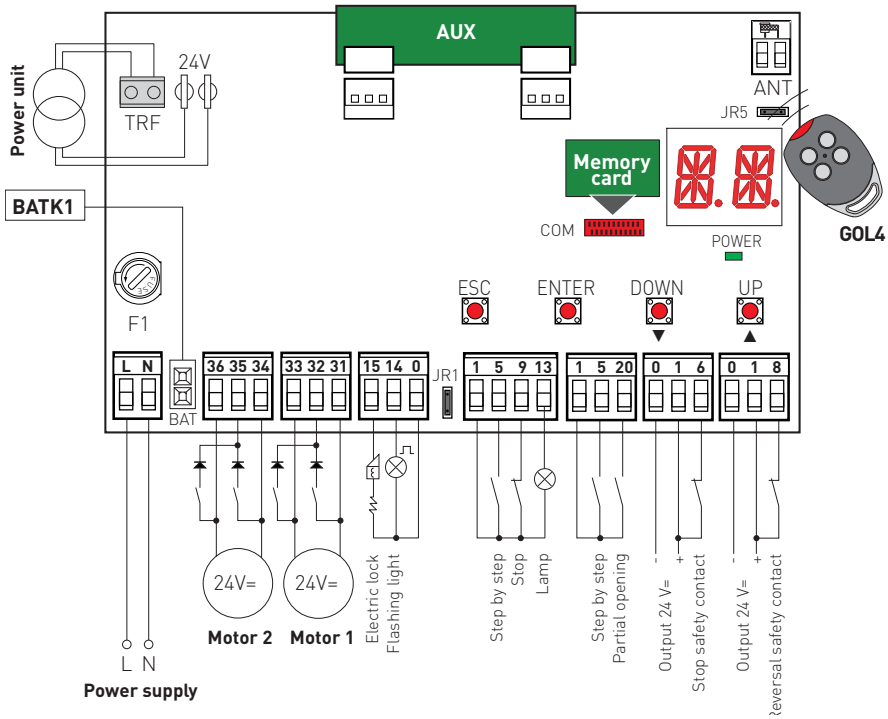
ENTREMATIC

Ditec E2H

HomeLink® kompatibel

IP1967EN

Installation manual for control panel for 2-motor 24V⎓ automations with built-in radio



Index

Caption

This symbol indicates instructions or notes regarding safety issues which require particular attention.

This symbol indicates informations which are useful for correct product function.

This symbol indicates instructions or notes intended for technical and expert personnel.

This symbol indicates operations not to be effected for not compromise the correct operation of the automation.

This symbol indicates options and parameters which are only available with the indicated item.

This symbol indicates options and parameters which are not available with the indicated item.

IP1967EN - 2016-08-01

1. General safety precautions

"Important instructions for installation safety.
Incorrect installation can cause serious injury"

This installation manual is intended for qualified personnel only.
Installation, electrical connections and adjustments must be performed in accordance with Good Working Methods and in compliance with the present standards.
Read the instructions carefully before installing the product. Bad installation could be dangerous.
The packaging materials (plastic, polystyrene, etc.) should not be discarded in the environment or left within reach of children, as these are a potential source of danger.
Before installing the product, make sure it is in perfect condition.
Do not install the product in explosive areas and atmospheres: the presence of inflammable gas or fumes represents a serious safety hazard.
The safety devices (photocells, safety edges, emergency stops, etc.) must be installed taking into account: applicable laws and directives, Good Working Methods, installation premises, system operating logic and the forces developed by the automation.
Before connecting the power supply, make sure the plate data correspond to that of the mains power supply. An omnipolar disconnection switch with minimum contact gaps of 3 mm must be included in the mains supply.
Check that there is an adequate residual current circuit breaker and a suitable overcurrent cut-out upstream of the electrical installation in accordance with Good Working Methods and with the laws in force.
When requested, connect the automation to an effective earthing system that complies with current safety standards.
During installation, maintenance and repair operations, cut off the power supply before opening the cover to access the electrical parts.
The electronic parts must be handled using earthed antistatic conductive arms.
The manufacturer of the motorisation declines all responsibility in the event of component parts being fitted that are not compatible with the safe and correct operation.
Use original spare parts only for repairing or replacing products.

1.1 Safety functions

The E2H control panel has the following safety functions:

- obstacle recognition with force limiting;

The maximum response time of the safety functions is 0.5 s. The reaction time to a faulty safety function is 0.5 s.
The safety functions comply with the standards and performance level indicated below:

EN ISO 13849-1:2008 Category 2 PL=c
EN ISO 13849-2:2012

The safety function cannot be bypassed either temporarily or automatically. Fault exclusion has not been applied.

2. EC declaration of conformity

The manufacturer Entrematic Group AB, with headquarters in Lodjursgatan 10, SE-261 44 Landskrona, Sweden, declares that the Ditec E2H type control panel complies with the conditions of the following EC directives:

EMC Directive 2004/108/EC
Low Voltage Directive 2006/95/EC
R&TTE Directive 1999/5/EC.

Landskrona, 08-09-2014

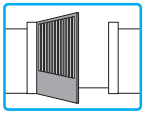
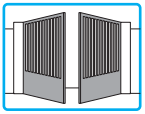
Marco Zini
(President & CEO)

3. Technical data

	ARCBH OBBI3BH LUXO3BH LUXO4BH	**FACIL3H FACIL3EH**
Memory module	3M10B 3M1AR 3M1LX	3M1FC
Power supply	230 V~ 50/60 Hz	
F1 fuse	F1,6A	F1,6A
Motor output	24 V⎓ 2x4,5 A max	24 V⎓ 2x6 A max
Accessories power supply	24 V⎓ 0,5 A	24 V⎓ 0,5 A
Temperature	min -20 °C max 55 °C	min -20 °C max 55 °C
Degree of protection	IP55	IP54
Memorizable radio codes	100 200 [BIXMR2]	100 200 [BIXMR2]
Radio frequency	433,92 MHz	433,92 MHz

NOTE: the given operating and performance features can only be guaranteed with the use of DITEC accessories and safety devices.

3.1 Applications

4. Connection of power supply

Before connecting the power supply, make sure the plate data correspond to that of the mains power supply.
An omnipolar disconnection switch with minimum contact gaps of 3 mm must be included in the mains supply.
Check that upstream of the electrical installation there is an adequate residual current circuit breaker and a suitable overcurrent cutout.
Use a H05RN-F 3G1,5 or H05RR-F 3G1,5 type electric cable and connect to the terminals L (brown), N (blue), ⏚ (yellow/green) in the automation.
Secure the cable using the special cable clamp and remove the outer sheath near the terminal only.
Connection to the mains power supply, in the section outside the automation, is made with independent channels and separated from the connections to the control and safety devices.
The channels must penetrate a few centimetres inside the automation thorough a hole maximum Ø16 mm.
Make sure there are no sharp edges that may damage the power supply cable.
Make sure that the mains power supply (230 V) conductors and the accessory power supply (24 V) conductors are separate.

5. Commands

Command		Function	Description
1 — 5	N.O.	STEP BY STEP	Selecting BC ▶ CS ▶ 1-5, the closure of the contact activates a closing or opening operation in the sequence: open-stop-close-open. Warning: if automatic closing is enabled, the duration of the stop is selected via the selection AP ▶ SS.
		OPENING	Selecting BC ▶ CS ▶ 1-3, the closure of the contact activates an opening operation.
1 — 6	N.C.	SAFETY STOP	Selecting BC ▶ 64 ▶ 1-6, the opening of the safety contact stops and prevents any movement. Note: to set the different contact safety functions, see the AP ▶ SM parameter settings.
1 — 6	N.O.	CLOSING	Selecting BC ▶ 64 ▶ 1-4, the closure of the contact activates a closing operation.
1 — 8	N.C.	REVERSAL SAFETY CONTACT	The opening of the safety contact triggers a reversal of motion (re-opening) during a closing operation. Selecting BC ▶ SQ ▶ ON, with the automation idle, the opening of the contact prevents any operation. Selecting BC ▶ SQ ▶ OF, with the automation idle, the opening of the contact prevents the closing operation only.
1 — 9	N.C.	STOP	Opening the safety contact stops the current operation. Note: the flashing light flashes.
1 — 9	N.O.	HOLD TO RUN FUNCTION	Selecting BC ▶ CS ▶ 1-3 and BC ▶ 64 ▶ 1-4, the permanent opening of the safety contact enables the hold to run function. In this state, the opening (1-5) and closing (1-6) controls function only if held in the pressed position, and the automation stops when the controls are released. Any safety devices, plus the automatic closing, are disabled.
1 — 20	N.O.	PARTIAL OPENING	Selecting BC ▶ P2 ▶ P3, the closure of the contact activates a partial opening operation of the door wing commanded by motor 1, and the duration is fixed by adjustment BA ▶ RP. Warning: if automatic closing is enabled, the duration of the stop is selected via the adjustment AP ▶ TP.
1 — 20	N.C.	AUTOMATIC CLOSING	Selecting BC ▶ P2 ▶ 1-2, the permanent closure of the contact enables automatic closing.

WARNING: Make a jumper on all NC contacts if not in use. The terminals with the same number are equal

5.1 SOFA1-SOFA2 or GOPAVRS self-controlled safety edge

Command		Function	Description
		SAFETY TEST	Insert the electronic card SOFA1-SOFA2 or GOPAVRS in the housing AUX on the control panel. Selecting AP ▶ ET ▶ ON, the terminal 41 activates a safety edge test before each operation. If the test fails, an alarm message is visualised on the display.
1 —⌐— **6**	N.C.	OPENING SAFETY DEVICE	Selecting AP ▶ D6 ▶ SE, connect the output contact of device SOFA1-SOFA2 to terminals 1-6 on the control panel (in series with the photocell output contact, if installed).
1 —⌐— **8**	N.C.	REVERSAL SAFETY CONTACT	Selecting AP ▶ D8 ▶ SE, connect the output contact of device SOFA1-SOFA2 to terminals 1-8 on the control panel (in series with the photocell output contact, if installed).

6. Output and accessories

Output	Value - Accessories	Description
	24 V⎓ / 0,5 A	Power supply output for external accessories, including automation status lamp. Electronically protected output.
1 — 13	24 V⎓ / 3 W	**Automation status lamp (proportional).** The light switches off when the automation is closed; the light switches on when the automation is open; the light flashes with a variable frequency while the automation is operating.
0 — 14	**LAMPH** 24 V⎓ / 25 W	**Flashing light (LAMPH).** Selecting BC ▶ FF ▶ ON, the flashing light activates simultaneously with the opening and closing operation. NOTE: with automatic closing enabled, there is a pre-flashing of 3 s that cannot be regulated.
0 — 14	24 V⎓ / 25 W max.	**Courtesy light.** Selecting BC ▶ FF ▶ OF, it is possible to connect a courtesy light that activates each time a total or partial opening command or closing command is received. The duration of the light can be regulated via the adjustment BA ▶ LU and BA ▶ LG.
0 — 15	24 V⎓ / 1,2 A	**Electric block 24V.**
0 — 15	12V~ / 15 W	**Electric lock 12 V.** Connect the supplied 8.2 Ω / 5W resistance in series.
AUX		The control panel is fitted with a housing for a plug-in card, such as radio receivers, magnetic spirals, etc. The action of the card can be selected via the selection BC ▶ AM. WARNING: the plug-in cards must be inserted and removed with the power supply disconnected.
	**Storage module**	The storage module allows remote controls to be stored and the type of control panel application to be defined (see TECHNICAL DETAILS on page 4). If the control panel is replaced, the storage module being used can be inserted in the new control panel. WARNING: the storage module must be inserted and removed with the power supply disconnected.
	**BATK1** 2 x 12 V / 2 Ah	**Battery operating.** The batteries are kept charged when the power supply is on. If the power supply is off, the control panel is powered by the batteries until power is re-established or until the battery voltage drops below the safety threshold. If this occurs, the control panel turns off. WARNING: the batteries must always be connected to the control panel for charging. Periodically check the efficiency of the batteries. NOTE: the operating temperature of the rechargeable batteries is approximately +5°C/+40°C.

7. Selection

	Description	OFF	ON
JR1	**Display mode setting.**	Visualization mode. It is only possible to visualize the values and parameters present.	Maintenance mode. It is possible to visualize and modify the values and parameters present. The entry in maintenance mode is indicated by the permanent switching on of the right-hand point.
JR5	**Built-in radio receiver.**	Disabled	Enabled

8. Signals

LED	ON	Flashing
POWER	24 V= power supply.	Indicates the transfer of data during DMCS programming.

9. Adjustment

NOTE: before making all the automation adjustments, insert the dedicated memory module and press ENTER, or load the SF ▸ RC configuration applying to the automation installed (see options). When the power is connected or in the case of motor non-selection, the display will block all operations and give an M0 error message.

WARNING: the pressure on the keys can be quick (less than 2 s) or prolonged (longer than 2 s). Unless specified otherwise, quick pressure is intended.
To confirm the setting of a parameter, prolonged pressure is necessary.

9.1 Switching on and off

The procedure to switch on the display is as follows:

- press the ENTER key

- start of display functioning check

- visualisation of first level menu

The procedure to switch off the display is as follows:

- press the ESC key and keep it pressed

NOTE: the display switches off automatically after 60 s of inactivity.

9.2 Key combinations

The simultaneous pressing of the keys ▲ and ENTER performs an opening command.

The simultaneous pressing of the keys ▼ and ENTER performs a closing command.

The simultaneous pressing of the keys ▲ and ▼ performs a POWER RESET command.
(Interruption of the power supply and restart of the automation).

IP1967EN - 2016-08-01

9.3 Main menu

- use the keys ▲ and ▼ to select the required function

- press the ENTER key to confirm

Display	Description
	**AT - Automatic Configurations.** The menu allows you to manage the automatic configurations of the control panel.
	**BC - Basic Configurations.** The menu allows to visualise and modify the main settings of the control panel.
	**BA - Basic Adjustments.** The menu allows to visualise and modify the main adjustments of the control panel.
	**RO - Radio Operations.** The menu allows you to manage the radio operations of the control panel.
	**SF - Special Functions.** The menu allows to set the password and manage the special functions in the control panel.
	**CC - Cycles Counter.** The menu allows to visualise the number of operations carried out by the automation, and manage the maintenance interventions.
	**AP - Advanced Parameters.** The menu allows to visualise and modify the advanced settings and adjustments of the control panel.

After confirming the selection, you access the second level menu.

WARNING: it is possible that, owing to the type of automation and control panel, certain menus are not available.

9.4 Second level menu - AT (Automatic Configurations)

- use the keys ▲ and ▼ to select the required function

- press the ENTER key to confirm

The procedures to activate the functions are described in the table.

Display	Description
	H0 - Predefined setting for residential use 0.  This selection loads predefined values for certain standard parameters: AC - enabling of automatic closing : disabled C5 - step-by-step/opening command operation : step-by-step RM - remote control operation : step-by-step AM - AUX coupling board operation : step-by-step SS - selection automation status at start up : open
	H1 - Predefined setting for residential use 1.  This selection loads predefined values for certain standard parameters: AC - enabling of automatic closing : enabled TC - setting of automatic closing time : 1 minute C5 - step-by-step/opening command operation : step-by-step RM - remote control operation : step-by-step AM - AUX coupling board operation : step-by-step SS - selection automation status at start up : closed
	C0 - Predefined setting for condominial use 0.  This selection loads predefined values for certain standard parameters: AC - enabling of automatic closing : enabled TC - setting of automatic closing time : 1 minute C5 - step-by-step/opening command operation : opening RM - remote control operation : opening AM - AUX coupling board operation : opening SS - selection automation status at start up : open
	RD - Resetting the basic settings (SETTINGS RESET). 

WARNING: it is possible that, owing to the type of automation and control panel, certain menus are not available.

IP1967EN - 2016-08-01

9.5 Second level menu - BC (Basic Configurations)

- use the keys ▲ and ▼ to select the required function

- press the ENTER key to confirm

Display	Description		
VS.	VS - Selecting mechanical stops verification. When enabled (ON), with every power supply connection the automation automatically checks the mechanical opening and closing end stops and/or the stop limit switches during opening and closing operation at the speed set with the adjustment BA ▶ VR. During the learning operation, the display visualizes the message MQ.	OF OFF	ON ON
NW.	NW - Selecting number of door wings.	1 1	2 2
AC.	AC - Enabling of automatic closing.	OF OFF	ON ON
C5.	C5 - Step-by-step/opening command operation.	I-S STEP-BY-STEP	I-3 OPENING
RM.	RM - Radio receiver functionality.	I-S STEP-BY-STEP	I-3 OPENING
AM.	AM - AUX coupling board operation.	I-S STEP-BY-STEP	I-3 OPENING
SS.	SS - Selection of automation status at activation. Indicates how the control panel considers the automation at the time of switch-on, or after a POWER RESET command.	OP OPEN	CL CLOSED
EL.	EL - Enablement of electric lock release stroke. When an electric lock is present, the enablement of the release stroke is recommended.	OF OFF	ON ON

Display	Description		
	SO - Enabling reversal safety contact functionality. When enabled (ON) with the automation idle, if the contact 1-8 is open, all operations are prevented. When disabled (OFF) with the automation idle, if the contact 1-8 is open, it is possible to activate the opening operation.	 OFF	 ON
	NI - Activation of NIO electronic anti-freeze system. When enabled (ON), it maintains the efficiency of the motors even in low temperatures. Note: for correct operation, the control panel must be exposed to the same ambient temperature as the motors.	 OFF	 ON
	64 - Functioning of safety stop/closing command.	 STOP	 CLOSING
	P2 - Functioning of partial opening command contact 1-20. P3 - Partial opening command. 1-2 - Enablement of automatic closing	 PARTIAL OPENING	 AUTOMATIC CLOSING
	EO - Functioning of electric lock/electric brake. SC - Functioning of electric lock (functioning time set via adjustment ) SF - Functioning of electric magnet powered with automation closed	 ELECTRIC LOCK	 ELECTRIC MAGNET
	FF - Setting function of 0-14 exit. OF - Courtesy light ON - Flashing light	 COURTESY LIGHT	 FLASHING LIGHT

WARNING: it is possible that, owing to the type of automation and control panel, certain menus are not available.

9.6 Second level menu - BA (Basic Adjustments)

- use the keys ▲ and ▼ to select the required function



- press the ENTER key to confirm

WARNING: the gap between the adjustment values of the parameters may vary according to the type of automation.

Display	Description		
	MT - Selection of automation type. NO - None 03 - OBBI-ARC F3 - FACIL L3 - LUXO WARNING: it is essential to set the type of automation **before** making the adjustments.	 NONE  FACIL	 OBBI-ARC  LUXO
	R1 - Adjustment of motor 1 thrust on obstacles. [%] The control panel is fitted with a safety device which, when it detects an obstacle: - in opening, stops the movement with a disengagement operation; - in closing, before the deceleration, inverts the movement; - in closing, during the deceleration, stops or inverts the movement according to the type of limit switch installed.	 0%	 99%
	R2 - Adjustment of motor 2 thrust on obstacles. [%] The control panel is fitted with a safety device which, when it detects an obstacle: - in opening, stops the movement with a disengagement operation; - in closing, before the deceleration, inverts the movement; - in closing, during the deceleration, stops or inverts the movement according to the type of limit switch installed.	 0%	 99%
	RP - Adjustment of the partial opening measurement. [%] Adjusts the percentage of operation in relation to the total opening of the automation.	 10%	 99%

Display	Description		
FA.	FA - Selection of opening limit switch mode. NO - None RA - Deceleration limit switch (after the activation, the door wing slows down its movement) SX - Stop limit switch (after the activation, the door wing stops its movement) PX - Proximity limit switch (after the activation, the door wing continues as far as the end stop)	NO NONE SX STOP	RA DECELERATION PX PROXIMITY
FC.	FC - Selection of closing limit switch mode. NO - None RA - Deceleration limit switch (after the activation, the door wing slows down its movement) SX - Stop limit switch (after the activation, the door wing stops its movement) PX - Proximity limit switc (after the activation, the door wing continues as far as the end stop)	NO NONE SX STOP	RA DECELERATION PX PROXIMITY
VA.	VA - Setting opening speed. [V]	10 MIN	27 MAX
VC.	VC - Setting closing speed. [V]	10 MIN	27 MAX
VR.	VR - Setting acquisition manoeuvre speed. [V] WARNING: the acquisition manoeuvre speed can only be adjusted with the setting BC ▸ VS ▸ ON.	04 MIN	20 MAX
TC.	TC - Setting automatic closing time. [s] Adjustment occurs with intervals of varying sensitivity. - from 0 to 59 sec with 1 sec intervals; - from 1 to 2 min with 10 sec intervals.	00 0 SECONDS 1' 1 MINUTE	59 59 SECONDS 2' 2 MINUTE
M1.	M1 - Setting motor 1 manoeuvre time. [s] Adjustment, in seconds, of the total manoeuvre time for motor 1. WARNING: adjustment occurs with a sensitivity interval of 0.5 sec, indicated by the switching on of the right-hand point. Example: 07 = 7 seconds 07. = 7,5 seconds	02 MIN	60 MAX

IP1967EN - 2016-08-01

Display	Description		
M2.	M2 - Setting motor 2 manoeuvre time. [s] Adjustment, in seconds, of the total manoeuvre time for motor 2. WARNING: adjustment occurs with a sensitivity interval of 0.5 sec, indicated by the switching on of the right-hand point. Example: 07 = 7 seconds 07 = 7,5 seconds	02 MIN	60 MAX
TR.	TR - Setting motor 1 closing delay time. [s] Adjustment, in seconds, of the delay time for starting the manoeuvre of motor 1, in relation to motor 2.	00 MIN	30 MAX
TO.	TO - Impostazione tempo di ritardo motore 2 in apertura. [s] Regolazione in secondi del tempo di ritardo della partenza di manovra del motore 2 rispetto al motore 1.	00 MIN	30 MAX
LU.	LU - Setting switch-on time for courtesy light. [s] Adjustment occurs with intervals of varying sensitivity. - from 0 to 59 sec with 1 sec intervals; - from 1 to 2 min with 10 sec intervals; - from 2 to 3 min with 1 min intervals; NO - Disabled ON - Permanent switch-on, switch-off using radio command WARNING: the courtesy light switches on at the start of each operation.	NO DISABLED 01 1 SECOND 1' 1 MINUTE 3' 3 MINUTES	59 59 SECONDS 2' 2 MINUTES ON ON
LG.	LG - Setting switch-on time for independent light. [s] Adjustment occurs with intervals of varying sensitivity. - from 0 to 59 sec with 1 sec intervals; - from 1 to 2 min with 10 sec intervals; - from 2 to 3 min with 1 min intervals; NO - Disabled ON - Switch-on and switch-off using radio command WARNING: the switching on of the light does not depend on the start of an operation, but it is possible to control it separately using the relevant transmitter key.	NO DISABLED 01 1 SECOND 1' 1 MINUTE 3' 3 MINUTES	59 59 SECONDS 2' 2 MINUTES ON ON

Display	Description		
	LR - Setting electric lock release time. [s] ON - Active throughout the entire operation	 MIN  ON	 MAX
	TS - Setting renewal of automatic closing time after safety release. [%]	 MIN	 MAX
	WO - Setting opening pre-flashing time. [s] Adjustment, in seconds, of the lead time for the switch-on of the flashing light, in relation to the start of the manoeuvre from a voluntary command.	 MIN	 MAX
	WC - Setting closing pre-flashing time. [s] Adjustment, in seconds, of the lead time for the switch-on of the flashing light, in relation to the start of the manoeuvre from a voluntary command.	 MIN	 MAX

WARNING: it is possible that, owing to the type of automation and control panel, certain menus are not available.

9.7 Second level menu - RO (Radio Operations)

- use the keys ▲ and ▼ to select the required function

- press the ENTER key to confirm

The procedures to activate the functions are described in the table.

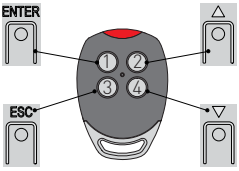
Display	Description		
SR.	SR - Transmitter memory storage.  It is possible to directly access the Transmitter memory storage menu with the display switched off, but only with Display visualization mode set at 00 or 03: - by transmitting a remote control not present in the memory, - by transmitting an unstored channel of a remote control already present in the memory.		
ER.	ER - Deleting a single transmitter.  		
EA.	EA - Total memory deleting.  		
EC.	EC - Deleting a single code. **(FUTURE USE)**		
RE.	RE - Setting memory opening from remote control. When enabled (ON) remote programming is activated. To memorise new transmitters without using the control panel, press and hold down the PRG key of an already-memorised GOL4 transmitter for 5 seconds until the LED switches on (within the capacity of the receiver) and press any CH key of the new transmitter. NOTE: make sure that undesired transmitters are not accidently memorized.	 OFF	 ON
MU.	MU - Setting the maximum number of transmitters that can be memorized on a memory module. It is possible to memorise up to 100 or 200 rolling code transmitters. NOTE: it is necessary to set MU ▶ 10 to allow the system configuration to be saved on the memory module	 200	 100

<table>
<tr><th>Display</th><th colspan="3">Description</th></tr>
<tr><td>C1.
C2.
C3.
C4.</td><td colspan="2">C1 - Setting key 1 function of memorized transmitter.
C2 - Setting key 2 function of memorized transmitter.
C3 - Setting key 3 function of memorized transmitter.
C4 - Setting key 4 function of memorized transmitter.
NO - None
1-3 - Opening command
1-4 - Closing command
1-5 - Step-by-step command
P3 - Partial opening command
LG - Courtesy light status change command
1-9 - STOP command

WARNING: 1-3 (opening) and 1-5 (step-by-step) are binary options and are dependent by the bC ▶ rM selection.</td><td>NO NONE
1-4 CLOSING
P3 PARTIAL
1-9 STOP

1-3 OPENING
1-5 STEP-BY-STEP
LG COURTESY LIGHT</td></tr>
<tr><td>rK.</td><td colspan="2">RK - Navigation via transmitter keyboard.
With the display switched off, quickly type the sequence of keys ③③②④① using the desired memorized transmitter.
Note: it is recommended to use a dedicated transmitter.

WARNING: during navigation via transmitter keyboard, NONE of the memorized transmitters are active.

To test the new configuration, switch off the display and give an open command using key ③.
 
Navigation via transmitter keyboard is automatically disabled after 4 minutes of inactivity or by setting rK ▶ OF.</td><td>OF OFF

ON ON</td></tr>
</table>

Warning: it is possible that, owing to the type of automation and control panel, certain menus are not available.

9.8 Second level menu - SF (Special Functions)

- use the keys ▲ and ▼ to select the required function

- press the ENTER key to confirm

The procedures to activate the functions are described in the table.

Display	Description
	SP - Setting the password  Note: this is only possible when the password is not set. The setting of the password prevents unauthorised personnel from accessing selections and adjustments. It is possible to annul the set password by selecting the sequence JR1=ON, JR1=OFF, JR1=ON.
	IP - Inserting the password.  Note: this is only possible when the password is set. When the password is not inserted, it is possible to access the visualisation mode regardless of the selection made with JR1. When the password is inserted, it is possible to access the maintenance mode.
	RD - Resetting the basic settings (SETTINGS RESET). 
	EU - Deleting of the user configurations and the last configuration set present in the memory module. 
	SV - Saving user configuration.  Selecting RQ ▶ MU ▶ 10 it is possible to save up to 2 personalised configurations in the memory positions U1 and U2 only with the storage module present on the control panel.

Display	Description
RC.	RC - Loading configuration.  It is possible to load the configurations previously saved, or load the predefined settings available in the memory positions 01, 02, 03 and 04. The predefined settings are as follows: 01 : OBBI 02 : FACIL 03 : LUXO 04 : ARC Loading a predefined setting, standard average values are automatically set for certain parameters (type of automation, operation speed, operation times and deceleration times).
RL.	RL - Loading the last configuration set NOTE: the control panel automatically saves the last configuration set, and keeps it memorised in the storage module. In the event of a fault or the replacement of the control panel, it is possible to restore the last configuration of the automation by inserting the storage module and loading the last configuration set. 
CU.	CU - Viewing the electronic panel's firmware version.  = Release 0.3.4 (example) Note: view only.

WARNING: it is possible that, owing to the type of automation and control panel, certain menus are not available.

9.9 Second level menu - CC (Cycles Counter)

- use the keys ▲ and ▼ to select the required function

- press the ENTER key to confirm

The procedures to activate the functions are described in the table.

Display	Description
CV.	CV - View total manoeuvres counter. ENTER ▶ 24 ▶ 16 ▶ 25 = 241.625 manoeuvres (example) Note: view only.
CA.	CA - Setting the maintenance alarm interval. (max 500.000 partial manoeuvres) ENTER ▶ 00 ▶ ▲ ▼ ▶ 08 [EXAMPLE] ▶ ENTER = 08 — 08 50 00 = 85.000 manoeuvres (ex) ▶ 00 ▶ ▲ ▼ ▶ 50 [EXAMPLE] ▶ ENTER = 50 ▶ 00 ▶ ENTER (2 s) = 00 It is possible to set the required number of operations for the signalling of the maintenance alarm.
OA.	OA - Selecting maintenance alarm viewing mode. 00 - Display (display alarm message V0) 01 - Flashing light (when automation is closed it flashes 4 times every 60 minutes) 02 - Open gate indicator light (when automation is closed it flashes 4 times every 60 minutes) 00 DISPLAY; 01 FLASHING; 02 INDICATOR
CP.	CP - View partial manoeuvres counter. ENTER ▶ 07 ▶ 16 ▶ 25 = 71.625manoeuvres (example) Note: view only.
ZP.	ZP - Resetting partial manoeuvres counter. ENTER (2 s) ▶ OK To ensure correct operation, it is recommended to reset the partial manoeuvres counter: - after each maintenance intervention, - after each setting of the maintenance alarm interval.

Warning: it is possible that, owing to the type of automation and control panel, certain menus are not available.

9.10 Second level menu - AP (Advanced Parameters)

- use the keys ▲ and ▼ to select the required function

- press the ENTER key to confirm

WARNING: the gap between the adjustment values of the parameters may vary according to the type of automation.

Given the complexity of the parameters, use of the Advanced Parameters menu is recommended only for qualified technical personnel.

Display	Description		
AA.	AA - Activating advanced parameters menu. NOTE: activation necessary before being able to scroll through the AP menu.	OF OFF	ON ON
ET.	ET - Enabling of safety test (SOFA1-A2 card).	OF OFF	ON ON
DO.	DO - Setting of disengagement on obstacle during opening. [s]	0.0 MIN	1.0 MAX
DC.	DC - Setting of disengagement on obstacle during closing. [s]	0.0 MIN	1.0 MAX
PP.	PP - Step-by-step sequence with commands 1-5. OFF - Opening-Stop-Closing-Opening ON - Opening-Stop-Closing-Stop-Opening	OF OFF	ON ON
S5.	S5 - Duration of STOP in step-by-step sequence with commands 1-5.	OF TEMPORARY	ON PERMANENT
R9.	R9 - Enablement of automatic closing after command 1-9 (STOP). When enabled (ON), after a command 1-9 the automation carries out the automatic closing (if enabled), after the set time.	OF OFF	ON ON
TA.	TA - Adjustment acceleration phase. [%]	00 FAST	99 SLOW

Display	Description		
	TP - Setting of automatic closing time after partial opening. [s] Adjustment occurs with intervals of varying sensitivity. - from 0 to 59 sec with 1 sec intervals; - from 1 to 2 min with 10 sec intervals.	 0 SECONDS  1 MINUTE	 59 SECONDS  2 MINUTES
	PO - Approaching/deceleration speed during opening. [V]	 MIN	 MAX
	PC - Approaching/deceleration speed during closing. [V]	 MIN	 MAX
	OB - Deceleration/braking time during opening. [s]	 MIN	 MAX
	CB - Deceleration/braking time during closing. [s]	 MIN	 MAX
	DS - Setting of display viewing mode. 00 - No display 01 - Commands and safety devices with radio test (see paragraph 10.2) 02 - Automation status (see paragraph 10.1) 03 - Commands and safety devices (see paragraph 10.2) NOTE: setting 01 allows to view the reception of a radio transmission for checking its range.	 NONE  STATUS	 RADIO TEST  COMMANDS
	D6 - Selecting device connected to terminals 1-6. NO - None SE - Safety edge PH - Photocells	 NONE  PHOTOCELLS	 EDGE
	D8 - Selecting device connected to terminals 1-8. NO - None SE - Safety edge PH - Photocells	 NONE  PHOTOCELLS	 EDGE

Display	Description		
	SM - Selection of the operating mode of photocell terminals 1-6. (only with ). 00 - During manoeuvre, the opening of the safety contact stops movement with disengagement. 01 - During manoeuvre, the opening of the safety contact stops movement with disengagement. When the contact is reclosed the interrupted manoeuvre resumes. 02 - During manoeuvre, the opening of the safety contact stops movement with disengagement. When the contact is reclosed an opening manoeuvre starts. 03 - During a closing manoeuvre, the opening of the safety contact reverses the movement.	 STOP + DISENGAGE  STOP + OPENING	 STOP + RESUME  REVERSE CLOSING
	TN - Setting intervention temperature for NIO anti-freeze system. [°C] Adjustment of the working temperature of the control panel. DOES NOT refer to outside temperature.	 -6 °C	 +6 °C
	TB - View control panel temperature. **DO NOT USE**	 OFF	 ON
	OL - Selecting open gate indicator light mode. When set ON, the light is switched off when automation is closed; it is switched on when automation is open and during the opening and closing phases. When set OFF the light is switched off when automation is closed; it is switched on when automation is open , it flashes during the opening and closing phases.	 FLASHING	 ON

WARNING: it is possible that, owing to the type of automation and control panel, certain menus are not available.

10. Display viewing mode

WARNING: it is possible that, owing to the type of automation and control panel, certain menus are not available.

10.1 Automation status display

WARNING: the automation status display mode is visible only with the Display viewing mode set on 02.

AP ▶ DS ▶ 02

Display	Description
	Automation closed.
	Automation open.
	Automation stopped in intermediate position.
	Automation closing.
	Automation opening.
	Automation closing from partial opening.
	Automation in partial opening.
	Automation partially open.

10.2 Commands and safety devices display

WARNING: the commands and safety device display mode is only visible with the Display viewing mode set on 01 or 03.

AP ▶ DS ▶ 01

AP ▶ DS ▶ 03

Display	Description
	1-2 - Automatic closing activation command.
	1-3 - Opening command.
	1-4 - Closing command.

	1-5 - Step-by-step command.
	1-6 - Safety with opening and closing stop.
	1-8 - Safety with closing reversal.
	1-9 - STOP command.
	P3 - Partial opening command.
	3P - Hold-to-run opening command.
	4P - Hold-to-run closing command.
	RX - Radio reception (of any memorised transmitter key present in the memory module).
	NX - Radio reception (of any key not memorised).
	CX - AUX coupling board command reception.
	F1 - Generic limit switch relating to motor 1.
	F2 - Generic limit switch relating to motor 2.
	O1 - Detection of an obstacle by motor 1 or arrival of motor 1 at mechanical stop.
	O2 - Detection of an obstacle by motor 2 or arrival of motor 2 at mechanical stop.
	RV - Enablement/disablement of built-in radio receiver via JR5.
	MQ - Acquisition of mechanical stops in progress.
	HT - Heating of the motors (NIO function) in progress.
	J1 - Variation of the JR1 jumper status.
	1C - Closing manoeuvre 1 wing at a time.

10.3 Alarms and anomalies display

WARNING: alarms and anomalies are displayed when any display selection is made. The signaling of alarm messages takes priority over all other displays.

Type of alarm	Display	Description	Remedy
Mechanical alarm		M0 - Automation type not selected.	If the dedicated memory module is present press ENTER. Select a type of automation.
		MB - Absence of motor 1 during an operation.	Check the connection of motor 1.
		MC - Absence of motor 2 during an operation (if 2-motor functioning has been set).	Check the connection of motor 2.
		MD - Irregular functioning of motor 1 opening limit switch.	Check the connection of the motor 1 opening limit switch.
		ME - Irregular functioning of motor 1 closing limit switch.	Check the connection of the motor 1 closing limit switch.
		MF - Irregular functioning of motor 2 opening limit switch.	Check the connection of the motor 2 opening limit switch.
		MG - Irregular functioning of motor 2 closing limit switch.	Check the connection of the motor 2 closing limit switch.
		MH - Incorrect wings overlap.	Verify that the motor which opens first (M1) is connected as shown in fig. 1.
		MI - Detection of third consecutive obstacle.	Check for the presence of permanent obstacles along the automation path.
Radio operations alarm		R0 - Insertion of a memory module containing more than 100 memorized transmitters. Warning: the R0 ▶ MU ▶ 20 setting is automatic.	To save the set configurations in the memory module, cancel a few memorized transmitters to bring the total lower than 100. Set R0 ▶ MU ▶ 10.
		R3 - Memory module not detected.	Insert a memory module.
		R4 - Memory module not compatible with control panel.	Insert a compatible memory module.

Type of alarm	Display	Description	Remedy
Accessories alarm		A0 - Failure of test of safety sensor on contact 6.	Check the device SOFA1-A2 is working correctly.
			If the supplementary SOF card is not inserted, check the safety test is disabled.
		A3 - Failure of test of safety sensor on contact 8.	Check the device SOFA1-A2 is working correctly.
			If the supplementary SOF card is not inserted, check the safety test is disabled.
		A7 - Incorrect connection of contact 9 to terminal 41.	Connect the 1-9 contact
Service		V0 - Request for maintenance intervention.	Proceed with the scheduled maintenance intervention.

11. Starting

WARNING: the system must have mechanical doorstops of appropriate strength or limit switches must be installed.

WARNING: if this control panel is being used to replace a faulty one, it is possible to reset the last automation configuration by inserting the storage module of the old control panel in the housing on the new one, then loading the last configuration set with the SF ▸ RL command.

11.1 Make a jumper for safety contacts 1-6, 1-8, 1-9. Set JR1=ON, JR5=ON.

11.2 If limit switches are used, adjust them by manually moving the wings as described here:
- deceleration limit switch: activation of the limit switch must occur before the mechanical doorstop,
- stop limit switch: activation of the stop limit switch must occur in the open/close position of the wings,
- proximity limit switch: activation of the proximity limit switch must occur near the mechanical doorstop.

11.3 Switch on power.
Warning: the following operations are performed with no safety devices.

11.4 If the dedicated memory module is present, press ENTER, if it is not present, load the SF ▸ RC configuration related to the type of automation installed.

11.5 If the automation has 1 door wing, set BC ▸ NW ▸ 1.

11.6 Verify the BC ▸ VS ▸ ON setting.

11.7 With the automation idle in the intermediate position, give a closing command ENTER + ▽, and check the door wings move in the correct direction. In the event of an incorrect connection, invert the polarity of the motor.
Note: the first closing operation after a power supply interruption is carried out with one door wing at a time, at reduced speed.

11.8 Give an opening command ENTER + △ and verify that the automation carries out the operation at reduced speed stopping at the mechanical doorstops during the opening phase.

11.9 Load the predefined setting most suitable for system available in the AT menu.

11.10 If limit switches are used, define their use by means of settings BA ▸ FA and BA ▸ FC.

11.11 In order to save the configurations in the memory module it is necessary to set RD ▸ MU ▸ 10.

11.12 To modify the operation and deceleration speed settings, the automatic closing times, and the thrust on obstacles, consult the menus.

11.13 Connect the safety devices (removing all relevant jumpers) and verify their correct operation.
Note: ensure that the forces exerted by the door wings are compliant with EN12453-EN12445 regulations.

11.14 If desired, memorize the radio commands with command RD ▸ SR (refer to chapter 12).

11.15 Connect any other accessories and check operation.

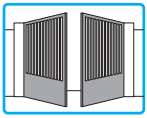
11.16 Once the start up and check procedures are completed, close the container.

12. Troubleshooting

Problem	Possible cause	Alarm signalling	Operation
The automation does not open or close.	No power.		Check power supply cable.
	Short circuited accessories.		Disconnect all accessories from terminals 0-1 (a voltage of 24V= must be present) and reconnect them one at a time. Contact Technical Service
	Blown line fuse.		Replace fuse.
	Safety contacts are open.	I-6 I-8	Check that the safety contacts are closed correctly (NC).
	Safety contacts not correctly connected or self-controlled safety edge not functioning correctly.	A0 A3 I-6 I-8	Check connections to terminals 6-8 on control panel and connections to the self-controlled safety edge.
	Photocells activated.	I-6 I-8	Check that the photocells are clean and operating correctly.
	The automatic closing does not work.		Issue any command. If the problem persists, contact Technical Service
	Faulty motor	MB	Check motor connection, if the problem persists, contact Technical Service.
The external safety devices are not activated.	Incorrect connections between the photocells and the control panel.		Check that I-6 / I-8 is displayed Connect NC safety contacts together in series and remove any jumpers on the control panel terminal board.
			Check the AP → d6 and AP → d8 setting
The automation opens/closes briefly and then stops.	There is a presence of friction.	MI	Manually check that the automation moves freely and check the R 1/R2 adjustment Contact Technical Service
The remote control has limited range and does not work with the automation moving.	The radio transmission is impeded by metal structures and reinforced concrete walls.		Install the antenna outside.
			Replace the transmitter batteries.

The remote control does not work	No storage module or incorrect storage module.		Switch the automation off and plug in the correct storage module.
			Check the correct memorisation of the transmitters on the built-in radio. If there is a fault with the radio receiver that is built into the control panel, the remote control codes can be read by removing the storage module.

13. Example application of automation with two swinging door wings



When the E2H control panel is used in applications for double wings automations with overlapping it is possible to make the following connections.

(Fig. 13.1) Installation with mechanical door-stops in opening and closing phases, without the use of electric limit switches.

(Fig. 13.2) Installation with mechanical door-stop in closing phases, with the use of electric limit switches.

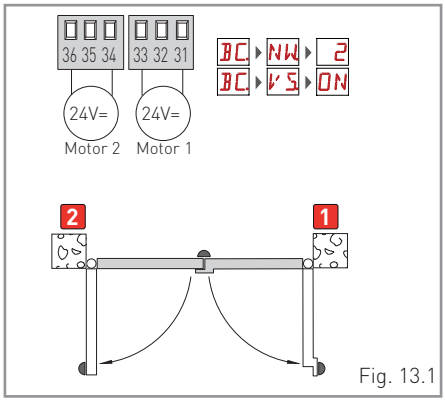


Fig. 13.1

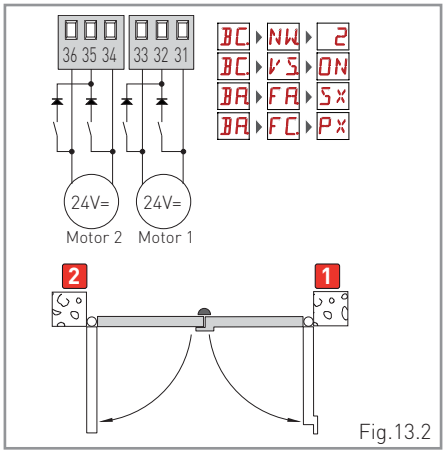
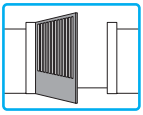


Fig.13.2

14. Example applications for automation with one swinging door wing



When the E2H control panel is used in applications for single wing automations it is possible to make the following connections.

(Fig. 14.1) Installation with mechanical door-stops in opening and closing phases, without the use of electric limit switches.

(Fig. 14.2) Installation with mechanical door-stop in closing phases, with the use of electric limit switches.

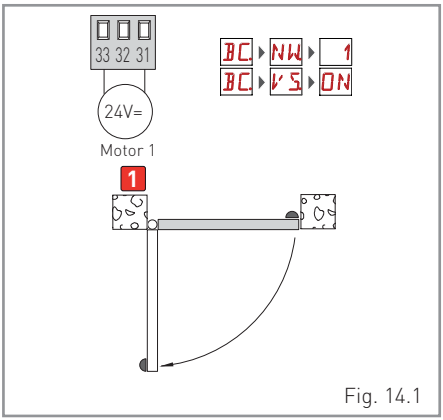


Fig. 14.1

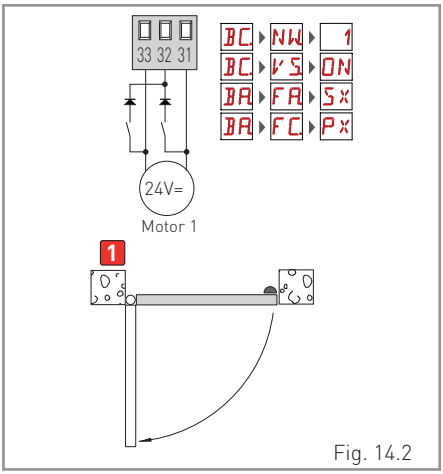


Fig. 14.2

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