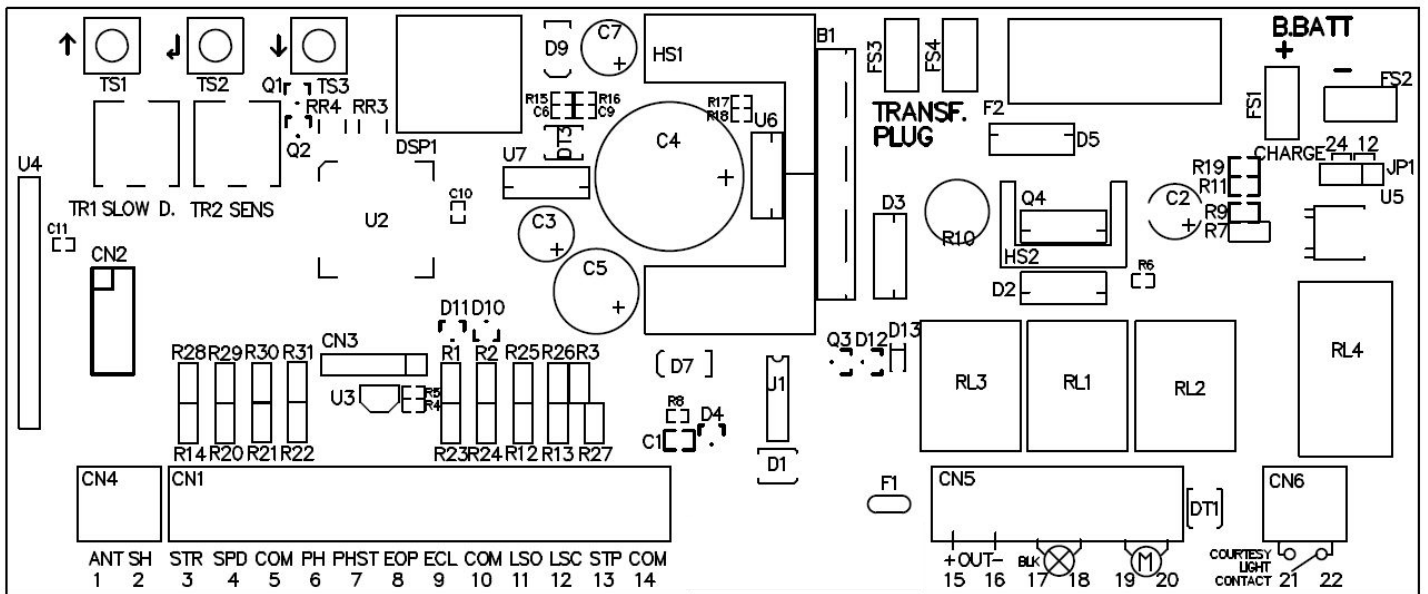
Important: Read carefully this manual before the installation. This manual is integral part of your product, keep it for reference.

Warnings: First of all verify that this product is suitable for the installation. Read carefully technical characteristic before the installation.
Installation of this control unit must be properly done by qualified installers, following rules and regulations of installation country.
It's mandatory to do periodic maintenance each 6 month . Maintenance or repairing must be done by qualified Technicians. Turn power off before maintenance or repairing.
This device is intended for gate automation, any other applications is strongly advised.
Not respecting of rules may cause serious damage to people, animals, things. Quiko Italy Srl discharges all responsibility for missed respect of rules.
Don't let this control unit unattended or where children can reach.

Preliminary checking: Before installing this control unit, verify that all the connected devices respect the technical characteristics mentioned in the table which follows. Verify that a working and suitable life switch is installed upline the installation. Verify that cables composing the installation, are suitable for it.

Technical characteristics

Power Supply	20-24 Vac/100-200VA +/-10%
Max. Current out (15-16)	250mA
Embedded Battery charger	24V 100mA
Max motor current	8A
Max flashing light current	1A
Operating temperature range	-30 +70°C
Backup battery	(2x) 12V 1.3Ah

Pursuant to legislation for the implementation of Directive 2012/19/EU on "Waste electrical and electronic equipment (WEEE)"
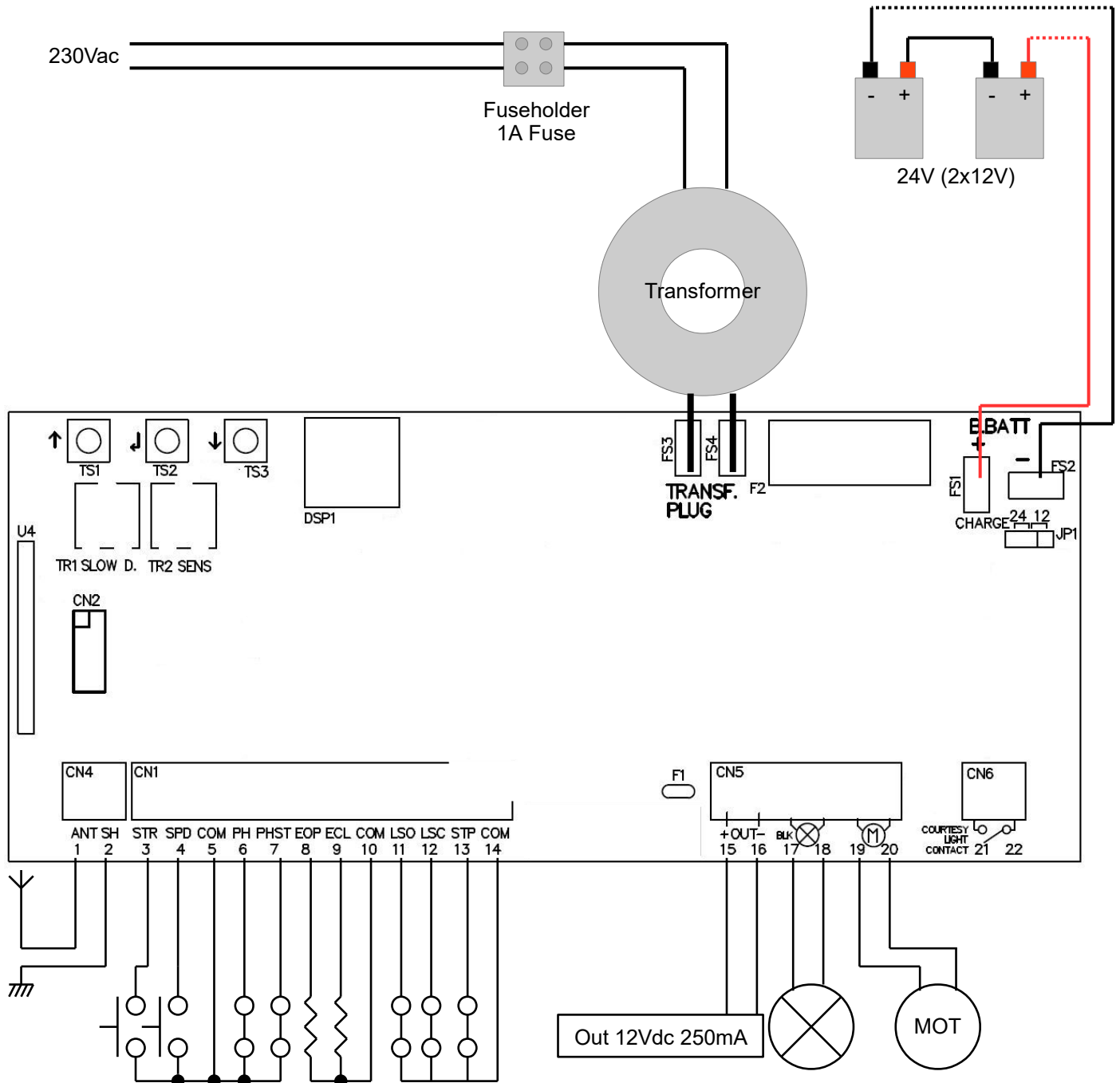
It is forbidden to dispose of electrical items and electronic equi-pment as municipal waste, as evidenced also by the symbol shown on the product and/or its packaging.
These forms of waste are subject to separate collections or-ganised by municipal authorities, or may be returned to the retailer when buying a new appliance of the same type. Improper disposal or misuse of such equipment or its com-ponent parts can damage the environment and human health due to the presence of hazardous substances. Illegal disposal of this waste is forbidden of the legislation currently in force.

Wiring
Main functions

230Vac

Fuseholder
1A Fuse

Transformer

24V (2x12V)

TS1 TS2 TS3

DSP1

U4

TR1 SLOW D. TR2 SENS

CN2

E.BATT

TRANSF. PLUG F2

FS1 FS2

CHARGE 24 12 JP1

CN4 CN1

F1 CN5

CN6

ANT SH STR SPD COM PH PHST EOP ECL COM LSO LSC STP COM
1   2   3   4   5   6 7   8   9   10 11 12 13 14

+OUT− BLK
15 16 17 18 19 20

COURTESY LIGHT CONTACT 21 22

Out 12Vdc 250mA

MOT

1 Antenna

2 Antenna's shield

3 Start input (NO)
   It completely opens the gate

4 Pedestrian start input (NO)
   It opens just partially

5 Common

6 Closing Photocell input (NC)
   During pause: Reloads pause
   During closing: Reverses motors direction

7	Opening photocell input (NC) / Detect input (NO) *During pause: Reloads pause* *During closing: Reverses motors direction* *During opening: stops the motors and waits till contact returns close.*
8	Analog opening safety edge input (8K2 ohm) *Waiting an opening command: inhibits opening* *During opening: reverses motor direction for 1 second.* *If not used leave unconnected.*
9	Analog closing safety edge input (8K2 ohm) *It works as opening safety edge, but for closing.*
10	Common
11-12	Limit switches input (NC). *They can be inverted together with gate direction (see advanced menu).* *Leave unconnected in case limit switches aren't used.*
13	Stop input (NC) *It always stops motors and blocks control unit activity.*
14	Common
15-16	Accessories Power Supply output 12Vdc 250mA
17-18	Flashing light output 24V dc (17 positive ; 18 negative) 1A. *It flashes fast during opening and slow during closing. If mains fails, it flashes very slowly.*
19-20	Output motor 8A
21-22	Courtesy light dry contact.
TR1	Slowing down speed trimmer
TR2	Obstacle detection sensibility trimmer
TS1-TS3	Buttons up/down
TS2	Enter button
DSP	Display
FS3-FS4	Transformer input 20-24Vac / 100-200VA
F2	Battery fuse 10A Fast
FS1-FS2	Backup battery input 24Vdc
JP1	Backup battery voltage selector 12/24V - Must be set to 24V when used with Quiko standard products

Input status

The display can show in each moment inputs status. If none input engaged, on the display "−−" is shown.
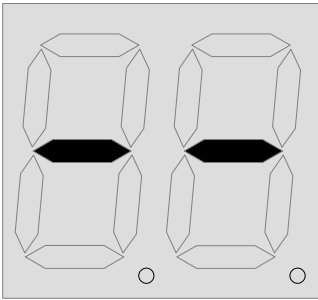
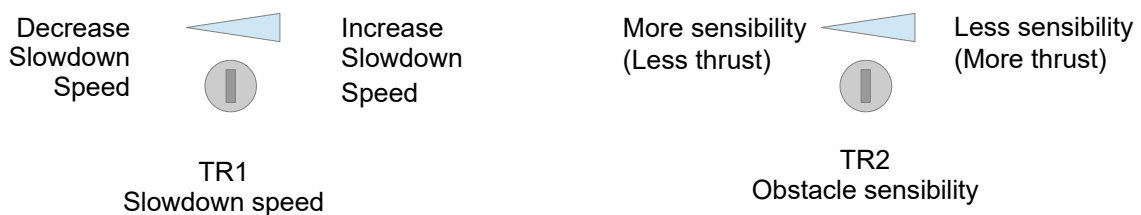|	
SP	Stop input
Eo	Safety Edge opening
Ec	Safety Edge closing
PS	Opening Photocell
Pc	Closing Photocell
dt	Detect input
oP	Open input
cL	Close input
St	Start input
Pd	Pedestrian start
Lc	Limit switch closing
Lo	Limit switch opening
−−	None inputs
10	Pause countdown in seconds (blinking)
01	Mass mode countdown (Fixed)

Trimmer regulations

The slow down speed trimmer regulates the slow down speed. Do not set speed too low (less than 6 cm/sec on the wing edge) to avoid problems in too cold conditions.

The obstacle sensibility trimmer fine tunes the obstacle detection level learned by the control unit during working times programming. This fine regulation must be done after working times learning.
Normally the trimmer should be in middle position, in this position it should be possible to respect rules in most of installations. If there is the need to resolve problems related to norms or to environmental situations (ex. strong wind) it's possible to regulate this trimmer increasing or decreasing sensibility.
Attention: Putting OD trimmer at max disables OD detection.

| Decrease Slowdown Speed | ◁ | Increase Slowdown Speed | More sensibility (Less thrust) | ◁ | Less sensibility (More thrust) |

TR1
Slowdown speed

TR2
Obstacle sensibility

Preliminary checks:

After having installed the control board do the following checks:

1. LIMIT SWITCHES CONNECTION

   Give electricity to the control board, manually unlock the automation and make sure that:

   " **Lc** " is shown when the closing limit switch is engaged;

   " **Lo** " is shown when the opening limit switch is engaged.

   If the display doen't show this, swap the limit switches cables and repeat the test above.

2. MOTOR CONNECTION

   Unlock the automation and put it in middle position, remove electricity and give it back after a few seconds. Give a Start pulse by means of a stored remote control or a wired input.

   The automation MUST open. If it closes instead, swap the motor cables and repeat the test above.

Special Features

ATTENTION:

1.Before proceeding with the quick programming, completely close the gate/barrier and make sure that "Lc" is shown on the display of the control board.

2.If the control board is installed on an automatic barrier, make sure that barrier mode "br" is enabled (See advanced menu).

Quick programming

To quickly program the working times, keep pushed "up" till you read AU on the display (3 seconds).

The control board will perform a complete opening and a complete closing, then it will automatically set the standard working time "t1" and slowdown working time "tS".

Self programming

This board in most cases doesn't need any working time programming to work. It comes from factory with a standard working time for a 4m sliding gate. During the first complete opening (from closing limit switch to opening limit switch) after a power reset, the board calculates itself the working time of the current gate and sets the slowdown time starting from next closing. This self-learned setting can be deleted by resetting the board or by programming the working time.

Quick radio codes learning

Push shortly down button to learn a remote (C1 is shown on the display), than transmit with remote.
Quick radio codes erasing:
Keep pushed down button until "OK" is shown on the display (about 5 seconds), then release the button, the codes are erased.

Auto Learning transmitters

It's possible to quickly learn transmitters without using the base menu. To store a new transmitter transmit 3 times with the new remote, making at least 1 second pause between each transmission. Then transmitt 3 times with a transmitter already in memory and then once with the new. When programmation is done, the stop led on the keyboard flashes once. Attention: This function must be enabled, refer to "advanced menu".

Mass entering mode

In this mode, if you push 5 times the Open command (for example), the control unit counts 5 cars passing trough the detect sensor (terminal 7), then it closes the barrier. This mode must be enabled in advanced menu (MM). This mode can be enabled just when pause time is 0, which means when automatic closing is disabled.
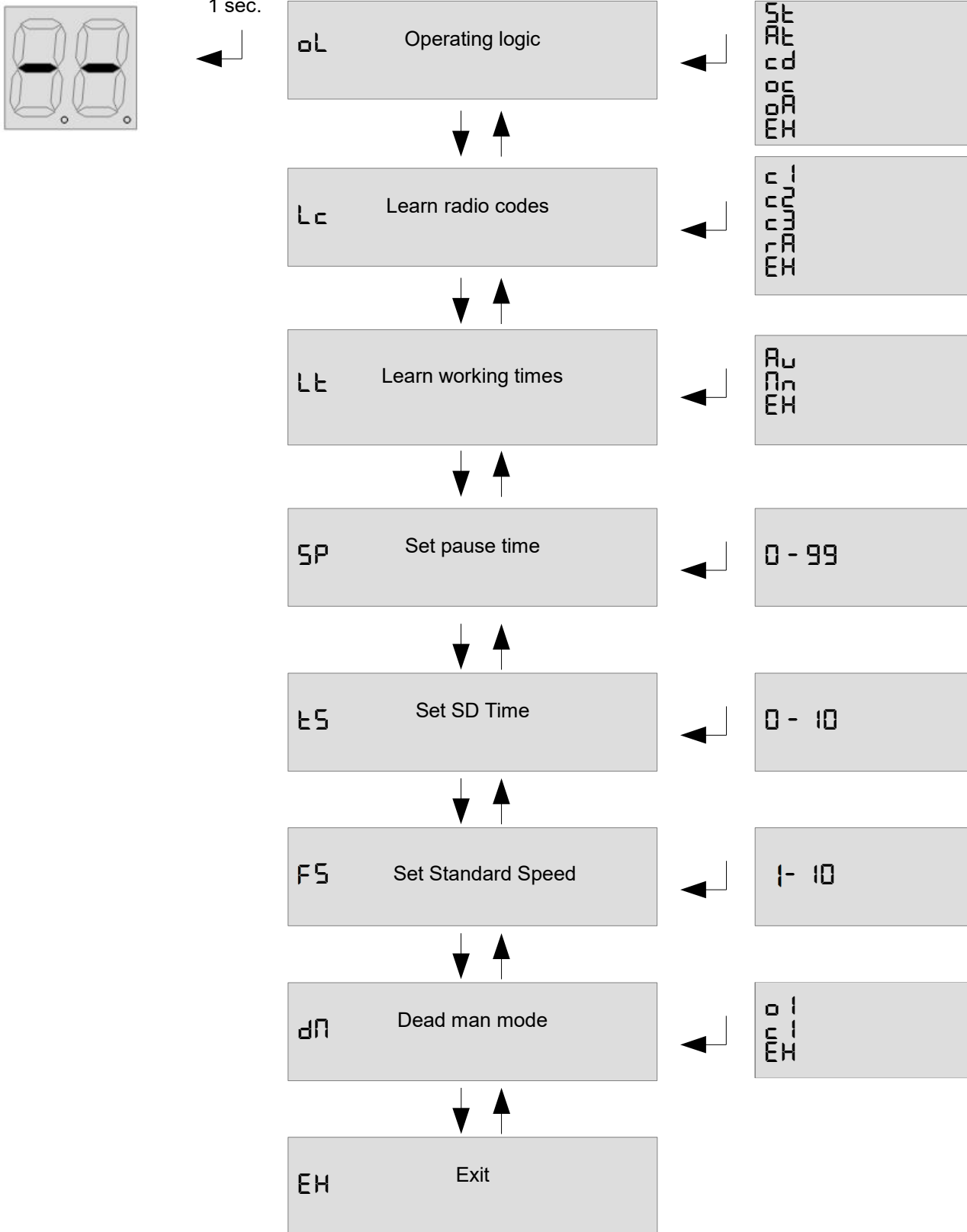
Board Programming
Main Menu
Push *enter* once for at least 1 second to enter main menu.

o𝐋 is shown on the display, with *up/down* it's possible to select other functions of this menu.

To exit this menu select ᴇH or push *up* and *down* together.

After 20 seconds without actions, the control unit exits itself from this menu.

Main menu map

1 sec.		
oL	Operating logic	St AE cd oc oA EH
Lc	Learn radio codes	c1 c2 c3 rA EH
Lt	Learn working times	Au Nn EH
SP	Set pause time	0 - 99
tS	Set SD Time	0 - 10
FS	Set Standard Speed	1- 10
dN	Dead man mode	o1 c1 EH
EH	Exit	

Main Menu

⊑Ł: steb by steb mode: inputs 3 & 4 work as Start and Pedestrian start.
A⊦: steb by steb mode with auto closing: inputs 3 & 4 work as Start and Pedestrian start.
⊏⊔: Condominium mode: inputs 3 & 4 work as Start and Pedestrian start.
⊔⊏: Open/Close mode: inputs 3 & 4 work as Open and close.
⊔A: Open/Close mode with auto closing: inputs 3 & 4 work as Open and close.
To exit this menu select ⊢H or push *up/down* together.

⌊⊏ **Learn radio code:**
Select ⌊⊏ and push enter, with *up/down* select sub menu.
⊏¦: Learns a remote. Select this menu and transmit to learn a Start/Open command.
⊏²: Learns a remote. Select this menu and transmit to learn a Pedestrian/Close command.
⊏³: Learns a remote. Select this menu and transmit to learn a Courtesy light ON command.
⊦A: Remove all codes, select this menu, than select ⅄⊑ (yes) in the next menu to remove all codes.
To exit this menu select ⊢H or push *up/down* together.

⌊⊦ **learn working time:**
Select ⌊⊦ in the base menu and push *enter*, after select the learning mode with *up/down*.
The gate/barrier closes till the closing limit switch, than it opens to the Opening limit switch, and finally it closes once.
Attention: if you aren't sure about gate/barrier direction, set it in fully closed position before starting the programmation, the board will assume the engaged limit switch as closing side and will manage motor direction automatically (see "⌊⌐⊔" menu in advanced menu).
To stop Learning procedure, switch Stop input.

⊑P **Set pause time:**
Use *up/down* to set the pause time between 0 and 99 seconds. Push *enter* to confirm. To exit without modifications push together *up* and *down*.
To exit this menu push *up/down* together.

⊦⊑ **Set slowdown time:**
Use *up/down* to set the pause time between 0 and 10 seconds. Push *enter* to confirm. To exit without modifications push together *up* and *down*. If set 0, slowdown is disabled
To exit this menu push *up/down* together.

⊔⊓ **Dead man mode:**
Selecting this menu it's possible to control each motor in dead man mode. Push *up* and *down* to select one of following item:
⊔¦ Open motor
⊏¦ Close motor
⊢H Exit
Keep pushed *enter* to start the motor in the selected dead man mode.
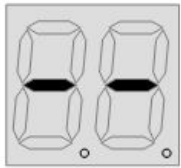

⊢⊑ **Set Standard Speed:**
This menu lets you select the speed of the motor during standard working time. It works in percentage. Use it to set the speed between 1 (10%) and 10 (100%).
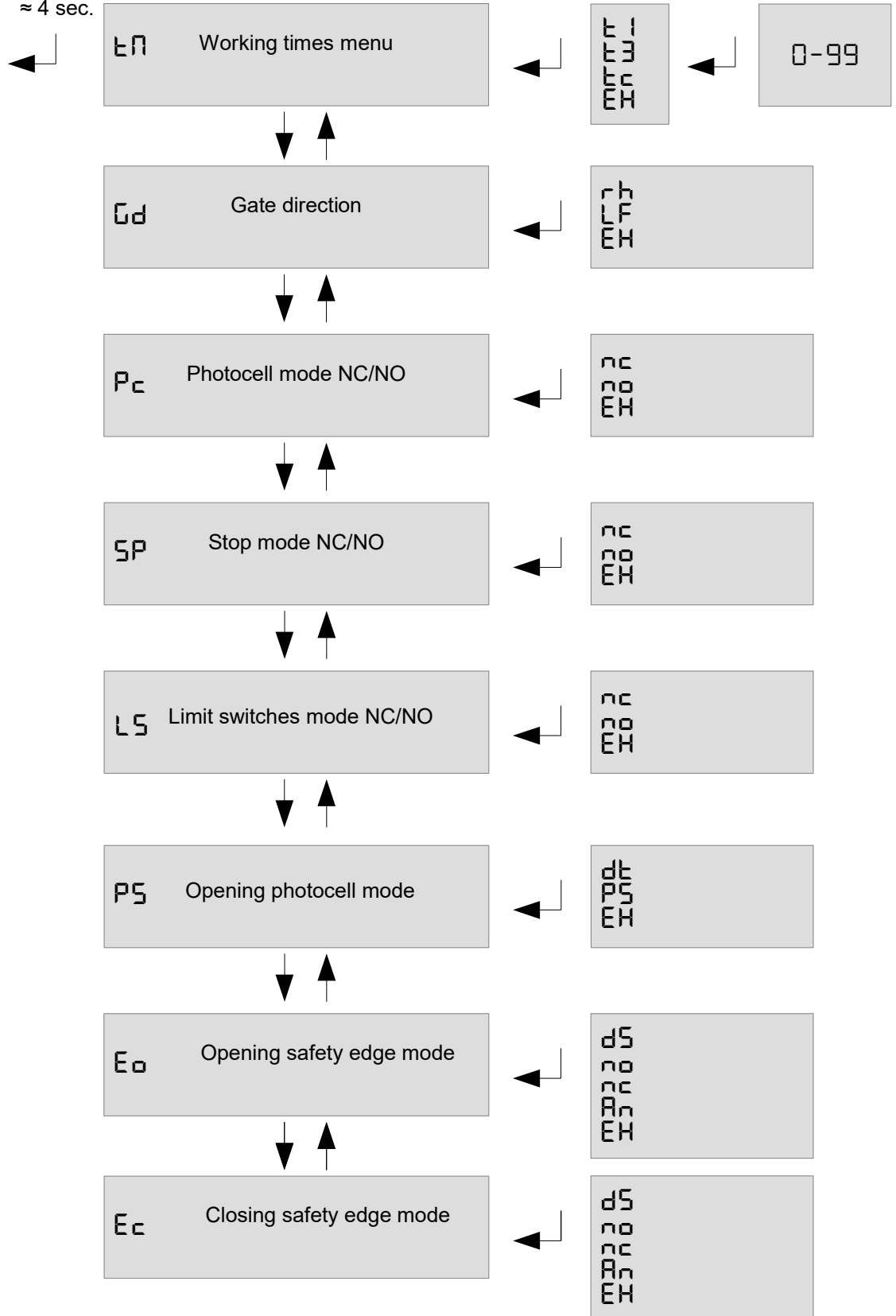
Board Programming

Advanced Menu

Push enter button till ᴛ∏ is shown on the display. With *up/down* it's possible to select all items in this menu.
To exit this menu select ᴇH or push *up/down* together.
After 2 minutes without actions, control unit exits itself from this menu.

Advanced menu map

≈ 4 sec.

| ᴛ∏ | Working times menu | ᴛ1
ᴛ3
ᴛc
ᴇH | 0-99 |

| �Ld | Gate direction | rh
LF
ᴇH |

| Pc | Photocell mode NC/NO | nc
no
ᴇH |

| SP | Stop mode NC/NO | nc
no
ᴇH |

| LS | Limit switches mode NC/NO | nc
no
ᴇH |

| PS | Opening photocell mode | dᴛ
PS
ᴇH |

| ᴇo | Opening safety edge mode | dS
no
nc
An
ᴇH |

| ᴇc | Closing safety edge mode | dS
no
nc
An
ᴇH |

Advanced menu map (continued)

SS	Soft start	YS / nt / EH
↓ ↑		
bL	Blinker flashing	YS / nt / L1 / L2 / EH
↓ ↑		
d2	Loads factory defaults	YS / nt / EH
↓ ↑		
Ar	Auto learning transmitters	YS / nt / EH
↓ ↑		
rN	Radio mode	1b / 4b / EH
↓ ↑		
cn	Cycles counter	1,2 - 34, - 56
↓ ↑		
NN	Mass mode	YS / nt / EH
↓ ↑		
br	Barrier mode	YS / nt / EH
↓ ↑		
EH	Exit	
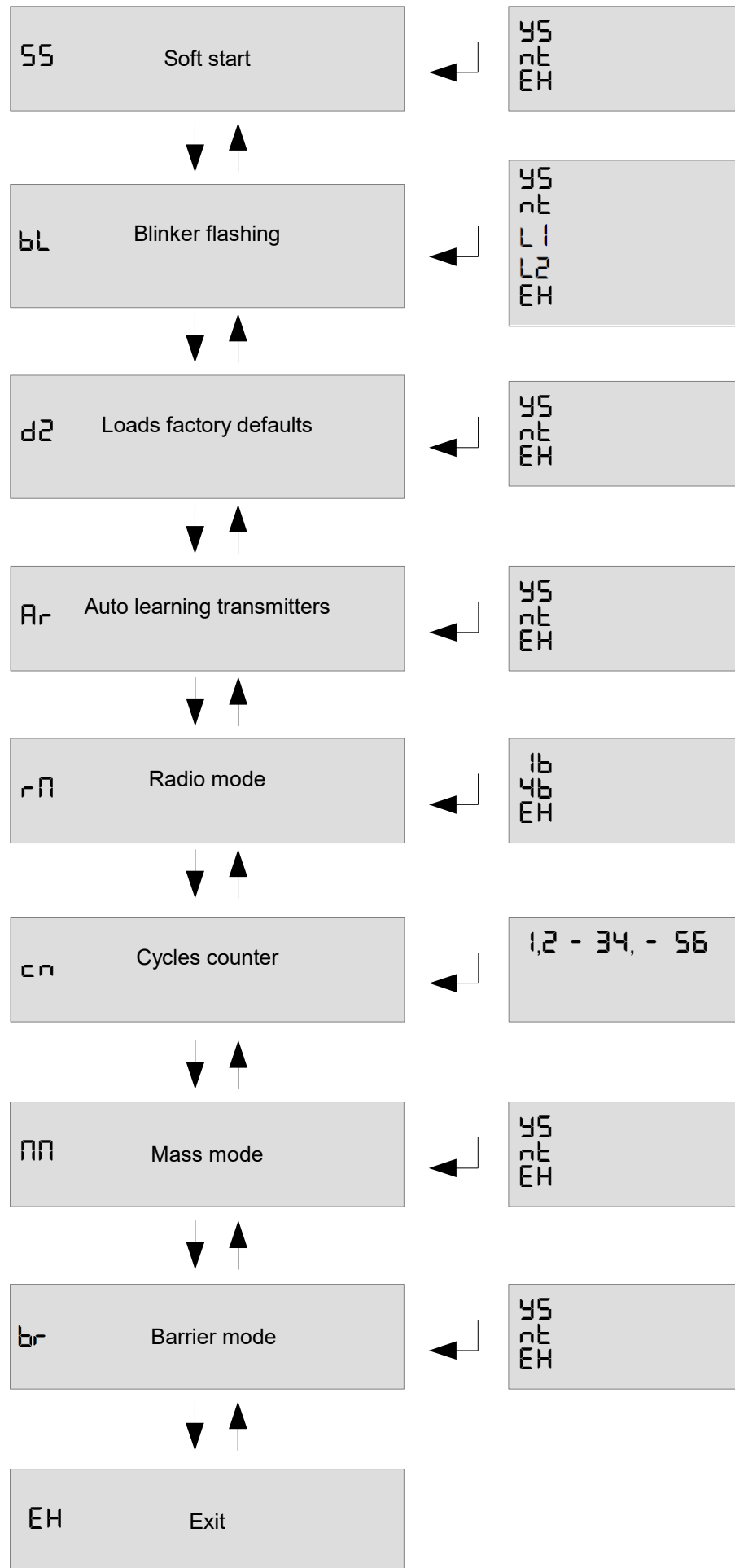
ᵗ� Working times menu:

In this menu it's possible to modify working times of control unit:

ᵗᴵ – Working time motor, ᵗᴲ – Pedestrian opening time, ᵗᶜ –Courtesy light time (x10 sec).

Once selected the working time to be changed, use *up/down* to modify it. Push *enter* to confirm.

To exit without modifications select Eh or push together *up* and *down*.

ᴳᵈ Gate direction:

In this menu it's possible to invert motor direction and limit switches according if gate is right or left. Use up/down to choose right (rh), left (LF) or exit (EH). Push enter to confirm.

Pᶜ Photocells mode, NC/NO:

In this menu is it possible to select if photocells input works NO or NC. **ATTENTION:** in some countries NO input for safety devices is forbidden. Please refer to single county safety rules in order to respect them.

SP Stop input polarity

Set if STOP inputs are NO or NC. Use up/down to choose NO (NO), NC (NC) or exit (EX).Push enter to confirm.

LS Limit switches polarity

Set if LS are NO or NC. Use up/down to choose NO (no), NC (nc) or exit (EH). Push enter to confirm.
ATTENTION: in some countries NO input for safety devices is forbidden. Please refer to single country safety rules in order to respect them.

PS Opening photocell mode

Set if PHST input works as Opening Photocell (PS) or Detect (dt) or exit (EH). Push enter to confirm.

Eo opening safety edge mode:

In this menu is it possible to set the opening safety edge as disabled (dS), normally close (nc), normally open (no) or analog 8K2 (An) **ATTENTION:** in some countries NO input for safety devices is forbidden. Please refer to single country safety rules in order to respect them.

Eᶜ closing safety edge mode:

In this menu it's possible to set the closing safety edge as disabled (dS) normally close (nc), normally open (no) or

analog 8K2 (An). **ATTENTION:** in some countries NO input for safety devices is forbidden. Please refer to single country safety rules in order to respect them.

SS Soft start

Set if soft start is active (yS) or not (nt). Soft start make a linear power slope to avoid mechanical shocks at start.

bL Blinker flashing mode:

Enabling this function, the blinker output flashes itself without needs of external flashing board. Use up/down to

choose yes (yS) for flashing, not (nt) for fixed light blinker or exit (EH). Push enter to confirm.

L1   (for QK-LEDKIT) Slow flash when the boom is in stand-by; Fast flash while it's moving

L2   (for QK-LEDKIT) Fixed light when the boom is in stand-by; Fast flash while it's moving

d2 Load defaults:

Choosing this menu and confirming with yes (yS), sets the control unit at factory defaults.

Ar Enable automatic transmitters learning:

Enabling this function it's possible to insert new transmitters without accessing base menu. Refer to "Automatic transmitters learning".

rᴏ Radio mode:

1b: Each button of a new transmitter is stored separately. User can choose the associated channel:

    c1 Start/open, c2 Pedestrian/close, c3 courtesy light command, c4 stop).

4b: Once you enter a button of a new transmitter in memory, all the other buttons get stored in the memory as well. Each button takes a channel between: open, close, pedestrian and stop.

cᴏ Counter

Shows the counter in 3 groups of 2 numbers. Example: 123.456 is displayed as :   12 - 34 - 56

ᴏᴏ Mass mode:

In this menu you can enable the mass enter mode. This mode can be enabled just when pause time is 0, this means when automatic closing is disabled. In this mode, if you push 5 times Open command (for example), the control unit counts 5 cars passing trough the detect sensor, then it closes the barrier.

br Barrier Mode:

In this menu you can enable the barrier mode for automatic barriers. When this mode is enabled, the working times tS (slowdown working time), t1 (standard working time) and t2 (pedestrian working time) are set in tenth of seconds (for example: tS = 01 means 0.1 seconds). **IT MUST BE ENABLED WHEN INSTALLING THE CONTROL BOARD ON AUTOMATIC BARRIERS - SOFT START "SS" MUST BE DISABLED WHEN IN BARRIER MODE.**

EU Declaration of Conformity

and Declaration of Incorporation of "quasi-machines" (pursuant to the Machinery Directive 2006/42/CE, Att.II, B)

Company name:	QUIKO
Postal address:	Via Seccalegno, 19
Postcode and City:	36040, Sossano (VI) - Italy
Telephone number:	+39 0444 785513
E-Mail address:	info@quikoitaly.com

declare that the DoC is issued under our sole responsibility and belongs to the following product:

Apparatus model/Product:	QK-CE24A
Type:	CONTROL BOARD INCLUDING RADIO MODULE FOR SLIDING GATES AND AUTOMATIC BARRIERS (24V)

The object of the declaration described above is in conformity with the relevant Union harmonisation legislation:

- **Directive 2014/53/EU (RED Directive)**
- **Directive 2011/65/EU (RoHS)**

The following harmonised standards and technical specifications have been applied:

Title:	Date of standard/specification
EN 61000-6-2	2005 + AC:2005
EN 61000-6-3	2007 + A1:2011+AC:2012,
EN 301 489-1 V2.2.3	2019
EN 301 489-3 V2.1.1	2017
EN 60335-2-103	2015
EN 12453	2017
EN 62479	2010
EN 300 220-2 V3.1.1	2017
EN IEC 63000	2018

Additional information

Signed for and on behalf of:

Revision:	Place and date of issue:	Name, function, signature
01.00	**Sossano, 01/04/2022**	**(Borinato Luca, Legal Officer)**

CE