

:BA100



BA100 - (AS05060)

Apparecchiatura elettronica
ISTRUZIONI PER L'INSTALLAZIONE

Electronic control unit
INSTRUCTIONS FOR INSTALLATIONS

I Grazie per avere scelto GIBIDI.**!** LEGGERE ATTENTAMENTE QUESTO MANUALE PRIMA DI PROCEDERE ALL'INSTALLAZIONE.

AVVERTENZE: Questo prodotto è stato collaudato in G.I.B.I.D.I. verificando la perfetta corrispondenza delle caratteristiche alle direttive vigenti. G.I.B.I.D.I. S.r.l. si riserva la facoltà di modificare i dati tecnici senza avviso, in funzione dell'evoluzione del prodotto.

SMALTIMENTO: G.I.B.I.D.I. consiglia di riciclare i componenti in plastica e di smaltire in appositi centri abilitati i componenti elettronici evitando di contaminare l'ambiente con sostanze inquinanti.

**UK** Thank you for choosing G.I.B.I.D.I.**!** PLEASE READ CAREFULLY THIS MANUAL BEFORE PROCEEDING WITH THE INSTALLATION.

WARNINGS: This product has been tested in G.I.B.I.D.I. verifying the perfect correspondence of the characteristics to the current directive. G.I.B.I.D.I. S.r.l. reserves the right to modify the technical data without prior notice depending on the product development.

DISPOSAL: G.I.B.I.D.I. advises recycling the plastic components and to dispose of them at special authorised centres for electronic components thus protecting the environment from polluting substances.

**F** Merci d'avoir choisi G.I.B.I.D.I.**!** NOUS VOUS PRIONS DE BIEN VOULOIR LIRE ATTENTIVEMENT CE MANUEL AVANT DE PROCÉDER À L'INSTALLATION.

AVERTISSEMENT: Ce produit a été testé chez G.I.B.I.D.I. afin de contrôler la correspondance parfaite des caractéristiques avec les règles en vigueur. G.I.B.I.D.I. S.r.l. se réserve la faculté de modifier les données techniques sans aucun préavis suivant l'évolution de ses produits.

ELIMINATION : G.I.B.I.D.I. conseille de recycler les composants en plastique et de remettre les composants électroniques à des centres spécialisés pour éviter de polluer l'environnement avec des substances polluantes.

**E** Gracias por haber elegido G.I.B.I.D.I.**!** POR FAVOR LEER CON ATENCIÓN ESTE MANUAL ANTES DE PROCEDER CON LA INSTALACIÓN.

ADVERTENCIAS: Este producto ha sido ensayado en G.I.B.I.D.I. averiguando la perfecta correspondencia de las características a las normas vigentes. La empresa G.I.B.I.D.I. S.r.l. se reserva el derecho de modificar los datos técnicos sin previo aviso, en función de la evolución del producto.

ELIMINACION: G.I.B.I.D.I. aconseja reciclar los componentes de plástico y llevar los componentes electrónicos a los centros de recogida correspondientes evitando de esta manera la contaminación ambiental con sustancias perjudiciales.

**D** Vielen Dank, dass Sie sich für G.I.B.I.D.I. entschieden haben.**!** BITTE LESEN SIE VORSICHTIG DIESEN MANUAL BEVOR MIT DER ANLAGE VORZUGEHEN.

WARNUNGEN: Dieses Produkt wurde in G.I.B.I.D.I. geprüft um die perfekte Entsprechung der merkmale an die geltende vorschriften zu prüfen. G.I.B.I.D.I. S.r.l. behält sich das recht vor, die technischen daten der produktentwicklung entsprechend ohne voranzeige abzuändern.

ENTSORGUNG: G.I.B.I.D.I. empfiehlt, Kunststoffkomponenten dem Recycling zuzuführen und elektronische Komponenten in behördlich genehmigten Zentren zu entsorgen, um die Verschmutzung der Umwelt durch Schadstoffe zu verhindern.

**P** Obrigado por ter escolhido a G.I.B.I.D.I.**!** LER COM ATENÇÃO ESTE MANUAL ANTES DE PROCEDER COM A INSTALAÇÃO.

ADVERTÊNCIA: Este produto foi testado em G.I.B.I.D.I. verificando a correspondência perfeita das características ao normas vigentes. A G.I.B.I.D.I. S.r.l. reserva-se o direito de modificar os dados técnicos sem pré-aviso em função de evolução do produto.

ELIMINAÇÃO: G.I.B.I.D.I. aconselha a reciclar as componentes em plástico e a eliminar as componentes electrónicas em centros habilitados evitando desta forma poluir o ambiente com substâncias poluentes.

**NL** Dank u voor uw keuze van G.I.B.I.D.I.**!** LEES DEZE GEBRUIKSAANWIJZING ZEER AANDACHTIG ALVORENS DE INSTALLATIE AAN TE VATTEN.

WAARSCHUWINGEN: Dit product werd gekeurd in G.I.B.I.D.I. Er werd nauwlettend gecontroleerd of de kenmerken van het product perfect overeenkomen met de geldige richtlijnen. G.I.B.I.D.I. S.r.l. behoudt zich het recht voor de technische gegevens te wijzigen zonder waarschuwing vooraf, als dat nodig is voor de evolutie van het product.

VERWERKING: G.I.B.I.D.I. adviseert om de kunststof componenten te recycleren en de elektronische componenten af te voeren naar erkende inzamelingspunten, om te voorkomen dat het milieu verontreinigd wordt door vervuilende stoffen.

**GR** Ευχαριστούμε που επιλέξατε τα προϊόντα G.I.B.I.D.I.**!** ΠΑΡΑΚΑΛΟΥΜΕ ΝΑ ΔΙΑΒΑΣΤΕ ΠΡΟΣΕΚΤΙΚΑ ΑΥΤΕΣ ΤΙΣ ΟΔΗΓΙΕΣ ΠΡΙΝ ΤΗΝ ΕΓΚΑΤΑΣΤΑΣΗ.

ΣΗΜΕΙΩΣΗ: Η εταιρία G.I.B.I.D.I. έχει ελέγξει αυτό το προϊόν όσον αφορά την τέλεια προσαρμογή των χαρακτηριστικών του στην ισχύουσα νομοθεσία. Η εταιρία G.I.B.I.D.I. S.r.l. διατηρεί το δικαίωμα αλλαγών των τεχνικών προδιαγραφών χωρίς προϋπόθεση και ανάλογα με την ανάπτυξη των προϊόντων της.

ΔΙΑΘΕΣΗ: Η G.I.B.I.D.I. σας συμβουλεύει να ανακυκλώσετε τα πλαστικά εξαρτήματα και να διαθέσετε τα ηλεκτρονικά εξαρτήματα μετά την απασίωση τους, σε εξειδικευμένα κέντρα που υπάρχουν για τον σκοπό αυτό, συμβάλλοντας έτσι στην προστασία του περιβάλλοντος από τις παρενέργειες της μόλυνσης.



FIG. 1

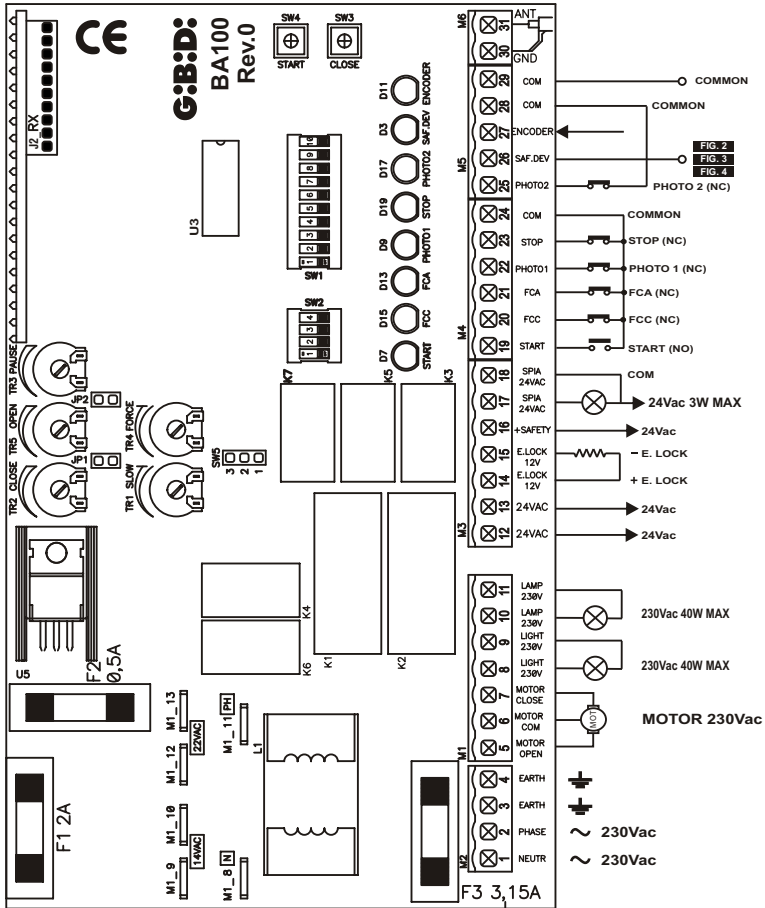
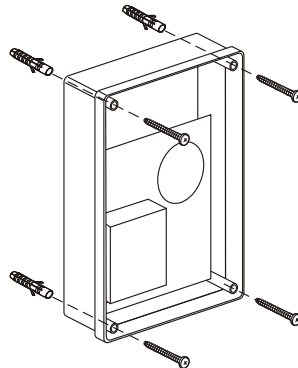


FIG. 5



UK

Control unit	BA100/AS05060
Type	Electronic control unit for automation of a swing gate, overhead door and barrier with 230 VAC motor
Power supply	220 / 230 VAC, single-phase, 50 Hz
No. of motors	1
Motor power supply	220 / 230 VAC
Flashlight	220 / 230 VAC 40W max
Warning light	24 VAC 3W max
Accessory power supply	24 VAC 8W max including safety device power supply
Safety device power supply	24 VAC 8W max including accessory power supply
Plug-in	radio receiver
Operating temperature	-20°C +60°C

TECHNICAL SPECIFICATIONS / FUNCTIONS

- Red warning LEDs of N.C. contacts (CLOSING LIMIT SWITCH, OPENING LIMIT SWITCH, STOP, PHOTOCELL 2, SAFETY DEVICE)
- Green warning LED of N.O. contact (START)
- START and CLOSE buttons on the board.
- Control of one 12 VAC electric lock.
- Safety switch test activation before the opening and closing movements.
- Stop and motion inversion for 2 seconds after intervention of the safety devices. At the next START pulse the motion restarts in the obstacle freeing direction.
- SAFETY DEVICE POWER SUPPLY Connection to this power supply allows TESTING the devices before motion. The safety devices must be connected to this terminal and will be powered only during the operating cycle.
- Deceleration during opening and closing with limit switch or timed (last 5 or 10 seconds). Deceleration is adjustable with the relative TRIMMER (SLOW)
- Photocell 1 (PHOTO 1) activates during closing only.
- Photocell 2 (PHOTO 2) activates both during opening and closing. The motion will always resume in opening after PHOTO 2 is freed.
- Motor force adjustment with the TRIMMER TR4 FORCE.
- Input SAF DEV with 8K2 resistor connected to the safety devices. If not used connect an 8K2 resistor between terminals 26 and 29 (present as default).
- Hydraulic motor (DIP 5 ON): if the gate has not performed any manoeuvres in the last 5 hours, a 10-second closing pulse is given. (hydraulic lock retention)

DURING THIS MOVEMENT THE SAFETY DEVICES ARE NOT ACTIVE.

INSTALLATION

Use glands adequate to ensure proper mechanical connection of cable and maintain the box protection degree IP55. (FIG. 5)

INSTALLATION WARNINGS

Before proceeding with installation, fit a magnetothermal or 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 3 mm.

- To prevent possible interference, differentiate and always keep the power cables (minimum cross-section 1.5 mm²) separate from the signal cables (minimum cross-section 0.5 mm²).
- Make the connections referring to the following tables and to the attached screen-print. Be extremely careful to connect in series all the devices that are connected to the same N.C. (normally closed) input, and in parallel all the devices that share the same N.O. (normally open) input. Incorrect installation or improper use of the product may compromise system safety.
- Keep all the materials contained in the packaging away from children, since they pose a potential risk.
- The manufacturer declines all responsibility for improper functioning of the automated device if the original components and accessories suitable for the specific application are not used.
- After installation, 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 and professional practice in compliance with the regulations in force are required.
- Maintenance must be carried out by qualified personnel.
- Before carrying out any cleaning or maintenance operation, disconnect the control unit from the mains.
- This control unit may only be used for the purpose for which it was designed.
- Check the aim of the final use and make sure that all safety measures are taken.
- Use of the product for purposes different from the intended use has not been tested by the manufacturer, therefore any work is carried out on full responsibility of the installer.
- Mark the automated device with visible warning plates.
- Warn the user that children or animals may not play or stand around near the door.
- Appropriately protect the danger points (for example, using a sensitive frame).

WARNINGS FOR THE USER

In the event of an operating fault or failure, cut the power upstream of the control unit and call Technical Service. Periodically check functioning of the safety devices. Any repairs 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 touch the card for adjustments and/or maintenance.



WARNING: IMPORTANT SAFETY INSTRUCTIONS.

It is very important to follow the present instructions for your own safety.
Please keep this manual.

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ELECTRICAL CONNECTIONS: FASTONS

Faston	Position	Description
1	M1_8 M1_11	Primary connection of 230 VAC transformer (black cables)
2	M1_9 M1_10	Secondary connection of 14 VAC transformer (red cables)
3	M1_12 M1_13	Secondary connection of 22 VAC transformer (blue cables)

PROTECTION FUSES: FASTONS

Position	Value	Type	Description
F1	2A	FAST	Secondary transformer protection
F2	500 mA	FAST	Accessory protection
F3	3,15A	FAST	Transformer and motor primary protection

ELECTRICAL CONNECTIONS: TERMINAL BOARD

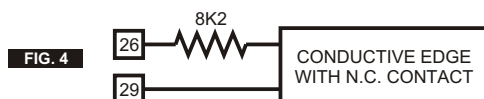
Terminal	Position	Signal	Description
M2	1	NEUTR	230 VAC power supply
	2	PHASE	230 VAC power supply
	3	EARTH	Ground wire connection
	4	EARTH	Ground wire connection

M1	5	OPEN MOTOR	Motor connection (opening)	
	6	COM MOTOR	Motor common	
	7	CLOSE MOTOR	Motor connection (closing)	
	8	LIGHT 230V	Courtesy light output 230V 40W	Comes on together with the motor and goes off 180s after the end of the movement.
	9	LIGHT 230V	Courtesy light output 230V 40W	
	10	LAMP 230V	Flashlight output 230 VAC 40W	Slow flashing during opening, off during pause, fast flashing during closing.
	11	LAMP 230V	Flashlight output 230 VAC 40W	

M3	12	24Vac	24 VAC external accessory power supply (photocells, radio, etc.)	
	13	24Vac	24 VAC external accessory power supply (photocells, radio, etc.)	
	14	E.LOCK 12V	Positive electric lock	
	15	E.LOCK 12V	Negative electric lock	
	16	+SAFETY	Safety device positive power supply with test (see DIP4 SW1), the negative must be connected to terminal 18	
	17	SPIA 24Vac	24 VAC warning light output	Slow flashing during opening, on fixed during pause, fast flashing during closing.
	18	SPIA 24Vac	24 VAC warning light output	

M4	19	START	START input (N.O.)	
	20	FCC	Closing limit switch input (N.C.)	Warning: If the limit switches are used to stop the gate motion, the water hammer must be disabled. See DIP3 SW1
	21	FCA	Opening limit switch input (N.C.)	
	22	PHOTO 1	PHOTOCELL 1 input (N.C.)	
	23	STOP	STOP input (N.C.)	
	24	COM	COMMON INPUTS/OUTPUTS	

M5	25	PHOTO 2	PHOTOCELL 2 input (N.C.)
	26	SAF. DEV	SAFETY DEVICE input •If not used leave the 8K2 resistor in place between terminals 26 and 29 (Fig.2). •If using a safety device already with 8K2 resistor connected between terminals 26 and 29 (Fig.3) remove the resistor fitted. •If using a safety device with N.C. contact, connect the 8K2 resistor provided in series to the contact (Fig.4).
	27	ENCODER	Non implementato
	28	COM	COMMON INPUTS/OUTPUTS
	29	COM	COMMON INPUTS/OUTPUTS
M6	30	GND	ANTENNA GROUND input
	31	ANT	ANTENNA SIGNAL input
J2_RX			Connector for plug-in receiver



FUNCTION PROGRAMMING (DIP SWITCH SW1)

DIP	STATUS	FUNCTION	DESCRIPTION
DIP 1 DIP 2	OFF OFF	STEP-BY-STEP WITH STOP	I Start pulse → OPEN II Start pulse → STOP (will not reclose automatically) III Start pulse → CLOSE IV Start pulse → OPEN
DIP 1 DIP 2	ON OFF	STEP-BY-STEP	I Start pulse → OPEN II Start pulse → CLOSE III Start pulse → OPEN
DIP 1 DIP 2	OFF ON	CONDOMINIUM	During opening it does not receive other Start commands after the first one; during Pause subsequent Start commands reload the pause time I Start pulse → OPEN Subsequent Start pulses → Uninfluential Pause from opening limit switch or opening time Start pulse during pause → Reloads the pause time (if DIP 6 ON) or CLOSES (if DIP 6 OFF) Subsequent Start pulse → OPEN
DIP 1 DIP 2	ON ON	DEAD MAN	Buttons on the board: If Start button is held down → OPEN If Close button is held down → CLOSE From terminal board: Closing the Start contact → OPEN Closing the PHOTO 1 contact and setting DIP1 of SW2 to OFF the door closes

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DIP 3	ON OFF	WATER HAMMER AND PRE-FLASHING	Enables pre-flashing during opening and closing for 3 seconds before moving the door. After pre-flashing a 1-second closing pulse is given (water hammer) to aid release of the electric lock (during opening only).	
			Disables the water hammer and pre-flashing function	
DIP 4	ON OFF	SAFETY DEVICE TEST	Enables the safety device TEST before activating the opening and closing cycle. The cycle can only start if the devices work perfectly, if not, three prolonged flashes indicate the fault. NB: After the start phase, set SW5 to position 2-3	
			Disables the safety device test.	
DIP 5	ON OFF	HYDRAULIC MOTOR	The operator is hydraulic	NOTE1*
			The operator is type electromechanical	
DIP 6	ON OFF	AUTOMATIC CLOSING	Enables automatic closing after the pause time adjustable with the trimmer TR3 PAUSE between 2 and 200 seconds.	
			Disables automatic closing.	
DIP 7 DIP 9	OFF OFF	NO DECELERATION	Deceleration function disabled	
DIP 7 DIP 9	OFF ON	DECELERATION WITH LIMIT SWITCH	Enables deceleration during both opening and closing when the respective limit switch is intercepted. If the jumpers JP1 and JP2 are closed, the deceleration time can be adjusted from 1 to 33 seconds; if the jumpers are open, the times can be adjusted from 1 to 16 seconds. The adjustment is made with the trimmers OPEN TR5 and CLOSE TR2. NB. WITH THIS FUNCTION THE LIMIT SWITCHES DETERMINE DECELERATION START	
DIP 7 DIP 9	ON OFF	5-SECOND DECELERATION	Enables deceleration during both opening and closing 5 seconds before the end of the run time. In this case, pay attention to adjustment of the TR2 / TR5 run times.	
DIP 7 DIP 9	ON ON	10-SECOND DECELERATION	Enables deceleration during both opening and closing 10 seconds before the end of the run time. In this case, pay attention to adjustment of the TR2 / TR5 run times.	
DIP 8	ON OFF	FAST CLOSING PHOTO 1	Reduces the pause time to 1.5 seconds after intervention of the photocells.	
			Disables the fast closing function.	
DIP 10	ON OFF	NO STOP	Disables the STOP command	
			Enables the STOP command	

DEFAULT SETTINGS (DIP SWITCH SW1)

DIP 1 and DIP 2 both OFF: Step-by-step with stop
 DIP 3 OFF: Water hammer and pre-flashing deactivated
 DIP 4 OFF: Safety device test disabled
 DIP 5 OFF: Electromechanical motor
 DIP 6 ON: Automatic closing enabled
 DIP 7 AND DIP 9 BOTH OFF Deceleration disabled
 DIP 8 OFF: Fast closing disabled
 DIP 10 OFF: STOP enabled

NOTE 1 *

If motion is inverted from opening to closing and vice versa, the opening and closing times will be the same in the case of an electromechanical configuration, but different in the case of a hydraulic configuration in order to take into account the different speed at which the operator runs in the two phases. In some hydraulic applications where the operators run at the same speed during opening and closing (e.g. FLOOR 810), it is advisable to enable electromechanical configuration.

FUNCTION PROGRAMMING (DIP SWITCH SW2)

The settings are stored during the rest phase (door closed).

DIP	STATUS	FUNCTION
DIP 1	ON	PHOTO 1 DISABLED
	OFF	PHOTO 1 ENABLED
DIP 2	ON	PHOTO 2 DISABLED
	OFF	PHOTO 2 ENABLED
DIP 3	ON	CLOSING LIMIT SWITCH DISABLED
	OFF	CLOSING LIMIT SWITCH ENABLED
DIP 4	ON	OPENING LIMIT SWITCH DISABLED
	OFF	OPENING LIMIT SWITCH ENABLED

DEFAULT SETTINGS (DIP SWITCH SW2)

DIP 1 ON: PHOTO 1 DISABLED

DIP 2 ON: PHOTO 2 DISABLED

DIP 3 ON: CLOSING LIMIT SWITCH DISABLED

DIP 4 ON: OPENING LIMIT SWITCH DISABLED SAAPERTURA

TRIMMER ADJUSTEMENT

The trimmers TR1, and TR4 can be adjusted also during gate movement and thus the effect immediately checked. The trimmers TR2, TR3 and TR5 are stored only during the rest phase (gate closed).

Trimmers	Function	Description
TR1	SLOW	Adjusts the DECELERATION level. Turning the trimmer clockwise the gate speed/force is increased) NB. With an electromechanical motor (DIP 5 OFF) the trimmer is uninfluent and deceleration will be fixed.
TR2	CLOSE	Adjusts the CLOSING TIME from 2 to 100 seconds if JP2 is open. The value is increased by turning the trimmer clockwise. Adjusts the CLOSING TIME from 2 to 200 seconds if JP2 is closed. The value is increased by turning the trimmer clockwise.
TR3	PAUSE	Adjusts the PAUSE TIME from 2 to 200 seconds. The value is increased by turning the trimmer clockwise.
TR4	FORCE	Adjusts the motor FORCE level. The force is increased by turning the trimmer clockwise. NB. IN CASE OF HYDRAULIC OPERATORS THE FORCE MUST BE AT MAXIMUM
TR5	OPEN	Adjusts the OPENING TIME from 2 to 100 seconds if JP1 is open. The value is increased by turning the trimmer clockwise. Adjusts the OPENING TIME from 2 to 200 seconds if JP1 is closed. The value is increased by turning the trimmer clockwise.

DEFAULT SETTINGS

TRIMMERS TR1, TR2, TR3, TR4, TR5 are adjusted to halfway their travel.

UK

FINAL CHECKS AND TESTING

- 1 Check the electrical connections: improper connection may be harmful to both the control unit and the operator.
- 2 Check correct setting of the dip switches according to requirements.
- 3 Check that the red LEDs of the normally closed contacts are on and the green LED of the normally open contact off.
- 4 Check by tripping the limit switches that the corresponding LEDs go off.
- 5 Check by passing across the range of the photocells that the corresponding LEDs go off.
- 6 Check by tripping the safety devices that the corresponding LEDs go off.
- 7 Set the gate to halfway its travel and lock the motor. Remove any obstacles in the range of action of the gate and then give a START command. Upon the first START command, an opening phase starts; check that the gate moves in the correct direction. If not, invert the wires in the MOTOR OPEN (5) - MOTOR CLOSE (7) terminals.
- 8 Adjust the trimmer TR3 (PAUSE) setting the desired pause time (at max clockwise 200 seconds are obtained)
- 9 Adjust the trimmer TR2 (CLOSE) setting the desired closing time.
- 10 Adjust the trimmer TR5 (OPEN) setting the desired opening time.
- 11 During motion turn the trimmer TR4 (FORCE) until finding the desired force/speed value.
- 12 During slow motion, turn the trimmer TR1 (SLOW) until finding the desired force/speed value.



Remember to set the SW5 jumper to position 2-3 before activating normal operation, otherwise a fault will be signalled during the SAFETY DEVICE TEST and the gate will remain locked.

BA100 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.



CE Declaration of conformity

The manufacturer:

GI.BI.DI. S.r.l.

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

Declares that the products:

ELECTRONIC CONTROL UNIT BA100

are in conformity with 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,**
- **EN61000-6-2, EN61000-6-3**

Date 10/06/08

Managing Director
Olivero Arosio



■ a **BANDINI INDUSTRIE** company



ISO 9001 Cert. N. 0079

GIBIDI

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