DISABILITAZIONE DELLA COSTA DI SICUREZZA IN CHIUSURA

Procedura per impostare il punto di disabilitazione della costa

1. Entrare nella modalità di programmazione tenendo premuto il tasto MENU e selezionare la voce inG con il tasto SEL.
2. Impostare il parametro su on.
3. Fare le altre impostazione eventualmente necessarie, quindi uscire dalla modalità di programmazione.
4. Portare la porta nella posizione di massima apertura, usando il telecomando o il pulsante collegato al morsetto L1.
5. Posizionare sotto la porta un oggetto solido alto al massimo 5 cm, in modo che azioni il bordo sensibile durante l'ultima parte della fase di discesa.
6. Attivare la chiusura della porta (in base al parametro Lol si usa il comando Start o Down); la porta urterà contro l'ostacolo e si riaprirà.

NOTA: In tutte le chiusura successive, se il bordo sensibile viene azionato prima di raggiungere la posizione dove si trovava l'ostacolo, la porta si riapre; se invece viene azionato più in basso, la porta continua a chiudersi.

7. Verificare attentamente, facendo diverse aperture e chiusure, che gli ostacoli vengano riconosciuti normalmente, e che la porta arrivi a chiudersi anche se il bordo viene schiacciato sul pavimento.

Cancellazione della funzione

Se si desidera ripristinare il funzionamento normale, entrare nella modalità di programmazione e impostare la voce inG su oFF: la porta si riaprirà ogni volta che nella fase di chiusura il bordo sensibile viene azionato, indipendentemente dalla posizione della porta.

Modifica della posizione di inizio della disabilitazione della costa

Se in fase di verifica si nota che il punto di disabilitazione è in una posizione non adatta (troppo in alto: ostacoli bassi non vengono riconosciuti; troppo in basso: la porta si riapre quando la costa viene premuta sul pavimento), per modificarlo occorre cancellare la funzione, uscire dalla modalità di programmazione, quindi ripetere dall'inizio la procedura di impostazione.

ATTENZIONE: Se per qualche motivo la prima operazione di chiusura dopo l'impostazione del parametro inG (punto 6 della procedura) viene interrotta o si conclude senza che avvenga l'inversione per attivazione del bordo sensibile, il punto di inizio della disabilitazione non viene rilevato. Occorre quindi rientrare in modalità di programmazione e ripetere l'intera procedura.

IMPORTANT REMARKS

For any installation problem please contact our Customer Service at the number +39-0172.812411 operating Monday to Friday from 8:30 to 12:30 and from 14:00 to 18:00.

V2 has the right to modify the product without previous notice; it also declines any responsibility to damage or injury to people or things caused by improper use or wrong installation.

⚠ Please read this instruction manual very carefully before installing and programming your control unit.

- This instruction manual is only for qualified technicians, who specialize in installations and automations.
- The contents of this instruction manual do not concern the end user.
- Every programming and/or every maintenance service should be done only by qualified technicians.

AUTOMATION MUST BE IMPLEMENTED IN COMPLIANCE WITH THE EUROPEAN REGULATIONS IN FORCE:
EN 60204-1 (Machinery safety. electrical equipment of machines, part 1: general rules)
EN 12453 (Safe use of automated locking devices, test methods, requirements)

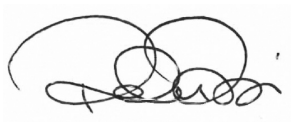
- The installer must provide for a device (es. magnetotermical switch) ensuring the omnipolar sectioning of the equipment from the power supply. The standards require a separation of the contacts of at least 3 mm in each pole (EN 60335-1).
- After making connections on the terminal board, use one hose clamp to fix dangerous voltage wires near the terminal board and another hose clamp to fix safety low voltage wires used for accessories connection; this way, in case of accidental detachment of a conducting wire, dangerous voltage parts will not come into contact with safety low voltage ones.
- The plastic case has an IP55 insulation; to connect flexible or rigid pipes, use pipefittings having the same insulation level.
- Installation requires mechanical and electrical skills, therefore it shall be carried out by qualified personnel only, who can issue the Compliance Certificate concerning the whole installation (EEC Directive 2006/42/CE, Annex IIA).
- The automated vehicular gates shall comply with the following rules: EN 12453, EN 12978 as well as any local rule in force.
- Also the automation upstream electric system shall comply with the laws and rules in force and be carried out workmanlike.
- The door thrust force adjustment shall be measured by means of a proper tool and adjusted according to the max. limits, which EN 12453 allows.
- We recommend to make use of an emergency button, to be installed by the automation (connected to the control unit STOP input) so that the gate may be immediately stopped in case of danger.
- Always remember to connect the earth according to current standards (EN 60335-1, EN 60204-1).

EU DECLARATION OF CONFORMITY

The manufacturer V2 S.p.A., headquarters in Corso Principi di Piemonte 65, 12035, Racconigi (CN), Italy
Under its sole responsibility hereby declares that the products:
CX TOP

conform to the essential requirements established in the following directives:
- 2014/30/UE (EMC Directive)
- 2014/35/UE (Low Voltage Directive)
- RoHS-3 2017/2102

Racconigi, 01/03/2024
V2 S.p.A. legal representative.egale della V2 S.p.A.
Roberto Rossi





DISPOSAL

As for the installation operations, even at the end of this product's life span, the dismantling operations must be carried out by qualified experts.

This product is made up of various types of materials: some can be recycled while others need to be disposed of.

Find out about the recycling or disposal systems envisaged by your local regulations for this product category.

Important! – Parts of the product could contain pollutants or hazardous substances which, if released into the environment, could cause harmful effects to the environment itself as well as to human health.

As indicated by the symbol opposite, throwing away this product as domestic waste is strictly forbidden. So dispose of it as differentiated waste, in accordance with your local regulations, or return the product to the retailer when you purchase a new equivalent product.

Important! – the local applicable regulations may envisage heavy sanctions in the event of illegal disposal of this product.

DESCRIPTION OF THE CONTROL UNIT

- Programming achieved using program buttons and display
- 230V power supply for 1 single-phase motor
- Plug-in adaptor for modular radio receiver MR2
- Up, stop, down inputs
- Up, stop, down and courtesy light controls from transmitter
- 1 photocell input with self-test function
- 1 mechanical, resistive or optical-type safety edge input with self-test function
- 1 emergency (fire alarm / alarm) input
- 24V accessory power supply output
- 230V flashing light/courtesy light output
- Optical-type safety edge power adjustment output
- Plug-in terminal boards
- Monitoring of input status shown by display

TECHNICAL SPECIFICATIONS

Power supply	230 V / 50 Hz
Max motor load	1100 W
Max accessories load 30 Vdc	3 W
Working temperature	-20 ÷ +60 °C
Protection fuse	F1 = 5A ritardato
Dimensions	170 x 185 x 70 mm
Weight	800 g
Protection	IP55

CABLE GLAND ASSEMBLY

The casing can accept 4 cable glands in the special easy-break housings. The type of cable gland is indicated in the figure 1.

⚠ **PLEASE NOTE:**

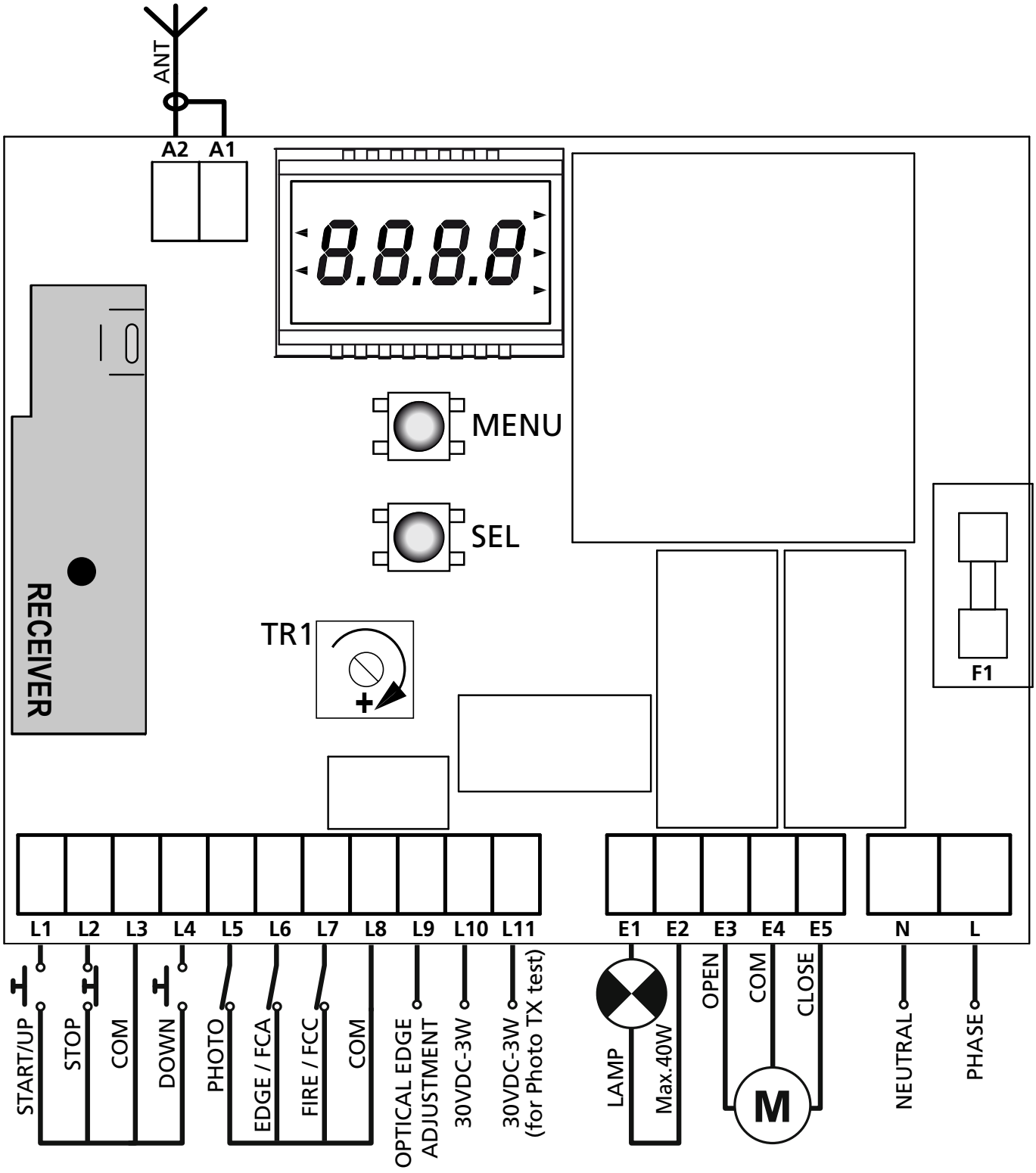
- Remove the electronic circuit board before drill the casing.
- Drill the container using a suitably sized cutter, according to the dimensions of the cable gland.
- Fix the cable glands using the special nuts.

ELECTRIC CONNECTIONS

L1	START/UP. N.O. contact
L2	STOP. N.C. contact
L3	COMMON (-)
L4	DOWN. N.O. contact
L5	PHOTOCELL. N.C. contact
L6	EDGE. N.C. contact (Safety edge - parameter inS = oFF) FCA. N.C. contact (Opening limit switch - parameter inS = on)
L7	FIRE. N.C. contact (Alarm - parameter inS = oFF) FCC. N.C. contact (Closing limit switch - parameter inS = on)
L8	COM (-). Common
L9	Adjustment of the power for OPTICAL SAFETY EDGE
L10	+30 Vdc power output for photocells and other accessories

E1 - E2	Flashing light 230Vac (parameter oul = oFF)
	Courtesy light 230Vac (parameter oul = on)
E3	Motor open
E4	Motor common
E5	Motor close
N	230Vac power supply - neutral
L	230Vac power supply - phase
A1	Antenna shield
A2	Antenna

L11	+30 Vdc power supply for functional test TX photocell



⚠ WARNING: Normally closed inputs STOP (L2), PHOTOCELL (L5), EDGE (L6), FIRE (L7), if not used must be bridged through the COMMON terminal (L3 - L8)

OPTICAL EDGE INSTALLATION

The CX TOP main control unit is configured for the installation of one 24 Vdc powered optical edge and transmitter power regulation.

Connect the transmitter and receiver in accordance with the following table.

	TRANSMITTER	RECEIVER
L6		BLACK CABLE
L8	BLUE CABLE	BLUE CABLE
L9	BLACK CABLE	
L10		BROWN CABLE
L11	BROWN CABLE	

After having made the connections, power-up the main control unit and adjust the power using the trimmer TR1 located on the control unit so as to obtain optimal edge operation.

FIRE / ALLARM INPUT

Safety input for connecting a fire or other type of alarm requiring the immediate automatic opening of the door.

The FIRE command should be connected between the **FIRE (L7)** and **COMMON (L8)** terminals.

When the FIRE contact is opened, the door is opened and cannot be closed again until the contact is reset.

NOTE: If the input is set as an alarm (inH = oFF), when the FIRE contact is open, the port cannot be opened. If the port is already open, it is closed.

PLUG IN RECEIVER

The control unit is suitable for plugging in a MR receiver. MR module receiver is provided with 4 channels and each of them is suitable for a command of the control unit:

- CHANNEL 1 → START/UP
- CHANNEL 2 → STOP
- CHANNEL 3 → DOWN
- CHANNEL 4 → COURTESY LIGHT

⚠ **WARNING: Before programming 4 channels and function logics read carefully the instructions of MR**

OPERATION WITH A TIMER

The control unit allows the connection of a timer for programming door opening and closing times.

To use this function, it is necessary to set the Lo 3 function (see FUNCTION TABLE) on the AUTOMATIC LOGIC (on) and the functions Lo 5 and Lo 2 on oFF

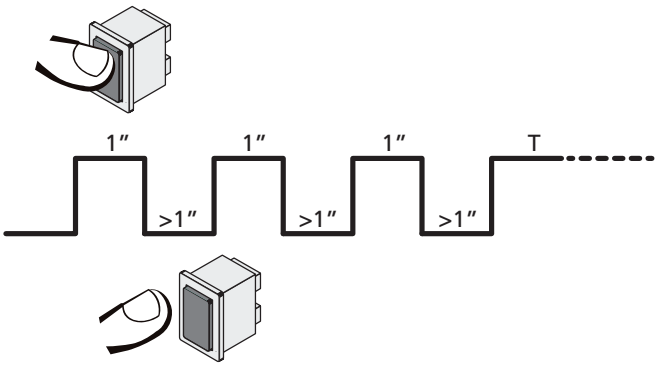
The timer should be connected between the **START (L1)** and **COMMON (L3)** terminals.

Each time the timer closes the contact, the automation device opens the door and remains paused until the contract is released. At this point the countdown starts, for the length of the pause time set, after which the automation device closes the door.

EMERGENCY DEAD MAN OPERATION

This operational mode can be used to move the gate in DEAD MAN mode in particular cases, such as installation/ maintenance or in the case of malfunctioning of photocell, edge, limit switches or encoder.

To activate the function the START command must be pressed 3 times (presses must last at least 1 second; the pause between commands must last at least 1 second).

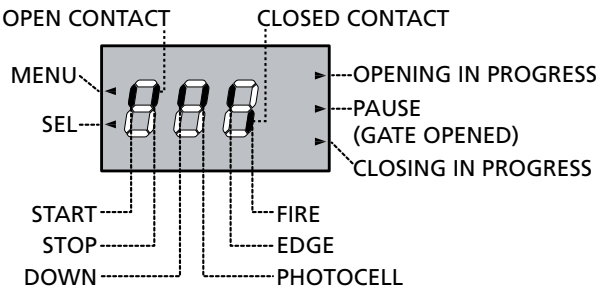


The fourth START command activates the gate in MAN PRESENT mode. To move the gate keep the START command pressed for the duration of the operation (time T).
The function will automatically turn off after 10 seconds of inactivity of the gate.

CONTROL PANEL

When power is on, the control unit checks that display correctly operates by switching on all segments for 1.5 sec. 8.8.8.8.
Firmware version, e.g. Pr 1.0, will be viewed in the following 1.5 sec.

Panel will be viewed upon completion of this test.



The control panel represents the physical status of the terminal board contacts and of the program mode keys: if the upper vertical segment is on, the contact is closed; if the lower vertical segment is on, the contact is open.

The arrows to the left of the display indicate the status of the MENU and SEL buttons.

The arrows to the right of the display indicate the status of the shutter.

- The highest arrow lights up when the shutter is in the opening phase.
- The central arrow indicates that the shutter is paused. If it flashes it means that the timer for automatic closing is active.
- The lowest arrow lights up when the shutter is in the opening phase.

The display shows the following messages when an operation is prevented due to an event:

- L2 - the contact on terminal L2 (STOP) is open
- L5 - the contact on terminal L5 (PHOTOELECTRIC CELL) is open
- L6 - the contact on terminal L6 (EDGE) is open
- L7 - the contact on terminal L7 (FIRE) is open
- P2 - the STOP button on the keyboard has been pressed
- r3 - channel 3 of the receiver (STOP) has been activated
- AU - the AUX channel on the panel (used by WES-EASY) is not working
- FS - the door is already at its limit in the required direction
- OP - the operator has stopped the operation by pressing a button on the control unit

PROGRAMMING

The functions of and times of the control unit are programmed via the configuration menu, which can be accessed and explored using the 2 MENU and SEL keys.

- To access the programming menu, press the MENU key until the display shows in 1
- To change the value of this parameter, press the MENU key: the display shows the currently set value (on / oFF)
- Select the desired value with the SEL key and press the MENU
  button to save the new value: the display shows in 1 again
- Press the SEL key to select the other parameters to be changed

Using the MENU and SEL keys to select and change the required parameters: in the following pages there is a table with all programming parameters, values selected, DEFAULT values set and a brief description of the function.

To exit the programming menu, press the MENU key until the display shows the control panel

If no button is pressed for 30 seconds, the control unit exits programming mode and stores the new parameters.

To exit the programming menu and undo the changes made during the current programming session, press the MENU and SEL keys simultaneously until the display shows the control panel.

To load default data, when the control unit is NOT in programming mode, press the MENU and SEL keys simultaneously until the display shows dEF.
With the SEL key, select the default that you want to load and press MENU to confirm.

NOTE: the control unit is supplied with the dEF1 configuration set

INPUTS						
DISPLAY	oFF	on	dEF1	dEF2	dEF3	dEF4
in 1	**PHOTOCELL ACTIVE ONLY DURING CLOSING** The intervention of the photocell during the opening stage is ignored. The intervention of the photocell during the closing stage causes the shutter to reopen.	**PHOTOCELL ACTIVE DURING OPENING AND CLOSING** The intervention of the photocell during the opening phase causes the motor to stop. When the photocell beam is released, the automation starts during opening for the work time set in parameter t 1. The intervention of the photocell during the closing stage causes the shutter to reopen.	on	oFF	oFF	on
in 2	**PHOTOCELL TEST INACTIVE** The photocell operation test is not performed	**PHOTOCELL TEST ACTIVE** Each time the control unit receives an open or close command, the PHOTOCELL TEST verifies that the PHOTOCELL is operating correctly. If the test fails, the display shows - L5 -	oFF	oFF	oFF	oFF
in 3	**MECHANICAL SAFETY EDGE** The L6 input is configured to manage a mechanical safety edge	**RESISTIVE RUBBER / OPTICAL SAFETY EDGE** The L6 input is configured to manage a safety edge (resistive rubber / optical) with active operation test. If the test fails, the display shows - L6 -	oFF	on	oFF	oFF
in 4	**FIRE FUNCTION** The L7 input is configured to manage a fire alarm	**ALARM FUNCTION** The L7 input is configured to manage an anti-theft command	oFF	oFF	oFF	oFF
in 5	**EDGE / FIRE FUNCTION** The L6 input is configured to manage a safety edge The L7 input is configured to manage an alarm	**LIMIT SWITCH FUNCTION** The L6 input is configured to manage an opening limit switch The L6 input is configured to manage a closing limit switch **NOTE:** If in 5 is set on the settings of the in 3 and in 4 functions, they are not considered	oFF	oFF	oFF	oFF
in 6	**DISABLING OF THE SAFETY EDGE WHILE CLOSING** Function off	**DISABLING OF THE SAFETY EDGE WHILE CLOSING** In case of irregular floors, you might have to disable the safety edge on the last closing section of the door (max. 5cm) to prevent any unwanted enabling of the edge. To set the point at which to disable the edge, follow the procedure on page 20.	oFF	oFF	oFF	oFF

OUTPUTS						
DISPLAY	oFF	on	dEF1	dEF2	dEF3	dEF4
ou 1	**FLASHING LIGHT** Output (E1 - E2) is on intermittently (2 Hz) during opening and closing and during pause mode, if automatic reclosing is active	**COURTESY LIGHT** The output (E1 - E2) is on and fixed during opening, pause and closure. Having completed the operating cycle, the light remains on for the COURTESY LIGHT OFF DELAY time	oFF	oFF	on	on
ou 2	**END OF CYCLE NON-ACTIVE SIGNAL** At the end of the operating cycle, the control unit sends no signal	**END OF CYCLE ACTIVE SIGNAL** At the end of the operating cycle, the control unit sends a signal to the WES sensors to activate ENERGY SAVING mode	oFF	oFF	oFF	oFF

OPERATING LOGIC						
DISPLAY	oFF	on	dEF1	dEF2	dEF3	dEF4
Lo 1	**START/STOP LOGIC** The START/UP input controls the STEP or AUTOMATIC operational cycle based on the programmed operational logic. The DOWN input is inactive	**UP/DOWN LOGIC** The START/UP input always controls opening and the DOWN input always controls closing, independently of the operational logic programmed. UP + DOWN when pressed simultaneously is the same as a STOP command	oFF	oFF	oFF	on
Lo 2	**START INACTIVE WHILE OPENING** During opening, the START command is ignored	**START ACTIVE WHILE OPENING** During opening, the START command interrupts opening (no timer is set for automatic re-closure)	on	on	on	on
Lo 3	**STEP LOGIC** The start command activates an OPEN-STOP-CLOSE-STOP-OPEN operational cycle	**AUTOMATIC LOGIC** The start command activates an OPEN-PAUSE-CLOSE-STOP operational cycle. Closure starts automatically after the pause time set	oFF	oFF	oFF	oFF
Lo 4	**DEAD MAN LOGIC INACTIVE** By simply using the start command, the user can activate the automation device in opening or closing. The maximum duration of opening or closing depends on the operating time set	**DEAD MAN LOGIC ACTIVE** The user must press and hold the start button for the entire duration of the desired opening or closing procedure. The maximum duration of opening or closing depends on the operating time set. DEAD MAN logic may be implemented with both Start/Stop and Up/Down logic. The STOP command interrupts the operational cycle, independently of the status of the control inputs. Hence, if the UP or DOWN button is pressed, the action of STOP is to stop motion, and on its release the motor DOES NOT MOVE UNTIL THE UP or DOWN INPUT IS RELEASED AND PRESSED ONCE MORE **PLEASE NOTE: when the Man-Present function is enabled, radio-controlled operation is disabled. To activate via radio, set the parameter Lo 7 = on**	oFF	oFF	on	oFF

OPERATING LOGIC						
DISPLAY	oFF	on	dEF1	dEF2	dEF3	dEF4
Lo 5	**TIMER FUNCTION** Each time the timer closes the contact L1-L3, the automation starts during opening and remains paused until the contact is released.	**EMERGENCY DEAD-MAN FUNCTION** If a command is rejected due to an active safety switch, you can activate the man mode on the emergency switch (page 14) to move the shutter. When the command is suspended, the control unit returns to the mode set. This way, it is possible to move the shutter when there is evidence of a fault on a safety.	oFF	on	oFF	oFF
Lo 6	**THE INTERVENTION OF THE SAFETY EDGE DOES NOT DISABLE AUTOMATIC CLOSING**	**THE INTERVENTION OF THE SAFETY DISABLES AUTOMATIC CLOSING**	on	on	oFF	on
Lo 7	**DEAD MAN LOGIC FROM BUTTON** The dead-man logic can only be activated via buttons (terminal board and push button panel).	**DEAD MAN LOGIC FROM BUTTON AND FROM THE TRANSMITTER** The dead-man logic can be activated via buttons (terminal board and push button panel) and from the transmitter.	oFF	oFF	on	oFF
Lo 8	**DEAD MAN LOGIC ACTIVATED DURING OPENING AND CLOSING**	**DEAD MAN LOGIC ACTIVATED ONLY DURING CLOSING**	oFF	oFF	on	oFF
Lo 9	**PRE-FLASHING DISABLED**	**PRE-FLASHING ENABLED** The pre-flashing time depends on the settings made for parameter Lo 10	oFF	oFF	oFF	oFF
Lo 10	**PRE-FLASHING TIME** Before activating the motor during opening, the indicator flashes for 1 second. Before activating the motor during closing, the indicator flashes for 3 seconds.	**PRE-FLASHING TIME** Before activating the motor during opening & closing, the indicator flashes for 3 seconds.	oFF	oFF	oFF	oFF

WORKING TIMES						
DISPLAY	**FUNCTION**	**AVAILABLE VALUES**	dEF1	dEF2	dEF3	dEF4
t. 1	**WORK TIME**	7" - 10" - 15" - 20" - 30" - 45" - 60" 75" - 90" - 120"	20"	30"	45"	20"
t. 2	**PAUSE TIME**	10" - 15" - 20" - 30" - 45" - 60" 90" - 120" - 180" - 250"	30"	10"	15"	30"
t. 3	**DELAYED TURNING OFF OF THE COURTESY LIGHTS**	3" - 5" - 10" - 20" - 30" - 1'00 2'00 - 5'00 - 10'0 - 20'0	3"	3"	2'00	2'00