# E145



#### IT

QUICK GUIDE - istruzioni di collegamento e programmazione dell'apparecchiatura per la messa in funzione di un impianto tipo (per le illustrazioni fare riferimento all'inserto centrale). Le istruzioni complete devono essere scaricate dal sito www.faacgroup.com.

#### EN

QUICK GUIDE - equipment connection and programming instructions for operating a standard system (refer to the middle for the pictures collection). Complete instructions must be downloaded from the web sitewww.faacgroup.com.

#### FR

QUICK GUIDE - instructions pour la connexion et la programmation de la platine pour la mise en fonction d'une installation type (pour les illustrations se référer à la collection de figures central). Les instructions complètes doivent être téléchargées du site web www.faacgroup.com.

FAAC

## DE

QUICK GUIDE - Anweisungen für den Anschluss und die Programmierung des Geräts zur Inbetriebnahme einer Standardanlage (die Illustrationen finden Sie in der Mitte des Handbuchs). Die vollständigen Anweisungen müssen von der Website www.faacgroup.com heruntergeladen werden.

## ES

QUICK GUIDE - instrucciones de conexión y programación del equipo para la puesta en funcionamiento de una instalación tipo (para las imagenes remítase al anexo central). Las instrucciones completas deben descargarse del sitio web www.faacgroup.com.

## NL

QUICK GUIDE - instructies voor de aansluiting en programmering van de apparatuur voor de inbedrijfstelling van een standaardinstallatie (raadpleeg de inzet in het midden voor de afbeeldingen). De volledige instructies moeten van de website www.faacgroup.com worden gedownload.

## F∕A∕A⊂

#### **CE DECLARATION OF CONFORMITY**

The manufacturer **Company name:** 

FAAC S.p.A. Soc. Unipersonale Via Calari, 10 - 40069 Zola Predosa BOLOGNA - ITALY

hereby declares that the following product:

Description: Model:

Address:

control board F145

conforms to the essential safety requirements of the following ECC directives:

Low Voltage Directive 2014/35/EU Electromagnetic Compatibility Directive 2014/30/EU Directive ROHS 2011/65/EU Furthermore, the following harmonised standards have been applied: EN 60335-1:2012 + A11:2014 - EN 61000-6-2:2005 - EN 61000-6-3:2007 + A1:2011 **Additional note:** this product underwent tests in a typical uniform configuration (all products manufactured by FAAC S.p.A.).

Bologna, January the 1st 2016

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### **1. TECHNICAL SPECIFICATIONS**

**INTENDED USE:** this electronic board is designed and built to control swing and/or sliding gates, which control access of vehicles and pedestrians.

**SAFEcoder** absolute encoder (FAAC Patented), it is easier to adapt existing systems in accordance with the law without having to replace the existing automated systems.

Thanks to the electronic board E145 and the new

Mains primary power supply With switching power supply from 90 V~ to 260 V~; 50/60 Hz

Power absorbed from mains	stand By = 4W; MAX ~ 800 W; sleep < 2 W (can be activated via PC/MAC)
MAX motor load	800 W
Accessories power supply	24V
MAX Accessories current	+24V=== MAX 500 mA; BUS-2easy MAX 500 mA; LOCK (FAAC) 12V~/24V===; LOCK (NON FAAC) 24V=== 500 mA (3A peak)
Operating temperature	da -20°C to +55°C
Power supply fuses	F1 = F10 AH 250 V

#### 2. INSTALLATION SEQUENCE

Remove the pictures collection from the centre of the instruction manual.

- 1. Secure the card into the enclosure and fit the protective cover: fig. 1.
- 2. Wire the electronic board: fig. 2
- to connect traditional photocells: fig. 3
- to connect and address BUS-2easy photocells: fig. (4)
- to connect the receiver module: fig. 6
- to connect any Bus encoders: terminal J10, fig. (6) ref. A.
- 3. Power the board E145.
- 4. Verify the status of the LEDs on board: fig. 7.
- Verify the LEDs on any Bus encoders, depending on the installation: fig. (3) ref. B.

- 6. Set the electronic board, according to the system and customer requirements: Chapter 3. Check the connection of the motors: Paragraph 3.3.
- 7. Store the remote controls in use on the system:
- for SLH encoded remote controls: fig. (8)
- for LC/RC encoded remote controls: fig. 9
- 8. Close the doors to perform SET-UP: Chapter 4.
- 9. According to the installed devices and the regulations in force, set the functions of the board: Paragraph 3.4.
- 10. Give an opening impulse to verify that the system works correctly.

Translation of the original instructions

ENGLISH



#### 3. PROGRAMMING

#### **BASIC PROGRAMMING**

Basic Functions list: Paragraph 3.1.

 Press F until the first basic function is displayed. (each function code remains displayed as long as the F button is pressed).



2. Release: The function value is displayed (default or other programmed one).



3. Use buttons + or - to modify the value.



 Press F to confirm the displayed value. Move to the next function. The modified value becomes effective immediately.

Proceed in the same way for all functions. The last (SE) closes programming.



- 5. In SE select  $\exists$  or  $\neg \neg$  with buttons + or -:
- $\exists$  = save new programming
- no = does NOT save new programming
- Press F to confirm and close. Go back to automation STATUS.

#### ADVANCED PROGRAMMING

Advanced Functions list: Paragraph 3.2.

Press and hold F and + as well, until the first advanced function is displayed. (each function code remains displayed as long as the F button is pressed).



2. Release: The function value is displayed (default or other programmed one).



- Use buttons + or − to modify the value.
   +/R1 -/R2
   ■
- 4. Press F to confirm the displayed value. Move to the next function. The modified value becomes effective immediately.

Proceed in the same way for all functions. The last (5E) closes programming.



- 5. In SE select  $\exists$  or  $\neg \neg$  with buttons + or -:
- $\exists$  = save new programming
- $\neg \Box =$  does NOT save new programming
- 6. Press F to confirm and close. Go back to automation STATUS.

ENGLISH

#### To EXIT the programming at anytime:

- press and hold **F** and then also **-** to switch directly to 5*E*.



## F∕A∕⊂

	3.1 BASIC PROGRAMMING		Basic Function		
	Basic	Function	Default	E LIMIT SWITCH WHEN CLOSING (only displa-	00
	CF	MOTOR TYPE:         I       Motors for swing gates         2       Motors for sliding gates         PC       Mixed configuration from a PC/MAC (e.g.: one swing and one slide)		yed with the CF = I or CF = PC function): □□ = closing limit switches disabled □I = the limit switch determines when the movement is stopped □2 = the limit switch determines when	110
Translation of the original instructions	d٢	<b>DEFAULT:</b> Indicates that all the set values are default values. Indicates that at last 1 set value is different from the default values.	У	Br       SLIDING LEAF BRAKING (only displayed with the CF = 2 or CF = PC function):         DD       = braking disabled         ID       = maximum braking time	05
	10	configuration.	F	<b>LEAF CLOSING DELAY (only displayed with</b> the $\square \square = 2$ function):	05
		E. EP. S. SR. SP. AI. A. AP. AL. b. bC. C. CU Refer to the specific paragraph for a description of the operating logics.	L	BUS-2easy DEVICE REGISTRATION: Register: keep + and - pressed simulta- neously for at least 5 s (the display flashes during this time).	no
	PA	PAUSE A TIME (only displayed with Auto- matic logic): Can be adjusted from DD to 9.5 minutes.	30	∀ will appear once confirmation of the com- pleted registration is given. Release + and →. The status of the BUS-2easy	
	РЬ	PAUSE B TIME (only displayed with Auto- matic logic): Can be adjusted from 00 to 9.5 minutes.	30	devices will appear on the display. <b>Opening photocells:</b> ON = registered and committed on = registered and committed	and registe
	Πn	NUMBER OF MOTORS:I= 1 motorI= 2 motors	⊇ (swing)   (sliding)	Opening and clo-	
	FI	MOTOR 1 POWER: 01 = minimum power 50 = maximum power	25	sing photocells:     BU:       ON = registered and     alw       committed     Enc	<b>5 Status:</b> ays ON coder 2:
	F2	MOTOR 2 POWER (only displayed with the $\square_{D} = 2$ function): $\square_{1} = minimum power$ $\square_{2} = maximum power$	25	Closing photocells: OPEN Photocell: reg ON = registered and com- ON = registered rect mitted and committed	= con cted and istered cor ly
	En	ENCODER USE:         Second s	по	$m_{-}$ MOTOR 2 dead-man DRIVE mode (only displayed with the $m_{-} = 2$ function): +/R1	
	FA	LIMIT SWITCH WHEN OPENING (only displayed with the $\Box F = I$ or $\Box F = P\Box$ function): $\Box = opening limit switches disabled$ $\Box I = the limit switch determines when the movement is stopped$ $\Box 2 = the limit switch determines when deceleration begins$	no	● OPENS (displaying □P) for as long as the button is pressed -/R2 ● CLOSES (displaying □L) for as long as the button is pressed ↑// MOTOR 1 dead-man DRIVE mode: +/R1 ● OPENS (displaying □P) for as long as the button is pressed -/R2	
				■ CLOSES (displaying << ) for as long as the button is pressed	



Default

20

no

пο

пο

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Basic Function	Default	Advanced Function
UP:       Refer to the relative paragraph.         SE       STATUS OF THE AUTOMATED SYSTEM: set the selection:         UP:       UP:         Status of the AUTOMATED SYSTEM: set the selection:         UP:       UP:         UP:       UP:         Status of the AUTOMATED SYSTEM: set the selection:         UP:       UP:         UP:       UP:         UP:       UP:         Status of the status         UP:       UP:         UP:       UP:         UP:       UP:         UP:       UP:         Status of the status       UP:         UP:       UP: <tr< td=""><td> y</td><td>LEAF 2 DECELERATION (only displayed with the □□ = 2 function):         The deceleration space can be adjusted as a percentage of the total travel of leaf 2.         Adjustable from □□ to ∃∃%, in 1% steps.         □□ = no deceleration         □1 = minimum deceleration space         □3 = maximum deceleration space</td></tr<>	 y	LEAF 2 DECELERATION (only displayed with the □□ = 2 function):         The deceleration space can be adjusted as a percentage of the total travel of leaf 2.         Adjustable from □□ to ∃∃%, in 1% steps.         □□ = no deceleration         □1 = minimum deceleration space         □3 = maximum deceleration space
of the automated system will appear on the display once again:	2	PF PRE-FLASHING
$\Box \Box = CLOSED$		우뉴 CLOSING PHOTOCELLS
$\Box I = OPEN$		
□2       = Stationary and then "OPENS"         □3       = Stationary and then "CLOSES"         □4       = In "PAUSE"         □5       = Opening         □6       = Closing         □7       = FAIL SAFE in progress         □8       = Verifying BUS-2easy devices         □9       = Pre-flashes and then "OPENS"         □0       = Pre-flashes and then "CLOSES"         □1       = Emergency open         □2       = Emergency close         HP       = Hold position		EC       ANTI-CRUSHING SENSITIVITY (only displayed with the En = ∃ function):         Varying this function alters the time after which the board commands the leaves to reverse their direction in case of an obstacle or to stop if they are in the contact point search space (refer to the r8 function).         The fourth consecutive obstacle detected in the same direction and position will be defined as a contact point and the leaf will stop in this position.         □□       = minimum sensitivity (maximum time before reversal)         □□       = maximum sensitivity (minimum time before reversal)
Advanced Function	Default	MECHANICAL STOP SEARCH ANGLE (only
<b>TIME OF MAXIMUM POWER AT START-UP</b>	OI	displayed with the $E_{\Box} = 9$ function and
CS FINAL STROKE WHEN CLOSING (FLUID HAMMER) (NOT displayed with the FC = ↓ function)	no	$F_{\Box}$ and $F_{H} = \bigcap_{\Box}$ or $= \Box_{C}^{2}$ functions): The mechanical stop search angle within which the board stops the movement without
$\begin{tabular}{lllllllllllllllllllllllllllllllllll$	ПО	mechanical stop itself can be adjusted.
$\label{eq:linear} \begin{array}{c} \mbox{LEAF OPENING DELAY (only displayed with} \\ \mbox{the } \mathbb{M}_{\square} = 2 \mbox{ function} \end{array}$	02	0.1 degree steps apply when adjusting between 0.3 and 9.9 degrees.
► LEAF 1 DECELERATION: The deceleration space can be adjusted as a percentage of the total travel of leaf 1. Adjustable from □□ to □□%, in 1% steps. □□ = no deceleration	20	1 degree steps apply when adjusting between         10 and 20 degrees.         ER       ADDITIONAL OPERATING TIME only displayed with the End and Figure and Figu

- naximum sensitivity (minimum time ersal) ICAL STOP SEARCH ANGLE (only with the  $E_{\Box} = \Im$  function and B = no or = 02 functions): anical stop search angle within board stops the movement without if an obstacle is encountered or the al stop itself can be adjusted. usted from 0.3 to 20 degrees. steps apply when adjusting between 1.9 degrees. teps apply when adjusting between degrees. AL OPERATING TIME only displathe  $E_{0} = c_{0}$  and  $E_{1}$  and  $E_{2}$  = no or 02 functions) **OUT 1:** Default  $\Box \Box =$  always active. Output can be configured from OO to  $|\neg$ .
  - ۲ł OUT 1 TIMING (only displayed with the of 70 = 0  $\exists$  or  $\circ$  | = 1  $\dashv$  function)

**OUT 2:** -2-Default  $\Box 2 = \text{LED}$  - Refer to the options in  $\Box$ .

03

ΠΠ

DL

99

= minimum deceleration space

= maximum deceleration space

## F∕A∕⊂

Advanced Function D			
٢2	<b>OUT 2 TIMING (only displayed with the</b> $\circ$ 2 = 0 3 or $\circ$ 2 = 14 function):	02	
AS	MAINTENANCE REQUEST - CYCLE COUNTER (linked to the subsequent 2 functions)	по	
пс	CYCLE PROGRAMMING (THOUSANDS)	00	
nd	CYCLE PROGRAMMING (TENS)	00	
S٤	<b>STATUS OF THE AUTOMATED SYSTEM:</b> Refer to S⊤ Basic Function.	У	

#### 3.3 CHECKING THE CONNECTIONS TO THE MOTOR

- $\ensuremath{\square}^2$  (appears if  $\ensuremath{\square}^n=2$ ) Function  $\ensuremath{\square}^2$  activates the leaf connected to motor Mot2 with dead-man enabled.
- If, however, leaf 1 moves, the power must be disconnected and the motor connections on terminal board **J2** must be swapped.
- With a single leaf, if it does not move, you must disconnect the power and check the connection of the motor to M1 on terminal board **J2**.
- If the leaf moves in the wrong direction, disconnect the power and swap the motor phases on terminal board **J2**.
- $\Pi I \;$  Function  $\Pi I$  activates the leaf connected to motor Mot1 with dead-man enabled.
- If, however, leaf 2 moves, the power must be disconnected and the motor connections on terminal board **J2** must be swapped.
- If the leaf moves in the wrong direction, disconnect the power and swap the motor phases on terminal board **J2**.

#### 3.4 USEFUL FUNCTIONS TO PROTECT AGAINST THE RISK OF IMPACT/ CRUSHING ON THE MAIN EDGE

- FI Allows the static thrust force of motor 1 to be adjusted. NOTE: For hydraulic operators, set the force value to maximum and adjust it via the bypass screws.
- F2 Allows the static thrust force of motor 2 to be adjusted **NOTE**: For hydraulic operators, set the force value to maximum and adjust it via the bypass screws.
- En Enables the encoders to be read by the electronic board, thereby guaranteeing that inversion occurs in the presence of obstacles (set  $En=\exists$ ).
- Cd Allows the closing delay of motor 1 to be modified in order to obtain a phase shift between the two leaves and reducing the risk of crushing between the two moving leaves.
- I Allows the space of reduced speed of leaf 1 to be adapted. The impact at slow speed allows the dynamic force to be reduced.
- EC Allows the obstacle inversion sensitivity to be adjusted.
- □ Allows the space before the mechanical stops in which the board does not perform inversions to be modified (set a value between 1 and 49 mm).

## 4. TIME LEARNING - SET-UP

50 flashes on the display indicating that a SET-UP must be performed.

All safety devices are disabled during SET-UP; therefore, prevent any transit in the leaf movement area.

The connected BUS-2easy accessories are always registered during SET-UP. The deceleration spaces can be configured and modified from the Advanced Programming (¬1 and ¬2) without having to repeat the SET-UP. Refer to the complete instructions if there are limit switches.

SETUP WITHOUT ENCODER

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If a system without an encoder is installed, the leaves will require mechanical stops.

- 1. Access BASIC programming and go to the ⊢L function. The -- will appear when the **F** button is released.
- 2. Verify that the leaves are closed. Otherwise:
- Keep the -/R2 button pressed to close leaf 2
- Keep the +/R1 button pressed to close leaf 1
- If the corresponding leaf opens when the **+/R1** and/ or **-/R2** buttons are pressed, disconnect the power and invert the phase wires of the corresponding motor on the J2 terminal board, (terminals 2-3 for the leaf 1 motor and terminals 5-6 for the leaf 2 motor).
- 3. With the leaves closed, keep buttons + and pressed (approx. 3 sec) until 5 flashes on the display.
- Release + and −. Leaf 1 begins its opening movement. Stop the leaf movement by sending an OPEN A pulse as soon as it reaches the mechanical stop.
- (if n = 2) 52 will flash on the display. Leaf 2 begins its opening movement. Stop the leaf movement by sending an OPEN pulse as soon as it reaches the mechanical stop.
- (if ∩n = 2) 53 will flash on the display. Leaf 2 begins its closing movement. Stop the leaf movement by sending an OPEN pulse as soon as it reaches the mechanical stop.
- 7. 54 will flash on the display. Leaf 1 begins its closing movement. Stop the leaf movement by sending an OPEN pulse as soon as it reaches the mechanical stop.
- 8. The board will automatically exit the programming. The OO on the display (status of the automated system) confirms that the SET-UP has been completed correctly. The SO flashing on the display indicates that it is necessary to repeat the SETUP.

#### SETUP WITH ENCODER

- If there are mechanical stops, the SETUP does not require OPEN A pulses.
- 1. Access BASIC programming and go to the En function. Set ∃ to enable BUS encoders.
- 2. Go to the ⊢L function. The -- will appear when the **F** button is released.
- 3. Verify that gate leaves are closed. Otherwise:
- Keep the -/R2 button pressed to close leaf 2
- Keep the +/R1 button pressed to close leaf 1
- If the corresponding leaf opens when the +/R1 and/ or -/R2 buttons are pressed, disconnect the power and invert the phase wires of the corresponding motor on the J2 terminal board, (terminals 2-3 for the leaf 1 motor and terminals 5-6 for the leaf 2 motor).
- With the leaves closed, keep buttons + and − pressed (approx. 3 sec) until 51 flashes on the display.
- Release + and -. Leaf 1 begins its opening movement and will stop as soon as it reaches the mechanical stop. If there is no mechanical stop, stop the leaf movement at the desired point by sending an OPEN A pulse.
- 6. (if □ = 2) 52 will flash on the display. Leaf 2 begins its opening movement and will stop as soon as it reaches the mechanical stop. If there is no mechanical stop, stop the leaf movement at the desired point by sending an OPEN A pulse.
- 7. (if □n = 2) 53 will flash on the display. Leaf 2 begins its closing movement and will stop as soon as it reaches the mechanical stop. If there is no mechanical stop, stop the leaf movement at the desired point by sending an OPEN A pulse.
- 8. 54 will flash on the display. Leaf 1 begins its closing movement and will stop as soon as it reaches the mechanical stop. If there is no mechanical stop, stop the leaf movement at the desired point by sending an OPEN A pulse.
- 9. The board will automatically exit the programming. The DD on the display (status of the automated system) confirms that the SET-UP has been completed correctly. The 5D flashing on the display indicates that it is necessary to repeat the SETUP.

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Translation of the original instructions

## **FAAC** 5. SIGNALLING ERRORS AND ALARMS

The ERROR LED (**DL13**) will flash to signalling an alarm. **Alarms** do not compromise operation.

The ERROR LED (**DL13**) will go on steady to signalling an error. **Errors** stop the operating. Remove the situation causing the error; it will disappear in the following cycle.

By simultaneously pressing + and - the display will show the number corresponding to the error/alarm in progress.

in progress.			
Error	Intervention required		
Board broken	Replace the board		
□ S Invalid SETUP	Repeat board SETUP		
BUS-2easy device e	Fror Ensure that no two pairs of devices have the same address.		
DS BUS-2easy output short-circuit	Check the connections of the con- nected and entered BUS-2easy devices		
Motor 1 limit switch	h error Check the limit switch connections for motor 1		
Motor 2 limit switch	h error for motor 2		
2 BUS-2easy call	Ensure that the BUS devices are operating correctly and, if neces- sary, repeat BUS device acquisition		
∃ FAIL SAFE	Check that the safety devices (pho- tocells) are operating correctly		
니닉 Configuration error	Check that the board is configu- red correctly (basic and advanced programming) and, if necessary, repeat SETUP		
] Motor 1 encoder fa	ult Check the connections or replace motor 1 encoder		
8 Motor 2 encoder fa	ult Check the connections or replace motor 2 encoder		
9 Incorrect memory of	data Repeat BUS-2easy device entry and/or re-program the board		
93 High absorption at	Check that absorption by the ac- +24V cessories connected is within per- mitted limits		

Aları	n	Intervention required		
20	Obstacle on MOTOR 1 (only with encoder/safe- ty edge)	Remove any possible obstacle on leaf 1		
51	Obstacle on MOTOR 2 (only with encoder/safe- ty edge)	Remove any possible obstacle on leaf 2		
25	LOCK 1 output short- circuit	Remove the cause of the short- circuit		
26	LOCK 2 output short- circuit	Remove the cause of the short- circuit		
27	Nr. of consecutive ob- stacles exceeded during opening	Remove any possible obstacle. Should the problem persist, repeat SETUP		
28	Nr. of consecutive ob- stacles exceeded during closing	Remove any possible obstacle. Should the problem persist, repeat SETUP		
30	XF radio code memory full	Cancel the radio codes that are not being used using the PC program or use an additional DEC/MINIDEC/ RP module		
31	Breach alarm	A movement was made with the automated system in status $St = 00$ or 01. Perform an operation cycle.		
35	TIMER active and TIMER fun- ction operating:	TIMER function is operating		
40	Service request	Contact the installer for main- tenance		
50	The HOLD POSITION is ope- rating (active on PC/MAC)	HOLD POSITION function is operating		
60	TIMER active and error in TIMER data	Reload a correct TIMER configura- tion with the PC/MAC programme		
62	Loss of time and date on the board (only if the TIMER is operating)	Reload the time and date with the PC/MAC programme and replace the BAT1 - CR2032 buffer battery		
63	JOLLY TIMER is activated	JOLLY TIMER is enabled by terminal board J3		
64	TIMER DISABLED is ope- rating	TIMER is disabled by terminal board J3		

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#### 6. OPERATING LOGIC

This table summarises the operating logic. Refer to the complete instructions for a detailed description of each.

LO	GIC	Status of the automated system: stopped	Status of the automated system: in motion	Status: photocell action
E	Semi-automatic	An OPEN pulse opens the gate and the following one closes it	An OPEN pulse stops the gate when opening and reopens when the gate is closing	The photocells invert during motion
EP	Semi-automatic, Step-by-Step	An OPEN pulse opens the gate and the following one closes it	An OPEN pulse blocks during motion	The photocells invert during motion
S	Automatic Safety	An OPEN pulse opens the gate and closes automatically after the pause time	An OPEN pulse closes the gate during the pause and inverts during motion	The closing photocells close the gate once again during the pause; they memorise clo- sure when the gate opens and immediately invert when closing
SA	Automatic Safety with inversion during the pause	An OPEN pulse opens the gate and closes automatically after the pause time	An OPEN pulse closes during the pause; has no effect when the gate opens and inverts when it closes	The closing photocells reapply the pause
SP	Automatic Step-by- Step Safety	An OPEN pulse opens the gate and closes automatically after the pause time	An OPEN pulse closes the gate during the pause and blocks during motion	The closing photocells close the gate once again during the pause; they memorise clo- sure when the gate opens and immediately invert when closing
A1	Automatic 1	An OPEN pulse opens the gate and closes automatically after the pause time	An OPEN pulse is ignored when the gate opens, is reapplied during the pause and reopens when the gate closes	The closing photocells close the gate once again during the pause; they memorise clo- sure when the gate opens and immediately invert when closing
A	Automatic	An OPEN pulse opens the gate and closes automatically after the pause time	An OPEN pulse is ignored when the gate opens, is reapplied during the pause and reopens when the gate closes	The closing photocells reapply the pause
AF	Automatic, Step-by- Step	An OPEN pulse opens the gate and closes automatically after the pause time	An OPEN pulse blocks when the gate opens and during the pause and inverts when it closes	The closing photocells reapply the pause
b	Semi-automatic "b" (OPEN-B inputs be- come CLOSE)	Logic with two separate com- mands: OPEN-A pulse opens; CLOSE pulse closes	An OPEN-A pulse opens when the gate closes, a CLOSE pulse closes when it opens	The photocells invert during motion
bC	Mixed Logic ("b" in opening; "c" in clo- sing), OPEN-B inputs become CLOSE)	Logic with two separate com- mands: OPEN-A pulse opens; pressed CLOSE closes	An OPEN-A pulse opens when the gate closes, a CLOSE pulse closes when it opens	The photocells invert during motion
C	Dead-man (OPEN- B inputs become CLOSE)	Logic with two separate com- mands: pressed OPEN-A opens; pressed CLOSE closes	An OPEN-A pulse opens when the gate closes; a CLOSE pulse closes when it opens	The photocells invert during motion

ENGLISH

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E145



**IT** INSERTO IMMAGINI

EN PICTURES COLLECTION

**FR** COLLECTION DE FIGURES

DE PHOTO KOLLEKTION

ES CONJUNTO DE IMAGENES







## FAA⊂



 Interrompere l'alimentazione elettrica prima di operare sull'apparecchiatura. Prima di fornire l'alimentazione elettrica dev'essere montato il coperchio di protezione (1).

 Interrupt the electrical power supply before working on the control unit. The protection cover (1) needs to be installed before switching on the power supply.

• Couper l'alimentation électrique avant d'opérer sur la carte électronique. Avant d'activer l'alimentation électrique, le couvercle de protection (1) doit être monté.

• Vor der Arbeit am elektronischen Steuergerät die Stromversorgung unterbrechen. Bevor die Stromversorgung eingeschaltet wird, muss die Schutzabdeckung (1) angebracht werden.

 Interrumpa la alimentación eléctrica antes de intervenir en el equipo electrónico. Antes de activar la alimentación eléctrica, hay que montar la cubierta protectora (1).

 Onderbreek de elektrische voeding alvorens op de elektronische apparatuur in te grijpen. Alvorens de elektrische voeding in te schakelen, moet het beschermdeksel (1) gemonteerd zijn.



\* Blu o grigio - Blue or grey - Bleu ou gris - Blau oder Grau Azul o gris - Blauw of grijs



 CL CLOSING photocells; OP/CL Photocells for OPENING/CLOSING; OP OPENING photocells; OPEN photocell used as OPEN pulse generator • Note: Transmitter and Receiver in the pair must have the same address. Do not give two or more pairs of photocells the same address.

 CL Photocellules en FERMETURE; OP/CL Photocellules en OUVERTU-RE/FERMETURE; OP Photocellules en OUVERTURE; OPEN Photocellule comme générateur d'IMPULSION OPEN • Remarque : Emetteur et Récepteur de la paire doivent avoir la même adresse. Ne pas donner la même adresse à deux ou plusieurs couples de photocellules. • CL Fotozellen beim SCHLIESSEN; OP/CL Fotozellen beim ÖFFNEN/ SCHLIESSEN; OP Fotozellen beim ÖFFNEN; OPEN Fotozelle als Impulsgeber für die OPEN-IMPULS • Hinweis: Sender und Empfänger in der Paar muss dieselbe Adresse haben. Niemals zwei oder mehreren Fotozellen-Paaren die gleiche Adresse geben.

 CL Fotocélulas en CIERRE; OP/CL Fotocélulas en APERTURA/CIERRE;
 OP Fotocélulas en APERTURA; OPEN Fotocélula como emisor de IMPULSO OPEN 

Nota: El Emisor y el Receptor del par deben tener la misma dirección. No asigne la misma dirección a dos o más pares de fotocélulas.

• **CL** Fotocellen voor het SLUITEN; **OP/CL** Fotocellen voor het OPENEN/SLUITEN; **OP** Fotocellen voor het OPENEN; **OPEN** Fotocel als impulsgever voor het OPEN-IMPULS • **Opmerking**: Zender en Ontvanger in het paar moet hetzelfde adres hebben. Niet hetzelfde adres aan twee of meer koppels fotocellen geven.





• Remarque : pour corriger l'association de l'encodeur au moteur M1 ou M2 , inverser les deux fils sur les bornes.

• **Hinweis**: Um die Zuordnung des Encoders zum Motor M1 oder M2 zu berichtigen, die beiden Drähte an den Klemmen vertauschen.

• **Nota**: para corregir la combinación del codificador con el motor M1 o M2, invierta los dos cables en los bornes.

 Opmerking: om de aansluiting van de encoder op de motor M1 of M2 te corrigeren, moeten de draden op de klemmenborden verwisseld worden.











## F∕A∕A⊂





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