CARDIN ELETTRONICA spa
Via del lavoro, 73 – Z.I. Cimavilla
31013 Codognè (TV) Italy
Tel: +39/0438.404011
Fax: +39/0438.401831
email (Italian): Sales.office.it@cardin.it
email (Europe): Sales.office@cardin.it
Http: www.cardin.it

BL 230Vac Motors

Instruction manual	Series	Model	Date
ZVL240.08	BL	Automation	20-07-2005

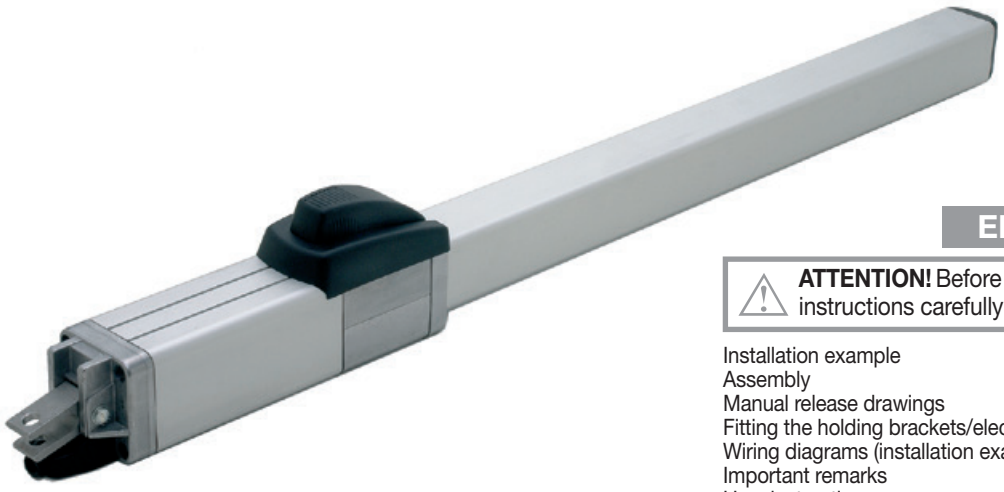
Questo prodotto è stato testato e collaudato nei laboratori della casa costruttrice, la quale ne ha verificato la perfetta corrispondenza delle caratteristiche con quelle richieste dalla normativa vigente. **This product** has been tried and tested in the manufacturer's laboratory who have verified that the product conforms in every aspect to the safety standards in force. **Ce produit** a été testé et essayé dans les laboratoires du fabriquant. Pour l'installer suivre attentivement les instructions fournies. **Dieses Produkt** wurde in den Werkstätten der Herstellerfirma auf die perfekte Übereinstimmung ihrer Eigenschaften mit den von den geltenden Normen vorgeschriebenen getestet und geprüft. **Este producto** ha sido probado y ensayado en los laboratorios del fabricante, que ha comprobado la perfecta correspondencia de sus características con las contempladas por la normativa vigente.

AUTOMAZIONE PER CANCELLI A BATTENTE
AUTOMATION FOR HINGED GATES
AUTOMATISME POUR PORTAILS BATTANTS
DREHTORANTRIEBE
AUTOMATIZACION PARA CANCILLAS BATIENTES

230Vac Motors

200/BL203
200/BL203L
200/BL203C
200/BL203CE
200/BL352
200/BL452

CE



ENGLISH

ATTENTION! Before installing this device read the following instructions carefully!

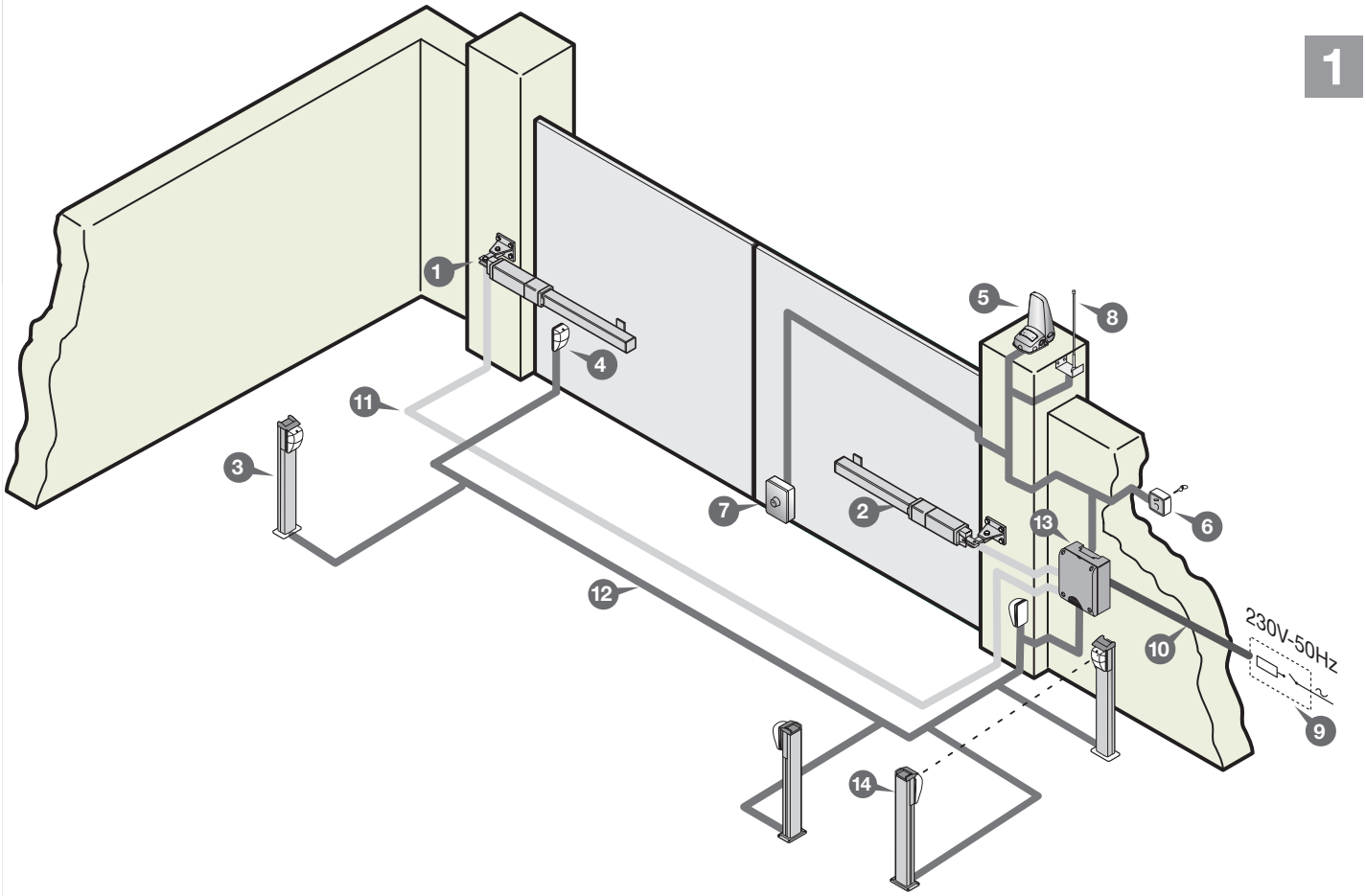
TECHNICAL SPECIFICATIONS		200/BL203	200/BL203L	200/BL203C	200/BL203CE	200/BL352	200/BL452
Power supply	V	230	230	230	230	230	230
Frequency	Hz	50	50	50	50	50	50
Electrical input	A	0,9	0,9	0,9	0,9	1,3	1,4
Power input	W	220	220	220	220	270	310
Duty cycle	%	25	25	25	25	50	50
Travel	mm	280	445	330	390	280	280
Force	N	2000	2000	2000	2000	3500	3500
Travel time (90°)	s	19	30	24	37	31	37
Capacitor	µF	6,3	6,3	6,3	4	5	10
Motor insulation class	cl.	F	F	F	F	F	F
Protection grade	IP	44	44	44	44	44	44
Maximum size (per leaf)	m	2	4	3	3	3,5	4,5
Maximum weight (per leaf)	kg	150	150	150	150	300	300

CARDIN ELETTRONICA spa
Via del lavoro, 73 – Z.I. Cimavilla 31013 Codognè (TV) Italy
Tel: +39/0438.404011
Fax: +39/0438.401831
email (Italian): Sales.office.it@cardin.it
email (Europe): Sales.office@cardin.it
Http: www.cardin.it

ZVL240.08-Mod: 10.06.2013

ESEMPIO D'INSTALLAZIONE - INSTALLATION EXAMPLE - EXEMPLE D'INSTALLATION - ANLAGENART - INSTALACIÓN ESTÁNDAR

1



LEGEND

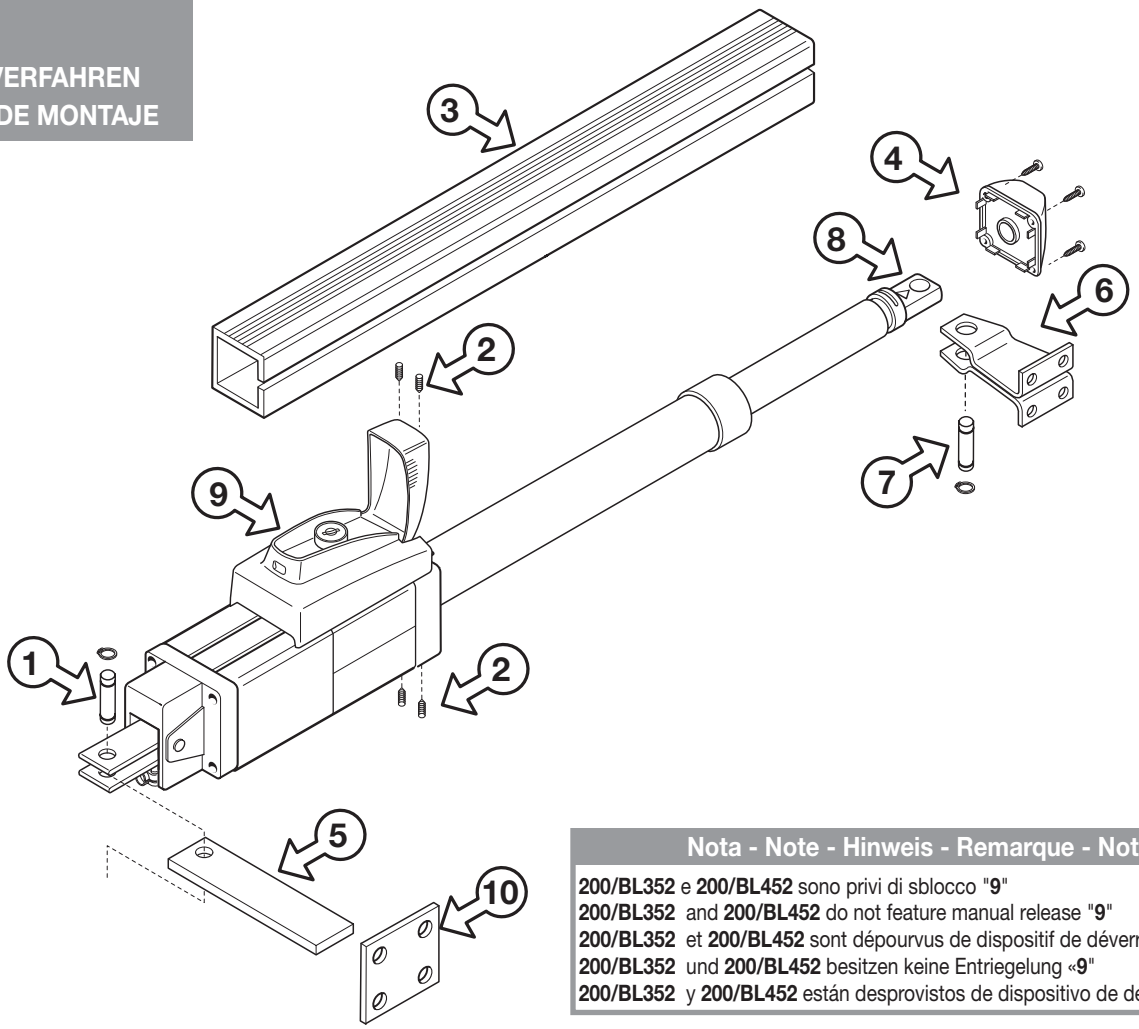
1 Geared motor (left)
2 Geared motor (right)
3 Internal photocells
4 External photocells
5 Warning lights
6 Mechanical selector switch
7 Electric locking device
8 External antenna (**RG58** coaxial cable - impedance 50Ω)
9 All-pole circuit breaker with a minimum of **3 mm** between the contacts
10 Mains cable **230 Vac**
11 Channelling for the motor connection cable **230 Vac**
12 Channelling route for low voltage wires
13 Electronic programmer
14 Lateral protective photocells **(FTCS)**

Attention: The drawing is purely indicative and is supplied as working base from which to choose the Cardin electronic components making up the installation. This drawing therefore does not lay down any obligations regarding the execution of the installation.

SCHEMA DI MONTAGGIO
ASSEMBLY
MONTAGE
MONTAGEVERFAHREN
ESQUEMA DE MONTAJE

200/BL203 - 200/BL203L - 200/BL352 - 200/BL452

2



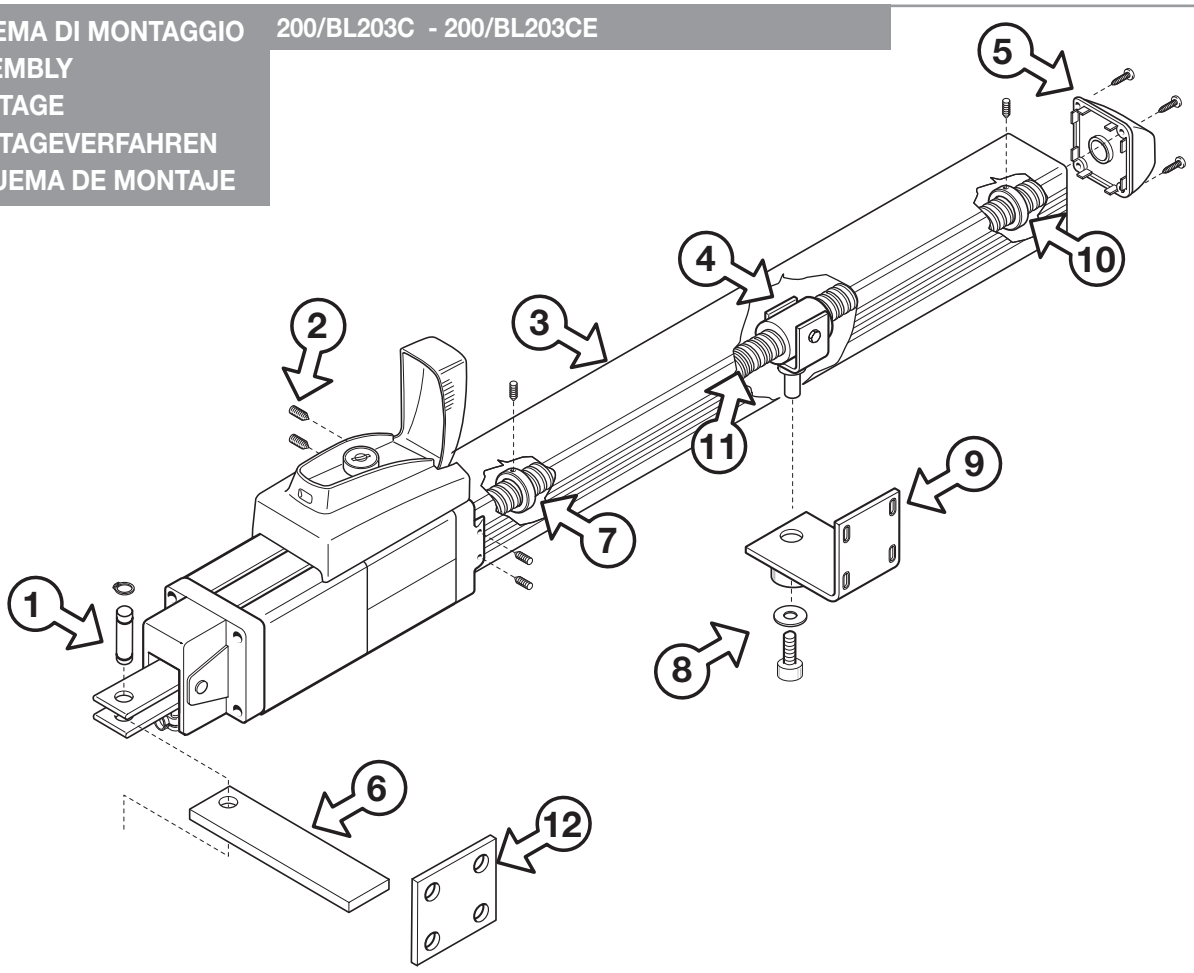
Nota - Note - Hinweis - Remarque - Nota

200/BL352 e **200/BL452** sono privi di sblocco "**9**"
200/BL352 and **200/BL452** do not feature manual release "**9**"
200/BL352 et **200/BL452** sont dépourvus de dispositif de déverrouillage "**9**"
200/BL352 und **200/BL452** besitzen keine Entriegelung «**9**"
200/BL352 y **200/BL452** están desprovistos de dispositivo de desbloqueo "**9**"

SCHEMA DI MONTAGGIO
ASSEMBLY
MONTAGE
MONTAGEVERFAHREN
ESQUEMA DE MONTAJE

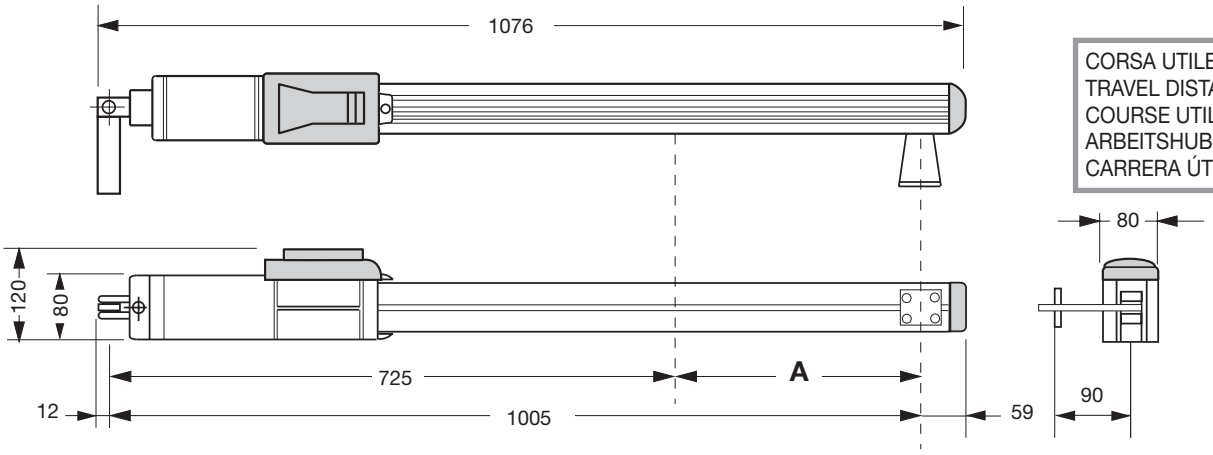
200/BL203C - 200/BL203CE

3



200/BL203

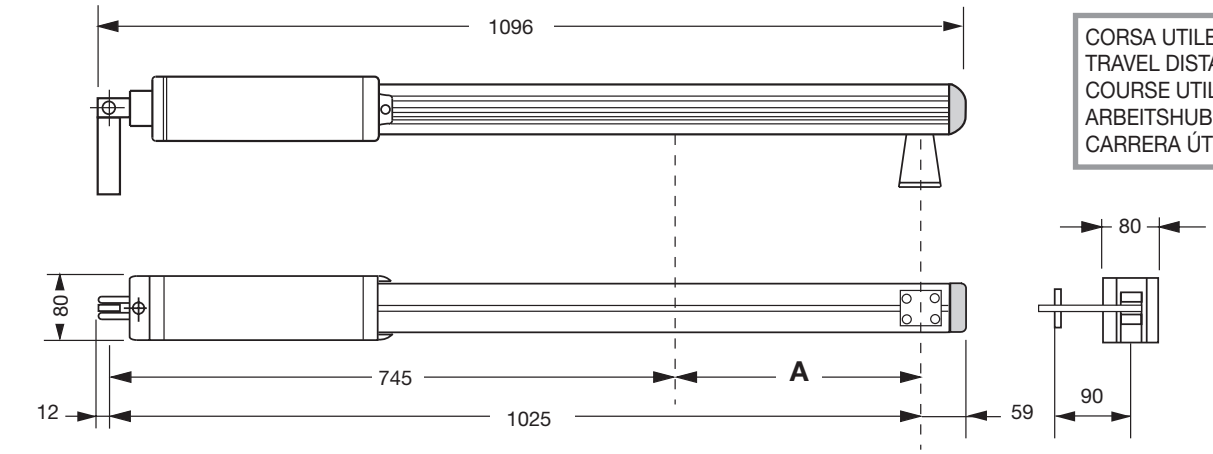
4



CORSA UTILE	**"A"** = 280 mm
TRAVEL DISTANCE	**"A"** = 280 mm
COURSE UTILE	**"A"** = 280 mm
ARBEITSHUB	**"A"** = 280 mm
CARRERA ÚTIL	**"A"** = 280 mm

200/BL352 - 200/BL452

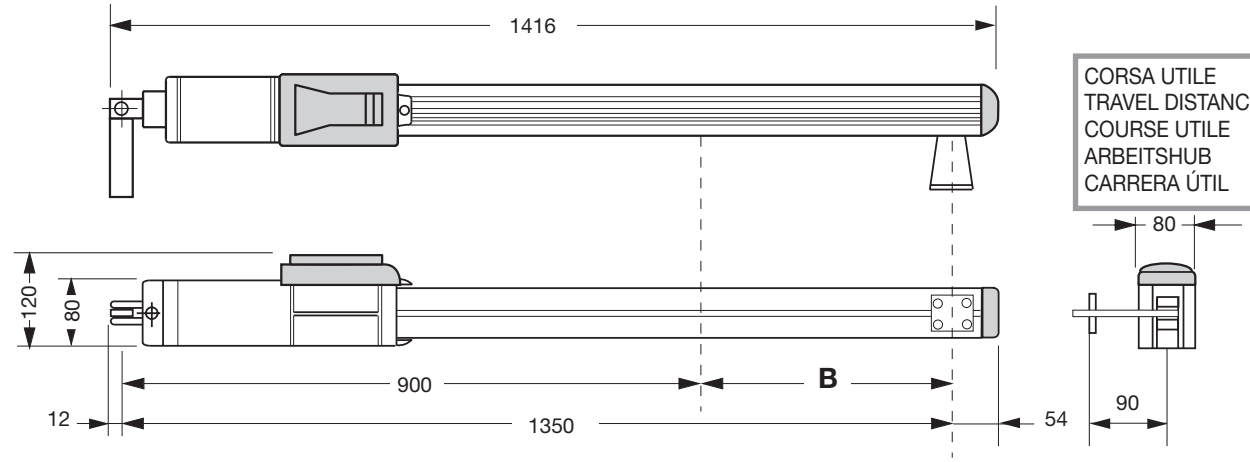
5



CORSA UTILE	**"A"** = 280 mm
TRAVEL DISTANCE	**"A"** = 280 mm
COURSE UTILE	**"A"** = 280 mm
ARBEITSHUB	**"A"** = 280 mm
CARRERA ÚTIL	**"A"** = 280 mm

200/BL203L

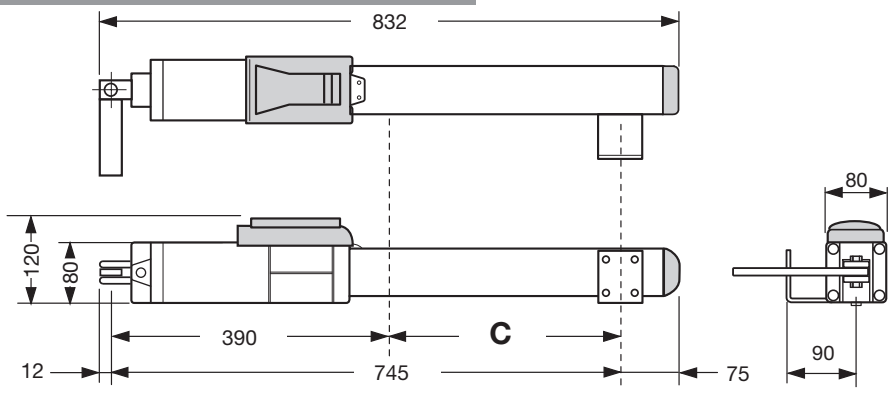
6



CORSA UTILE	**"A"** = 450 mm
TRAVEL DISTANCE	**"A"** = 450 mm
COURSE UTILE	**"A"** = 450 mm
ARBEITSHUB	**"A"** = 450 mm
CARRERA ÚTIL	**"A"** = 450 mm

200/BL203C - 200/BL203CE

7



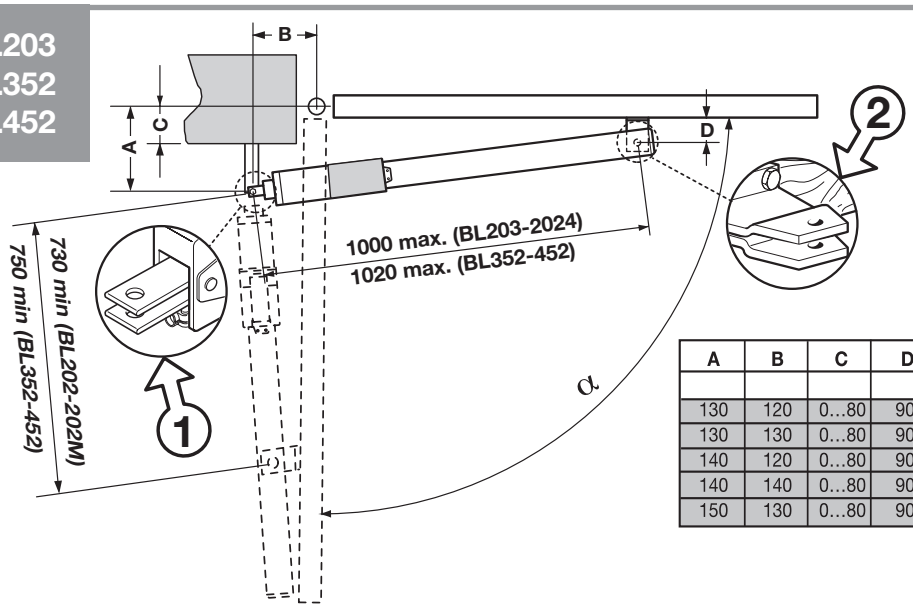
CORSA UTILE	**"C"** = 355 mm
TRAVEL DISTANCE	**"C"** = 355 mm
COURSE UTILE	**"C"** = 355 mm
ARBEITSHUB	**"C"** = 355 mm
CARRERA ÚTIL	**"C"** = 355 mm

LIMITI D'IMPIEGO - LIMITS OF USE - CONTRAINTES D'UTILISATION - ANWENDUNGSGRENZEN - LIMITES DE EMPLEO

Importante! Per un'installazione ottimale utilizzare i dati evidenziati in grigio.
Important! For an optimum installation use the values highlighted in grey.
Important! Pour optimiser l'installation, appliquer les données mises en évidence dans les cases en gris.
Wichtig! Für eine optimale Installation sind die grau markierten Zahlenwerte zu verwenden.
¡Importante! Para una instalación perfecta utilizar los datos evidenciados en gris.

200/BL203
200/BL352
200/BL452

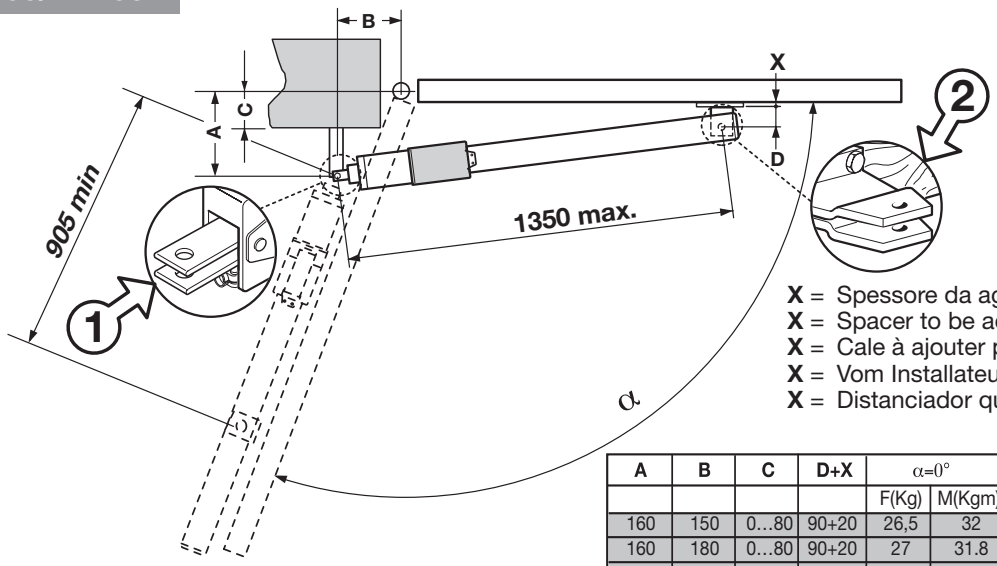
8



A	B	C	D	α=0°		α=90°		α max
				F(Kg)	M(Kgm)	F(Kg)	M(Kgm)	
130	120	0...80	90	29,3	26	28	24.8	90°
130	130	0...80	90	29.6	25.9	31	27.2	90°
140	120	0...80	90	31.6	27.7	31.1	27.3	90°
140	140	0...80	90	31.9	27.7	34.2	29.7	90°
150	130	0...80	90	33.6	29.5	31.2	27.3	90°

200/BL203L

9

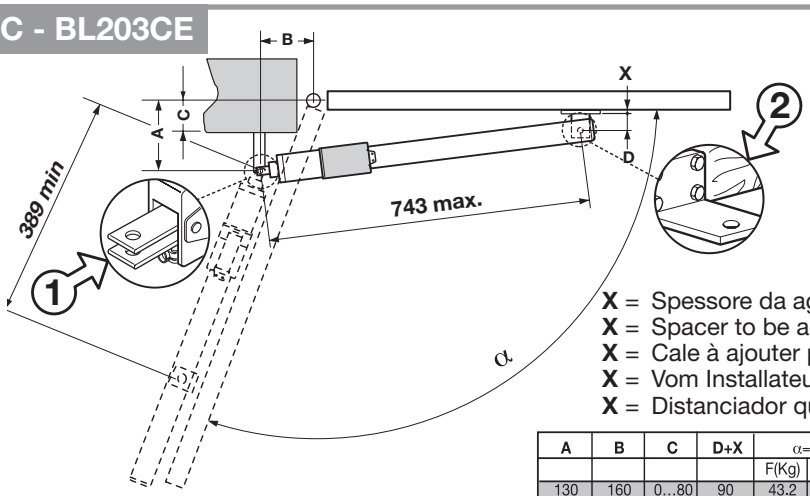


X = Spessore da aggiungere a cura dell'installatore
X = Spacer to be added by the installer
X = Cale à ajouter par les soins de l'installateur
X = Vom Installateur hinzuzufügendes Distanzstück
X = Distanciador que el instalador debe añadir

A	B	C	D+X	α=0°		α=90°		α=110°		α max
				F(Kg)	M(Kgm)	F(Kg)	M(Kgm)	F(Kg)	M(Kgm)	
160	150	0...80	90+20	26,5	32	25.9	31.22	13	15.8	110°
160	180	0...80	90+20	27	31.8	32.5	38.3	19.2	22.6	110°
180	180	0...80	90+20	30	35.3	32.7	38.5	17.7	20.8	110°
180	210	0...80	90+20	30,6	35	39.9	45.7	24.4	28	110°
200	180	0...80	90+20	33	38.8	33	38.8	16	19	110°

200/BL203C - BL203CE

10

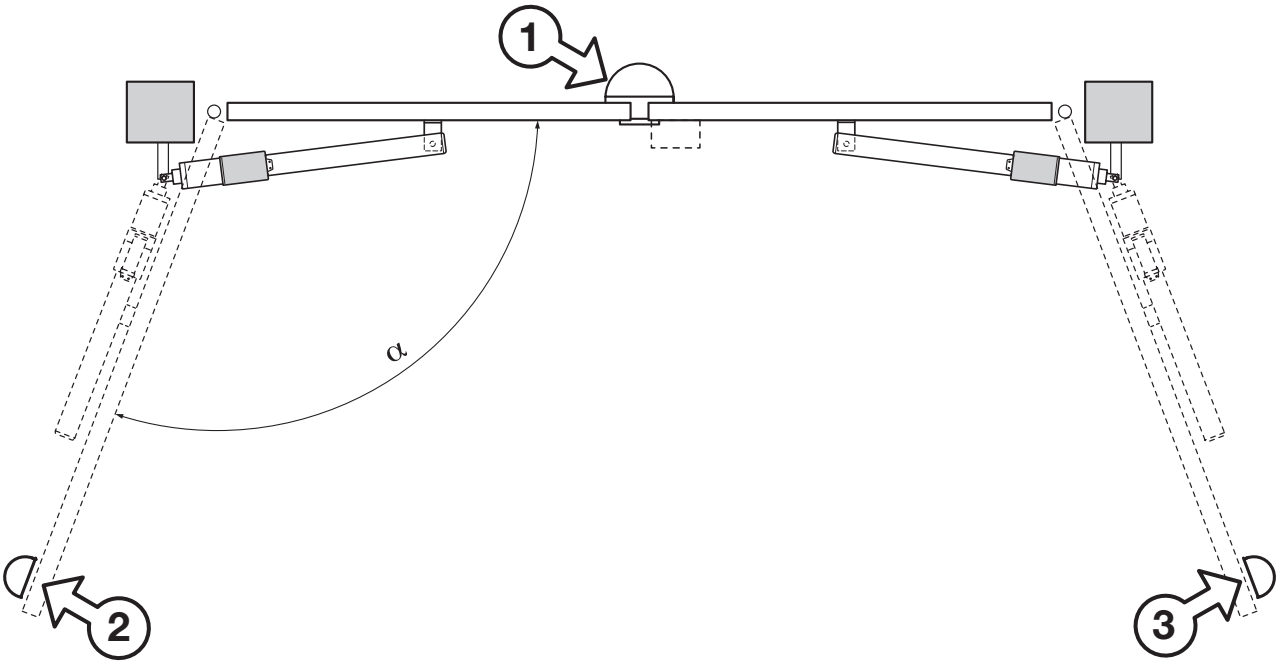


X = Spessore da aggiungere a cura dell'installatore
X = Spacer to be added by the installer
X = Cale à ajouter par les soins de l'installateur
X = Vom Installateur hinzuzufügendes Distanzstück
X = Distanciador que el instalador debe añadir

A	B	C	D+X	α=0°		α=90°		α=110°		α max
				F(Kg)	M(Kgm)	F(Kg)	M(Kgm)	F(Kg)	M(Kgm)	
130	160	0...80	90	43.2	25.6	59.6	35.3	35.8	24.8	110°
130	170	0...80	90	43.8	25.5	65	37.9	41.1	24	110°
180	160	0...80	105	58.3	34.9	57.4	33.7			90°

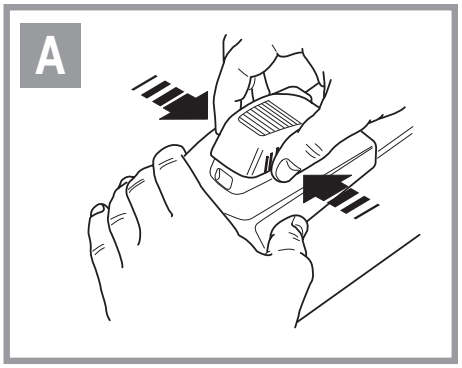
ESEMPIO D'INSTALLAZIONE - INSTALLATION EXAMPLE - EXEMPLE D'INSTALLATION - INSTALLATIONSART - EJEMPLO DE INSTALACIÓN

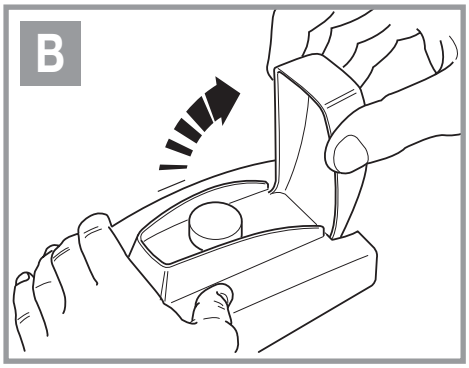
11

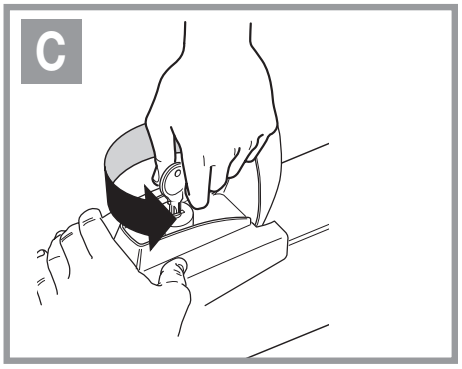


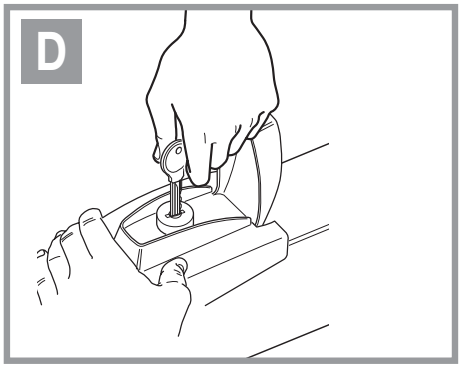
SBLOCCO MANUALE - MANUAL RELEASE - DÉVERROUILLAGE MANUEL - MANUELLE ENTRIEGELUNG - DESBLOQUEO MANUAL

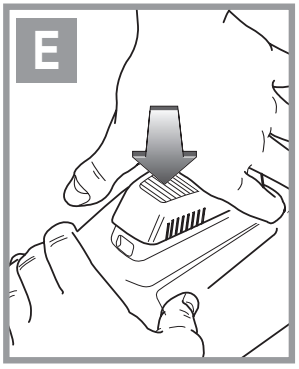
12







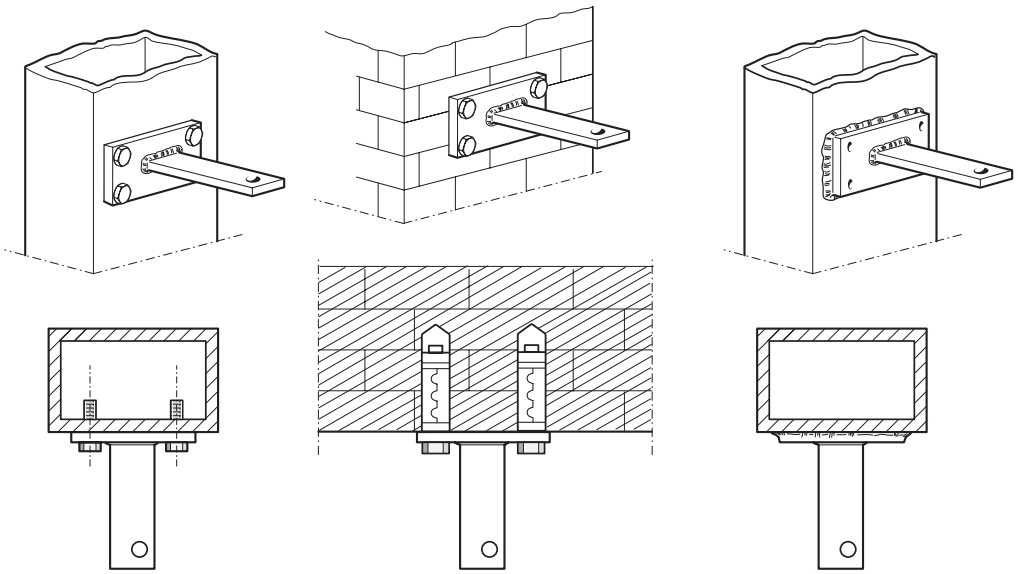




FISSAGGIO STAFFA POSTERIORE (A PILASTRO) - FITTING THE REAR BRACKET (TO A COLUMN) - FIXATION DE LA PATTE POSTÉRIEURE (AU PILIER) ANBRINGUNG HALTEBÜGEL HINTEN (AN DER SÄULE) - FIJACIÓN DEL SOPORTE POSTERIOR (EN EL PILAR)

200/BL203
200/BL203L
200/BL203C
200/BL203CE
200/BL352
200/BL452

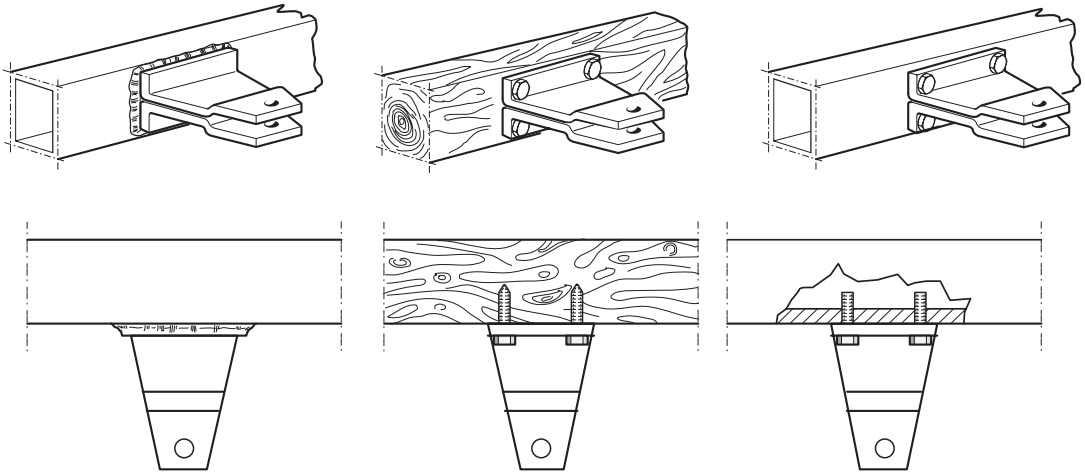
13



FISSAGGIO STAFFA ANTERIORE (A CANCELLO) - FITTING THE FRONT BRACKET (TO THE GATE) - FIXATION DE LA PATTE ANTÉRIEURE (AU PORTAIL) ANBRINGUNG HALTEBÜGEL VORNE (AM TOR) - FIJACIÓN DEL SOPORTE ANTERIOR (EN LA CANCILLAS)

200/BL203
200/BL203L
200/BL352
200/BL452

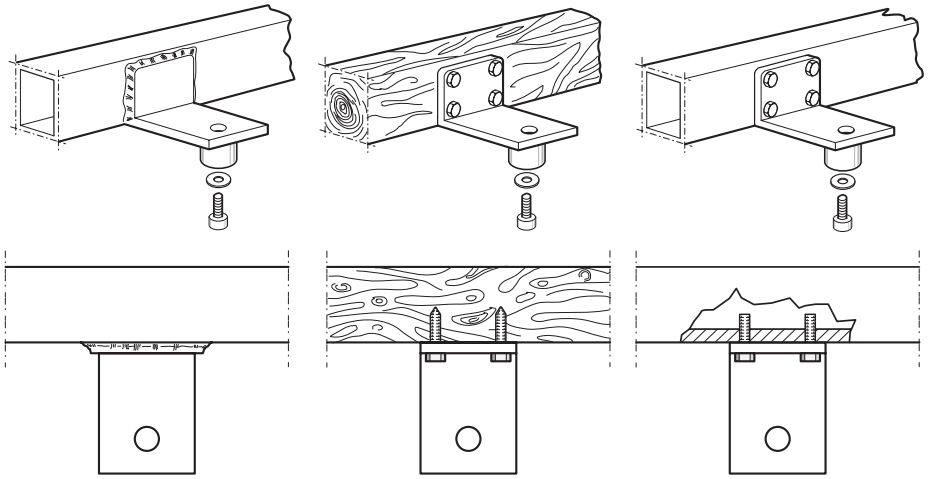
14



FISSAGGIO STAFFA ANTERIORE (A CANCELLO) - FITTING THE FRONT BRACKET (TO THE GATE) - FIXATION DE LA PATTE ANTÉRIEURE (AU PORTAIL) ANBRINGUNG HALTEBÜGEL VORNE (AM TOR) - FIJACIÓN DEL SOPORTE ANTERIOR (EN LA CANCILLAS)

200/BL203C
200/BL203CE

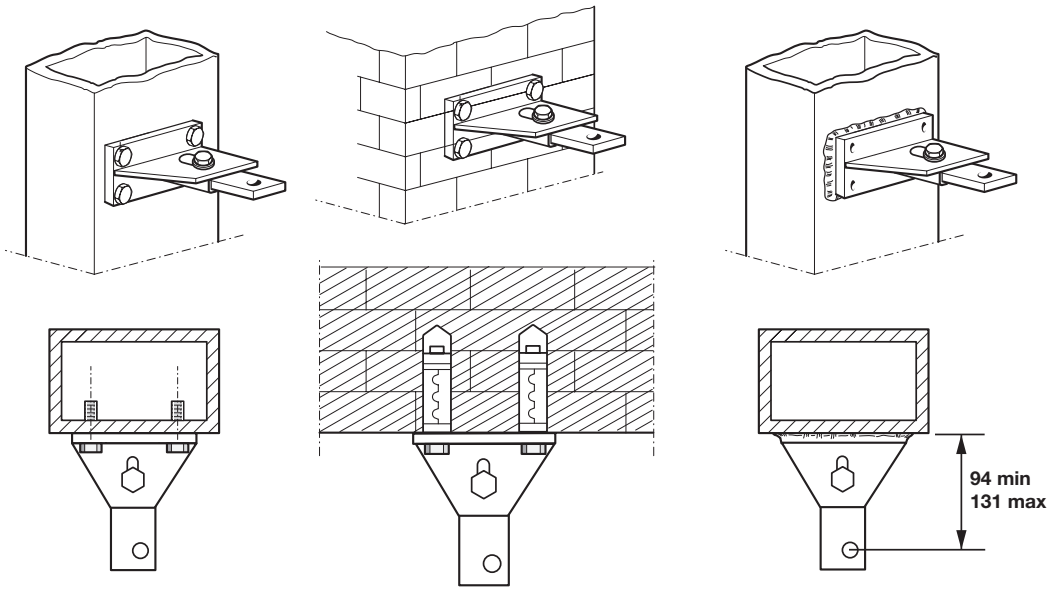
15



STAFFA POSTERIORE REGOLABILE (OPZIONALE) - FITTING THE ADJUSTABLE REAR BRACKET (OPTIONAL) - PATTE POSTÉRIEURE RÉGLABLE (EN OPTION) - HINTERER, EINSTELLBARER HALTEBÜGEL (EXTRA) - SOPORTE POSTERIOR REGULABLE (OPCIONAL)

206/BL201STAP

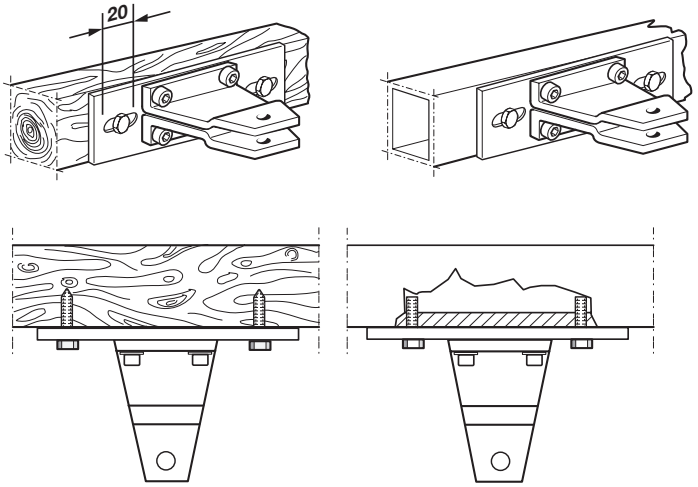
16



STAFFA ANTERIORE REGOLABILE (OPZIONALE) - FITTING THE ADJUSTABLE FRONT BRACKET (OPTIONAL) - PATTE ANTÉRIEURE RÉGLABLE (EN OPTION) - VORNER, EINSTELLBARER HALTEBÜGEL (EXTRA) - SOPORTE ANTERIOR REGULABLE (OPCIONAL)

206/BL201SUAR

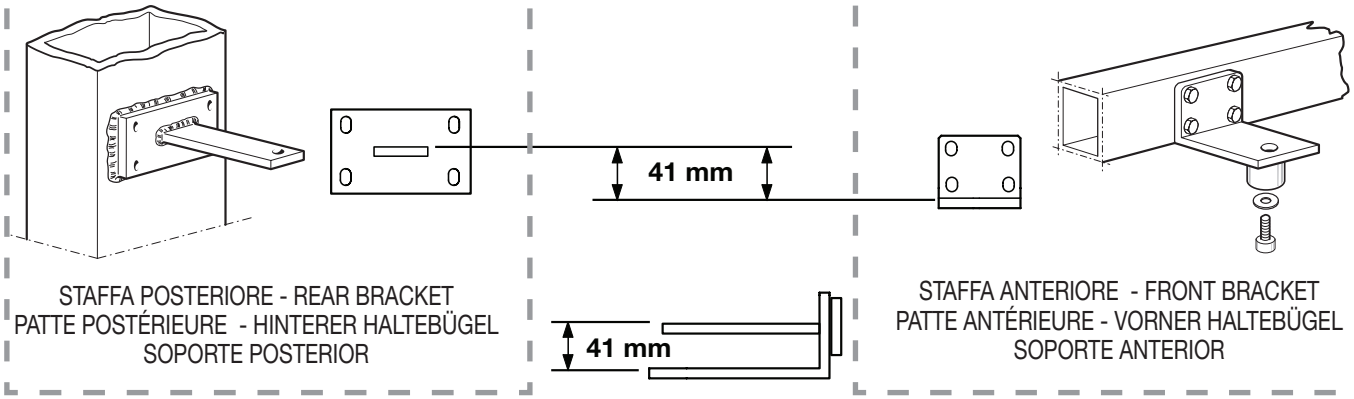
17



PREINSTALLAZIONE STAFFA POSTERIORE/ANTERIORE - PRE-INSTALLATION FRONT/REAR BRACKET PRÉINSTALLATION PATTE POSTÉRIEURE/ANTÉRIEURE - VORMONTAGE HINTERER/VORNER HALTEBÜGEL PREINSTALACIÓN SOPORTE POSTERIOR/ANTERIOR

18

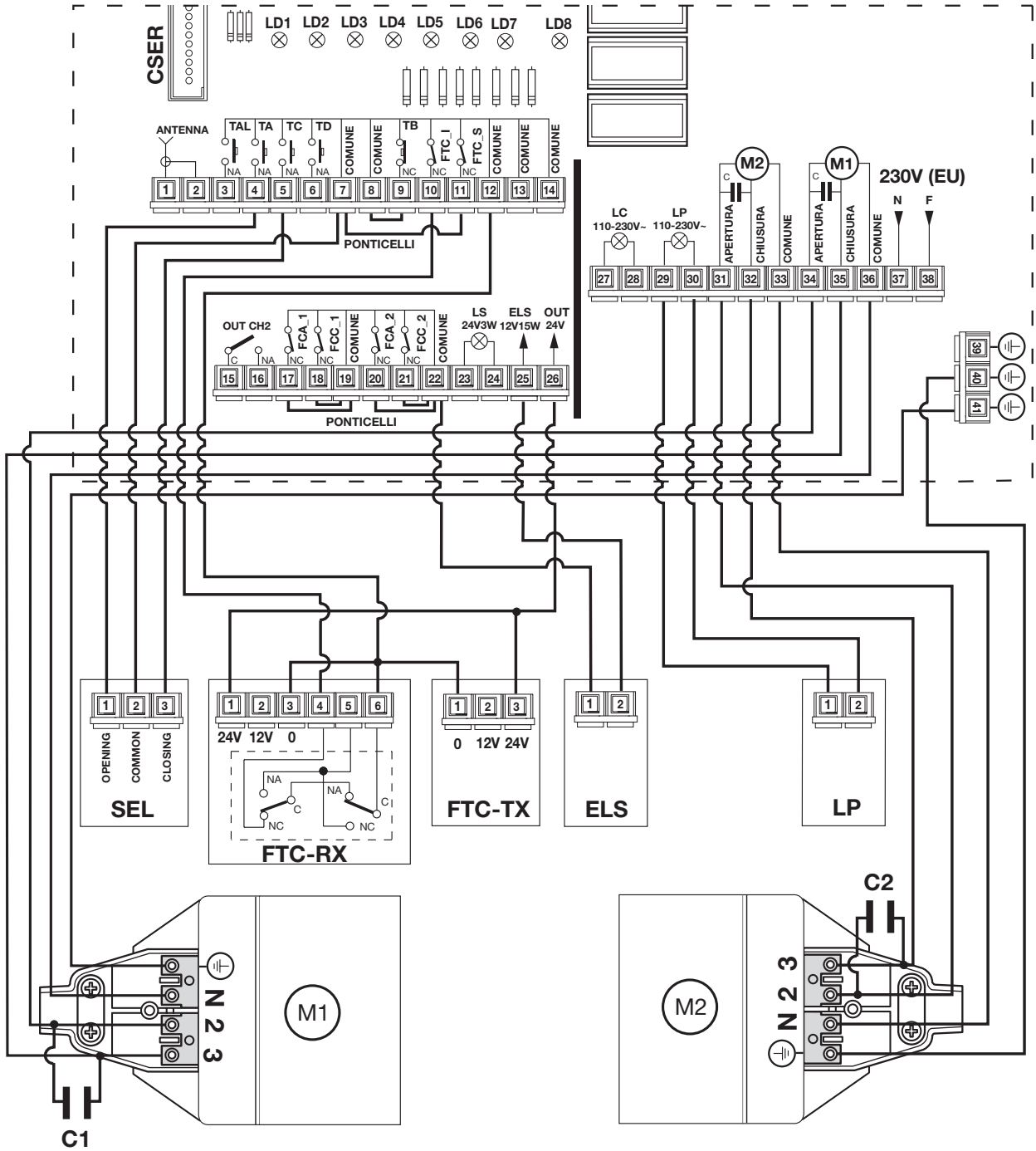
200/BL203C - 200/BL203CE



STAFFA POSTERIORE - REAR BRACKET
PATTE POSTÉRIEURE - HINTERER HALTEBÜGEL
SOPORTE POSTERIOR

STAFFA ANTERIORE - FRONT BRACKET
PATTE ANTÉRIEURE - VORNER HALTEBÜGEL
SOPORTE ANTERIOR

PRG811



⏚	-	Terra	⏚	-	Ground	⏚	-	Terre	⏚	-	Erdung	⏚	-	Tierra
N	-	Comune	N	-	Neutral	N	-	Commun	N	-	Gemeinsam	N	-	Común
2	-	Apre	2	-	Open	2	-	Ouvre	2	-	Öffnen	2	-	Abre
3	-	Chiude	3	-	Close	3	-	Ferme	3	-	Schließen	3	-	Cierra

UTILIZZARE PER IL COLLEGAMENTO ELETTRICO CAVO MULTIPOLARE FLESSIBILE 3 x 1 + T
USE FLEXIBLE MULTIWIRE CABLES FOR THE ELECTRICAL CONNECTION 3 x 1 + EARTH WIRE
POUR LE BRANCHEMENT ÉLECTRIQUE, UTILISER UN CÂBLE MULTIPOLAIRE FLEXIBLE 3 X 1 + T
ZUM ANSCHLUSS EIN MEHRPOLIGES FLEXIBLES ELEKTROKABEL 3 X 1 + T VERWENDEN.
PARA LA CONEXIÓN ELÉCTRICA UTILIZAR UN CABLE MULTIPOLAR FLEXIBLE 3 x 1 + T

READ THE FOLLOWING REMARKS CAREFULLY BEFORE PROCEEDING WITH THE INSTALLATION. PAY PARTICULAR ATTENTION TO ALL THE PARAGRAPHS MARKED WITH THE SYMBOL ⚠ NOT READING THESE IMPORTANT INSTRUCTIONS COULD COMPROMISE THE CORRECT WORKING ORDER OF THE SYSTEM AND CREATE DANGER SITUATIONS FOR THE USERS OF THE SYSTEM.

- These instructions are aimed at professionally qualified "**installers of electrical equipment**" and must respect the local standards and regulations in force. All materials used must be approved and must suit the environment in which the installation is situated.
- All maintenance operations must be carried out by professionally qualified technicians. Before carrying out any cleaning or maintenance operations make sure the power is disconnected at the mains.
- This appliance must be used exclusively for the purpose for which it has been made. "i.e. **for the automation of hinged gates**" with one or two gate leaves.
- The unit may be fitted both to the **right** and to the **left** of the passageway. This product and all its relative components has been designed and manufactured by Cardin Elettronica who have verified that the product conforms in every aspect to the safety standards in force.

  Any non authorised modifications are to be considered improper dangerous and the complete responsibility of the installer.

⚠ **Caution!** mechanical stop buffers must be installed in both the opening and closing positions (pos. 1, 2, 3, fig. 11).

IMPORTANT SAFETY INSTRUCTIONS

It is the responsibility of the installer to make sure that the following public safety conditions are satisfied:

1) Ensure that the gate operating installation is far enough away from the main road to eliminate possible traffic disruptions.
2) The operator must be installed on the inside of the property and not on the public side of the gate. The gates must not swing outwards onto a public area.
3) The gate operator is designed for use on gates through which vehicles are passing. Pedestrians should use a separate entrance.
4) The gate must be in full view when it is operating therefore controls must be situated in a position where the operator can see the gate at all times.
5) At least two warning signs (similar to the example on the right) should be placed, where they can be easily seen by the public, in the area of the system of automatic operation. One inside the property and one on the public side of the installation. These signs must be indelible and not hidden by any objects (such as tree branches, decorative fencing etc.).

6) Make sure that the end-user is aware that children and/or pets must not be allowed to play within the area of a gate installation. If possible include this in the warning signs.
7) Whenever a fully open gate leaf comes within **at least 500 mm** of a fixed structure the space must be protected by an anticrush buffer.
8) A correct earth connection is fundamental in order to guarantee the electrical safety of the machine.
9) You are advised to protect the sistem's lateral access points with pairs of **(FTCS)** photocells connected to the stop input, see installation example, component 14 on page 2.
10) If you have any questions about the safety of the gate operating system, do not install the operator. Contact your dealer for assistance.

TECHNICAL DESCRIPTION

200/BL203 Self-locking electromechanical operator suitable for hinged gates up to **2,0** metres in length and **150 Kg** in weight (per gate leaf).

200/BL203L Self-locking electromechanical operator suitable for hinged gates up to **2** metres in length and **150 kg** in weight (per gate leaf).

If used with the maximum travel distance an opening angle of **90°** and the addition of an electric locking device, it can be used for gates up to **4** metres in length and **150 kg** in weight.

200/BL203C - 200/BL203CE Self-locking electromechanical operator suitable for hinged gates up to **1,8** metres in length and **150 kg** in weight (per gate leaf).

If used with the maximum travel distance an opening angle of **90°** and the addition of an electric locking device, it can be used for gates up to **3** metres in length and **150 kg** in weight.

200/BL352 Reversible electromechanical operator suitable for hinged gates up to **3,5 m** in length and **300 kg** in weight (per gate leaf).

200/BL452 Reversible electromechanical operator suitable for hinged gates up to **4,5 m** in length and **300 kg** in weight (per gate leaf).

- Single phase motor housed in a cast aluminium case with incorporated overload protector .
- External carter in extruded aluminium.
- Release mechanism components in shockproof plastic.
- Geared motor with steel gears enclosed in a die cast two-piece aluminium shell (**BL203-202L-202C**).
- Silent running epicycloid reduction motor with a never ending universal ball screw in steel (**BL352-452**).
- Brackets and accessories in zinc-plated steel.
- Lubrication using permanently fluid grease.

ACCESSORIES

206/BL201STAP	- Adjustable rear bracket for fitting to a wall
206/BL201SUAR	- Adjustable rear plate for fitting to a gate
980/XLSE11C	- Electric locking device 12 Vac

USER INSTRUCTIONS

Attention! Only for EU customers - **WEEE marking**.
This symbol indicates that once the products life-span has expired it must be disposed of separately from other rubbish. The user is therefore obliged to either take the product to a suitable differential collection site for electronic and electrical goods or to send it back to the manufacturer if the intention is to replace it with a new equivalent version of the same product. Suitable differential collection, environmental friendly treatment and disposal contributes to avoiding negative effects on the ambient and consequently health as well as favouring the recycling of materials. Illicitly disposing of this product by the owner is punishable by law and will be dealt with according to the laws and standards of the individual member nation.

During the opening/closing manoeuvre check for correct operation and activate the emergency stop button in case of danger.

During blackouts the gate can be released and manually manoeuvred using the supplied release key (see manual release).

Periodically check the moving parts for wear and tear and grease if required, paying particular attention to the never ending screw pos. 11 fig. 3 (**200/BL203C - 200/BL203CE**), using lubricants which maintain their friction levels unaltered throughout time and are suitable for temperatures of **-20 to +70°C**.

In case of failure or operational anomalies switch off the power at the mains do not attempt to repair the appliance yourself.

Periodically check the correct operation of all safety devices (photoelectric cells etc.).

Eventual repair work must be carried out by specialised personnel using original spare parts.

The appliance is not suitable for continuous operation and must be adjusted according to the model (see technical data on page 28).

INSTALLATION INSTRUCTIONS

The minimum controls which may be installed are OPEN-STOP-CLOSE, these controls must be installed in a location not accessible to children. Before starting the installation of the system check that the structure which is to be automated is in good working order and respects the local standards and regulations in force.

To this end make sure that the gate is sufficiently rigid (if necessary reinforce the structure) and that the runner guides slide easily.

You are advised to grease all the moving parts using lubricants which maintain unaltered friction characteristics over a period of time and are suitable for temperatures of **-20** to **+70°C**.

- Check the safety measures between the fixed and moving parts:
  - a minimum space of **30 mm** must always be left along the entire distance between the gate and the support column measured throughout the entire opening angle of the gate.

- make sure that the space between the bottom of the gate and the pavement never exceeds **30 mm** throughout the entire opening angle of the gate.

- The surface of the gate must not feature openings which allow a person's hand or foot to pass through.
- Check the exact positioning of the pivots, and their good working order (the upper and lower hinges/pivots must be aligned on the same axis).
- Work out the run of the cables according to the command and control devices fitted and make sure the system conforms to the local standard and regulations in force (see installation example fig. 1 pag. 2).
- Check that the appliance is suitable for the size, weight and duty cycle of the gate to which it is to be applied (see duty cycle on page 28)

FITTING THE UNITS 200/BL203- BL203L

The unit may be positioned either to the right or to the left of the passageway.
To install the unit correctly carry out the following procedure carefully.

- Move the gate/s to the closed position.
- Select the type of opening required (fig. 8, 9 pag. 5).
- Fasten the rear mooring bracket to the column (fig. 13 pag. 7), taking into account the measurements "**A**" and "**B**", after having checked the position of the gate hinge with respect to the column (measurement "**C**" fig. 8, 9 page 5) according to the type of opening required.
- Fix the arm to the rear mooring bracket "**5**" using the retaining pin "**1**" (fig. 2 pag. 3) and the front bracket "**6**" using the pin "**7**".
- Extend the arm manually until it reaches **5 mm** from the end of the travel distance.

⚠ **ATTENTION**! The centre distance between the front mooring bracket "**2**" and the rear mooring bracket "**1**" must never exceed **1000 mm** for the **BL203** and **1345 mm** for the **BL203L** (see figures 8-9 on page 5)

- Move the arm to its normal operating position, rest the head against the gate and mark the position of the front bracket "**6**".

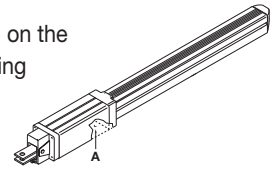
  Note: Make sure the operator is perfectly level (using a spirit level) and then fix the front bracket to the gate (fig. 14 pag. 7).
- The front bracket may be fixed in the following positions:
- on the gate frame or on a horizontal cross beam,
- if this is not possible, fix a reinforcing plate to the gate structure and then fasten the front bracket onto the reinforcing plate.
- Insert the arm in the front bracket "**6**", insert the retaining pin "**7**" and fasten down using the supplied C-clips (fig. 2 pag. 3).
- Install the protective carter by fastening the 4 screws on the geared motor (pos. 2 fig. 2) and position the plastic protective cap (pos. 4 fig. 2).
- With the motor released move it manually to the fully open position and check that all the components work correctly.
- If you are using **200/BL203L** with a gate from **2** to **4** metres in width an electric locking device must be fitted to ensure that the gate is blocked when it is closed.

FITTING THE UNITS 200/BL352 - 200/BL452

The unit may be positioned either to the right or to the left of the passageway. To install the unit correctly carry out the following procedure carefully.

- Move the gate/s to the closed position.
- Select the type of opening required (fig. 8 pag. 5).
- Fasten the rear mooring bracket to the column (fig. 13 pag. 7), taking into account the measurements "**A**" and "**B**", after having checked the position of the gate hinge with respect to the column (measurement "**C**" fig. 8 page 5) according to the type of opening required.

ATTENTION! The motor must be installed on the gate with the humidity drain holes "**A**" facing downwards (see drawing)



- Fix the arm to the rear mooring bracket "**5**" using the retaining pin "**1**" (fig. 2 pag. 3) and the front bracket "**6**" using the pin "**7**".
- Extend the arm manually until it reaches **5mm** from the end of the travel distance.

⚠ **ATTENTION!** The centre distance between the front mooring bracket "**2**" and the rear mooring bracket "**1**" must never exceed **1020** mm for the **BL352** and **BL452** (see figure 8 on page 5)

- Move the arm to its normal operating position, rest the head against the gate and mark the position of the front bracket "**6**".

  Note: Make sure the operator is perfectly level (using a spirit level) and then fix the front bracket to the gate (fig. 14 pag. 7).
- The front bracket may be fixed in the following positions:
- on the gate frame or on a horizontal cross beam;
- if this is not possible, fix a reinforcing plate to the gate structure and then fasten the front bracket onto the reinforcing plate.
- Insert the arm in the front bracket "**6**", insert the retaining pin "**7**" and fasten down using the supplied C-clips (fig. 2 pag. 3).
- Install the protective carter by fastening the 4 screws on the geared motor (pos. 2 fig. 2) and position the plastic protective cap (pos. 4 fig. 2).
- Extend the arm manually until it reaches **5mm** from the end of the travel distance.
- Mount the electric locking device (locks the gate in the closed position).

FITTING THE UNIT 200/BL203C - 200/BL203CE

The unit may be positioned either to the right or to the left of the passageway.

- Move the gate/s to the closed position.
- Select the type of opening required (fig. 10 pag. 5).
- Fasten the rear mooring bracket to the column (fig. 13 pag. 7), taking into account the measurements "**A**" and "**B**", after having checked the position of the gate hinge with respect to the column (measurement "**C**" fig. 10 page 5) according to the type of opening required.

Note: if the gate brackets are to be pre-installed (front and rear) without the presence of the piston, you must also consult the indications in figure 18.

- Position the protective carter "**3**" (with the scoring facing the gate), fasten the 4 screws "**2**" positioned on the geared motor (tighten them well down) and insert the plastic end cap "**5**" using the four supplied screws (fig. 2 pag. 3).
- Rotate the never ending screw (part. 4 fig. 3) until it reaches **15 mm** from the end of the closing direction travel distance.
- Fix the arm to the rear mooring bracket "**6**" using the retaining pin "**1**" (fig. 3 pag. 3).
- Move the arm to its normal operating position, rest the head against the gate and mark the position of the front bracket "**6**".

  Note: Make sure the operator is perfectly level (using a spirit level).
- position the front holding bracket (fig. 14 pag. 7)
- The front bracket may be fixed in the following positions:
- on the gate frame or on a horizontal cross beam,
- if this is not possible, fix a reinforcing plate to the gate structure and then fasten the front bracket onto the reinforcing plate.
- Insert the retaining pin of the never ending screw "**4**" into the front bracket "**9**" and fasten down using the supplied screw and washer "**8**" (fig. 3 pag. 3).
- With the motor released move it manually to the fully open position and check that all the components work correctly.
- If you are using **200/BL203C - 200/BL203CE** with a gate from **1,8** to **3 m** in width an electric locking device must be fitted to ensure that the gate is blocked when it is closed.

ELECTRICAL CONNECTION (fig. 19-21 page 9-11)

Before connecting the appliance make sure that the voltage and frequency rated on the data plate conform to those of the mains supply.

- The appliance works off a single phase **230 V 50 Hz** power supply (see wiring diagram).
- The geared motor must be earthed, to this end use the binding post marked ⏚ which can be found on the wiring box.
- Do not use cables with aluminium conductors; do not solder the ends of cables which are to be inserted into the binding posts; use cables which are marked **T min 85°C** and are resistant to atmospheric agents.
- The power cable must have enough slack to make sure it is not pulled tight during normal operation.
- The power cable must not be wound around any of the appliances components and must not be cemented into the wall.

⚠ An double pole circuit breaker with a minimum of **3 mm** between the contacts must be installed between the electronic programmer and the mains supply.

- Connect the supplied capacitor between the live wires 2 and 3 of the geared motor (fig. 19-21 pag. 9-11).

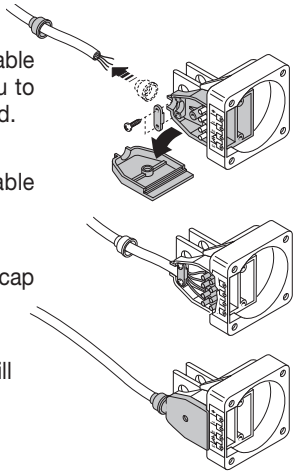
Power cable rubber sealing cap

1) Fit the sealing cap on to the power cable and slide it down enough to allow you to connect the cable to the terminal board.

2) Fasten down the cable using the cable clamp.

3) Close the cover and slide the sealing cap up over the cable entry opening.

This action is extremely important and will guarantee a protection grade of IP44.



⚠ **IMPORTANT!** The geared motor is not fitted with a torque limiter. Only use an electronic programmer which has a torque limiter with maximum force at the head of the gate equal to **150 N** (local standards and regulations in force).

SETTING THE MOTOR TORQUE (see electronic programmer)

When carrying out the installation you are advised to use a Cardin electronic programmer fitted with a torque limiter.

The Cardin programmers optimise the correct working order of the "machine" (motorised gates/doors) and guarantee full power maximum thrust at the start of the opening/closing manoeuvre).

The programmer also guarantees that the effective torque fed to the system will be that selected by the operator in the electronic programmer.

The choice of settings depends on the weight and size of the gate leaf/door and the different environmental conditions on-site.

You are reminded that the standards and regulations in force unequivocally require that the torque be set to a level suitable for the system.

Correctly choosing the torque will guarantee maximum security and long life for the mechanical components.

SETTING THE MECHANICAL TRAVEL LIMIT (fig. 3 pag. 3)

The model **200/BL203C - 200/BL203CE** is fitted with adjustable mechanical travel limits "**7**" and "**10**".

Loosen the fastening screws and move the rings "**7**" and "**10**" to the desired opening and closing positions then tighten them carefully.

MANUAL RELEASE MECHANISM (fig. 12, page 6)

Releasing the gate should only be carried out when the motor has stopped because of blackouts.

To release the gate use the plastic key supplied with the appliance. It should be stored in an easily accessible place, at home or on the appliance itself using the key slot (pos. 5 fig. 12).

To release the gears

- open the lock mechanism cover by pressing on the sides (fig 12a-12b);
- insert the release key and turn it through about 30 degree (fig. 12c). The gears will be released and the lock cylinder will rise;
- if you wish leave the gears released, just close the lock cylinder cover (fig. 12e).

To lock the gears

- remove the key (fig. 12d), close the cover and press down with the palm of your hand until the gears are locked;
- keep the key in a safe place.

Note: To make the operation easier the gate can be moved slightly if required.

⚠ Don't force the locking mechanism, if you encounter resistance move the gate slightly to allow the cogs to slot together more easily within the geared motor.

CARDIN ELETTRONICA spa
Via Raffaello, 36- 31020 San Vendemiano (TV) Italy
Tel: +39/0438.404011-401818
Fax: +39/0438.401831
email (Italy): Sales.office.it@cardin.it
email (Europe): Sales.office@cardin.it
Http: www.cardin.it

CODICE	SERIE	MODELLO	DATA
DCE005	BL	230 Vac	23-06-1999

Dichiarazione di Conformità CE (Direttiva Macchine 89/392/CEE, All. II)

Il costruttore: **CARDIN ELETTRONICA S.p.A.**
DICHIARA CHE L'APPARECCHIATURA DESTINATA AD ESSERE INSERITA IN MACCHINE E NON FUNZIONANTE IN MODO INDIPENDENTE:

Nome dell'apparato	**Motoriduttore BL202 - BL203**
Tipo di apparato	**Motoriduttore elettromeccanico autobloccante**
Modello	**BL202 - BL202C - BL202L - BL203 - BL203C - BL203L**
Marchio	**Cardin Elettronica**
Anno di prima fabbricazione	**-**

è ideata per essere incorporata in una macchina o per essere assemblato con altri macchinari per costituire una macchina considerata dalla Direttiva 89/392/CEE e successivi emendamenti.

è conforme alle disposizioni delle seguenti direttive comunitarie:
- Direttiva 2004/108/CE (Compatibilità Elettromagnetica)
- Direttiva 2006/95/CE (Direttiva Bassa Tensione)

e sono state applicate le seguenti norme e/o specifiche tecniche:
- EN 60555-2 : 1986
- EN 60555-3 : 1986 + 1991
- EN 55014-1 : 1997
- EN 55014-2 : 1997
- EN 60335-1 : 1994 (e aggiornamenti successivi)

Il costruttore è in possesso delle seguente relazioni di prova e dei certificati di conformità CE rilasciati dal "Competent Body" PRIMA RICERCA & SVILUPPO:
- relazione di prova **EMC.TR.98.215** (29/12/98) - certificato di conformità **CE n. 99.018**
- relazione di prova **SAF.TR.98.181** (07/06/99) - certificato di conformità **CE n. 99.206**

INOLTRE DICHIARA CHE NON È CONSENTITO METTERE IN SERVIZIO L' APPARECCHIATURA FINO A CHE LA MACCHINA NELLA QUALE SARÀ INCORPORATA E DELLA QUALE DIVENTERÀ COMPONENTE SIA STATA IDENTIFICATA E NE SIA STATA DICHIARATA LA CONFORMITÀ ALLE DISPOSIZIONI DELLA DIRETTIVA 89/392/CEE E SUCCESSIVI EMENDAMENTI.

San Vendemiano il 30/03/2012

Ing. A. Fiorotto

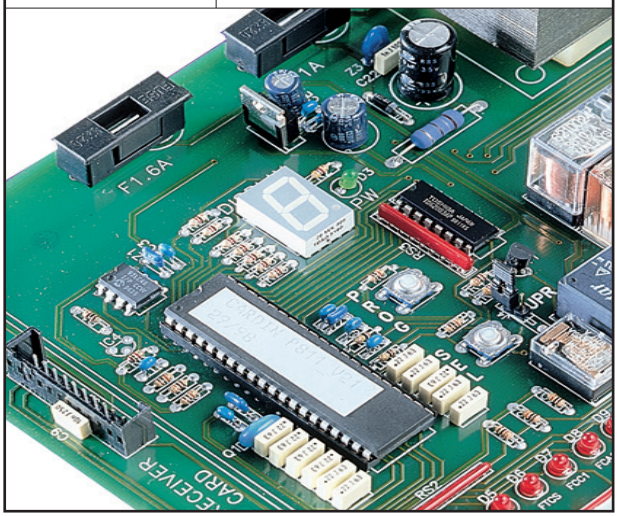
CARDIN ELETTRONICA SPA
Via Raffaello, 36 31020 SAN VENDEMIANO
c.f. - p. IVA 00681370268

Responsabile Tecnico - R&D Laboratory

The **CE conformity** declaration for Cardin products is available in original language from the site **www.cardin.it** under the section "Standards and Certification".
Les déclarations de **conformité CE** des produits Cardin sont disponibles dans la langue originale sur le site **www.cardin.it** dans la section "normes et certificats".
Die **CE-Konformitätserklärungen** für die Cardin-Produkte stehen in der Originalsprache auf der Homepage **www.cardin.it** im Bereich "Normen und Zertifizierung" zur Verfügung.
Las declaraciones de **conformidad CE** de los productos Cardin se encuentran disponibles en el idioma original en el sitio **www.cardin.it** en la sección "normas y certificaciones".

PROGRAMMATORE ELETTRONICO PER IL COMANDO DI PORTE E PORTONI MOTORIZZATI
ELECTRONIC PROGRAMMER CONTROLLING MOTORISED GATES AND DOORS
PROGRAMMATEUR ÉLECTRONIQUE POUR LA COMMANDE DE PORTES ET PORTAILS MOTORISÉS
ELEKTRONISCHER STEUERUNGSEINHEIT FÜR DIE AUTOMATISIERUNG VON TÜREN UND TOREN
PROGRAMADOR ELECTRONICO PARA EL CONTROL DE LAS PUERTAS MOTORIZADAS

ZVL322.02	MOD:YPR811B01



MOD:11-06-2013

REMARKS

ENGLISH

Before commencing with the installation of this appliance make sure that you have read the following instructions carefully. In particular familiarise yourself with the safety devices required by the system, only then will you be able to use them to great effect. Not all of the safety devices required by Italian or local safety standards have been taken into consideration in this manual. The installer must therefore make sure that any eventual safety devices required by the local standards and regulations have been installed both ahead of and after the products described in this manual. These instructions are aimed at professionally qualified "installers of electrical equipment" and must respect the local standards and regulations in force . This appliance must be used exclusively for the purpose for which it has been made. "i.e. for the automation of gates and doors" Any non authorised modifications are to be considered improper

TECHNICAL SPECIFICATIONS

Power supply	Vac	230
Frequency	Hz	50/60
Number of possible motors	Nr.	2
Overall motor power	W	470 + 470
Nominal electrical input	Amp	4.6
Operating temperature	°C	-20…+55

Inputs

Power supply connection **230Vac 50/60Hz**
Earth wire
Antenna entry point for slot-in receiver card
Opening button in input "normally open contact"
Limited opening button in input "normally open contact"
Closing button in input "normally open contact"
Dynamic button in input "normally open contact"
Blocking button in input "normally closed contact"
Inversion photoelectric cells "normally closed contact"
Blocking photoelectric cells "normally closed contact"
Opening/closing "1" travel limit "normally closed contact" (can be excluded via software)
Opening/closing "2" travel limit "normally closed contact" (can be excluded via software)

Outputs

Output motor 1
Output motor 2
Output for warning lights **230Vac 40W** (intermittent or continuous operation)
Output for a timer controlled night light **230Vac 40W**
Output powering external devices **24Vac 10W**
Output for electric locking device **12Vac 15W**
Output for indicator lamps **24Vac 3W**
Output for radio receiver second channel contact C-NO (only with a 2-channel receiver card)

Work time: Maximum programmable time	300 seconds
Pause time: Maximum programmable time	300 seconds

Night lights

For a double leaf installation the overall time is equal to: "work time leaf 1 + leaf 2 + pause time + 30 seconds"
For a single leaf installation the overall time is equal to: "2 times the work time of leaf 1 + pause time + 30 seconds"

Function description

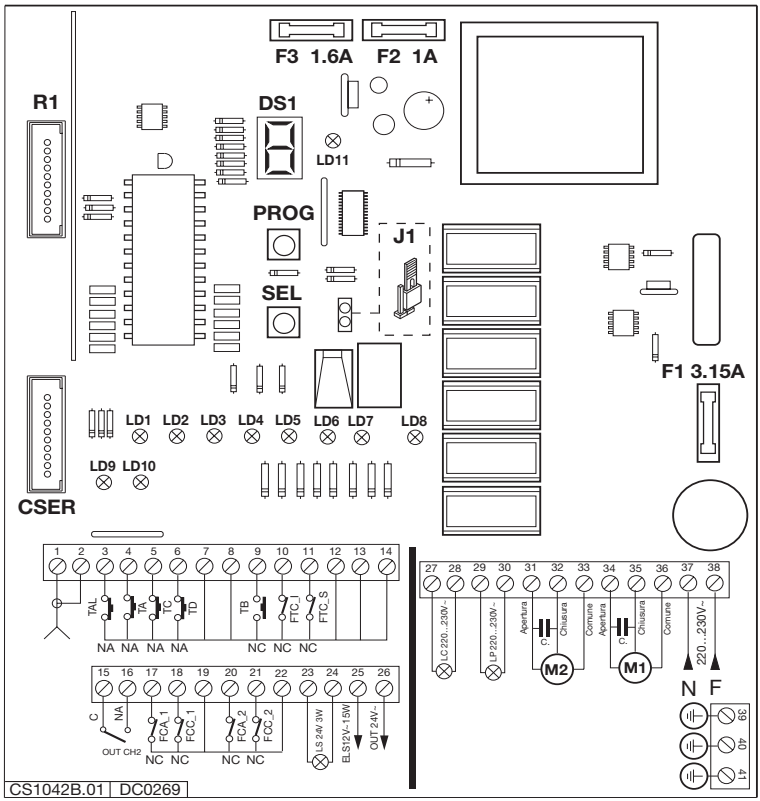
Electronic programmer for single/double leaf gates, sliding, hinged or garage doors running off **230Vac**. The use of voltage partialization applied to the motors allows initial thrust and torque limiter control.
Setting the system functions is carried out simply using two buttons, which activate a ten stage programming sequence; a 7-segment LED display guides the installer through the selection of the following options:

1. Single/double gate leaves
2. Sliding/hinged gates
3. Electric lock freeing movement (gate jolt)
4. Electric lock
5. Dynamic button function mode (open-block-close-block /open-close-open-close
6. Automatic reclosing
7. Preflashing
8. Gate 1 travel limit exclusion
9. Gate 2 travel limit exclusion
0. Intermittent flashing warning light activation

Following on from this the torque limiter can be set and then the work time programming which is executed in real time (the motors move while the work time is being set).
Limited opening can only be set for gate 1 (motor **M1**) which is also the first to open when you have a double hinged gate installation; the work time is equal to the complete time for gate 1.

Main board

1



Legend

DS1	LED display
J1	Manual function mode selection (normally open)
F1	**3,15A** delayed fuse - overload protection **230V**
F2	**1A** rapid action fuse - overload protection **24V** circuit
F3	**1.6A** delayed fuse - electric locking device
LD1	Security LED - Blocking button
LD2	Security LED - Travel direction inversion photoelectric cells
LD3	Security LED - Blocking photoelectric cell
LD4	Security LED - Closing travel limit switch gate 1
LD5	Security LED - Opening travel limit switch gate 1
LD6	Security LED - Closing travel limit switch gate 2
LD7	Security LED - Opening travel limit switch gate 2
LD8	Indicator LED - Manual operation
LD9	Indicator LED - Opening button active
LD10	Indicator LED - Closing button active
LD11	Power ON LED
PROG	Programming button
SEL	Programming options scrolling button
R1	Standard radio receiver interface
CSER	Serial line interface connection (optional)

ELECTRICAL CONNECTION

- Before connecting the appliance make sure that the voltage and frequency rated on the data plate conform to those of the mains supply.

  Note: The installer must set the torque selector switch to the appropriate voltage depending on the weight (see page 17) and dimensions of the gate/door which is to be automated. The safety standards indicate a maximum thrust at the head of the gate equal to **15 kg**.

- Connect the control wires, the security devices, the motor cables and other **230Vac** devices. Connect the power supply cable to the device

Terminal board connections

1	Inner conductor for the radio receiver antenna. (The antenna must be connected using a coaxial cable **RG58** with an impedance of **50Ω**).
2	Outer conductor for the radio receiver antenna.
3	**TAL** (contact normally open) limited opening button (only for motor 1).
4	**TA** (contact normally open) Opening button in input.
5	**TC** (contact normally open) Closing button in input.
6	**TD** (contact normally open) Dynamic button in input "Open-Close".
7-8	Common for all inputs.
9	**TB** (contact N.C.) Blocking button in input (The opening of this contact will interrupt the cycle until a new movement command is given).
10	**FTCI** (contact N.C.) Safety and control devices in input (photocells invert the travel direction when an obstruction is detected). The opening of this contact will provoke a travel direction inversion during closure due to the cutting in of the safety device.
11	**FTCS** (normally closed contact) Safety and control devices in input (photoelectric cells stopping the gate when an obstruction is detected). The gate will start moving again automatically once the object or obstruction has been removed and after the pause time has elapsed until it reaches a travel limit (only in the automatic mode) and always during closing.
12-14	Common for all inputs and outputs (negative).
15-16	Second channel exchange contact in output (only for a 2-channel receiver card).
17	**FCA1** (normally closed contact) opening travel limit switch in input 1.
18	**FCC1** (normally closed contact) closing travel limit switch in input 1.
19	Common for all inputs.
20	**FCA2** (normally closed contact) opening travel limit switch in input 2.
21	**FCC2** (normally closed contact) closing travel limit switch in input 2.
22	Common for all inputs and outputs (negative).
23-24	Indicator lamp **24Vac 3W**.
25	Electric locking device **12Vac 15W** max. (only while opening).
26	**24Vac 10W** in output, powering external devices.
27-28	Night light in output **230Vac 40W**.
29-30	Warning lights in output **230Vac 40W** (intermittent or continuous activation).
31-32-33	Motor **M2** in output Opening- Closing- Common.
34-35-36	Motor **M1** in output Opening- Closing- Common.
37-38	Electronic programmer power supply **230Vac 50/60Hz**.
39	Electronic programmer earth wire **230Vac 50/60Hz**.
40	Motor earthing wire (output).
41	Motor earthing wire (output).

NOTE: ALL UNUSED NC CONTACTS MUST BE JUMPED

(with the exception of the travel limits excluded via software "see Programming procedure")

Switch the power on and make sure that the status of the LEDs (see fig. 1) is as follows:

- **LD1**	Red security LED blocking button "**TB**"	**on**
- **LD2**	Red security LED inverting photoelectric cell "**FTCI**"	**on**
- **LD3**	Red security LED stop photoelectric cell "**FTCS**"	**on**
- **LD4**	Red LED closing travel limit 1 activated "**FCC1**"	**on***
- **LD5**	Red LED opening travel limit 1 activated "**FCA1**"	**on***
- **LD6**	Red LED closing travel limit 2 activated "**FCC2**"	**on***
- **LD7**	Red LED opening travel limit 2 activated "**FCA2**"	**on***
- **LD8**	Red indicator LED manual operation	**off**
- **LD9**	Red indicator LED opening button activated "**TA**"	**off**
- **LD10**	Red indicator LED closing button activated "**TC**"	**off**
- **LD11**	Green power on LED	**on**

*The LEDs are "on" if the relative security device is inactive (depends on the position of the gate). Check that the activation of the safety devices (those which have not been bridged or excluded during programming) switch the corresponding LEDs off.

If the **green power on LED doesn't light up** check the condition of the fuses and the power cable connection between binding posts 37 and 38 (fig. 1).

If none of the **red LEDs light up** check the condition of the fuses and contacts on the terminal board.

If one or more of the **safety LEDs do not light up** check the contacts of the relative security devices and check that the unused safety device contacts have been bridged.

INDICATIONS ON THE DISPLAY (DS1)


alarm caused by two travel limits on the same gate leaf being activated together


memorised parameter error


time programming mode block (caused by: **TB, FTCI, FTCS**)


defining the system configuration


waiting period between system configuration and successive programming stages


torque setting (value 1)


work time programming

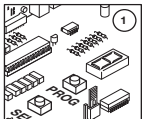

opening stage


block

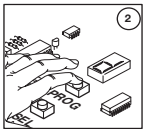

reclosing pause (only if enabled)


closing stage

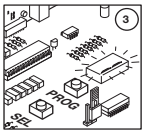
PROGRAMMING PROCEDURE (see appendix 1, page 21)



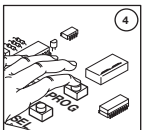
Before commencing make sure that the gate is closed: the LED display will be off. To select the manual operation mode the jumper **"J1"** must be open.



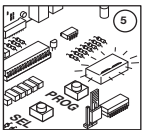
Keep the **PROG** button held down for more than 4 seconds: The letter "**d**" will appear on display **DS1** (this is the parameter definition mode).



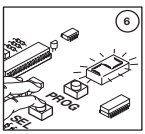
After about 1 second the programming steps starting from step 1 will appear on the display.

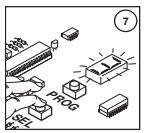


If this is the first time the system has been programmed (EEPROM memory empty) none of the parameters will have been set, meaning that the numbers will flash at each step; if programming is being carried out on a system which has already been programmed, the flashing will depend on the value read from the EEPROM when the system was switched on (you may therefore check the previously set parameters). Press the **PROG** button

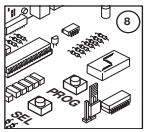


As you can see in figures 4-5, pressing the **PROG** button when the display is not flashing will force the number to flash. This operation can be repeated as many times as required until the desired setting has been obtained.





Pressing the **SEL** button moves on to the next programming stage. It is not possible to return to the previous programming stage, in fact you must carry on until the last stage has been reached before the cyclical programming cycle will allow you to return to stage 1 (see appendix 1). Note.: While **SEL** is pressed LED LD8 will remain lit



After the twelfth stage, shown by the digit "**b**", the next time you press the **SEL** button will move you on to the stage shown in figure 8, which indicates the separation between the configuration of the system and the torque limiter/work time programming. At this point there are three possibilities (see appendix 1):

- after 20 seconds of inactivity (without pressing any buttons) the programmer will save the parameters set up to now and exit the programming mode.
- pressing the **SEL** button moves you back to step "**1**".
- pressing the **PROG** button moves you to the next stage.

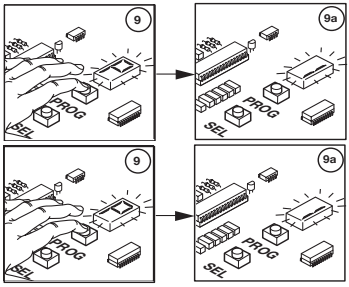
DISPLAY	FIXED	FLASHING
1	Single gate	Double gate
2	Hinged gates	Sliding
3	Gate opening jolt enabled	Gate opening jolt disabled
4	Electric locking device enabled	Electric locking device disabled
5	Dynamic button open-close*	Dynamic button open-block-close-block
6	Automatic reclosing enabled	Automatic reclosing disabled
7	Preflashing enabled	Preflashing disabled
8	Gate 1 travel limit enabled	Gate 1 travel limit disabled
9	Gate 2 travel limit enabled	Gate 2 travel limit disabled
0	Warning lights flash continuously	Warning lights flash intermittently
A	**FTCI** active even when in blocked **	**FTCI** active only during closing
b	Non intermittent indicator light	Intermittent indicator light***

* Travel direction inversion is active only during closing.

** no commands will be received when the **FTCI** are in alarm and the programmer is in block, not even during opening.

*** flashes slowly during opening, quickly during closing, remains lit when the gate is blocked in an open position and is off when the gate is completely closed.

PROGRAMMING THE TORQUE

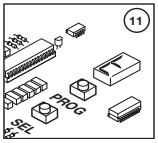


Display indications	Torque percentage	Voltage
P1	40%	**110Vac**
P2	55%	**135Vac**
P3	65%	**155Vac**
P4	75%	**185Vac**
P5	100%	**230Vac**

Pressing the **PROG** at the point described in fig. 8 will allow you to set the torque limiter. The values range from 1 to 5, and the value shown in the figure is relative to the minimum torque (the characters "**P**" and "**1**" will alternate on the display).

Each time the **SEL** button is pressed the value will increase by 1; once you arrive at "**5**" the next time you press **SEL** the display will show the symbol ⌙, pressing **SEL** again will cycle back to "**1**" (see appendix 1). The indication on the display will be alternating if a value has not been selected and will be fixed when you arrive at a previously selected value.Pressing the **PROG** button will set the value on the display: to change this value press **SEL**, and then press **PROG** again.
When the symbol ⌙ appears on the display after 20 seconds the programmer will save the parameters set up to now and leave the programming mode. If you press the **PROG** button during this period you will move on to the last programming stage (work time setting).

Work time programming



The start of the work time programming stage is indicated on the display by the letter "**t**" which remains for about 2 seconds after which the display will switch off.
At this point only the **PROG** button is enabled. Each time the button is pressed the time programming will proceed as indicated below:

	CONFIGURATION		
Press PROG	**Gate 1**	**2-leaf sliding gate**	**2-leaf hinged gate**
first	open gate 1	open gates 1 and 2	open gate 1-delay fixed for gate 2 (2 sec)
second	start pause	block gate 1	block gate 1
third	end pause -> close gate 1	block gate 2 start pause	block gate 2 start pause
fourth	-	close gates 1 and 2	end pause-close gate 2
fifth		-	end closing direction delay close gate 1

Programming is carried out step by step by the system which activates the motors according to the settings carried out in the previous step (eg.: If you have chosen a 1 gate configuration, only motor number 1 will be activated).
As you can see the programming method requires you to press the **PROG** button according to the type of gate and the number of leaves.
If the electric locking device, preflashing and gate jolt (initial movement in the closing direction) have been enabled, they must also be set during programming.

Note 1: the maximum work time and pause time duration is 300 seconds: once this time limit has been reached the programmer will automatically move on to the next programming stage (memorizing the maximum time). The maximum closing direction delay time for gate 1 is equal to the work time of gate 2.

Note 2: If the gate jolt has been enabled you cannot disable the electric locking device.
Selecting a single gate (gate 1) automatically disables the travel limits for gate 2.
Selecting a sliding gate automatically disables the gate jolt.
Excluding travel limits during programming means you will not have to bridge the contacts on the terminal board.

The intervention of the travel direction inversion or blocking photocell or pressing the blocking button will stop the gate, while the flashing warning light will remain lit, indicating that the programmer is in an active phase. The figure "**b**" will flash on the display. The work time count is blocked, but once the alarm situation has been resolved or the blocking button has been released (only active while it is being pressed down) the gate movement will start up again automatically, and the time count will carry on. **The intervention of the opening direction photoelectric cell will force the gate to stop, but the time count will continue**, this is indicated by the flashing lights which will remain active: the time count will only end after the **PROG** button has been pressed as described in the table above. Once the opening direction programming has been completed the symbol "-" will appear on the display.

Attention! Program the work time so that the gate always opens completely, including a time margin of 3 to 4 seconds; if this is not the case the completion of the manoeuvre cannot be guaranteed (see the considerations in paragraph "Timer controlled travel limits"). The end of programming is indicated by the night light switching on (the activation time of which is now already programmed) and the indicator lamp (which switches off at the end of the closing manoeuvre).

REMOTE CONTROL

The dynamic command and auxiliary contact (C-NO) can be controlled via radio by inserting a 2-channel Cardin standard radio receiver card into the interface "**R1**" (fig. 1) It is possible to control two channels, one controlling the dynamic command and the other controlling the C-N.O. contact between binding posts 15-16. Channel **"A"** of the transmitter must always correspond to channel **"A"** of the receiver. The second channel may correspond to the functions B, C or D depending on the position of the jumper. For more information please read the instructions which are supplied with your receiver card.

FUNCTION MODES

1) Automatic

Selected by enabling automatic reclosing (programming step 6 , number "**6**" fixed). When the door is completely closed the opening command will start a complete cycle which will end with automatic reclosing and the night light switching off. Automatic reclosing starts after the programmed pause period has elapsed when the opening cycle has been completed or straight away after the intervention of a photoelectric cell (the intervention of a photoelectric cell causes the pause time to be reset). During the pause time the symbol "-" will flash on the display and pressing the blocking button during this period will stop automatic reclosing and consequently stop the display from flashing.
The intervention of mechanical travel limits will block the relative gate; the end of the opening/closing manoeuvre is determined by the following table:

Table 1	ACTIVATED TRAVEL LIMITS		
	Gate 1	Hinged gate 2	Hinged gate 2
End of opening manoeuvre	**FCA 1**	**FCA2**	**FCA2**
End of closing manoeuvre	**FCC1**	**FCC2**	**FCC1**

The indicator light remains lit until the closing manoeuvre has terminated

Note: The night light switches on automatically each time a movement command is given either by control button or by radio. The intervention of a photoelectric cell during reclosing has no effect on the timing of the night light.

2) Semi-automatic

Selected by disabling automatic reclosing (programming step 6 , number "6" flashing). Work cycle control using separate opening and closing commands. When the door has reached the completely open position the system will wait until it receives a closing command either via an external control button or via radio control, before completing the cycle. The activation of one of the travel limit switches causes the relative gate to stop and the termination of the opening/closing cycle as indicated in table 1. Starting from the opening manoeuvre the night light will switch off after the set period has elapsed. The indicator light remains lit until the closing manoeuvre has terminated.

3) Manual operation

Selected by closing the jumper **"J1"**. The associated red indicator LED "**LD8**" will light up. Movement commands can only be given by continuously pressing the opening or closing buttons. The dynamic button/limited opening and radio control commands have no effect (it is however possible to use the C-NO contact between binding posts 15 and 16 see fig. 1). Each time the button is released the gate/door will instantly stop.
The cutting in of a blocking command or the photoelectric cells (both in the closing and opening directions) instantly stops all movement: to be able to move the gate/door again you will first have to release all commands (meaning that no control buttons are active) and then press the required manual operation button as explained above.
The activation of one of the travel limit switches causes the relative gate to stop and the termination of the opening/closing cycle as indicated in table 1.
Work cycle time management is also active for this function meaning that even without mechanical travel limits the system will block when the work cycle time has elapsed. The night light remains on only while the gate/door is moving.
The indicator light remains lit until the closing manoeuvre has terminated.

Limited opening command (TAL)

The limited opening command, which only works when the gate is completely closed, now functions in the following way.

1) If your system only has one gate leaf: it will open for about half the work cycle time
2) If your system has two gate leaves: it will completely open gate leaf one.

The following sequence can be carried out by repeatedly pressing the **TAL** command:

- pressing **TAL** once: limited opening
- pressing **TAL** twice: block
- pressing **TAL** three timers: closing

Once closing has started the **TAL** command has no effect until the gate is completely closed. During limited opening the "**TD**" and "**TA**" commands are however active and will allow the gate to be completely opened if pressed.

Opening command (TA)

The "**TA**" command can be continuously activated, e.g. controlled by a timer contact (working in the "**clock**" mode): the gate will open completely, and even if automatic reclosing is active, will remain in pause (flashing line on the display) until the "**TA**" button is released: at this point after the pause time has elapsed, the closing cycle will start.
Therefore: activating the "**TA**" command will cause the pause time to be continuously reset.
If the gate has been blocked using a "**TB**" command in the completely open position (travel limit activated or the opening direction work time has elapsed) activating the "**TA**" command will reset the pause time after which the gate will move in the closing direction: the "**TA**" command therefore works as a closing command if the gate is completely open.

ALARM CONDITIONS

1) Parameters loaded from EEPROM are wrong.
The letter "**E**" will flash on the display and the system remains blocked:
The only way to solve this situation is to enter the program mode and reprogram the system. If the problem persists after reprogramming, the problem regards the EEPROM (incorrect memorising). Switch off the power to the system, after a few seconds switch it back on and then reprogram the system.

2) Both travel limits have cut in (or haven't been correctly bridged, or not excluded via software).
The letter **"A"** will appear on the display and the system remains blocked. The warning lights will flash for a three second period which is repeated every six seconds. Once you have eliminated the travel limit problem the programmer will automatically reset itself. If you do not wish to use the travel limits disable them during programming (steps 8-9, see page 16).

SOFT TRAVEL LIMITS

The system is designed to operate without mechanical closing travel limits; the work time management allows the system to control the position of the garage door. The following points however should be taken into consideration:

1) Due to climatic variations or mechanical wear the performance of the system can change. A work time programmed without leaving a margin of tolerance (extra time) may not be sufficient to complete the manoeuvre (in other words, over a period of time the garage door may remain slightly open). To avoid this situation proceed as follows:

1a) During programming keep the motor under tension for a couple of seconds after the mechanical opening direction travel limit has cut-in (not more than four seconds).

1b) the programmer automatically allows for a 3-second increase in order to guarantee that during repeated travel direction inversion manoeuvres the forcing movement of the garage door does not cause this problem.

Example: **with the gate/door completely open**
Command sequence: the gate closes for 1 second then opens.
Result: the gate moves in the closing direction for 1 second and in the opening direction for 1 + 3 seconds, so the motor remains under tension for 3 seconds after the gate is completely open.

2) During blackouts the programmer will lose the position of the gate/door which will be considered to be "completely closed", unless the completely open or closed travel limit is active, (see table 1, page 18) this is so as to allow the opening manoeuvre. The work times are programmed in this transitory phase in such a way as to guarantee the complete opening of the door and successively complete closing.

Attention! To enable this situation; when the system is restarted with the door not completely closed the motor will be kept under tension (for longer than normally necessary) during the first cycle. This remains valid until the cycle has been completed and the door is completely closed. At this point the programmer will once again know the exact position of the door.
The particular work time management method avoids keeping the motor under tension when it is not necessary:

Example: **double hinged gates**
Opening command followed by a closing command after 1 second has elapsed.
As gate 2 still has to start the manoeuvre (2 second gate delay in the opening direction) motor 2 will not be activated in the closing phase.

If while moving, the gate delay phase has already taken place, once the gates start to move again after a blocking command this will not be repeated. This always occurs however during travel direction inversion.

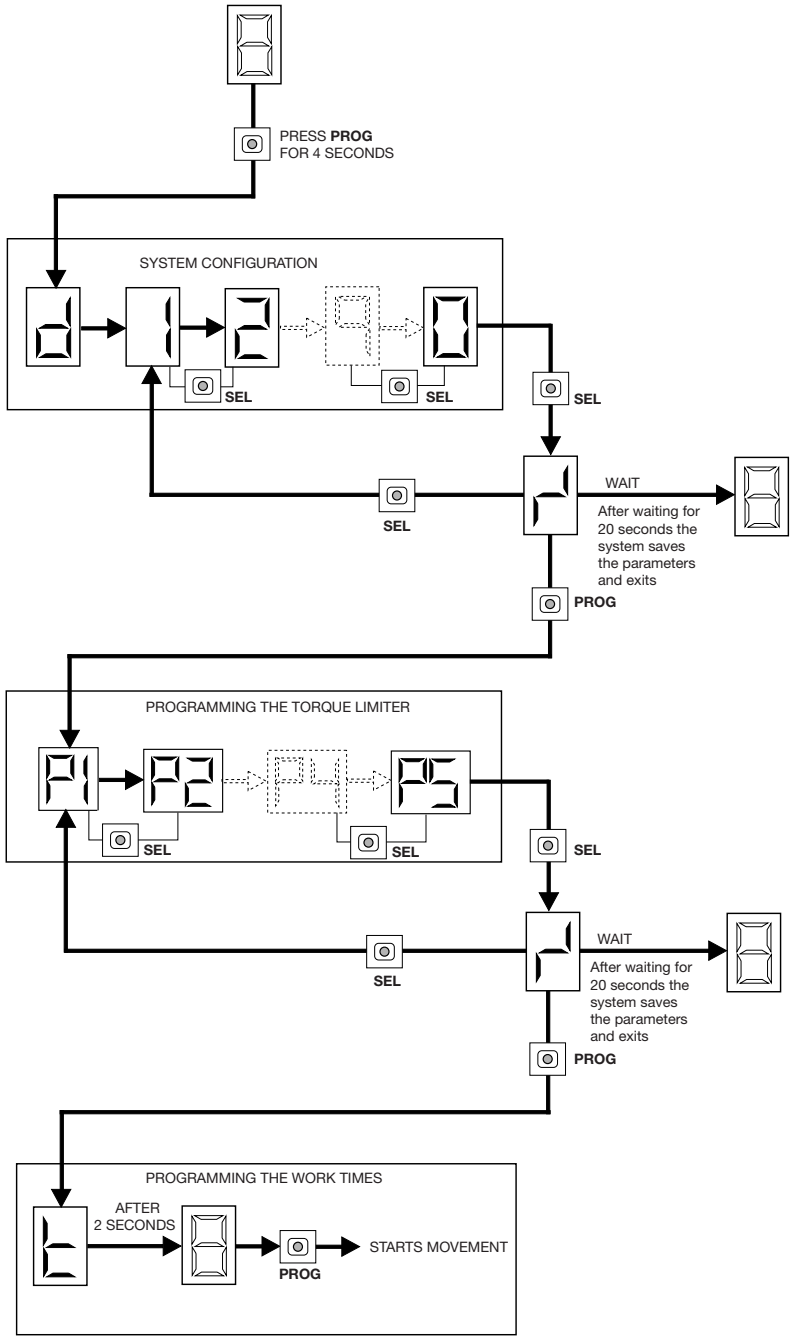
ELECTRIC LOCKING DEVICE

The electric locking device only activates during opening and reopening. This occurs for the each movement command given after start up until the door is completely closed. From this point onwards the electric lock will only activate when the door is in proximity with the completely closed position (thus avoiding unnecessary activation)

ELECTRIC LOCKING DEVICE FREEING MOVEMENT

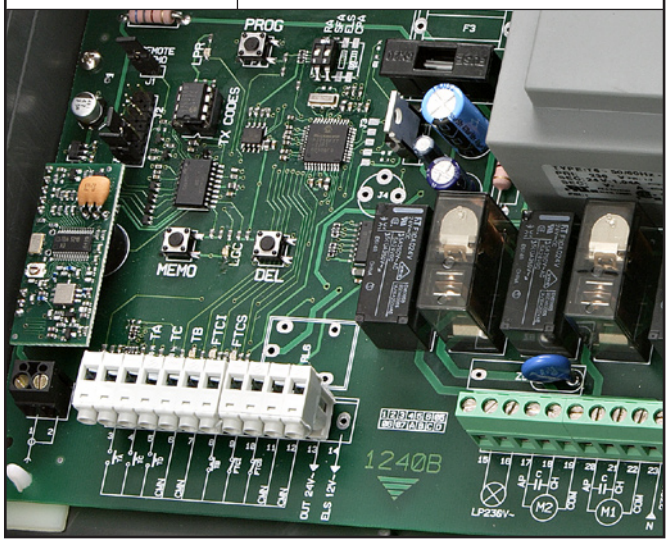
The lock freeing movement, (only for hinged gates) which is active when the gates are completely closed, forces gate one to move in the closing direction for 1 second in order to allow the lock to free itself correctly. The lock remains active for 2 seconds (plus a margin of 0,5 seconds) giving time for gate 1 to move in the opening direction. This only occurs when the gates are completely closed. For all manoeuvres after a blocking command has been given with the gates open the "lock freeing movement will not take place" but the electric locking device will be activated.

APPENDIX 1


PRESS **PROG**
FOR 4 SECONDS
SYSTEM CONFIGURATION
SEL
SEL
SEL
SEL
WAIT
After waiting for 20 seconds the system saves the parameters and exits
PROG
PROGRAMMING THE TORQUE LIMITER
SEL
SEL
SEL
SEL
WAIT
After waiting for 20 seconds the system saves the parameters and exits
PROG
PROGRAMMING THE WORK TIMES
AFTER 2 SECONDS
PROG
STARTS MOVEMENT

PROGRAMMATORE ELETTRONICO PER IL COMANDO DI PORTE E PORTONI MOTORIZZATI
ELECTRONIC PROGRAMMER CONTROLLING MOTORISED GATES AND DOORS
PROGRAMMATEUR ÉLECTRONIQUE POUR LA COMMANDE DE PORTES ET PORTAILS MOTORISÉS
ELEKTRONISCHER STEUERUNGSEINHEIT FÜR DIE AUTOMATISIERUNG VON TÜREN UND TOREN
PROGRAMADOR ELECTRONICO PARA EL CONTROL DE LAS PUERTAS MOTORIZADAS

ZVL482.00 | **MOD:PRG813**



230 Vac motors

CE

ITALIANO

ATTENZIONE! Prima di iniziare l'installazione leggere le istruzioni attentamente!

FRANÇAIS

ATTENTION! Avant de commencer la pose, lire attentivement les instructions!

ENGLISH

ATTENTION! Before installing this device read the following instructions carefully!

DEUTSCH

ACHTUNG! Bevor mit der Installation begonnen wird, sollte die Anleitung aufmerksam gelesen werden.

ESPAÑOL

¡ATENCIÓN! Antes de iniciar la instalación del sistema, leer atentamente las instrucciones.

ZVL482.00 Mod: 28-11-2005

TO REDUCE THE RISK OF SEVERE INJURY OR DEATH READ THE FOLLOWING REMARKS CAREFULLY BEFORE PROCEEDING WITH THE INSTALLATION. PAY PARTICULAR ATTENTION TO ALL THE PARAGRAPHS MARKED WITH THE SYMBOL ⚠. NOT READING THESE IMPORTANT INSTRUCTIONS COULD COMPROMISE THE CORRECT WORKING ORDER OF THE SYSTEM.

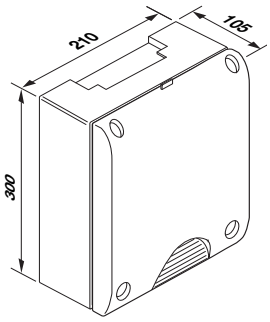
- These instructions are aimed at professionally qualified "**installers of electrical equipment**" and must respect the local standards and regulations in force.
- All materials used must be approved and must suit the environment in which the installation is situated.
- This product and all its relative components has been designed and manufactured by Cardin Elettronica who have verified that the product conforms in every aspect to the safety standards in force.

  The resulting installation and any non authorised modifications are the complete responsibility of the installer and all maintenance operations must be carried out by professionally qualified technicians.
- This electronic programmer is not fitted with a torque limiter and must only be used exclusively for the purpose for which it has been made. "i.e. **for the command and control of double gate installations with 230 Vac motors**"
- The manufacturer accepts no liability for situations arising from the use of an electrical installation which does not conform to the local standards and regulations in force

PROGRAMMER INSTALLATION

General description

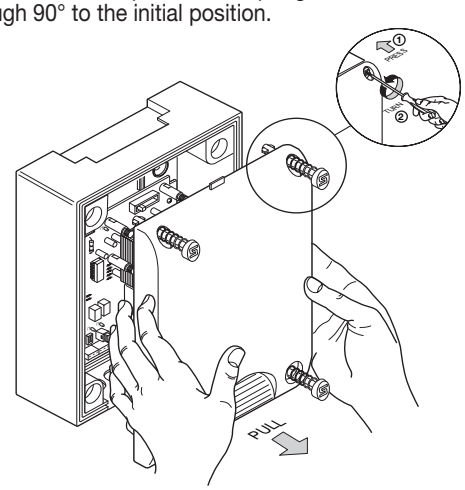
- All weather container in **ABS** with a doo sealing gasket.
- Container fitted with wall fastening ele· ments.
- Power cable inlet for the insertion of **Ø1(mm** tubes.
- Protection grade **IP55.**
- Fireproofing grade **UL94V2.**



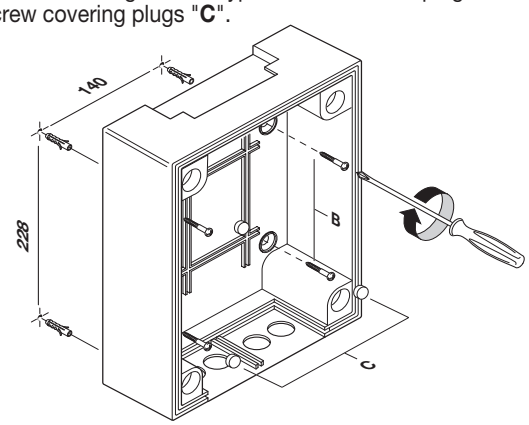
Positioning
Depending on the type of installation, work out the position in which the programmer will be situated remembering that the site must be:
- a position safe from accidental collision;
- high enough above the ground to be safe from pools of water;
- in a position which the technician can easily reach.

Container installation
Attention! Fixing the container to the wall does not require you to dismantle the circuit-board.

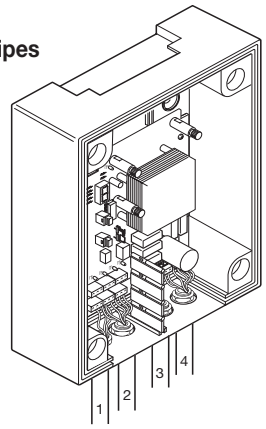
Opening the container
Unfasten the four spring loaded screws, using a flat nosed screwdriver (det. 1), by rotating them 90° with respect to the locked position. At this point remove the cover as indicated in the drawing
Note: To close the container replace the lid making sure that the sealing gasket is perfectly positioned and then press in the spring loaded screws and turn them back through 90° to the initial position.



Fastening the container to the wall
Using the container as a template mark the four points at which the fastening holes are to be drilled;
- Fasten the container using four M4 type screws and raw plugs "**B**" and insert the screw covering plugs "**C**".



Inserting the rigid electrical connection pipes
Check that the pipe holders are securely fastened:
- insert the rigid electrical connection pipes "**1-2-3** and **4**" into the pipe holders;
- the **230 Vac** cables should be passed through pipes 3 and 4 (see figure) so as to separate them from the low voltage wires which should be passed through pipes 1 and 2;
- carry out the electrical connection following the wiring diagram on page 7.



ELECTRONIC PROGRAMMER

Electronic control unit for two **230 Vac** motors with an incorporated radio receiver card, which allows the memorisation of **300** user codes.

The "**rolling code**" type decoder uses **433.92 MHz** (**S449**) series transmitters.

Programming is carried out using one button and allows you to set the opening and closing work times.

⚠ • After having installed the device, and **before powering up the programmer**, release the door (manual release mechanism) and move it manually, checking that it moves smoothly and has no unusual points of resistance.

• The programmer is not fitted with a torque limiter; therefore the safety of the appliance must be guaranteed by installing the relevant safety devices.

• Connect the operator with the greatest travel time to the "**motor 2**" output (binding posts 17-18-19).

• Before connecting the appliance make sure that the voltage and frequency rated on the data plate conform to those of the mains supply.

• An all pole trip switch with at least **3 mm** between the contacts must be installed between the unit and the mains supply.

• Don't use cables with aluminium conductors; don't solder the ends of cables which are to be inserted into the binding posts; use cables marked **T min 85°C** and resistant to atmospheric agents.

⚠ • The terminal wires must be positioned in such a way that both the wire and the insulating sheath are tightly fastened (a plastic jubilee clip is sufficient).

TERMINAL BOARD CONNECTIONS

1 Inner conductor for radio receiver antenna **443 MHz** (if an external antenna is fitted use a coaxial type cable **RG58** with an impedance of **50**Ω).
2 Outer conductor for the radio receiver antenna **433 MHz**.
3 **TA** (NO contact) opening button input
4 **TC** (NO contact) Closing button input
5 **TD** (NO contact) Dynamic button input "Open -Block- Close - Block"
6 - 7 Common for all inputs and outputs
8 **TB** (NC contact) Stop button input (The opening of this contact interrupts the cycle until a new movement command is given).
9 **FTCI** (NC contact) Safety and control devices in input (photocells invert the travel direction when an obstruction is detected). Opening this contact will provoke a travel direction inversion during closure due to the cutting in of the safety device.
10 **FTCS** (NC contact) Safety and control devices in input (stop photocells). When the photocells are once again at rest and the pause time has elapsed the device will move in the closing direction (only in the automatic mode).
11- 12 Common for all inputs and outputs.
13 Output **24 Vac 10 W** powering external devices (photoelectric cells, etc.).
15-16 **LP** output for warning lights **230 Vac 40 W** indicating the movement of the gate/door.
17-18-19 Second motor output **M2** Open-Close-Common.
20-21-22 First motor output **M1** Open-Close-Common.
23-24 Programmer power supply **230 Vac 50-60 Hz.**
25 Programmer earth wire.
26-27 Motor earth wires.

ALL UNUSED NC CONTACTS MUST BE JUMPED

Switch on the power and make sure the LEDS (fig. 1) are as follows.

- **L1** Red indicator LED for the time programming button **Off**
- **L2** Red transmitter code programming indicator LED **Off**
- **L3** Red indicator LED for the blocking button "**TB**" **On**
- **L4** Red indicator LED for the inverting photocells "**FTCI**" **On**
- **L5** Red indicator LED for the stop photocells "**FTCS**" **On**
- **L6** Green programmer power on LED **On**

Check that the activation of the safety devices (those which have not been bridged) switch the corresponding LEDS off.

If the **green power on LED "L6" doesn't light** up check the condition of the fuses and the power cable connection between binding posts 23 and 24 (fig. 1).

If **one or more of the safety LEDS do not light up** check the contacts of the relative security devices and check that the unused safety device contacts have been bridged.

TIME PROGRAMMING PROCEDURE

Make sure that the gate/door is closed before starting the procedure:

- keep button "**P3**" (fig. 1) pressed down for about 4 seconds, the red LED "**L1**" will light up indicating that you have entered the time programming mode.
- release the button (keeping it pressed has no effect);

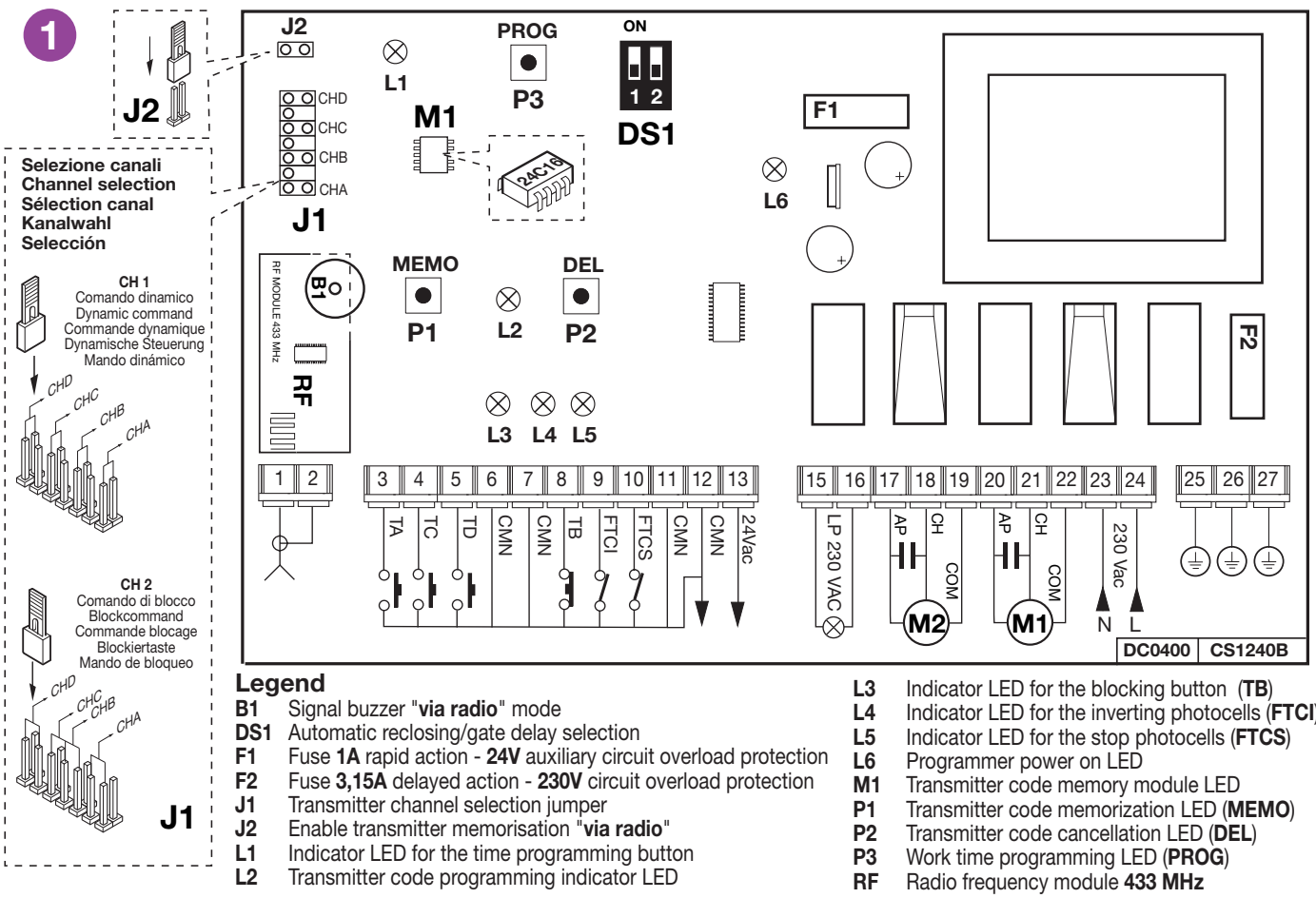
Note: in this phase the only enabled command is the programming button.

- the next time the button is pressed the system begins the opening manoeuvre and starts counting the work time; if an object crosses the photoelectric cells during programming the system will block and the time count will be stopped. Once the obstacle has been removed the procedure will carry on from where it left off;
- the triggering of the mechanical opening travel limit will not stop the work time count, which carries on until "**P3**" is pressed a second time (stop for gate leaf 1) and a third time (stop for gate leaf 2). At this point both gates have stopped and the pause count starts;

Warning: the time which elapses between the intervention of the mechanical travel limit and the next time you press "**P3**" (stopping the relative motor) must not exceed 4 seconds.

- the fourth time "**P3**" is pressed will end the pause count and start the closing manoeuvre;
- if you have selected DIP 2 = "ON" (gate delay enabled) you will have to press button "**P3**" another time to start the closing manoeuvre for gate 1;
- when both of the gates have closed the system exits the programming mode and memorises the parameters under EEPROM: **the parameters are checked straight away** and if the result is positive LED "**L1**" will switch off;
- if the parameters have not been memorised correctly under **EEPROM** LED "**L1**" will flash until a new time programming sequence is started.

Warning: LED "**L1**" will flash if an obstacle is interfering with the photoelectric beam. The LED will switch off and programming will continue only after you have removed the obstacle that is interfering with the beam.



Legend

B1 Signal buzzer "**via radio**" mode
DS1 Automatic reclosing/gate delay selection
F1 Fuse **1A** rapid action - **24V** auxiliary circuit overload protection
F2 Fuse **3,15A** delayed action - **230V** circuit overload protection
J1 Transmitter channel selection jumper
J2 Enable transmitter memorisation "**via radio**"
L1 Indicator LED for the time programming button
L2 Transmitter code programming indicator LED
L3 Indicator LED for the blocking button (**TB**)
L4 Indicator LED for the inverting photocells (**FTCI**)
L5 Indicator LED for the stop photocells (**FTCS**)
L6 Programmer power on LED
M1 Transmitter code memory module LED
P1 Transmitter code memorization LED (**MEMO**)
P2 Transmitter code cancellation LED (**DEL**)
P3 Work time programming LED (**PROG**)
RF Radio frequency module **433 MHz**

REMOTE CONTROL (fig. 1)

The system can be remotely activated using radio control devices. Two functions are available:
- sequential command Open-Block-Close-Block;
- blocking command

The commands can be activated from any of the available channels.

SERIES S449 RADIO CONTROLS 433 MHZ

Memory module M1

This is extractable, furnished with a non volatile EEPROM type memory and contains the transmitter codes and allows you to memorise up to **300 codes** (300 channel buttons).
The programmed codes are maintained in this module even during black-outs.

- If the electronic card has to be replaced due to failure, the module can be extracted from it and inserted into the new card. Make sure that the module is correctly inserted as shown in **fig. 1**.

Signal LED "L2" (fig.1):

Flashing quickly:	cancels a single code
Flashing slowly:	memorises a single code
Permanently lit:	memory full.

TRANSMITTER CODE MANAGEMENT

> **Attention!** Before memorising the transmitters for the first time remember to cancel the entire memory content.

A) Memorising a channel (fig.1):

1. Press and hold down button "**P1**" **MEMO**: The LED "**L2**" will flash slowly.
2. At the same time activate the transmitter which is to be memorised.
3. Hold down button "**P1**" **MEMO** until **LED** "**L2**" starts to flash again.
4. Release the **MEMO** button: The LED will continue to flash.
5. Activate the transmitter again (same transmitter, same channel; if the channel is different or it is a different transmitter the memorisation attempt will abort without success).
6. End of memorisation: the LED "**L2**" will remain lit for 2 seconds, indicating that the transmitter has been correctly memorised.

Note:
- It is not possible to memorise a code which is already in memory: if you attempt this, the LED will switch off when you activate the transmitter (point 2).

  Only after releasing the button "**P1**" **MEMO** will you be able to continue the memorising procedure.
- If after activating the transmitter for the first time you wait for more than fifteen seconds without activating the transmitter a second time the memorisation attempt will abort without success.

B) Cancelling a channel (fig.1):

1. Press and hold down the button "**P2**" **DEL**: the LED "**L2**" will flash quickly.
2. Activate the transmitter channel which is to be cancelled.
3. The LED will remain lit for 2 seconds, indicating that the transmitter has been cancelled.

Note:
- If the user that you wish to cancel is not in memory, the LED will stop flashing; only after releasing the button "**P2**" will you be able to continue the cancellation procedure.
- For both the memorisation and cancellation procedures, if the button is released before activating the transmitter the procedure will abort.

C) Cancelling all user codes from memory (fig.1)

1. Keep both buttons pressed down ("**P1+P2**") for more than four seconds.
2. LED "**L2**" will remain lit during the entire cancellation time (about 8 seconds).
3. LED "**L2**" switches off when the cancellation procedure has terminated.

Note:
- When the memory is almost full the time required to search for a user code could take up to 1 second from when the command was received.
- If led "**L2**" remains lit memory is completely full. To memorise a new transmitter you will first have to cancel a code from memory.

D) Memorising ulterior channels via radio

- Memorisation can be activated by radio (without opening the receiver container) if jumper "**J2**" has been inserted (fig. 1).

1) Make sure that the jumper "**J2**" has been inserted (fig. 1).

2) Using a transmitter, in which at least one channel button "A, B, C or D" has already been memorised in the receiver, press the button in the transmitter as shown in figure.

Note: all the receivers within range when the channel button is pressed (and which have at least one of the transmitter channel buttons memorised) will activate their signal buzzer "**B1**" (pag. 1).

3) Press one of the channel buttons on the same transmitter.
The receivers which do not contain that channel code will sound a five-second long "beep" and will then deactivate.

The receivers which contain the channel code will sound a one-second long "beep" and will enter the "**programming via radio**" mode.

4) Press the previously chosen channel buttons on the transmitter which you wish to memorise; the receiver will sound 2 "beeps" of half a second each after which the receiver will be ready to receive another code.

5) To leave the programming mode wait for 3 seconds without pressing any buttons.
The receiver will sound a five-second long "beep" and will then exit the programming mode.

- When the memory is entirely occupied the buzzer will sound 10 rapid "beeps" and will automatically leave the "**programming via radio**" mode. Led "**L2**" will remain lit on the receiver.

  - The same signal is given each time you try to enter "**programming via radio**" when the memory is full.

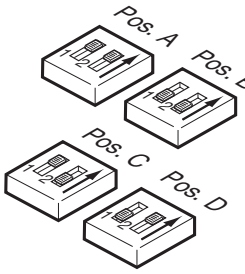
ANTENNA CONNECTION

The receiver is supplied with its own antenna which consists of a piece of rigid wire **170 mm** in length.

In alternative it is possible to connect an **ANS400** tuned antenna using a coaxial cable RG58 (impedance **50**Ω) with a maximum length of **15 m**.

FUNCTION MODES

Functions selected using the Dip-switch "DS1"



Pos. A (Dip 1 "ON" + Dip 2 "ON")
Automatic reclosing activated + gate delay activated

Pos. B (Dip 1 "OFF" + Dip 2 "OFF")
Automatic reclosing excluded + gate delay excluded

Pos. C (Dip 1 "ON" + Dip 2 "OFF")
Automatic reclosing activated + gate delay excluded

Pos. D (Dip 1 "OFF" + Dip 2 "ON")
Automatic reclosing excluded + gate delay activated

1) Automatic

Selected by moving dip 1 to the "ON" position.
When the door is completely closed the opening command will start a complete cycle consisting of opening and automatic reclosing.

Automatic reclosing starts after the programmed pause period has elapsed when the opening cycle has been completed or straight away after the intervention of a photoelectric cell during the pause time (the intervention of a photoelectric cell causes the pause time to be reset).

2) Semi-automatic

Selected by moving dip 1 to the "OFF" position.
Work cycle control using separate opening and closing commands.
When the door has reached the completely open position the system will wait, until it receives a closing command either via an external control button or via radio control, before completing the cycle.

TIMER CONTROLLED TRAVEL LIMITS

The system is designed to operate without mechanical closing travel limits; the work time management allows the system to control the position of the gates/doors. The following points however should be taken into consideration:

1) Due to climatic variations or mechanical wear the performance of the system can change. A work time programmed without leaving a margin of tolerance (extra time) may not be sufficient to complete the manoeuvre (in other words, over a period of time the gate/door may remain slightly open)
To avoid this situation proceed as follows:

1a) During programming keep the motor under tension for a couple of seconds after the mechanical opening direction travel limit has cut-in (not more than four seconds).

1b) The programmer automatically allows for a 3 second increase in order to guarantee that during repeated travel direction inversion manoeuvres the forcing movement of the gate/door does not cause this problem.

Example: **with the gate/door completely open**
Command sequence: the gate closes for 1 second then opens
Result: the gate moves in the closing direction for 1 second and in the opening direction for 1 + 3 seconds, so the motor remains under power for 3 seconds after the gate is completely open.

2) During blackouts the programmer will lose the position of the gate/door. The work times are programmed in this transitory phase in such a way as to guarantee the complete opening of the door and successively complete closing.

Attention: To enable this situation; when the system is restarted with the door not completely closed the motor will be kept under tension (for longer than normally necessary) during the first cycle.
This remains valid until the cycle has been completed and the door is completely closed. At this point the programmer will once again know the exact position of the door.

ALARM CONDITIONS

1) Work times loaded from EEPROM are incorrect

LED "**L1**" will flash and the system remains blocked:
The only way to solve this situation is to enter the program mode and reprogram the system. If the problem persists after reprogramming, the EEPROM will have to be replaced (incorrect memorising).

DICHIARAZIONE DI CONFORMITÀ CE - CE CONFORMITY DECLARATION - DÉCLARATION DE CONFORMITÉ CE CE-KONFORMITÄTSERKLÄRUNG - DECLARACIÓN DE CONFORMIDAD CE

Dichiarazione di Conformità CE
(Direttiva Macchine 89/392/CEE, All. II)

Dichiarazione del costruttore per apparecchiature destinate ad essere inserite in macchine e non funzionanti in modo indipendente

IN CERTIFICAZIONE

CARDIN ELETTRONICA SPA
Via Rafael o 36 - 31020 SAN VENDEMIANO (TV)
c.f. - p. IVA 00681370268
Tel 0438.401818 - Fax 0438.421837

Dichiarazione di conformità CE

La dichiarazione di conformità CE dei prodotti Cardin è disponibile in lingua originale nel sito **www.cardin.it** nella sezione "norme e certificazione".
L'accesso alle sezioni speciali del sito è riservato agli utilizzatori dei prodotti Cardin, i quali possono richiede la chiave d'accesso direttamente presso i nostri punti di vendita.

CE Conformity declaration

The CE conformity declaration for Cardin products is available in original language from the site **www.cardin.it** under the section "Standards and Certification".
Access to the special areas of the site is reserved for installers and/or users of Cardin products. The password can be obtained directly from our sales outlets.

Déclaration de conformité CE

Les déclarations de conformité CE des produits Cardin sont disponibles dans la langue originale sur le site **www.cardin.it** dans la section “normes et certificats”.
L’accès aux sections particulières du site est réservé aux utilisateurs des produits Cardin; ceux-ci peuvent demander la clé d’accès directement auprès de nos points de vente.

CE-Konformitätserklärung

Die CE-Konformitätserklärungen für die Cardin-Produkte stehen in der Originalsprache auf der Homepage **www.cardin.it** im Bereich “Normen und Zertifizierung” zur Verfügung.
Der Zugriff zu den Spezialbereichen der Homepage ist den Verwendern der Cardin-Produkte reserviert, die das Passwort dafür direkt bei unseren Verkaufsstellen erfragen können.

Declaración de Conformidad CE

Las declaraciones de conformidad CE de los productos Cardin se encuentran disponibles en el idioma original en el sitio **www.cardin.it** en la sección “normas y certificaciones”. El acceso a las secciones especiales del sitio queda reservada a los usuarios de los productos Cardin, los cuales podrán pedir la llave de acceso directamente en nuestros puntos de venta.

Guida all'installazione

La guida all'installazione è stata redatta dalla Cardin Elettronica allo scopo di facilitare i compiti dell'installatore nell'applicazione delle prescrizioni della Direttiva Macchina Europee in riferimento alle nuove norme armonizzate europea. La guida e i moduli da compilare, che facilitano l'adempiamento dei compiti dell'installatore, sono disponibili in lingua originale nel sito **www.cardin.it** nella sezione "norme e certificazione".

Installation guide

The installation guide has been drawn up by Cardin Elettronica with the aim helping the installer to apply the prescriptions of the machine directive in reference to the European harmonised standards. The guide and the documents to be filled out are available from the **www.cardin.it** site under the section "Standards and Certification".

Guide à l’installation

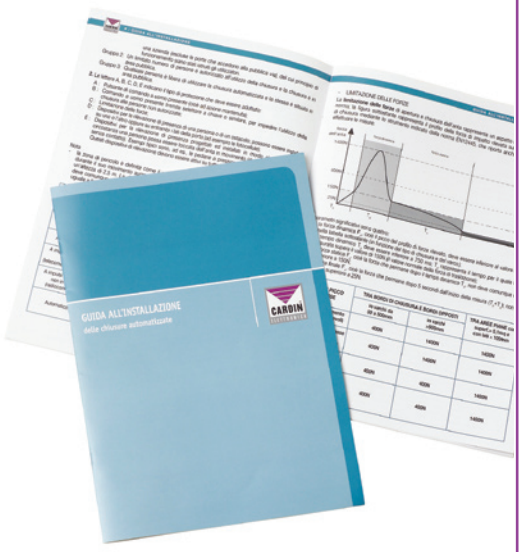
Le guide à l’installation a été rédigé par Cardin Elettronica dans l’objectif de faciliter à l’installateur l’application des dispositions des directives machine concernant les nouvelles normes harmonisées européennes. Le guide et les formulaires à remplir, qui facilitent à l’installateur la mise en conformité, sont disponibles dans la langue originale sur le site **www.cardin.it** dans la section «normes et certificats».

Installationsanleitung

Die Installationsanleitung wurde von der Cardin Elettronica zu dem Zweck abgefasst, die Aufgaben des Installateurs bei der Anwendung der Anordnungen der auf den neuen harmonisierten europäischen Normen basierenden Maschinenrichtlinien zu erleichtern. Die Anleitung und die auszufüllenden Formblätter, die die Aufgabenerfüllung des Installateurs erleichtern, stehen in der Originalsprache auf der Homepage **www.cardin.it** im Bereich “Normen und Zertifizierung” zur Verfügung.

Guía de instalación

La guía de instalación ha sido redactada por Cardin Elettronica con la finalidad de facilitar los deberes del instalador a la hora de aplicar las prescripciones de las directivas máquina en relación a las nuevas normas armonizadas europeas. La guía y los módulos para rellenar, que facilitan el cumplimiento de las obligaciones del instalador, están a disposición en su idioma original en el sitio **www.cardin.it** en la sección “normas y certificaciones”.



CARATTERISTICHE TECNICHE

• Alimentazione	Vac	230
• Frequenza	Hz	50-60
• Corrente nominale	A	3,3
• Motori collegabili	N°	2
• Potenza motori	W	350 + 350
• Temperatura di esercizio	°C	-20°...+55

Ingressi:
- Ingressi NA: tasto di apertura, tasto di chiusura, tasto dinamico
- Contatti NC: fotocellule di inversione, fotocellule di stop, tasto di blocco
- Collegamento antenna per modulo radio "**FM**"

Uscite:
- Uscite per: 2 motori; potenza: **350 + 350 W**
- Uscita per lampeggiatore **230 Vac 40 W** (attivazione continua)
- Uscita per alimentazione dispositivi esterni **24 Vac 10W**

Programmazione tempi:
Tempo di lavoro max 300 secondi
Tempo di pause max 300 secondi

CARACTÉRISTIQUES TECHNIQUES

• Alimentation	Vac	230
• Fréquence	Hz	50
• Courant nominal	A	0,9
• Moteurs raccordables	Nbre	2
• Puissance des moteurs	W	350 + 350
• Température de fonctionnement	°C	-20°...+55

Entrées:
- Entrées NO: touche d'ouverture, touche de fermeture, touche dynamique
- Contacts NF: cellules photoélectriques d'inversion, cellules photoélectriques de stop, touche de blocage
- Branchement antenne pour module radio "**FM**"

Sorties:
- Sorties pour 2 moteurs; puissance: **350 + 350 W**
- Sortie pour clignoteur **230 Vac 40 W** (activation continue)
- Sortie pour alimentation dispositifs externes **24 Vac 10W**

Programmation des temps:
Temps de travail maxi. 300 secondes
Temps de pause maxi. 300 secondes

TECHNICAL SPECIFICATIONS

• Power supply	Vac	230
• Frequency	Hz	50-60
• Electrical input	A	3,3
• Number of motors	Nr.	2
• Motor power	Vdc	350 + 350
• Operating temperature range	°C	-20°...+55

Inputs:
- NO inputs: opening button, closing button, dynamic button
- NC inputs: inverting photocells, stop photocells, blocking button
- Radio frequency module aerial connection "**FM**"

Outputs:
- Outputs for: 2 motors; power: **350 + 350 W**
- Output for warning lights **230 Vac 40 W** (continuous activation)
- Output for external devices **24 Vac 10 W**

Time programming:
Maximum work time 300 seconds
Maximum pause time 300 seconds

TECHNISCHE DATEN

- Stromversorgung	Vac	230
- Frequenz	Hz	50-60
- Nominalstrom	A	3,3
- Anschließbare Motoren	Anzahl	2
- Motorenleistung	W	350 + 350
- Betriebstemperatur	°C	-20°...+55

Eingänge:
- N.O. Eingänge: Öffnungstaste, Schließungstaste, dynamische Taste
- N.C. Kontakte: Fotozelle für Bewegungsumkehrung, Lichtschranke für Stop, Blockiertaste
- Antennenanschluss für Funkmodul "**FM**"

Ausgänge:
- Ausgänge für: 2 Motoren; Leistung: **350 + 350 W**
- Ausgang für Blinklicht **230 Vac 40 W** (dauerleuchtend)
- Ausgang zur Stromversorgung externer Vorrichtungen **24 Vac 10W**

Zeitenprogrammierung:
Betriebszeit max. 300 Sekunden
Pausenzeit max. 300 Sekunden

DATOS TÉCNICOS

- Alimentación	Vac	230
- Frecuencia	Hz	50-60
- Corriente nominal	A	3,3
- Motores conectables	N°	2
- Potencia motores	W	350 + 350
- Temperatura de operación	°C	-20..... +55

Entradas:
- Entradas NA: tecla de apertura, tecla de cierre, tecla dinámico
- Contactos NC: fotocélulas de inversión, fotocélulas de parada, tecla de bloqueo
- Conexionado antena para módulo radio "**FM**"

Salidas:
- Salidas para: 2 motores; potencia: **350 + 350 W**
- Salida para relampagueador **230 Vac 40 W** (activación continua)
- Salida para alimentación dispositivos externos **24 Vac 10 W**

Programación de los tiempos:
Tiempo de operación máx. 300 segundos
Tiempo de pausas máx. 300 segundos

CARDIN ELETTRONICA spa
Via Raffaello, 36
31020 San Vendemiano (TV) Italy
Tel: +39/0438.404011-401818
Fax: +39/0438.401831
email (Italy): Sales.office.it@cardin.it
email (Europe): Sales.office@cardin.it
Http: www.cardin.it