

CHAMBERLAIN™

# LiftMaster™

**PROFESSIONAL**

- de Anleitungen CB124
- fr Instructions CB124
- en Instructions CB124
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- hr Upute CB124
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- sk Obrázky CB124
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IMPORTANT FITTING AND OPERATING INSTRUCTIONS

PLEASE START BY READING THESE IMPORTANT SAFETY RULES

 This safety alert symbol means "Caution" - failure to comply with such an instruction involves risk of personal injury or damage to property. Please read these warnings carefully.

 This gate drive mechanism is designed and tested to offer appropriately safe service provided it is installed and operated in strict accordance with the following safety rules.

*Incorrect installation and/or failure to comply with the following instructions may result in serious personal injury or property damage.*

-  *When using tools and small parts to install or carry out repair work on a gate exercise caution and do not wear rings, watches or loose clothing.*
-  Frequently examine the installation for imbalance and signs of wear or damage to cables, hardware and mountings. Do not use if repair or adjustment is necessary. Gates which stick or jam must be repaired immediately. *Employ a qualified technician to repair the gate, never attempt to repair it yourself.*
-  Installation and wiring must be in compliance with your local building and electrical installation codes. Power cables must only be connected to a properly earthed supply.
-  *Disconnect electric power to the system before making repairs or removing covers.*  
A disconnecting device must be provided in the permanently-wired installation to guarantee all-pole disconnection by means of a switch (at least 3mm contact gap) or by a separate fuse.
-  Entrapment protection devices **MUST** be installed to protect anyone who may come near a moving gate. Locate entrapment protection devices to protect in BOTH the open and close gate cycles. Locate entrapment protection devices to protect between moving gate and RIGID objects, such as posts.
-  Make sure that people who install, maintain or operate the gate drive and/or the control board are qualified and follow these instructions. Keep these instructions in a safe place so that you can refer to them quickly when you need to.
-  Please remove any locks fitted to the gate in order to prevent damage to the gate.
-  *The full protection against potential squeeze or entrapment must work direct when the drive arms are installed.*
-  After the installation a final test of the full function of the system and the full function of the safety devices must be done.
-  *Children should be supervised to ensure that they do not play with the appliance.*
-  This drive cannot be used with a gate incorporating a wicket door unless the drive cannot be operated with the wicket door open.
-  This appliance is not intended for use by persons (including children) with reduced physical sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety.
-  Lightweight gates must be substantially reinforced to avoid gate damage. The best solution is to check with your gate manufacturer for an opener installation reinforcement kit.
-  Controls must be far enough from the gate so that the user is prevented from coming in contact with the gate while operating the controls.
-  Gate must not extend over public byway during operation.
-  Activate opener only when the gate is in full view, free of obstructions. Do not allow children to play near the gate.
-  *Keep additional accessories away from children. Do not allow children to play with pushbuttons or remote controls. A gate can cause serious injuries as it closes.*

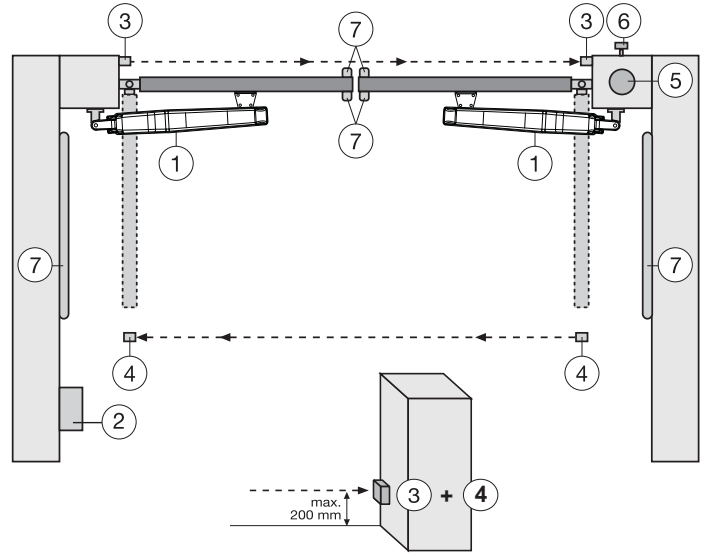
**SAVE THESE INSTRUCTIONS**

**TECHNICAL DATA**

Voltage:	230V~ ±10% 50Hz
Transformer:	230V/24V, 150VA
Output Motor:	24V/DC
Consumption max.:	max. 400W (in operation)
Consumption Standby:	max. 4 Watt (without accessories)
Supply accessories:	24VDC / 600mA max.
Operating temperature:	-25°C + 55°C
Modes:	Standard, Automatic
Measurements:	250x75mm (without box)
Measurements Box:	ca. 300mm x 220mm x 120mm
Protection class Box:	IP45
Fuse:	2 x 2A
Remote control:	max. 180 x Rolling Code
feasible frequencies:	433MHz, 868MHz

**TYPICAL CONFIGURATION OF A UNIT:**

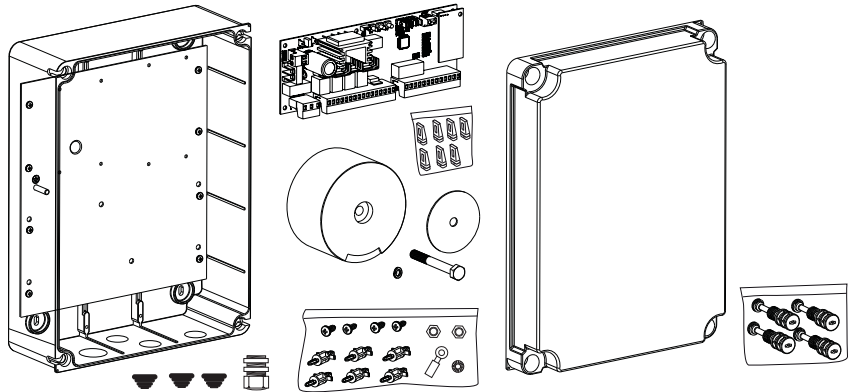
1. Motor (LYN/SCS)
2. Control board
3. Photocell (active for closing), max. height 200 mm  
First photocell.
4. Photocell (active for opening and closing), max. height 200 mm  
Second photocell (optional).
5. Flashing light (optional)  
Important visual information on the movement of the gate.
6. Key-operated switch or wireless keypad (optional)  
Is mounted on the outside. The gate is opened by key or by entering a number.
7. Contact strip (optional)  
Safeguards the gate on being touched. Contact strips can be mounted on the gate or on the pillars. If required, contact strips must be mounted at a height of up to 2.5m.



**CONTROL BOX**

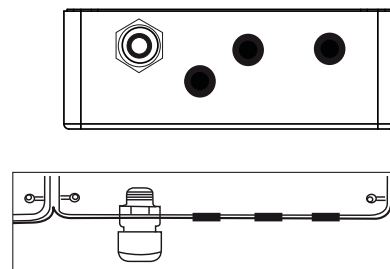
The control consists of several components.

- exterior installation box 1
- cover for box 1
- control 1
- transformer 1
- baseplate (pre-assembled) 1
- cable bushing large 1
- cable bushing small 3
- fastening clips 6
- screws 3,5 x 9,5 mm 4
- large washer 1
- screw large 1
- spring lock washer 1
- cable lug 1
- nut M8 2
- washer M8 1
- large closure screws 5
- small bag containing jumpers 1



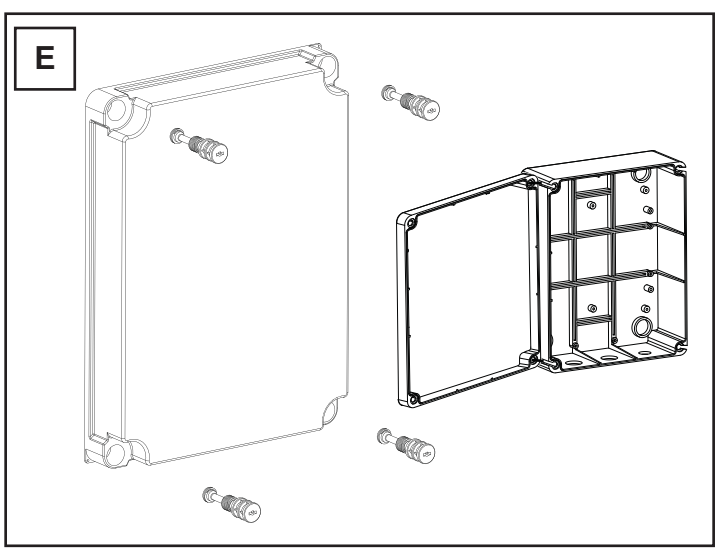
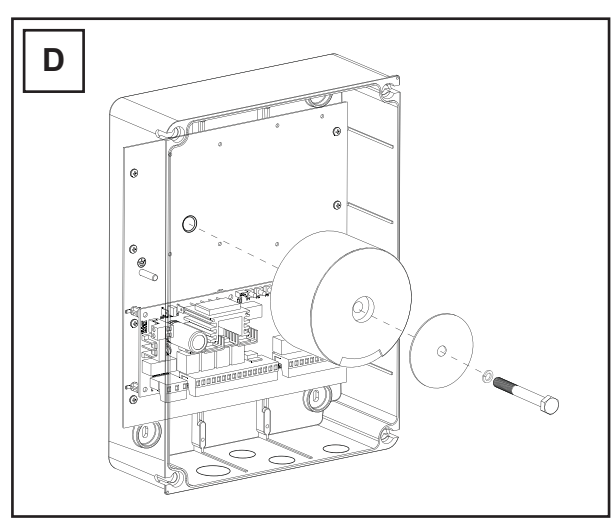
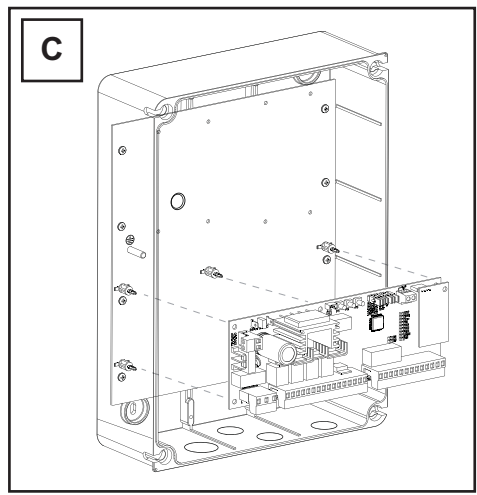
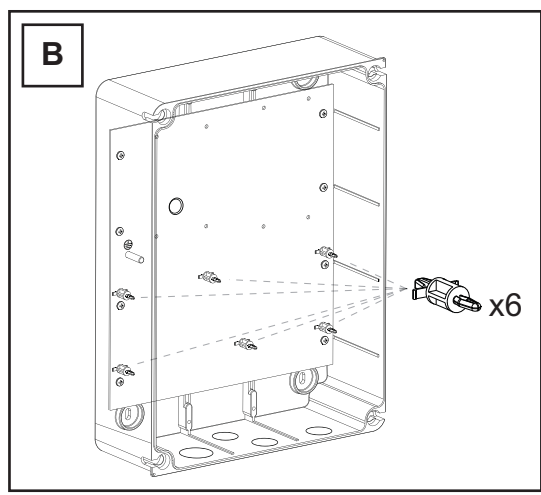
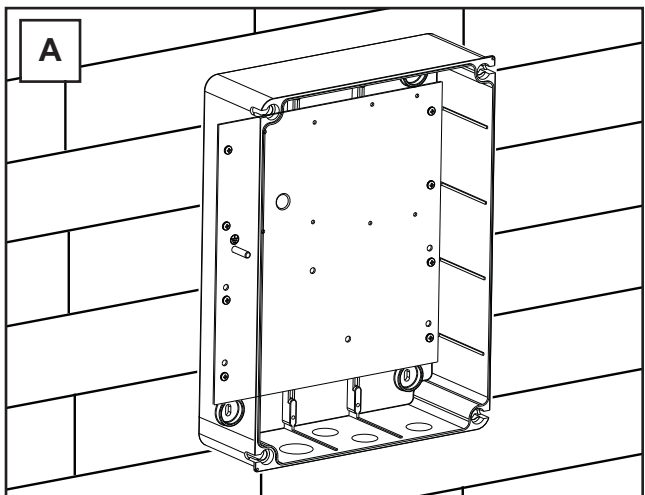
**PREPARATION**

Open the 4 pre-cut holes at the bottom of the casing with a screwdriver or a similar device. Attach large cable bushing on the left then the rest as shown in picture. Humidity and water destroy the control. All openings and cable bushings must be sealed against water (waterproof). The control box with the motor control is to be mounted with the cable bushings facing down.



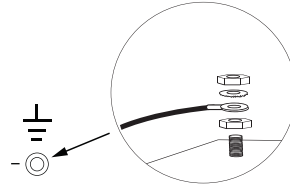
**RECOMMENDED PROCEDURE:**

Fasten exterior installation box to wall, after previously measuring required distances and establishing correct position of drill-holes (Hardware not included). Baseplate for transformer is already pre-assembled (A).  
Push fastening clips in designated holes (B) .  
Push controlboard on to fastening clips (C).  
Fasten transformer on to baseplate using the large screw and large washer (D).  
Put the 4 large closure screws through cover of the box. Fasten 2 of them (left or right) approx 2cm into the wall.  
After that the cover can be opened to the side (E).  
Close box on a trial basis turning the screws all the way in. If the lid does not close completely, then the box is not fitted to the wall evenly and is therefore distorted. This must be corrected. It is very important for the box to be waterproof once closed.



## WIRING OF CONTROL / SUMMARY

- a) start with 230Volts supply cable.  
Run cable through large cable bushing on the lefthand side.
- b) Attach cable eye to ground wire. Then connect ground wire to base plate with washer and nut (exactly as shown in picture detail).  
Connect all other cables to control.



## CABLES AND WIRING

The usage of shielded cable in order to connect the motor to control board is highly recommended. Magnetic and inductive influence of the signal in the cables can produce electric noise and may disturb the function of the gate .

### Generally avoid:

- Control board location far away from gate.
- 230Volt and low voltage in the same power line. Not allowed by electrical rules.
- Wiring of the infrared sensors, switches, flashing lamps & electric locks require a cable separately from the motor wiring.
- Other wirings like telephone intercoms, lights for garden etc. must be in separate cables.
- Rigid copper cables especially when thicker diameters are difficult to manage during the installation and may result in bad connections with functional issues. Use instead flexible cables.
- Cable material not suitable for outside use. Use cables suitable for outside use and underground. Run the cables in conduits if the cable is not suitable for placing in the ground (armoured or suitably protected). You may also consult your local electrician.

### We recommend the following accessories:

- **LA400-JB40E** Kit for cable extension of one installation unit. Consists of 12m of cable 6-pole with identical colours, distribution box IP65, cable screw joints and fastening material.
- **041ASWG-0482-50** Cable 50m for professional use. Consists of 50m of cable 6-pole with identical colours. Cut only as much as you need for the current installation.

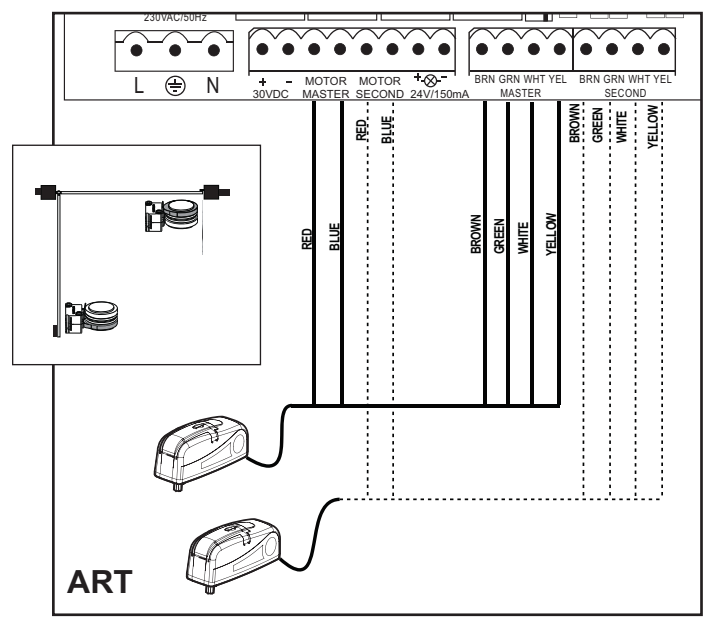
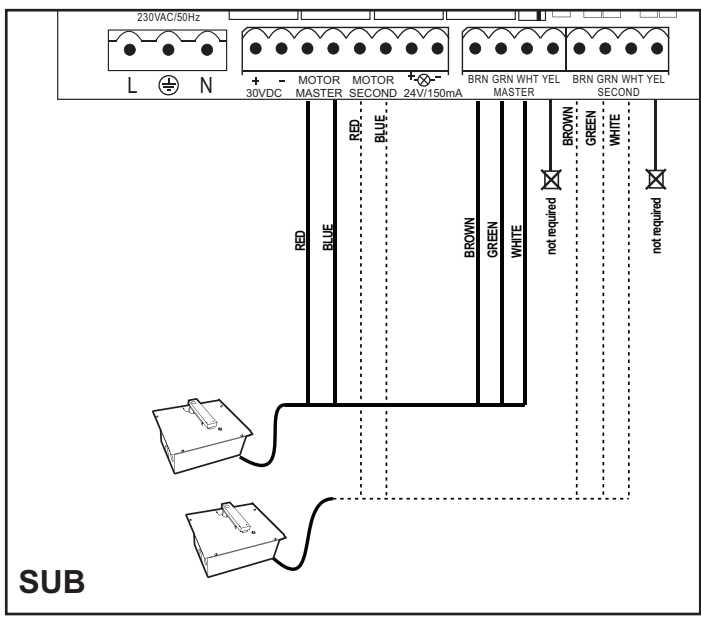
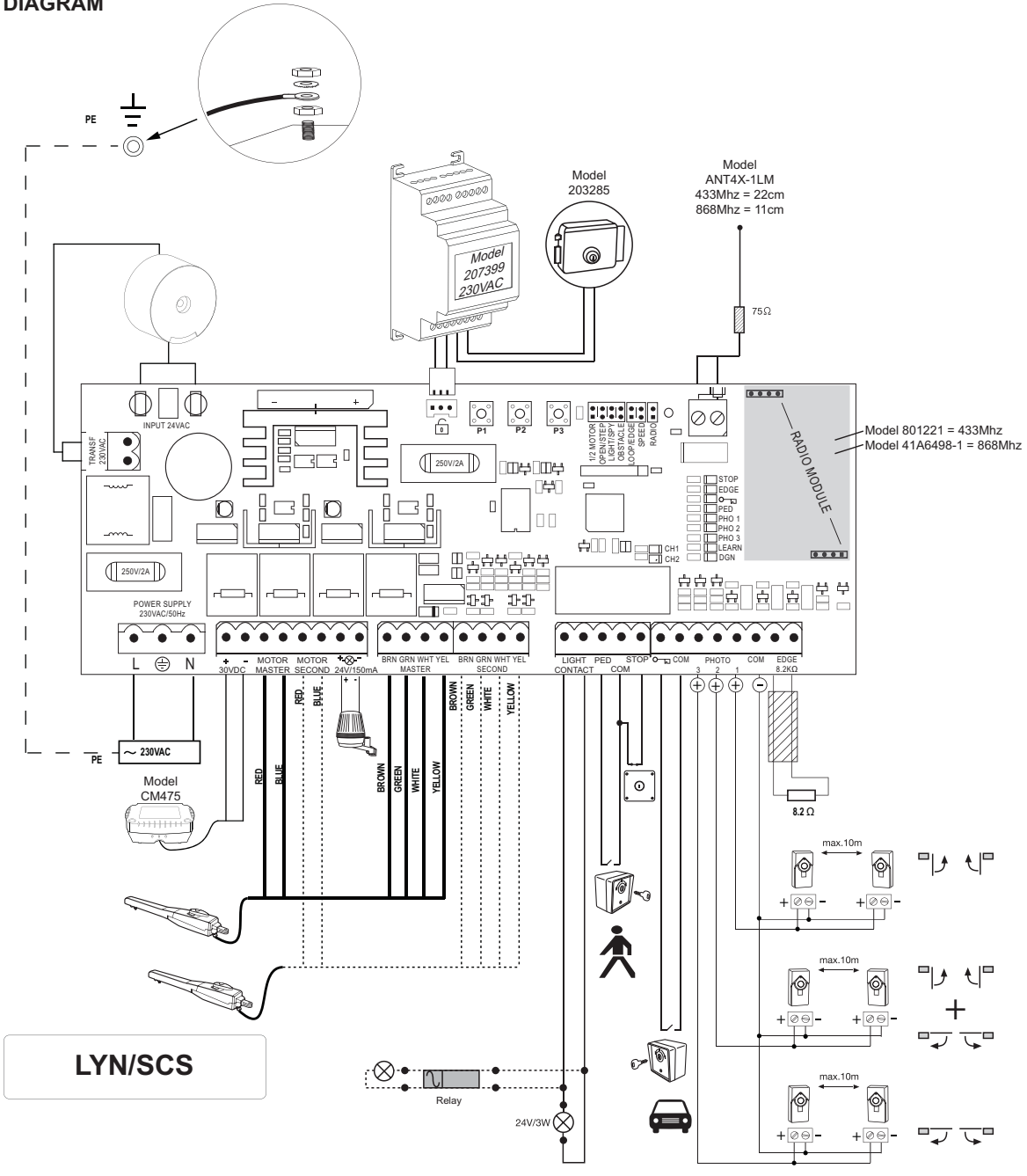
### General wiring sizes:

The numbers mentioned in the table below are minimum requirements. It is always possible to use larger diameters.

- 230Volt Supply Power to controller: min. 0,75mm<sup>2</sup> 3-pole
- 230Volt Supply transformer installed separately (i.e. in the garage) and low voltage to gate. See table.
- Motor wiring: 2 wires min. 1,0mm<sup>2</sup>, 4 wires min. 0,75mm<sup>2</sup> (or shielded cable)
- Electric locks: See table
- Switches, infrared sensors, flashing lamp: See table etc. min.0,5mm<sup>2</sup>

Operator Model	Distance 0m - 6m	Distance 6m - 10m	Distance 10m - 12m	Distance 12m – xx
LYN, SCS, ART motor wiring	2 x 1,0mm <sup>2</sup> 4 x 0,75mm <sup>2</sup>	2 x 1,0mm <sup>2</sup> 4 x 0,75mm <sup>2</sup>	Normal Wiring	Max. 15m Use shielded cable for the 4 smaller motor wires.
SUB (underground) motor wiring	2 x 1,0mm <sup>2</sup> 4 x 0,75mm <sup>2</sup>	2 x 1,0mm <sup>2</sup> 4 x 0,75mm <sup>2</sup>	Use shielded cable for the 4 smaller motor wires	Use shielded cable for the 4 smaller motor wires
Transformer separately installed (in garage) and low voltage supplied to control board box.	0,75mm <sup>2</sup>	0,75mm <sup>2</sup>	1,0mm <sup>2</sup>	Max. 30m; Min. 1,5mm <sup>2</sup> Gate weight maximum 50% of maximum motor power rating.
Electric lock (12Volt) wiring	0,75mm <sup>2</sup>	0,75mm <sup>2</sup>	1,0mm <sup>2</sup>	Max. 30m; Min. 1,5mm <sup>2</sup>
External antenna (Remove original antenna of logic board)	Coax cable (Satellite cable) 50 or 75 Ohm	Coax cable (Satellite cable) 50 or 75 Ohm	Coax cable (Satellite cable) 50 or 75 Ohm	Coax cable (Satellite cable) 50 or 75 Ohm (max. 25m)
Switches, Flashing lamp etc.	0,5mm <sup>2</sup>	0,5mm <sup>2</sup>	0,75mm <sup>2</sup>	Min. 0,75mm <sup>2</sup> Max. 30m
Infrared Sensors	0,5mm <sup>2</sup>	0,5mm <sup>2</sup>	0,75mm <sup>2</sup>	Min. 0,75mm <sup>2</sup> Max. 20m

# WIRING DIAGRAM



DESCRIPTION	FUNCTION
L	connector L 230V supply
N	connector N 230V supply
30VDC	connector for a battery kit +/- CM475 + 041ADBL-0115
Motor MASTER	motor 1 (master opens first) red/blue
Motor SECOND	motor 2 (Second opens second) red/blue
To check correct polarity refer to	section basic setting and functionality P1+P2+P3
24V/150mA	flashing light (accessory)
BRN	Motor1 MASTER brown cable
GRN	green cable
WHT	white cable
YEL	yellow cable
BRN	Motor2 SECOND brown cable
GRN	green cable
WHT	white cable
YEL	yellow cable
Light Contact	gate monitor/ yard lighting
PED	connection for emergency stop or negative pole
COM	stop switch
STOP	stop switch
Key symbol	key switch
COM	negative pole
PHOTO3	photocells 3 (open)
PHOTO2	photocells 2 (close & open)
PHOTO1	photocells 1 (close)
COM	negative pole
EDGE 8.2kOhms	safety edge with 8.2KOhms
RADIO	connection for radio module
Antenna symol	connection for antenna 75Ohms
E-lock symbol	connection for E-lock control board
INPUT 24VAC	24V power input from transformer. can be connected with any polarity.
Transformer 230VAC	230V supply to transformer. Can be connected with any polarity.
250V/2A	fuse 250V/2A (2x included)

DESCRIPTION OF LED'S (LIGHT EMITTING DIODE)		
DESCRIPTION	COLOUR	STATUS
Stop	green	Stop Switch ON: Stop Active OFF: OK (Requires wire bridge if no switch is connected)
Edge	green	Safety Edge 8.2KOhm ON: Activated OFF: OK (Requires 8.2KOhm resistor if not used)
"Key symbol"	red	Key-switch 2-wing opening ON: Activated OFF: OK
PED	red	Key-switch 1-wing opening ON: Activated OFF: OK
PHO 1	red	Photocell 1 (close) ON: OK, photocell connected (no problem) OFF: No photocells connected Dimming: Photocell blocked, function & diagnostic is blinking
PHO 2	red	Photocell 2 (open & close) (Refer to photocell 1)
PHO 3	red	Photocell 3 (open) (Refer to photocell 1)
LEARN	yellow	Programming indicator ON: (flashing) programming is active OFF: off
DGN	red	Diagnostic, Refer to page 15, section: Indication of diagnostic blinks
CH1	red	Remote control programming 2-wing opening ON: New remote can be programmed OFF: off Refer to section RADIO for programming details.
CH2	red	Remote control programming 1-wing opening (Refer to CH1)

FUNCTIONALITY OVERVIEW OF THE PUSH BUTTONS P1, P2, & P3	
Button	Function
P1+P2+P3	Manual operation. The gate wings can be moved electrically in a manual mode. Activate Function: Push P1+P2+P3 simultaneously. The LED DGN starts to flash as long as feature is activated. Button P1 operates Motor1. Button P2 operates Motor2. Deactivate: Wait for 20 seconds or disconnect logic board power. If wings close at first reverse wires red and blue.
P1	For automatic programming of the automatic travel distance limits of the gate.
P1 + P2	For the advanced programming of the travel distance limits of the gate
P2 + P3	Electric lock delay time
P1 + P3	Wing delay adjustment.
P2	Automatic closing time. Requires also P3 to confirm.
P3	Software-reset to factory defaults. Push & hold for 10 seconds. Does not reset the remote control memory (see section "radio").
Radio jumper + P1	Programming Remote for Channel 1 Command for both motors (wings)
Radio jumper + P2	Programming Remote for Channel 2 Command for single motor (Motor1).



### BACKUP BATTERY (OPTIONAL) MODEL: CM475 (24V/AC)

The terminals serve to reload an externally installed storage battery.

The integrated recharger is loaded and in case of power failure the battery provides power. A new fully charged storage battery may provide power for more than 24 hours. Storage batteries are subject to deterioration and lose capacity. Due to extensive use they lose capacity even faster. Replace storage batteries after approx. 2-3 years. CM475 is not for outside use and requires a suitable enclosure.

### FLASHING LAMP (OPTIONAL) MODEL: FLA24-2

A flashing lamp can be connected to the control board. It warns when the gate is being moved. The flashing light should be fitted as high as possible and in good clear view. The control board emits a constant signal that the lamp converts to a flashing signal.

**Cable cross-section: 0.5 mm<sup>2</sup> or more.**

**Voltage: 24 V DC**

### GATE MONITORING or YARD LIGHTING (OPTIONAL)

The Terminals have two functions depending on how the jumper Light / Spy is plugged. Refer to step "JUMPERS" in this manual. The output has no separate power supply and should be charged only up to 24V.

Gate monitoring / status of gate (Spy):

An LED can be connected to the terminals to indicate the status of the gate.

Relay open = gate closed  
Relay clicking = gate is opening  
Relay closed = gate open  
Relay clicks fast = gate is closing

Lighting (+120 seconds) (Light):

Other appliances can be switched by a commercially available relay, which is installed externally.

Gate closed = relay open  
Gate moving = relay closed  
Gate open = relay open

CAUTION: Output can be charged only up to 24V, or a relay must be interposed.

### STOP SWITCH (OPTIONAL) MODEL: 600084

**A stop switch to stop the movement of the gate in any direction can be connected to this output.**

### KEY SWITCH (OPTIONAL) MODEL: 100010, 100027, 100034, 100041

The system can be operated by key switch. It is possible to operate only 1 wing or two wings. This depends on how the JUMPERS are used (connectors: key symbol and COM)

### SAFETY EDGE (OPTIONAL) MODEL: 600046, 600053, 600077, 600060

#### JUMPER LOOP / EDGE MUST BE FREE

A safety edge working according to the 8.2 kilo ohm principle can be connected to the control board, i.e. a 8.2 kilo ohm test resistor is attached to the end of the safety edge. It ensures that the electric circuit is monitored permanently. The control board is supplied with an 8.2 kilo ohm resistor installed. Several safety edges are connected in series. **Cable cross-section: 0.5 mm<sup>2</sup> or more.**

### ANTENNA (OPTIONAL) MODEL: ANT4X-1LM

The control board is supplied with a wire antenna as standard. An external antenna (accessory) can be connected to terminals as shown. A larger range (radio) can thus be achieved. For best range results mount antenna as high as possible.

### E-LOCK (OPTIONAL)

The control board allows the use of a 12V E-lock. (instructions included with E-lock). **A transformer (207399) must be connected for the E-lock on the main board.** In case the gate pushes too hard for the e-lock to open, a special function can be programmed. Activation time adjustment: Push P2 and P3 together and hold for approx 5 seconds, and count the number of clicks you hear. The click sound is produced from a relay (light relay).

1 click = approx. 4 seconds power to e-lock (factory setting)

2 clicks = gate closes for 1 second, then opens. Furthermore, after reaching the closed door position, the drive presses briefly to support the snap-in of the electric lock. Note: The door should be equipped with ground stops.

### PHOTOCELLS (OPTIONAL) MODEL: 771E

The photocells are for safeguarding the gate and must be used. The fitting location depends on the gate's design. EN12453 specifies that a pair of photocells must be installed at a height of 200 mm and activated to "Close". The photocells consist of a transmitter and a receiver and must be opposite each other. The photocell is mounted on the wall using small screws and wall plugs. To enable the "Automatic Closing" function, the Chamberlain failsafe photocell must be installed. The Chamberlain failsafe system (2-cable system) has small LEDs (light) that can be seen from the outside on both sides to indicate the status of the photocell.

#### Programming of IR sensors:

- connect IR sensors
- program the travel of the gate.

#### Deletion of IR sensors:

Disconnecting already connected IR sensors will cause the control board to block the functionality of the terminals it was connected to. To delete IR sensors correctly:

- disconnect IR sensors
- cut control board from current shortly
- program the travel of the gate.

#### Diagnosis of the photocell

- LED constant = OK
- LED flashes = photocell disables control board
- LED off = no current, incorrect connection or polarity

#### Diagnosis on the control board

- LED off = OK no photocell connected
- LED flashes = photocell disables control board

#### Connection between 1 & COM:

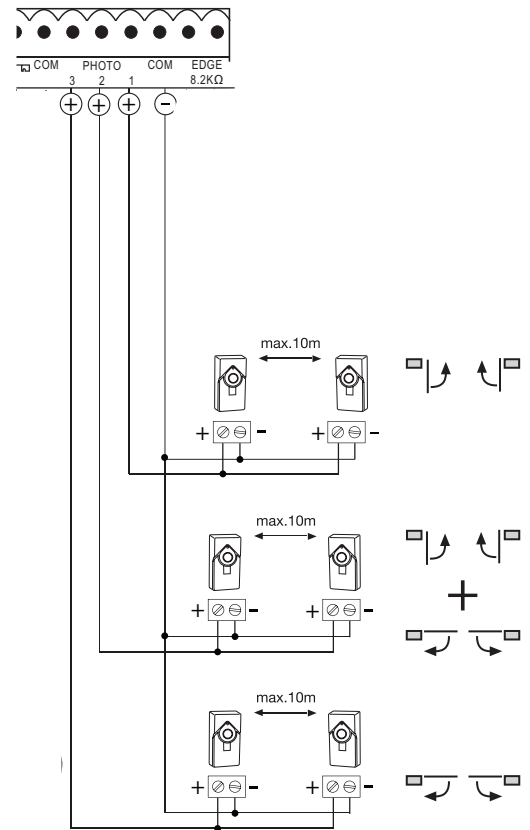
Active when gate is closing  
(reverses gate to open)

#### Connection between 2 & COM:

Active when gate is closing and opening

#### Connection between 3 & COM:

Active when gate is opening  
(holds gate in present position until photocell is cleared;  
continues when cleared)



### RADIO AND RADIO PROGRAMMING

Insert radio module on designated pins, if not pre-installed.  
Number of remote controls possible to memorize: 180  
Notice: Do not program other remote controls than allowed.  
Other brands or types may seem to work but cause functional issues

#### PROGRAM / DELETE REMOTE CONTROLS

The receiver has two channels CH1 and CH2. Using the different channels enables the opening of one wing resp. both wings. For example, if CH2=P2 receives the code from the remote control only one wing will open. Choosing a different button on the remote control in combination with CH1=P1 will cause both wings to open.

#### PROGRAMMING

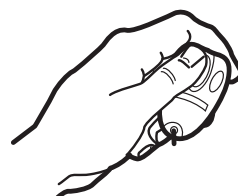
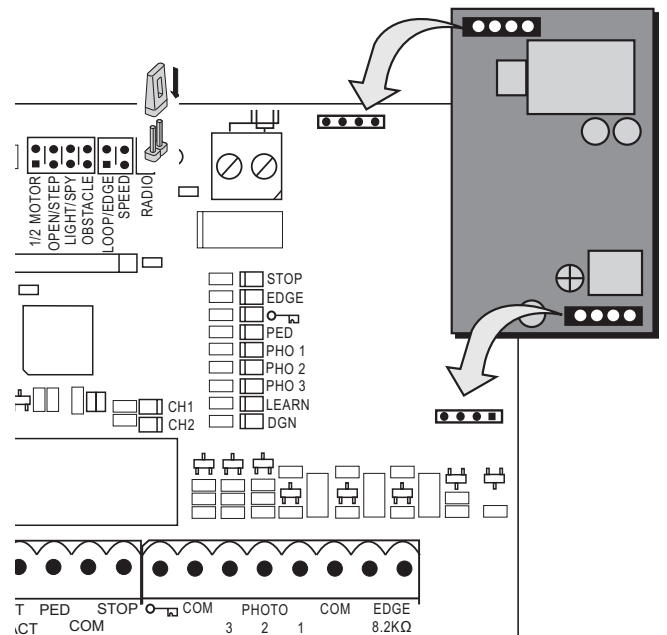
- Insert (connect) jumper "RADIO"
- In order to store a code press a previously selected button on the remote control while simultaneously pressing the learn-buttons P1 or P2 of the logic board.
- When pushing the programming button P1 or P2 an LED will be lit up and goes OFF once the programming was accepted.
- Repeat for all remote controls (a maximum of 180 remote controls can be programmed to each channel).

**Note:** Make sure not to program the same remote control button to CH1 and CH2, otherwise the gate will work improperly.  
Redo programming if required.

- To finish: Remove (disconnect) jumper "Radio"!

#### DELETE

- Insert (connect) Jumper "Radio".
- Press and hold learn-buttons (P1 or P2) for approx. 10 seconds until LED goes out again. All codes programmed to this channel are deleted.
- Remove (disconnect) jumper "Radio"



## LOOP DETECTOR

### Jumper LOOP / EDGE must be plugged

Loop detectors react to metal and the most common use is for cars or trucks but not for bikes or pedestrians.

### Exit loop / Gate Opening Loop (A)

An exit loop is behind the gate and opens the gate when closed, keeps it open or re-opens the gate.

The jumpers OPEN/STEP and LOOP/EDGE must be in position PLUGGED (in place). The gate requires installed photocells and the closing of the gate shall be activated by the automatic close timer.

### Safety/Interrupt loop and Shadow loop (B) (C)

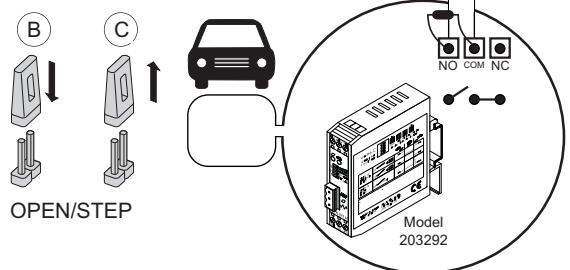
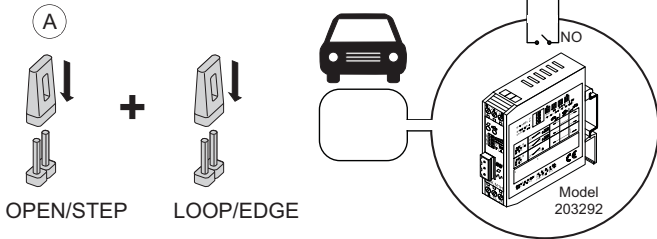
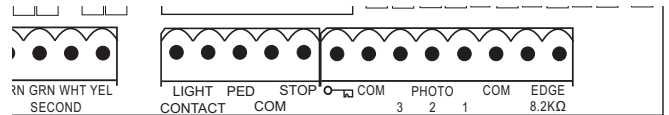
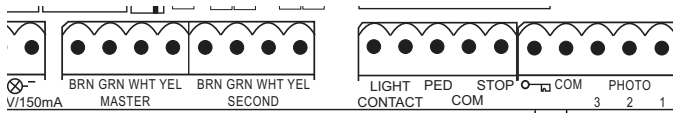
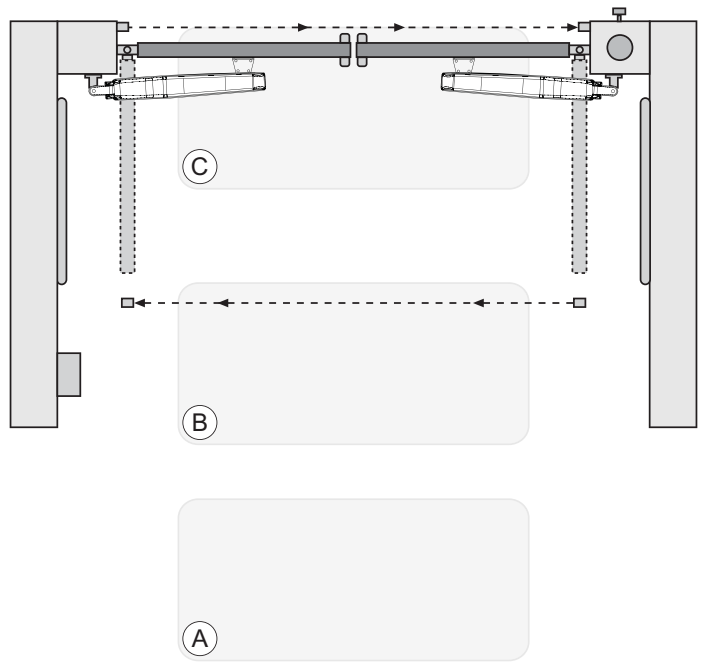
Safety loops can be used to detect cars or truck but do not comply with regulations as single protection since they do not detect people.

The loop detector control board output is wired as NO signal to the 8.2KOhm safety edge output. In case you use safety edges as well: Check the functionality you need before installation!

Interrupt loop => Jumper open-step PLUGGED (in place)

Shadow loop => Jumper OPEN-STEP OPEN (removed)

Other options for loop detectors can be requested from our service department.



## JUMPER SETTINGS

### 1 / 2 Motor

Select if 1 or 2 motors are connected to the control board

FREE: 2 Motors connected  
 PLUGGED: 1 Motor connected

### OPEN/STEP

Changes the programming and reaction of the gate on commands.  
 For the use with loop detectors please refer to the loop detector instruction first.

Step Mode: The gate starts to open if a command is received, next stop, next closes, next stop, next open.....

OPEN Mode: The gate will not react on a command during the travel to the gate open position.

FREE: STEP  
 PLUGGED: OPEN

### LIGHT/SPY

#### Gate Monitoring / yard Lighting

Select if the function is used or leave free.

FREE: LIGHT (yard lighting)  
 PLUGGED: SPY (gate monitoring)

### OBSTACLE

**Factory-equipped with fixed wire jumper. Cutting through increases the operating power at the control. CAUTION: If the jumper is severed, the door system should be secured with additional safety devices (contact strip, etc.).**

### LOOP/EDGE

Select for desired device.

FREE: EDGE  
 PLUGGED: LOOP

### SPEED

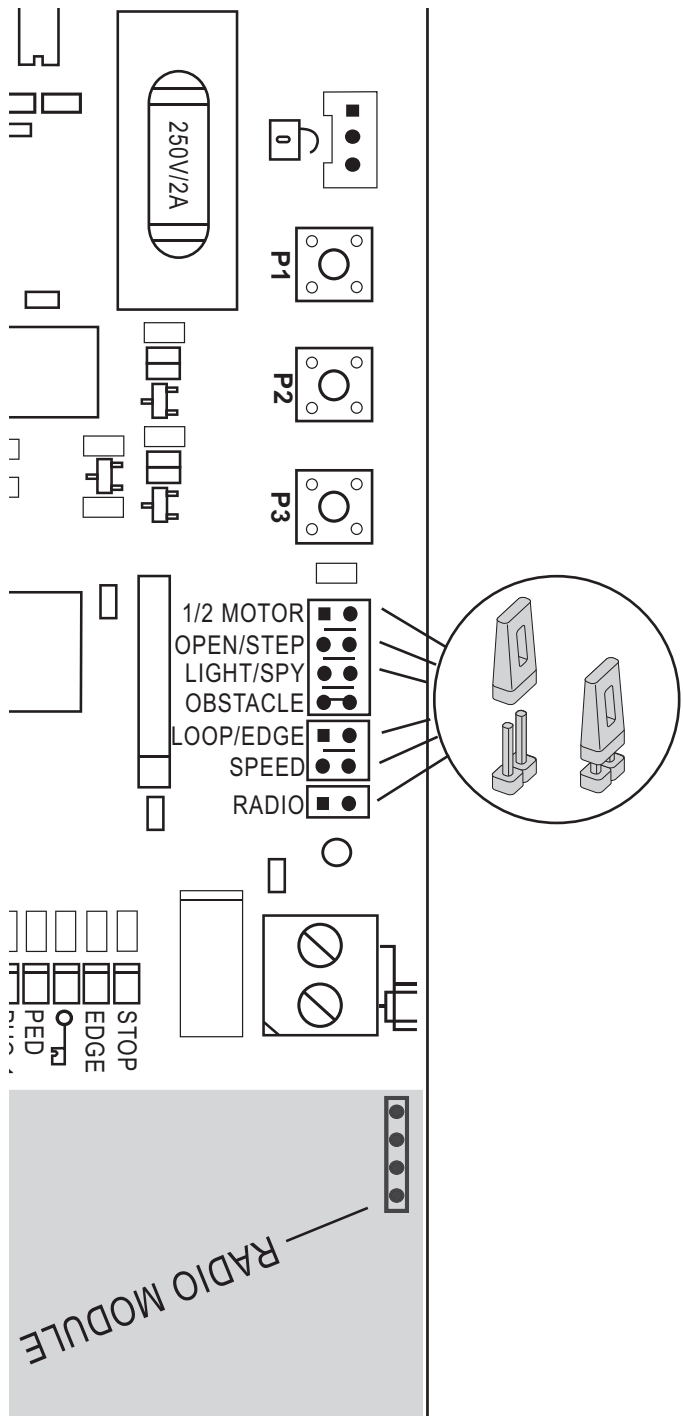
Select for the type of motor you intend to use.

FREE: Slow ART, LYN, SCS, SUB  
 PLUGGED: Fast LYN, SCS, SUB

### RADIO

The radio jumper is required to program remote controls.  
 For programming procedure please refer to page 9, section "radio"  
 FREE: No programming of remote controls possible  
 PLUGGED: Programming of remote controls possible

**Important: Keep jumper "RADIO" disconnected (removed) if not in use!**



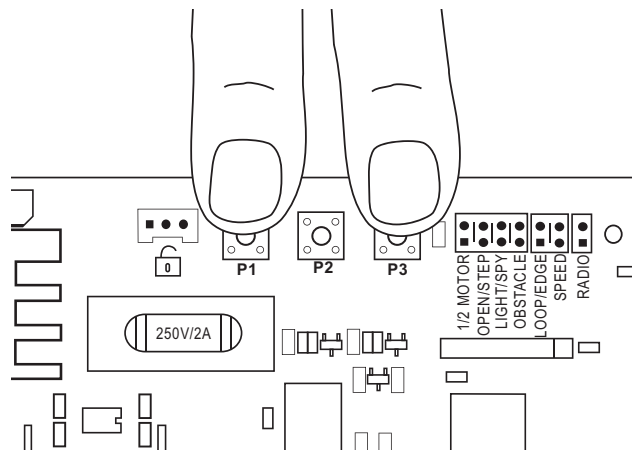
## Wing Delay Adjustment

The delay of one wing is required to open and close the wings correctly and to operate the wings with a safe distance from each other. A larger distance may be required when the mechanical installation distances are different between the wings or wing length is different. The delay time in opening direction is fixed. The closing is adjustable

Push P3 and P1 together and hold for approx 5 seconds, and count the number of clicks you hear. The click sound is produced from a relay (light relay).

- 1 click = factory setting
- 2 clicks = 15%
- 3 clicks = + 50%
- 4 clicks = + 100%
- 5 clicks = no delay (wings move simultaneously)

Repeat the procedure if required.



## INITIAL OPERATION

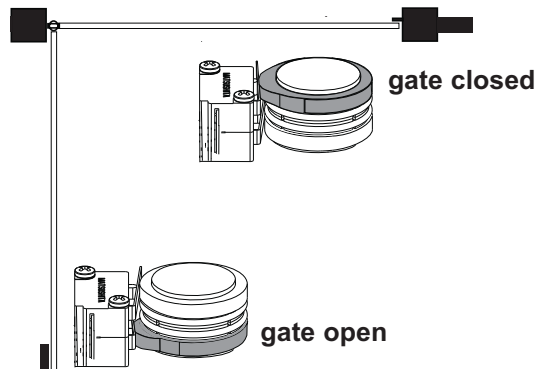
### BASIC SETTING

Proceed step by step. If you are not sure, start again at the beginning. Take sufficient time to make these settings.

1. Are all components required for operation connected? Motors, photocells, safety contact strip, stop switch.
2. Make sure that nobody is present in the range of the gates.
3. Close the gate/s and attach motor/s.

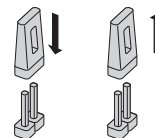
#### ART:

- Reference point or "passpoint" has to be adjusted to allow a successful travel distance programming. The cams under the cover of the ART need to be positioned correctly. The top cam clicks the micro switch first and the bottom cam as second. The micro-switches pushed by the cam shall not be pushed (clicked) at the same time and shall be not pushed in the end position of the gate. Twist the cams by using a pair of pliers or with a large flat screwdriver.
- Disengage the gate using the release key for this adjustment.
- In case the drive arms are, after this installation step, re-located the cam position has to be checked if a further adjustment is required.
- Jumper settings for ART: Jumper SPEED removed! ART will not work if speed jumper is in place (ON). By factory setting no jumper is placed.



#### SUB (Underground):

- Jumper setting: Jumper SPEED in place for faster gate movement or removed if gate is heavy or safest way of operating is required. Can be changed any time later after completion of the installation.



#### LYN-SCS Operator:

- Jumper setting: Jumper SPEED in place for faster gate movement or removed if gate is heavy or safest way of operating is required. Can be changed any time later after completion of the installation.

Now connect the mains supply (230V) to the control board.

#### BASIC SETTING:

1. Press buttons P1, P2 and P3 simultaneously for approx. 2-3 seconds until yellow LED flashes.
2. Monitor the gate. Press and hold P1 for 1-2 seconds. The wing with motor 1 opens. If motor 1 closes, it is wired incorrectly and the red and blue wires of the motor cable must be reversed. (Caution: Disconnect Power!) Repeat steps 1 and 2. Leave gate/s in partially open position.

**NOTE:** General operation – if you release the button, the gate will immediately stop. By pressing the button again the gate will move in the opposite direction until you release the button, and so on.

3. Press and hold P2 for 1-2 seconds. The wing with motor 2 must open. (Do not open gate completely, only short distances.) If motor 2 closes, it is wired incorrectly and the red and blue wires of the motor cable must be reversed. (Caution: Disconnect Power!) Repeat steps 1 and 2. Leave gate/s in partially open position.

**NOTE:** The control board is active for this manual setting mode for approx. 20 seconds. If necessary, start again by pressing P1, P2 and P3 simultaneously.

Now check the following:

1. SCS only: During opening the front housing must not touch the gate. Stop opening several times and check. If housing touches the gate dimensions A/B must be checked and if necessary, underlay the gate pillar with flat washers in order to enlarge clearance.
2. Both wings must open completely. Do not open the wings too far! If there are no stops, choose and mark a position for maximum opening.
3. SUB (underground operator) only: Now adjust your hard-stop in the box. Wait until learn-LED goes out (20 seconds after a button was pressed).

### PROGRAMMING TRAVEL DISTANCES “SIMPLE I”

**NOTE:** End stops must be available in CLOSED and OPEN modes.

1. Wings must be closed
2. Press P1 until wing / motor 1 starts opening (learn-LED flashes)  
Automatic programming starts (slow travel)  
Wing 1 moves to the stop in OPEN position  
Wing 2 moves to the stop in OPEN position  
Then wing 2 moves to the stop in CLOSE position.  
Then wing 1 moves to the stop in CLOSE position.  
When the learn-LED goes out the programming has finished.

### PROGRAMMING TRAVEL DISTANCES “SIMPLE II”

**NOTE:** If there are no stops at the OPEN position, the wing should be stopped at opening angle of 90 degrees.

1. Both wings must be closed.
2. Press P1 until wing / motor 1 starts opening
3. Press P1 hard when wing / motor 1 reaches OPEN position. Wing 2 starts.
4. Press P1 hard when wing / motor 2 reaches OPEN position. After that wing 2 closes automatically. The wing 1 closes automatically.
5. The motors “learn” the CLOSE position automatically.  
If required, individual CLOSE positions can be programmed as well. Press P1 hard at the desired CLOSE position for each wing. When the learn-LED goes out the programming has finished.

### PROGRAMMING TRAVEL DISTANCES “ADVANCED”

**NOTE:** In this mode P1 must be pressed 9 times. With every time the button is pressed a position (time) is stored. (This allows programming of SOFT-STOP (slow travel) in order to adjust to application. Long or short phases of SOFT-STOP are possible.

1. Both wings must be closed.
2. Press P1 and P2 for approx.5-6 seconds until wing / motor 1 starts opening.Release buttons!!!
3. Press P1 again. SOFT-STOP for wing / motor 1 in OPEN direction starts at this point.
4. Press P1 again when OPEN position is reached.Now wing / motor 2 starts automatically to open.
5. Press P1 again. SOFT-STOP for wing / motor 2 in OPEN direction begins at this point.
6. Press P1 again when OPEN position is reached. Now wing / motor 2 starts closing automatically.
7. Press P1 again. SOFT-STOP for wing / motor 2 in CLOSE direction begins at this point.
8. Press P1 again when CLOSE position is reached. Now wing / motor 1 starts automatically to close.
9. Press P1 again. SOFT-STOP for wing / motor 1 in CLOSE direction begins at this point.
10. Press P1 again when CLOSE position is reached.  
Done!

**NOTE:** If one wing reaches a stop and button P1 is not pressed, then the motor moves towards the stop and stores this position automatically.

**COMPLETION OF INSTALLATION / PROGRAMMING**

Once the travel distances are programmed, the remote controls can be programmed as well. (Refer to PROGRAMM / DELETE REMOTE CONTROLS).

1. You can now let the door run 2 complete cycles by pressing a key on the remote or a connected switch and observe the process. Close the door again, WITHOUT making another setting.
2. If all adjustments are done, check operation of photocells, switch, flashing light, remotes, accessories, etc.
3. Advise people using the gate with regard to gate operation, safety functions and how to release the gate in order to operate it manually.

**TIMER TO CLOSE (AUTO-CLOSE)**

**NOTE: Only possible with connected photocells (1 + COM). Time frames from 2 seconds up to 120 seconds are possible.**


Activate:

1. Press and hold P2 until yellow LED starts flashing
2. Now count the time you wish to program
3. Press P2 again. Done!


Deactivate:

1. Press and hold P2 until yellow LED starts flashing.
2. Press P3. Yellow LED goes out. Done!

**FORCE / TORQUE OF MOTOR**  
 Thrust of the motor is set automatically while programming the travel distance. Thrust can only be modified by programming the travel distance again. If gate movement is impeded by weather or changes to the installation (rust or inappropriate lubrication) it may have to be repaired.

 The control board complies with the latest EU guidelines. One of these guidelines specifies that the closing forces at the gate edge must not exceed 400N (40 kg) for the last 500 mm before the door is CLOSED. Above 500 mm, the maximum force at the gate edge must not exceed 1400 N (140 kg). If this cannot be ensured, a contact strip must be mounted on the gate at a height up to 2.5 m or on the pillar on the opposite side (EN12453).

**BATTERY DISPOSAL**  
 Batteries and rechargeable batteries may not be disposed along with domestic waste, but are obliged to be returned. After use they can be returned free of charge locally e.g. in trade or at municipal collecting points. Batteries and rechargeable batteries are marked with a crossed waste container as well as with the chemical symbol which describes their toxic element, "Cd" for cadmium, "Hg" for mercury and "Pb" for lead.



## INDICATION OF THE DIAGNOSIS LED

The LED diagnostics show the first upcoming issue. If several issues are existing the LED diagnostics may not show them.

Indication	Description	Remedy
1x blinking	Motor 1 has insufficient connection to control board Control board does not see motor sensor. Travel distance programming was not successful	Cables not wired or badly connected. Check terminals precisely. Consider wire lengths The gate must be closed completely before programming the travel distance
2x blinking	Motor 2 has insufficient connection to control board	Refer to 1x blinking
3x blinking	Limits for motor 2 have not been accepted A: After or during programming travel: Wing 1 did not open wide enough and did not meet the integrated passpoint which is located inside the operator halfway above the spindle. B: Motorcables have insufficient connection to control board Yellow or white cable not wired or badly connected	A: Open gate wide enough when programming the travel (50% over maximum) B: Check terminals precisely. Consider wire lengths C: See 1x blinking (wiring)
4x blinking	Limits for motor 1 have not been accepted	Refer to 3x blinking
5x blinking	Travel has not been programmed The process of programming has been interrupted	The gate must be closed completely before programming the travel distance.
6x blinking	Force to operate the gate is too high A: Gate is out of order B: Gate is rough-running C: Gate stopped through windload D: Wrong mechanical installation	Refer to 5x blinking also A: Repair gate B: Check if gate can be easily moved C: Do not operate gate in very windy conditions D: Reprogram to achieve sufficient level of force
7x blinking	Photocells 1 block installation + LED PHO1 =OFF A: Object blocks photocells B: Alignment of the sensors is incorrect C: Power supply to photocells is insufficient	A: Remove object B: Check alignment C: Check cable widths and contacts
8x blinking	Photocells 2 block installation	Refer to 7x blinking
9x blinking	Photocells 3 block installation	Refer to 7x blinking
10x blinking	Emergency stop switch blocks installation	A: Check wiring B: Check basic setting of control board (Jumpers)
11x blinking	Safety edge blocks installation A: Object obstructs safety edge B: Defective safety edge C: Power too low or broken wire in supply	A: Remove object B: Check wiring. Check resistor 8.2KOhms C: Check basic setting of control board (Jumpers)
12x blinking	Power supply to control board is too low A: Defective supply 230V or malfunctioning contact B: Broken wire in supply cable (copper cable) C: The battery (accessory) to operate the gate whilst power failure is dead.	A: Check electric contact B: Check by electrician C: Allow battery to charge 24 hours
13x blinking	EEPROM Fault Power up failed	Replace control board
14x blinking	Only LYN/SCS Release lever OPEN	Close (re-connect) release lever,
15x blinking	Defect on relay or major electrical component A: Overload B: Bad wiring (wrong) D: water in photocells (bad installation) E: a photocell was connected before but not removed (disconnected)	Replace logic board  Check wiring Reprogram the travel distance from gate fully closed



## FAQs

Pressing P1, P2 and P3 does not show any reaction		Jumper "RADIO" must be removed Check whether the radio module is seated correctly.
The gate opener doesn't respond at all; no LED is on.	Possibly power failure.	1. Check conductor and zero conductor. 2. Check house fusing.
Immediately after the gate has started moving, it stops and reverses.	Obstacle in area of gate.	Check gate area for objects check wiring of motor (LYN/SCS)
The gate opener does not open the gate fully.	1. Are the post dimensions A+B correct? 2. Has the travel of the controller been set correctly?	1. Check A+B dimensions. 2. Reprogram if required
Gate can only be opened	1. photocell blocks	1. Function and connection must be checked
"Timer to close" doesn't work.		1. Only works if the 2-cable photocell 770E(ML) or 771E(ML) has been installed.
The control board does not work any more using the transmitter, only with the switch and even then only as long as a button is pressed and kept pressed.	1. A safety photocell, a contact strip or the stop disables the control board 2. Only one photocell was connected for OPEN	Check diagnostic LED
The gate opener doesn't respond at all, although the controller has been connected (LEDs are on).	1. Remote control has not been programmed. 2. LEDs indicate a fault. 3. Photocell connected incorrectly. 4. Motor terminal possibly not connected properly.	1. Programming remote control. 2. Find and rectify fault(s) (see description of diagnostic LEDs). 3. Check photocell connection / programming. 4. Check terminals and connections.
Control board does not work with transmitter	1. transmitter not programmed 2. A photocell blocked	1. Program transmitter 2. Check photocells, check diagnostic LEDs 3. Jumper "RADIO" must be plugged.
The remote control's range is too short.	The installation of an external aerial is recommended as the controller with the short cable aerial is located either behind the post or near ground level in most cases. The optimum location of the aerial is as high as possible in all cases. An appropriate aerial with installation kit can be obtained from Chamberlain as an accessory.	
The gate must follow a slope.	Not recommended! Change gate! The gate can move in an uncontrolled (dangerous) manner if the gate opener has been released. A stronger force is needed in the upwards direction of the slope and then, in the opposite direction, the gate opener's force is too strong.	
The gate post is so thick that I am unable to comply with the requisite A+B dimensions.	Reduce post thickness or shift gate location.	
Travel distance can't be programmed.	1. Jumper setting not correct 2. Motor wiring not correct or cable broken 3. Diagnostic LED 4. Electric noise in wiring disturbs 5. Gate moves for 1 second only and stops without reversal during programming 6. ART only: Passpoint adjustment incorrect 7. ART only: Motor disengaged	1. Check manual, especially "1/2 Motor" 2. If motor is moving check brown, green, white, yellow cable. Test with different cable to exclude that the defect is the cable in the ground. Or connect for testing the motor direct to the control board without extension cable. 3. Check diagnostic for route cause. 4. Refer to solution 2 and if applicable change wiring type or routing. Verify wiring with manual recommendation. 5. Not enough electrical power (volts) or bad wiring. Refer to solution 2. 6. Adjust passpoint cams in motor. Refer to ART manual. 7. Engage motor. Refer to ART manual.
The operator sometimes moves slowly	Powerfailure	Common procedure. After powerfailure the operator performs a selftest. Depending on the operator model this can take a few seconds or a complete cycle (SUB). Do not interrupt this test via remote control or switch, otherwise the limits may change. If this is the case reprogram travel distance using P1.