APPARECCHIATURA ELETTRONICA PER CANCELLI SCORREVOLI 230V

CONTROL BOARD FOR 230V SLIDING GATES

PLATINE ELECTRONIQUE POUR PORTAILS COULISSANTS 230V

EQUIPO ELECTRÓNICO PARA PORTONES CORREDIZOS 230V

ELEKTRONISCHES GERÄT FÜR SCHIEBETORE 230V

SPRINT 382

ISTRUZIONI PER L'USO – NORME DI INSTALLAZIONE

USE AND INSTALLATION INSTRUCTIONS

INSTRUCTIONS POUR L'EMPLOI – NORMES D'INSTALLATION

INSTRUCCIONES PARA EL USO – NORMAS DE INSTALACIÓN

BETRIEBSANLEITUNG - INSTALLATIONSVORSCHRIFTEN

GENIUS®

COMPANY
WITH QUALITY SYSTEM
CERTIFIED BY DNV
= UNI EN ISO 9001/2000=

CE

AVVERTENZE PER L'INSTALLATORE

OBBLIGHI GENERALI PER LA SICUREZZA

1) **ATTENZIONE! È importante per la sicurezza delle persone seguire attentamente tutta l'istruzione. Una errata installazione o un errato uso del prodotto può portare a gravi danni alle persone.**
2) Leggere attentamente le istruzioni prima di iniziare l'installazione del prodotto.
3) I materiali dell'imballaggio (plastica, polistirolo, ecc.) non devono essere lasciati alla portata dei bambini in quanto potenziali fonti di pericolo.
4) Conservare le istruzioni per riferimenti futuri.
5) Questo prodotto è stato progettato e costruito esclusivamente per l'utilizzo indicato in questa documentazione. Qualsiasi altro utilizzo non espressamente indicato potrebbe pregiudicare l'integrità del prodotto e/o rappresentare fonte di pericolo.
6) GENIUS declina qualsiasi responsabilità derivata dall'uso improprio o diverso da quello per cui l'automatismo è destinato.
7) Non installare l'apparecchio in atmosfera esplosiva: la presenza di gas o fumi infiammabili costituisce un grave pericolo per la sicurezza.
8) Gli elementi costruttivi meccanici devono essere in accordo con quanto stabilito dalle Norme EN 12604 e EN 12605.
   Per i Paesi extra-CEE, oltre ai riferimenti normativi nazionali, per ottenere un livello di sicurezza adeguato, devono essere seguite le Norme sopra riportate.
9) GENIUS non è responsabile dell'inosservanza della Buona Tecnica nella costruzione delle chiusure da motorizzare, nonché delle deformazioni che dovessero intervenire nell'utilizzo.
10) L'installazione deve essere effettuata nell'osservanza delle Norme EN 12453 e EN 12445. Il livello di sicurezza dell'automazione deve essere C+E.
11) Prima di effettuare qualsiasi intervento sull'impianto, togliere l'alimentazione elettrica.
12) Prevedere sulla rete di alimentazione dell'automazione un interruttore onnipolare con distanza d'apertura dei contatti uguale o superiore a 3 mm. È consigliabile l'uso di un magnetotermico da 6A con interruzione onnipolare.
13) Verificare che a monte dell'impianto vi sia un interruttore differenziale con soglia da 0,03 A.
14) Verificare che l'impianto di terra sia realizzato a regola d'arte e collegarvi le parti metalliche della chiusura.
15) L'automazione dispone di una sicurezza intrinseca antischiacciamento costituita da un controllo di coppia. E' comunque necessario verificarne la sogli di intervento secondo quanto previsto dalle Norme indicate al punto 10.
16) I dispositivi di sicurezza (norma EN 12978) permettono di proteggere eventuali aree di pericolo da **Rischi meccanici di movimento**, come ad Es. schiacciamento, convogliamento, cesoiamento.
17) Per ogni impianto è consigliato l'utilizzo di almeno una segnalazione luminosa nonché di un cartello di segnalazione fissato adeguatamente sulla struttura dell'infisso, oltre ai dispositivi citati al punto "16".
18) GENIUS declina ogni responsabilità ai fini della sicurezza e del buon funzionamento dell'automazione, in caso vengano utilizzati componenti dell'impianto non di produzione GENIUS.
19) Per la manutenzione utilizzare esclusivamente parti originali GENIUS.
20) Non eseguire alcuna modifica sui componenti facenti parte del sistema d'automazione.
21) L'installatore deve fornire tutte le informazioni relative al funzionamento manuale del sistema in caso di emergenza e consegnare all'Utente utilizzatore dell'impianto il libretto d'avvertenze allegato al prodotto.
22) Non permettere ai bambini o persone di sostare nelle vicinanze del prodotto durante il funzionamento.
23) Tenere fuori dalla portata dei bambini radiocomandi o qualsiasi altro datore di impulso, per evitare che l'automazione possa essere azionata involontariamente.
24) Il transito tra le ante deve avvenire solo a cancello completamente aperto.
25) L'Utente utilizzatore deve astenersi da qualsiasi tentativo di riparazione o d'intervento diretto e rivolgersi solo a personale qualificato.
26) **Tutto quello che non è previsto espressamente in queste istruzioni non è permesso**

IMPORTANT NOTICE FOR THE INSTALLER

GENERAL SAFETY REGULATIONS

1) **ATTENTION! To ensure the safety of people, it is important that you read all the following instructions. Incorrect installation or incorrect use of the product could cause serious harm to people.**
2) Carefully read the instructions before beginning to install the product.
3) Do not leave packing materials (plastic, polystyrene, etc.) within reach of children as such materials are potential sources of danger.
4) Store these instructions for future reference.
5) This product was designed and built strictly for the use indicated in this documentation. Any other use, not expressly indicated here, could compromise the good condition/operation of the product and/or be a source of danger.
6) GENIUS declines all liability caused by improper use or use other than that for which the automated system was intended.
7) Do not install the equipment in an explosive atmosphere: the presence of inflammable gas or fumes is a serious danger to safety.
8) The mechanical parts must conform to the provisions of Standards EN 12604 and EN 12605.
   For non-EU countries, to obtain an adequate level of safety, the Standards mentioned above must be observed, in addition to national legal regulations.
9) GENIUS is not responsible for failure to observe Good Technique in the construction of the closing elements to be motorised, or for any deformation that may occur during use.
10) The installation must conform to Standards EN 12453 and EN 12445. The safety level of the automated system must be C+E.
11) Before attempting any job on the system, cut out electrical power.
12) The mains power supply of the automated system must be fitted with an all-pole switch with contact opening distance of 3mm or greater. Use of a 6A thermal breaker with all-pole circuit break is recommended.
13) Make sure that a differential switch with threshold of 0.03 A is fitted upstream of the system.
14) Make sure that the earthing system is perfectly constructed, and connect metal parts of the means of the closure to it.
15) The automated system is supplied with an intrinsic anti-crushing safety device consisting of a torque control. Nevertheless, its tripping threshold must be checked as specified in the Standards indicated at point 10.
16) The safety devices (EN 12978 standard) protect any danger areas against **mechanical movement Risks**, such as crushing, dragging, and shearing.
17) Use of at least one indicator-light is recommended for every system, as well as a warning sign adequately secured to the frame structure, in addition to the devices mentioned at point "16".
18) GENIUS declines all liability as concerns safety and efficient operation of the automated system, if system components not produced by GENIUS are used.
19) For maintenance, strictly use original parts by GENIUS.
20) Do not in any way modify the components of the automated system.
21) The installer shall supply all information concerning manual operation of the system in case of an emergency, and shall hand over to the user the warnings handbook supplied with the product.
22) Do not allow children or adults to stay near the product while it is operating.
23) Keep remote controls or other pulse generators away from children, to prevent the automated system from being activated involuntarily.
24) Transit through the leaves is allowed only when the gate is fully open.
25) The user must not attempt any kind of repair or direct action whatever and contact qualified personnel only.
26) **Anything not expressly specified in these instructions is not permitted.**

CONSIGNES POUR L'INSTALLATEUR

RÈGLES DE SÉCURITÉ

1) **ATTENTION! Il est important, pour la sécurité des personnes, de suivre à la lettre toutes les instructions. Une installation erronée ou un usage erroné du produit peut entraîner de graves conséquences pour les personnes.**
2) Lire attentivement les instructions avant d'installer le produit.
3) Les matériaux d'emballage (matière plastique, polystyrène, etc.) ne doivent pas être laissés à la portée des enfants car ils constituent des sources potentielles de danger.
4) Conserver les instructions pour les références futures.
5) Ce produit a été conçu et construit exclusivement pour l'usage indiqué dans cette documentation. Toute autre utilisation non expressément indiquée pourrait compromettre l'intégrité du produit et/ou représenter une source de danger.
6) GENIUS décline toute responsabilité qui dériverait d'usage impropre ou différent de celui auquel l'automatisme est destiné.
7) Ne pas installer l'appareil dans une atmosphère explosive: la présence de gaz ou de fumées inflammables constitue un grave danger pour la sécurité.
8) Les composants mécaniques doivent répondre aux prescriptions des Normes EN 12604 et EN 12605.
   Pour les Pays extra-CEE, l'obtention d'un niveau de sécurité approprié exige non seulement le respect des normes nationales, mais également le respect des Normes susmentionnées.
9) GENIUS n'est pas responsable du non-respect de la Bonne Technique dans la construction des fermetures à motoriser, ni des déformations qui pourraient intervenir lors de l'utilisation.
10) L'installation doit être effectuée conformément aux Normes EN 12453 et EN 12445. Le niveau de sécurité de l'automatisme doit être C+E.
11) Couper l'alimentation électrique avant toute intervention sur l'installation.
12) Prévoir, sur le secteur d'alimentation de l'automatisme, un interrupteur omnipolaire avec une distance d'ouverture des contacts égale ou supérieure à 3 mm. On recommande d'utiliser un magnétothermique de 6A avec interruption omnipolaire.
13) Vérifier qu'il y ait, en amont de l'installation, un interrupteur différentiel avec un seuil de 0,03 A.
14) Vérifier que la mise à terre est réalisée selon les règles de l'art et y connecter les pièces métalliques de la fermeture.
15) L'automatisme dispose d'une sécurité intrinsèque anti-écrasement, formée d'un contrôle du couple. Il est toutefois nécessaire d'en vérifier le seuil d'intervention suivant les prescriptions des Normes indiquées au point 10.
16) Les dispositifs de sécurité (norme EN 12978) permettent de protéger des zones éventuellement dangereuses contre les **Risques mécaniques du mouvement**, comme l'écrasement, l'acheminement, le cisaillement.

ENGLISH

CONTROL BOARD SPRINT 382

1. WARNINGS

Important: Before attempting any work on the control board (connections, maintenance), always turn off power.

- **Install, upstream of the system, a differential thermal breaker with adequate tripping threshold.**
- **Connect the earth cable to the appropriate terminal on the J7 connector of the equipment (see fig.2).**
- **Always separate power cables from control and safety cables (push-button, receiver, photocells, etc.). To avoid any electric noise, use separate sheaths or a shielded cable (with earthed shield).**

2. TECHNICAL SPECIFICATIONS

Power supply	230 V~ (+6% -10%) - 50 Hz
Absorbed power	10 W
Motor max. load	1000 W
Accessories max. load	0,5 A
Operating ambient temperature	-20 °C +55 °C
Protection fuses	2 (see fig. 1)
Function logics	Automatic / "Stepped" automatic / Semi-automatic / Safety devices / Semi-automatic B / Dead-man C / "Stepped" semi-automatic / *Mixed Log. B+C*
Work time	Programmable (from 0 to 4 min.)
Pause time	Programmable (from 0 to 4 min.)
Thrust force	Adjustable over 50 levels
Terminal board inputs	Open / Partial opening / Safety devices at opng. / Safety devices at clsng. / Stop / Edge / Power supply + Earth
On-connector inputs	Opening and closing limit-switches / Encoder
Terminal board outputs	Flashing lamp - Motor - 24 Vdc accessories power supply - 24 Vdc indicator-light / Timed output. - Fail safe
Rapid connector	5-pin card connection for radio-receiver module
Programming	3 keys (+, -, F) and display, "basic" or "advanced" mode
Basic mode programmable functions	Function logic - Pause time - Thrust Force - Gate direction
Advanced mode programmable functions	Torque at initial thrust - Braking - Fail safe - Pre-flashing - Indicator-light/Timed output - Opening and closing safety devices logic - Encoder - Decelerations - Partial opening time - Work time - Assistance request - Cycle counter

3. LAYOUT AND COMPONENTS

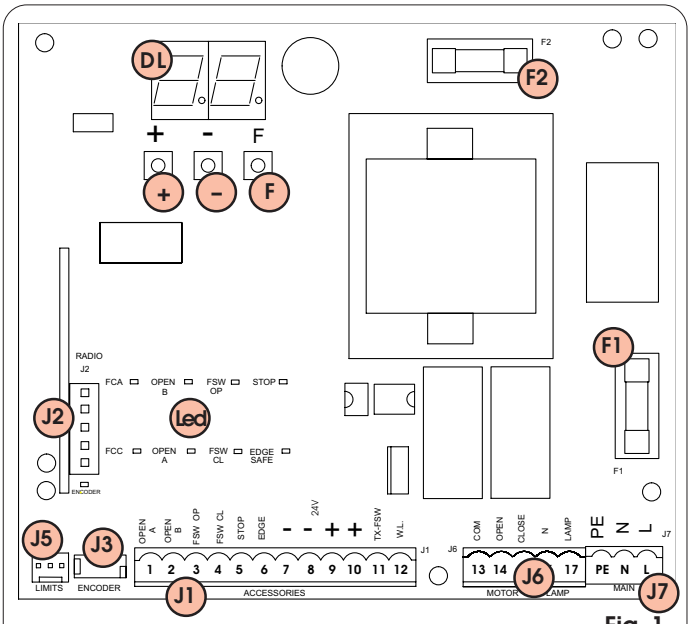

Fig. 1

DL	SIGNALLING AND PROGRAMMING DISPLAY
Led	INPUTS STATUS CONTROL LED
J1	LOW VOLTAGE TERMINAL BOARD
J2	CONNECTOR FOR RADIO-RECEIVER MODULE
J3	ENCODER CONNECTOR
J5	LIMIT -SWITCH CONNECTOR
J6	MOTORS AND FLASHING LAMP CONNECTION TERMINAL BOARD
J7	230 VAC POWER SUPPLY TERMINAL BOARD
F1	MOTORS AND TRANSFORMER PRIMARY WINDING FUSE (F 5A)
F2	LOW VOLTAGE AND ACCESSORIES FUSE (T 800mA)
F	"F" PROGRAMMING PUSH-BUTTON
-	"-" PROGRAMMING PUSH-BUTTON
+	"+" PROGRAMMING PUSH-BUTTON

4. ELECTRIC CONNECTIONS

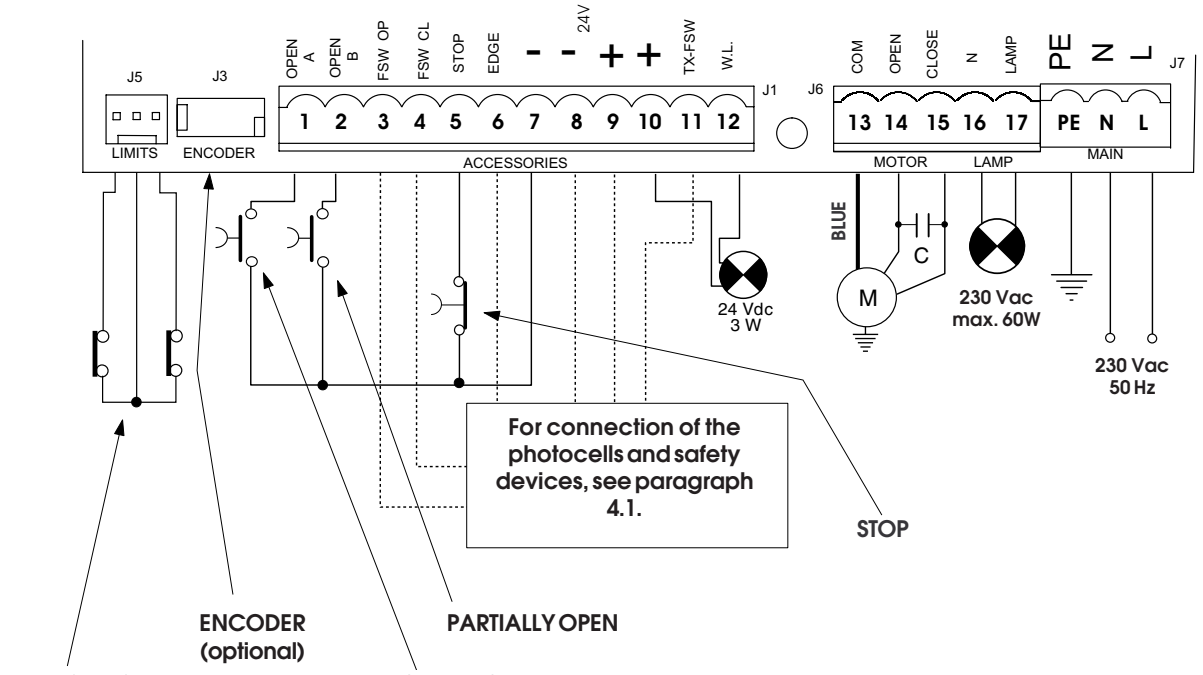

Fig. 2

NB.: The capacitor is supplied with the operator.

4.1. Connection of photocells and safety devices

Before connecting the photocells (or other devices) we advise you to select the type of operation according to the movement area they have to protect (see fig.3):

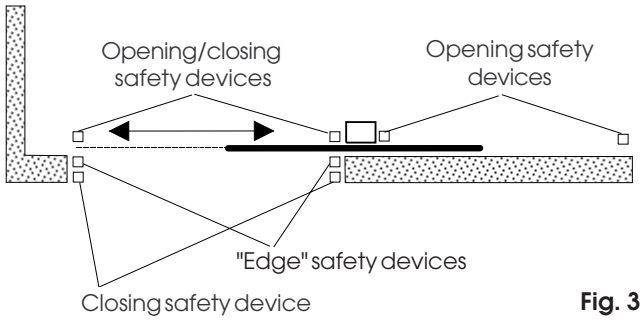

Fig. 3

Opening safety devices: they operate only during the gate opening movement and, therefore, they are suitable for protecting the area between the opening leaf and fixed obstacles (walls, etc) against the risk of impact and crushing.

Closing safety devices: they operate only during the gate closing movement and, therefore, they are suitable for protecting the closing area against the risk of impact.

Opening/closing safety devices: they operate during the gate opening and closing movements and, therefore, they are suitable for protecting the opening and closing areas against the risk of impact.

"Edge" safety devices: they operate during the gate opening and closing movements and, therefore, they are suitable for protecting the areas between the moving leaf and fixed obstacles (pillars, walls, etc) against the risk of shearing and dragging.

Encoder (optional): operates during the gate opening and closing movements and, therefore, it is suitable for protecting the opening and closing area against the risk of impact, crushing, shearing and dragging.

N.B. If two or more safety devices have the same function (opening, closing, opening and closing, edge), the contacts must be connected to each other in series (fig. 4).
N.C. contacts must be used.

Connection of two N.C. contacts in series (e.g. Photocells, Stop, Edge, etc.)

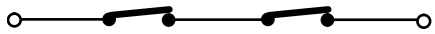

Fig. 4

N.B: If safety devices are not used, jumper connect the terminals as shown in fig. 5.

Connection of no safety device

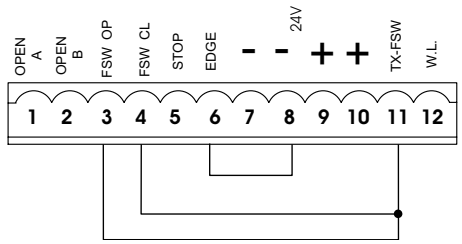

Fig. 5

The most common photocell and safety device lay-outs are shown below (from fig. 6 to fig. 13).

Connection of a closing safety device and an opening safety device

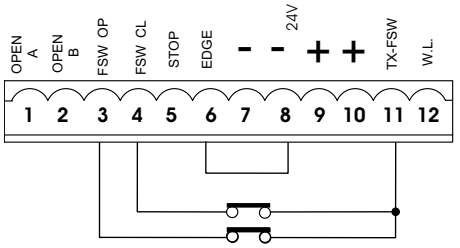

Fig. 6

Connection of an "edge" safety device

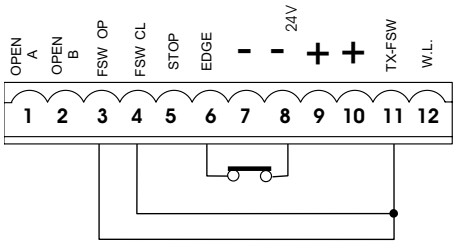

Fig. 7

Connection of a pair of photocells for opening

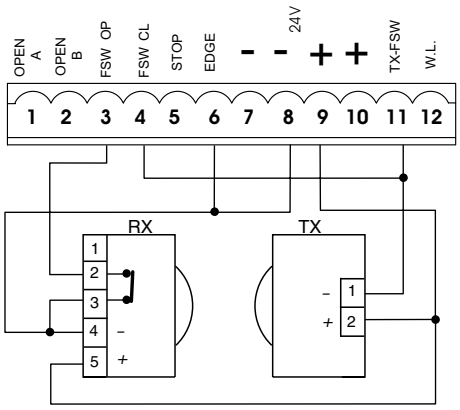

Fig. 8

Connection of a pair of closing photocells

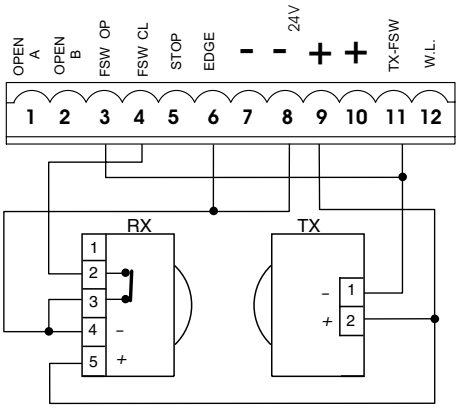

Fig. 9

Connection of a pair of opening photocells, a pair of closing photocell and an edge safety device

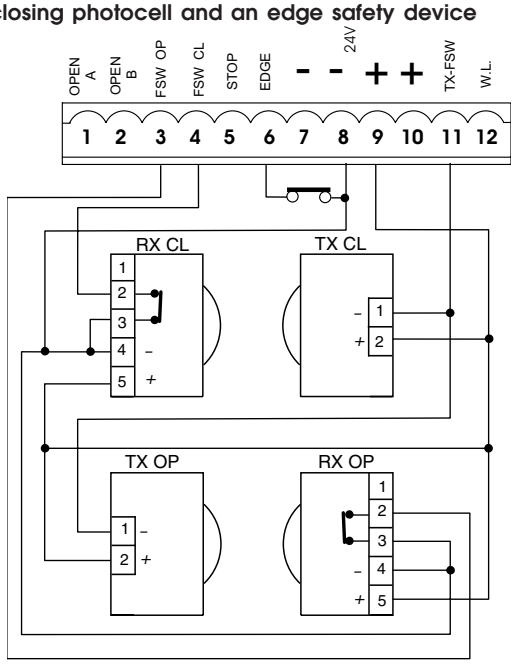

Fig. 10

Connection of two pairs of closing photocells and two edge safety devices

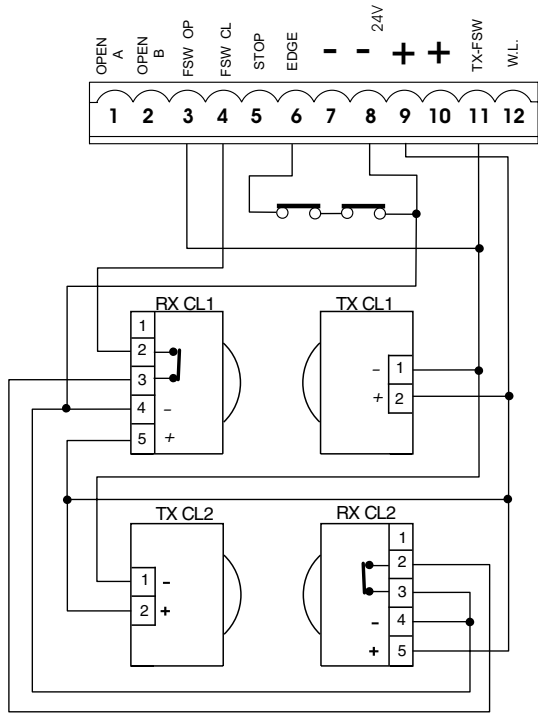

Fig. 11

Connection of a pair of closing photocells, a pair of opening photocells and a pair of opening/closing photocells

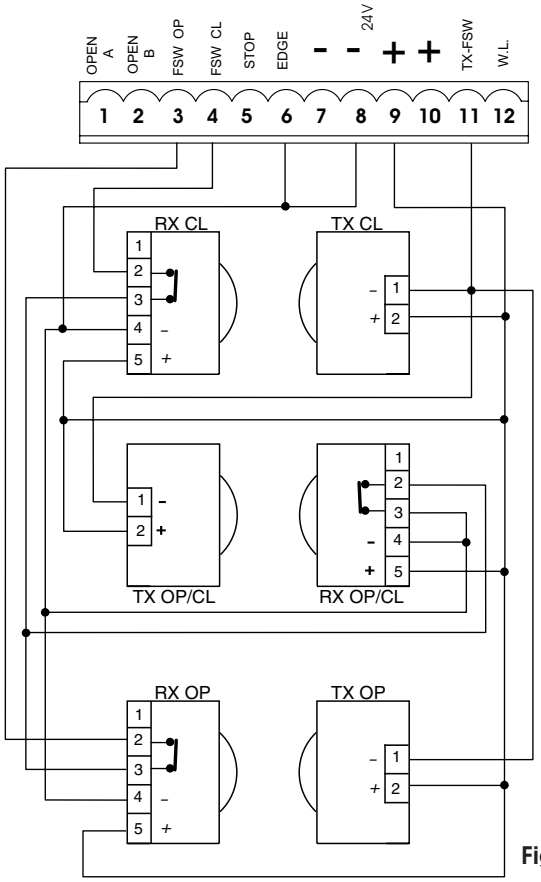

Fig. 12

Connection of a pair of closing photocells and a pair of opening/closing photocells

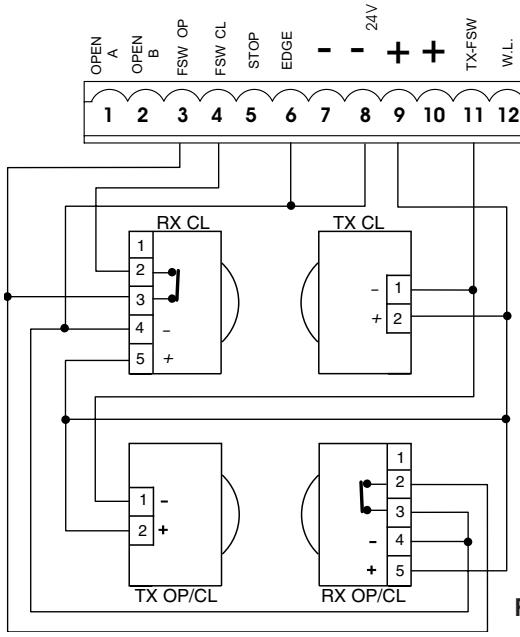

Fig. 13

Connection of two N.O. contacts in parallel (e.g. Open A, Open B)

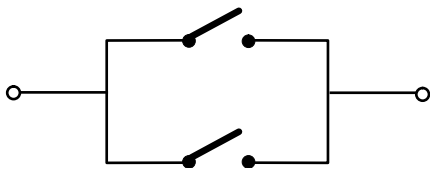

Fig. 14

4.2. J7 Terminal board - Power supply (fig. 2)

POWER SUPPLY (terminals PE-N-L):
PE: Earth connection
N : 230 V~ power supply (Neutral)
L : 230 V~ power supply (Line)

NB.: *For correct operation, the board must be connected to the earth conductor in the system. Install an adequate differential thermal breaker upstream of the system.*

4.3. J6 Terminal board - Motors and flashing lamp (fig. 2)

MOTOR - (terminals 13-14-15): Motor connection.
In gearmotors with a built-in control unit, this connection is pre-wired standard. For leaf opening direction, see basic programming in Chpt 5.1.
LAMP - (terminals 16 -17): Flashing lamp output (230 V ~)

4.4. J1 Terminal board - Accessories (fig. 2)

OPEN A - "Total Opening" command (terminal 1): any pulse generator (push-button, detector, etc.) which, by closing a contact, commands total opening and/or closing of the gate leaf.

To install several total opening pulse generators, connect the N.O. contacts in parallel (see fig. 14).

OPEN B - "Partial opening " or "Closing" command (terminal 2): any pulse generator (push-button, detector, etc.) which, by closing a contact, commands partial opening and/or closing of the gate leaf. In the **B** and **C** logics, it always commands gate closure.

To install several partial opening pulse generators, connect the N.O. contacts in parallel (see fig. 14).

FSW OP - Opening safety devices contact (terminal 3): The purpose of the opening safety devices is to protect the leaf movement area during opening. During opening, in the **A-AP-S-E-EP** logics the safety devices reverse the movement of the gate leaves, or stop and restart the movement when they are released (see advanced programming in Chpt 5.2). During the opening cycle in logics **B** and **C**, they interrupt movement. They never operate during the closing cycle.

If the **Opening safety devices** are engaged when the gate is closed, they prevent the leaf opening movement.

To install several safety devices, connect the N.C. contacts in series (fig.4).

NB.: If no opening safety devices are connected, jumper connect inputs OP and -TX FSW *(fig. 5).*

FSW CL - Closing safety devices contact (terminal 4): The purpose of the closing safety devices is to protect the leaf movement area during closing. During closing, in the **A-AP-S-E-EP** logics, the safety devices reverse the movement of the gate leaves, or stop and reverse the movement when they are released (see advanced programming in Chpt 5.2). During the closing cycle in logics **B** and **C**, they interrupt movement. They never operate during the opening cycle. If the **Closing safety devices** are engaged when the gate is open, they prevent the leaf closing movement.

To install several safety devices, connect the N.C. contacts in series (fig.4).

NB.: If no closing safety devices are connected, jumper connect terminals CL and -TX FSW *(fig. 5).*

STOP - STOP contact (terminal 5): any device (e.g. a push-button) which, by opening a contact, is able to stop gate movement.

To install several STOP devices, connect the N.C. contacts in series.

NB.: *If STOP devices are not connected, jumper connect the* ***STP*** *and* ***-*** *terminals.*

EDGE - EDGE safety device contact (terminal 6): The purpose of the "edge" safety device is to protect the leaf movement area during opening/closing against fixed obstacles (pillars, walls, etc.). In all logics, during opening and closing, the safety devices reverse gate leaf movement for 2 seconds. If the safety devices operate again during the 2-seconds reversing time, they STOP movement without any reversing. If the **Edge safety devices** are engaged while the gate is closed or open, they prevent the leaves movement.

To install several safety devices, connect the N.C. contacts in series (fig.4).

NB.: If edge safety devices are not connected, jumper connect the EDGE and - inputs. *(fig. 5).*

– Negative for power supply to accessories (terminals 7 and 8)

+ 24 Vdc - Positive for power supply to accessories (terminals 9 and 10)

Important: Accessories max. load is 500 mA. To calculate absorption values, refer to the instructions for individual accessories.

TX -FSW - Negative for power supply to photocell transmitters (terminal 11)

If you use this terminal for connecting the negative for supplying power to the photocell transmitters, you may, if necessary, also use the FAIL SAFE function (see advanced programming in Chpt 5.2).

If this function is enabled, the equipment checks operation of the photocells before every opening or closing cycle.

W.L. - Power supply to indicator-light / timed output (terminal 12)

Connect a 24 Vdc - 3 W max indicator-light or timed output, if necessary, between this terminal and the +24V supply (see advanced programming in Chpt 5.2).To avoid geopardising correct operation of the system, **do not exceed** the indicated power.

4.5. Connector J2 - Rapid connection to radio-receiver module

The control unit is designed to house a 5-pin radio-receiver module. To install, cut out power and fit the module in the appropriate J2 connector inside the control unit.

This done, observe the radio-receiver instructions for memory-storing the remote control. When the remote control has been stored, it controls START just like any command device.

4.6. Connector J6 - Limit-switches rapid connection (fig.2)

This input is intended for rapid connection of the opening and closing limit-switches designed to stop the leaf, or for start of decelerations or for braking (see advanced programming in Chpt. 5.2.). In gearmotors with a built-in control unit, this connection is pre-wired as standard (fig. 2). For leaf opening direction, see advanced programming in Chpt 5.2.

4.7. Connector J3 - Encoder rapid connection (fig.2)

This input is designed for rapid connection of the Encoder (optional). To fit the encoder on the motor, refer to the relevant instructions.

The presence of the encoder is signalled - when the gearmotor is running - by the flashing of the "Encoder" LED on the board. When the encoder is used, the control unit knows the exact position of the gate while it is moving.

The encoder controls the adjustments of some of the control unit's functions in a different way (partial opening or deceleration - see advanced programming in Chpt 5.2) and as an anti-crushing device.

If the gate strikes an obstacle during opening or closing, the encoder immediately reverses the gate leaf for 2 seconds. If the encoder operates again during the 2-seconds reversing time, it STOPS movement without commanding any reversing.

5. PROGRAMMING

To program operation of the automated system, you have to access the "*PROGRAMMING*" mode.
Programming is split into two parts: *BASIC* and *ADVANCED*.

5.1. BASIC PROGRAMMING

To access BASIC PROGRAMMING, press key **F**:

- if you press it (and hold it down), the display shows the name of the first function.
- if you release the key, the display shows the value of the function that can be modified with keys **+** and **-**.
- if you press **F** again (and hold it down), the display shows the name of the next function, etc.
- when you reach the last function, press **F** to exit the program, and the display resumes showing the gate status.

The following table shows the sequence of functions accessible in BASIC PROGRAMMING:

BASIC PROGRAMMING (F)

Display	Function	
L 0	***FUNCTION LOGICS (see tab. 3/a - g):*** A = Automatic AP = "Stepped" automatic S = "Safety" Automatic E = Semi-automatic EP = "Stepped" Semi-automatic C = Dead-man b = "B" Semi-automatic bC = Mixed Log. (B opening / C closing)	EP
P A	***PAUSE TIME:*** This has effect only if the automatic logic was selected. Adjustable from 0 to 59 sec. in one-second steps. Subsequently, display changes to minutes and tens of seconds (separated by a point) and time is adjusted in 10-second steps, up to the maximum value of 4.1 minutes. E.g. if the display shows 2.5, pause time is 2 min. and 50 sec.	2.0
F 0	***FORCE:*** Adjusts Motor thrust. 01 = minimum force 50 = maximum force	25
d 1	***OPENING DIRECTION:*** Indicates the gate opening movement and makes it possible not to change the motor and limit-switch connections on the terminal board. -3 = Right-hand opening movement E- = Left-hand opening movement	-3
S t	***GATE STATUS:*** Exit from programming and return to gate status viewing. 00 = Closed 01 = Now opening 02 = Stopped 03 = Open 04 = Pause 05 = "FAIL SAFE" tripped (chpt. 5.2) 06 = Now closing 07 = Now reversing	

5.2. ADVANCED PROGRAMMING

To access ADVANCED PROGRAMMING, press key **F** and, as you hold it down, press key **+**:

- if you release key **+** , the display indicates the name of the first function.
- if you release key **F** too, the display shows the value of the function that can be modified with keys **+** and **-**.
- if you press key **F** (and hold it down), the display shows the name of the next function, and if you release it, the value that can be modified with keys **+** and **-** is shown.
- when you reach the last function, press **F** to exit the program, and the display resumes showing the gate status.

The following table shows the sequence of functions accessible in ADVANCED PROGRAMMING:

ADVANCED PROGRAMMING (F) + (+)

Display	Function	
b0	***MAXIMUM TORQUE AT INITIAL THRUST:*** The motor operate at maximum torque (ignoring the torque setting) at start of movement. Useful for heavy leaves. y = Active no = Disabled	y
br	***FINAL BRAKING:*** When the gate engages the opening or closing limit-switch, a braking stroke can be selected to ensure the leaf is stopped immediately. If decelerations are selected, braking starts when they finish. At 00 value, braking is disabled. Time can be adjusted from 01 to 20 sec. in 0.1-second steps. E.g. if the display indicates 10, braking time is 1 second. 00 = Braking disabled from 01 to 20 = Timed braking	05
F S	***FAIL SAFE:*** If this function is activated, it enables a function test of the photocells before any gate movement. If the test fails (photocells not serviceable signalled by value 05 on the display), the gate does not start moving. y = Active no = Disabled	no
P F	***PRE-FLASHING (5 s):*** Activates the flashing lamp for 5 seconds before start of movement. no = Disabled oP = Only before opening CL = Only before closing OC = Before every movement	no
S P	***INDICATOR-LIGHT:*** If 00 is selected, the output functions as a standard indicator-light (lighted at opening and pause, flashing at closing, and off when gate closed). ***Courtesy light:*** Different figures correspond to timed activation of the output, which can be used (by a relay) to power a courtesy lamp. Time can be adjusted from 0 to 59 sec. in 1-second steps, and from 1.0 to 4.1 min. in 10-second steps.	00

Display	Function	
	Electric lock command and 'traffic lights' functions: *If you press key - from the 00 setting, the command for the E 1 closing electric lock is activated;* *If you press - again, the command for the E 2 closing and opening electric lock is set; if you press the - key again, you can set the 'traffic lights' functions E 3 and E 4.* *00 = Standard indicator-light* *from 0 1 to 4. 1 = Timed output.* *E 1 = electric lock command before opening movement* *E 2 = electric lock command before opening and closing movements* *E 3 = 'traffic lights' function: the output is active in "open" and "open on pause" status and is disabled 3 seconds before the closing manoeuvre starts.* *Note: there is 3 seconds of pre-flashing before the closing manoeuvre.* *E 4 = 'traffic lights' function: the output is active only in "closed" status.* ***Attention: do not exceed the output's maximum load (24Vdc-3W). If necessary, use a relay and a power supply source outside the equipment.***	
Ph	***CLOSING PHOTOCELLS LOGIC:*** *Select the tripping mode of the closing photocells.* *They operate for the closing movement only: they stop movement and reverse it when they are released, or they reverse it immediately.* *Y = Reverse on release* *no = Reverse immediately when opening*	no
oP	***OPENING PHOTOCELLS LOGIC:*** *Select the tripping mode of the opening photocells.* *They operate for the opening movement only: they stop the movement and restart it when they are released, or they reverse it immediately.* *Y = Reverse immediately when closing* *no = Restart movement on release*	no
EC	***ENCODER:*** *If the encoder is used, you may select its presence.* *If the encoder is present and enabled, "decelerations" and "partial opening" are controlled by the encoder (see relevant paragraphs).* *The encoder operates as an anti-crushing device: If the gate strikes an obstacle during opening or closing, the encoder immediately reverses gate leaf movement for 2 seconds.* *If the encoder operates again during the 2-seconds reversing time, it stops movement (STOP) without commanding any reversing. If no sensor is supplied, the parameter must be set on 00. If there is the encoder, adjust the sensitivity of the anti-crushing system, by varying the parameter between 0 1 (maximum sensitivity) and 99 (minimum sensitivity).* *from 0 1 to 99 = Encoder active and sensitivity adjustment* *00 = Encoder disabled*	01

Display	Function	
rP	***Pre-limit switch DECELERATION:*** *You can select gate deceleration before the opening and closing limit-switches have been tripped.* *Time can be adjusted from 00 to 99* *If an encoder is used, the adjustment is not determined by time but by motor revs, thus obtaining greater deceleration precision.* *00 = Deceleration disabled* *from 0 1 to 99 = Deceleration enabled*	00
rA	***Post-limit switch DECELERATIONS:*** *You can select gate deceleration after the opening and closing limit-switches have been tripped.* *Time can be adjusted from 00 to 09 sec. in 0.04-second steps.* *The maximum value of 09 corresponds to about 7 cm.* *If an encoder (optional) is used, the adjustment is not determined by time but by motor revs, thus obtaining greater deceleration precision.* *00 = Deceleration disabled* *from 0 1 to 09 = Deceleration enabled*	05
PO	***PARTIAL OPENING:*** *You can adjust the width of leaf partial opening.* *Time can be adjusted from 0 1 to 20 sec. in 0.1-second steps.* *If an encoder (optional) is used, the adjustment is not determined by time but by motor revs, thus obtaining greater precision of partial opening.* *E.g. for a gate with a sliding speed of 10 m /min, value 10 corresponds to about 1.7 metres of opening.* *E.g. for a gate with a sliding speed of 12 m /min, value 10 corresponds to about 2 metres of opening.*	05
t	***WORK TIME:*** *We advise you to set a value of 5 to 10 seconds over the time taken by the gate to travel from the closing limit-switch to the opening limit-switch and vice versa. This will protect the motor against any overheating if a limit-switch fails.* *Adjustable from 0 to 59 sec. sec. in one-second steps.* *Subsequently, viewing changes to minutes and tens of seconds (separated by a point) and time is adjusted in 10 second steps, up to a maximum value of 4. 1 minutes.* *E.g. if the display shows 2.5, work time is 2 min. and 50 sec.* ***Attention: the set value does not exactly match the motor's maximum operating time, because the latter is modified according to the performed deceleration spaces.***	01

Display	Function	
AS	***ASSISTANCE REQUEST (combined with next function):*** *If activated, at the end of countdown (settable with the next function i.e. "Cycle programming") it effects 2 sec. (in addition to the value already set with the PF function) of pre-flashing at every Open pulse (job request). Can be useful for setting scheduled maintenance jobs.* *y = Active* *no = Disabled*	no
nc	***CYCLE PROGRAMMING:*** *For setting countdown of system operation cycles. Settable (in thousands) from 00 to 99 thousand cycles.* *The displayed value is updated as cycles proceed.* *This function can be used to check use of the board or to exploit the "Assistance request".*	00
St	***GATE STATUS:*** *Exit from programming and return to gate status viewing (see Chpt 5.1.).*	

6. START-UP

6.1. INPUTS CHECK

The table below shows the status of the LEDs in relation to to the status of the inputs.

Note the following: ***LED LIGHTED*** = closed contact
LED OFF = open contact

Check the status of the LEDs as per Table.

Operation of the signalling status LEDs

LEDS	LIGHTED	OFF
FCA	**Limit-switch free**	Limit-switch engaged
FCC	Limit-switch free	**Limit-switch engaged**
OPEN B	Command activated	**Command inactive**
OPEN A	Command activated	**Command inactive**
FSW OP	**Safety devices disengaged**	Safety devices engaged
FSW CL	**Safety devices disengaged**	Safety devices engaged
STOP	**Command inactive**	Command activated
EDGE	**Safety devices disengaged**	Safety devices engaged

NB.: The status of the LEDs while the gate is closed at rest are shown in bold.

7. AUTOMATED SYSTEM TEST

When you have finished programming, check if the system is operating correctly.

Most important of all, check if the force is adequately adjusted and if the safety devices are operating correctly.

Tab. 3/a

LOGIC "A"	PULSES						
GATE STATUS	OPEN-A	OPEN-B	STOP	OPENING SAFETY DEVICES	CLOSING SAFETY DEVICES	OP/CLOS. SAFETY DEVICE	EDGE SAFETY DEVICE
CLOSED	Opens the leaf and closes it after pause time (1)	Opens leaf for the partial opening time and closes after pause time (1)	No effect (OPEN disabled)		No effect	No effect (OPEN disabled)	
OPEN on PAUSE	Reloads pause time (1)		Stops operation	No effect	Reloads pause time (1) (OPEN disabled)		No effect (OPEN disabled)
ON CLOSING	Re-opens the leaf immediately (1)			No effect (saves OPEN)	see paragraph 5.2.	Stops and, on release, reverses on opening	Reverses on opening for 2" (2)
ON OPENING	No effect (1)			see paragraph 5.2.	No effect	Stops and, on release, continues opening	Reverses on closing for 2" (2)
STOPPED	Closes the leaf		No effect (OPEN disabled)	No effect		No effect (OPEN disabled)	

Tab. 3/b

LOGIC "AP"	PULSES						
GATE STATUS	OPEN-A	OPEN-B	STOP	OPENING SAFETY DEVICES	CLOSING SAFETY DEVICES	OP/CLOS. SAFETY DEVICE	EDGE SAFETY DEVICE
CLOSED	Opens the leaf and closes it after pause time (1)	Opens leaf for the partial opening time and closes after pause time (1)	No effect (OPEN disabled)		No effect	No effect (OPEN disabled)	
OPEN on PAUSE	Re-closes the leaf immediately		Stops operation	No effect	Reloads pause time (1) (OPEN disabled)		No effect (OPEN disabled)
ON CLOSING	Re-opens the leaf immediately (1)			No effect (saves OPEN)	see paragraph 5.2.	Stops and, on release, reverses on opening	Reverses on opening for 2" (2)
ON OPENING	Stops operation			see paragraph 5.2.	No effect	Stops and, on release, continues opening	Reverses on closing for 2" (2)
STOPPED	Closes the leaf		No effect (OPEN disabled)	No effect		No effect (OPEN disabled)	

Tab. 3/c

LOGIC "S"	PULSES						
GATE STATUS	**OPEN-A**	**OPEN-B**	**STOP**	**OPENING SAFETY DEVICES**	**CLOSING SAFETY DEVICES**	**OP/CLOS. SAFETY DEVICE**	**EDGE SAFETY DEVICE**
CLOSED	Opens leaves and closes them after pause time	Opens leaf for the partial opening time and closes after pause time (1)	No effect (OPEN disabled)		No effect	No effect (OPEN disabled)	
OPEN on PAUSE	Re-closes the leaf immediately		Stops operation	No effect	Closes after 5" (OPEN disabled)		No effect (OPEN disabled)
ON CLOSING	Re-opens the leaf immediately			No effect (saves OPEN)	see paragraph 5.2.	Stops and, on release, reverses on opening	Reverses on opening for 2" (2)
ON OPENING	Re-closes the leaf immediately			see paragraph 5.2.	No effect	Stops and, on release, continues opening	Reverses on closing for 2" (2)
STOPPED	Closes the leaf		No effect (OPEN disabled)	No effect		No effect (OPEN disabled)	

Tab. 3/d

LOGIC "E"	PULSES						
GATE STATUS	**OPEN-A**	**OPEN-B**	**STOP**	**OPENING SAFETY DEVICES**	**CLOSING SAFETY DEVICES**	**OP/CLOS. SAFETY DEVICE**	**EDGE SAFETY DEVICE**
CLOSED	Opens the leaf	Opens the leaf for partial opening time	No effect (OPEN disabled)		No effect	No effect (OPEN disabled)	
OPEN	Re-closes the leaf immediately		Stops operation	No effect	No effect (OPEN disabled)		
ON CLOSING	Re-opens the leaf immediately			No effect (saves OPEN)	see paragraph 5.2.	Stops and, on release, reverses on opening	Reverses on opening for 2" (2)
ON OPENING	Stops operation			see paragraph 5.2.	No effect	Stops and, on release, continues opening	Reverses on closing for 2" (2)
STOPPED	Closes the leaf (with the Closing safety devices engaged, it opens at the 2nd pulse)		No effect (OPEN disabled)	No effect		No effect (OPEN disabled)	

Tab. 3/e

LOGIC "EP"	PULSES						
GATE STATUS	**OPEN-A**	**OPEN-B**	**STOP**	**OPENING SAFETY DEVICES**	**CLOSING SAFETY DEVICES**	**OP/CLOS. SAFETY DEVICE**	**EDGE SAFETY DEVICE**
CLOSED	Opens the leaf	Opens the leaf for partial opening time	No effect (OPEN disabled)		No effect	No effect (OPEN disabled)	
OPEN	Re-closes the leaf immediately		Stops operation	No effect	No effect (OPEN disabled)		
ON CLOSING	Stops operation			No effect (saves OPEN)	see paragraph 5.2.	Stops and, on release, reverses on opening	Reverses on opening for 2" (2)
ON OPENING	Stops operation			see paragraph 5.2.	No effect	Stops and, on release, continues opening	Reverses on closing for 2" (2)
STOPPED	Restarts movement in reverse direction (always closes after a Stop)		No effect (OPEN disabled)	No effect (if it must open, it disables OPEN)	No effect (if it must close, it disables OPEN)	No effect (OPEN disabled)	

Tab. 3/f

LOGIC "C"	CONTROLS ALWAYS HELD DOWN		PULSES				
GATE STATUS	**OPEN-A (opening)**	**OPEN-B (closing)**	**STOP**	**OPENING SAFETY DEVICES**	**CLOSING SAFETY DEVICES**	**OP/CLOS. SAFETY DEVICE**	**EDGE SAFETY DEVICE**
CLOSED	Opens the leaf	No effect	No effect (OPEN-A disabled)	No effect (OPEN-A disabled)	No effect (OPEN-B disabled)	No effect (OPEN-A disabled)	No effect (OPEN-A/B disabled)
OPEN	No effect	Closes the leaf	No effect (OPEN-B disabled)	No effect (OPEN-A disabled)	No effect (OPEN-B disabled)	No effect (OPEN-B disabled)	No effect (OPEN-A/B disabled)
ON CLOSING	Stops operation		Stops operation	No effect	Stops operation (OPEN-B disabled)	Stops operation (OPEN-A/B disabled)	Reverses on opening for 2" (2)
ON OPENING		Stops operation		Stops operation (OPEN-A disabled)	No effect	Stops operation (OPEN-A/B disabled)	Reverses on closing for 2" (2)

Tab. 3/g

LOGIC "B"	PULSES						
GATE STATUS	**OPEN-A (opening)**	**OPEN-B (closing)**	**STOP**	**OPENING SAFETY DEVICES**	**CLOSING SAFETY DEVICES**	**OP/CLOS. SAFETY DEVICE**	**EDGE SAFETY DEVICE**
CLOSED	Opens the leaf	No effect	No effect (OPEN-A disabled)	No effect (OPEN-A disabled)	No effect (OPEN-B disabled)	No effect (OPEN-A disabled)	No effect (OPEN-A/B disabled)
OPEN	No effect	Closes the leaf	No effect (OPEN-B disabled)	No effect (OPEN-A disabled)	No effect (OPEN-B disabled)	No effect (OPEN-B disabled)	No effect (OPEN-A/B disabled)
ON CLOSING	Reverses on opening	No effect	Stops operation	No effect	Stops operation (OPEN-B disabled)	Stops operation (OPEN-A/B disabled)	Reverses on opening for 2" (2)
ON OPENING	No effect	No effect		Stops operation (OPEN-A disabled)	No effect	Stops operation (OPEN-A/B disabled)	Reverses on closing for 2" (2)
STOPPED	Opens the leaf	Closes the leaf	No effect (OPEN-A/B disabled)	No effect (OPEN-A disabled)	No effect (OPEN disabled)	No effect (OPEN-A/B disabled)	No effect (OPEN-A/B disabled)

Tab. 3/h

LOGIC "BC"	OPENING PULSES / CLOSING COMMANDS ALWAYS PRESSED		PULSES				
GATE STATUS	**OPEN-A (opening)**	**OPEN-B (closing)**	**STOP**	**OPENING SAFETY DEVICES**	**CLOSING SAFETY DEVICES**	**OP/CLOS. SAFETY DEVICE**	**EDGE SAFETY DEVICE**
CLOSED	Opens the leaf	No effect	No effect (OPEN-A disabled)	No effect (OPEN-A disabled)	No effect	No effect (OPEN-A disabled)	No effect (OPEN-A disabled)
OPEN	No effect	Closes the leaf	No effect (OPEN-B disabled)	No effect	No effect (OPEN-B disabled)	No effect (OPEN-B disabled)	No effect (OPEN-A/B disabled)
ON CLOSING	Reverses to open	No effect	Stops operation	No effect (saves OPEN A)	Stops operation (OPEN-B disabled)	Stops operation (OPEN-A/B disabled)	Reverses to open for 2" (2)
ON OPENING	No effect	No effect		Stops operation (OPEN-A disabled)	No effect	Stops operation (OPEN-A/B disabled)	Reverses to close for 2" (2)
STOPPED	Opens the leaf	Closes the leaf	No effect (OPEN-A/B disabled)	No effect (OPEN-A disabled)	No effect (OPEN-B disabled)	No effect (OPEN-A/B disabled)	No effect (OPEN-A/B disabled)

(1) If maintained, it prolongs the pause until disabled by the command (timer function)
(2) If a new pulse occurs within 2 seconds after reversing, it immediately stops operation.
NB.: Effects on other active pulse inputs in brackets.

DICHIARAZIONE CE DI CONFORMITÁ

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- è conforme ai requisiti essenziali di sicurezza delle seguenti direttive:
  73/23 CEE e successiva modifica 93/68/CEE.
  89/336 CEE e successiva modifica 92/31 CEE e 93/68/CEE

Note aggiuntive:
questi prodotti sono stati sottoposti a test in una configurazione tipica omogenea (tutti i prodotti di costruzione GENIUS s.r.l.).

Grassobbio, 01-06-2005

L'Amministratore Delegato
D. Gianantoni

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  89/336 EEC and subsequent amendments 92/31 EEC and 93/68 EEC.

Notes:
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Grassobbio, 01-06-2005

Managing Director
D. Gianantoni

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L'Administrateur Délégué
D. Gianantoni

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Grassobbio, 01-06-2005.

Administrador Delegado
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