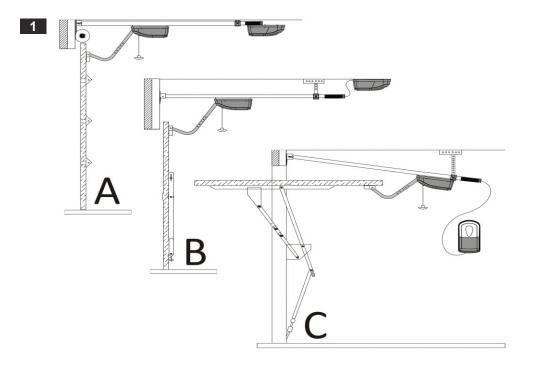
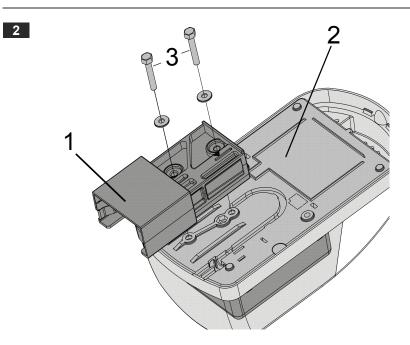


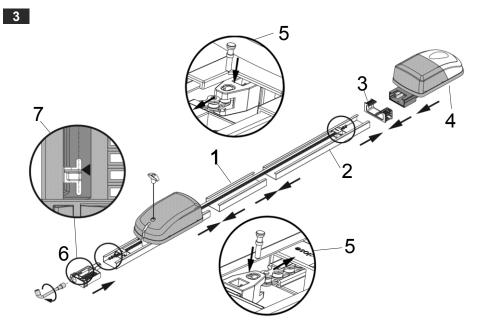
T6 - T12

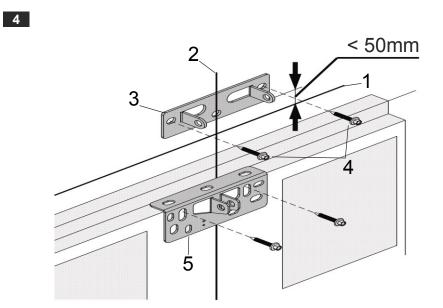
Electromechanical gearmotors INSTRUCTIONS FOR INSTALLATION

CE



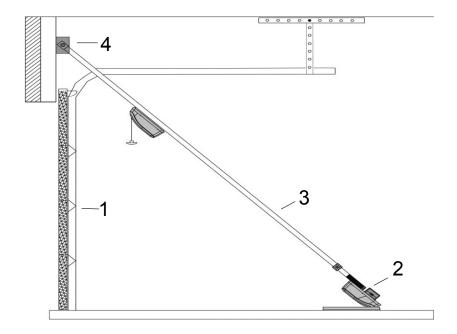


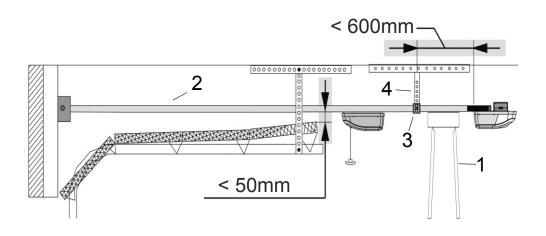


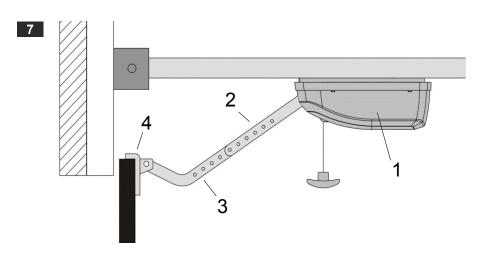


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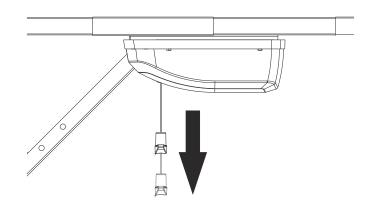
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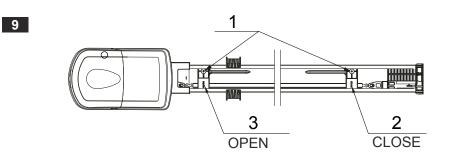




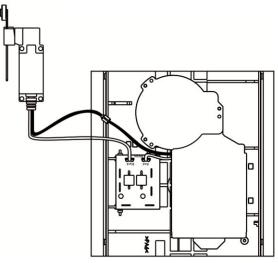


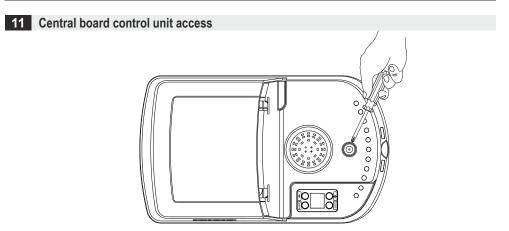
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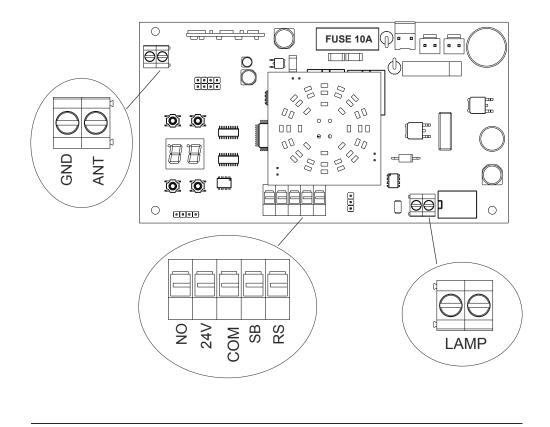


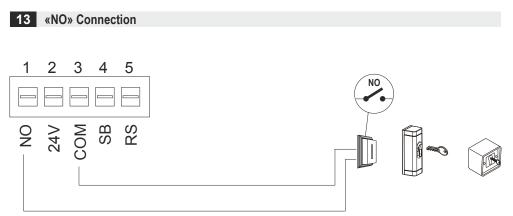






#### 12 Terminals layout

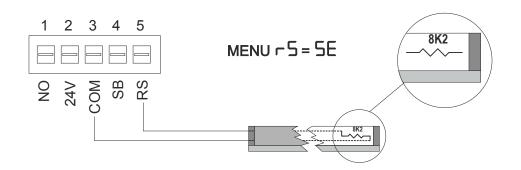




#### 14 PHOTOCELLS connection



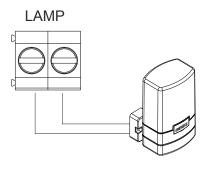
#### 15 EDGE connection



16 STOP 8K2 connection

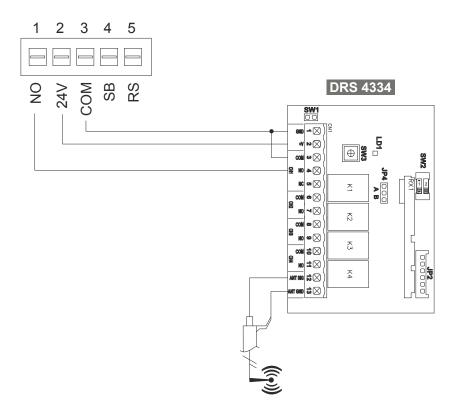


#### 17 FLASHING LIGHT connection





#### 18 EXTERNAL RECEIVER connection



#### Thank you for choosing GI.BI.DI.

#### READ CAREFULLY THESE INSTRUCTIONS BEFORE PROCEEDING WITH INSTALLATION.

#### WARNINGS:

This product has been tested by GI.BI.DI. for full compliance with the requirements of the directives in force. GI.BI.DI. S.r.I. reserves the right to change the technical data without prior notice in relation to product development.

DISPOSAL: GI.BI.DI. advises recycling the plastic components and to dispose of them at special authorised centres for electronic components thus protecting the environment from polluting substances.



#### INTRODUCTION

The gearmotors TAIMEN T6-T12 allow easily and quickly automating of sectional doors and overhead doors of up to 15 sq.m. .

The automated device with integrated control unit facilitates system certification in accordance with EN12453.

#### WARNINGS FOR THE INSTALLER

• Before proceeding with the installation, fit a magnetothermal and differential switch with a maximum capacity of 10A upstream of the system. The switch must guarantee omnipolar separation of the contacts with an opening distance of at least 3mm.

- All the packaging materials must be kept out of reach of children since they are potencial sources of danger.
- The manufacturer declines all responsibility for proper functioning of the automated device if failing to use original GIBIDI components and accessories suitable for the intended application.

• When installation has been completed, always carefully check proper functioning of the system and the devices used.

• This instruction manual addresses persons qualified for installation of "live equipment ", therefore good technical knowledge is required exercised as profession in compliance with the regulations in force.

- Maintenance must be performed by qualified personnel.
- Before carrying out any cleaning or maintenance operation, disconnect the control unit from the mains.

• This product has been designed and constructed solely for the use indicates in this document. Any other use may cause damage to the product and be a source of danger.

· Verify the intended end use and take the necessary safety precautions.

• Use of the products for purposes different from the intended use has not tested by the manufacturer and the operations performed are therefore on full responsibility of the installer.

- Mark the automated device with visible warning plates.
- Warn the user that children and animals must not play or stand near the gate.
- Adequately protect the danger points, for example using a sensitive frame.

• Check proper installation of the earthing system: connect all the metal parts of doors, gates, ecc. and all the system components equipped with earthing plate.

- Exclusively use original spare parts for any maintenance or repair.
- · Do not make any modification to the components of the automated device unless expressly authorised by GIBIDI.

#### WARNINGS FOR THE USER

• In the event of an operating fault or failure, cut the power upstream of the control unit and call the Technical Service.

• Periodically check the functioning of the safety devices. Any repair must be carried out by specialised personnel using original and certified materials.

• The appliance is not to be used by children or people with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction.

• Do not access to the control unit for adjustments and/or maintenance.

• Never operate the opener when any persons are under or near the path of the garage door. Children must be supervised at all times when near the garage door and when the opener is in use.

- Always disengage the opener with the garage door in the fully closed position.
- Before attempting to disengage the opener from any position other than fully closed, ensure that there are no children / persons and solid objects under or near the path of the garage door.
- Never attempt to open or close the garage door by pulling on the engage / disengage cord.
- For safety reasons always ensure that the garage door is fully open and stationary before driving into or out of the garage.
- Maintain the visual contact with the automated device during the complete operation period.



#### WARNING: IMPORTANT SAFETY INSTRUCTIONS.

It is important for the safety of persons to follow these instructions. Keep this instruction manual.

#### **TECHNICAL SPECIFICATIONS**

Operator	TAIMEN T6	TAIMEN T12
Туре	Irreversible electron	mechanical gearmotor
Supply voltage	220/230	V 50-60 Hz
Motor supply voltage	24	4Vdc
Power absorbed	MAX 80W	MAX 110W
Max force	600 N	1200 N
Speed	Adjustable	90-125 mm/s
Slow downs	Aut	omatic
Operating temperature	-20°C + 60°C	-20°C + 60°C
Degree of protection	IP 20	IP 20
Max door height	2,500 mm	2,500 mm
Max door surface	10 sqm	15 sqm
Operating frequency (%)	30% (at 20°C)	30% (at 20°C)
Radio receiver	On board, 100 t	ransmitters max
Formula to calculate the operating frequency	$\%Fu = \frac{A+C}{A+C+P} \times 100$	A = Opening time C = Closing time P = Overall pause time A+C+P = Time between two openings

#### PRELIMINARY WARNINGS

Check that the door structure is in conformity with the regulations in force and that door movement is linear without friction.

#### Preliminary checks:

• Check that the door structure is sufficiently strong. In any case check that the weight and dimensions of the door fall within the limits of use of the operator.

- Check that the door can be moved manually without force (points of greatest friction) for the entire travel of the door during both opening and closing.
- · A garage door is deemed to be well balanced and aligned if it:
  - requires an equivalent amount of applied force to either manually open or close.
  - requires no more than 150N (15Kg) of applied force to either manually open or close.
  - does not rise or fall more than 100mm when released at any point between fully open and fully closed positions.
  - does not rub on any supporting or surrounding structures.
- If the door is not a new installation, check the state of wear of all the components, repair or replace the defective or worn parts and perform any other operations necessary.
- Remove or make non-operating the existing locks.
- The wall bracket carries all of the opening and closing thrust of the opener and as such must be securily fastened to a rigid, structural member of the garage wall or ceiling.

The reliability and safety of the automated device are directy influenced by the status of door structure.

#### POSITION AND ASSEMBLY CONTROL UNIT-COURTESY LIGHT

Control unit-courtesy light can be installed in three different ways (Fig. 1).

- method A: at the end of the steel drive rail directly on the unit of motor pretensioning and power supply (Fig. 1-A and Fig.2).
- method B: on the ceiling near the unit of motor pretensioning and power supply (Fig. 1-B).
- method C: using the cable extension kit, everywhere (Fig. 1-C).

#### DRIVE RAIL ASSEMBLY

• Compose the drive rail joining the three segments (Fig. 3-2) by the two joints (Fig. 3-1), being sure that the drive rail segments are completely put in the junctions.

- Put in the assembled drive rail the swinging brackets support (Fig. 3-3) including roundhead screws and nuts.
- Put the pretensioning units at the beginning and at the end of the assembled drive rail (Fig. 3-4) and (Fig. 3-6).
- Fix the chain to the pretensioners using the included pins (Fig. 3-5).

• Use a 13mm socket wrench to adjust the pretensioning screw until the lower part of the screw head aligns with the indicator on the pretensioning device (Fig. 3-7).

#### WALL BRACKET INSTALLATION

• Determine the highest point of the door during the movement and mark the level on the wall above the door (Fig.4-1).

• Determine the door center line and mark a vertical line on the wall above the door (Fig. 4-2).

• Position the wall bracket (Fig. 4-3) and ensure that the distance between the bracket base and the line previously marked is not more than 50mm (Fig. 4-1).

- Mark on the wall the position of the two outer screws holes.
- Fix the bracket to the wall (Fig. 4-4).

#### BRACKET INSTALLATION ON THE DOOR

• Fix the handling bracket to a structural part of the door, using the two self-drilling screws 6mm x 50mm. Be sure that the bracket is on the centre and on the top of the door (Fig. 4-5).

#### FIXING THE OPERATOR TO WALL BRACKET

# Important Note: in order to avoid any damage to the operator, it is necessary to put the control unit - courtesy light on a carton or some protective material (Fig. 5-2).

• Be sure that the door is closed (Fig. 5-1).

• Put the assembled operator on the ground in line with the centre of the door and the control unit-courtesy light far from the door (Fig. 5-2).

- Lift the operator on the side of pretensioning unit (Fig. 5-4) till the wall bracket (Fig. 5-4).
- Fasten the pretensioning unit to the wall bracket using the long pin and a spring clip.

#### FIXING THE OPERATOR TO THE CEILING

#### Important Note: to avoid any damage, always lift the operator by the drive rail.

• Lift the operator and rest it on a support (Fig. 6-1) high enough that the drive rail (Fig. 6-2) runs parallel to the ground.

- Align the movable bracket of the drive rail with a structural element of the ceiling (Fig. 6-3).
- Fix the support brackets of the drive rail to a structural element of the ceiling (Fig. 6-4).
- Fix the drive rail support to the brackets using the nuts included (Fig. 6-3).

#### **ASSEMBLING TOWING ARM**

- Be sure that the door is closed.
- Remove motor unit cover (Fig. 7-1).

• Put the straight towing arm in the proper seat of the motor unit (Fig. 7a-1) and fix it with the little pin and a spring clip (Fig. 7a-1).

• Fix the curved towing arm to the bracket on the door with the medium pin and a spring clip (Fig. 7a-2).

• Join and fix curved and straight towing arms with the two screws M8 x 20mm and the nuts M8 included, taking care of using the two more distant holes and a spring clip (Fig. 7a-3).

#### **ENGAGING / DISENGAGING**

Importat Note: always disengage the operator with the door closed. If disengaging from any position other than the door fully closed, ensure that there are no persons or objects near the door.

- To disengage: Pull down on the release handle with the string until hearing a click (Fig.8) and release it.
- To engage: Pull down on the release handle with the string until hearing a click again (Fig.8) and release it.

#### **CONNECTION TO POWER SUPPLY**

- · Connect, using the provided cable, the operator to the properly earthed power supply.
- Be sure that the power cable does not touch the operator and that the exceeding cable is correctly positioned.

#### LIMIT SWITCH ADJUSTMENT

#### Opening adjustment:

- · Loosen the fixing screw of the opening limit switch (Fig.9-1).
- · Slide the limit switch till the position necessary to open the door (Fig. 9-3).
- Tighten the screw of the opening limit switch (Fig. 9-1).

#### Closing adjustment:

- Loosen the fixing screw of the closing limit switch (Fig.9-1).
- Slide the limit switch till the position necessary to close the door (Fig. 9-2).
- Tighten the screw of the closing limit switch (Fig. 9-1).

#### **DISPLAY SIGNALS**

EI	Photocell interrupted
53	Safety edge / stop intervention
63	Amperometric intervention
EH	Travel learning cycle failed, current limit exceeded
ES	Transmitters memory full
-0	Input closing NO
ЦЕ	Ventilation mode
-	Transmitters learning mode
Fr	Factory reset
LL	Travel learning cycle
[]	Door not closed
==	Need to make the travel learning cycle. In this situation the operator does not reply to start, opening, closing commands

#### **BUTTONS ON BOARD FUNCTION**

Learn

	Learn	In pause	Short pressure : Transmitters learning/cancellation Pushed for 8s : Transmitters complete cancellation
١		In the menu	Exit from the menu or power supply selection
	Confirm	In pause	Short pressure : has the same functions of NO output Pushed for 5s : active the travel learning procedure
		In the menu	Menu or power supply selection
		In pause	Short pressure : - Pushed for 8s : Read the chapter <b>«FORCED MOVEMENT OF THE DOOR»</b>
		In the menu	Slide the menu or the available selections
	<b>⊕</b> + <b>●</b> ●	In pause	Short pressure : Access to the menu

#### TRANSMITTERS MANAGEMENT

#### Learning procedure:

- When the operator has stopped, push and release the LEARN button.
- - L appears on the display, the flashing light and courtesy light start blinking slowly.
- · Push within 6 seconds any button of the transmitter you want to store.
- The flashing light and courtesy light will do 3 fast blinkings to confirm that the storage has been completed.
- Push within 6 seconds any button of another transmitter to be stoted or wait to go out from the procedure.

#### Alternative learning procedure:

- It is necessary to have a transmitter already stored.
- When the operator has stopped, push for 10 seconds the button 1 and 2 of a transmitter already stored.
- rL appears on the display, the flashing light and courtesy light start blinking slowly.
- · Push within 6 seconds any button of the transmitter you want to store.
- The flashing light and courtesy light will do 3 fast blinkings to confirm that the storage has been completed.
- Push within 6 seconds any button of another trasmitter to be stored or wait to go out from the procedure.

#### Complete cancellation of storage transmitters procedure:

- When the operator has stopped, push for 8 seconds the LEARN button.
- - L appears on the display, the flashing light and courtesy light start blinking slowly.
- The flashing light and courtesy light will do 3 fast blinkings to confirm that the cancellation has been completed.
- Release the LEARN button.

#### Assigning specifical functions to transmitter buttons:

It is possible to assign different functions to the transmitter buttons by setting Er parameter.

#### TRAVEL LEARNING AND ANTI-CRUSHING THRESHOLDS

During travel learning procedure, the software stores operation times and automatically learns the amperometric values for the correct operation of the anti-crushing system.

The anti-crushing parameters can be modified later by menu RF.

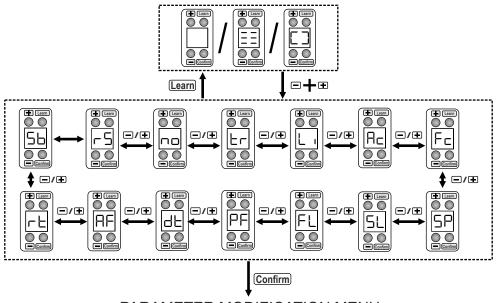
#### Travel learning procedure:

- When the operator has stopped and blocked, push the button CONFIRM for 5 seconds.
- LL will appear on the display, the flashing light and courtesy light will blink slowly.
- Push and release the button CONFIRM or any button of a transmitter stored or enable the input NO.
- The operator will do the following learning automatic manoeuvres :
  - Complete closing in slow down.
  - Complete opening at high speed (menu 5P).
  - Complete closing at high speed (menu 5P).
  - Complete opening at high speed with slow down (menu SP+SL).
  - Complete closing at high speed with slow down (menu SP+SL).
- · During automatic learning manoeuvres :
  - Any interaction (photocells, frame, input NO, CONFIRM button) causes the end of the learning procedure that
    must be repeated from the beginning.
  - Anti-crushing system is disabled.
- After the procedure, the flashing light and courtesy light will do 3 fast blinkings to confirm that the learning has been completed, LL will not appear on the display any more, the flashing light and courtesy light will not blink any more.

#### **OPERATION PARAMETERS MODIFICATION**

#### Access to the menu:

- When the motor has stopped, push the buttons + and at the same time and release them.
- + 5b, the first parameter of the menu, will appear on the display.
- Use buttons + or to display the available parameters.
- Push the button CONFIRM to modify the parameter chosen or LEARN to go out from the menu.
- In case the parameter has been modified, slide the available options with buttons + or -.
- If you want to save the modification done, push the button CONFIRM, the selection will blink fast and the parameter just modified will appear again on the display.
- If you do not want to save the modification done, push LEARN to return to previous menu and do not save the modification.



PARAMETER MODIFICATION MENU



#### PARAMETERS

The DEFAULT settings are indicated by the grey box

Display	Function	Status	Description
		OF	SB input disabled (terminal 4).
	PHOTOCELLS	On	SB input enabled, install the photocells (terminal 4). <b>Operation:</b> Input enabled only during closing phase. Stop the motion and reverse completely opening. If intercepted in pause, charge again the pause time. If enabled, allows the fast closing (see menu F c)
56		ос	SB enabled in opening and closing (terminal 4). <b>Operation:</b> Input enabled both in opening and closing. If intercepted, stops the motion till it is not freed. When released, the motion starts again in opening. If intercepted in pause, charge again the pause time.
	RS TERMINAL FUNCTION	OF	Terminal RS disabled (terminal 5)
-5		SE	Terminal RS works as 8k2 safety edge, install the device (terminal 5). <b>Operation during closing movement:</b> reverse the motion for 2s, when the contact is restored, open completely again and, if the automatic closing is enabled, will close automatically again. N°3 interventions in succession, before a complete closing, cause the stop of the movement and the control unit wait for a command. The reverse movement is done at 50% of maximum speed. <b>Operation during opening movement:</b> stop the motion and the control unit waits for a command.
		SE	Terminal RS works as 8k2 stop, install the device (terminal 5). <b>Operation during closing movement:</b> stop the motion and the control unit waits for a command. <b>Operation during opening movement:</b> stop the motion and the control unit waits for a command.

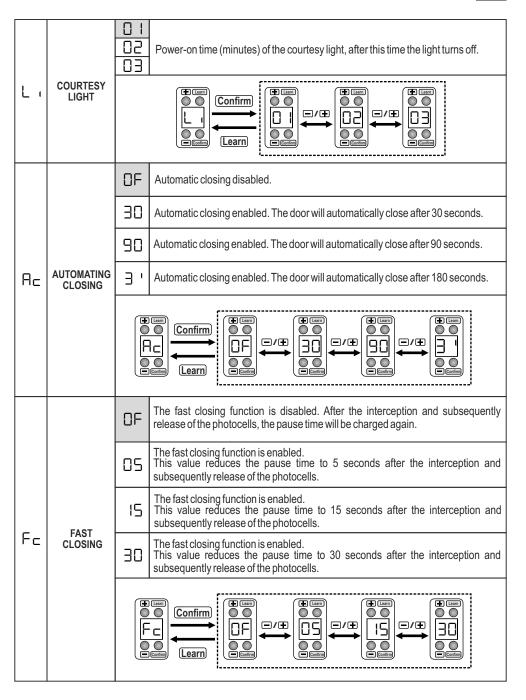
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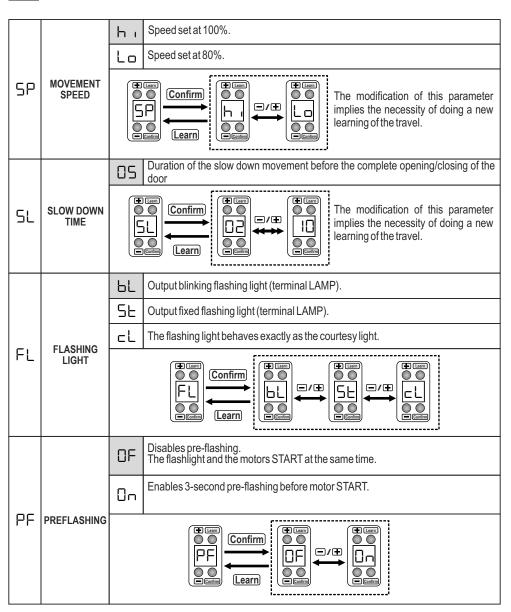
-5	RS TERMINAL FUNCTION			
		רט	$\begin{array}{llllllllllllllllllllllllllllllllllll$	
		гс	$\begin{array}{llllllllllllllllllllllllllllllllllll$	
		٥Ρ	Input NO enabled as opening command, the door opens and does not close automatically again.	
		cL	Input NO enabled as closing command, the door closes.	
	INPUT NO	<b>Я</b> u	Input NO enabled as start with AUTOMATIC logic. Operation: Door closed →OPENS During opening →IRRELEVANT Door open → Restarts the pause time if the automatic reclosing is enabled, otherwise closes. During closing →OPENS SUSTAINED COMMAND : the gate OPENS and stays opened as long as the contact stays closed.	
		Pط	$\begin{array}{llllllllllllllllllllllllllllllllllll$	



		Ь!	Transmitter button 1. DEFAULT - u	
		62 63 64	Transmitter buttons 2, 3, 4. DEFAULT (no function assigned).	
		гυ	Button enabled as start step-by-step with stop both in opening and closing.	
		гс	Button enabled as start step-by-step with stop only in opening.	
		٥Ρ	Button enabled as opening command, the door opens and does not close automatically again.	
		c٤	Button enabled as closing command.	
		Lı	Button enabled as courtesy light command. It switches on and off the courtesy light.	
		UΕ	Button enabled as ventilation command. The door closes and opens again for the 20% of the travel, it will close again after 30 minutes.	
	TRANSMITTER BUTTONS MANAGEMENT	Au	Button enabled as start with AUTOMATIC logic.	
Er		Рd	Button enabled as pedestrian command with step-by-step logic and without automatic closing.(for horizontal doors)	
			No function assigned	
			$\begin{array}{c} \textcircled{\begin{tabular}{c} \hline \\ \hline $	
			Confirm Learn	

20 **G:B:D:** 





	DETENSIONING	OF	Detensioning in closing disabled.
		0-	Detensioning in closing enabled. After the door has been completely closed, the motor moves back a little to reduice system tension.
dt			
ЯF	- ANTI- CRUSHING	01	<ul> <li>Amperometric threshold of the motor, the default value is calculated from the control unit during the travel learning.</li> <li>The more you increase this value, the more the operator pushes before making the anti-crushing manoeuvre.</li> <li>Alow value needs a door in perfect conditions and well balanced.</li> <li><b>Operation:</b> <ul> <li>Its intervention in closing causes the immediate inversion of the motion decelerating till a complete opening and, if enabled, will make the automatic closing.</li> <li>Its intervention in opening causes the stop of the movement and the control unit waits for a command.</li> <li>N°3 interventions in succession, before a complete closing, cause the stop of the movement and the control unit waits for a command.</li> </ul> </li> </ul>

	TIME RECOVERY	OF	Time recovery disabled. The control unit does not make any calculations attempting to correctly make the slow down phase before the complete opening and closing. In case of motion inversion before the complete opening/closing, the control unit makes the whole fast working time and then the slow down time. Configuration suggested for big/heavy doors.
٢Ł		On	Time recovery enabled. The control unit makes some calculation attempting to correctly make the slow down phase before the complete opening and closing. This configuration causes, after repeated motion inversions, long periods of slow down motion and possible anti-crushing interventions not desired.

#### FACTORY RESET

The factory reset procedure will bring back all the parameters to the default values and all the stored transmitters will be deleted.

#### Procedure:

- When the motor has stopped, push the buttons + and at the same time and release them.
- 5b will appear on the display.
- Push the buttons + and at the same time for 8 seconds.
- Fr will appear on the display
- · After 5 seconds, the control unit resets and 6 dashes will appear on the display.

#### FORCED MOVEMENT OF THE DOOR

At any time, when the motor has stopped, it is possible to force an opening or closing manoeuvre. **WARNING:** During the forced movement of the door, any type of safety is enabled.

#### **Opening forced movement:**

Pushing the button + for 8 seconds and keeping it pushed, the door will move slowly in opening. When you release the button +, the door will stop.

#### Closing forced movement:

Pushing the button - for 8 seconds and keeping it pushed, the door will move slowly in closing. When you released the button -, the door will stop.

#### WICKET DOOR SWITCH

In order to make the automated device inoperative, when the wicket door is open, connect it as shown in Fig. 10.

#### **OVERHEAD DOOR**

In order to automate an overhead door, it is necessary to use the curved arm, provided separately.

#### **OPERATION WITH BATTERIES**

In order to assure the operation of the automatic device even in absence of line voltage, it is necessary to use the BATTERY KIT FOR DIGITAL CONTROL UNIT, that you can purchase as optional with code AJ01510. **NOTE:** 

It is not allowed using the BATTERY KIT FOR ANALOG CONTROL UNIT with code AJ01480.

#### COURTESY AND FLASHING LIGHTS SIGNALS

SIGNAL	MEANING	EFFECT	LIGHT
0,8s ON, 0,8s OFF	Opening	The door is opening	FLASHING
0,4s ON, 0,4s OFF	Closing	The door is closing	FLASHING
2s ON, 2s OFF	Travel learning cycle	A travel learning cycle begins at a start command	FLASHING + COURTESY
5 fast blinkings	Photocell (in	Releasing command, the door opens	FLASHING + COURTESY
3 slow blinkings	Frame 8k2 intercepted at rest and a start command is launched	Door blocked and closed	FLASHING + COURTESY
3 slow blinkings	Frame 8k2 intercepted in pause or at rest and a start command is launched	Door blocked and open	FLASHING + COURTESY
4 slow blinkings	Low battery at the beginning of opening or closing	Door blocked	FLASHING + COURTESY
4 slow blinkings	Low battery at the beginning of closing	Door blocked and open	FLASHING + COURTESY
Fixed light for 5s after a travel learning cycle	Travel learning cycle failed	Entering E E mode	FLASHING + COURTESY

#### INSTALLATION COMPLIANCE WITH THE REGULATION

When an existing door/gate is automated, it becomes a machine and the installer becomes the builder. He is responsible for the safety of the automated device and has to comply with the provisions provided by the 2006/42/CE Directive.

To make easier the certification process, Gi.Bi.Di. put at your disposal on its website WWW.GIBIDI.COM some guides and replies to the more frequent questions.

G:B:D: 27

#### UK

## **Declaration of conformity CE**

The manufacturer:

GI.BI.DI. S.r.I.

Via Abetone Brennero, 177/B, 46025 Poggio Rusco (MN) ITALY

declares that the products:

**ELECTROMECHANICAL OPERATORS TAIMEN T6-T12** 

are in conformity To the following CEE Directives:

• LVD Directive 2006/95/CE and subsequent amendments;

• EMC Directive 2004/108/CE and subsequent amendments;

and that the following harmonised standards have been applied:

- EN60335-1,
- EN61000-6-1, EN61000-6-3

Moreover declares that the product must not be used until the machine in which it has been incorporated has not been declared in accordance with 2006/42/CE Directive.

The Legal Representative Michele Prandi

Date 01/10/2018

# 28 **G:B:D:**

### TAIMEN

NOTES	

TAIMEN	G:B:D:
NOTES	



#### GI.BI.DI. S.r.I.

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