AUTOMATION FOR
GARAGE DOORS
A complete automatic device suitable for moving all types of counterbalanced garage doors. The compact and solid form makes this product a versatile machine that may be used safely and efficiently on all types of counterbalanced garage doors.

The automation consists of a compact single-piece geared reduction unit (with an incorporated encoder and bilateral manual release system) and is fitted with a reduction system made from materials that allow maximum efficiency and minimum noise. All the components making up the device: geared motor, transformer, electronic programmer and batteries (optional) are mounted on a robust chassis made of shockproof plastic and are separated and protected by a double carter that completely covers all the moving parts and safely houses all the cables and wiring. The second removable cover allows access to all the setting and program functions in complete safety. Internally, the carter contains the mechanism required to activate the manual release system and this allows the manoeuvre to be fluid and manageable under all working conditions whilst at the same time covering all possible manual release mechanisms installed by the door manufacturers: a handle directly installed on the geared motor, an external release cord or via a hexagonal key operated mechanism that is accessed through the door panel both to the right and to the left of the motor.

The door position is encoder controlled and self-programming thus reducing installation times to a minimum and optimising the programming procedure. Repositioning takes place automatically whenever foreign objects get in the way of the door as it is moving. The electronic control unit is completed by the anti-crush and “soft start” and “soft stop” functions and a display that monitors the programming stages and counts the number of manoeuvres carried out by the machine.

**Multi-decoding:**
The product range is factory fitted with a multi-decoding remote control module (system S449 – S486 – S504 – S508).

For garage doors larger than 4 metres and for garage doors with an in-built pedestrian door (mounted laterally) a second slave motor is required.
SELF-PROGRAMMING ELECTROMECHANICAL UNIT WITH A 24V MOTOR (433MHz)
Self-locking encoder-controlled Master automation with an in-built electronic programmer.
Operator arms are to be ordered separately.
Kit battery charger + batteries to be ordered separately.

SELF-PROGRAMMING ELECTROMECHANICAL UNIT WITH A 24V MOTOR (868MHz)
Self-locking encoder-controlled Master automation with an in-built electronic programmer.
Operator arms are to be ordered separately.
Kit battery charger + batteries to be ordered separately.

ELECTROMECHANICAL UNIT WITH A 24V MOTOR
Self-locking slave automation.
Use to supplement the GLB249M - GLB248M units for particular installations that require two motors.
Operator arm to be ordered separately.
CARDIN PRO SERIES GL

AXLE SHAFTS
Pair of axle shafts for central motor positioning, 1500mm long.
Pair of axle shafts for central motor positioning, 2200mm long.

JOINTS FOR LATERAL MOTOR POSITIONING

TELESCOPIC ARMS
Right curved telescopic arm
Left curved telescopic arm
Straight telescopic arm, 700mm
Straight telescopic arm, 700mm (2 pcs.)
Straight telescopic arm, 1000mm
Straight telescopic arm, 1000mm (2 pcs.)

SUPPORT BRACKET
Motor support extension bracket, 2000mm.

EXTERNAL RELEASE CORD
length 2000mm

KIT BATTERY CHARGER + NIMH BATTERIES
Allows the GLB249M unit to work during blackouts.

CABLE GLANDS Ø16mm
**MOTOR SPECIFICATIONS**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>GLB249M-GLB248M</th>
</tr>
</thead>
<tbody>
<tr>
<td>Motor power supply</td>
<td>Vdc 24</td>
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<tr>
<td>Nominal electrical input</td>
<td>A 2</td>
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<tr>
<td>Power input</td>
<td>W 100</td>
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<tr>
<td>Duty cycle</td>
<td>% 70</td>
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<tr>
<td>Geared motor speed</td>
<td>revs/min 1,7</td>
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<tr>
<td>Maximum torque</td>
<td>Nm 170</td>
</tr>
<tr>
<td>Operating temperature</td>
<td>°C -20°…+55</td>
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<tr>
<td>Protection grade</td>
<td>IP 54</td>
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</table>

**PROGRAMMER SPECIFICATIONS**

<table>
<thead>
<tr>
<th>Parameter</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Power supply</td>
<td>Vac 230</td>
</tr>
<tr>
<td>Nominal electrical input</td>
<td>A 0,5</td>
</tr>
<tr>
<td>Maximum power yield</td>
<td>W 120</td>
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</tbody>
</table>

**BUILT-IN RECEIVER CARD**

<table>
<thead>
<tr>
<th>Parameter</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Recepton frequency</td>
<td>MHz 433.92 / 868,3</td>
</tr>
<tr>
<td>Number of channels</td>
<td>No 4</td>
</tr>
<tr>
<td>Number of functions</td>
<td>No 2</td>
</tr>
<tr>
<td>Number of stored codes</td>
<td>No 300</td>
</tr>
</tbody>
</table>

**INSTALLATION EXAMPLE**

**LEGEND**

1. Geared motor
2. Photoelectric cells
3. Mechanical selector switch
4. Anticrush safety edge
5. Radioshield
6. Release cord
7. External warning lights
8. External aerial
9. Wall mounted switch TB - TD
10. Shunt box
11. All pole circuit breaker
12. Mains cable 230Vac
13. Channelling route for low voltage wires

**Attention:** The drawing is purely indicative and is supplied as a 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.
230V automatic device suitable for counterbalanced garage doors up to 10 m². For garage doors larger than 4 metres and for garage doors with an in-built pedestrian door (mounted laterally) a second slave motor is required.

GL STAR is a complete automation system suitable for use with all types of counterbalanced overhead garage doors. The appliance has been designed and realised to be reliable day after day and throughout the passage of time. It is for this reason that the panelling and external particulars are made out of cast aluminium and galvanised steel, the internal moving parts are made of tempered steel and the carter is made of shockproof plastic.

These solutions offer guaranteed resistance to atmospheric agents, and after installing, an absolutely maintenance free future. The installer is guaranteed a valid and reliable product. The user is guaranteed first rate service and a silent, consistent and regular action which will safeguard the automated structure throughout the years of service to come.

The manual release system allows the manoeuvre to be fluid and manageable under all working conditions whilst at the same time covering all possible manual release mechanisms installed by the door manufacturers whether it be a handle fitted directly to the door or an external cord release system.

The integrated programmer allows encoder and limit switch controlled gate positioning and self-programming thus reducing installation times to a minimum and optimising the programming procedure.

The electronic control unit controls are completed by the anti-crush and “soft start” and “soft stop” functions.

Open collector:
The product range is factory set for the insertion of an open collector receiver card that guarantees compatibility with all the radio control series available in the Cardin catalogue.
CARDIN TRADE
SERIES GL

SELF-LOCKING GARAGE DOOR MOTOR
with a 230V slave motor.

2,5m
h-max
8m²

GL STAR1E

SELF-LOCKING GARAGE DOOR MOTOR
with a 230V encoder-controlled motor complete with electronic travel limits and an in-built programmer.

PRG
2,5m
h-max
8m²

GL STAR2E

SELF-LOCKING GARAGE DOOR MOTOR
with a 230V encoder-controlled motor complete with electronic travel limits, an in-built electronic programmer with autotransformer and torque limitation.

PRG
2,5m
h-max
8m²

GL STAR2AE
CARDIN TRADE SERIES GL

SUPPORT BRACKETS
in zinc-plated metal, 60cm.  
in zinc-plated metal, 200cm.

ADJUSTABLE BRACKETS
Axle shaft supports.

ADAPTER KIT GL20-GLSTAR
Adapter kit to install the STAR garage door motor in an old GL20 installation

TRANSMISSION SHAFTS
20cm including support bracket. 
150cm including support bracket. 
200cm including support bracket.

TRANSMISSION ARMS
Two straight arms with round bushing for AT shafts.
One straight arm with grooved bushing for motor drive shaft.
Two curved arms with round bushing for AT shafts.

EXTERNAL RELEASE CORD KIT
with a personalised key for counterbalanced or sectional garage doors.

EXTERNAL RELEASE CORD KIT
To connect to the door handle.

ELECTRONIC PROGRAMMER
for one 230V encoder-controlled motor complete with torque limitation and deceleration. Factory set for the insertion of an open collector receiver card.

TRAVEL LIMIT KIT
Travel limit switch kit and encoder for GL STAR1E.
**CARDIN TRADE SERIES GL**

**MOTOR SPECIFICATIONS**

<table>
<thead>
<tr>
<th>Specification</th>
<th>GL STAR1E - 2E - 2AE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Motor power supply</td>
<td>Vac 230</td>
</tr>
<tr>
<td>Frequency</td>
<td>Hz 50</td>
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<tr>
<td>Nominal electrical input</td>
<td>A 1.7</td>
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<tr>
<td>Power input</td>
<td>W 360</td>
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<tr>
<td>Duty cycle</td>
<td>% 40</td>
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<tr>
<td>Geared motor speed</td>
<td>revs/min 1.8</td>
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<tr>
<td>Maximum torque</td>
<td>Nm 530</td>
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<tr>
<td>Operating temperature range</td>
<td>°C -20°…+55</td>
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<tr>
<td>Protection grade</td>
<td>IP 30</td>
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**PROGRAMMER SPECIFICATIONS**

<table>
<thead>
<tr>
<th>Specification</th>
<th>GL STAR1E - 2E - 2AE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power supply</td>
<td>Vac 230</td>
</tr>
<tr>
<td>Nominal electrical input</td>
<td>A 2</td>
</tr>
<tr>
<td>Maximum power yield</td>
<td>W 360</td>
</tr>
</tbody>
</table>

**OPTIONAL RECEIVER CARD**

The product range is factory set for the insertion of an open collector receiver card that guarantees compatibility with all the radio control series available in the Cardin catalogue.

**INSTALLATION EXAMPLE**

**LEGEND**

1. Geared motor
2. Photoelectric cells
3. Mechanical selector switch
4. Anticrush safety edge
5. Radioshield
6. Release cord
7. Warning light with aerial
8. Wall mounted switch TB - TD
9. Shunt box
10. All pole circuit breaker
11. Mains cable 230Vac
12. Channeling route for low voltage wires

**Attention:** The drawing is purely indicative and is supplied as a 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.
CHAIN-GUIDED AUTOMATION FOR SECTIONAL DOORS

CARDIN PRO

SERIES GL

The chain guided automation GL124 is made up of two elements complete in all their parts, which are assembled by simply slotting them together. An efficient and aesthetically designed high performance propulsion unit, featuring new technical solutions, and fitted with all the elements for operation under all working conditions it slots together with an extruded aluminium chain driven transmission. The motor attachment and chain drive head on the guide are structurally optimised using nylon fibre. The compact and robust propulsion unit is commanded by state of the art logic based on encoder control, which tracks the movement of the door, and on a self-learning programming procedure.

The unit is fitted with a direct current motor which uses an efficient system of kinematics protected by a special anti drag element that cancels out vibrations and variations in movement that can occur during the work cycle. The automation is fitted with courtesy lights and NiMH batteries that guarantee emergency operation during blackouts. The integrated electronic programmer is housed in a protective well that only leaves access to the programming controls, display and circuit protection fuses.

The carriage slides along the chain guide on specially lubricated castors. The manual release mechanism used to detach the carriage from the chain guide is carried out using a release cord that separates the door from the automation. Repositioning takes place automatically whenever foreign objects get in the way of the door as it is moving. The electronic control unit is completed by the anti-crush and “soft start” and “soft stop” functions and a display that monitors the programming stages and counts the number of manoeuvres carried out by the machine.

Chain guide to be ordered apart.
SELF-PROGRAMMING ELECTROMECHANICAL UNIT WITH A 24V MOTOR
Encoder controlled integral automation fitted with an electronic programmer, an S449 radio receiver card, battery charger and NiMH batteries.
Digital work time control.
Command inputs: TA, TC and TB.
Safety inputs: photocells, safety edge (N.C. contact or 8.2kΩ).
Chain guide to be ordered apart.

For sectional doors:
- maximum height 2.7m with a 3000mm chain guide;
- maximum height 3.2m with a 3500mm chain guide;
- maximum height 4.2m with a 4500mm chain guide;
- maximum height 5.7m with a 6000mm chain guide.

OPTIONAL SLOT-IN CARD
Functions:
- traffic light output for 2 traffic lights (red, green);
- programmable potential free output, impulsive or continuous (courtesy light 100 W);
- digital safety edge management input.
ALUMINIUM CHAIN GUIDE

- length 3000mm
- length 3500mm
- length 4500mm
- length 6000mm

<table>
<thead>
<tr>
<th>Length</th>
<th>Code</th>
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</thead>
<tbody>
<tr>
<td>3000mm</td>
<td>GL124S30</td>
</tr>
<tr>
<td>3500mm</td>
<td>GL124S35</td>
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<td>4500mm</td>
<td>GL124S45</td>
</tr>
<tr>
<td>6000mm</td>
<td>GL124S60</td>
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</tbody>
</table>

ADAPTER

Allows the chain guided automation to be used on counterbalanced garage doors.

<table>
<thead>
<tr>
<th>Code</th>
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<tbody>
<tr>
<td>GLBO</td>
</tr>
</tbody>
</table>

EXTERNAL RELEASE CORD

- length 2000mm
- length 4000mm

<table>
<thead>
<tr>
<th>Length</th>
<th>Code</th>
</tr>
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<tbody>
<tr>
<td>2000mm</td>
<td>GL20SB</td>
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<tr>
<td>4000mm</td>
<td>GL20SB4</td>
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</tbody>
</table>
**MOTOR SPECIFICATIONS**

Motor power supply: Vdc 24
Nominal electrical input: A 3
Power input: W 130
Duty cycle: % 70
Drag speed: m/min 7
Maximum travel distance: mm 5700
Operating temperature range: °C -20°…+55
Protection grade: IP 40

**PROGRAMMER SPECIFICATIONS**

Power supply: Vac 230
Nominal electrical input: A 0,9
Maximum power yield: W 190

**BUILT-IN RECEIVER CARD**

Reception frequency: MHz 433.92
Number of channels: No 4
Number of functions: No 2
Number of stored codes: No 300

**INSTALLATION EXAMPLE**

**LEGEND**

1. Geared motor + built-in programmer
2. Photoelectric cells
3. Mechanical selector switch
4. Anticrush safety edge
5. Release cord
6. External warning lights
7. External aerial
8. Wall mounted switch TB - TD
9. Shunt box
10. All pole circuit breaker
11. Mains cable 230Vac
12. Channelling route for low voltage wires

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