jcm⊙tech
technology & imagination

F30
User Manual

EN

Table of contents

Important safety instructions

Important safety instructions for installation

⚠️ **Disconnect the power supply whenever you proceed to the installation, maintenance or repair of the equipment.**

•Before installing the panel, remove all unnecessary ropes or chains and disable any equipment such as locks that is not necessary for the automatic operation.

•Before installing the panel, check that the door is in good mechanical condition, correctly balanced and that it opens and closes correctly.

•Install the manual unlocking device at a height lower than 1.8m.

•Install any permanent control next to the door away from any moving part and at a minimum height of 1.5m.

•For permanently connected equipment, an easily accessible power disconnection device must be incorporated into the wiring. It is recommended that this be of the emergency switch type.

•If the control panel is supplied without emergency stop button, this will be incorporated in the installation, connecting it to the STOP terminal.

•For correct use of the security edge, this must never be activated when the door is fully closed. It is wise to install the ends of run before activating the edge.

•This equipment can only be handled by a specialist fitter, by maintenance staff or by a suitably trained operator.

•To connect the power supply and motor wiring, 2.5 mm2 section terminals must be used.

•Use protective goggles when handling the equipment.

•Fuses must only be handled when the appliance is disconnected from the mains.

•The instructions for using this equipment must remain in the possession of the user.

•European door normative EN 12453 and EN 12445 specify the following minimum protection and door safety levels:

- for single-family dwellings, prevent the door from making contact with any object or limit the force of contact (e.g. safety band), and in the case of automatic closing, it is necessary to complement this with a presence detector (e.g. photocell).

- for communal and public installations, prevent the door from making contact with any object or limit the force of contact (e.g. safety band), and complement this with a presence detector (e.g. Photocell).

⚠️ **F30 control panel switches automatically to dead man mode when safety devices are active or defective. Therefore, all controls work as "hold-to-run" controls.**

⚠️ **WARNING: IN ACCORDANCE WITH THE EN 13241-1 AND EN 12453-1 STANDARD CONCERNING PRESSURE MAINTAINED CONTROL DEVICES:**

"The person operating the door must have a direct view of the doorway, must be near the door (5 meters maximum) during movement of the door and should not find itself in a dangerous position". Any adjustment of the radio range out of these
recommendations, undertakes the installer in terms of responsibility for injury or damage.

"Releasing of the pressure maintained control device should stop the door movement before it scrolls 5cml".

Important safety instructions for use

- Do not allow children to play with the door controls.
- Keep the remote controls out of the reach of children.
- Watch the door movement and keep people away until the door is fully open or closed.
- Precaution when operating the manual unlocking device, as the door may suddenly fall due to the bad condition of the springs or door unbalance. Details on how to use the manual unlocking device must be provided by the manufacturer or the device installer.
- Examine the installation frequently, especially the cables, springs and supports, to detect signs of wear, damage or unbalance. Do not use the door if repair work or adjustments are required, as this may cause damage.

Use of the system

Designed for automation of garage doors, in accordance with the general description. Not guaranteed for other uses. The manufacturer reserves the right to alter equipment specifications without prior notification.

General description

Control panel with frequency inverter 0.75KW and control by absolute encoder JCM, Elektromaten or Kostal, designed for fast doors.

Is composed by:

•Motor brake outputs and flashes at 230Vac, and voltage-free contact outputs to indicate the status of door open and door closed.
•One 24Vac output and two 24Vdc outputs for the connection of photocells with self-test or other accessories such as radars. These outputs provide a maximum of 700mA shared between the three.
•Partial or total and closing opening pushbutton inputs.
•Inputs for safety contacts, a safety edge and a stop.
•External card connectors: Motion STICK receiver, RSEC3 radioband3G receiver, TL-CARD-V traffic light card and MTC1
magnetic detector card.

In case of activation of a safety input, if any control input is kept active, the movement of the door becomes by maintained pressure (Dead man), and the LED on the cover indicates this by flashing.

This control panel complies with the current electrical safety regulations EN 60335-1: 2012.
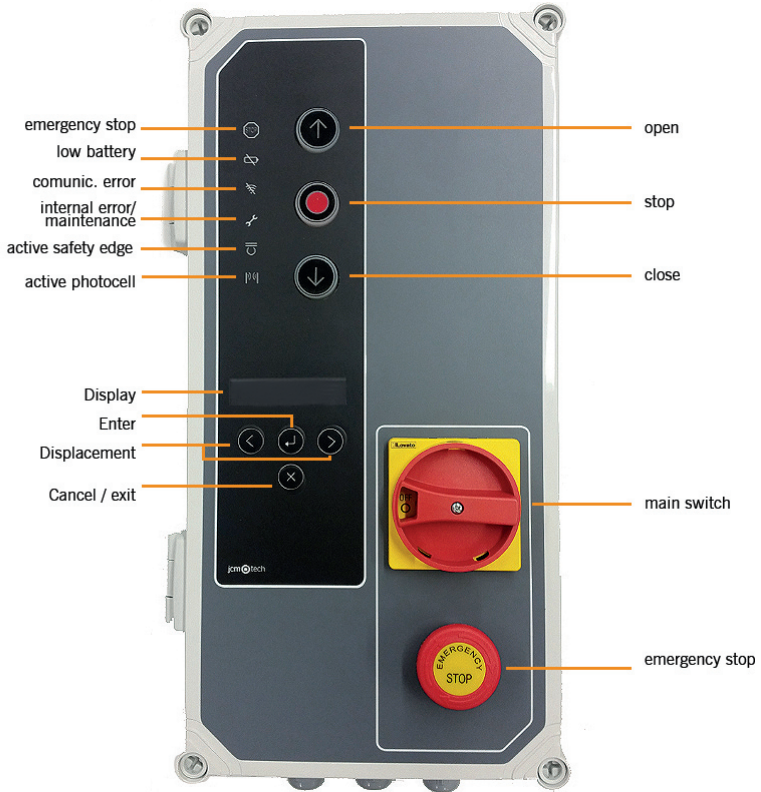
Detailed description

1- FUSE

1A/250V

2- AUTOCLOSE TIME

Min=3s - Max=180s

Maximum position=No auto-close

3- RECEIVER

Motion STICK / DCS RACK receiver connector

4- MTC

Connector for magnetic detector card MTC

5- REMOTE CONNECTOR

Connection for VERSUS-PROG programmer

6- EXPANSION CARDS

RSEC3 Radioband receiver connector

TL-CARD-V Connector

7- PROGRAMMING PUSHBUTTONS

Open and close manoeuvre programming

8- OPTION SELECTORS

9- 24VDC OUTPUT

Fixed output 700mA, shared with all 24v outputs

10- 24VDC / TEST OUTPUT

Output for photocell tests, 700mA shared with all 24v outputs

11- PROTECTION EARTH (MANDATORY)

Connection for earth

12- SAFETY CONTACT INPUTS

Connection for photocells 1 (Open) and photocells 2 (Close)

13- 24VDC / TEST OUTPUT

Output for photocell tests, 700mA shared with all 24v outputs

14- MOTOR

Connection for motor U (Open) V (Close) W (Common)

15- POWER SUPPLY

Power supply input connection

16- PROTECTION EARTH (MANDATORY)

Connection for earth

17- SAFETY EDGES INPUT/ STOP

Connection for 8k2 band / Stop pushbutton

18- PUSHBUTTONS INPUTS

Connection for external buttons (Partial opening, Opening and Closing)

19- END LIMIT SWITCHES

Open and close end limit switches

20- OPENED

Voltage-free contact (indicates door opened)

21- CLOSED

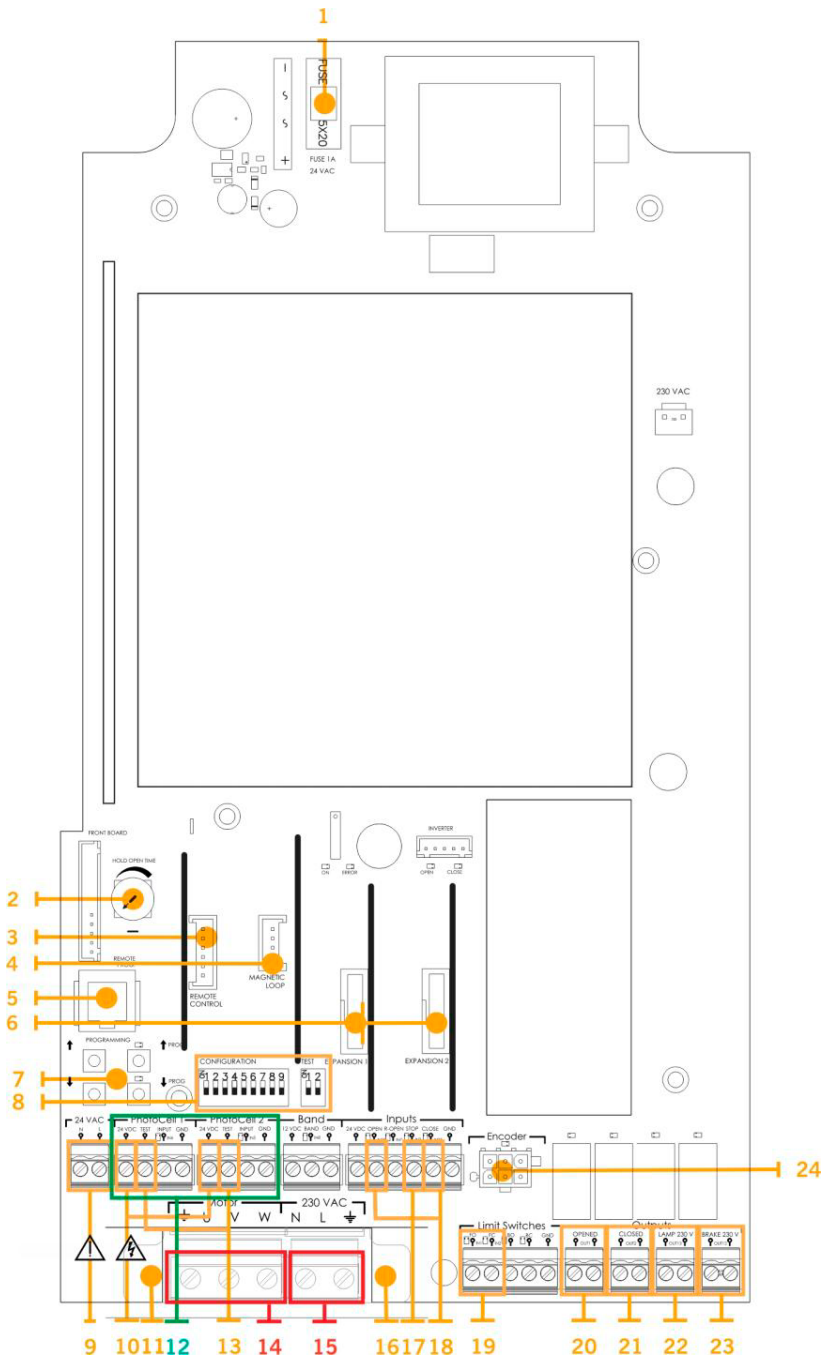Voltage-free contact (indicates door closed)

22- FLASH LAMP

Connection for 230Vac flash lamp

23- MOTOR BRAKE

Connection for 230Vac motor brake

24- ENCODER INHIBITION

Remove the jumper for connecting the encoder

FUSE
5X20
FUSE 1A
24 VAC

230 VAC

FRONT BOARD

HOLD OPEN TIME

REMOTE

REMOTE CONTROL

MAGNETIC LOOP

INVERTER

ON   ERROR

OPEN   CLOSED

PROGRAMMING

PROG

PROG

CONFIGURATION
1 2 3 4 5 6 7 8 9

TEST

EXPANSION 1

EXPANSION 2

24 VAC
N   L

PhotoCell 1
24 VDC TEST INPUT GND

PhotoCell 2
24 VDC TEST INPUT GND

Band
12 VDC BAND GND

Inputs
24 VDC OPEN R.OPEN STOP CLOSE GND

Encoder

Motor
+   U   V   W

230 VAC
N   L

Limit Switches
FCO   FCC   GND

Outputs
OPENED   CLOSED   LAMP 230 V   BRAKE 230 V
GND   GND

Installation

Fixations of the control panel

Install the control panel vertically on the wall at a height of 1.5m and following the assembly instructions.

177

377

⚠️
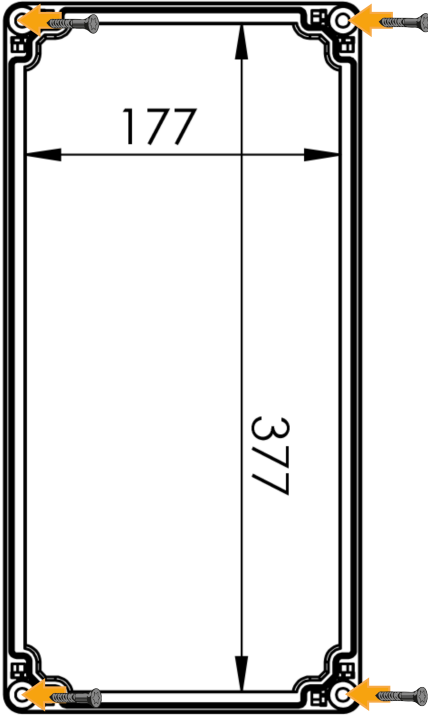
**Do not pierce the box for cable entry.
Use the cable glands enabled for it.**
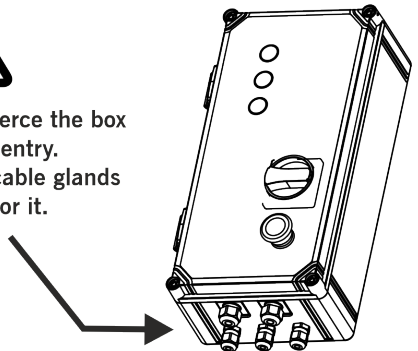
> ⚠ **To avoid electric shock, the equipment must be disconnected from the power supply and all electrical connections**

POWER SUPPLY AND MOTOR CONNECTION

230V
POWER SUPPLY

SHIELDED
MOTOR CABLE

MOTOR BRAKE

M
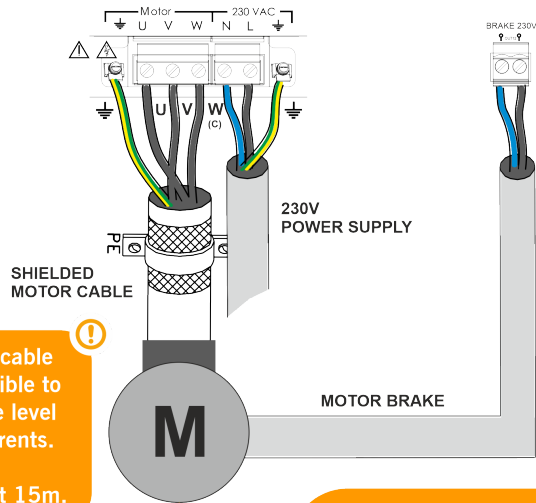
⚠ **Keep the motor cable as short as possible to reduce the noise level and leakage currents. Recommended maximum lenght 15m.**

⚠ CONNECTION

⚠ **For 230V working with the frequency converter, the motor connection must be a delta connection. (Refer to the motor plate).**

⚠ **Use a shielded/armoired cable for the motor connection, and connect this cable to both the decoupling plate and the motor metal.**
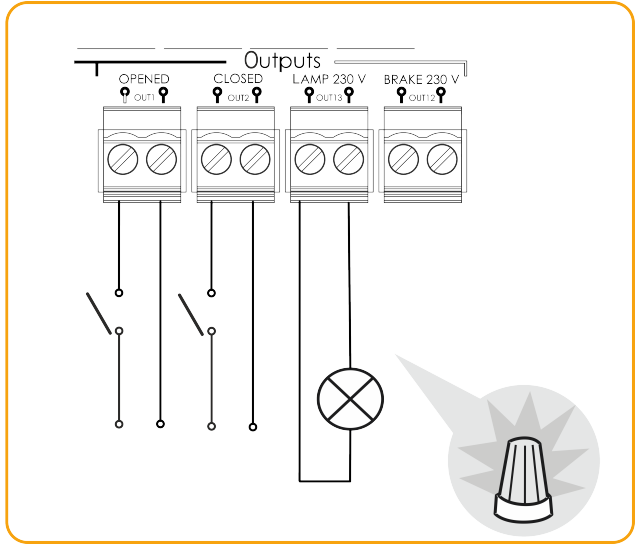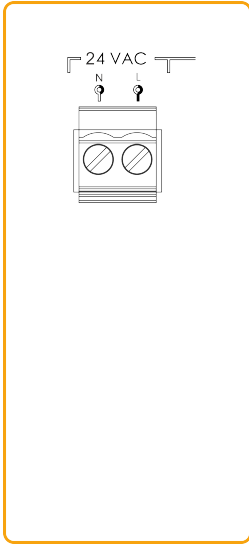
Make the shield connections with the largest possible surface area (cable clamp).

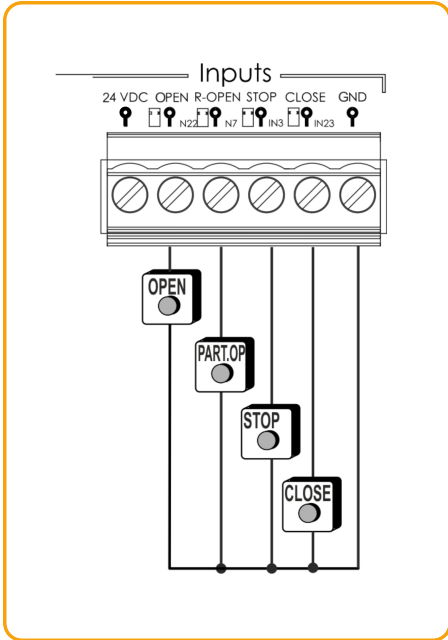**Make sure that the motor cable section is suitable to fit the clamp.**

⚠ **Avoid placing control line cables alongside motor cables and brake cables. This recommendation includes the encoder cable.**

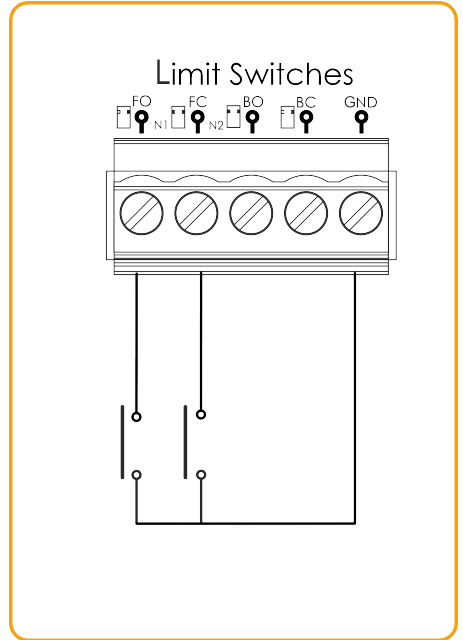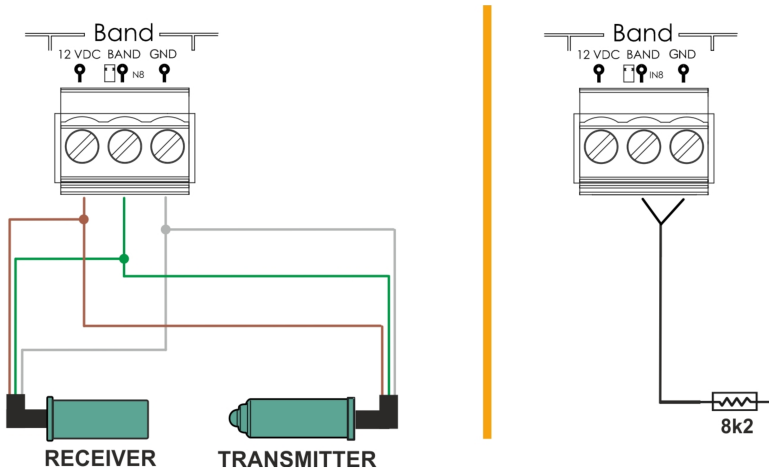**If the interference level of the system is higher, use shielded/armoired cables for the control lines connection also.**
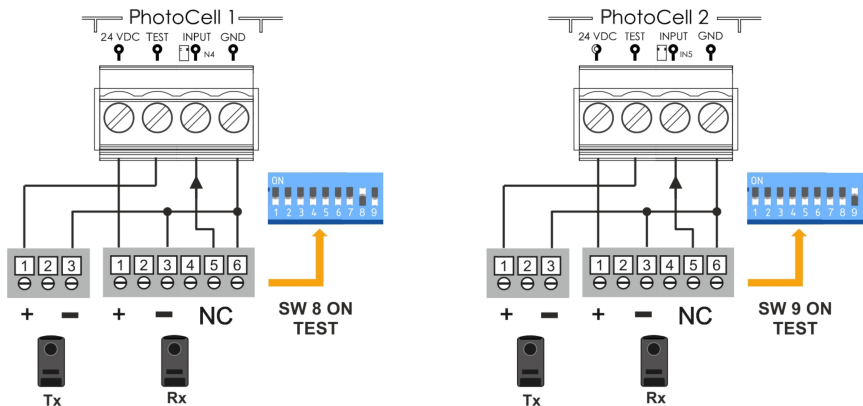
OUTPUTS

24 VAC
N L

Outputs
| OPENED | CLOSED | LAMP 230 V | BRAKE 230 V |
| OUT1 | OUT2 | OUT13 | OUT12 |

PUSHBUTTONS

Inputs
| 24 VDC | OPEN | R-OPEN | STOP | CLOSE | GND |
| | IN22 | IN7 | IN3 | IN23 | |

OPEN

PART.OP

STOP

CLOSE

LIMIT SWITCHES

Limit Switches
| FO | FC | BO | BC | GND |
| IN1 | IN2 | | | |

Band
12 VDC BAND GND

RECEIVER **TRANSMITTER**

Band
12 VDC BAND GND

8k2

AUTOEDGE: the type of safety edge connected is detected in programming mode

PHOTOCELLS INPUTS

PhotoCell 1
24 VDC TEST INPUT GND

1 2 3   1 2 3 4 5 6

+ − + − NC

ON
1 2 3 4 5 6 7 8 9

SW 8 ON
TEST

Tx   Rx

PhotoCell 2
24 VDC TEST INPUT GND

1 2 3   1 2 3 4 5 6

+ − + − NC

ON
1 2 3 4 5 6 7 8 9
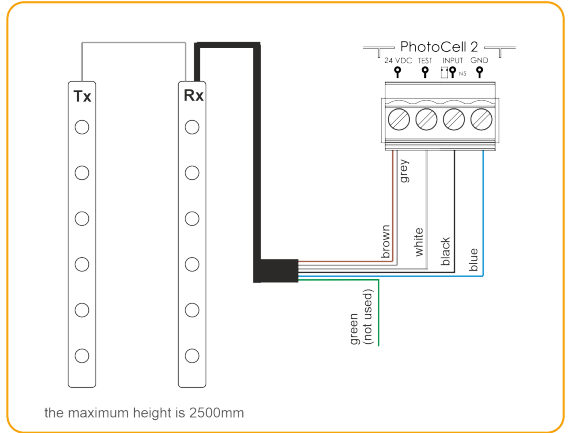
SW 9 ON
TEST

Tx   Rx

Normally, by default, PhotoCell1 is configured for opening safety and PhotoCell2 2 for closing safety.

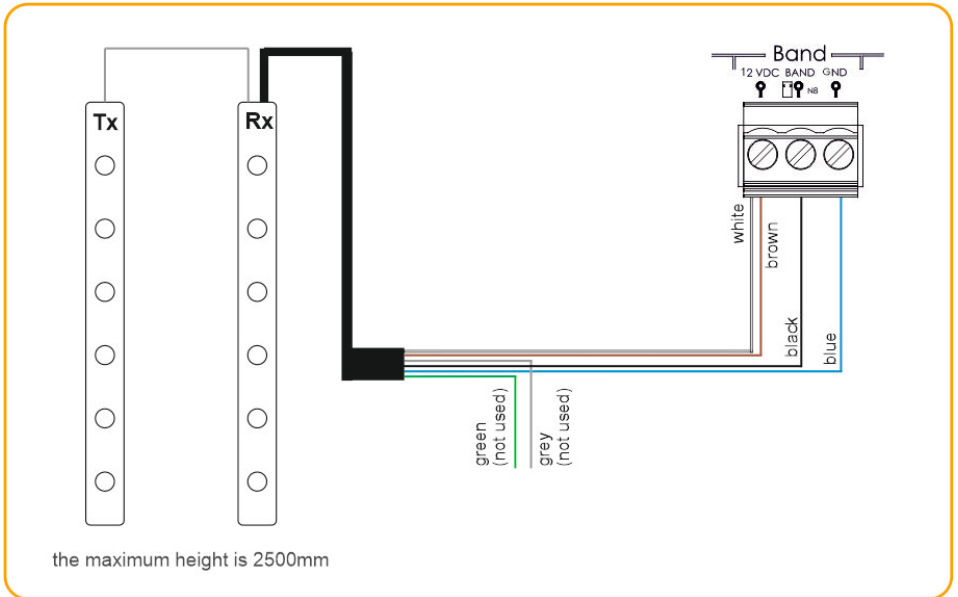**Check the configuration of the control panel parameters to be sure.**
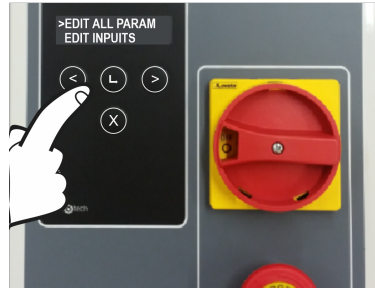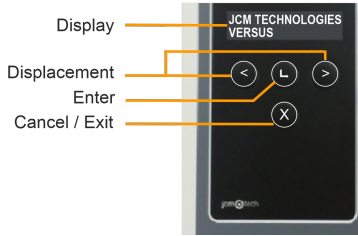
NPN PHOTOCELLS INPUTS

PhotoCell 2
24 VDC   TEST   INPUT   GND

brown

blue

black
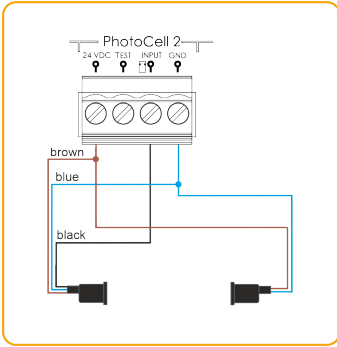
NPN PHOTOCELL BARRIERS INPUTS

Tx

Rx

PhotoCell 2
24 VDC   TEST   INPUT   GND   NS

grey

brown

white

black

blue

green
(not used)

the maximum height is 2500mm

GridScan/PRO PHOTOCELL BARRIERS (FSS)

Tx

Rx

Band
12 VDC   BAND   GND   NB

white

brown

black

blue

green
(not used)

grey
(not used)

the maximum height is 2500mm

Configuration / Starting up

Parameter configuration

Display

Displacement

Enter

Cancel / Exit

JCM TECHNOLOGIES
VERSUS

PARAM CONFIG

>EDIT ALL PARAM
EDIT INPUITS

To initialize the inverter parameters, press the < or > key for 2s to enter PROGRAMMING, select the PARAM CONFIG menu with the < or > key and validate with the L Enter key.

Once inside, you can select between different menus with the < or > keys and validate the desired menu with L Enter key. The message PLEASE WAIT DATA LOADING will appear on the display.

You will be able to edit all parameters together or edit separately (inputs, outputs, ON/OFF, numerical, switch). Also you will be able to enter Freq. Converter menu or Restore Default menu (both explained on next pages).

For example, if you want to change the value of input IN 2 from FC.OPEN M1 to PEDESTRIAN START, you must follow the instructions below:

>EDIT INPUTS
 EDIT OUTPUTS

L

PARAM ID P.5E
IN 1

>

PARAM ID P.5F
IN 2

L

IN 2
*FC.OPEN M1

> . . . . **>**

IN 2
PEDESTRIAN START

L

PARAM ID P.5F
IN 2

The option configured will be indicated with a * before the text.

IN 2
*PEDESTRIAN START

Option 1 selector

By default all selectors leave the factory set to OFF.

| SELECTOR OPTIONS	OFF	ON
1- AUTOCLOSE	Do not closes automatically	Closes automatically
2- DM OPEN	Functioning without dead man on opening	Activates the dead man on opening manoeuvre
3- DM CLOSE	Functioning without dead man on closing	Activates the dead man on closing manoeuvre
4- NO PREFLASH / PREFLASH	Without pre-flash	Activates the pre-flash function
5- BREAK / NO BREAK	Activates motor brake function	Deactivates motor brake function
6- NO STOP ON OPENING	Start button performs an stop at opening	Start button opens until total opening
7- CLOSE BY SEC.CL.	Deactivates closing by security contact	Activates closing by security contact
8- TEST OP	Does not perform auto-test of the opening security contact	Activates the opening security contact auto-test.
9- TEST CL	Does not perform auto-test of the closing security contact	Activates the closing security contact auto-test.

Option 2 selector

SELECTOR OPTIONS	OFF	ON
1- FINE ADJ	Deactivates the fine adjustment function	Activates the fine adjustment function **(only functioning with digital end limit switches)**
2- ENCODER ABS/ LIMIT SWITCH	Activates functioning by digital end limit switches connector (ENCODER connector)	Activates functioning by mechanical limit switches input

Connect the power supply

Before powering up the panel, leave the door in half way.

Power up the control panel and first of all initialize the inverter parameters and adjust the speed ramps.

Initialization of frequency converter parameters
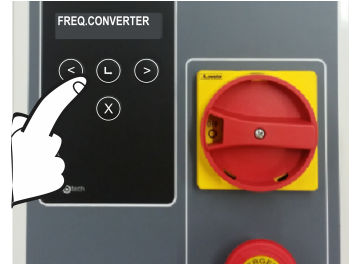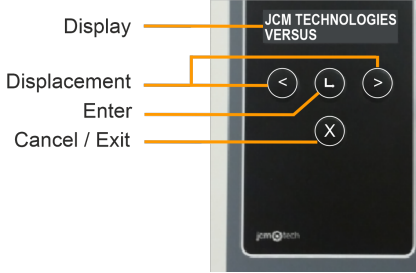
- Display
- Displacement
- Enter
- Cancel / Exit

JCM TECHNOLOGIES
VERSUS

PARAM CONFIG

To initialize the inverter parameters, press the **<** or **>** key for 2s to enter PROGRAMMING, select the PARAM CONFIG menu with the **<** or **>** key and validate with the **L** Enter key.

FC Motor Freq

Select the desired parameter to modify with the **<** or **>** key and validate with **L** Enter key. The message PLEASE WAIT DATA LOADING will appear on the display. Press **>** key to move the pointer and press **<** to increase the number. Press **L** Enter key to validate.

FREQ.CONVERTER

Once inside, select the FREQ.CONVERTER menu with the **<** or **>** key and validate with **L** Enter key. The message PLEASE WAIT DATA LOADING will appear on the display

The parameters that must be entered and found in the motor plate are the following:

- •**FC Motor Freq:** motor frequency
- •**FC Motor Power:** motor power
- •**FC MotorCurrent:** motor current
- •**FC Motor RPM:** motor revolutions per minute

In order to have a maximum performance of the motor, the FC Motor Freq parameter must be the same as the frequency of the network power supply (50Hz/ 60H / ...)

Speed ramps adjustment

Once the "open door" and "closed door" points have been programmed, the programming of the door will be calculated automatically from the VERSUS parameters indicated below.

Follow the initialization sequence of the drive parameters on page 14 to access them.

The door speed profiles will be calculated according to the following pattern:

> ***Once the sequence has been programmed, the mentioned parameters can be changed with the appropriate display or programmer and the speed profiles will be recalculated.**

ACCELERATION RAMP OPENING

OPERATING
with limit switches
with encoder

FC HighSpeedOpen
opening speed (%)

FC Creep Speed
approach speed (%)

FC PosRamp Time
acceleration
ramp (s)

FC NegRampTime
Deceleration
ramp (s)

Creep
Puls / s
Open

FC QuickStopTime
final breaking ramp (s)

Closing
limit switch

Opening
limit switch

Door
opened

ACCELERATION RAMP CLOSING

OPERATING
with limit switches
with encoder

FC HighSpeedClose
closing speed (%)

FC Creep Speed
approach speed (%)

FC PosRamp Time
acceleration
ramp (s)

FC NegRampTime
Deceleration
ramp (s)

Creep
Puls / s
Close

FC QuickStopTime
final breaking ramp (s)

Opening
limit switch

Closing
limit switch

Door
closed

- **FC PosRamp Time:** seconds from 0% to 100% of the speed (acceleration ramp)
- **FC HighSpeedOpen:** opening speed in percentage (100% is maximum speed)
- **FC NegRampTime:** seconds from 100% to 0% of the speed (deceleration ramp)
- **FC Creep Speed:** constant speed after decelerating in percentage (approach speed)
- **Creep Puls / s Open:** pulses / seconds at approach speed before complete opening (pulses when operating with encoder / seconds when operating with limit switches)
- **FC HighSpeedClose:** speed in percentage (100% is maximum speed)
- **Creep Puls / s Close:** pulses / seconds at approach speed before complete closing (pulses when operating with encoder / seconds when operating with limit switches)
- **FC QuickStopTime:** seconds from 100% to 0% of the speed, only when operating with limit switches (final breaking ramp)

Other parameters:

- **FC DCBrake Speed:** indicates the speed from where DC Brake is activated
- **FC Brake Speed:** indicates the speed from where Brake is activated

Checking motor direction

1. Turn the Options 2 selector to the ON position
2. Press the Open button on the cover and check that the door opens.
3. If it fails to open, disconnect the power supply and swap over the wires to the motor. Or change the parameter P38 (Motor Out Invert) to ON, with the VERSUS-PROG programmer.

Programming

Once configured all the parameters and performed the start-up, proceed to program it.

When programming, it is preferable to make medium and/or long runs to short ones (in order to improve hysteresis and inertia).

The manoeuvre programming will be done in creep speed.

OPEN PUSHBUTTON
Open programming manoeuvre

OPENING PROGRAMMING
Enter programming for open pushbutton / Validate opening programming

CLOSE PUSHBUTTON
Close programming manoeuvre

CLOSING PROGRAMMING
Enter programming for close pushbutton / Validate closing programming
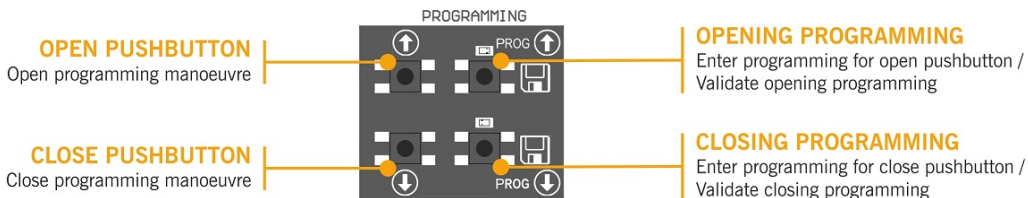
Manoeuvre programming with digital end limit switch (ENCODER)

Turn the option 2 of the Options 2 selector to the OFF position.

Only the buttons on the board can be used, and these will function in dead man mode.

PROGRAMMING FOR OPENING

1. Press the **PROG** button for 3 seconds, the indicator light will come on.

2. Position the door in the door open point using the buttons. It is advisable to make long runs in order to ensure a correct adjustment.

3. Once the door is in the desired "door opened" position, press the **PROG** button to validate the "door opened" position. The indicator light will flash a number of times and then go out.

PROGRAMMING FOR CLOSING

1. Press the **PROG** [icon] button for 3 seconds, the indicator light will come on.

2. Position the door in the door closed point using the buttons [icon] [icon] . It is advisable to make long runs in order to ensure a correct adjustment.

3. Once the door is in the desired "door closed" position, press the **PROG** [icon] button to validate the "door closed" position. The indicator light will flash a number of times and then go out.

> ⚠ The STOP button aborts the programming

> ⚠ If you connect an RSEC3 to use external safety elements, you must reprogram the maneuver.

Fine adjustment (for programming with absolute encoder)

Once the manoeuvre has been programmed, a fine adjustment of the programmed "door open" and "door closed" position can be made.

Situate option 1 of the Options 2 selector in the ON position. The indicator lights will flash continually. Door is not moved with this selector in ON position.

> ⚠ In this mode, door does not move.

MODIFYING THE "DOOR OPENED" POSITION

1. Press the **PROG** [icon] button. The indicator light will come on.

2. Press the [icon] or [icon] button to increase or decrease the "door open" position. Each press will be approximately equivalent to 1 cm (this value depends on the absolute encoder resolution).

3. Once the "door opened" position has been adjusted, press the **PROG** [icon] button to validate the "door opened" position". The indicator light will flash a number of times and then go out.

MODIFYING THE "DOOR CLOSED" POSITION

1. Press the **PROG** [icon] button. The indicator light will come on.

2. Press the [icon] or [icon] button to increase or decrease the "door closed" position. Each press will be approximately equivalent to 1 cm (this value depends on the absolute encoder resolution).

3. Once the "door closed" position has been adjusted, press the **PROG** [icon] button to validate the "door closed" position". The indicator light will flash a number of times and then go out.

Situate option 1 of the Options 2 selector in the OFF position. The indicator lights will turn off.

Manoeuvre programming with limit switches

Turn the options 2 of the Options 2 selector to the ON position.

Jumper on the encoder connector must be plugged.

The limit switches need to be adjusted before programming, and the door positioned in the "door closed" position.

PROGRAMMING FOR OPENING

1. Press the **PROG** button for 3 seconds. The indicator light will come on.

2. Press the Open button . The door will open automatically until it founds the opening limit switch.

PROGRAMMING FOR CLOSING

3. Press the **PROG** button for 3 seconds. The indicator light will come on.

4. Press the Close button . The door will close automatically until it founds the closing limit switch
5. End of programming, the indicator light will flash a number of times and then go out.

Partial manoeuvre programming

Bridge the Partial opening input IN7 and proceeds to programme according to encoder or limit switches, as desired.

In this case, the "door opened" position will be located at the half way point of the run.

Verification

Verify that the control panel works correctly

Once the control panel is properly wired and programmed, check that the entire system (accessories included) is working correctly.

Safety edge

Check that the LED ⟲ is at OFF.

If it is activated when the door's moving, the LED ⟲ will pass at ON, indicating the activation of the safety edge.

Photocell

Check that the LED 〕〕 〔〔 is at OFF.

If it is activated when the door's moving, the LED 〕〕 〔〔 will pass at ON, indicating the activation of the photocell.

Encoder (if installed)

If the control panel does not receive any encoder pulse for 2 seconds, the door manoeuvre will be stopped for safety reasons.

Communication's quality (in case of RSEC3 connected)

To ensure that the radio communication is good enough, check that the LED 📶 is at OFF. If 📶 is permanently activated, please check RadioBand3.

Maintenance

Fuse replacement

When connecting the equipment to the power supply, if the front panel does not light up, open the front cover and replace the fuse with another of the same characteristics.

Set parameters to default values

If you desire to set the parameters to the default values, you must enter into the frequency converter parameters menu as explained below, and select the RESTORE DEFAULT option.

To initialize the inverter parameters, press the < or > key for 2s to enter PROGRAMMING, select the PARAM CONFIG menu with the < or > key and validate with the L Enter key.

Once inside, select the RESTORE DEFAULT menu with the < or > key and validate with the L Enter key. Then select RESTORE ALL, and the message CONTINUE? will appear on the display. Press L Enter key to validate.

Warning of maintenance

The limit of maneuvers has been overflown. You must reset the PC0 parameter (Maintenance counter) to 0, with the display menu or with the VERSUS-PROG programmer.

Troubleshooting

F30

INDICATOR	ON	SOLUTION
(STOP)	Emergency stop input activated	
low battery icon	Low battery detection	Verify the batteries of the safety transmitter
radio icon	Radio communication error	Verify the radio signal. Check the batteries, reprogram again or change equipments location.
wrench icon	ON: Installer mode Flashing: Maintenance warning	See Maintenance chapter
photocell icon	ON: Closing photocell activation error Flashing: Indicates the reversed movement after a safety detection	
safety edge icon	ON: RS3 / Safety edge activation Flashing: Indicates the reversed movement after a safety detection	

Indicator light for possible faults, LED ERROR

	ERROR	LED ERROR	INDICATION	SOLUTION
ER02	INTERNAL ERROR	10 slow flashes 2 quick flashes	Internal error	Consult the technical service
ER07	REFERENCE NOT FOUND	10 slow flashes 7 quick flashes	The panel has not detected the limit switches	Check if the door has passed the limit switch (limit switch failure). In case of stopping before the limit switch, check possible obstruction and inverter parameters (the motor may not reach the set speed)
ER09	MAX. PROG. TIME	10 slow flashes 9 quick flashes	The maximum permitted programming time has been exceeded	Program a shorter time manoeuvre than the maximum permitted
ER12	CLOSING SAFETY EDGE ERROR	1 slow flash 2 quick flashes	Closing safety edge error	Check the closing safety band connections
ER13	OPENING SAFETY EDGE ERROR	1 slow flash 3 quick flashes	Opening safety edge error	Check the opening safety band connections
ER19	CLOSE TEST ERROR	1 slow flash 9 quick flashes	Closing safety contact autotest error	Check that the device connected to the closing safety contact is in good condition and correctly installed
ER26	STOP	2 slow flashes 6 quick flashes	The panel has stopped due to a STOP or due to an encoder STOP	Check that the STOP input has been activated
ER30	RBAND DOES NOT EXIST	3 slow flashes 10 quick flashes	The panel had been programmed with RBAND and it is no longer there	Re-program the panel without RBAND or connect the RBAND with which the panel had been programmed
ER31	RBAND NC IN PROG	3 slow flashes 1 quick flash	The panel has not been programmed with RSEC3	Re-program the panel with the RSEC3 card connected
ER32	FC NOT LEARNT	3 slow flashes 2 quick flashes	Error in limit switches learning	Check the motor's internal limit switches.
ER39	PANEL LOCKED	3 slow flashes 9 quick flashes	An attempt has been made to enter programming with the panel locked	Enter the password with the VDPLAY or VERSUS-PROG to unlock the control panel
ER41	ENCODER ERROR	4 slow flashes 1 quick flash	No absolute encoder found or the encoder itself is returning an error	Check absolute encoder connection

ER43	FREQ. CONVERTER ERROR	4 slow flashes 3 quick flashes	Frequency converter error	Check frequency converter parameters configuration or check connections
ER54	POSITION EXCEEDED	4 slow flashes 6 quick flashes	The door has stoppEd beyond the programmed limits (encoder mode)	Check that the encoder communication is correct and there is no interference
ER55	ENCODER BLOCKED	4 slow flashes 7 quick flashes	The panel has not received encoder movement for more than 2 seconds	Check that the door is not obstructed and the encoder is installed correctly
ER56	OVERCURRENT	4 slow flashes 8 quick flashes	The panel has not reached the limit switch due to overcurrent in the motor	Check that the input voltage is correct and does not decrease when moving the door. The door may be too heavy for the motor. Check that the door is not obstructed

In case of any safety error, the door can be moved keeping pressed the ↑ or ↓ or any other input controls

Technical Data

Electrical Parameter

Parameter	Value
Power supply	230Vac
Maximum motor power	230Vac 3~ 0,75kW
Optional cards (EXPANSION1/EXPANSION2)	RSEC3, TL-CARD-V
Receiver card connector	Motion STICK / DCS RACK
230V output	Motor brake and flashing
Voltage-free outputs	OPEN/CLOSE door status signals
24Vac / 24Vdc / 24Vdc TEST outputs	Accessories power supply / Photocells test (shared 700mA)
ENCODER connector	Connector for absolute encoder JCM / Kostal / Electromaten
Auto-close time	Adjustement from 3s to 180s
Operating temperature	-20ºC to 55 ºC
IP rating	IP55
Size	305 x 225 x 126 mm
Inverter	Danfoss FC51

Notes

Notes

UKCA Declaration of conformity

JCM TECHNOLOGIES, SAU hereby declares that the product **F30** complies with the relevant fundamental requirements of the Supply of Machinery (Safety) Regulations 2008 as well as with the Electromagnetic Compatibility Regulations 2016 and the Electrical Equipment (Safety) Regulations 2016 whenever its usage is foreseen; and with the RoHS Regulations 2012.

EU Declaration of conformity

JCM TECHNOLOGIES, SAU declares that the product **F30** complies with the relevant fundamental requirements of the Machine Directive 2006/42/EC as well as with the Directives 2014/30/EU on electromagnetic compatibility and 2014/35/EU regarding low voltage whenever its usage is foreseen; and with the 2011/65/EU RoHS Directive.

See website https://www.jcm-tech.com/declarations/

JCM TECHNOLOGIES, SAU
C/ COSTA D'EN PARATGE, 6B
08500 VIC (BARCELONA)
SPAIN