



CDVI

Security to Access



Bluetooth®

DIGIWAY SR

Spring Return Swing Door Operator,
Door Automation



EN

Summary

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Important Safety Instructions and Precautions



This document contains important information for safe use and operation. It is important for the safety of persons to follow these instructions. Save these instructions.

This manual is intended for professional installers, adequately trained.

Installation and connections must be carried out in accordance with Good Working Practice and in compliance with the current Regulations.

Poor installation could cause a health & safety hazard. Read this manual carefully before commencing the installation. First check all of the existing door and frame structure - verify its integrity, stability and strength. If necessary modify the structure in order to make it safe, being aware of all the possible problems that could occur during normal use.

Any existing door closing system must be removed before installation of any door automation product.

Ensure that entrapment between the driven part and the surrounding fixed parts due to the movement of the driven part is avoided. This can be achieved if the relevant distance does not exceed 8mm. However, the following distances are considered sufficient to avoid entrapments for the parts of the body identified:

Fingers	> 25 mm
Feet	> 50 mm
Head	> 300 mm
Whole Body	> 500 mm

If these distances cannot be achieved, safeguarding is needed.

Verify that all the zones where there is a risk of crushing, dragging, shearing and other dangers, are protected by electronic safety, safety freeboards or barriers.

These devices must be installed in compliance with the current laws and in a professional way, in relation to the place of use, the type of use and the operating logic of the product.

The currents developed by the complete system must comply with the current standards and, where this is not possible, protect the zones with electronic safety devices.

Apply hazardous area notices required by the applicable regulations.

Before the actuator is connected, make sure that the plate details correspond to those of the mains power and that there is a differential circuit-breaker and an adequate protection against overcurrents on the supply side of the system.

Fit a Dual Pole disconnection switch with contact opening gap of at least of 3mm. Interrupt the power supply before opening the cover of the actuator for any maintenance or repairing intervention.

Handling of electronic parts must be carried out wearing grounded antistatic bracelets to avoid any static damage.

Servicing the actuator is of fundamental importance if the system is to operate correctly and safety. Comply with the manufacturer's instructions described in this manual.

Only use genuine spare parts if replacements or repairs are required.

The motor manufacturer declines any responsibility in the event of component parts fitted that are not compatible with safe and correct operation.

This product cannot be installed in places with an explosive atmosphere or in the presence of flammable fumes or gases.

This appliance can be used by children aged 8 years and up and persons with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, if they have been given supervision or instruction concerning use of the appliance in a safe way and understand the hazard involved.

Children must not play with the appliance.

Cleaning and user maintenance must not be done by children without supervision.

The A-weighted emission sound pressure level of this drive is equal to or less than 70 dB(A).

The actuating member of a biased-off switch is to be located within direct sight of the driven part but away from moving parts. Unless it is key operated, it is to be installed at a minimum height of 1.5 m and not accessible to the public.

Machinery Directive

Automatic pedestrian doors fall into the application field of the Machinery Directive (2006/42/CE). This states that the installer who motorizes a door becomes the manufacturer of a machinery and so must:

1. Prepare the Technical Construction File (which must contain the documents indicated in Annex V of the Machinery Directive) and must be kept and placed at the disposal of competent national authorities for at least ten years from the date of manufacture of the motorised door.
2. Draft the EC Declaration of Conformity in accordance with Annex II-A of the Machinery Directive
3. Affix the CE marking on the power operated door in accordance with point 1.7.3 of Annex I of the Machinery Directive.

The installer must consign to the customer the following documents:

1. Instructions on how to operate and safely use the system.
2. Routine maintenance instructions.
3. Declaration of conformity.
4. Maintenance register.

Instructions for use

The operator DIGIWAY-SR type DWSR102XCD belongs to the Service Class 5 (600 cycles a day for 5 years).

Applications: HEAVY DUTY, for pedestrian access to institutional complexes with very intense use.

Declaration of the Manufacturer

(according to Directive 2006/42/CE, Annex II part B)

The Manufacturer

CDVI WIRELESS SPA
Via Piave,23
31020 S.Pietro di Feletto (TV)
ITALY

Herewith declares that the automatic operator for swing doors

Brand : CDVI
Type : DIGIWAY-SR
P/N : DWSR102xCD

- constitutes a "partly completed machinery" and it is intended to be incorporated into machinery or to be assembled with other machinery to constitute a machinery covered by Directive 2006/42/CE;
- complies with the following Directives :

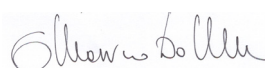
2006/95/CE (Low Voltage Directive)
2004/108/CE (Electromagnetic Compatibility Directive)
2014/53/UE (RED)

European Standard EN16005 : Power Operated doorsets - Safety in Use

- it is not allowed to put the machinery into service until the machinery into which it has to be incorporated or of which it has to be a component has been found and declared to be in compliance with the provisions of the Directive 2006/42/CE.

S.Pietro di Feletto, 1/11/2017

G. Massimo Dalle Carbonare
(Product manager)



1] IDENTIFYING PRODUCT AND PARTS

Digiway-SR mod. DWSR102xCD is an indoor operator (IP40) for swing doors, with integrated electronic controller and radio receiver. The opening motion is manual or electromechanical, closing is spring-driven servo-assisted.

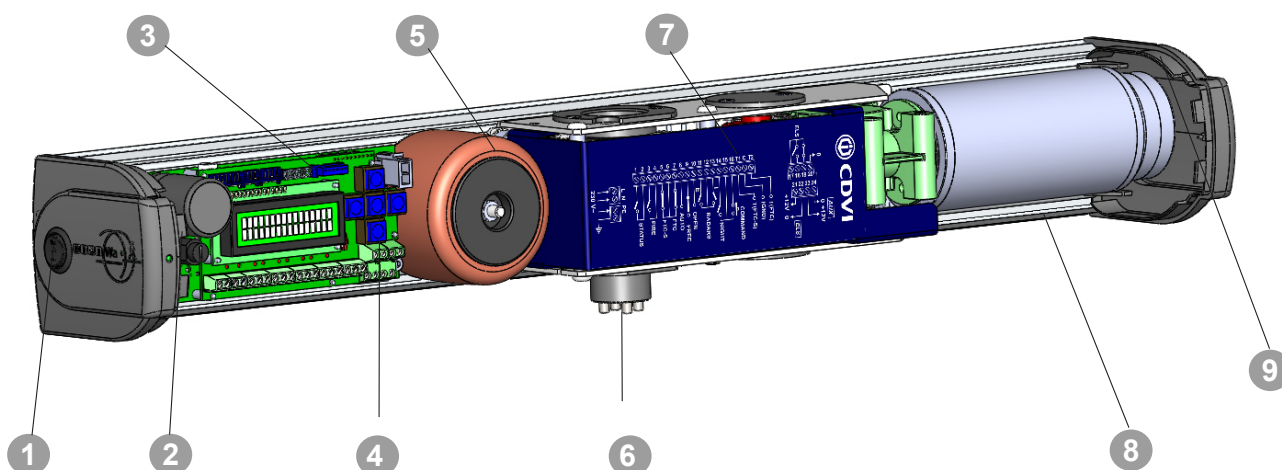
The following versions are available:

P/N	Ref.	Description
F0543000163	DWSR102SCD	Single door operator for inswing doors with sliding arm
F0543000164	DWSR102ACD	Single door operator for outswing doors with articulated arm
F0543000165	DWSR102UCD	Single door operator for inswing or outswing doors with universal arm
F0543000202	DWSR102SBT	Single door operator for inswing doors with sliding arm w/Bluetooth Module
F0543000201	DWSR102ABT	Single door operator for outswing doors with articulated arm w/Bluetooth Module
F0543000203	DWSR102UBT	Single door operator for inswing or outswing doors with universal arm w/Bluetooth Module

The operator is suitable for swing doors with max width of 1.5 m or max weight of 200kg (Refer to diagram on page 7).

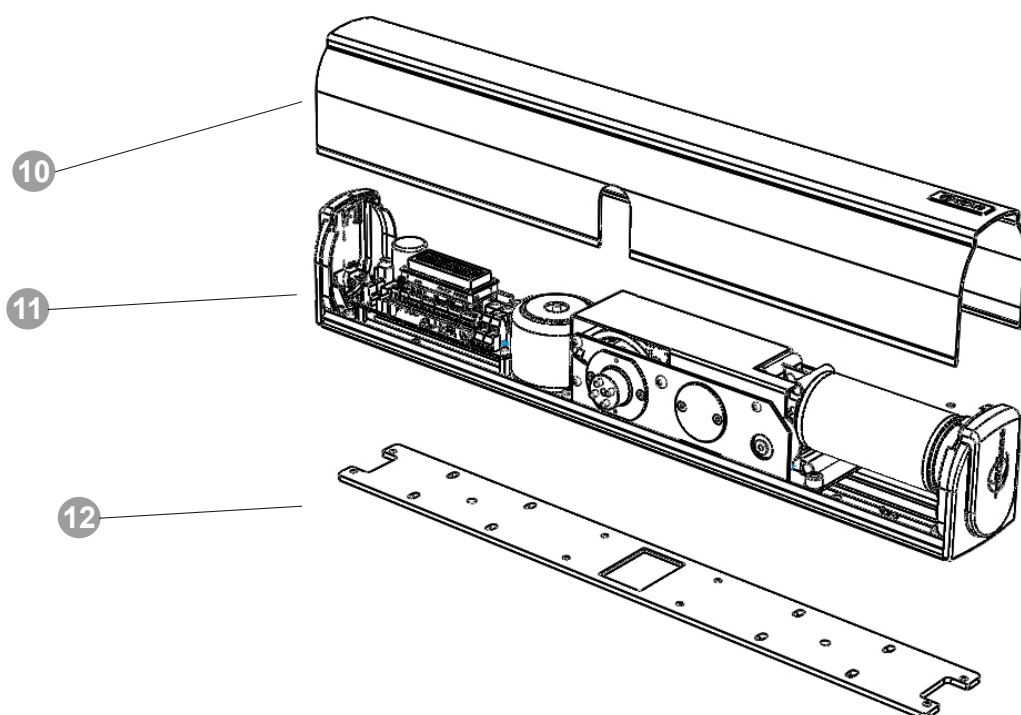
At max speed the door can open and close within 4 sec. (90°), depending on door weight and dimensions.

See the technical specifications in the following pages of this manual.

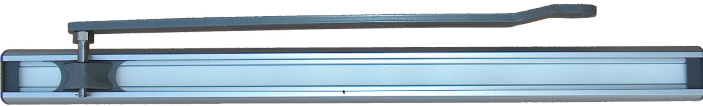
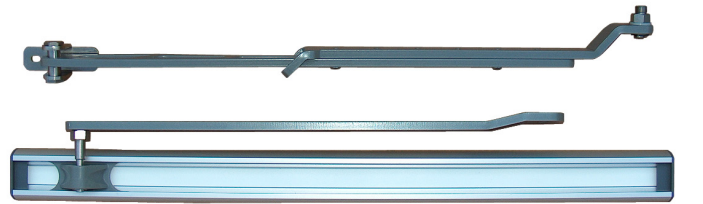


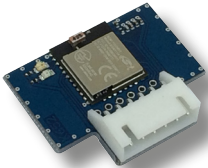
Legend

- | | |
|-----------------------------|--|
| 1 - Operating mode selector | 7 - Mechanical drive with spring close |
| 2 - Status LP LED | 8 - Slot for cover opening |
| 3 - Display LCD | 9 - Shaft encoder |
| 4 - 5-button keyboard | 10 - Anodized aluminium cover |
| 5 - Toroidal transformer | 11 - Receiver card |
| 6 - Motor shaft | 12 - Backplate |



Accessories

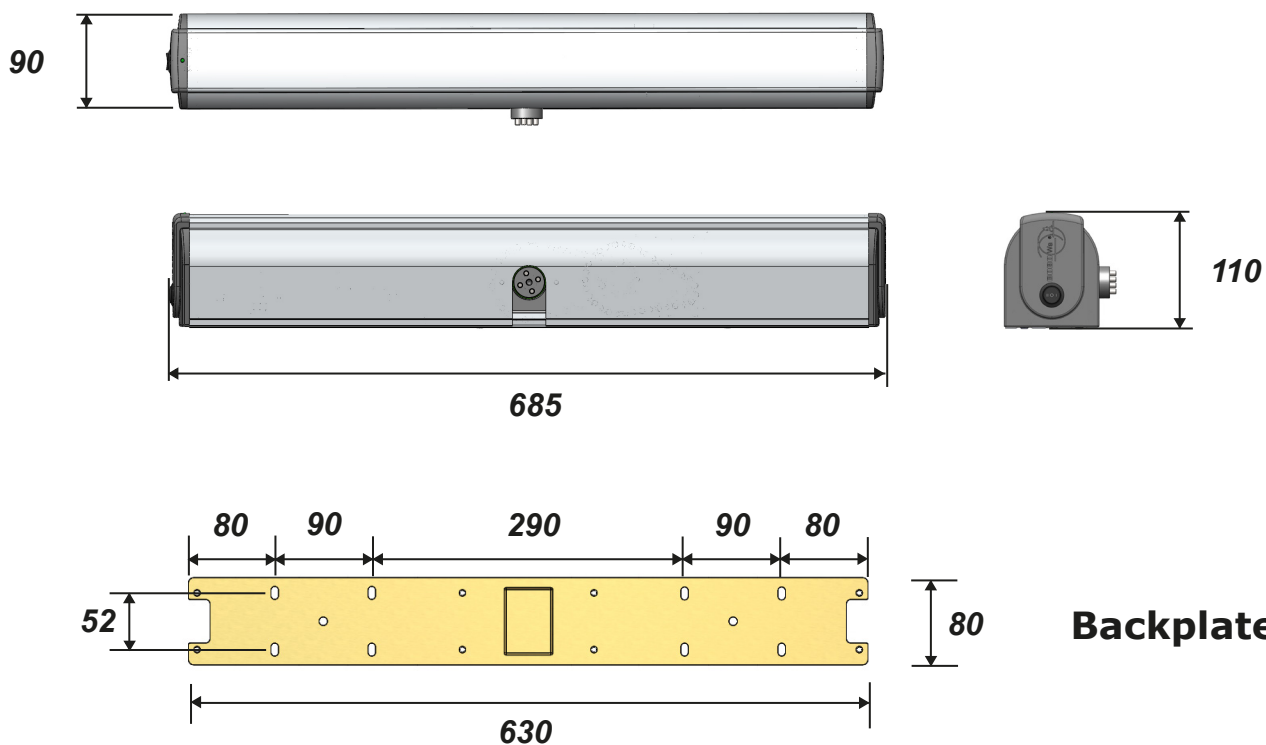
Description	P/N	F Code	
Kit articulated arm	DWKBA	F0543000030	
Kit sliding arm	DWKBS	F0543000031	
Kit universal arm	DWKBU	F0543000122	
Double door cable	DWPCS	F0543000124	
Mounting tools kit	DWTK	F0543000156	
Extension 55 mm	DWSE	F0543000033	

Extension 30 mm	DWSE30	F0543000123	
Extension 80 mm	DWSE80	F0543000136	
Door Coordinator	SEL-NICK	F0522000003-A	
Bluetooth module (*)	DSRMBT	F0543000178	

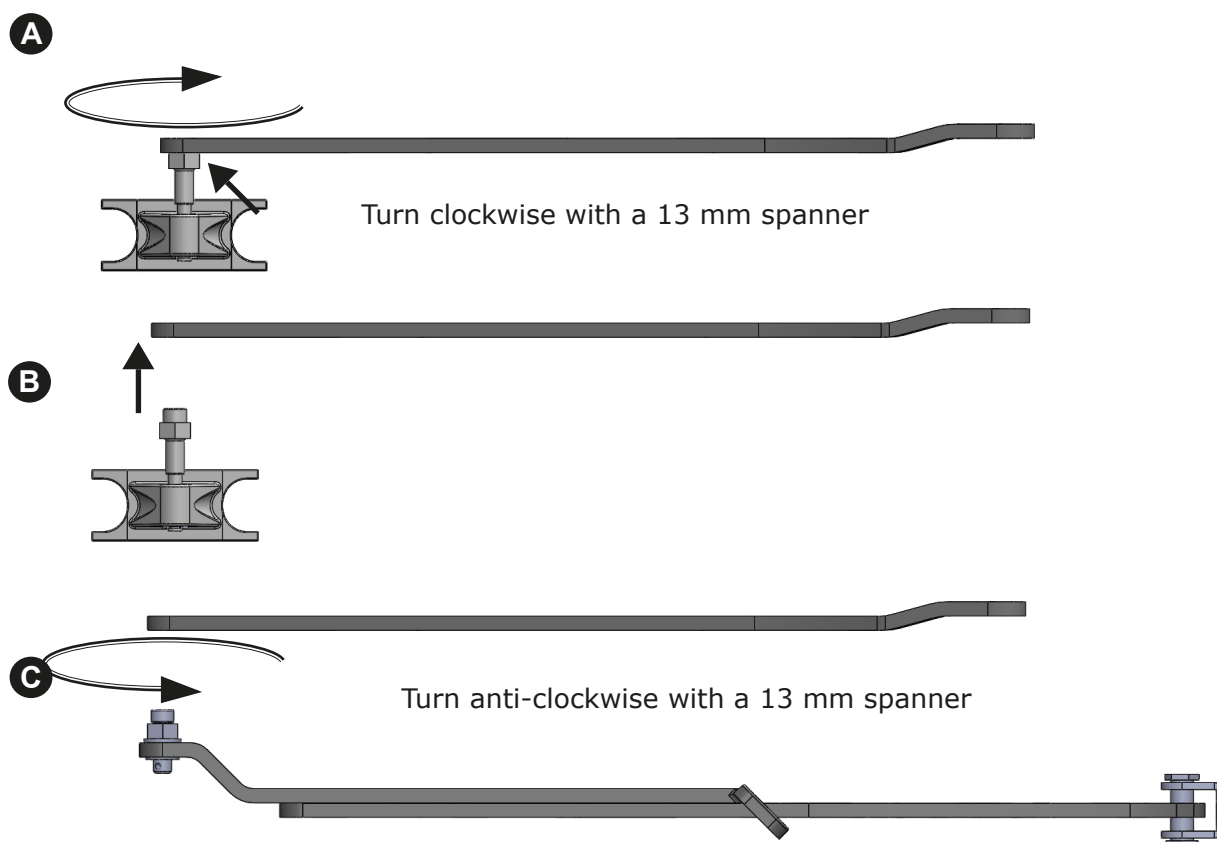
(*): The types with the suffix BT (refer to table on pag. 6), come with the Bluetooth module built-in. The types with the suffix CD on the part name can also be equipped with the Bluetooth module.

See page 43 for the detail concerning the after-sale installation of the module, for its configuration and use.

Overall dimensions



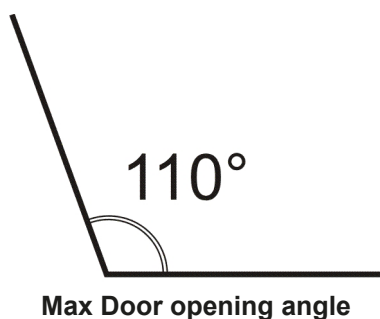
Universal arm: how to change from sliding arm to articulated arm



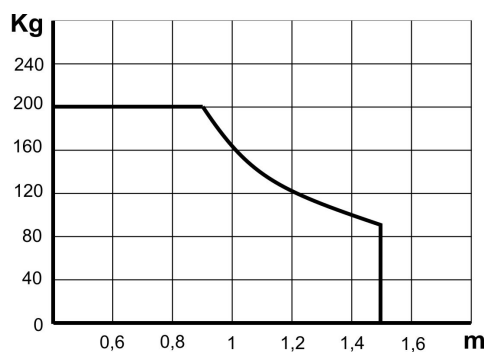
Technical specifications

General specifications

Power supply	230 Vac - 50 Hz
Motor torque	15 Nm
Max power	100 W
Operating class	5 (heavy duty)
Overall dimensions	685 x 90 x 110 mm
Weight	10.5kg
Operating temperature	-10°C +/- 55°C
IP Grade	IP40
Opening / closing time	4 / 15 sec.
Pause time	4 / 90 sec.
Power for auxiliary devices	13.5 Vdc / 500 mA [max]
Power for electrolock	12 Vdc / 1A [max] or 24Vdc / 0.5A
Electrolock output relay	(C-NO-NC) 10A / 12V
Open door output relay	(C-NO) - 24 VA
Electrolock hold time	Adjustable [0.1 / 5 min]
Transmitters security protocol	Keeloq® Hopping Code
RX memory	50 transmitters
Integrated receiver main specifications	433.92 MHz ASK / -107 dBm
Fire input	Dry contact (C-NC)



Use conditions



Electronic card specifications

Operating modes: Automatic (I) - Door free (0) - Door always open (II) - Semiautomatic (I)

Inputs: Re-open photocells (NC)
Stop photocells (NC)
Door free (NO)
External Radar (NO)
Internal Radar (NO)
Day / Night selection (NO)
Fire input (C-NC)

Outputs: Door open contact (C-NO)
Door Always open (NO)
Electrolock output contacts (C-NO-NC)
Electrolock power 12 Vdc / 1 A or 24 Vdc / 500 mA
Test for safety devices (FTC- FTC-S)
External devices power 12 Vdc / 500 mA

Main features

- Operating modes: Fully automatic, Semi-automatic, Always open, Door free;
- Operating with single door, double door, with or without leaf overlap;
- Guided procedure for door travel limit settings;
- Remote controls memorisation and management;
- Slow motion approaching the limits;
- Push & Go / Pull & Go function;
- Adjustable Pause Time, max Closing Speed, max Opening Speed, Closing final speed;
- Opening Jolt fully adjustable;
- Status tricolor LED (red - orange - green);
- Adjustable electrolock hold time and torque;
- Adjustable opening Jolt parameters;
- Adjustable Stop photocells;
- "Fire mode";
- Night / Day mode;
- Door open output relay.
- Cycles counter;
- Obstacle log register (20 logs)

2] INSTALLATION

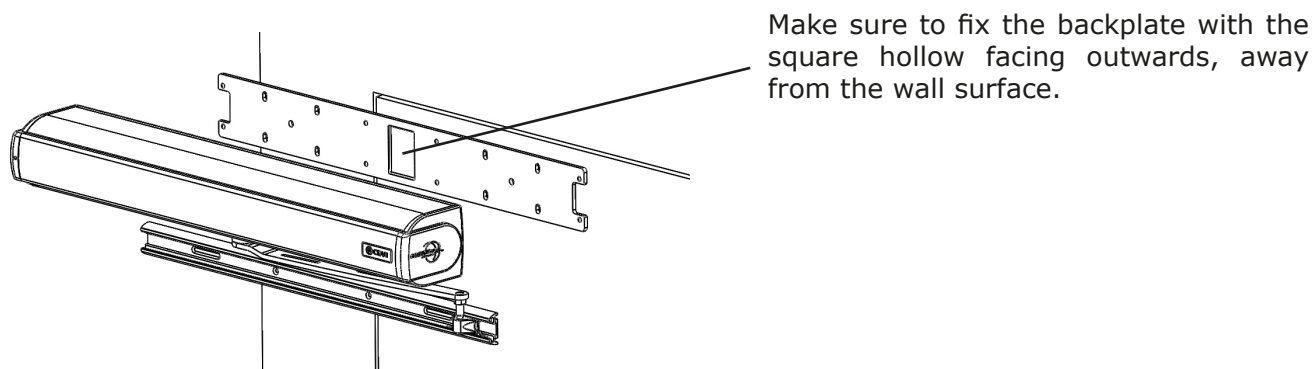
First, check the stability of the door that is to be motorised, verifying smooth uninterrupted motion in both directions (open and close) to full travel.

If the travel is not clear adjustments must be made to achieve satisfactory travel.

- Remove any manually operated locking mechanism unless it is to be used with a strike. A door stop is not required to complete the opening cycle but advisable to stop the being over opened when used manually.
- Any existing closing systems should be removed before installation.

Fixing the motor

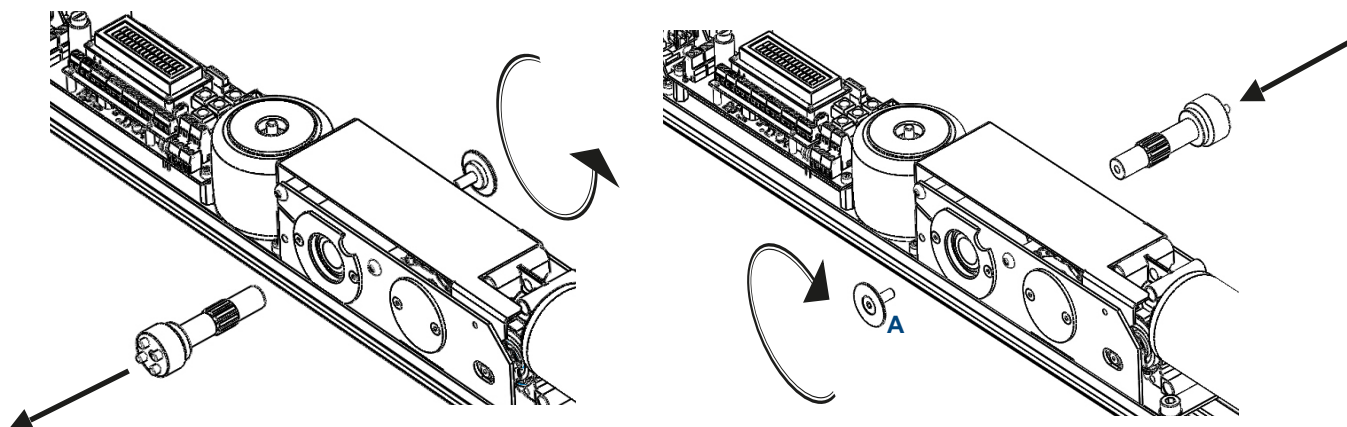
The motor must be fixed on the top jamb making use of the corresponding backplate provided.



The closing spring is always charged in the same direction, (see direction arrow on casing) therefore the motor must be mounted according to its discharge direction so that the spring discharges by closing the door.

Depending on the hinge location (left or right) together with the door opening direction it may be necessary to mount the operator upside down.

To accomplish this the drive shaft must be removed and replaced making sure the shaft protrudes from below. Remove the mounting screw in the top of the shaft, unscrew the screw A with an Allen key M6, disconnect the shaft and reassemble the parts in the opposite direction.

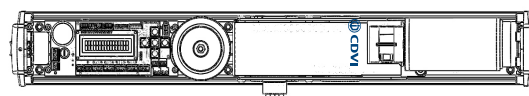


ORIENTATION OF THE OPERATOR FOR USE IN DIFFERENT SCENARIOS WHEN FIXING ON THE TOP JAMB.



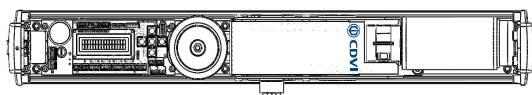
Hinges at LEFT - side motor with sliding arm

FIG. A



Hinges at RIGHT - side motor with sliding arm

FIG. B



Hinges at LEFT - side motor with articulated arm

FIG. C



Hinges at RIGHT - side motor with articulated arm

FIG. D

Rotation of the Display LCD Module

The operator comes from the factory with the LCD display module on the left (Fig. B and Fig. C). If the operator has to be mounted upside down (Fig. A and Fig. D), proceed as follows:

- 1 - **Disconnect the mains power supply;**
- 2 - Remove the display module from the lower card by pulling upwards (Fig. 1);

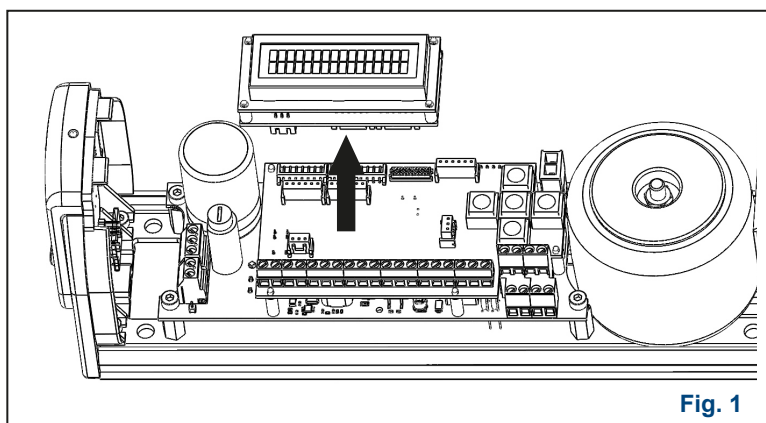


Fig. 1

3 - Turn the operator to the correct orientation and replace the LCD display into the connector making sure that all the pin connections between the module and lower PCB are seated with the LCD module the correct way up. (fig. 2);

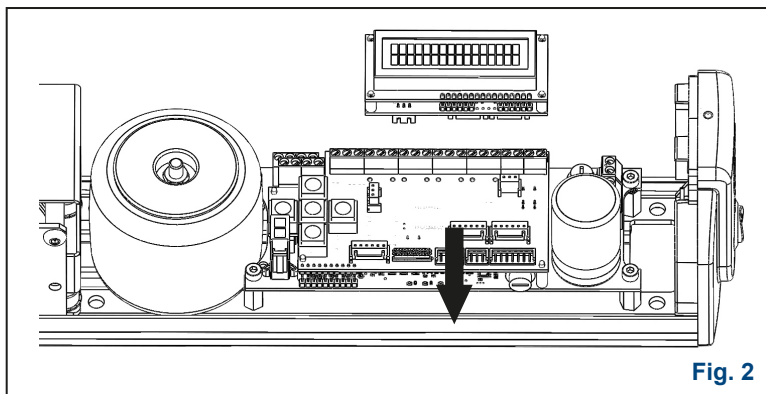
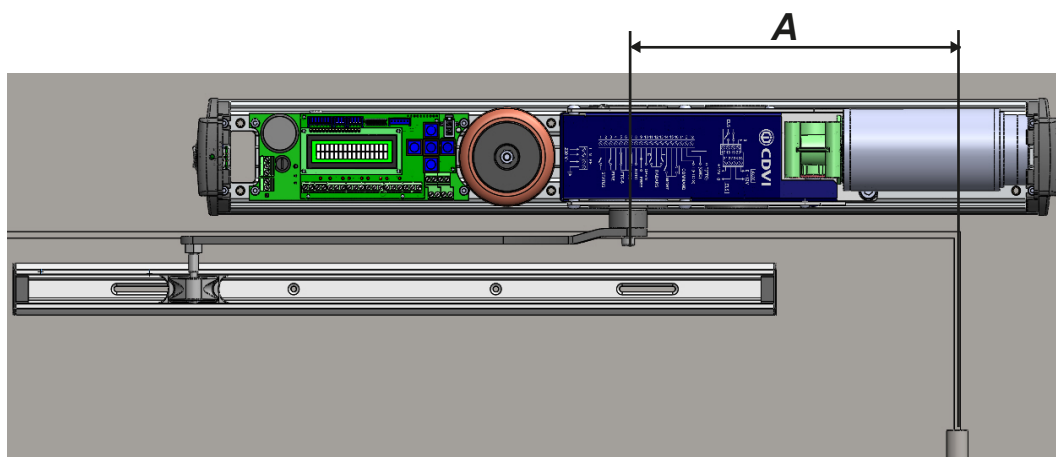


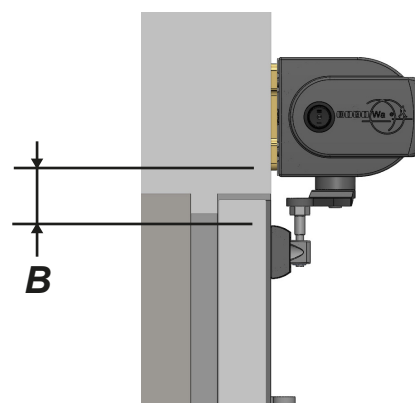
Fig. 2

4 - Reconnect the mains power.

Mechanical installation: sliding arm version

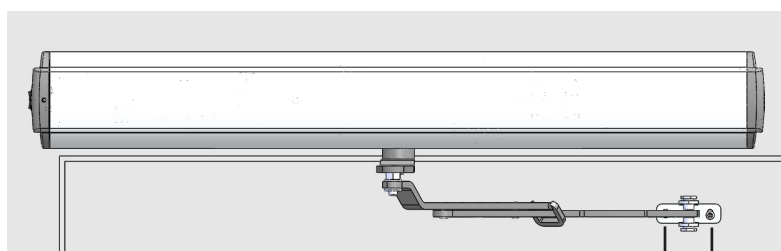


Parameter	Value (mm)	Description
A	280	Door hinge – motor axis distance
B	35	Backplate – guide distance

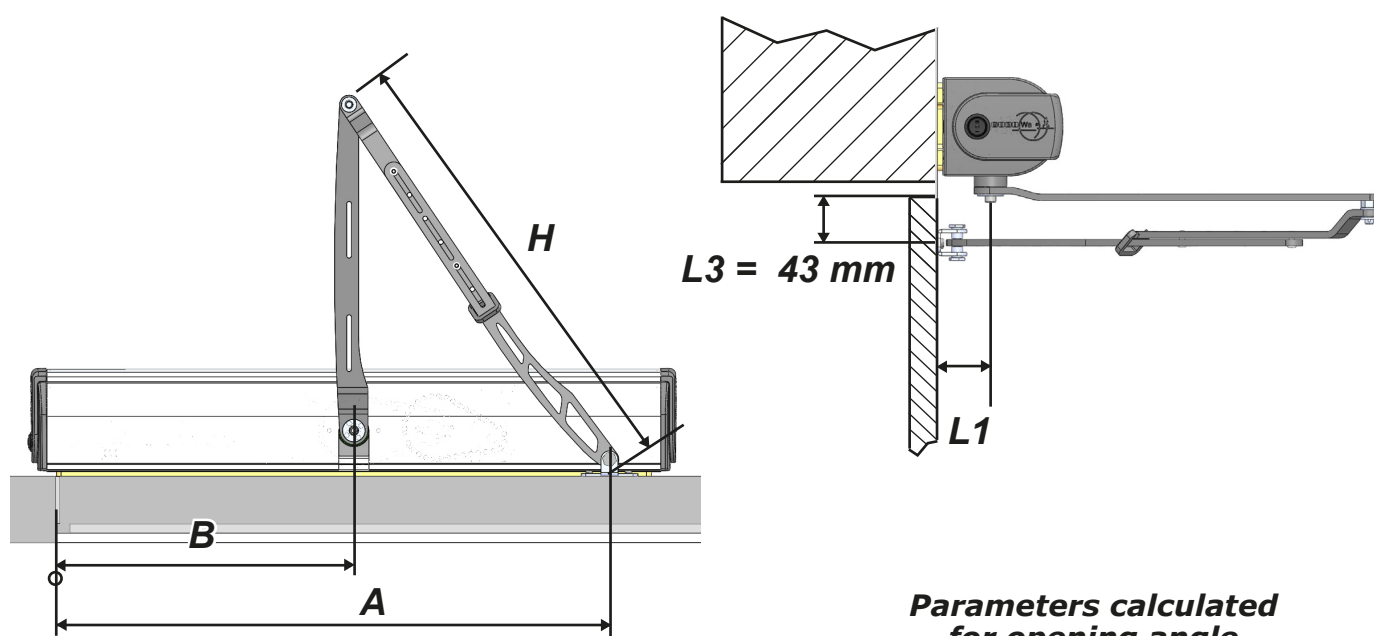


 **Important:** The door face and Digiway mounting must be in line as shown above.

Mechanical installation: articulated arm version



$C = 40 \text{ mm}$

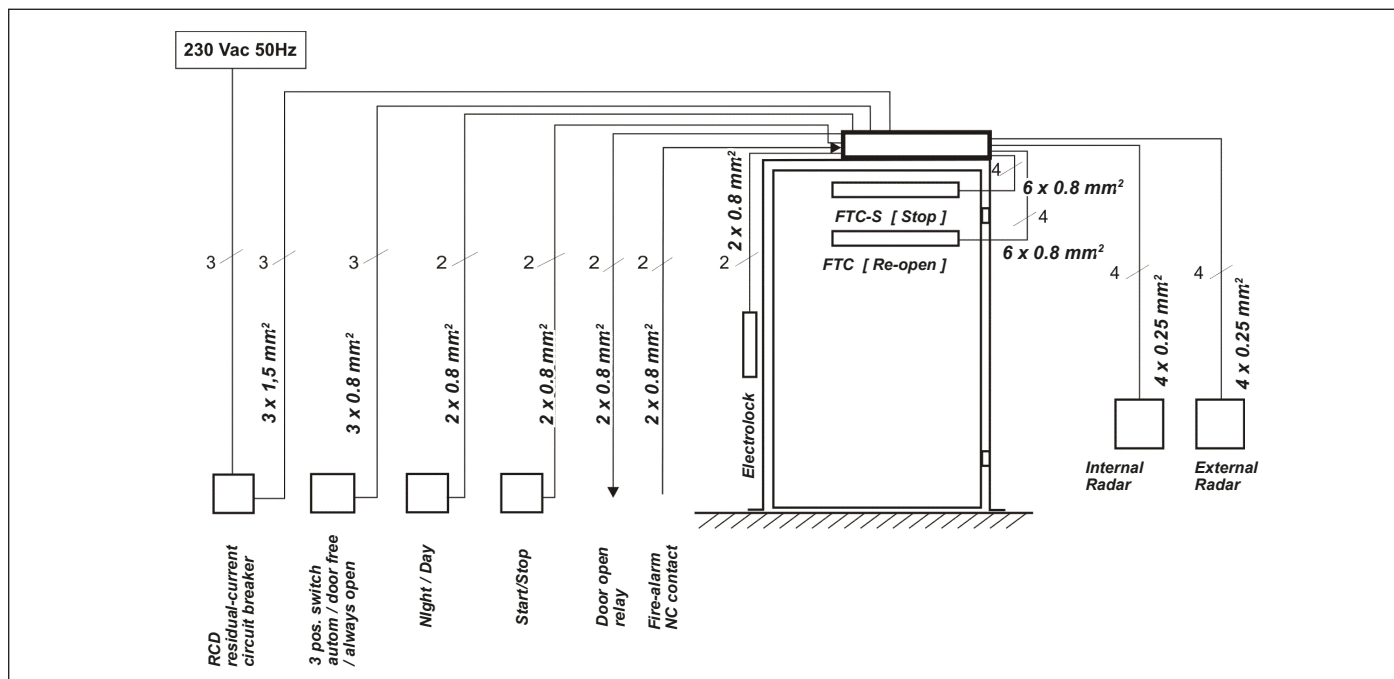


*Parameters calculated
for opening angle
 $\leq 100^\circ$*

Param.	Description
A	Door hinge – door bracket distance
B	Door hinge – motor axis distance
C	Door bracket hole centres.
L1	Distance motor axis - door
L3	Distance motor shaft-door bracket
H	Length of the adjustable forearm

B = 330 mm		
L1	A	H
300	540	600
270	500	570
240	500	570
210	500	540
180	500	520
150	460	460
120	460	450
90	500	430
B = 300 mm		
60	550	450

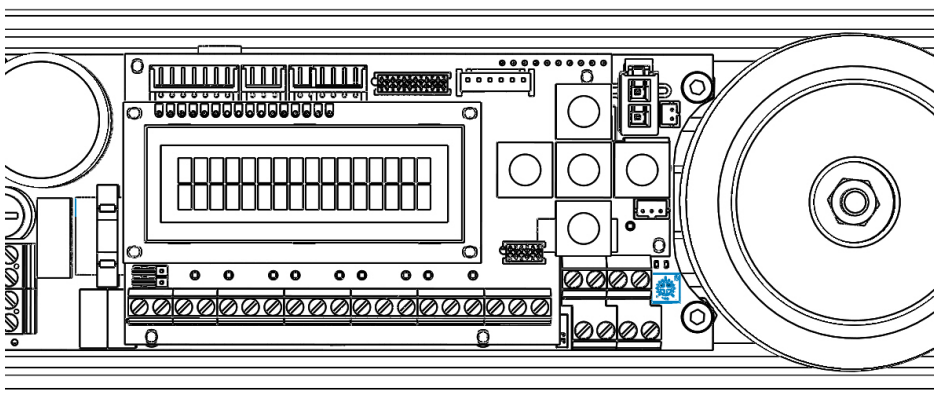
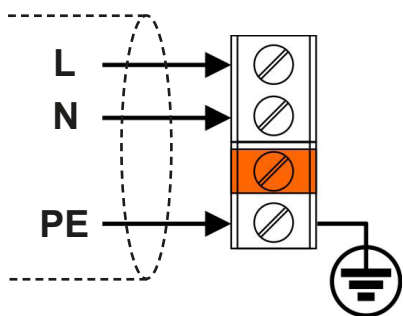
Wiring diagram & connections

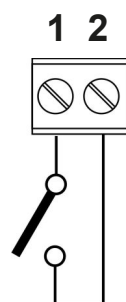


Electrical connections

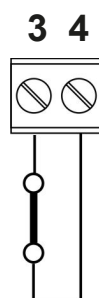
Connect the equipment to the Mains power using the appropriate cable (3 x 1.5mm²), passing it through the rear opening of the profile and the backplate and avoiding being too tight and touching sharp edges.

At the end of the installation, connect to the ground cable (yellow-green) provided, from the cover to the corresponding connector on the control PCB.



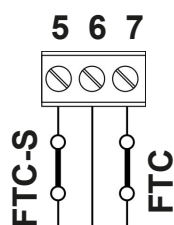

Dry-Contact

Door Status relay		
Door Status	Closed	Opening/Open/Closing
Relay	OFF	ON


Fire alarm

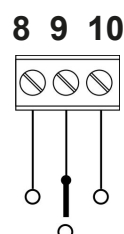
3	C contact
4	NC contact

NOTE: The door status relay can be configured both to activate when the door is in the "Opening / Open / Closing" state, and to activate when the number of cycles indicated by the partial cycle counter has exceeded the maintenance request threshold. See Advanced Settings menu to change the operating mode.



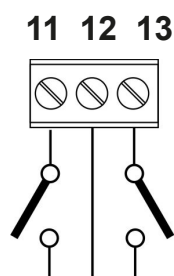
Safety photocells (*)	
5	Safety Input NC Stop Photocells [FTC-S]
6	Safety Input C Photocells
7	Safety Input NC Re-open Photocells [FTC]

(*) **NC Contacts: short if not connected**
 FTC = Photocell (IR Curtain Safety Sensor)

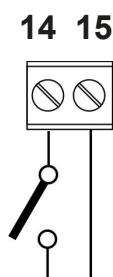


External switch (*)	
8	Input NO switch pos. I
9	Input C switch pos. 0
10	Input NO switch pos. II

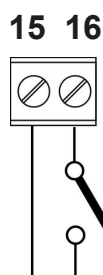
Contacts are in parallel connection to the external switch. See page 19 for external switch exclusion.



Radar	
11	Input NO Radar External (Disabled in Night Mode)
12	Input C Radar
13	Input NO Radar Internal



Day / Night	
14	Input NO Day/Night switch
15	Input common



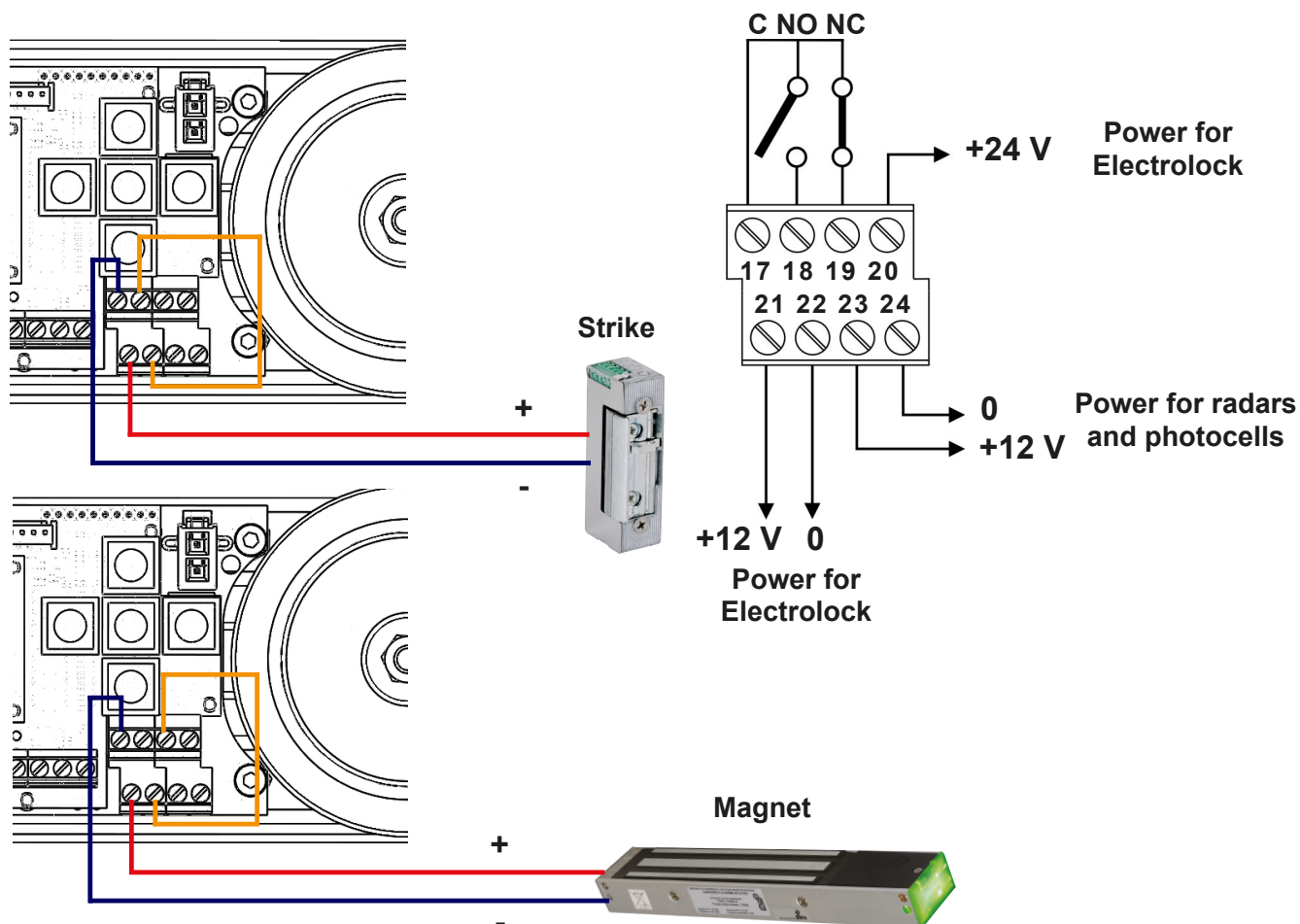
Open command	
15	Input common
16	Input NO push-button open/close/stop

T1 C T2


Test Photocells	
T1	Output (+12) Test FTC-S
C	Common test photocells (GND)
T2	Output (+12) Test FTC

Test FTC
Common
Test FTC-S

Wiring to strike or magnet



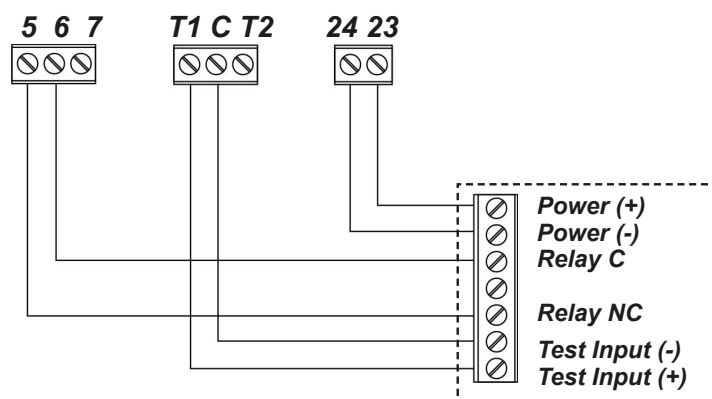
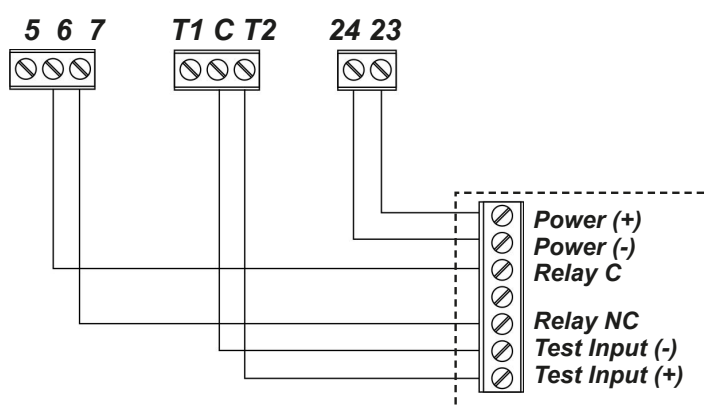
Monitored photocells wiring

The Standard EN16005 indicates that the parts of the system which have a direct effect safety must comply with EN12978 and be designed to comply with EN ISO 13849-1 Performance Level "C". Safety related parts of the control system used as an escape route must functionally comply with EN ISO 13849-1 Performance Level "D".

If devices type ESPE (photocells) are used, they must be monitored by the drive system. DIGIWAY-SR is equipped with output test signals (Test1, C, Test2) that check the photocells' status before any motion.

The system switches off the photocell for a few mS, a test signal then checks the change across terminals 5-6 and 6-7.

If the signals are not stable, the door motion will be stopped or switched to Low Energy mode (see Advanced Options menu).

**STOP Photocells (FTC-S)****REOPEN photocells (FTC)**

WARNING: at the end of the autocalibration (see pg18) you are asked to enable or disable the test on the photocells. If no photocells are connected, terminals 5-6 and 6-7 must be shorted and the test must be disabled.

Low Energy Mode

The Standard EN 16005 (Annex F) indicates the parameters for Low Energy mode : the minimum open / close time from 10° to 90° is indicated in the following table:

Width of doorset leaf (m)	Mass (kg)				
	50	60	70	80	90
	Time (sec.)				
0.75	3.0	3.2	3.2	3.3	3.5
0.85	3.1	3.1	3.2	3.4	3.6
1.00	3.2	3.4	3.7	4.0	4.2
1.2	3.8	4.2	4.5	4.8	5.1

For other widths and/or masses the times can be calculated using the formula:

$$t = \frac{D\sqrt{m}}{2,26}$$

where t = time in sec.

D = diameter doorset leaf in meters

m = mass in kg.

See on the ADVANCED SETTINGS menu how to set the doorset leaf dimensions and the operating mode in case of photocell malfunction.

Electronic card LED's

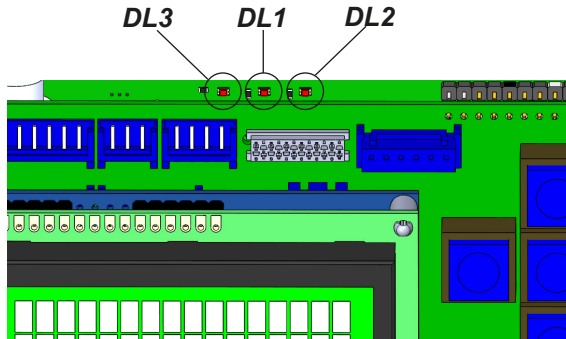
	Led ON	Led OFF
L1	Fire contact CLOSED OK	Fire contact OPEN
L2	NC contact stop photocells closed	NC contact stop photocells open
L3	NC contact re-open photocells closed	NC contact re-open photocells open
L4	Automatic mode	-
L5	Door always open	-
L6	External radar active	-
L7	Internal radar active	-
L8	Night mode	Day mode
L9	Open/close command active	-

Meaning of LP LED messages

Function	LED GREEN		LED ORANGE		LED RED		
	ON	blinking	ON	blinking	ON	blinking	fast blinking
Everything OK	O						
Fire alarm				O (fast)			
Night Mode			O				
Door free	-	-	-	-	-	-	-
Travel profile calculation in progress		O					
Selflearning						red/green	
Safety photocells malfunction							O
Door always open				O (slow)			
Service required						O (slow)	

Alarms

The electronic card of DIGIWAY SR is equipped with 3 alarm LEDs indicating 3 different anomalies which will set the door into free swing mode.

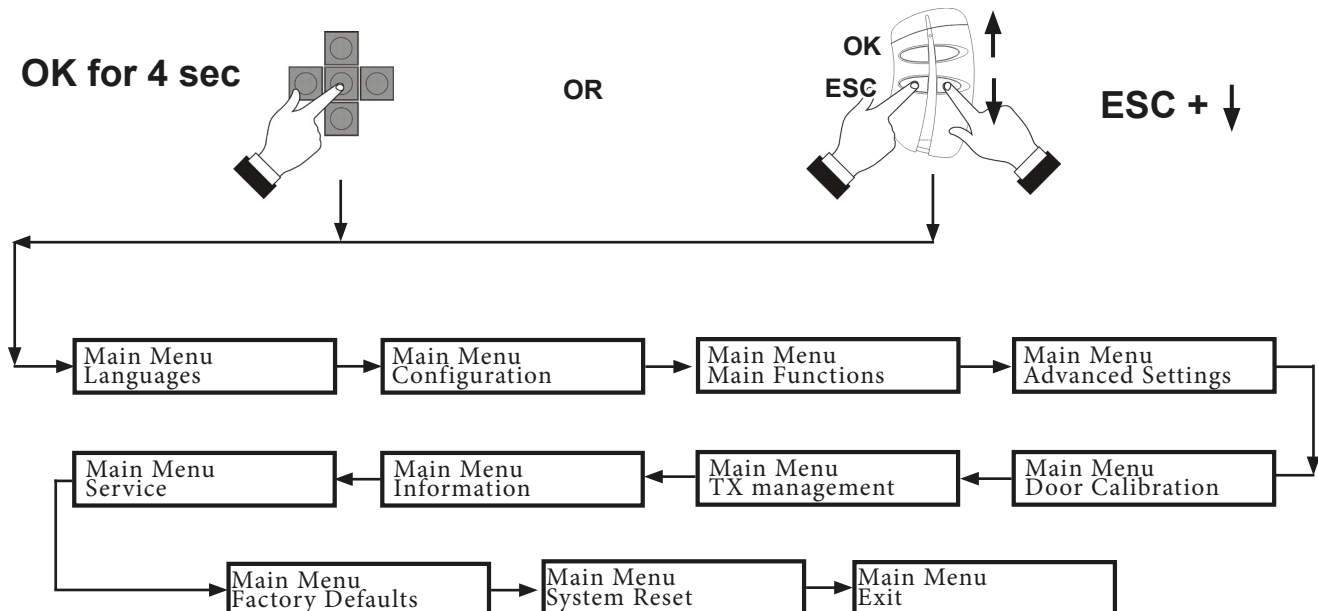


LED	Description
DL1	Abnormal current consumption > 9A for 2 sec.
DL2	Short-circuit with current peak
DL3	Overheating of the card (> 65°C). When the temperature decreases under 47°C the system resets automatically.

3] SYSTEM CONFIGURATION AND SETTINGS

DIGIWAY SR is equipped with a 2x16 character LCD Display and a 5-key keyboard. The operating configuration can be set by navigating through several menus. The menu has a tree structure with a main menu and different sub-menus.

ACCESS to the MAIN MENU



Guided configuration

The operator is supplied with a 4-button transmitter included. On completion of the mechanical fixing and the electric connections, proceed with the memorisation of the transmitter into the internal memory inside DIGIWAY. This transmitter can be used to set up all parameters without needing to access the 5 onboard buttons.

The transmitter keys correspond to the onboard push-buttons according to the following diagram:



Note: In normal operating mode the down key will trigger the door to open.

The set-up of the operator can be divided into 6 steps:

- **STEP I: INITIAL SETUP** (preliminary actions)
- **STEP II: PRELOAD OF THE SPRING** (Initial spring tension adjustment)
- **STEP III: CONFIGURATION** (set-up of the basic operating mode)
- **STEP IV: DOOR CALIBRATION** (automatic detection of the door characteristics)
- **STEP V: ADJUSTMENTS** (further adjustments and personalisation)
- **STEP VI: SPECIAL PARAMETERS** (set-up of the advanced parameters)

STEP I: INITIAL SETUP

- 1 Press the OK button on the keyboard for 4 sec until the display enters the main menu;
- 2 Select the language by scrolling the possible choices with the UP and DOWN buttons
- 3 Press OK to confirm: the display shows the message OK and then displays all messages in the new language;
- 4 Exit from the menu with the button ESC.
- 5 Scroll through the main menu, select **TX MANAGEMENT** submenu and press OK
- 6 Select the option **ADD TX** and press **OK**
- 7 Press the transmitter key OK (top-left button): the display will show the S/N, confirming the memorisation

- 8 Exit from the menu by pressing the ESC button.
- 9 Exit from the main menu selecting EXIT MENU.

From this time on the remote control is enabled to access the main menu. Enter simply by pressing ESC + DOWN simultaneously.

NOTE: ONLY THE FIRST TRANSMITTER MEMORISED CAN ACCESS THE MAIN MENU!
All subsequently added transmitters only open the door!
It is advisable not to give the first remote to the end user for general use.

The OK key of the transmitter has multiple functions: OK if you are in the menu, START / STOP in normal operating.

STEP II: SPRING PRELOAD ADJUSTING

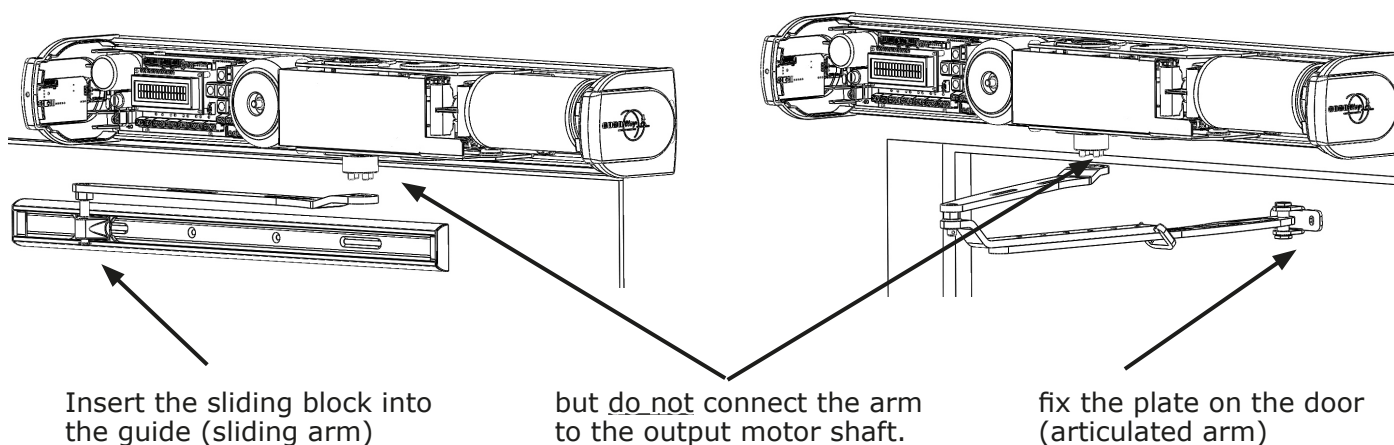
The device is equipped with a torsion spring that closes the door in absence of mains power.

The holding force when the door is closed, depends on the level of preload set: this can be adjusted electronically using the buttons on the card. For safety reasons, the motor comes with no preload.



ATTENTION: Adjust the spring preload before the self-calibration and any other setting.

- 1 The preload adjustment is performed with the device powered. Once the motor has been fixed to the backplate, **APPLY POWER**.



- 2 Set the external switch to position 0: **DOOR FREE** and close the door
- 3 Push the OK button for 4 sec., enter the submenu **Door Calibration, Spring Precharge**.

Main menu
Door calibration

Door calibration
Spring precharge

Reset Preload
Value ?

The menu will ask if you wish to keep or reset the previously stored preload.

OK

POS=+000,0

Press OK if the spring is not charged. The value will be set to +000.0. The number is the value of the spring preload expressed in degrees.

ESC

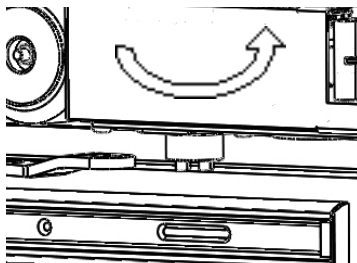
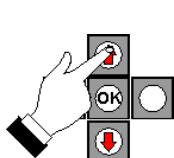
POS=+183,2 (*)

Press ESC if you want to increase or decrease a value previously set.



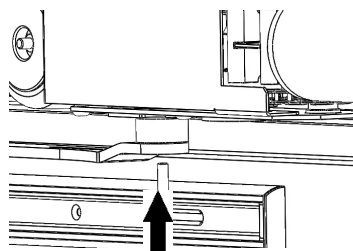
ATTENTION: If the operator is dismantled from the door or the arm is disjoined from the motor shaft, the spring will discharge and there will be no correlation between the spring preload and the stored value. In this case press OK to reset the value.

- 4 Press the UP button of the keyboard and the system will rotate the motor shaft, charging the spring.
Keep on pressing the button until the 4 pins enter into the 4 holes of the forearm.



ATTENTION: Check that the rotation of the motor shaft follows the direction of the arrow on the label otherwise the spring will be charged in the wrong direction.

- 5 Once the 4 pins of the motor shaft are aligned with the 4 holes of the forearm, insert the forearm and fix it with the screw M6x16 provided.
Preload can be adjusted in steps of 90 degrees, in relation to the pins of the drive shaft.



- 6 Select 'Save'.
The system will stop holding the motor shaft and the spring will start pushing the door until closed. Test the preload value by opening the door and verifying the closing force BEFORE selecting Door Limits.
If the precharge is not enough, repeat the operation.



ATTENTION: To avoid spring discharge, when further adjustment is required, first enter the 'Spring Precharge' menu, and then unscrew the M16x6 shaft bolt. The shaft will remain static as long as the unit is in the above menu.

WARNING: THE DOOR MAY SLAM SHUT AT THIS POINT.

STEP III: CONFIGURATION

Step III allows the setup of all the basic parameters of the operator according to the type of required automation.

The submenu CONFIGURATION consists of several parameters. Each parameter can have 2 or more values. For each one there is a preset factory value. If the FACTORY DEFAULT function in the Main Menu is used all parameters will be set to default as shown below.

See the description of each parameter in the following table:

Parameter	Description	Option	Default
Num. Doors	Sets the number of Doors	ONE DOOR / TWO DOORS	ONE DOOR
Electrolock	Enables electrolock and specify the type of lock, magnet or strike. (1)	NO LOCK / STRIKE / MAGNET	NO LOCK
Opening Jolt	Enables the opening Jolt: SHORT CLOSING PULSE BEFORE OPENING. Useful to unlock the electrolock in windy situations	ENABLE / DISABLE	DISABLE
Push & Open	Automatically opens the door with a short push.	ENABLE / DISABLE	ENABLE
Wind Stop	Keeps the door closed in presence of wind which pushes the door. See ADVANCED SETTINGS to set the level of the closing force used.	ENABLE / DISABLE	DISABLE
Autoreclosing	Enables the automatic reclosing of the door	ENABLE / DISABLE	ENABLE
Radar 'I' Mode	INTERNAL radar operating mode. INDICATES WHEN THE RADAR IS DISABLED. If CLOSING is selected the radar is excluded during closing. This prevents the door from reopening for the arm detection	NEVER / CLOSING / ALWAYS	NEVER
Radar 'E' Mode	EXTERNAL radar operating mode. INDICATES WHEN THE RADAR IS DISABLED. If selected the CLOSING the radar is excluded during closing. This prevents the door from reopening for the arm detection	NEVER / CLOSING / ALWAYS	NEVER
Open Command	Sets the function of the main trigger command to terminals 15 & 16 and also the transmitter input. Open - door opens and stays open unit triggered to close; Open/close - door opens, waits for the preset pause time and then closes; Open/close/stop as open/close but the door can be stopped on command using the trigger input.	OPEN - OPEN / CLOSE - OPEN / CLOSE / STOP	OPEN/ CLOSE
Disabled Mode	Disabled access mode (See paragraph Disabled access settings)	ENABLE / DISABLE	DISABLE
2 Doors Overlap	Overlap of the leaves in the case of double doors. Allows the master lead to open first and the slave leaf to close first. If disabled the doors will open/close simultaneously.	ENABLE / DISABLE	DISABLE

Door Type	MASTER leaf and SLAVE leaf (in case of double doors)	MASTER / SLAVE	MASTER
Fire Signal	Fire signal management. When this option is enabled the door operates regularly only if the fire contact C-NC is shorted or the Fire power is applied. If the fire contacts open or the fire power drops down, for a fire alarm in progress, the door reacts according to the preset option in the Advanced Options.	ENABLE / DISABLE	DISABLE

(1): in case of magnet, the lock is always activated if the side switch is set in pos. 0: door free.

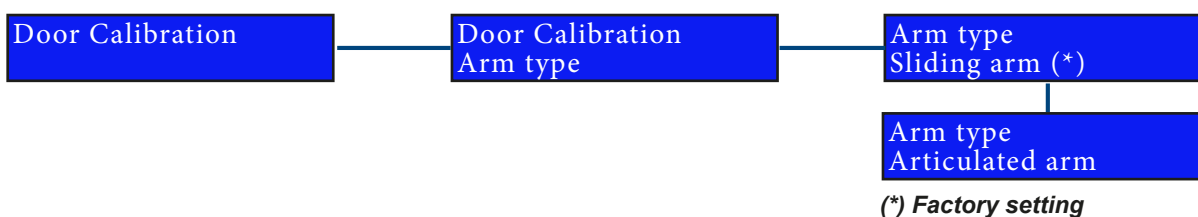
Note: When a maglock is used the lock relay is always activated to allow free manual use when the side switch is set in pos. 0: door free.

 **ATTENTION:** Any change carried out requires a complete cycle (open, pause, close) or a system reset to be implemented. Give the system reset command when the door is closed.

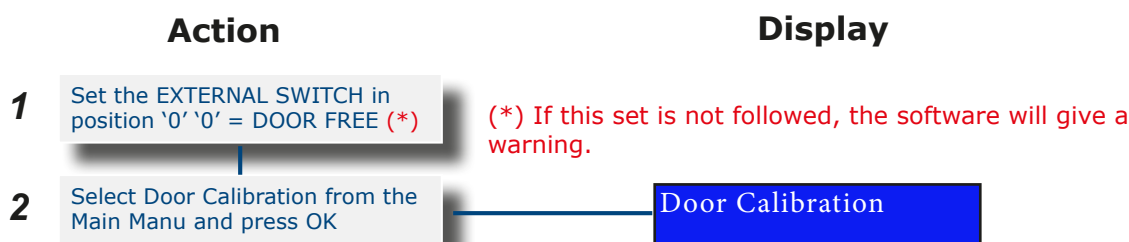
STEP IV: DOOR CALIBRATION [SINGLE]

Recommendation: CDVI advise to keep the first calibration simple by only connecting power and linking out the safety inputs 5,6 and 7. Once calibrated then connect safety sensors and then locks.

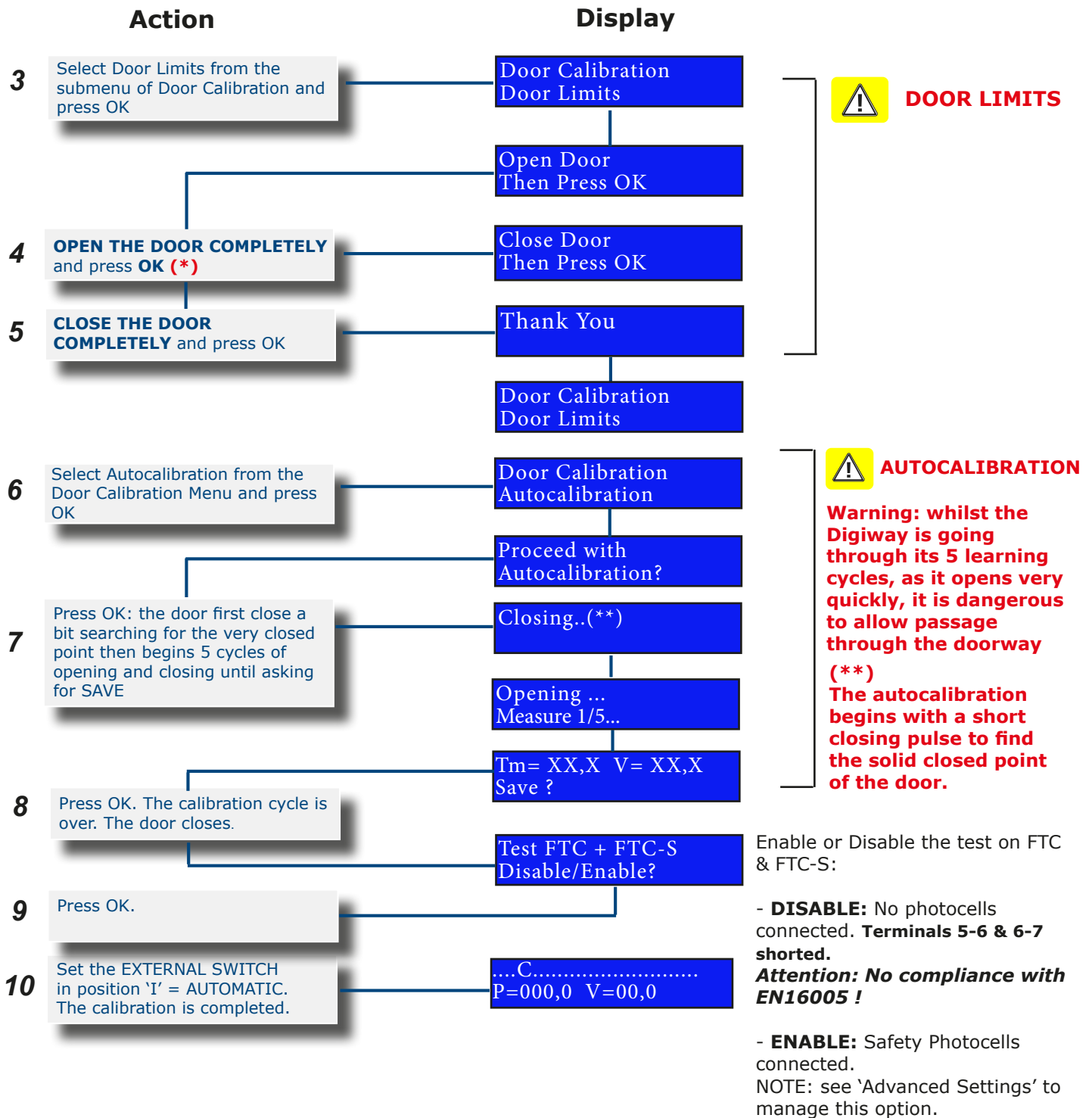
First, set the arm type 'Sliding or Articulated' for the door type the operator is fitted to.



DIGIWAY-SR is equipped with a software which sets the internal parameters to the door characteristics. Door calibration sets the door travel limits and launches a special 5-cycle routine for automatic detection of door characteristics. Follow the next steps:

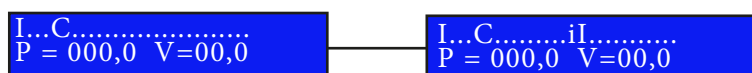


Continued



Calibration Completion

At the end of auto-calibration, for the door to be fully functional a full complete cycle must be carried out. During this cycle a speed and current profile is calculated for opening and closing. This is necessary for functional obstacle detection. At the end of this cycle the external LED changes to GREEN and the letters i and I appear on the display indicating the acquisition of the profiles.



If the external switch is moved to 0 (free door) or II (open door) the 2 profiles are recalculated and the 2 letters i and I disappear from the display, to reappear again at the end of the next cycle.

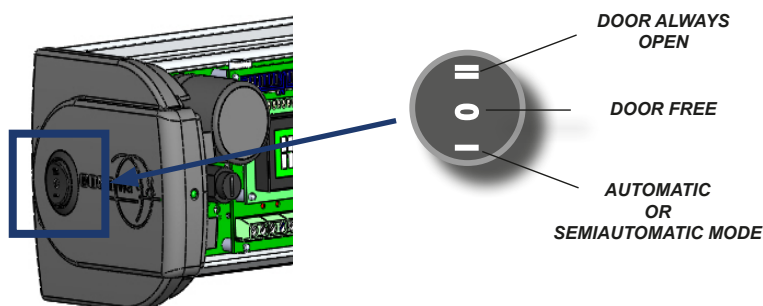
Door open position fine adjustment

If at the end of the autocalibration the door does not open at the exact point set during the calibration, it is possible to change the open angle without having to complete the autocalibration operation again. To do this; enter the calibration menu and select the option: OPEN POS.



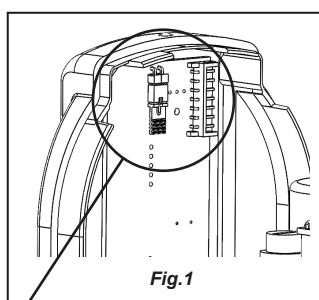
The number displayed (eg 155) is the open angle in degrees and stored by the system corresponding to the open door position. Using the keys of the PCB or the buttons of the transmitter, decrease the value to make it open less or increase the value to make the door open more. NOTE: the new position is reached after one full cycle.

Settings of the external side switch

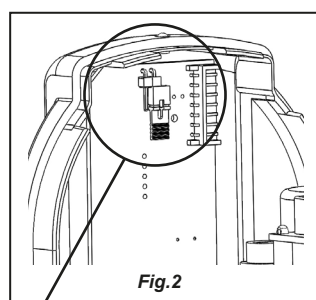


JUMPER FOR EXTERNAL SWITCH EXCLUSION

You can exclude the external switch using the jumper located on the internal card of the left cap. With the jumper removed it's necessary to use an external 3-position switch wired at terminals 8-9-10, or link out 8 & 9 for a permanent automatic operation. This is useful for environments where the operator could be tampered with.



JUMPER ON:
SWITCH ENABLED



JUMPER OFF:
SWITCH DISABLED

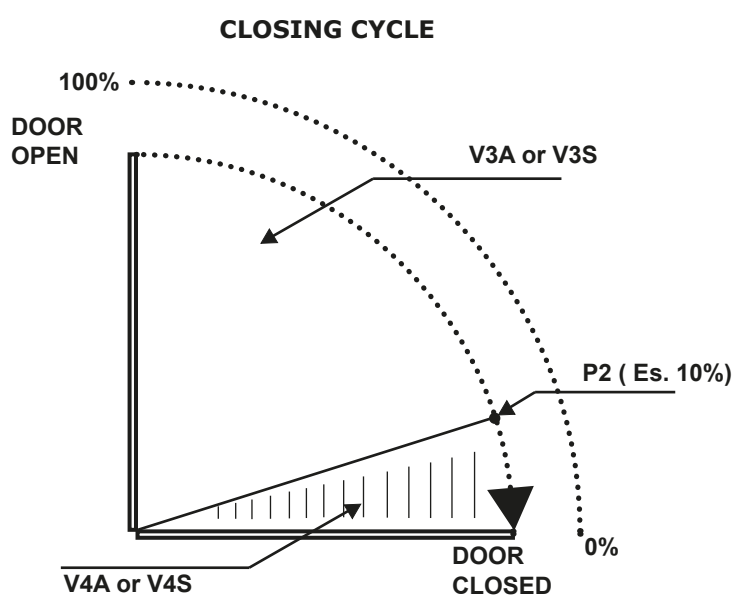
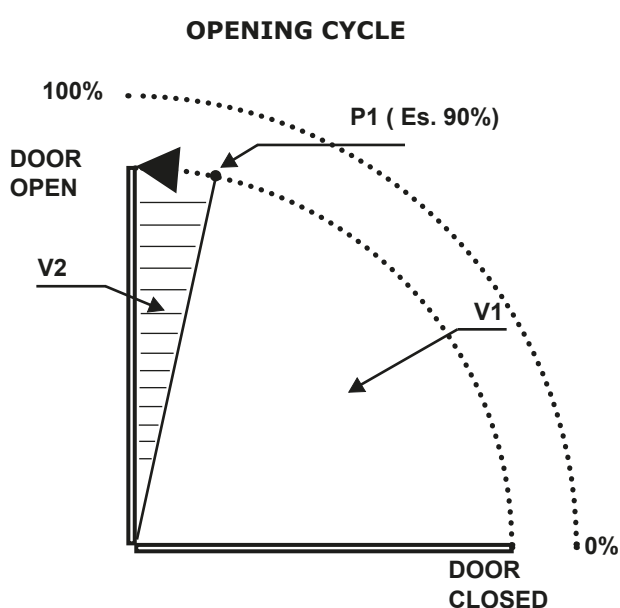
STEP V: MAIN FUNCTIONS

Main Functions	Description	Values	NOTES
MODE	AUTOMATIC or SEMI-AUTOMATIC	AUTOMATIC	In AUTOMATIC mode the door is triggered by the external devices (opening command, radar, radio, push & go): opens by motor and closes by motor. Automatic mode would normally be used when the door is locked utilising the internal lock drive relay.
		SEMI-AUTOMATIC	In SEMI-AUTOMATIC mode the door is free and kept closed by the spring: it can be opened manually and closed by spring as if it were driven by a simple door closer, without any pause time. If you activate any external device (radar, radio control) it executes the automatic spring-closing after the pause time. NOTE: Semiautomatic mode is highly advised where there is an high volume of traffic and no detection sensor is installed.



WARNING: in SEMIAUTOMATIC MODE the door can be triggered both by external devices and pushed manually by unaware users. **NOTE:** When pushing the door open, the open position control is disabled. For this reason it's highly recommended to use a DOOR STOP fitted to prevent over-extension of the operator arm caused by manual opening push.

Main operation parameters



Cycle	Mode	Parameter	Description
Opening	Automatic & Semi-automatic	P1	Approach point on OPENING (% of the full travel) [range : 85 - 100%]
		V1	OPENING Speed
		V2	Final OPENING Speed
Closing	Auto & Semi	P2	Approach point on CLOSING (% of the full travel)
	Automatic	V3A	CLOSING Speed in AUTOMATIC
		V4A	Final CLOSING Speed in AUTOMATIC
	Semi-automatic	V3S	CLOSING Speed in SEMIAUTOMATIC (*)
		V4S	Final CLOSING Speed in SEMIAUTOMATIC (*)

(*): The maximum closing speed in semi-automatic mode depends exclusively on the spring preload and the door. The parameters V3S and V4S can be set to manage the closing speed, according to installation requirements.

Travel & speed adjustments

At the end of the autocalibration phase, the 2 opening speeds (V1 and V2) and the 4 closing speeds (V3A and V4A, V3S and V4S) are automatically set to have an opening with soft arrival and a closing with soft arrival. To modify the values and get different approach speeds, act on the parameters V2 (opening) or or V4A/V4S/V3S (closing)..

Main Functions	Description	Values	Factory value	NOTES
P1	Approaching point on OPENING (% of the full travel)	85 - 100%	98%	
P2	Approaching point on CLOSING (% of the full travel)	0 - 100%	3%	
V1 [Auto & Semi]	OPENING Speed	0 - 100	Set by the system	
V2 [Auto & Semi]	Final OPENING Speed	0 - 100	13	
V3A [Auto]	CLOSING Speed in AUTOMATIC	0 - 100	Set by the system	
V4A [Auto]	FINAL CLOSING Speed in AUTOMATIC	0 - 100	10	
V3S [Semiauto]	CLOSING Speed in SEMI-AUTOMATIC	0 - 100	Set by the system	See below
V4S [Semiauto]	FINAL CLOSING Speed in SEMI-AUTOMATIC	0 - 100	20	See below

Final closing speed adjustment

Automatic Mode

The door is factory programmed to have a SOFT-STOP, arriving gently in the closed position.

To have a higher speed in closing, for rearming a lock, for example, you need to change 2 parameters:

- **P2** = point after which the leaf changes its speed, which would follow the SOFT-STOP profile
- **V4A** = speed that the leaf keeps from point P2 to the closed point. Increase V4A until the desired effect is achieved.

Semi-automatic mode

In semi-automatic mode the door closes only thanks to the force of the spring. The closing speed V3S depends on the pre-charge of the spring and the mass of the door. V3S is regulated to have a uniform speed closure.

To obtain a speed increase, starting from point P2, act on parameter V4S according to the following table:

Setting	Effect
V4S = V3S	Uniform closing
V4S < V3S	Soft-stop
V4S > V3S	Closing stroke

The closing stroke is useful to rearm a lock

Pause time

Main Functions	Description	Values	Factory value	NOTES
Pause Time	Pause time	1 - 99 SEC.	10 sec.	This is the time the door holds open before automatically closing again from all trigger inputs.
Pause Time ext	Extended Pause time	1 - 99 SEC.	20 sec.	When Disabled mode is enabled and the door is opened through a command on inputs 15-16, it will re-close after the pre-set Ext Pause time. The Pause time for the remaining inputs (radar, push&go, remote controls) stays the same.

Obstacle detection

Main Functions	Operating mode	Range	Factory value	NOTES
OD Reactivity	Opening and closing in AUTOMATIC Opening in SEMI-AUTOMATIC	0.1 - 5 sec.	0.3 sec	OBSTACLE DETECTION Fast OBSTACLE DETECTION Slow 0.1 sec ----- 5 sec. Reaction speed to an obstacle during opening. Higher values of the parameter have the effect of making the obstacle detection rougher

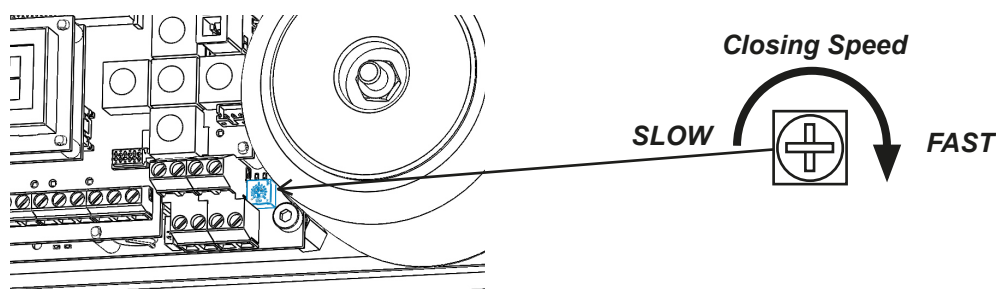
OD Delta Vel	Opening and Closing in AUTOMATIC & SEMI-AUTOMATIC	0 - 100%	40%	Speed difference caused by the impact against an obstacle. The parameter expresses the minimum percentage speed fall from the nominal value that causes the recognition of an obstacle. When this event happens, the LCD display shows a B1 obstacle type.
OD Delta Curr	Opening and Closing in AUTOMATIC & SEMI-AUTOMATIC	0 - 100%	50%	Current consumption difference caused by the impact against an obstacle. Gives the percentage increase of the current drawn by the motor in the event of impact against an obstacle. When this happens, the LCD display shows a B2 obstacle type.

Obstacle types

OBSTACLE	Description
B1	Obstacle presence: a variation in speed greater than 40% of the rated value is detected
B2	Obstacle presence: a variation of the current greater then 50% of the rated value is detected
B3	B1 & B2
B4	Possible obstacle which prevents the door from moving at least 1% of the total travel within 1 sec.
B5	Possible obstacle which causes a peak of the current consumption greater then 2A in 100 mS
B6	Possible obstacle in the last 10° before full close or after 80° before full open which causes : 1) a peak of current greater than 97% of the max value 2) the speed that remains below 20°/min. Can occur only if the motion profile is absent (i and I not displayed on the LCD)

Closing Speed in POWER OFF

When the operator is not powered the closing speed of the door is controlled by the spring pre-load set. It is possible to adjust this speed using a trimmer (as below), this will adjust the brake action of the control circuit providing steady closing with the power off.



STEP VI: ADVANCED SETTINGS

DIGIWAY-SR is equipped with many further parameters (all adjustable) to suit any type of installation. From the main menu select **ADVANCED SETTINGS** to enter this submenu, which allows many adjustments.

- 1) **Advanced Setting**
Electrolock Time — **Electrolock Time**
|||||||.....0,5 SEC.

It is possible to set the electrolock release time from 0.1 to 40 sec. depending on the lock (see Configuration - Electrolock)/door. Press the UP or DOWN buttons to increase or decrease the lock time and confirm with OK.

Default value = 0.5 Sec

- 2) **Advanced Setting**
Opening Jolt Time — **Opening Jolt Time**
|||||||.....0,5 SEC.

The opening jolt, when enabled, is a short closing pulse before the operator begins to open - this relieves pressure of "side-load" for some locking devices. It's possible to adjust this time from 0.1 to 40 sec. depending on the type of electrolock and door. Press the UP or DOWN buttons to increase or decrease the time and confirm with OK. *It is recommended to adjust time before adjusting torque.*

Default value = 0.5 Sec

- 3) **Advanced Setting**
Open Jolt Torque — **Open Jolt Torque**
|||||||.....20%

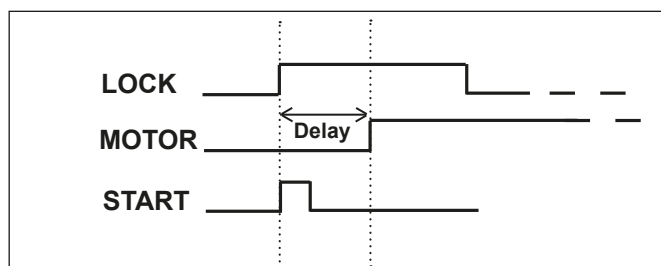
It is possible to adjust the torque of the motor during the opening jolt pulse. This is adjusted depending on the mechanical resistance of the door. Press the UP or DOWN buttons to increase or decrease the value and confirm with OK.

Default value = 20%

- 4) **Advanced Setting**
Open Delay — **Open Delay Time**
|||||||.....0,5 SEC.

It is possible to add a short delay to the door motion to allow the electrolock bolt to exit completely from its keeper, ensuring the door is fully unlocked. This can be useful when using motorised locks. The open delay is set by pressing UP or DOWN buttons to increase or decrease from 0.1 to 40 sec and confirm with OK.

Default value = 0 Sec



NOTE: The function works even if electrolock is DISABLED. In case of double doors it can be used to increase the system opening delay of the SLAVE DOOR, during the opening phase.

- 5) **Advanced Setting**
Wind Stop Torque — **Wind Stop Torque**
|||||||.....10%

It is possible to adjust the torque of the motor when the wind stop utility is enabled. This allows you to change the value of the force applied by the door related to the wind pressure. This will add an extra closing force to the regular force given by the preload of the spring. Press the UP or DOWN buttons to increase or decrease the torque and confirm with OK.

Default value = 50%

6) **Advanced Setting** — **Enable / Disable**
Dynamic Pause

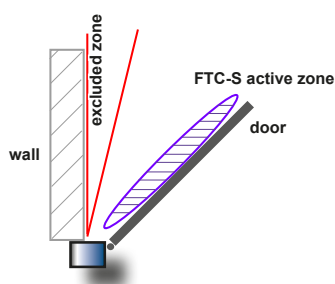
The dynamic pause is a function which automatically adjusts the pause time programmed, avoiding too many close attempts of the door in high traffic situations. When enabled, this function increases by 1 sec. the pause time programmed each time it detects a passage through the door during the closing phase, and restarts the time when the passage is detected when the door is open.

Once the door completes its cycle up to the closed status, the pause time is reset to the programmed value.

Press UP or DOWN buttons to enable or disable the function and confirm with OK.

Default value = DISABLE

7) **Advanced Setting** — **FTC-S Exclusion**
FTC-S Exclusion |||||.....000



If the door is next to a wall and is using a curtain protection device, it may be necessary to prevent the device being activated by the wall to allow a complete opening of the leaf. Set the zone width as percentage of the full door motion using the UP or DOWN buttons to increase or decrease the value.

000 = Door OPEN

100 = Door CLOSED

Example: if you want to disable the curtain device when the leaf is open at 80% of complete travel, set the value to 20.



WARNING: the excluded zone may pose a health & safety hazard because it is not protected!

8) **Advanced Setting** — **Fire Release**
Fire Release — **Open/Free/Closed**

It's possible to set the reaction of the door in the event of a fire alarm (Fire contact on terminals 3-4 OPEN):

- **DOOR FREE** = In case of Fire Alarm the door becomes FREE: the operator acts as a door closer: the internal spring keeps the door closed.
- **DOOR OPEN** = In case of Fire Alarm the door opens and stays OPEN as long as the C-NC contact on terminals 3-4 is open or the function of the **Menu Configuration** is disabled.
- **DOOR CLOSED LOCKED** = Door CLOSED and lock active
- **DOOR CLOSED UNLOCKED** = Door CLOSED and lock disactive

9) **Advanced Setting** — **Max Obst Cycles**
Max Obst Cycles |||||.....000

When the door meets an obstacle during closing, it re-opens immediately. At the end of the pause time, it re-closes. If the obstacle is still present the cycle restarts. This parameter sets the max number of re-closing attempts before stopping and waiting for an external command. Range: from 1 to 256.

Value 0 of the parameter means no limit.

Default value = 100 attempts

- 10) Advanced Setting
OD Close [Auto] — OD Close [Auto]
Reopen

In automatic mode, after the detection of an obstacle during closing, the door can react in different ways, according to the following settings:

- **REOPEN:** the door reopens and after the pause time recloses
- **STOP & WAIT:** the door stops and after the pause time recloses
- **STOP:** the door stops, waits for a command to reopen and for a further command to reclose.

- 11) Advanced Setting
OD Close [Semi] — OD Close [Semi]
DISABLED

In semi-automatic mode, during closing, the Obstacle Detection can be disabled. If the parameter is set "enabled", the door reopens in case of obstacle detection. If set "disabled", the door only stops at contact with the obstacle.

Default value = DISABLED

- 12) Advanced Setting
Ex Power Close — Enable / Disable

When enabled, adds one more **CLOSING** pulse after the regular **CLOSING** cycle to compensate for possible friction or door imbalance. Enable or disable this function with the UP or DOWN buttons and confirm with OK.

Default value = DISABLE

- 13) Advanced Setting
Ex Close Torque — Ex Close Torque
|||||||.....50 %

This function allows you to set the **TORQUE** of the **CLOSING** extra pulse. Change the value by pressing the UP or DOWN buttons and confirm with OK.

Default value = 50%

- 14) Advanced Setting
Extra Close Time — Extra Close Time
|||||||.....0 SEC.

This function allows you to set the duration **TIME** of the **CLOSING** extra pulse. Change the value by pressing the UP or DOWN buttons and confirm with OK.

Default value = 0 SEC

- 15) Advanced Setting
Test FTC — ENABLED /
DISABLED

It's possible to disable the test on the re-opening of photocell FTC:

ATTENTION!: If the test is DISABLED the operator must work in Low Energy Mode otherwise it won't comply with the Standard EN16005.

- 16) Advanced Setting
Test FTC-S — ENABLED /
DISABLED

It's possible to disable the test on the stopping of photocell FTC-S:

ATTENTION!: If the test is DISABLED the operator must work in Low Energy Mode otherwise it won't comply with the Standard EN16005.

- 17) Advanced Setting
Test FTC Fail — STOP /
LOW ENERGY

In case of malfunction of the safety photocells FTC it's possible to set the operating mode: **STOP / motion in LOW ENERGY**

- 18) Advanced Setting
Test FTC-S Fail — STOP /
LOW ENERGY

In case of malfunction of the safety photocells FTC-S it's possible to set the operating mode: **STOP / motion in LOW ENERGY**

- 19) Advanced Setting
Door diameter — Diameter (m)
|||||||.....1,2

The SW calculates the minimum opening/closing time when the malfunction mode is set at Low Energy, according to the doorset diameter (in m) and weight (in kg).

- 20) Advanced Setting
Door weight — Weight (Kg)
|||||||.....120

Sets the doorset weight in kg.

- 21) Advanced Setting
Latch ctrl pos — Latch ctrl pos
|||.....3%

Sets the point in % that follows the Latch control torque setting. Useful for releasing over strikes.
0% door closed - 100% door open

- 22) Advanced Setting
Latch ctrl torque — Latch ctrl torque
|||||||.....5

Boost the starting torque of the **OPENING**: setting of the torque value.
Default value = 0

- 23) Advanced Setting
Promptness OPEN — Promptness OPEN
|||||||.....5

OPENING
PROMPT
 min 0.1 ----- **OPENING**
SMOOTH
 5 max

- 24) Advanced Setting
Promptness CLOSE — Promptness CLOSE
|||||||.....5

CLOSING
PROMPT
 min 0.1 ----- **CLOSING**
SMOOTH
 5 max

NOTE: The 2 parameters PROMPTNESS OPEN and PROMPTNESS CLOSE can be useful if, due to a particularly large mass of the door, it tends to slam in opening or closing, even due to gusts of wind. In that case it is a good idea to increase the PROMPTNESS OPEN value from the value initially calculated automatically by the system during self-calibration, to obtain a smooth opening.
 The 2 parameters operate on opening and closing in automatic mode and only on opening in semiautomatic mode.

- 25) Advanced Setting
Night only lock — ENABLED /
DISABLED

If set to ENABLED, the electrolock actuation is dependent on the input DAY-NIGHT (Terminals 14-15). If the input 14-15 is open (Day) the lock output will remain always activated after the first cycle. If the contact 14-15 is shorted (Night) the lock output is activated normally, before any opening.
Default Value = DISABLED

- 26) Advanced Setting
Ext start filter — Ext start filter
|||||||.....0,0

Sets the minimum duration that the start command (Terminals 15-16) must be closed to trigger the door.
NOTE: Useful to cut down unwanted activations.

Default Value = 0 sec

- 27) Advanced Setting
Ext start MODE — Ext start MODE
RECLOSE/OPEN

Set the operation of the START command (Terminals 15-16)

- RECLOSE: even if the START command is active, after the pause time the door closes again.
- OPEN: As long as the START command is active, the door remains open. A second press is required to close the door.

Default value = RECLOSE

- 28) Advanced Setting
Output Relay — Output Relay
STATUS/SERVICE

Set the status relay mode:

- STATUS: activates when the door is in OPEN / OPENING / CLOSING
- SERVICE: it is activated if the partial counter that indicates the maintenance request has exceeded the intervention threshold.

Default value = STATUS

- 29) Advanced Setting
FTC-S MODE — FTC-S MODE
STOP/RECLOSE

Sets the operating mode of the stop photocell in opening

- STOP: the door stops and remains stopped until the FTC-S is deactivated. Threshold clear.
- RECLOSE: if the FTC-S is activated, due to an obstacle opening, the door stops and after 4 sec. it closes again.

Default value = STOP

- 30) Advanced Setting
FTC Test Filter — FTC Test filter
20 mS

Allows you to change the delay time to match the delay time of the test signal coming from the safety photocells.

Default value = 20 mS [exact value to connect Hotron photocells]

- 31) Advanced Setting
Magnet Mode — Magnet Mode
Timed

Allows you to change the magnet lock time function when Electrolock is set to Magnet.

Position allows the lock to relock on the door closed position i.e. lock relay is active while the door is open.

Timed allows the lock relay to follow the exact time set in Electrolock Time

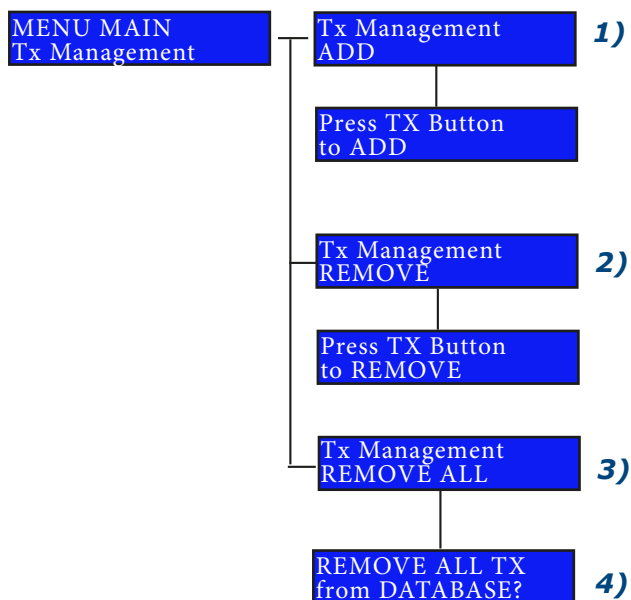
- 32) Advanced Setting
Fire Kill — Fire Kill is
OFF / ON

In the event that the FIRE mode is activated, all Safety sensors (FTC, FTC-S) will be overridden (Kill - ON) causing the door to close even though an object or person may be in the door's path of travel, and therefore may be subject to injury. This mode of operation is generally used to isolate the area in the event of a fire.

Default value = OFF

Remote controls management

The unit is equipped with a superheterodyne AM receiver with Keeloq® Hopping code security protocol. Through the TX MANAGEMENT menu it is possible to manage the memory of the receiver which can store up to 50 transmitters.



- 1) To memorise a transmitter, select **ADD** from the menu TX MANAGEMENT and press OK. At the message "PRESS TX BUTTON TO ADD", press the button of the transmitter to memorise it.
If everything is correct the Serial Number of the transmitter will appear on the LCD display. If the transmitter is already present in the memory, the following message will appear: TX ALREADY PRESENT.
- 2) To delete a transmitter select the option **REMOVE** from the menu TX MANAGEMENT and press OK. At the message "PRESS TX BUTTON to REMOVE", press the button of the transmitter to cancel.
If everything is correct, the message: TX REMOVED will appear on the LCD display. To delete the first transmitter you only need to press one button. To delete any other transmitter you need to press each button individually.
- 3) To completely erase the database select the option **REMOVE ALL** from the TX MANAGEMENT menu and confirm. At the message "REMOVE ALL TX FROM DATABASE", press OK and the memory will be completely erased.
- 4)  **ATTENTION:** This action also removes even the 4-ch transmitter, used to navigate through the menu. Navigation will then only be possible with the keyboard buttons or after the memorisation of a new 4-ch transmitter, in the first memory location.

Disabled persons access settings

If the operator is used for disabled persons access, adjust the opening and closing speed of the leaf for Low Energy setting

Door width	Door weight				
	50 Kg	60 Kg	70 Kg	80 Kg	90 Kg
750 mm	3.0 s	3.1 s	3.2 s	3.3 s	3.5 s
850 mm	3.1 s	3.1 s	3.2 s	3.4 s	3.6 s
1000 mm	3.2 s	3.4 s	3.7 s	4.0 s	4.2 s
1200 mm	3.8 s	4.2 s	4.5 s	4.8 s	5.1 s

NOTE1: According to the Regulation, when the DISABLED PERSONS ACCESS is activated [See configuration menu]:

- The min. Pause Time must be set at 5 Sec.
- The motor torque measured at the main closing edge must be lower then 67 N.
- The min slow time time in closing must be 1,5 sec.

Manage the settings of these values in the Main Functions Menu.

NOTE2: When the Disabled Persons Mode is enabled, if the door is open through a C-NO command on inputs 15-16, it will reclose after the Pause Time Extended. If the command comes from inputs (radar, push&go, remote control), the Pause time remains the regular one. The Pause Time Extended is **always** executed if the open command comes from the D button of a remote control.



Warning: Disabled persons access doors must be identified with proper signage.

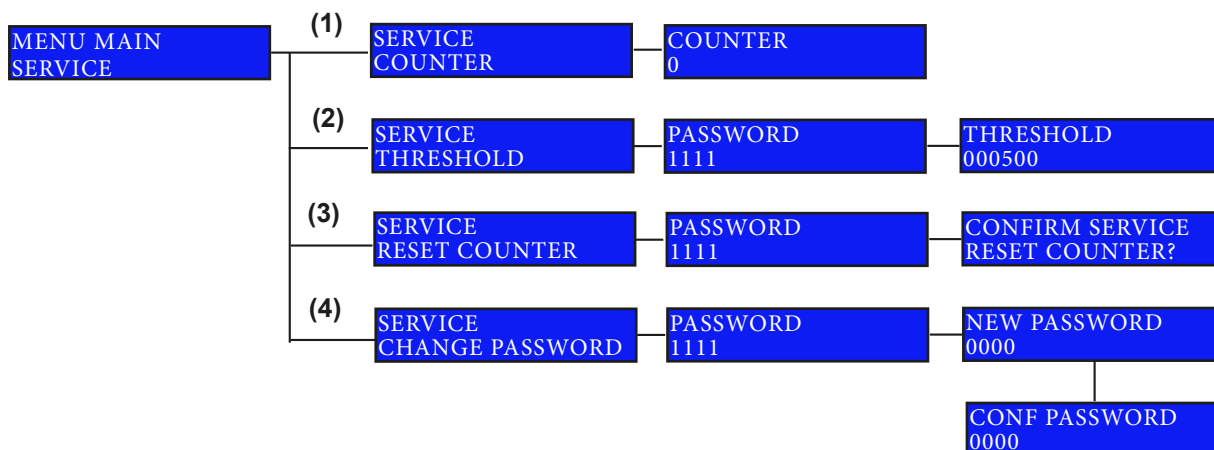


Service Menu

The unit is equipped with 2 cycle counters: **Absolute Counter** and **Partial Counter**

- The **Absolute Counter** registers the cycles of the motor for all its life; it cannot be reset except by the factory. The counter increases by 1 if the door makes a clean motion opening or closing with no obstacles or re-opening action caused by a sensor (radar, photocells, etc.). The current value of the absolute counter can be seen on the INFORMATION menu (see next page).
- The **Partial Counter** can be used to set a maintenance period. It can be reset after a service intervention.

Note: Manual use i.e. opening by pushing or pulling the door is not counted.



NOTES

(1) Partial counter value.

(2) Threshold is the number of cycles after which the unit starts to give the Service Request message: the main LED flashes RED SLOWLY. Its setting requires you to input the correct 4-digit System Password.
 If Threshold=0 (factory setting) the main LED never changes colour.

(3) Resets the partial counter value: it has to be reset after the maintenance intervention and resets the main LED to solid GREEN.
 This requires the 4-digit System Password to be entered.

(4) Changing the System Password: **FACTORY VALUE = 1111**
 To change the password first requires the default or current password to be entered. When changing the password the new password must re-entered to confirm.

STATUS relay (terminals 1-2 of the terminal block)

The STATUS relay, if set as SERVICE in the Advanced Settings menu, closes contacts 1-2 when the partial cycle counter crosses the threshold.
 By connecting this contact to a device that sends an e-mail message to the installer, you can then inform the installation service that the unit needs maintenance. The contact remains closed until the partial cycle is reset, at the end of the maintenance operation.

Information

DISPLAY LEGEND

M / S	o	O	c	C	B	1,2,3,4,5,6,f	b	s	M	i	I	U	J/E
Master / Slave	Opening	Open	Closing	Closed	Obstacle	Obstacle type	restart for obstacle	Stop	Motor	Opening cycle	Closing cycle	Electrolock	Opening Jolt



FMoOcCBXbsMiUJ
P=-000.0 V=-00.0

Action in progress	
F	Forward
R	Reverse
K	Brake
I	Idle

Position (+/-)	Speed: rpm/10
P: gives the instant position of the door in degrees, compared to the initial value (000) of the closed door.	V: gives the instant speed value of the door along the motion.

Information
SW Release

WadoPlus v2.0a
gg/mm/aaaa

Gives the SW release number and date.

Information
Counter

N° cycles
00000

The counter logs each single trip of the door (OPENING + CLOSING) for maintenance intervention.

Obstacles register

The system is equipped with a register that stores the last cycles that have presented an obstacle (real or unknown). The log stores 20 cycles, so, once filled, it discards the oldest event and keeps the most recent one.

On each line of the register you can see:

- Number of the cycle indicated by the absolute counter when the obstacle occurred;
- the type of obstacle (B1, B2, B4, etc.),
- the Opening or Closing phase;
- the operating mode (Automatic or Semi-automatic).

Information
Obstacle List

Cycle #0000000000
OD: B1 OPEN Aut

To display the list press UP or DOWN

The register can be erased by a proper command

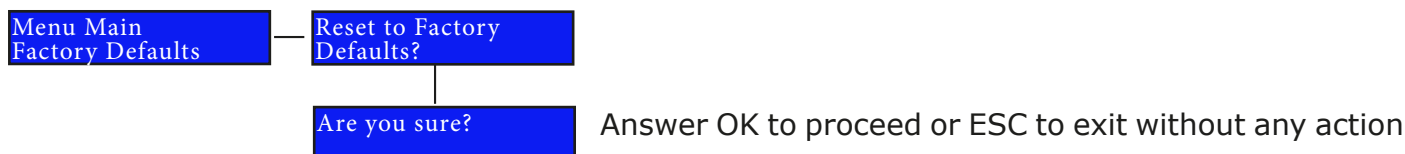
Information
Reset Obst. List

Reset Obst. List ?

Press OK to cancel the list, ESC to exit

Factory Defaults

If the set-up of the parameters hasn't been successful, it's possible to recover the factory settings using the sub-menu Factory Defaults from the Main Menu. After the completion of this function, all the parameters will be reset to the factory value. See each function to know the corresponding value.



Having reset the system to the factory settings, the engineer can operate the door but without using the acceleration and deceleration values calculated during the Step III of Door Calibration. In order to revert to the previous operating mode it is necessary to repeat Step III again. The door limits (DOOR CLOSE and DOOR OPEN) remain the same.

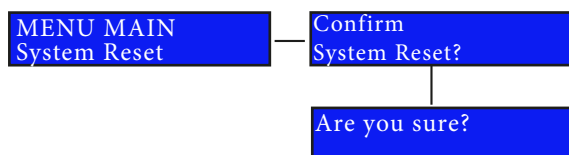
The transmitters memory is completely erased!

System Reset

It is possible to give a reset to the system, equivalent to a "power-off + power-on", using the option "System Reset" from the main menu.

After the system reset the LCD displays the SW release, the parameters condition and the free memory space for transmitters.

This function doesn't change the value of any parameter except the obstacle detection parameters (I and i) which will be re-calculated during the next cycle.



Give the "System Reset" command when the door is CLOSED.

4] DOUBLE DOOR CONFIGURATION

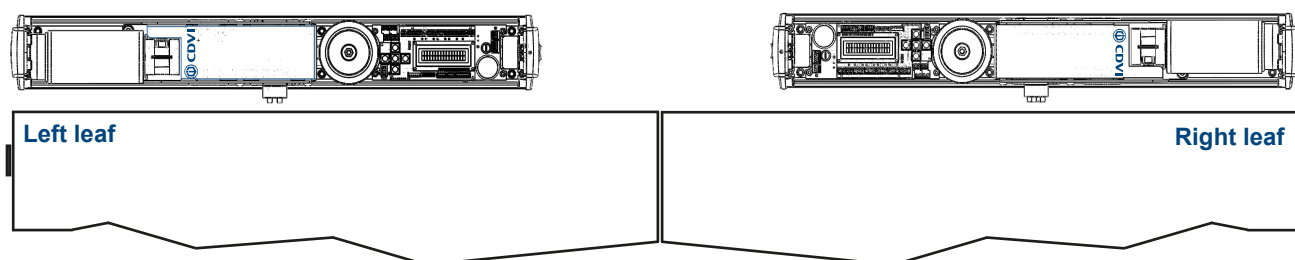
Double door operation can be achieved using 2 x Digiway-SR units properly installed and connected for synchronised operation. The units can be mechanically fixed independently or paired using a central profile.

- **PART I: Mechanical fixing**
- **PART II: Electrical connections**
- **PART III: Final setup**

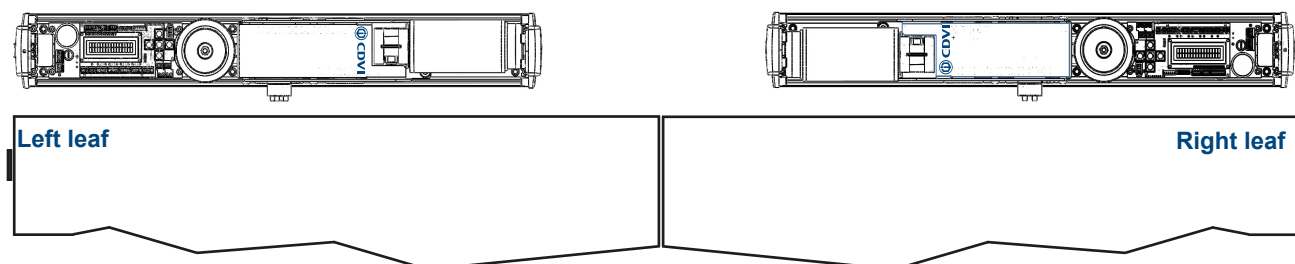
PART I: Mechanical fixing

A. Without central profile

1 - Inward configuration: sliding arms



2 - Outward configuration: articulated arms



For fixing of each operator to the top-jamb (header) follow the instructions of page 14.
NOTE: the operator installed to the LEFT LEAF for INWARD operation and to the RIGHT LEAF for OUTWARD operation requires inverse configuration from the factory default; refer to the the instructions on page 14 - 15.

B. With central profile (NOT AVAILABLE IN UK)

5 different dimensions are available. The central backplate and profiled cover are included in the packaging of the double door version.

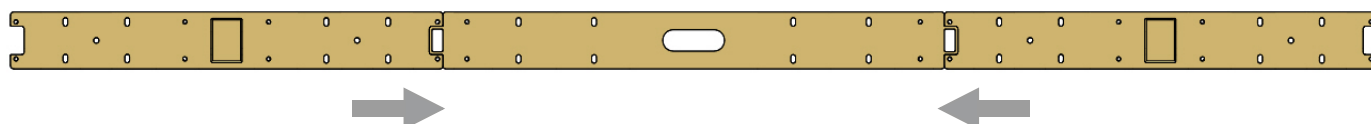
Double door total width	Leaves width	p/n Sliding Arm	p/n Articulated Arm
1600 mm	70 - 80 mm	DWSD10216SCD	DWSD10216ACD
1700 mm	81 - 85 mm	DWSD10217SCD	DWSD10217ACD
1800 mm	86 - 90 mm	DWSD10218SCD	DWSD10218ACD
1900 mm	91 - 95 mm	DWSD10219SCD	DWSD10219ACD
2000 mm	96 - 100 mm	DWSD10220SCD	DWSD10220ACD

1 - Backplate fixing

- Locate the best position for the central back-plate, locating the centre of the plate with the centre of the double door;
- Mark the position of the holes for the plugs provided;
- Make the holes and insert the plugs provided;
- Pass the power supply cable through the central hole of the back-plate;
- Fix the central back-plate by using the screws and the plugs provided ensuring it is perfectly horizontal.



- Fit the side backplates to each side of the central back-plate and locate the position of the oval holes.
- Make the holes and insert the rawl plugs
- Fix the side backplates with the screws provided.



2 - Central profile fixing

Fix the back central profile with the side caps using the 4 screws M6x14 provided to the central backplate



3 - Motor fixing

Fix the two operators following the rules of paragraph A, according to the type of operation required, inward or outward.

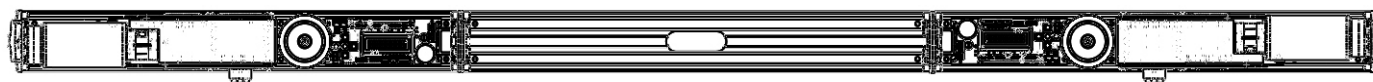
Outward configuration

- Remove the right cap of both operators;
- Fix the left motor to the left backplate with the 6 screws M6 provided;
- Invert the right hand motor and fix to the right hand backplate;
- Remove the M6 screw and invert the motor shaft as showed at page 10;
- Invert the display LCD module;
- Attach the articulated arms to the 2 motor shafts, fix to each door leaf following the reference to the distances indicated in the tables on page 14.



Inward configuration

- Remove the right hand cap of both operators;
- Fix the left motor on the left backplate with the 6 screws M6 provided;
- Remove the left cap from the right operator and disconnect the 6-wire cable;
- Remove the 15 cm cable from the left cap;
- Invert the operator and fix it on the right side backplate;
- Unscrew the M6 screw and invert the motor shaft;
- Connect the 60 cm 6-wire cable to the corresponding connectors;
- Invert the display LCD module.



C. Arms fixing

1 - Door guides fixing (inward opening)

- Fix the two arms on the motor shafts with the screws M6x12 provided;
- Insert the guide on the sliding blocks;
- Set the external switch to position 0 and move the door to find the best position for the door guide;
- Fix the guides on the doors with the 4 screws provided ;



2 - Articulated arm fixing (outward opening)

- Fix the 2 articulated arms to the motor shafts with the screws M6x12 provided;
- Offer the door plate to the door;
- Fix the plate with the 2 screws provided, making reference to the instructions on page 14.

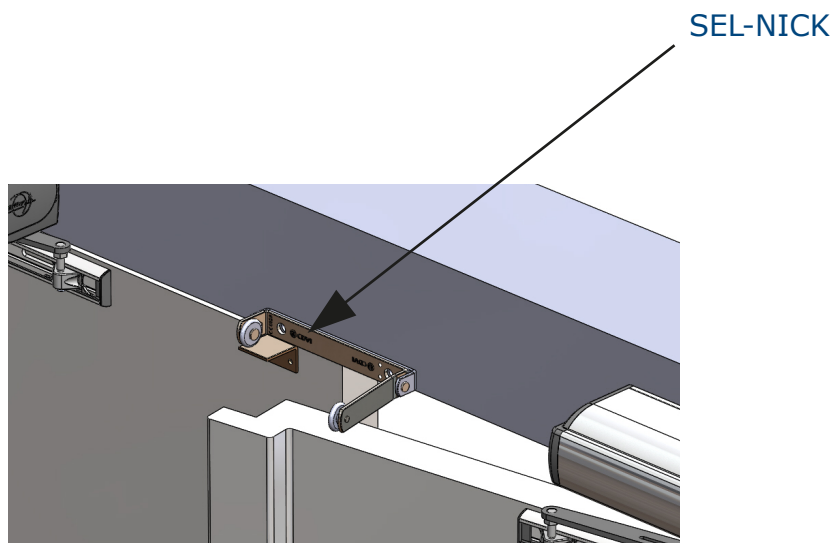


3 - Mechanical check

- With the side switches in position 0 check the fluency of the motion both in opening and closing of both leaves

D. Rebated doors in Power-off

If the 2 DIGIWAY-SR's are operating on rebated doors, when power is off the doors can be opened manually and would close by spring. In this situation there is no control by the sw for the correct synchronization, so the right closing order (first the SLAVE and then the MASTER) can not be respected. In this case it is advisable to install on the door jamb a "Door Coordinator" (SEL-NICK) - this prevents the leaves closing in the wrong order.



E. Rebated doors in semiautomatic mode

With power-on and the doors operating in semi-automatic mode they will reclose by spring.

The SW always controls the position of the 2 leaves.

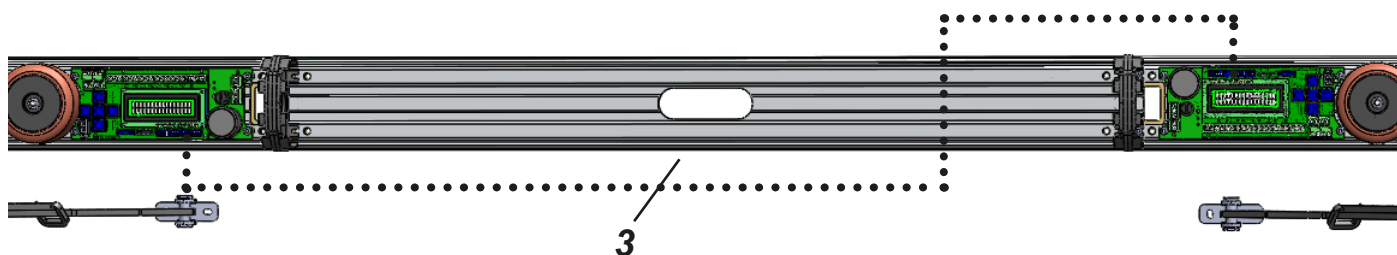
When a door coordinator is not used, for a smooth closing without start/stop of the master, adjust the closing speed of the single leaves using the parameters V3S and V4S on the Main Functions menu.

PART II: Electrical connections

For operators DWSD with a central profile, the product comes equipped with synchronization cable.

It is also possible to use 2 single door units (DWSR102x) to automate a double leaf door with synchronization of each leaf. For this use the serial cable **DWPCS** (optional).

The cable is terminated with two special three-way connectors and must be inserted in the corresponding slot located under the logic card of the unit (see image below).



1) Connect the motors referring to the electrical diagram of the single door.

 **WARNING:** in double door mode with overlapping leaves (rebated), it is very important to identify the type of unit

- MASTER unit drives the leaf which opens first and closes last
- SLAVE unit drives the leaf which opens last and closes first



2) Connect the RADARS and the Day/Night switch to the unit identified as MASTER

3) The contacts of the safety devices (photocells) can be connected in two ways:

- Connect the photocells' contacts to terminals 5-6-7 of the corresponding unit electronic card
- Connect the photocells from each door in series. Connect to terminals 5-6-7 of the MASTER unit and bridge to the contacts 5-6-7 of the SLAVE unit in SERIES.

4) Connect the electrolock to the MASTER unit

5) For the SLAVE unit memorise the 4ch remote control needed to navigate the menu ONLY. For the Master unit memorise the navigation transmitter and any other transmitter used to open the door

 **ATTENTION : Do not memorise the same 4ch navigation transmitter on both the units!**

PART III: Final Set-up

Follow the set-up procedure below for either 2 x single motors (DWSRxx) or a double door unit (DWDSxx). This can be completed only if the mechanical and electrical installations have been executed.

- 1) On the SLAVE unit, enter the CONFIGURATION menu:
 - set the parameter **"DOOR TYPE" = SLAVE**
 - set (temporarily) the parameter **"NUM. DOORS" = ONE DOOR (default value)**
- 2) On the MASTER unit, enter the CONFIGURATION menu:
 - set the parameter **"DOOR TYPE" = MASTER**
 - set (temporarily) the parameter **"NUM. DOORS" = ONE DOOR (default value)**

Note: the MASTER unit controls all commands for the double doors: radars and the other I/P devices must be connected only to this unit.

3) Verify that the safety inputs (Terminals 5-6-7) of the SLAVE unit are shorted or connected to the corresponding safety photocells (FTC and FTC-S) and that LEDs L3 and L4 are stable on.

4) Verify that the safety inputs (Terminals 5-6-7) of the MASTER unit are shorted or connected to the corresponding safety photocells (FTC and FTC-S) and that the leds L3 and L4 are stable on.

5) Follow the Door CALIBRATION procedure described on page 18 of this manual to the end for each door. Once finished reset both the switches to position "0".

6) Set the **ENGAGE POSITION** in the Door Calibration menu: this is the point (in case of rebated doors) where the 2 leaves are free to open and close without any interference.

SLAVE = 15

Door Calibration Door Engage Pos.	—	Door Engage Pos. 015
--------------------------------------	---	-------------------------------------

MASTER = 20

Door Calibration Door Engage Pos.	—	Door Engage Pos. 020
--------------------------------------	---	-------------------------------------

If the factory settings for engage position are not suitable, adjust the values.

7) Enter the CONFIGURATION menu of the **SLAVE** unit and set the following parameters:
NUM. DOORS = **TWO DOORS**
2 DOORS OVERLAP = **ENABLE** (in case of rebated doors)

8) Enter the CONFIGURATION menu of the **MASTER** unit and set the following parameters:
NUM. DOORS = **TWO DOORS**
2 DOORS OVERLAP = **ENABLE** (in case of rebated doors)

9) Set the switches of both motors to position I (automatic) and check the presence of the letters S and M on the displays of both units as confirmation of the ongoing communication.

Operating mode

Rebated Doors			Not Rebated Doors		
Master	Slave	Operating	Master	Slave	Operating
0	-	Both Doors Free	0	0	Both Doors Free
II	I (*)	Both Doors always open	II	II	Both Doors always open
I	I	Sensors open both Doors: first master, then slave	I	I	Sensors open both doors simultaneously
	0	Sensors open MASTER door ONLY. SLAVE door remains closed	I	0	Sensors open MASTER door ONLY. SLAVE door remains closed
	II	Illegal	0	I	Sensors open SLAVE door ONLY. MASTER door remains closed

(*): Do not set the switch on the Slave on pos. 0 or II, with the Master on II, because there is no opening delay and the 2 leaves could jam while opening simultaneously.

Note: If using an external command switch (e.g. keyswitch), connect the Master terminals 7,8 and 9 in parallel with the Slave and remove the jumpers (page 28).

5] USE INSTRUCTIONS

If the door is working properly the LED LP is STABLE GREEN

HOW TO OPEN THE DOOR

According to the peripherals installed the door driven by this operator can be opened by the following devices:

- OPEN BUTTON
- OPEN REMOTE CONTROL
- RADAR (INTERNAL / EXTERNAL)
- MANUAL PUSH ON THE DOOR to OPEN or CLOSE (if enabled)
- PUSH THE DOWN BUTTON OF THE 5-BUTTON KEYBOARD

HOW TO SET THE DOOR IN AUTOMATIC MODE

Move the external switch to position I ---> the LP LED will become GREEN

HOW TO SET THE DOOR TO SEMIAUTOMATIC MODE

Move the external switch to position I ---> the LP LED will become GREEN
 Enter the Menu and change the mode in the Main Function submenu

HOW TO SET THE DOOR TO ALWAYS OPEN

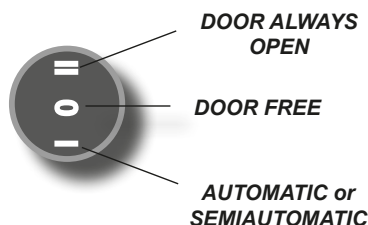
Move the external switch to position II ---> the LP LED will become ORANGE

HOW TO SET THE DOOR TO FREE

Move the external switch to position 0 --> the LP LED will switch OFF

HOW TO SET THE DOOR TO NIGHT MODE (when connected)

Move the external switch to NIGHT ---> the LP LED will become ORANGE BLINKING



6] MAINTENANCE

An automatic door, realised through the installation of the operator DIGIWAY-SR, needs regular servicing (at least every 12 months) as listed in the following points:

- 1) Check the door balancing and the correct functionality of the hinges
- 2) Sliding arm:
 - 2A) Check the fixing solidity of the sliding guide to the door and its horizontal alignment
 - 2B) Check the ease of movement of the sliding block
 - 2C) Check drive shaft bolt is tight
 - 2D) Check the correct coupling arm-motor shaft (solidity of the driving pins)
 - 2E) Possible cleaning of the guide
- 3) articulated arm:
 - 3A) Check the fixing of the bracket to the door
 - 3B) Check the solidity of the articulated arm knee
 - 3C) Check drive shaft bolt is tight
 - 3D) Check the solidity of the adjustable forearm (2 screws M5 x 12)
- 4) Check the fixing M6x20 screw which keeps the motor shaft connected to the mechanism
- 5) Check the fixing of the motor to the backplate and the backplate to the wall
- 6) Ensure the absence of friction along the run of the door
- 7) Check of the functionality of the peripherals (radar, electrolock or magnet)
- 8) In the case of double door with overlapping, check the correct synchronisation of the 2 leaves

7] TROUBLESHOOTING

Issue	Cause	Solution
Door doesn't close completely over a latch	Inadequate spring preload	Increase spring preload
External LED blinks RED quickly & door moves slowly	Photocell test failed	Check photocells, in case of their absence disable the tests in Advanced Options menu
Door doesn't move	C-NC photocells contacts open	If no safety photocells are connected short terminals 5-6 and 6-7
Obstacle type: B1	Obstacle presence: a variation of the speed greater then 40% of the rated value is detected	Remove the obstacle. In case of false obstacle try to increase the factory threshold value for the speed (40%) OD Delta VEL in 'Main Functions Menu'
Obstacle type: B2	Obstacle presence: a variation of the current greater then 50% of the rated value is detected	Remove the obstacle. In case of false obstacle try to increase the factory threshold value for the current (15%) OD Delta CUR in 'Main Functions Menu'
Obstacle type: B3	$B3 = B1 + B2$	see B1 and B2
Obstacle type: B4	Possible obstacle which prevents the door from moving at least of 1% of the total travel within 1 sec.	Remove the obstacle. Check the preload of the spring: if it is too preloaded the door could be difficult to open completely
Obstacle type: B5	Possible obstacle which causes a peak of the current consumption greater then 2A in 100 mS	Remove the obstacle. Check the preload of the spring: if it is too preloaded the door could be difficult to open completely
Obstacle type: B6	Possible obstacle in the last 10° before full close or after the 80° before full open which causes: 1) a peak of current greater than 97% of the max value 2) the speed that remains below 20°/min. Can occur only if the motion profile is absent (i and I not displayed on the LCD)	Remove the obstacle. Call assistance for access to inner parameters.
Obstacle type: Bf	Obstacle detected by the slave door in a double door configuration	Remove the obstacle
Led DL1 (see pg14) stable red	Abnormal current consumption	Severe error: replace the electronic card
Led DL2 (see pg14) stable red	Short circuit on the card	Severe error: replace the electronic card
Led DL3 (see pg14) stable red	Overheating	Power-off the system and check operating temperature. If the problem persists, replace the electronic card
The door doesn't reclose anymore even in power-off	Spring broken	Replace the complete mechanic block
The remote control included doesn't work	The remote control is faulty or without battery or it has not been memorised. The receiver memory has been erased by a factory default.	Memorise the master transmitter again
No remote controls work	No remote controls have been memorized or The receiver card is faulty	Memorise the remote controls or Replace the left cap

The side switch doesn't work	The jumper is OFF or absent (see page 20)	Insert the jumper
The main LED blinks RED slowly	Service required	Call assistance for service intervention
Test FTC / FTC-S Fails	the Photocells are broken or the contacts C-NC are bridged and the test has been enabled. <i>or</i> The delay of the test signal is too short and doesn't match with the photocells test specifications	If the delay (factory value = 20 mS) is too short, make it longer acting on parameter 30 of the Advanced Settings and increase the value.

8] BLUETOOTH CONNECTION & MANAGEMENT

The appliance can be provided from the factory with a Bluetooth module that allows you to manage the settings using a smartphone.

The models with the Bluetooth module are identified with the suffix BT on the part-name. The Bluetooth module can be plugged in a second time on regular units (suffix CD on the part name).

The Bluetooth module allows the unit to communicate with a Smartphone with iOS (Apple) or Android. The Bluetooth communication will make the display of the Digiway visible on the screen of your smartphone, even when the aluminium cover is installed. This makes any configuration and service intervention easier.

Type	P/N	Description
DSRMBT	F0543000178	BLUETOOTH PLUG-IN MODULE FOR DIGIWAY-SR

Installing the Bluetooth module on a regular unit (*only for xxxCD units*)

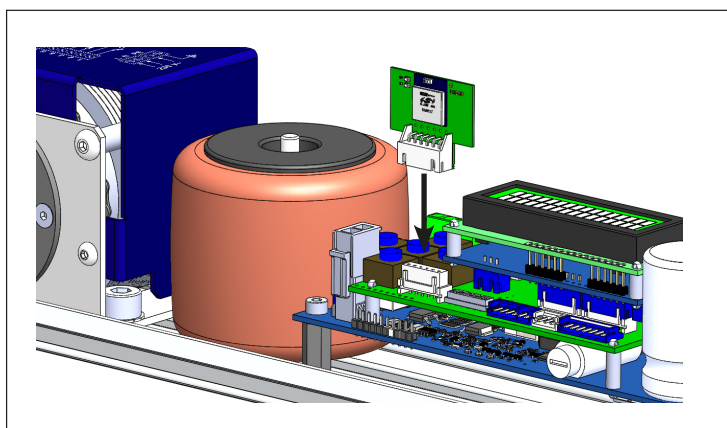
1) Remove the cover

2) Power off the unit! 

3) Plug the polarised module connector into the white 6-pole connector of the DIGIWAY board

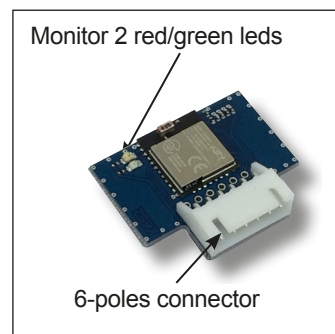
4) Switch the unit back on

5) Replace the cover



Technical Specifications

Communication w/mobile phone:Bluetooth
 Standard:BLE 4.2
 Power supply:3 Vdc
 OS Compatibility:Android, iOS
 Release Android:5.1 and next
 Release iOS:10 and next
 Compatibility SW DIGIWAY-SR:3.0h and next



Monitor RED/GREEN LED messages

Red LED	Green LED	Status
OFF	Blinking	Module operating in stand-by
Blinking	Blinking	Bluetooth connection in progress. App not logged
Blinking	Fixed	Connected and logged-in

Installing the App on the smartphone

For communication with the module it is necessary to install the correct App on your smartphone, from either the App Store (Apple) or Google Play (Android).



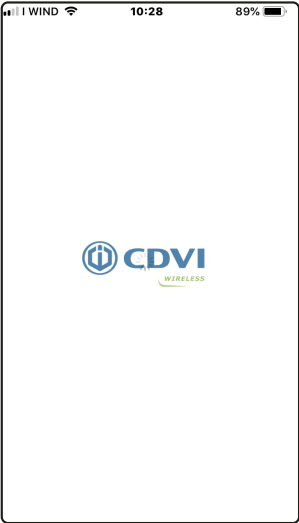
Search CDVI or Digiway BLE on the App Store and proceed with the download.

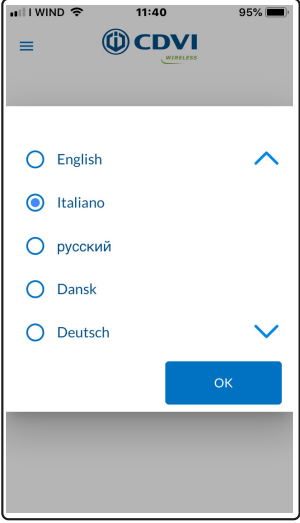


Search CDVI or Digiway BLE on Google Play and proceed with the download.

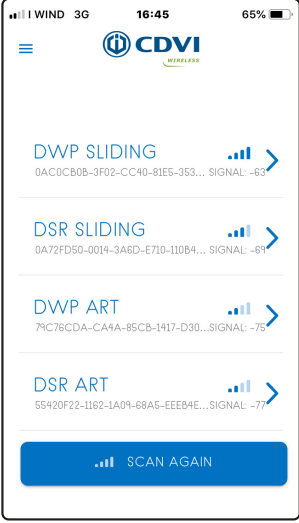
Once the download is completed, start the App.

- 1**

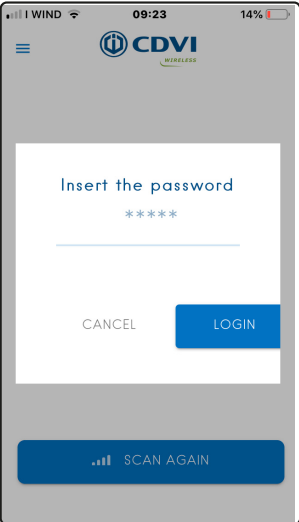

- 2**



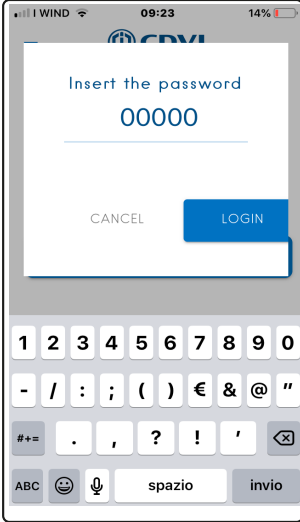
You will be asked to specify the language of the App: select the language and press OK.
- 3**



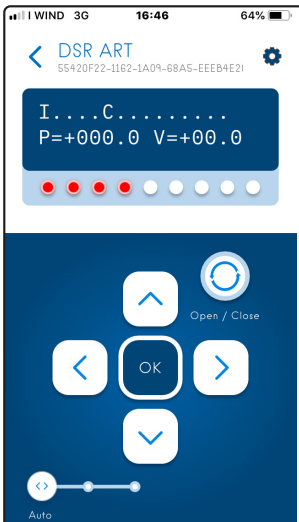
The App will start searching the Bluetooth modules present in the area, displaying all the modules found and their field strength.
- 4**



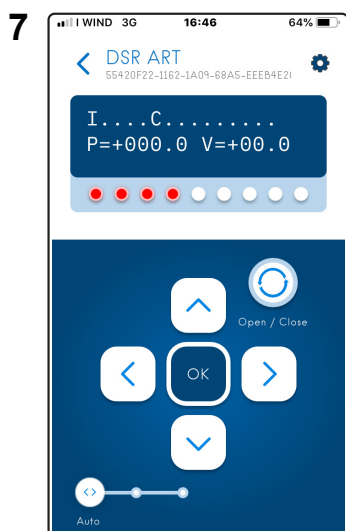
Select the target unit. The first time you will be asked to enter the password. The password will be kept remembered for subsequent access attempts.
- 5**



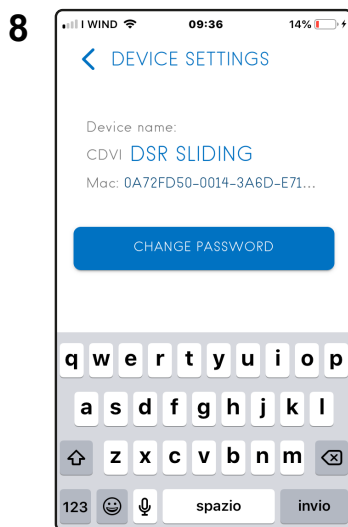
Input the password: All modules come preset with password "00000". It's recommended to change the password (see points 7 - 8).
- 6**



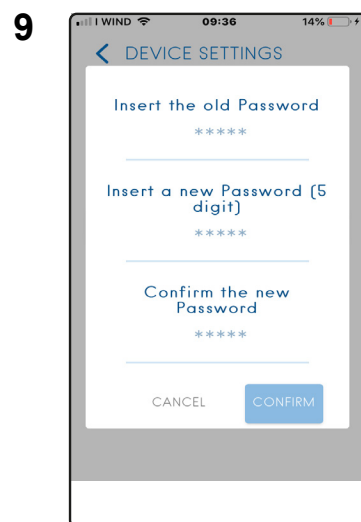
Select the target DIGIWAY. The App will show the corresponding LCD display. The LED of the module (if cover removed) changes to flashing RED showing the communication is in progress.



Press OK for 4 sec. to enter the menu or push open/close to give a command to the door



Click on the  symbol to access the "Change password function"



Input the old password, then the new password. Retype it to confirm.

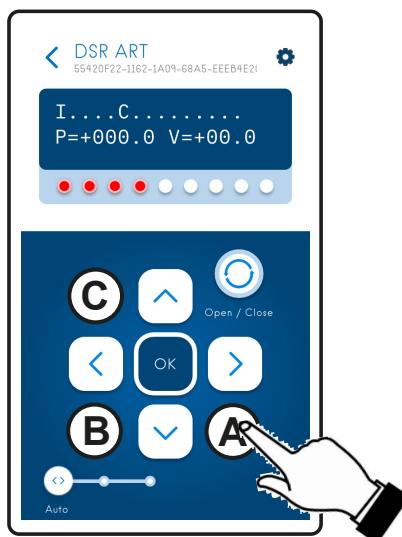
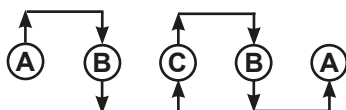
NOTE

1) On Android phones, it can happen that the screen doesn't display the full graphics or has some overlapping words. --> Reset the dimension of the characters to factory default on your smartphone:
Settings-->Display-->Text size.

2) If the DIGIWAY doesn't appear on the list of devices initially, try scanning again by pressing the button "Scan Again".

Access to hidden menu

Access to the inner menu (only upon specific need, and followed by factory assistance) is granted by pressing the screen of the smartphone in 3 points, according to a specific sequence:



Installing Manufacturer: (Name of the company who installed the Automatic Door Operator)

Identification: (Identity of the door that has been automated such as door location or serial number)

Site (Details of the building where the door operator has been installed)

Address	
Owner refs	

Installer Details: (Information of the installer and company)

Company	
Address	
Installer name	
Installer signature	

Date of completion of the installation: _____

Identification of the power operated drive units:

Brand	CDVI
Series	DIGIWAY SR
Type	
Part Name	
Serial Number	
Manufacturing Date	

Identification of any protective devices: (Includes photocells/safety mats/operation modes etc.)

Installation manual: _____

NOTE: the installation of the power operated pedestrian door must be completed with the risk assessment and risk reduction. Find hereunder the list of the main mechanical hazards. More hazards can be found on Annex L of the Standard EN16005.



Hazard	Description	Installation notes and/or actions taken to eliminate or reduce the risk
	Impact	
	Crushing	
	Shearing	
	Wedging	
	Conveying	
	Cutting	
	Hooking	

Service

Date:		Operator name:
Maintenance	[]	Description
Repair	[]	
Upgrading	[]	
Other	[]	
Signature		

Date:		Operator name:
Maintenance	[]	Description
Repair	[]	
Upgrading	[]	
Other	[]	
Signature		

Date:		Operator name:
Maintenance	[]	Description
Repair	[]	
Upgrading	[]	
Other	[]	
Signature		



[illegible]



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