

## simu.

## The Brand of Professionals



MANUFACTURERS OF MOTORS AND AUTOMATIC CONTROLS FOR ROLLER SHUTTERS, SUN BLINDS
INDUSTRIAL AND COMMERCIAL CLOSURES SINCE 1952

For over 65 years, SIMU has built on its industrial expertise and founding values in order to offer quality products and services to its worldwide customers.

INVENTOR OF THE TUBULAR MOTOR FOR ROLLER SHUTTERS IN 1959!
In 1959, SIMU invented the tubular motor for roller shutters, a technology which has become the market standard. Since then, we have continued to expand our knowledge and our expertise of the market and of our customers' activities.
With over 65 years of experience, SIMU has become a reference brand in France and on the international stage!


## SIMU GUARANTEES

SIMU GUARANTEES ITS PRODUCTS FOR ITS PROFESSIONAL CUSTOMERS AGAINST ALL MANUFACTURING, DESIGN OR MATERIAL FAULTS.


- Full solar solution AUTOSUN (T3.5EHZDC motor + battery + panel)


Tubular motors Central motors - BOX and BOX SI motors - Electronic products Battery and solar panel from the
AUTOSUN system sold AUTOSUN system sold alone Accessories (excluding cells and
batteries)
you ARE
O A professional, a direct customer of SIMU : the full waranty applies.
O An individual or indirect customer of SIMU : please contact your installer or reseller to know the details of the waranty applicable to you.

## AFTER-SALES SERVI(E

SIMU FORMATION


We accompany our professional customers through to training. Our training department offers a programme of technical courses to help you get to know SIMU products and understand their installation, adjustment and programming rules
To find out more about our training offer, please contact your usual SIMU sales consultant.


Is a product under warranty has a failure? Contact us!
The SIMU After Sales Service will repair or replace it within 2 weeks (as soon as we receive the defective product)

Our General Terms and Conditions of Warranty and the After Sales Service return form are available on www.simu.com in the "Support/ Warranty" section

ONLINE SUPPORT


- Manual components - Safety brake
- Plug Hz and BHz ON/OFF - Sun sensor BHz


FAQ, for immediate answers to the most frequently asked questions about our products.
The online catalogue with all available references available and their technical documentation;
(1) (1)

## (11)

Your online ordering platform, reserved for SIMU professional customers (Metropolitan France). To order, consult your prices or track your order

## SIMU SERVIIES

## DAILY, CONTACT

OUR TECHNICIANS ANSWER
TO YOUR TECHNICAL QUESTIONS AND ASSIST YOU WHEN

YOU NEED HELP
FOR INSTALLATION,
ADJUSTMENT OR
TROUBLESHOOTING
OF SIMU PRODUCTS.

CUSTOMER SERVICE

Tel. +33384647500 service@simu.com


Our technicians will answer you from Monday to Friday from 8 am to $12 \mathrm{pm}-1.30 \mathrm{pm}$ to 5.15 pm ( 4 pm on Friday) Excluding public holidays and closure periods

## INTRODVCTION

- IDENTIFIFYING A MOTOR STICKER
- SECURITY

The control mode p. 9

- Installation recommendations
- WIRING PRECAUTIONS


## - (ENTRIS wired central motor

- Installation
p. 12

Wiring with key switch p. 13
End-limits setting
Troubleshooting p. 17

- (ENTRIS VEOHZ radio central motor

Installation
Wiring
19
Compatible transmitters
End-limits setting
Command mode
Validation of the first command point
Control of the visual command
Use

- Optionnal settings

Troubleshooting
-T8, T8M, T8S, T8S DMI SINGLE-PHASE MOTOR Installation tubular motors T 8 and $\mathrm{T8M}$
installation tubular motors T8 and T8M p. 28
Installation tubular motors T8S and T8S DMI p. 29

- Wiring with key switch
p. 30

End-limits setting
Troubleshooting p. 33

- T9, TgM three-Phase motor p. 35

Installation
Examples of installation
Wiring three-phase motor with SD350-with manual override - 400V Wiring three-phase motor with SD350 - without manual override - 400V Wiring three-phase motor with SD350-with manual override - 230 V Wiring three-phase motor with SD350-without manual override - 230V Wiring three-phase motor with SD510 - with manual override - 400 V Wiring three-phase motor with SD510 - without manual override - 400 -Wiring three-phase motor with SD510-with manual override - 230V -Wiring three-phase motor with SD510 - without manual override - 230V End-limit settings
Troubleshooting
SIMUBOX EXTERNAL MOTOR
p. 57
p. 58
Single-phase SIMUBOX motor wiring with key switch
Three-phase SIMUBOX motor wiring with key switch
Three-phase SIMUBOX smotor (no EI) wiring with SD510-400 V p. 64
End-limits setting
p. 66
Troubleshooting
p.

- SIMUBOX SI EXtERNAL motor
Installation
SIMUBOX SI motor wiring with key switch
End-limits setting
-Troubleshooting
- SDIOOHZ RADIO CONTROL BOARD


## Installation

- Installation and wiring
- Box setting
- Troubleshooting
- SD350 control board
- Installation
p. 95
- Wiring of three-phase motor with SD350-with manual override - 400 V
- SD510 CONTROL BOARD
Power wiring
Three-phase tubular motor wiring with SD510 - with manual override - 400 V
SIMUBOX three-phase motor (no El) with SD510-400 V
End-limits setting
p. 108
Key switch connection
p. 108
Safety device connection (for a shutter which cannot lift a person) p. 109
Safety device connection (for a shutter which can lift a person)
p. 112
First power on
p. 115
Expert level parameters
p. 123
nsuling and programming maintenance
Troubleshooting



## IDENTIFYING A MOTOR STICKER

Each SIMU motor has an identification sticker with a unique registration number, stuck on the tube, useful to have its technical information and ensure its traceability.

STICKER FOR UNIQUE REGISTRATION WITH DATAMATRIX \& BARCODE
STICKER FOR UNIQUE REGISTRATION WITH DATAMATRIX

(1) Technical reference + index (2) Production code (PPP) (3) Production year (YY) (4) Production day (DDD) (5) Production day (DD) (6) Production minute (MM)
(7) Production second (SS)

STICKER FOR UNIQUE REGISTRATION WITH DATAMATRIX

n case of repairing or of after-sales service, you may encounter motors with different stickers: there are older sticker models. However, the information given will be the same as those presented above.
(1) Technical reference + index (3) Production year (YY) Production code (PPP) (4) Production day (DDD) 4) Production day (DDD
(5) Production hour ( HH )



## SECURITY

FROM MAY 1ST 2005
ALL THE STATE MEMBERS OF THE EUROPEAN UNION ARE REQUIRED TO APPLY EUROPEAN STANDARD EN 13241-1 FOR THE CERTIFICATION

OF ALL INDUSTRIAL, COMMERCIAL AND GARAGE DOORS.

## The main requirements are

- Solution to avoid shutter curtain fall (safety brake)
- Solution to avoid closing risks

Solution to avoid opening risks

## The ( $\in$ marking is the compliance of the manufacturer with the EN 13241-1 standard.

The manufacturer must supply to installers:
Installation and removal instruction
User's manual

- Maintenance manual
- Declaration of conformity
- Declaration of performance
THE RESPONSABILITIES MANUFACTURER ARE ENGAGED


## APPLICABLE STANDARDS

## EUROPEAN DIRECTIVES AND STANDARDS

All European countries are required to comply with European directives for products placed on the market. Compliance with harmonised standards provides a presumption of conformity with the essential health and safety requirement of the European directives that reference them. One of the major changes linked to the transition to the new European standards and directives is the notion of responsibility: if the product is the result of the assembly of components from several suppliers, the installer is considered, in fact, responsible for the whole installation

## SCOPE AND RESPONSIBILITIES

The motorised product must be installed by a professional in the field of motorisation and home automation. The installer must ensure that the installation of the drive complies with the relevant standards in the intended area of application and the electrical installation regulations in force in the country of use. Before installing and using the use of the motorization outside of the field of application is strictly prohibited. Wrongful use or other failure to comply with the instructions in the manual would dismiss SIMU from any liability and guarantee. The installer must inform his customers of the conditions of use and maintenance of the motorization and must give them the instructions for use and maintenance, as well as the document enclosed with the product (instructions and safety). Any after-sales service operation on the operator requires the intervention of an operator and home automation professional. If you have any doubts about the installation of the operator or if you need further information, please contact a SIMU representative or visit www.simu.com

## THE CONTROL MODE

## DEADMAN

with permanent visual control

- You have to HOLD the button or the key to OPEN or CLOSE the door You have always a view during the movement of the door.
$\checkmark$

You don't need safety accessories

MIXED MODE with permanent visual control

- You have to HOLD the button or the key to CLOSE the door. during the down command.

You don't need safety accessories. This mode is forbidden for grills.

- You OPEN and CLOSE the door by IMPULSE command.

You have to install safety accessories to secure the closing in all cases.

You have to put safety accessories to secure the opening if you have crushing, shearing, lifting or drawing-in point (ie grills)


## INSTALLATION RECOMMENDATIONS

WARNING: This document does not exempt the installer from carrying out a risk analysis of the installation, as he is fully responsible for it; The recommendations below are given for information purposes only and SIMU cannot be held responsible for any failure to comply with the requirements of the applicable standards.

The following table shows SIMU's recommendations on the safety elements to be mendations on the safety elements to be
integrated according to its situation and operating mode

| Control maintained within sight | YEs | ко | мо | yes | Yes |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Pulse control | yes | yes | YES* | yes | мо |
| Automatic control (automatic door closure) | YES | YES | YES* | YES | ко |
| THAT OPEN ONTO ON PUBLLC ROAD |  |  |  |  |  |
| Control maintained within sight | ves | ко | но | мо | YES |
| Pulse control | yes | yes | YES* | ко | ко |
| Automatic control (automatic door closure) | yes | yes | YES* | YES | ко |




- YouTube

1 CENTRIS moto
(2) Spring boxes
(3) Tube $\varnothing 60$ or 76 mm
(4) Curtain or rolling grill


C Key switch with built-in declutching system
D Declutching security box + switch

## DEADMAN OPERATING MODE IS MANDATORY

 TO CLOSE THE CURTAIN WITH A KEY SWITCH- DEADMAN OPERATING MODE IS MANDATORY

TO OPEN THE CURTAIN IF A PERSON COULD BE LIFTED.

- MIXED OPERATING MODE IS ALLOWED

IF THE CURTAIN COULDN'T LIFT A PERSON


Universal key switch


## END LIMITS SETTING

## DENTIFYING THE END LIMITS

A Sliding end limits box cover B and C Removable memory rings
(D) and © Rotary adjusting wheels
© and (G) Electric switches
(1) Motor crown.
(1) Guiding blades.


## DOWN END-LIMIT ADJUSTMENT

1 - Put electrically the shutter to the DOWN wished position
2 - Remove the memory ring of the right side C
3 - Turn the right adjusting ring $\Theta$ in the " - " direction until to activate the switch ©

## JP END-LIMIT ADJUSTMENT

1 - Put electrically the shutter to the UP wished position (noise of the blades(1).
2 - Move the shutter down up to the floor
3 - Remove the memory ring of the left side $\operatorname{B}$.
4 - Turn the left adjusting ring (D) turns in the "-" direction
(tip: mark the wheel with a pencil).

DO NOT FORGET TO RETIGHTEN THE PROTECTIVE RAIL AFTER ADJUSTMENT


Move the shutter up and down to check the end limits positions. If necessary, turn the adjusting wheels in the " + " direction to increase shutter run or in the " - " direction to decrease shutter run.

## TROUBLESHOOTING

| PROBLEMS | POSSIBLES CAUSES | SOLUTIONS |
| :---: | :---: | :---: |
| The motorized product is not working | The motor is on thermal cut | Wait until the motor cools down |
| The motorized product is running without driving the curtain | The declutching system is active | Check that the declutch cable is not wound up or that the clutch lever is deactivated |
| The curtain doesn't go up and down | The motor is disengaged and doesn't move the curtain | - Cut the power off <br> - Re-engage the motor by the clutch handle <br> - Operate the curtain |
| The motor is operating in one direction only | Key switch not properly wired | Check the operating of the motor with direct power supply |
|  | Wrong balancing | Check the balancing of the curtain |
| The motor stops before its end-limits | Wrong end limit setting | Set the end-limit on the good position |
|  | Wrong balancing | Check the balancing of the curtain |
| The motor losts its end-limits | No end-limit setting | Set the end-limit on the good position |
|  | Dismantling of the teeth on the end-limit unit system | Check the teeth condition and align them |

## INSTALLATION

(1) Centris veoHz central motor
(2) Spring boxes
(3) Tube $\varnothing 60$ or 76 mm

4 Curtain or rolling grill


## WIRING DIAGRAM

The installation of the power supply must comply with the standards in force in the country where it is installed; the power line must be reserved exclusively for the motor and provided with adequate protection.
An all-pole disconnection device must be provided:
An all-pole disconnection device must be provided:

- Either via a power cable with a plug.
- Or by a switch providing a contact separation distance of at least 3 mm on each pole (see EN60335-1 standard).
- Make the connections when the equipment is not live.
- Do not connect the motor to a power source (mains) before completing the installation.


COMPATIBLE TRANSMITTERS

The CENTRIS veoHz motor is compatible with Simu veoHz transmitters only. Refer to the corresponding instruction manuals.

- Max. 12 transmitters per motor in total


TSA 3B veohz


Control box veoHZ

## LIMIT SWITCH SETTINGS



1- ENTER THE SETTINGS MODE


Switch on the motor.
Simultaneously press the keys $\mathbf{\Delta}$ and $\mathbf{V}$ on a veoHz transmitter -> The motor responds with a "short rotation".
This transmitter controls the motor with a press and hold mechanism (by default).
2- SETTING THE ROTATION DIRECTION


Press the $\boldsymbol{\Delta}$ key on the transmitter.
(1) If the shaft rotates in an upward direction, the direction is correct and you can proceed to step 3 .
(2) If the shaft rotates in a downward direction, the direction is wrong and you must reverse the rotation direction by the - STOP key for at least 3 seconds $\rightarrow$ The motor confirms the setting by a "short rotation".

3- LIMIT SWITCH SETTINGS

## (1) Lower hold point

1. Position the motor on the wanted lower hold point.
2. Simultaneously press the keys • STOP et $\boldsymbol{\nabla}$ to set the lower hold point
$\rightarrow$ The motor confirms the setting by a "short rotation".
(2) Upper hold point
3. Position the motor on the wanted upper hold point. The upper hold point must be located at a distance greater than 30 mm from the upper stop point.
4. Simultaneously press the keys STOP et $\boldsymbol{\nabla}$ to set the upper hold point
$\rightarrow$ The motor confirms the setting by a "short rotation".
4- VALIDATION OF SETTING

After saving the upper and lower stop points, confirm the settings:
Press • STOP for 3 seconds. The motor rotates 0.5 second in the downward direction and then automatically rises to force the upper stop points and de-compresses.
At this step, you can modify the motor command mode, before completing the programming by validating the first command point.


## COMMAND MODE

Please identify the prog button to start setting This button is necessary to set end-limits.

Perform all the programming with the transmitter that will control the closing.
The upper and lower stop points are mandatory (mounting with at least 2 M5 screws per stop point)
$\rightarrow$ command by pulse press to raise and press and hold to lower.
MODE 2 is authorised only if there is no crushing, shearing, lifting or drawing-in point as defined in
EN12453:2001 standard §4.1.1 and §4.1.2.(e.g.: grilles and curtains with projections that may be used to lift a person are not authorised with MODE 2). Failure to follow these instructions will result in a hazardous situation that could result in death or serious injury. Choosing this mode engages the full liability of the installer.

## CHANGE OF MODE

If the default command mode MODE 1 is appropriate, do not perform this step and skip to the next chapter.

To enter MODE 2 :


- Position the curtain outside the limit switch positions. -Simultaneously press the keys • STOP, $\boldsymbol{\Delta}$ and $\boldsymbol{\nabla}$ for 5 seconds -> The motor confirms the setting by a "short rotation". You now control the motor by pulse to raise and by press and hold to lower.

If you are not satisfied with this mode or you feel that it may have any danger to people and property, go back to MODE 1:
To go back to MODE 1, simultaneously press the keys • STOP, $\mathbf{\Delta}$ and $\boldsymbol{\nabla}$ for 5 seconds
$\rightarrow$ The motor confirms the setting by a "short rotation".

## VALIDATION OF THE FIRST COMMAND POINT



At this step, you need to validate the 1 st command point.

- Press the PROG key of the transmitter for 1 second.
$\rightarrow$ The motor confirms the setting by a "short rotation".
Your transmitter is now set and controls the motor according to the mode defined before.


The EN12453:2001 standard §5.1.1.4 stipulates that the person operating the door must always have a direct view of the door, be close to the door when the shutter is moving and not remain in a dangerous position.
By default, the VEO Hz mobile transmitters have a very short radio range (setting on threshold 2).
It is the responsibility of the installer to ensure that the defined radio range guarantees a visual command.

If you feel that this very short range does not allow controlling the product appropriately, you can increase it (threshold 3 -threshold 4), provided that the new radio range guarantees an exclusively visual command. - If you feel that this very short range does not allow visually controlling the product, you can decrease it (threshold 1).

## CHANGING THE RADIO RANGE (THRESHOLDS 1-2-3-4)

If the transmitter's default range is appropriate (threshold 2), do not perform this step.
First remove the rear screw on the transmitter to quickly access the PROG button (as you will have 15 seconds to confirm the threshold selection).
-Put the curtain outside the limit switch positions.
Simultaneously press the keys $\boldsymbol{\Delta}$ and $\boldsymbol{\nabla}$ on the VEO Hz transmitter for 5 seconds $->$ The motor responds with a "short rotation"
To increase the range, press $\triangle$. To decrease the range, press $\boldsymbol{\nabla}$
The motor performs a "short rotation" corresponding to the selected threshold
Threshold 1: a rotation of 0.5 s
-Threshold 2: two rotations of 0.5 s .
Threshold 3: three rotations of 0.5 s
Threshold 4: four rotations of 0.5 s .


After selecting your threshold, confirm the setting within 15 seconds by pressing "Prog" for 1 second
-> The motor confirms the setting by a "short rotation"
Ensure that the new range ensures an exclusively visual command
This new radio range is valid for all mobile transmitters that will be programmed later. When the transmitter is out of the defined range, its orders are ignored.

## USE

1. If the power supply is disconnected for over 30 seconds, the next radio command authorised will only be to raise the curtain to the upper stop points (resetting). The motor forces the stop points before "decompressing".


- Instructions for use: refer to the command point manuals and the clutch system manual.

The motor does not require any maintenance operations. Change the batteries of your command points after 2 years or before The motor does not require any maintenance

## OPTIONAL SETTINGS

## A- PROGRAMMING A NEW MOBILE OR FIXED COMMAND POINT



1- Open the motor's memory from the previously programmed transmitter ©: Press the PROG key of the transmitter for 3 seconds $\rightarrow$ The motor responds with a "short rotation".
2- Validate the operation from the new transmitter ©: Press the PROG key of the new transmitter for about 1 second $\rightarrow$ The motor responds with a "short rotation".
-If the new command point is mobile, its range will be equal to that defined before. All mobile or wall-mounted transmitters control the motor according to the command mode selected before.
With respect to a fixed command point, it is the responsibility of the installer to mount this command point where it is visible from the curtain - To delete a transmitter from the motor memory: perform operation 1 - from a transmitter $\boldsymbol{B}$ that was previously programmed and
operation 2 - from the transmitter $\mathbf{B}$ to be deleted.

## B- PARTIAL OPENING



b-
c-

This function is provided only for MODE $\mathbf{2}$ (raise by pulse press) and for upward movement - CHECK if the defaul "partial opening" position is suitable.
b- Press the STOP key for 0.5 S
c- The curtain goes back to its "partial opening" position.
2- CHANGE THE "PARTIAL OPENING" POSITION if the default position is not suitable
a- For this, position the curtain at the desired "partial opening" position
a- Press the STOP key for 6 seconds $\rightarrow$ The motor confirms the setting by a "short rotation".
c- The new position of the partial opening is saved.

C- CHANGING THE POSITION OF THE UPPER LIMIT SWITCH


1- Put the motor on the current upper end-limit position by using the key $\mathbf{\Delta}$

- Simultaneously press the keys $\boldsymbol{\Delta}$ and $\mathbf{V}$ for 6 seconds $\rightarrow$ The motor responds with a "short rotation".

3-Put the currain on the wanted limit switch using the keys $\boldsymbol{\Delta}$ and $\mathbf{\nabla}$
4 - Press the STOP key for 3 seconds $\rightarrow$ The motor confirms the setting by a "short rotation"
The new end-limit position is saved.

## D- CHANGING THE POSITION OF THE LOWER LIMIT SWITCH



- Put the motor on the current lower end-limit position by using the key $\mathbf{\nabla}$

2- Simultaneously press the keys $\mathbf{\Delta}$ and $\boldsymbol{\nabla}$ for 6 seconds $\rightarrow$ The motor responds with a "short rotation".
3- Put the currain on the wanted limit switch using the keys $\boldsymbol{\Delta}$ and $\mathbf{\nabla}$.
4 - Press the - STOP key for 3 seconds $\rightarrow$ The motor confirms the setting by a "short rotation".
The new end-limit position is saved.

## E- CANCELLATION OF THE PROGRAMMING AND LIMIT SWITCH SETTINGS



Take a transmitter previously programmed or not on the motor. Press the PROG key of this transmitter for 1 second until the motor responds with a "short rotation".
This transmitter is now the only one programmed on the motor, all other transmitters are erased.
However, the motor settings are not changed. However, the motor settings are not changed.

F- CANCELLATION OF THE PROGRAMMING AND LIMIT SWITCH SETTINGS


- Cut the power supply of the motor for 2 seconds.

2- Cower on the power supply of the motor for 7 second
3 - Cut the power supply of the motor for 2 seconds.
4- Power on the power supply of the motor.
$\rightarrow$ The motor responds with a "short rotation"


## The motor is now in "programming cancellation" mode

(If you change the power supply of multiple motors, they will all be ready for cancellation. It is therefore appropriate列 this mode all motors not concerned by this modification, by pressing a command key of a transmitte programmed with the motors to be ejected.

## Now validate the "programming cancellation" of the motor:



Press the PROG key of the transmitter for more than 7 seconds.
Press and hold until the motor responds with a
Press and hold until the motor responds with a "short rotation" and then a few seconds later $\rightarrow$ the motor again responds with a "short rotation". Fully set the motor again.

## TROUBLESHOOTING

| PROBLEMS | POSSIBLES CAUSES | SOLUTIONS |
| :---: | :---: | :---: |
| The motorised product is not working | The motor is thermally protected | Wait for the motor to cool down. If the motorised product still does not work, use the clutch device and contact a motor and building automation professional |
|  | The motor is disengaged | Re-engage the motor by re-screwing the clutch handle |
|  | Out-of-range command point | Get closer to the motor |
| The product does not work properly | Command point at range limit | Get closer to the motor |
| The down command is ignored | The motor suffered a power failure $>30$ s or a disengagement during a failure < 30s | Raise the curtain up to the upper stop points; the product will then make a short downward movement |
| Transmitter LED flashing very fast or jerky movement of the product (need to restart every 3 sec .) | Low battery | Replace the battery, otherwise the curtain cannot be moved |
| I cannot pair my mobile transmitter | Command point not compatible with VEO Hz | Get a VEO Hz command point |
|  | No more channels available (12 max) | Delete an existing transmitter |
|  | Out-of-range command point | Get closer to the motor |



R

## INSTALLATION

tubular motor T8 - T8M
(1) Tubular motor with or without manual override
(2) Plates for motor side (double plates + angle bracket + motor bracket)
(3) Adjustable bobbin with shaft
(4 Plates opposite side (double plates + angle bracket + safety brake bracket)
(6) Safety brake
(6) Wheel
(7) Tube


## tubular motor T8S - T8S DMI

(1) Tubular motor with or without manual override

2 Plates for motor side (double plates + angle bracket + motor bracket)
(3) Adjustable bobbin with shaft
(4) Plates opposite side (double plates + angle bracket + safety brake bracket)
(5) Safety brake
(6) Wheel
(7) Tube



## END-LIMITS SETTINGS

tubular motor T8 - T8M


## IDENTIFICATION OF THE SETTING SCREW.

- Identify the setting screw by arrows I and II on the head of motor, corresponding to the rotation of the winding. These will be used to modify the end-limits positions of both directions of rotation.
Turn setting screw on clockwise direction (+) to increase the number of turns
- Turn setting screw on anticlockwise direction (-) to decrease the number of turns



## SETTING THE END-LIMITS

## Setting the upper end limit

Press the $\boldsymbol{\Delta}$ key on the command point and adjust the position of the end limit by turning the corresponding adjustment screw.

Setting the lower end limit: Press the $\boldsymbol{\nabla}$ key on the command point and adjust the position of the end limit by turning the corresponding adjustment screw

$$
T 8-T 8 M
$$

T8S - T8S DMI


## TROUBLESHOOTING

| PROBLEMS | POSSIBLES CAUSES | SOLUTIONS |
| :---: | :---: | :---: |
| The end-limits are lost | The adaptor crown is not fixed correctly (with the basic crown or with the tube) | Check that the end ring fixing screws are present on the base ring and on the roller tube. |
| The motor is operating in one direction only. | Connection problem | Please check the wiring of the command point (brown wire, black wire) and check the operating of the motor. |
| The motor doesn't operate. | The security end limit switch is activated (in case of use of manual override, don't cross up or down end-limit position) | Turn back few rounds with the manual override to operate the motor by command order again. |
|  | The manual override system is active. <br> The microswitch puts the power off. | Deactivate the manual override system |
|  | The crank is hinged on the eye crank of the manual override. Due to its weight (very long and very heavy shaft), the microswitch cuts the power. | Remove the crank of the manual override when you don't use it |
|  | The safety brake switch is active | Please check the continuity of the safety brake switch |
| The motorised product does not work. | The motorization is in thermal cut-off | Wait for the motorization to cool down |



## INSTALLATION

motor tubular Tg - TgM
(1) Tubular motor with or without manual override
(2) Plates for motor side (double plates + angle bracket + motor bracket)
(3) Adjustable bobbin with shaft
(4) Plates for opposite side (double plates + angle bracket + safety brake bracket)
(6) Safety brake
(6) Wheel
(7) Tube

INSTALLATION EXAMPLES

WITH SD350 CONTROL BOARD


WITH SD510 CONTROL BOARD

three-phase tubular motors WITH Manval override with neutral 400V Power SUPPLY

, Т9M T9, T If you are not using the "STOP" input, leave bridge in place.


Safety brake


Safety brake

| (2) | brown | Direction 1 |
| :---: | :---: | :--- |
| 3 | black | Direction 2 |
| (4) | red | Phase |
| (3) | yellow/green | Earth |



| (N | blue | neutral |
| :--- | :--- | :--- |
| (1) | white | phase 1 |
| (L2 | white | phase 2 |
| (23 | white | phase 3 |
| (U) | blue | three-phase motor |
| (V) | grey | three-phase motor |
| (W) | red | three-phase motor |
| (I) | yellow/green | earth |


| (1) | purple | limit switch direction 1 |
| :--- | :--- | :--- |
| (2) | purple | limit switch direction 1 |
| 3 | black | limit switch direction 2 |
| 4 | black | limit switch direction 2 |
| 5 | beige | overheating protection |
| 6 | blue | manual override contact |
| 7 | brown | manual override contact |
| 8 | grey | overheating protection |

THREE-PHASE TUBULAR MOTORS WITHOUT MANUAL OVERRIDE with neutral 400V Power SUPPLY

| (N) | blue | neutral |
| :--- | :--- | :--- |
| L1 | white | phase 1 |
| L2 | white | phase 2 |
| L3 | white | phase 3 |
| (U) | bleu | three-phase motor |
| (V) | gris | three-phase motor |
| W | rouge | three-phase motor |
| (I) | yellow/green | earth |


| (1) | purple | limit switch direction 1 |
| :--- | :--- | :--- |
| 2 | purple | limit switch direction 1 |
| 3 | black | limit switch direction 2 |
| 4 | black | limit switch direction 2 |
| 5 | beige | overheating protection |
| 8 grey overheating protection |  |  |

WIRING OF THREE-PHASE MOTOR WITH SD350
three-phase tubular motors WITh MANUAL OVERRIDE POWER SUPPLY 230 V

| 1 | purple | limit switch direction 1 |
| :--- | :--- | :--- |
| 2 | purple | limit switch direction 1 |
| 3 | black | limit switch direction 2 |
| 4 | black | limit switch direction 2 |
| 5 | beige | overheating protection |
| 6 | blue | manual override contact |
| 7 | brown | manual override contact |
| 8 | grey | overheating protection |


three-phase tubular motors WITHOUT MANUAL OVERRIDE


## WIRING OF THREE-PHASE MOTOR WITH SD510

three-phase tubular motors WITh MANUAL OVERRIDE


THREE-PHASE TUBULAR MOTORS WITHOUT MANUAL OVERRIDE POWER SUPPLY 400 V

| (1) | blue | neutral |
| :---: | :---: | :---: |
| (1) | white | phase 1 |
| (1) | white | phase 2 |
| (13) | white | phase 3 |
| (1) | bleu | three-phase motor |
| (V) | grey | three-phase motor |
| (1) | red | three-phase motor |
| $\theta$ | yellow/green | earth |
| (1) | purple | limit switch direction 1 |
| (2) | purple | limit switch direction 1 |
| 3 | black | limit switch direction 2 |
| 4 | black | limit switch direction 2 |
| (5) | beige | overheating protection |
| (8) | grey | overheating protection |



(8)

WIRING OF THREE-PHASE MOTOR WITH SD510

THREE-PHASE TUBULAR MOTORS WITH MANUAL OVERRDE


THREE-PHASE TUBULAR MOTORS WITHOUT MANUAL OVERRIDE


## END-LIMITS SETTINGS

## IDENTIFICATION OF THE SETTING SCREW



- Identify the setting screw by arrows I and II on the head of motor, corresponding to the rotation of the winding. These will be used to modify the end-limits positions of both directions of rotation.
-Turn setting screw on clockwise direction (+) to increase the number of turns
- Turn setting screw on anticlockwise direction (-) to decrease the number of turns


## SETTING THE END-LIMITS



## Setting the upper end limit:

Press the $\boldsymbol{\Delta}$ key on the command point and adjust the position of the end limit by turning the corresponding adjustment screw


## Setting the lower end limit:

Press the $\boldsymbol{\nabla}$ key on the command point and adjust the position of the end limit by turning the corresponding adjustment screw

## TROUBLESHOOTING

| PROBLEMS | POSSIBLES CAUSES | SOLUTIONS |
| :---: | :---: | :---: |
| The end-limits are lost | The adaptor crown is not fixed correctly (with the basic crown or with the tube) | Check that the screws fixing of the end crown are present on the base ring and on the winding tube. |
| The motor is operating in one direction only. | Connection problem | Please check the wiring of the command point (brown wire, black wire) and check the operating of the motor. |
| The motor doesn't operate | The security end limit switch is activated (in case of use of manual override, don't cross up or down end-limit position) | Turn back few rounds with the manual override to operate the motor by command order again. |
|  | The manual override system is active. <br> The microswitch puts the power off. | Deactivate the manual override system. |
|  | The crank is hinged on the eye crank of the manual override. Due to its weight (very long and very heavy shaft), the microswitch cuts the power. | Remove the crank of the manual override when you don't use it. |
|  | The safety brake switch is active | Please check the continuity of the safety brake switch. |

## Tg - Tg M



- YouTube


1

## NSTALLATION

## WITH PLATES AND BLOCKING BAR

(1) External motor SIMUBOX
(2) Block rod

3 Plate for motor side
(4) Bobbin with shaft for motor side
(5) Bobbin with shaft for opposite side (safety brake)
(6) Safety brake plate for opposite side
(7) Safety brake


## WITH MOTOR BRACKET AND SQUARE BRACKETS

(1) External motor SIMUBOX
(2) Motor bracket
(3) Bracket for motor side
(4) Bobbin with shaft for motor side
(5) Bobbin with shaft for opposite side (safety brake)
(6) Square bracket for opposite side
(7) Safety brake



DEADMAN OPERATING MODE IS MANDATORY TO CLOSE THE CURTAIN WITH A KEY SWITCH
DEADMAN OPERATING MODE IS MANDATORY TO OPEN THE
CURTAIN IF A PERSON COULD BE LIFTED
MIXED OPERATING MODE IS ALLOWED IF THE CURTAIN COULDN'T LIFT A PERSON.


Key switch


| 2 | brown | Direction 1 |
| :---: | :---: | :--- |
| 3 | black | Direction 2 |
| 4 | red | Phase |
| $\frac{1}{=}$ | yellow/green | Earth |





DEADMAN OPERATING MODE IS MANDATORY TO CLOSE THE CURTAIN WITH A KEY SWITCH.
DEADMAN OPERATING MODE IS MANDATORY TO OPEN THE CURTAIN IF A PERSON COULD BE LIFTED. MIXED OPERATING MODE IS ALLOWED IF THE CURTAIN COULDN'T LIFT A PERSON.


Universal key switch

| (1) | grey | safety |
| :---: | :---: | :--- |
| $\mathbf{2}$ | brown | safety |
| $\mathbf{3}$ | black | Cde S1 |
| 4 | red | Cde Control |
| $\mathbf{5}$ | brown | Cde S2 |

Three-phase 400V power supply

| (4) | white | phase 1 |
| :---: | :---: | :---: |
| (L) | white | phase 2 |
| L3 | white | phase 3 |
| (1) | yellow/green | earth |



## THREE-PHASE SIMUBOX MOTOR (WITHOUT EI)

POWER SUPPLY 400 V


Three-phase 400V power supply

## SINGLE PHASE SIMUBOX

## CHECKING ROTATION DIRECTION

IT IS ESSENTIAL TO CHECK THE ROTATION DIRECTION OF THE MOTOR TO ENSURE PROPER OPERATION OF THE LIMIT SWITCHES


Once the power supply is connected, replace the wiring cover : - Tighten the 3 screws
-Switch on the installation.

- Move the shutter with the keyswitch.

If the output shaft is rotating in the opposite direction to the one required:
Immediately release the switch
Switch off the supply.
Revert wiring of Cde S1 and Cde S2.
Switch on again and check the rotation direction.

## END LIMIT ADJUSTMENT



S1/S2 arrows are placed around the shaft : spot which one corresponds to the upward movement. Move the shutter. If the limit switch is not in the desired position, push in the screw corresponding to the chosen direction (S1 or S2) with a screwdriver and:

- To increase the number of turns: Push and turn in the" + " direction.

To decrease the number of turns: Push and turn in the"-"" direction.

IF THE MOTOR DOES NOT OPERATE, TURN THE LIMIT SWITCHES 4 TURNS IN THE + DIRECTION. REPEAT THE SETTINGS AFTER RELEASING THE STOP.

## THREE-PHASE SIMUBOX (WITHOUT EI)

## CHECKING ROTATION DIRECTION

it is essential to check the rotation direction of the motor to ensure PROPER OPERATION OF THE LIMIT SWITCHES.


Once the power supply is connected, replace the wiring cover - Tighten the 3 screws

Switch on the installation.

- Move the shutter with the control box.

If the output shaft is rotating in the opposite direction to the one required :
Immediately release the switch
Switch off the supply.
Interchange 2 phases.
-Switch on again and check the rotation direction.

## END LIMIT ADJUSTMENT



S1/S2 arrows are placed around the shaft : spot which one corresponds to the upward movement. Move the shutter. If the limit switch is not in the desired position, push in the screw corresponding to the chosen direction (S1 or S2) with a screwdriver and

- To increase the number of turns: Push and turn in the" + " direction.

To decrease the number of turns: Push and turn in the"-" direction.

IF THE MOTOR DOES NOT OPERATE, TURN THE LIMIT SWITCHES 4 TURNS IN THE + DIRECTION. REPEAT THE SETTINGS AFTER RELEASING THE STOP.

## TROUBLESHOOTING

## THREE-PHASE SIMUBOX (EI)

Once the power supply is connected, replace the wiring cover : - Tighten the 3 screws

- Switch on the installation
- Spot the S1/S2 arrows placed around the shaft.
- Push on the S1 of the motor switch (up).
- Axis has to turn in the S1 way.
- Repeat the operation with S2.

If the output shaft is rotating in the opposite direction to the one
required:
Immediately release the switch

- Switch off the supply

Interchange 2 phases.
Switch on again and check the rotation direction.

Then move the shutter with the keyswitch. If the operation is reversed

- Immediately release the switch.
- Switch off the supply

Revert wiring of Cde S1 and Cde S2
Switch on again and check the rotation direction.
END LIMIT ADJUSTMENT USE THE SWITCH ON THE MOTOR TO OPERATE


Use the switch on the motor to operate the curtain. If the limit switch is not in the desired position, push in the screw corresponding to the chosen direction (S1 or S2) with a screwdriver and - To increase the number of turns: Push and turn in the" + " direction.

- To decrease the number of turns: Push and turn in the"-" direction.

IF THE MOTOR DOES NOT OPERATE, TURN THE LIMIT SWITCHES 4 TURNS IN THE + DIRECTION. REPEAT THE SETTINGS AFTER RELEASING THE STOP.

SINGLE PHASE 230V - THREE-PHASE EI - THREE-PHASE (NO EI)

| PROBLEMS | POSSIBLES CAUSES | SOLUTIONS |
| :--- | :--- | :--- |
| The motorised product does <br> not operate. | The overheating protection on the <br> drive has been activated. | Wait for the drive to cool down. |
|  | The manual override system is <br> active. | Release the troubleshooting maneuver <br> to deactivate it. |
|  | The motor is stopped at its secu- <br> rity end limit. | Call your maintenance staff to inspect <br> the installation. |
|  | Following the use of the manual <br> override system, the security end <br> limits device is activated. | Use the manual override system to turn <br> the tube 30 and deactivate the security <br> end limits device. |



1

## (1) External motor SIMUBOX SI

(2) Bobbin with shaft for motor side
(3) Bobbin with shaft for opposite side

## (4) Square brackets




The control system consists of a board with a combination of reversing contactors for opening (K1) and closing (K2). For three-phase motors, the power supply must be connected to the reversing contactor K1 on the terminals L1 /L2 /L3 The earth wires must be connected to the terminals designated PE.

DEADMAN OPERATING MODE IS MANDATORY TO CLOSE THE CURTAIN WITH A KEY SWITCH.
DEADMAN OPERATING MODE IS MANDATORY TO OPEN THE CURTAIN IF A PERSON COULD BE LIFTED.

- MIXED OPERATING MODE IS ALLOWED IF THE CURTAIN COULDN'T LIFT A PERSON.

Connector board for : $3 \times 400 \mathrm{~V}$ AC, PE or $3 \times 230 \mathrm{~V}$ AC, PE


THREE-PHASE 400V POWER SUPPLY necessary for operation. This
Between terminals T1 and T2 if voltage $=3 \times 230 \mathrm{~V}$ AC, PE Between temrinals T 2 and T 3 if voltage $=3 \times 400 \mathrm{~V}$ AC, PE connected instead of wire link A.确

Wire links $E$ and $F$ : These wire links is necessary
for operation. Additional safety switches can be connected instead of the wire link $E$ (which interrupts opening) and F (which interrupts closing).

Wire link A: This wire link is necessary for operation. Removing its interrupts the contro voltage. Electrical operation is no longer possible Additional safety switches (e.g. interlocking switches or slack wire switches) can b


Universal key switch


| 1) | black | direction 2 |
| :---: | :---: | :--- |
| 2 | brown | direction 1 |
| 3 | red | Phase |

## END-LIMITS SETTING

With the adjustment of the end-limits settings' cams, the upper and lower stop positions of the door are determined. To make this adjustment, the SIMUBOX SI must be connected to the power supply. The camble clamp of the end-limits setting (with 6 micro switches) with its micro switches is accessible after unscrewing the cover.
if the control points are not connected, operate the door in deadman mode by using buttons S11-S13. If not, reverse the phases L1 and L2.

## DOWN" END-LIMIT - S4

To set the "down" limit switch, follow the steps below:
Close the door

- Position the cam 1 of the micro limit switch "down" on the centre of its plunger 2 by turning with the 6 -pan female key provided. Tighten the approximate adjustment screw 3 Open the door until the "down" limit switch is released.
- Close the door again

If necessary, correct the "down" position with the fine adjustment screw 4, This adjustment is accessible from both sides with the 6-pan male key.
End-limit setting "down" is automatically preset when setting the end-limit setting "down".

- The switching point of the safety end-limit microswitch may have to be corrected with the screw for precise adjustment so that the door can be stopped safely in case of a phase reversal of the power supply or in case of a failure of the "down" end-limit.



## "UP" END-LIMIT - S3

After the door has been opened, the cams for the "up" end-limit and "up" safety must be adjusted in the same way as those for the "down" end-limits and "down" safety.

ADDITIONAL END-LIMITS - S5 \& S6 (OPTION)
The cams of the additional end-limits have to be adjusted as described above. After tightening the screw for the approxima tive adjustment, the release point can be set with the precise adjustment screw.


## SAFETY ELECTRICAL CIRCUIT

Terminals 21 to 28 on end-limit connector board (Fig.4) are reserved for the safety electrical circuit.
If the safety circuit is interrupted, the control power supply is interrupted. Electrical operation is no longer possible. Terminals 25 to 28 on the end-limit connector board are used by the safety contact of the manual override and the thermal motor protection probe.

## TROUBLESHOOTING

| FAILURE $\quad$ The motor does not work and the K1 and K2 contactors do not respond |  |
| :---: | :---: |
| POSSIBLE CAUSE | SOLUTION |
| No voltage at the connecting terminals | Measure the voltage <br> Three-phase <br> L1 with L2 <br> L2 with L3 <br> If $N$ present: <br> L1, L2, L3 with N, L3 with L1 <br> If there is no voltage, check the fusing, supply line and connection terminals / screw on the building side. |
| F1 control fuse detective. | Check the control devices and external consumers for earth fault and short circuit. When the faults has been corrected, insert the replacement fuse supplied. |
| Connection terminals / screws loose | With the supply off, check that all connections have a tight fit. |
| Motor temperature switch tripped: <br> Overload <br> Motor defective | Let it cool down. Replace the drive unit. |
| Control circuit interrupted by: <br> Emergency final limit switch <br> External safety switch Emergency manual operation F2 residual current monitoring | Approach the emergency final limit switch with emergency manual operation and check its setting. <br> Check the operation of the external safety switches. Check the emergency manual operation OPEN and CLOSE commands are present simultaneously. Check the control devices. |
| Defective mecanic | Check the mecanic |
| FAILURE The door no longer closes during maintained operation. |  |
| POSSIBLE CAUSE | SOLUTION |
| Safety edge device operated or defective Photocell operated or defective. | Use and evaluation unit to check the safety edge device. <br> Check switching and alignment of photo cell. |

©


ज

## INSTALLATION



INSTALLATION AND WIRING


SAFETY BRAKE WIRING


MOTOR WIRING

optical safety edge wiring


The installation of photocells with AUTO-TEST is mandatory if:

- the remote control of the automatism out of the door's view is used - automatic closing is activated

ALL STEPS OF THESE OPERATIONS MUST BE RESPECTED


PHOTOcell barrier wiring WITH AUTO TEST

AUTHORISED WITH CONTROL MAINTAINED WITHIN SIGHT ONLYcaution
ALL STEPS OF THESE OPERATIONS MUST BE RESPECTED :

photocell wiring WTTHOUTAUTO TEST

$\triangle$CAUTION
ALL STEPS OF THESE OPERATIONS MUST BE RESPECTED


REMOVE THE BRIDGE
BEFORE WIRING

KEY SWITCH WIRING


ANTENNA WIRING


## The installation of photocells with AUTO-TEST is mandatory if

the remote control of the automatism is used when the door is not visible

- automatic closing is activated
©


## CAUTION

 ALL STEPS OF THESE OPERATIONS MUST BE RESPECTED :

FLASHING LIGHT WIRING 230V
CAUTION
A CABLE CLAMP MUST BE USED FOR POWER SUPPLY


## AREA LIGHTING WIRING 230



## CAUTION

In case of a tear-out, the earth wire must always be longer than the phase and neutral A cable clamp must be used.
The output must be protected by a 5 A time-delay fuse (not supplied)
For class I lighting, connect the earth wire to the earth terminal
Lighting output power.

- either 5 fluocompact or LED lights
- or 2 power supplies for low-voltage LEDs
or 1 halogen light, max. 500 W


POWER SUPPLY WIRING


1- Connect the neutral ( N ) to terminal 1 of the receiver. 2 - Connect the live ( L ) to terminal 2 of the receiver. 3 - Connect the earth wire to terminal 3 of the receiver. 4 - Lock the power supply cable with the cable clamp provided. and neutral to ensure that it is the last to be disconnected if the connector is pulled out.

- The cable clamp supplied must be used

For all low-voltage cables, ensure that they can withstand traction of 100 N . Check that the conductors do not move when this traction is applied.

## CONTROL BOARD SETTING

MEANING OF THE DIFFERENT PARAMETERS

STATUS OF LEDS
O Off

- Fixed light
-     - Slow flash

獸: Quick flash
(0) Very quick flash

OPERATING MODE


## (Text in bold = default values)

| P0 | Operating mode |
| :---: | :--- |
| VALUES | 1: sequential |
|  | 2: sequential + short closure time-delay (60 s) |
|  | 3: sequential + long closure time-delay (120 s) + blockage of cells (2 s) |

COMMENTS 1: Each press on the remote control causes the motor to move (initial position: door closed) as per the following cycle: open, stop, close, stop, open, etc
2: This operating mode is only authorised if photoelectric cells are installed and P3 $=2$. In sequential mode with short closure time-delay:

- the door will close automatically after a time-delay of 60 s ,
- pressing a button on the remote control interrupts the movement taking place and the closure time delay (the door remains open).

3: This operating mode is only authorised if photoelectric cells are installed and P3 $=2$ in sequential mode with long closure time-delay + blockage of the cells:
-the door will close automatically after a time-delay of 120 s .

- pressing a button on the remote control interrupts the movement taking place and the closure time delay (the door remains open).
after the door is opened, movement in front of the cells (safe closure) will close the door after a short timed delay (fixed at 2 s ). If no movement occurs in front of the cells, the door will close automatically after a time-delay of 120 s . If there is an obstacle in the cells' detection zone, the door will not close. It will close once the obstacle is removed

| P1 | 203 V auxiliary output |
| :---: | :---: |
| VALUES | 1 : orange light 2 : area lighting |
| COMMENTS | 1 : Fixed advance warning of 2 s . <br> 2 : The lighting comes on as soon as the motor starts and goes off 60 seconds after the motor has come to a complete stop. |
| P2 | Hard-wired safety edge safety input |
| VALUES | 1 : optical <br> 2 : resistive $1,2 \mathrm{k} \Omega$ <br> 3 : resistive $8,2 \mathrm{k} \Omega$ |
| P3 | Photoelectric cell safety input |
| VALUES | 1 : active (for photoelectrics cells without auto-test) <br> 2 : active with auto-test by means of switching (for photoelectrics cells without auto-test) <br> 3 : active with autotest via test output (for reflex cells) <br> 4 : inactive |

CHECKING THE MOTOR DIRECTION OF ROTATION
(1)


2 Please check the motor direction of rotation


Motor end stop setting. Please refer to the motor manual

4
Exit setting mode
Pres) Pre

MEMORISING 2 OR 4-BUTTON REMOTE CONTROLS
(1)


(3)
$(\mathrm{P})$
2 s.


(SE) 0 Brocio
1

MEMORISING FUNCTIONAL REMOTE CONTROLS IN 3-BUTTON MODE
1

(2)


MEMORISING KEYPAD
(1)

(2) channel 1 channel

make the code and then press channel 1 or channel 2

CLEARING THE MEMORISED REMOTE CONTROLS


DELETING MOTOR SETTINGS (REMOTE CONTROLS ARE STILL MEMORISED)


LOCKING THE PROGRAMMING BUTTONS


To access the programming again, repeat the same procedure.

STATUTS OF LEDS
O Off
溶 Fixed light
嫁－Slow flash
㴆
${ }^{\circ}$ Very quick flash

## POWER INDICATOR LIGHT

|  | POWER INDICATOR LIGHT |
| :---: | :---: |
| －－ | Electronic in motor setting mode <br> $\rightarrow$ If necessary，check the motor＇s direction of rotation and set the motor＇s end stops． |
| 溟 | Product set |
|  | Motor thermal cut－out <br> $\rightarrow$ Switch the power supply off，wait about 5 min ．then switch the power supply back on． |


|  | PHOTOELECTRIC CELLS INDICATOR LIGHT |
| :---: | :--- |
| O | Normal operation |
| -Detection in progress <br> $\rightarrow$ Once detection is complete，the indicator light goes out． <br> Permanent fault <br> $\rightarrow$ Check cell alignment and the associated wiring． <br> NOTICE！After 3 mins，the wired control input（terminals 20 and 21）allows the door <br> to be controlled in dead－man mode． |  |
| 总受 | AUTO－TEST in progress <br> $\rightarrow$ Once the auto－test is complete，the indicator light goes out |


|  | SAFETY EDGE INDICATOR LIGHT |
| :---: | :---: |
| O | Normal operation |
| 溟 | Detection in progress <br> $\rightarrow$ Once detection is complete，the indicator light goes out． <br> Permanent fault <br> $\rightarrow$ Check the safety edge wiring． <br> NOTICE！After 3 mins，the wired control input（terminals 20 and 21）allows the door to be controlled in dead－man mode． |
|  | AUTO－TEST in progress <br> $\rightarrow$ Once the auto－test is complete，the indicator light goes out． |

## CELLS，SAFETY EDGE，ANTI－FALLBACK AND WIRED CONTROL INDICATOR LIGHT

## Short circuit on connected peripherals wired input

$\rightarrow$ Check that the peripherals connected and their wiring function correctly
$\rightarrow$ If the indicator lights are still flashing，switch the power off，disconnect the peripherals from terminals 10 to 21，wait 30 s then switch the power back on：if the 4 indicator lights stop of the peripherals connected to the wired $\rightarrow$ If the indicator lights are still flashing，switch the power off，remove the green terminal block $(12-13-14)$ ，wait 30 s and then switch the power back on：if the 4 indicator lights stop flashing，
chect check the wiring of the safety edge．
$\rightarrow$（10－11），wait 30 s and then switch the power back on：if the 4 indicator lights stop flashing check the wiring of the anti－fallback mechanism and then refit the terminal block．Start a movement to make sure there is no short－circuit．
$\rightarrow$ If the 4 indicator lights continue to flash，contact Simu technical assistance．

|  | ALL THE INDICATOR LIGHTS |
| :---: | :---: |
| ${ }^{\text {entw }}$ | Locking／unlocking the programming buttons <br> $\rightarrow f$ all the indicator lights flash when a programming button is pressed，the keypad is locked． Unlock it，see Locking the programming buttons |
|  | PROG INDICATOR LIGHT |
| O | No radio reception when a button is pressed on the remote control <br> $\rightarrow$ Check if the remote control button has been programmed． <br> $\rightarrow$ Check that the remote control is equipped with Simu－Hz radio technology． <br> $\rightarrow$ Check the remote control batteries． |
| 景 | Radio control received but no action by the actuator <br> $\rightarrow$ Check the other indicator lights to see if there is another fault． <br> $\rightarrow$ The control is not operational from this position． <br> $\rightarrow$ The button is memorised for a function other than opening／closing the garage door（for example controlling the auxiliary output）． |

MAINTENANCE MODE CONTROL
In case of failure of a safety device（photocell or reflex cell，safety edge，safety brake），after 3 minutes，the radio control points are desactivated and only a key contact connected to terminals 20 and 21 allows the door to be controlled in dead man mode．
It is also possible to control the door using the + and - buttons by pressing SET for 2 seconds．

$\ldots$

INSTALLATION EXAMPLE


## WIRING OF THREE-PHASE MOTOR WITH SD350

three-phase tubular motors With Manval override with neutral 400 V POWER SUPPLY


| (N | blue | neutral |
| :--- | :--- | :--- |
| (1) | white | phase 1 |
| (2) | white | phase 2 |
| (L3 | white | phase 3 |
| (U) | blue | three-phase motor |
| (V) | grey | three-phase motor |
| W | red | three-phase motor |
| (I) | yellow/green | earth |


| 1 | purple | limit switch direction 1 |
| :--- | :--- | :--- |
| 2 | purple | limit switch direction 1 |
| 3 | black | limit switch direction 2 |
| 4 | black | limit switch direction 2 |
| 5 | beige | overheating protection |
| 6 | blue | manual override contact |
| $\mathbf{7}$ | brown | manual override contact |
| 8 | grey | overheating protection |


| PROBLEMS | POSSIBLES CAUSES | SOLUTIONS |
| :---: | :---: | :---: |
| When you give an impulse on buttons of the control box, the motor does not react to the command | No power supply | Check the supply voltage between terminals N and L1 or L1 and L2 |
|  | Buttons are not connected properly | Check the position of the connector on the electronic board |
|  | STOP function activated | Check the connection on «STOP» |
|  | End limits not properly wired | Come back to a good wiring |
|  | Overheating protection activated | Wait for the motor to cool down |
|  | Manual override activated | Turn the manual override system with $1 / 4$ turn to deactivate it |
|  | Safety brake activated | Call a professional in motorization and building automation |



## PRESENTATION

The SD510 control board has been designed to control the SIMU T9 or SIMUBOX three-phase motors as well as to be used exclusively with the following SIMU accessories: OSE safety edge, cell barrier, reflex sensor, signalling light, SA Hz standard receiver + TSA + remote control, universal key switch, unstable key switch.


## (1) SW1: 230-400: Supply voltage configuration.

(2) Boutons: Navigator menu buttons
(3) Keys low fuse 0.8A high breaking capacity / Transformer primary winding protection
(H.B.C: High breaking Capacity / 1500A mini)..
(4) Slow blow fuse $0.8 \mathrm{~A} / 24 \mathrm{Vdc}$ output protection
(5) AFF. 1 : Display shows the operating phase
(6) AFF. 2 : Display indicates errors if any, otherwise indicates door position

7 B1: Motor encoder output (not used), End limit contact.
8 B2: 3 command input (CMD1, CMD2, AUX), Stop.
(9) B3: 2Safety edge inputs.
(10) B4: Photocell inputs and $24 \mathrm{Vdc} 20 \% / 0.5 \mathrm{~A}$ global outputs.
(11) B5: Auxiliary outputs :- Low power (dry contact). Switchable maximum current: 0.8 A at 230 Vac or 1.6 A at 24 Vdc .
-2 auxiliary power outputs (dry contact). Maximum voltage and current for change-over switching: 400Vac / 1A
(12) B6: Power supply connection
(13) B7: Power supply

Led 1 \& 2: not used
Led 3: Off if opening limit control input switch is activated
Led 4: Off if closing limit control input switch is activated
Led 5: Off if partial limit switch control input is activated
Led 6: Off if pre-closing limit switch control input is activated
Led 7: On if command 1 control input is activated Led 8: On if command 2 control input is activated Led 9: On if auxiliary control input is activated Led 10: Off if stop or emergency stop control input is activated
Led 11: Off if photocell 1 control input is activated Led 11: Off if photocell 1 control input is activated
Led 12: Off if photocell 2 control input is activated


Set up power supply with the switch SW1 ( 1 ) please refere to page 102


THREE-PHASE 400 V POWER SUPPLY


## Connect motor to control box.

Connection has to be done in a connection box in order not to apply tensile on the cable For a three-phase motor, connect safety brake (mandatory device) in series with motor safety chain and emergency stop (terminals 5 and 6 ) and connect end limits (terminals $7 / 8 / 9$ )
Connect an external stop button. Otherwise, use a bridge between 18 and 19. Motor won't work if STOP is not connected.


## THREE-PHASE TUBULAR MOTOR WIRING

three-phase tubular motor With Manval overridee



THREE-PHASE 400 V power supply


## END-LIMIT SETTINGS

The control box is now in dead man mode.
Set up end limits with up and down buttons.
Check end limit leds lighting.

CHECKING MOTOR ROTATION

(

$\rightarrow$ Press and hold the key «up » to open the door.


$\rightarrow$ Press and hold the key «down » to close the door

## $\rightarrow$ If the operation is reversed, power off the product and reverse the motor's power supply terminal B7 (44 and 45).

## KEY SWITCH CONNECTION

CHECK THE ROTATION DIRECTION WITH THE KEY SWITCH


If the axis rotates in the opposite direction to the desired one:
$\rightarrow$ Stop the movement immediately
$\rightarrow$ Turn off power
$\rightarrow$ Reverse 13 and 15 on terminal block B2
$\rightarrow$ Switch on the system again and repeat the rotation direction check operation


SIMU'S SAFETY RECOMMENDATIONS

|  | KE (CASE 1) | KE (CASE 2) |
| :---: | :---: | :---: |
|  | $\rightarrow$ INSTALLATION AND SETTINGS <br> FOR A SHUTTER WHICH CANNOT LIFT A PERSON. | $\rightarrow$ INSTALLATION AND SETTINGS FOR A SHUTTER WHICH CAN LIFT A PERSON |
| PRESS AND HOLD | No accessories required | No accessories required |
| MIXTE | No accessories required | 2 self-tested photocells in up position |
| IMPULSIVE / AUTOMATIC | - Optical safety edge <br> - 2 sets of low cells not self-tested. <br> - Flashing light only if that open onto on public road | - Optical safety edge <br> - 2 sets of low cells not self-tested <br> - 2 sets of high with self-testing <br> - Flashing light only if that open onto on public road |

## SAFETY DEVICE CONNECTION (CASE 1)

To operate the curtain in MIXED MODE, below security devices are not necessary
To operate the curtain in IMPULSE OR AUTOMATIC MODE, a safety edge and 2 photocells are mandatory. The flashing light is mandatory if that open onto on public road.

WIRING AN OPTICAL SAFETY EDGE.

KR $\rightarrow$ INSTALLATION AND SETTINGS FOR A SHUTTER WHICH CANNOT LIFT A PERSON


## $\rightarrow$ INSTALLATION AND SETTINGS FOR A SHUTTER WHICH CANNOT LIFT A PERSON



## SIGNAL LIGHT CONNECTION

KB $\rightarrow$ INSTALLATION AND SETTINGS FOR A SHUTTER WHICH CANNOT LIFT A PERSON
Configure the High power output 2
$\rightarrow$ Flashing output, J2 = 04

$\rightarrow$ flashing high power output 1 :
$\rightarrow$ flashing output, $\mathrm{J} 1=04$
If a flashing light is also connected place its switch on «FLASH »


## SAFETY DEVICE CONNECTION (CASE 2)

To operate the curtain in mixed mode, 2 SELF-TESTED PHOTOCELLS on the top position of the curtain are mandatory. To operate the curtain in IMPULSE OR AUTOMATIC MODES, a safety edge, 2 photocells on the down position and 2 self-tested photocells on the top position are mandatory.
The flashing light is compulsory if that open onto on public road.

SAFETY EDGE CONNECTION
KB $\rightarrow$ INSTALLATION AND SETtINGS FOR A SHUTTER WHICH CAN LIFT A PERSON


CONNECTION OF 2 NOT SELF-TESTED PHOTOCELLS
KA $\rightarrow$ Installation and settings for a shutter which can lift a person

$\rightarrow$ INSTALLATION AND SETTINGS FOR A SHUTTER WHICH CAN LIFT A PERSON


SIGNAL LIGHT CONNECTION
? $\rightarrow$ INSTALLATION AND SETTINGS FOR A SHUTTER WHICH CAN LIFT A PERSON
Configure the High power output 2:
$\rightarrow$ Flashing output, J2 = 04


## $\rightarrow$ INSTALLATION AND SETTINGS FOR A SHUTTER WHICH CAN LIFT A PERSON

Configure the high power output 1
$\rightarrow$ Flashing output J1 = 04
$\rightarrow \mathrm{J} 4=02$ (pexpert mode needed)
If a flashing light is also connected place its switch on «FLASH »


| OPERATING PHASE DISPLAY |  |
| :---: | :---: |
| Waiting for a command | RIL |
| Total internal opening <br> (complete opening phase with priority to inside panel) | Tole |
| Total external opening <br> (complete opening phase with priority to outside panel) | OE |
| Closing (Closing phase in progress) | FE |
| Waiting to close <br> (Door open on standby for closing) | RF |
| Reopening after safety close detection | LI |
| Reclosing after safety open detection | LF |

The 2 digits on the right display : -The default if there is one -The door position in other case

|  | DOOR POSITION DISPLAY |
| :---: | :---: |
|  | Door is opened |
|  | Door is neither opened or closed |
|  | Door is closed |

FIRST POWER UP PROCEDURE
The direction of rotation of the motor must have been checked and the limit switches must have been set If the ATEE code is indicated, please check the wiring of end limits(7-8-9), motor safety chain (5-6), stop (18/19) and the front panel buttons (CM1).



BELOW TABLES SHOW PRE-PROGRAMMED PARAMETERS
d $l$ : Operating mode is preprogrammed during 1 st power up procedure. It can be changed in deadman, mixed or impulse. This mode is allowed only with necessary security devices.

## Generic parameters

| $d \square$ | GENERIC PARAMETERS |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Paremeters |  | Value | Impulse 2BP | Mixed | Automatic |
| d 1 | Operating mode | 00 | Deadman |  |  |  |
|  |  | $\square 1$ | Mixed (automatic open / deadman close) |  | X |  |
|  |  | 02 | Impulse open and close | X |  | X |
| d2 | AUX Command configuration | 00 | Step by step command | X |  |  |
|  |  | 01 | Partial / complete opening selection for CMD1 |  |  |  |
|  |  | 02 | Partial open command |  | X |  |
|  |  | 83 | Traffic management external command |  |  |  |
|  |  | 04 | Input photocell blanking |  |  | X |
|  |  | 85 | Automatic interlocking input |  |  |  |
| d3 | Closing on photocell activation | 0 n | Closing after photocell activation |  |  | X |
|  |  | DF | No closing after photocell activation | X | X |  |
| ${ }^{4} 4$ | Closing on timer end | On | Closing after end of the timer |  |  |  |
|  |  | DF | No closing after end of the timer | X | X | X |
| d5 | With or without clock system | On | With clock system |  |  |  |
|  |  | DF | Without clock system | X | X | X |
| d | Number of closing attempts | $\begin{gathered} \hline 00 \text { to } \\ 50 \end{gathered}$ | Closing attempts | 83 | 00 | 83 |

## INSTALLATION AND SETTINGS FOR A SHUTTER

## WHICH CANNOT LIFT A PERSON

$d 2$ : Step by step command allows to control the shutter from a SIMU remote control (installation of the SAHz receiver below).

$d 3$ : Possibility to program closing on cell-activation. This mode is only allowed with necessary security devices. $d 4$ : Lhutter can close automatically after a dwell-time. This mode is only allowed with necessary security devices In this case, check $t R$ in $t \square$ menu

| $t \square$ | TIMER PARAMETERS |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Parameters |  | Value | Impulse 2BP | Mixed | Automatic |
| $t F$ | Opening / closing timer | 00 | 00 second to 4.0 minutes | 1.0 | 1.0 | 30 |
| LR | Re-closing timer | $\square 1$ | 0 OL second to 4 H00 | 10 | 10 | 85 |
| $t u$ | Warning timer before starting | 02 | $\square 0$ second to iO seconds | 83 | 83 | 03 |



Between 10 min and 1 hour press the button $\dagger$ or $\square$ to increase or decrease the timer by 10 seconds．


Between 1 min and 10 min press the button $\mathbf{1}$ or to increase or decrease the timer by $5 \mathbf{5}$ ．


Between 1 hour and 4 hour press the button $\boldsymbol{t}$ or $\square$ to increase or decrease the timer by 10 minutes．

(4-1

Hours $\exists 450-3$ hours 50 min时拝 Hours 4 H $\triangle 4$ hours 00 min ．

| ED | Input parameters |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Parameters |  | Value |  | Impulse 2BP | Mixed | Automatic |
| E 1 | Photocell 1 input | EXPERT MODE to modify |  | Safety input on CLOSING without self－test with complete reopening | Inactive | Safety input on CLOSING without self－test with complete reopening |
| E2 | Photocelll 2 input | EXPERT MODE to modify |  | Safety input on CLOSING without self－test with complete reopening | Inactive | Safety input on CLOSING without self－test with complete reopening |
| E3 | 8．2k safety edge input configuration | 00 | Inactive | Programmed during 1st installation procedure |  |  |
|  |  | 01 | 8.2 k safety edge only |  |  |  |
|  |  | 02 | Air pressure safety edge without 8．2k |  |  |  |
|  |  | 03 | Air pressure safety edge with 8.2 k |  |  |  |
|  |  | 04 | Pass－door function |  |  |  |
| $E 4$ | 8．2k safety edgefunction | 01 | Safety input on CLOSING with COMPLETE reopening | x | x | X |
|  |  | 02 | Safety input on CLOSING with 2 SECONDS reopening |  |  |  |
| $E 5$ | OSE safety edge function | 00 | Inactive | Programmed during 1st installation procedure |  |  |
|  |  | 01 | Safety input on CLOSING with COMPLETE reopening |  |  |  |
|  |  | 02 | Safety input on CLOSING with 2 SECONDS reopening |  |  |  |
| Eb | End limit type | 00 | Mechanical end limit | Programmed during 1st installation procedure |  |  |
|  |  | $\square 1$ | Electronic end limit |  |  |  |
|  |  | 02 | No end limit |  |  |  |
| EF | Radio channel reaction during opening | MODE EXPERT pour modifier |  | Reverse |  |  |
| EH | Function not used |  |  |  |  |  |
| EU |  |  | Function not us |  |  |  |

In the case of a shutter which can lift a person，the 5 safety accessories have to set like this：
－Bottom photocells are connected on safety edge input ：program $\varepsilon 3$ on 02 （air pressure safety edge without 8.2 k ） －Top photocells are self－tested ：program E I and $E 2$ on 04 （cf Chapter 4 to go in expert mode）．

OUTPUT PARAMETERS

## EXPERT LEVEL PARAMETERS

| U | OUTPUT PARAMETERS |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Parameters | Values |  | Impulse 2BP | Mixed | Automatic |
| U' | High power output 1 function | 00 | Electric strike door release |  |  |  |
|  |  | 01 | Electromagnetic door lock |  |  |  |
|  |  | $\square 2$ | Brake contact NO | X | X | X |
|  |  | $\square 3$ | Brake contact NC |  |  |  |
|  |  | 04 | Flashing output |  |  |  |
|  |  | 55 | Door closed indication |  |  |  |
| U2 | High power output 2function | 00 | Electric strike door release | X |  |  |
|  |  | $\square 1$ | Electromagnetic door lock |  |  |  |
|  |  | 02 | Brake contact NO |  |  |  |
|  |  | $\square 3$ | Brake contact NC |  |  |  |
|  |  | 04 | Flashing output |  | X | X |
|  |  | 05 | Door closed indication |  |  |  |
| 43 | Function not used |  |  |  |  |  |
| 45 | Warning before starting | 00 | No warning before starting |  |  |  |
|  |  | $\square 1$ | Warning before start closing only |  |  | X |
|  |  | $\square 2$ | Warning before start opening and closing | x | x |  |
| L'L | Low power output 1 function | [0 | Alarm |  |  |  |
|  |  | 01 | Timer |  |  |  |
|  |  | $\square 2$ | Door position | x |  |  |
|  |  | 83 | Self-test output NC |  |  |  |
|  |  | 04 | Self-test output NO |  |  |  |
|  |  | 05 | Automatic interlocking output |  |  |  |
|  |  | - $\square^{\text {b }}$ | Buzzer output |  |  |  |
|  |  | 07 | Service point output |  |  |  |
|  |  | 08 | Service point output + deadman operating |  |  |  |
|  |  | 79 | Opened door indication |  | X | x |
|  |  | 10 | Closed door indication |  |  |  |
|  |  | 11 | Function not used |  |  |  |
|  |  | 12 | Function not used |  |  |  |
| UE | Red traffic lights flashing configuration | EXPERT MODE to modify |  | Red lights are flashing on the two way |  |  |
| UF | Red light waiting command configuration | EXPERT MODE to modify |  | Red lights are off during waiting command phase |  |  |

U2: in impulse mode, change it in 54 to make the signaling light working.

EXPERT LEVEL ACTIVATION


EXPERT PARAMETERS

| $d \square$ | GENERIC PARAMETERS |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Parameters |  | Value | Impulse 2BP | Mixed | Automatic |
| d 1 | Operating mode | 00 | Deadman |  |  |  |
|  |  | 01 | Mixed (automatic open / deadman close) |  | x |  |
|  |  | 02 | Impulse open and close | x |  | x |
| d2 | AUX Command configuration | 00 | Step by step command | x |  |  |
|  |  | $\square 1$ | Partial / complete opening selection for CMD1 |  |  |  |
|  |  | 02 | Partial open command |  | X |  |
|  |  | 83 | Traffic management external command |  |  |  |
|  |  | 84 | Input photocell blanking |  |  | x |
|  |  | 05 | Automatic interlocking input |  |  |  |
| d3 | Closing on photocell activation | On | Closing after photocell activation |  |  | x |
|  |  | DF | No closing after photocell activation | x | x |  |
| d4 | Closing on timer end | On | Closing after end of the timer |  |  |  |
|  |  | DF | No closing after end of the timer | x | X | x |
| d5 | With or without clock system | On | With clock system |  |  |  |
|  |  | OF | Without clock system | x | x | x |
| d ${ }^{\text {b }}$ | Number of closing attempts | 00 a 50 | Closing attempts | $\square 3$ | 00 | 03 |


| ED | INPUT PARAMETERS |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Parameters |  | Value |  | Impulse 2BP | Mixed | Automatic |
| E 1 | Entrée 1 Photocellule | 00 | Inactive |  | X |  |
|  |  | 01 | OPEN safety input without self-test with COMPLETE re-closing |  |  |  |
|  |  | D2 | OPEN safety input without self-test with 2 SECONDS re-closing |  |  |  |
|  |  | 03 | OPEN safety input with self-test with 2 SECONDS re-closing |  |  |  |
|  |  | 04 | OPEN safety input with self-test with 2 SECONDS re-closing |  |  |  |
|  |  | 05 | CLOSE safety input without self-test with COMPLETE re-opening | x |  | x |
|  |  | $\square$ | CLOSE safety input without self-test with 2 SECONDS re-opening |  |  |  |
|  |  | 07 | CLOSE safety input with self-test with COMPLETE re-opening |  |  |  |
|  |  | 88 | CLOSE safety input with self-test with 2 SECONDS re-opening |  |  |  |
| E2 | Photocell 2 input | 00 | Inactive |  | x |  |
|  |  | 01 | OPEN safety input without self-test with COMPLETE re-closing |  |  |  |
|  |  | 02 | OPEN safety input without self-test with 2 SECONDS re-closing |  |  |  |
|  |  | 03 | OPEN safety input with self-test with COMPLETE re-closing |  |  |  |
|  |  | 84 | OPEN safety input with self-test with 2 SECONDS re-closing |  |  |  |
|  |  | 55 | CLOSE safety input without self-test with COMPLETE re-opening | x |  | X |
|  |  | - $\square$ | CLOSE safety input without self-test with 2 SECONDS re-opening |  |  |  |
|  |  | 07 | CLOSE safety input with self-test with COMPLETE re-opening |  |  |  |
|  |  | 88 | CLOSE safety input with self-test with 2 SECONDS re-opening |  |  |  |
| E3 | $\begin{gathered} \text { 8.2k safety } \\ \text { edge } \\ \text { configuration } \end{gathered}$ | 00 | Inactive | Programmed during $1^{\text {st }}$ installation procedure |  |  |
|  |  | $\square 1$ | 8.2k safety edge only |  |  |  |
|  |  | $\square 2$ | Air pressure safety edge without 8.2 k |  |  |  |
|  |  | 03 | Air pressure safety edge with 8.2k |  |  |  |
|  |  | 04 | Pass-door function |  |  |  |
| E4 | 8.2 k safety edge function | Di | Safety input on CLOSING , with COMPLETE re-opening without self-test | X | X | X |
|  |  | D2 | Safety input on CLOSING with 2 SECONDS re-opening without self-test |  |  |  |
|  |  | 03 | Safety input : OPENING $\rightarrow$ STOP, CLOSING $\rightarrow$ COMPLETE re-opening |  |  |  |
|  |  | 04 | Safety input: OPENING $\rightarrow$ STOP, CLOSING $\rightarrow 2$ SECONDS re-opening |  |  |  |
|  |  | 05 | CLOSE safety input with COMPLETE re-opening and BLANKING |  |  |  |
|  |  | Ob | CLOSE safety input with 2 SECONDS re-opening and BLANKING |  |  |  |
| $E 5$ | OSE safety edge function | 00 | Inactive | Programmed during $1^{\text {st }}$ installation procedure |  |  |
|  |  | 01 | Safety input on CLOSING , with COMPLETE re-opening without self-test |  |  |  |
|  |  | D2 | Safety input on CLOSING with 2 SECONDS re-opening without self-test |  |  |  |
|  |  | 03 | Safety input : OPENING $\rightarrow$ STOP, CLOSING $\rightarrow$ COMPLETE re-opening |  |  |  |
|  |  | 04 | Safety input: OPENING $\rightarrow$ STOP, CLOSING $\rightarrow 2$ SECONDS re-opening |  |  |  |
|  |  | 05 | CLOSE safety input with COMPLETE re-opening and BLANKING |  |  |  |
|  |  | - $\square$ | CLOSE safety input with 2 SECONDS re-opening and BLANKING |  |  |  |
| Eb | End limit type | 00 | Mechanical end limit | Programmed during $1^{\text {st }}$ installation procedure |  |  |
|  |  | 01 | Electronical end limit |  |  |  |
|  |  | O2 | No end limit |  |  |  |
| E7 | Function not used |  |  |  |  |  |
| E8 | Function not used |  |  |  |  |  |
| E9 | Function not used |  |  |  |  |  |
| ER | Function not used |  |  |  |  |  |
| EL | Function not used |  |  |  |  |  |
| ED | Function not used |  |  |  |  |  |
| EE | Function not used |  |  |  |  |  |
| EF | Radio channel reaction during opening | 00 | Stop |  |  |  |
|  |  | 01 | Inversion | x | x | x |
| EH | Function not used |  |  |  |  |  |
| Eu |  |  | Function not used |  |  |  |


| U' | OUTPUT PARAMETERS |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Parameters |  | Value | Impulse 2BP | Mixed | Automatic |
| U' | High power output 1 function | 00 | Electric strike door release |  |  |  |
|  |  | 01 | Electromagnetic door lock |  |  |  |
|  |  | 02 | Brake contact NO | x | x | x |
|  |  | 03 | Brake contact NC |  |  |  |
|  |  | 84 | Flashing output |  |  |  |
|  |  | 05 | Door closed indication |  |  |  |
|  |  | Ob | Lock type 1 NO |  |  |  |
|  |  | 87 | Lock type 1 NC |  |  |  |
|  |  | 08 | Lock type 2 NO |  |  |  |
|  |  | 09 | Lock type 2 NC |  |  |  |
|  |  | 10 | Capacitor commutation |  |  |  |
| 42 | High power output 2 function | 00 | Electric strike door release | X |  |  |
|  |  | 01 | Electromagnetic door lock |  |  |  |
|  |  | 02 | Brake contact NO |  |  |  |
|  |  | 03 | Brake contact NC |  |  |  |
|  |  | 04 | Flashing output |  | x | x |
|  |  | 05 | Door closed indication |  |  |  |
|  |  | D | Lock type 1 NO |  |  |  |
|  |  | 07 | Lock type 1 NC |  |  |  |
|  |  | 88 | Lock type 2 NO |  |  |  |
|  |  | 09 | Lock type 2 NC |  |  |  |
|  |  | 10 | Capacitor commutation |  |  |  |
| 43 | Function not used |  |  |  |  |  |
| 44 | Flashing type | 00 | Normal speed | X | X |  |
|  |  | 01 | High speed |  |  | X |
|  |  | 02 | Fixed |  |  |  |
|  |  | 03 | Impulse 1 second on start |  |  |  |
| U'5 | Warning before starting | 00 | No warning before starting |  |  |  |
|  |  | 01 | Warning before start closing only |  |  | x |
|  |  | 02 | Warning before start opening and closing | X | X |  |
| b' | Low power output 1 function | 00 | Alarm |  |  |  |
|  |  | Di | Timer |  |  |  |
|  |  | 02 | Door position | X |  |  |
|  |  | 03 | Self-test output NC |  |  |  |
|  |  | 04 | Self-test output NO |  |  |  |
|  |  | 05 | Automatic interlocking output |  |  |  |
|  |  | Ob | Buzzer output |  |  |  |
|  |  | 07 | Service point output |  |  |  |
|  |  | 88 | Service point output + deadman operating |  |  |  |
|  |  | 09 | Opened door indication |  | x | x |
|  |  | 10 | Closed door indication |  |  |  |
|  |  | 11 | Function not used |  |  |  |
|  |  | 12 | Function not used |  |  |  |
| 47 | Function not used |  |  |  |  |  |
|  | Function not used |  |  |  |  |  |
| 49 | Function not used |  |  |  |  |  |
| UR | Function not used |  |  |  |  |  |
| UB | Function not used |  |  |  |  |  |
| U'L | Function not used |  |  |  |  |  |
| UT | Function not used |  |  |  |  |  |
| UE | Red traffic lights flashing configuration | 00 | Fixed red lights |  |  |  |
|  |  | 01 | Red lights flash on the two ways. | X | X | X |
|  |  | 02 | The red lights flashes on the priority way |  |  |  |
| UF | Red light waiting command configuration | On | Red lights are on during the waiting command phase |  |  |  |
|  |  | OF | Red lights are off during the waiting command phase | x | x | x |


| tu | TIMER PARAMETERS |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | Parameters | Values | Impulse 2BP | Mixed | Automatic |
| $t F$ | Opening / closing timer | 00 Sec . to 4.0 Min | 1.0 | 1.0 | 30 |
| th | Re-closing timer | 00 Sec . to 4 HOD | 1.0 | 10 | 85 |
| tL | Reverse on safety action timer | 0 O sto 1.5 s | 0.2 | $\bigcirc .2$ | 0.2 |
| $t t$ | Traffic light timer | $0 \mathrm{~S}^{\text {s to } 10 \mathrm{~s}}$ | 10 | 10 | 10 |
| tU | Warning timer before starting | 00 Sec. to 10 Sec . | 83 | 83 | 83 |
| ti | Function not used |  |  |  |  |
| $t 2$ | Function not used |  |  |  |  |
| เ3 | Function not used |  |  |  |  |
| t4 | Function not used |  |  |  |  |

## CONSULTING AND PROGRAMMING MAINTENANCE

| [P | MAINTENANCE - COUNTERS - ERROR MESSAGES |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Parameters |  | Value |  | Impulse 2BP | Mixed | Automatic |
| $\mathrm{Hn}^{\prime}$ | Service operating mode | On | $\begin{aligned} & \hline \begin{array}{l} \text { Deadman without active } \\ \text { safety input } \end{array} \\ & \hline \end{aligned}$ | X | X | X |
|  |  | DF | Normal operating (d1) |  |  |  |
| ᄃ | Cycle counter (high part) (hundred thousand, ten thousand, thousand) | 000 to 999 |  |  |  |  |
| c | Cycle counter (low part) (hundred, ten, unit) | OOD to 999 |  |  |  |  |
| ${ }^{\prime \prime}$ | Service point intermediate counter (hundred thousand, ten thousand, thousand) | 000 to 999 |  |  |  |  |
| $m$ | Service point intermediate counter (hundred, ten,unit) | 000 to 999 |  |  |  |  |
| U | Service point intermediate counter Set point adjustment high part | 000 to 999 |  |  |  |  |
| $\checkmark$ | Service point intermediate counter set point adjustment low part | 000 to 999 |  |  |  |  |
| PD | Last default | 00 to 99 |  |  |  |  |
| PI | Before last default | 70 to 99 |  |  |  |  |
| P2 |  | 20 to 99 |  |  |  |  |
| P3 |  | 00 to 99 |  |  |  |  |
| P4 |  | 70 to 99 |  |  |  |  |
| P5 |  | 70 to 99 |  |  |  |  |
| Pb |  | 20 to 99 |  |  |  |  |
| P7 |  | 20 to 99 |  |  |  |  |
| PP |  | 70 to 99 |  |  |  |  |
| P9 | Older default | 00 to 99 |  |  |  |  |
| PE | Erase the ten last defaults | On ${ }^{\text {Erase }}$ defaults |  |  |  |  |
|  |  | DF | Keep defaults |  |  |  |
| Em | Expert menu activation | Dn | $n$ Second level programming |  |  |  |
|  |  | DF First level programming |  |  |  |  |
| PP | Password protection | On Active protection code |  |  |  |  |
|  |  | DF No password protection |  |  |  |  |
| P[ | Password change | In Start changing password procedure |  |  |  |  |
|  |  | DF | No change |  |  |  |
| Fr | Factory reset | On Factory reset |  |  |  |  |
|  |  | DF | No factory reset |  |  |  |

SERVICE OPERATING MODE: Hin
On : Allows to configure the door in service operating mode (deadman without active safety input). DFF : Normal operating function configured by d i parameter.

TOTAL NUMBER OF CYCLES : $[$ and $c$
$[\% \quad \%$ : Displays hundred of thousand, ten thousand and thousand for the total cycle number.

Example: 260585 cycles done $=>โ=26 \square$ et $c=585$

## SERVICE POINT ADJUSTEMENT VALUE $\downarrow$ ' AND $山$

$U$ and $\iota$ program a cycle number bracket before next maintenance

山" "n: Allows to configure the number before until the next cycle (low part)

Example to adjust 40000 cycles :

CNEXT MAINTENANCE CYCLE COUNTER: ${ }^{1 m}$ AND> $n$
${ }^{M}$ and $m$ show the cycle number to reach to make the next maintenance $M m=\left[c+L^{M} m\right.$
$M \because M: M$ : Displays hundred of thousand, ten-thousand and thousand for the next service point value
$\pi \because \because \because:$ Displays hundred, ten and units for the next service point value.

## The number of cycles of the next maintenance mn

$=$ Number total of cycles $c \varepsilon+$ Service point adjustment value $u$
 or maintenance + deadman
If the total number of cycles [c exceeds the service point adjustment value ${ }^{M} \cap$, the red light on the cover will lit DISPLAY THE LAST TEN DEFAULTS: $P \square$ TO $P$

| Displayed error message | Description |
| :---: | :---: |
| PD \% | Last displayed error $\because \%=$ Error message |
|  | Last to old error display |
| P9 $\because \%$ | Oldest error display |



## PASSWORD PROTECTION ACTIVATION: Pp

The password protects the programming menu access
A reset of the board is necessary for the protection to be active
Example: password activation 234


[^0]

| Error description | Code |  |  |  | Deadman | Actions et consequences |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\begin{aligned} & \text { Code } \\ & \text { Led } \end{aligned}$ | Display | Mem. | Alarm |  |  |
| No error | - | OL | No | No | - |  |
| Permanent command | - | 10 | No | No | - |  |
| Opening command during closing phase | - | 11 | No | No | - |  |
| Stop \ Safety chain \ Emergency stop | - | 12 | 12 | No | - |  |
| Photocell 1: Opening safety activated | Blinks | 20 | No | No | Yes | Stay in deadman in opening |
| Photocell 1: Closing safety activated | Blinks | 21 | No | No | Yes | Stay in deadman in closing |
| Photocell 2: Opening safety activated | Blinks | 22 | No | No | Yes | Stay in deadman in opening |
| Photocell 2: Closing safety activated | Blinks | 23 | No | No | Yes | Stay in deadman in closing |
| 8.2k safety edge: Opening safety activated | Blinks | 24 | No | Yes | Yes | Stay in deadman in opening |
| 8.2k safety edge: Closing safety activated | Blinks | 25 | No | No | Yes | Stay in deadman in closing |
| OSE safety edge: Opening safety activated | Blinks | 2 b | No | Yes | Yes | Stay in deadman in opening |
| OSE safety edge: Closing safety activated | Blinks | 27 | No | No | Yes | Stay in deadman in closing |
| Pass door opened (input 8.2k) | - | 28 | No | Yes | No | Block all operating function |
| Self-Testing Photo Cell 1 Error | Blinks | 30 | 30 | Yes | Yes | Stay in deadman on the phase where photocell is active until next self test |
| Self-Testing Photo Cell 2 Error | Blinks | 31 | 31 | Yes | Yes | Stay in deadman on the phase where photocell is active until next self test |
| Air Pressure Safety Edge Diagnostic Error | Blinks | 33 | 33 | Yes | Yes | A new air pressure safety self test is realized during a deadman closing |
| Pass door failure (8.2k) | - | 34 | 34 | Yes | No | Block all operating function Reset needed |
| Pre-closing area too long | Blinks | 35 | 35 | Yes | Yes |  |
| Reset or Power On | - | Non | 40 | Yes | - |  |
| End limit not reached | - | 41 | 41 | Yes | - |  |
| Interlocking in progress | - | 44 | No | No | No |  |
| Buzzer | - | 45 | No | No | - |  |
| Locking system monitor error | - | 46 | 46 | No | - |  |
| Radio receiver: Memory is full | - | 50 | No | No | No |  |
| Radio receiver: Missing memory | - | 51 | No | No | No |  |
| Internal Control Error: Internal Board default. | - | b | b] | Yes | No | Block all operating function Change control unit |
| Counter Cycle Overflow | - | b | No | No | No | Change the control unit |



## SIMU

ZONE INDUSTRIELLE LES GIRANAUX 70100 ARC-LĖS-GRAY FRANCE

Tel. +33 (0) 384647500
Fax +33(0)384647599
service@simu.com


[^0]:    Password change: $P[$

    \section*{| PC 0 |
    | :--- |
    | $\mathbf{V} \mid$ |}

    PC DOF
    T
    PC D
    Password change
    "'p V \}
    $50^{\prime}, 00$ Define the password 2nd character V
    
    v!
    1 D Define the password 3rd character

    V
    V!
    ! !
    Sort

