Manual (Translated)
FirePro V2 Control Unit

Door control for FS drives:

EN

Door control
FireProV2
Manual

RDA

Please keep this manual with attachments carefully!

1 Index:

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2 Safety instructions

This manual is translated from the original Dutch manual, In the event of discrepancies between the two, the Dutch version shall prevail.

Read this manual carefully before starting work on this
Control unit. Check the screw connections before this control unit becomes operational.

Caution: before starting work on this control, first
Disconnected the power supply and disconnect the poles of the batteries.
Performing work on this control under tension is life-threatening & can cause serious injuries!
Only qualified personnel with appropriate equipment and knowledge are permitted to carry out work on this control. Qualified personnel means persons who are familiar with the installation, configuration, commissioning & operation of electrically driven door, gate installations. They must be able to assess the complete installation, identify possible hazards and apply the necessary safeguards.

2.1 Relevant Safety requirements:

The safe use of this control can only be guaranteed when used as intended. The manufacturer is not responsible for damage that has occurred due to external components or non-compliance with these instructions.
Modifications are only permitted in accordance with the manufacturer. If modifications are applied without the manufacturer's consent, the manufacturer's declaration is not valid.

During installation, commissioning, maintenance and control of the controller shall
Specific case applicable in compliance with the safety and accident prevention rules
to be taken.

Only apply safety products (as: safety edges and photocells which comply with applicable standards.)

The manufacturer accepts no liability for damage resulting from operating and connection errors, neglect of the operating instructions or inadequate maintenance and / or service, and again refers to the possible occurrence of dangerous situations.
Despite conformity with harmonized standards, not every possible hazard can be foreseen. For this reason, people should only enter the danger zone if this is necessary.
If in doubt about the installation, do not proceed and contact the
Technical Service for clarifications.
All information on this document (photos, drawings, characteristics and dimensions) may be subject to change without prior notice.

Please read this manual carefully and keep this manual with Attachments carefully!

Please keep this manual with attachments carefully!

3 Control Print Overview
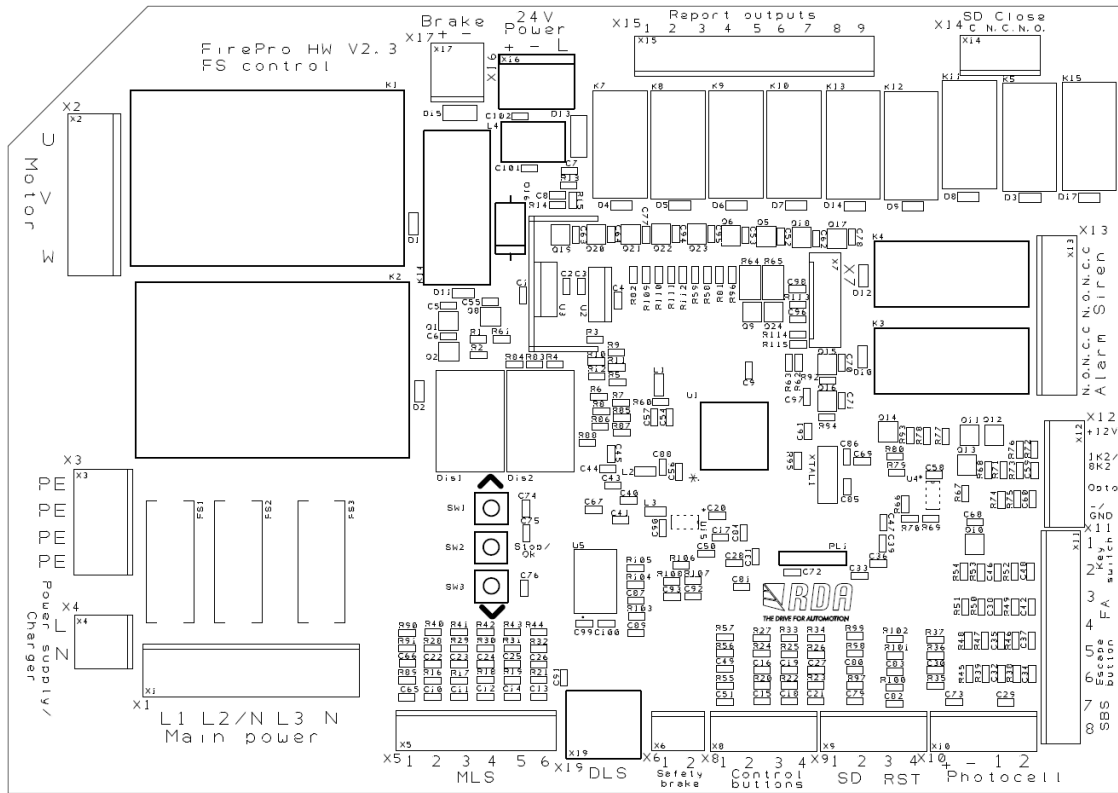
4   Schedule with NES motor
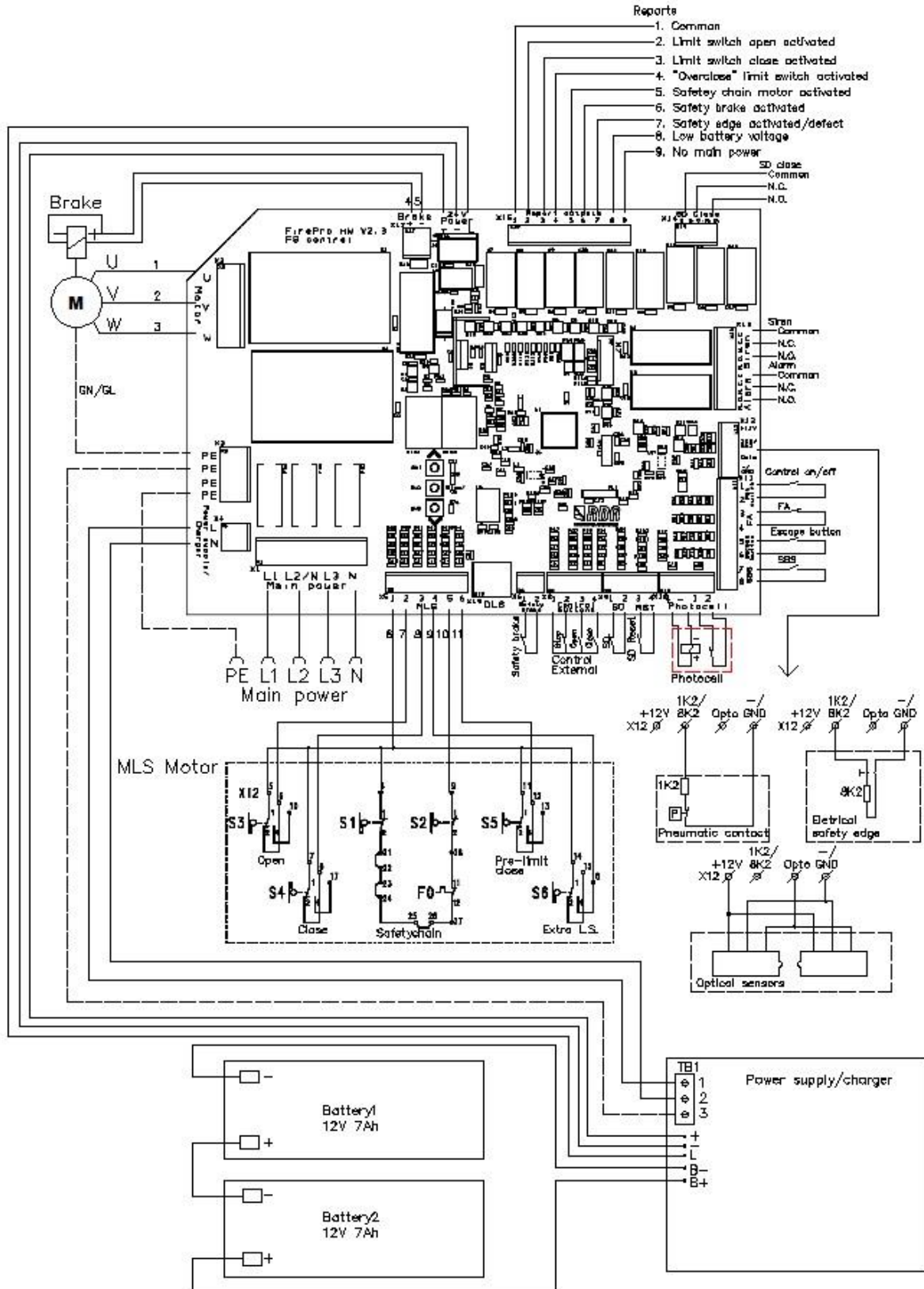
5 Schedule with DES motor
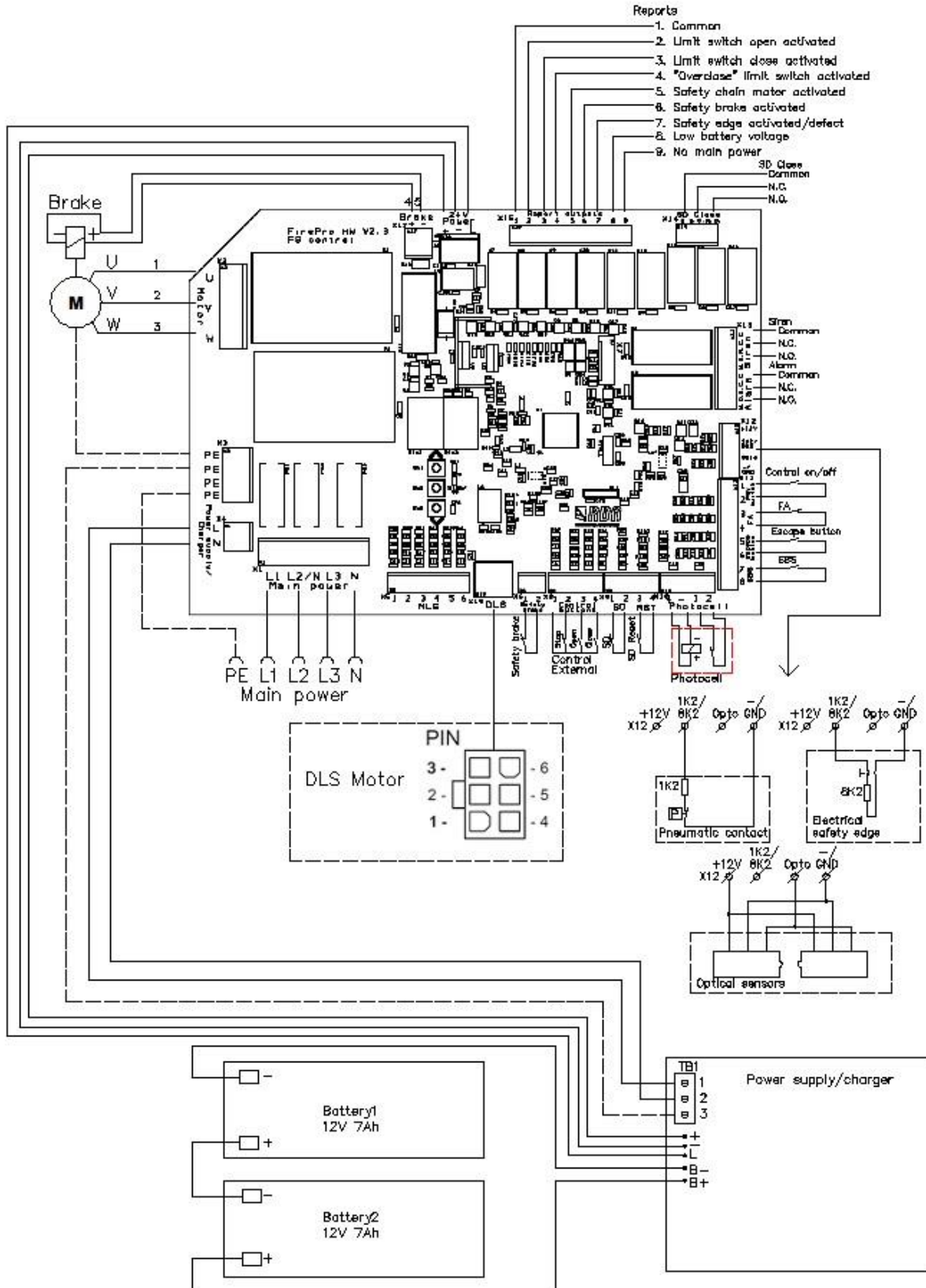
6 Technical data

Power supply   : 3N ~ 400VAC +/-10%, 50/60Hz
                     : 3 ~ 230VAC +/- 10%, 50/60Hz
                     : 1N ~ 230VAC +/-10%, 50/60Hz

Fuse   : Max. 5A Slow
Maximum power   : 2,2Kw
Maximum current   : 8,5A

Control voltage   : 24Vdc
Control current   : 300mA

External power supply : 24Vdc
Maximum current   : 100mA

Battery   : Voltage: 12v
                       LxWxH: 151x51x94mm
                       Brand: CSB Battery
                       Type: UPS123607
                       Weight: 1.97 kg
                       Technology: AGM

Relay outputs   : Potential-free switch contacts
Maximum load   : 230VAC resistive last = 1A/inductive charge = 1A

Relay outputs   : Various notifications as N.O. contact with 1 common
Maximum load   : 24VDC resistive last =1A / inductive charge =1A

Temperature range   : + 5... + 40 °C
Humidity   : Max. 93% (non-condensing)
Vibration   : Vibration-free mounting (e.g. concrete wall)

Enclosure Size   : 400 x 300 x 150mm (L x W x H)
Protection class   : IP33
Weight   : 9,8kg

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7 Description of Control Unit

The FirePro is a controller for failsafe drives (FS series) with mechanically adjustable limit switches (NES) or digital Absolute Encoder (DES) and centrifugal brake. This control unit can work both automatically and in hold to run. The operation is possible with the control buttons on the cabinet and by means of external up-stop-down control. There is also an input for an impulse control (e.g. pull switch) available.

A two-color LED is present on the lid which is green in normal operation and is red in case of malfunction, fire alarm, smoke detection or power failure. The notification belonging to the red LED is displayed on the control print display.

There is an input for the safety contact (NC) of the safety brake. If this entry is interrupted, the door can no longer be operated.

The control unit is equipped with batteries that provide the control voltage and hold the brake in case of a power failure if there is no fire or smoke notification. In the case of fire alarm, smoke detection or if the batteries are empty or not present, the door will drops because the power supply for the brake is gone. When voltage is still present, the door drops until the limit switch is closed or the "overclose" limit switch is reached. In the menu you can set whether the door is lowered until the normal limit switch is reached or until the "overclose" limit switch is achieved. With the "overclose" limit switch a door can possibly drop further than it does during normal operation. A Stop with a set time can optionally be made at a desired position, during fire alarm, smoke detection or low battery voltage. This can only be used with CAM switches when the "overclose" function is not in use.

7.1 Fire alarm:

After fire alarm, the door is released immediately or after extended time (parameter 3.4, 0-140 sec.) .

7.2 Smoke detection:

In the case of smoke detection, a command must be given at the reset entry after the smoke detection is over. In the case of smoke detection, there is also a potential-free contact indicating that the door is closed so that the air bellows for smoke sealing can be filled between the door. It is therefore no longer possible to flee. If this contact is not used for detection, it can be programmed in the menu to switch if a malfunction is active.

7.3 Siren/Alarm:

When the door is in motion, a potential-free switch can be used to connect a siren or other signaling. This stops when the door stops moving. in the event of a fire alarm, there is also a potential-free switch which can also be connected to a siren/alarm or other signaling.

7.4 Safety edge:

It is possible to connect an safety edge. This can be an safety edge by means of DW (air pressure, 1k2) contact, 8k2 safety edge or opto sensors. Under normal operation, the safety edge only works if automatically Closing is selected. In the event of a fire alarm, smoke detection or low battery voltage, the safety edge can be switched on or off. If it is switched on, when the safety edge is activated, the door will stop. The menu allows you to select which safety edge has been chosen and set the waiting time after the safety edge has been activated before the door continues to drop. If the power supply is still present, you can also select to fully open the door and then close it again.

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7.5   Photocell protection:

The Photocell protection works only with normal operation. The door will stop and then go back open.

7.6   Light curtain:

It is possible to connect a PNP, SSR OR OSE light curtain To the FirePro, and use it as an safety edge.

7.7   Escape button:

There is a possibility to connect a escape button with which the door in the event of a fire alarm or smoke detection will open to be able to escape (only if the mains power is still present). The door will then close again to a set time. It is also to be set that the door can still be opened with the Open button and when releasing it the door closes again immediately (when the mains supply is still present). In the case of smoke detection, the door/shutter can no longer be opened if it is completely closed, unless it is chosen to partially open the door.

7.8   Maintenance Cycle:

A maintenance cycle can be activated in the menu. If it is activated and the number of set cycles is reached, the LED turns red and green alternately. A CS notification appears on the display (see page 36).

⚠ **When interrupting the calamities /fire alarm-contact or if the batteries are low (and the Close option is selected), the door/roller shutter automatically closes and this can be without safety protection!**

⚠ **Make sure that the batteries are never discharged completely. If the batteries are discharged completely, they can no longer be reused. Replace the batteries.**
Disconnect the battery connection if the controller is not in use.
Each year, replace the batteries preventively during maintenance.

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8 Mounting

For a solid, professional installation of this control unit, the following points must be checked and inspected:

1. The control unit must be fitted in a good, solid housing which meets the necessary requirements for the situation on the location.
2. In order to meet the required IP value, the cable glands should be replaced if necessary. If necessary, further sealing measures should be taken.
3. PVC insulated cabling should only be applied indoor.
4. Power supply Phase (1N ~ 230VAC-50Hz, +/-10%) Must be secured with a fuse against short circuits and overload.
5. In case of a power cable with a 3-pole 16A CEE plug (phase, Zero & Earth) applies: assemble a 16A. Socket in the direct proximity of the controller and fuse the power supply in accordance with applicable standards/guidelines. After installation of the control unit and the power cable with the wall socket, check that the screw connections are properly tightened and that everything is properly connected.
6. In case of a connection to the installation, the following applies: Connect the control unit to a fixed power supply line and fuse the power supply as indicated earlier. To interrupt the power supply, a multi-pole switch must be mounted in the immediate vicinity of the control unit which all Poles should be interrupted when shut-off.
   CAUTION: The switch must have a contact opening which complies with the span CATEGORY III for complete separation.
7. A hazard analysis of the complete installation must be made by the installer on the location. Please note that the door or gate is appropriate secured and that it cannot bring hazard to persons or objects.
8. The installation must at least comply with the European and local laws and standards. In accordance with European legislation, an automatic door or gate must comply with the Machinery Directive 2006/42/EC and in particular the following standards: EN 12445; EN 12453; EN 12635 and EN 13241-1, which makes a declaration of conformity possible.
9. The door or gate must be protected against passing the final position by means of safety-limit switches, mechanical attacks or other safety systems.
10. The technical data of any external components such as: Photo cells, traffic lights or loop detectors should be monitored. These may not exceed the maximum permissible load on the control unit.

9 Connect
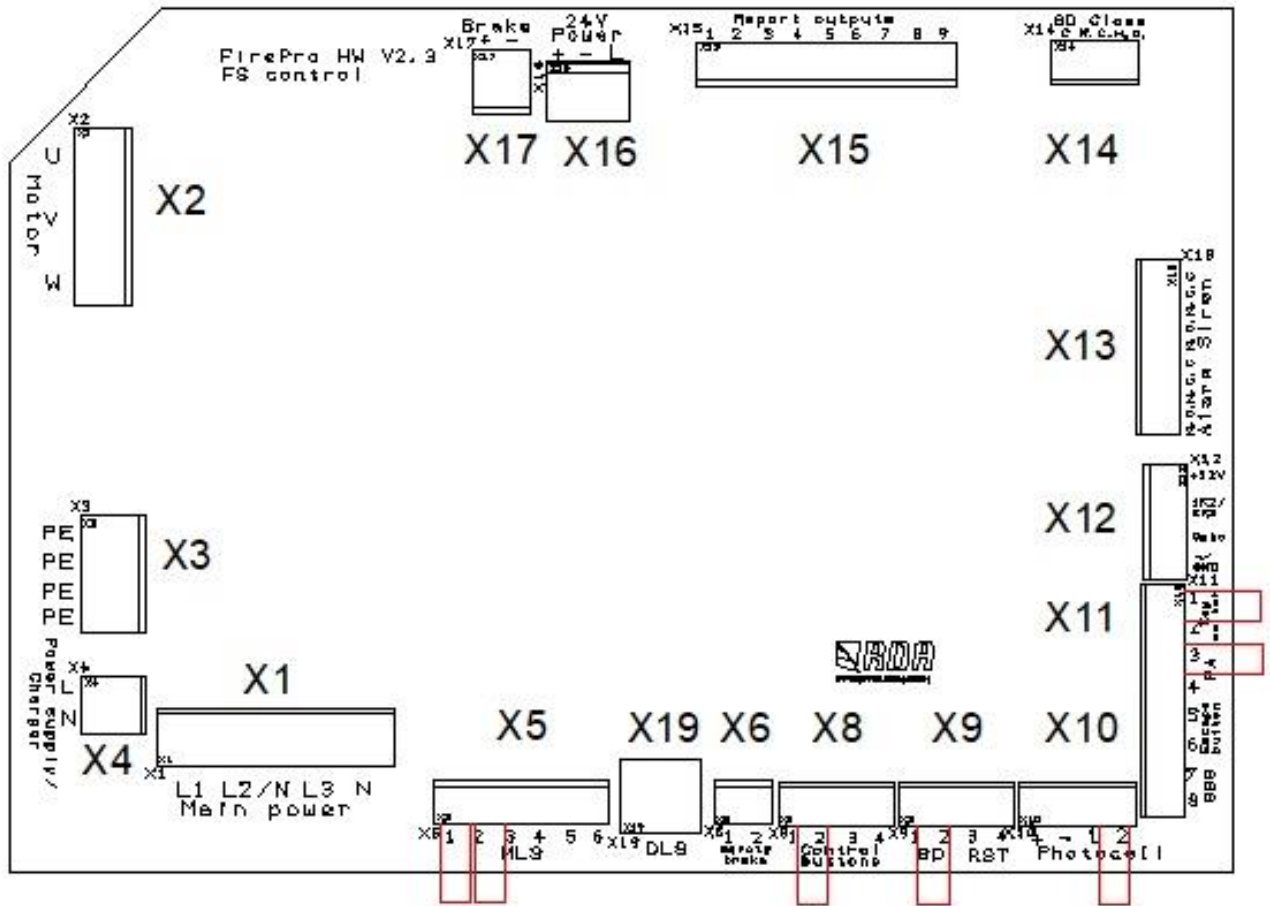
Fout! Bladwijzer niet gedefinieerd. **connecting circuit board**

9.1 Power supply:

The power supply 3N ~ 400VAC, 1 ~ 230VAC or 3 ~ 230VAC is connected to X1. The diagram below lists the different schedules. The earth (PE) is connected to X3.

⚡ **Connect the earth to X3!**

3 Phase 400V Motor in star	3 Phase 230V Motor in Triangle	Single Phase 230V
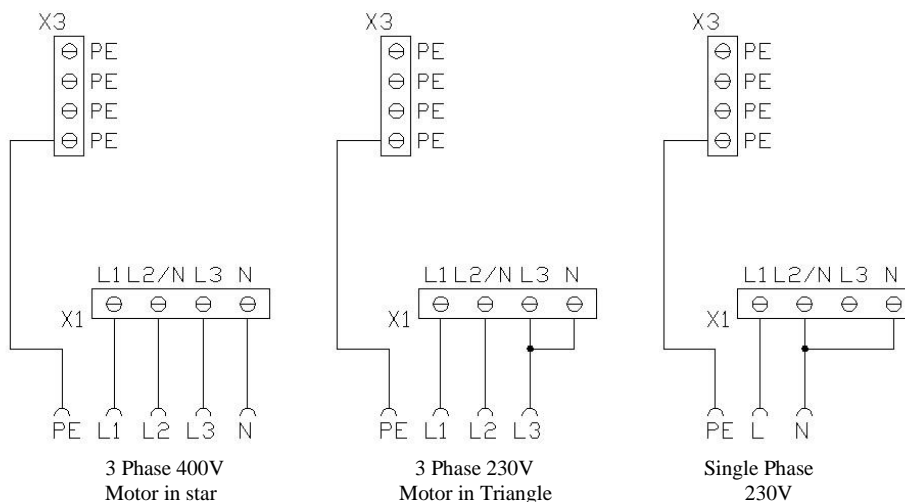
Figure 2 Connecting mains supply

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9.2 Power supply 24 VDC / Battery Charger:

The charger for the batteries and also the power supply for the controller need 230VAC as input. This is connected to X4 according to the diagram below and the Earth (PE) on X3.
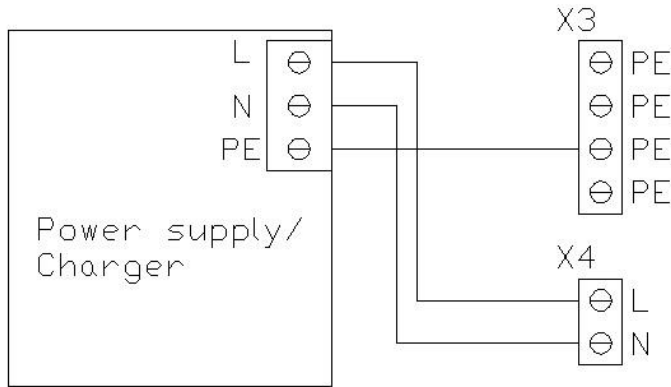
Figure 3 Connecting 230VAC voltage to power supply/charger

The output of the power supply / charger is equipped with a stitch connector. It can be plugged in at X16 (see Fig. 4). This ensures the power supply for the control unit. The wires for the batteries can be slid onto the poles of the batteries. Please note! The red thread is for the positive and the black for the negative! The two 12V batteries must be connected in series so that they have a 24VDC output voltage together.
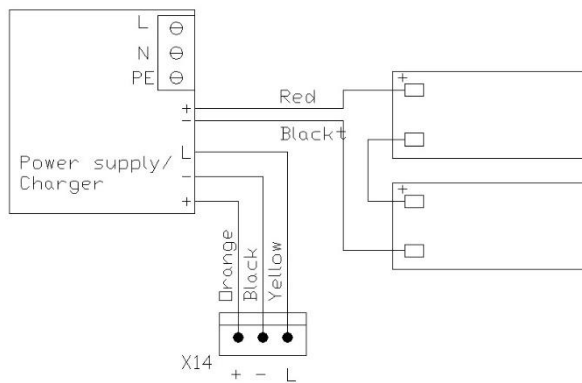
Figure 4 Connecting output power/charger

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9.3 Motor:

The 3 phases or phase and zero of the motor are connected to X2 (U-V-W). With a 1 phase motor, V is the zero, U is the closing phase and W is the opening phase. The earth can be connected under X3 and the brake on X17(see Fig. 5).

⚠ **When connecting the brake, observe the polarity correctly. The positive and negative may not be changed!**

3 Phase 400V
Connect Motor in star

3 Phase 230V
Connect Motor in Triangle

Only with GFA
FS 15 WS drive
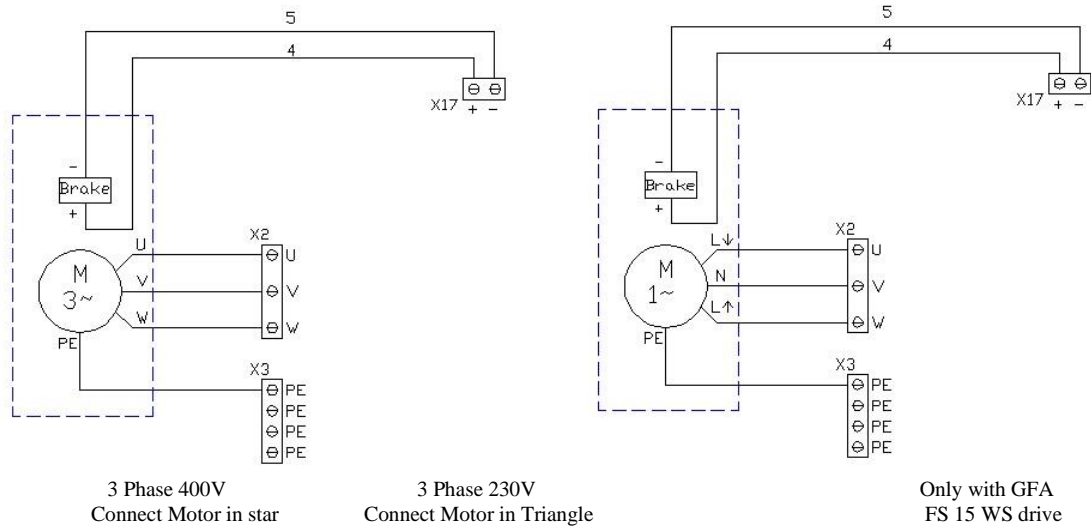
Figuur 5 Connecting 3 Phase and 1 Phase motor

9.4 Mechanical End Switches:

The cam/mechanical limit switches of the motor are connected to X5. Figure 6 shows the schedule for connecting the limit switches. The extra limit switch is a NO contact. The other limit switches are all NC contacts.
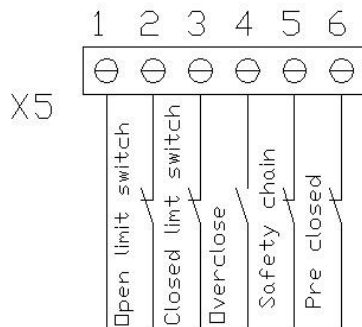
Figure 6 Connecting Cams/Mechanical limit Switches

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9.5   Digital limit switches:

The digital limit switches can be connected by means of a plug connection on X19. In Figure 7, the layout of this connection is drawn.
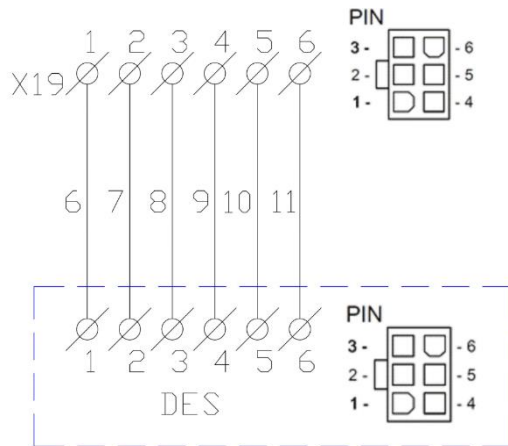
Figure 7 Digital limit switches

⚠ **Please note! Two types of encoders can be connected, namely: Kostal and GFA. Before they are exchanged, the controller must first be reset to factory settings by using parameter 9.5 setting 1! Then make the installation power-less and switch the encoder for an encoder of another type!**

9.6   Roll-off protection:

Connection X6 is for the NC contact of the roll-off protection. If no roll-off protection is used, this input must be connected with a wire bridge otherwise the door cannot be operated (see Fig. 8). When using multiple roll- off protections, e.g. a roll-off and a cable break protection, they must be connected in the control cabinet in series.
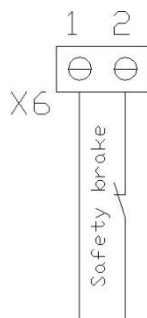
Figure 8 Connecting N.C./disconnection of roll-off protection

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9.7 UP-Stop-down operation:

There are two inputs for connecting a up-stop-down operation, X7 and X8. X7 is used for operation on the lid of the cabinet and X8 can be used for an external operation. If X7 or X8 is not used, connections 1 and 2 for the Stop function must be connected with a wire bridge (see Fig. 9).
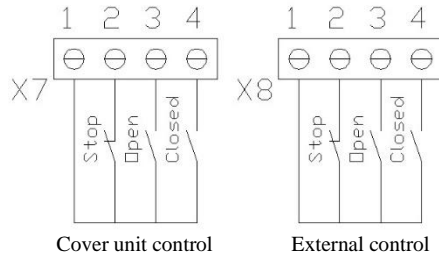
Figure 9 Connecting up-stop-down operation

9.8 Photocell:

A photocell can be connected to X10. There is also a 24VDC power supply on X10 for the power supply of a photocell or any other accessories like e.g. A receiver. In addition, an entrance for the NC contact of the photocell is also provided. If no photocell is applied, this input must be connected with a wire bridge (see Fig. 10).
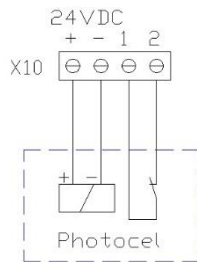
Figure 10 Connecting Photocell

9.9 Light curtain:

A PNP and SSR light curtain can be connected to X10. AN OSE light curtain can be connected to X12. There is also a 24VDC power supply available on X10 for a light curtain. In addition, an entrance for the NC contact of The light curtain is also provided. If no light curtain is applied, this input must be connected with a wire bridge (see Fig. 11).
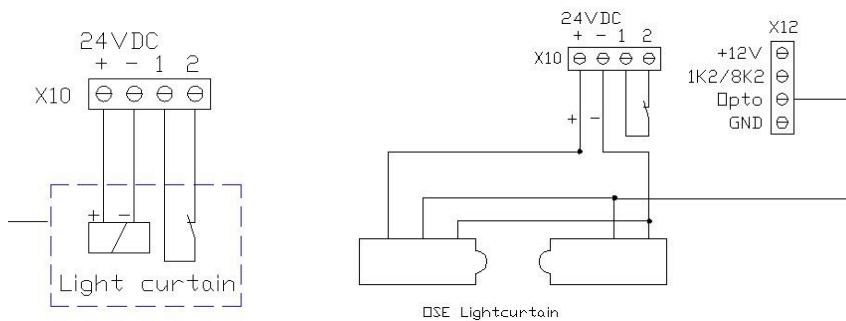
Figure 11 connecting light curtain

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9.10 Connecting LIGI 01-PNP light curtain:
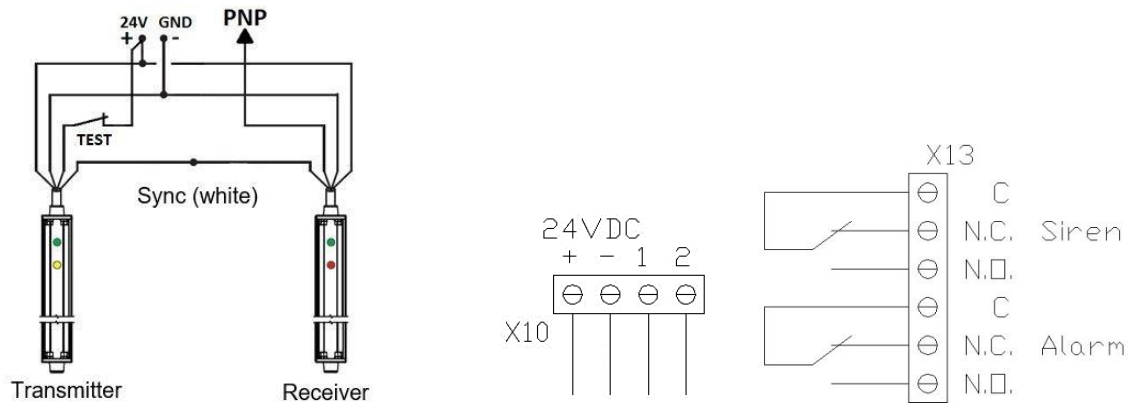
Transmitter			Receiver		
Brown: Blue:	10-30V DC (X10 +24V) 0V DC (X10 GND)	Blanking on *			
Blue: Brown:	10-30V DC (X10 +24V) 0V DC (X10 GND)	Blanking off**	Brown: Blue:	10-30V DC 0V DC	X10 +24V X10 GND
White:	Synchronization	> Receiver	White:	Synchronization	> Transmitter
Black***:	Test	> X13	Black:	PNP output	> X10-2

Table 1

*   Connecting with door function (Blanking):   Yellow + green LED on transmitter
* *   Connecting without door function: Green LED on transmitter
* * *   See table 2 for test function

To connect and set Test function:

| Transmitter				
Option 1:	Black	Siren output	Test input	> X13-NC (Siren)
			Test 24V DC	> X13-C (Siren)
Parameter 5.1 > 5 "Test function light curtain"				
Option 2:	Black	Alarm output	Test input	> X13-NC (Alarm)
			Test 24V DC	> X13-C (Alarm)
Parameter 5.3 > 2 "Test function light curtain"				

Table 2

Fine adjustment Position:
By making the transmitter's black wire more than 15 sec power-less (from the + 24VDC), the tuning mode is turned on. On the transmitter the green and yellow LED will flash alternately and on the receiver the green LED must be lit and the red will blink. The faster the red LED flashes the better the adjustment. If the green LED flashes, the adjustment is too bad for use!
Exit mode by reconnecting the black wire to + 24VDC.

For doors with reflective surfaces:

When placed before the door (without a door function), it can prevent the door from closing properly/regularly. This can happen at reflective doors. By the self-regulation in the light curtain, the light level of the transmitter will be lowered when the door is closed. At the moment the door opens, the light level is too weak to reach the receiver. This disables the receiver as if the light beam is interrupted.

At the **open Door** , connect the Sync (white) wires briefly (less than 1 second) to the + 24VDC. At the receiver the green LED lights up continuously and the red flashes for several seconds. After a maximum of 10 seconds, the red LED will remain off. The learning process is over. The light curtain software then remembers the light values at open door and the light curtain also no longer automatically adjusts itself after this setting.
This is to prevent the light reflections from leading to unwanted reversing of the door.

*Note: **This only works with a disabled door function**.*
During the learning, there should be no interruption of the light curtain!
If this happens, the procedure can simply be repeated.

Reset to factory defaults:

Connect the Sync (white) wires for at least 15 seconds and up to 25 seconds with the + 24VDC.

Advice:

After all the settings, remove the power from the light curtain and put it back on. The light curtain, with all the right settings, sets itself off to the correct luminosity.

Error messages:
Transmitter:

No LED lights	*Check power supply*
Green lights > Yellow flashes every time 3x	*Receiver power supply is connected the wrong way*
Only yellow flashes 3x	*White sync cables not (properly) connected*

Receiver:

No LED lights	*Check power supply*
Red LED flashes every 2x	*Output cable incorrectly connected or defective*

Both:
If all LED's on both transmitter and receiver are blinking, the light curtain must be replaced.

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9.11 Key switch:

On connector X11, a key switch which is placed on the lid can be connected to number 1 and 2. This allows the control to be switched on and off. When this key switch is not used, this input must be connected with a wire bridge to make the operation work (see Fig. 12). If the key switch is activated, a red dot will appear at the bottom right of the display.
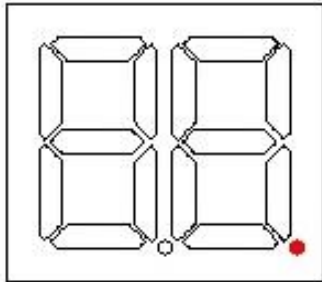
Key switch activated

9.12 Fire Alarm / Smoke detector:

On connector X11, the potential free NC Contact of the fire alarm or smoke detector can be connected to number 3 and 4, which is interrupted in case of fire/calamity. If this input is not used, it must be connected with a wire bridge (see Fig. 13). For situations with air Bellows for smoke sealing see 9.16.

9.13 Escape button:

On connector X11, a escape button can be connected to number 5 and 6 which can be used to open the door at fire/calamity (see Fig. 13). When inflated air bellows for smoke sealing (9.17 smoke detection) The escape button function no longer works.

9.14 Impulse:

On connector X11, a pulse function can be connected to number 7 and 8. A control such as e.g. a pull switch can be connected (see Fig. 13).
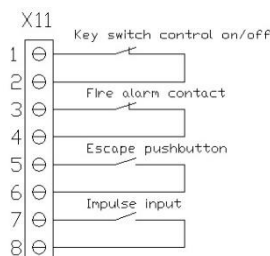
Figure 13 connecting clamp X11

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9.15 Safety edge:

An safety edge can be connected to X12. This can be a resistance protection with a 1K2 resistor (DW-contact) or with an 8K2 resistor. It is also possible to connect a security via Opto sensors (see Fig. 14).
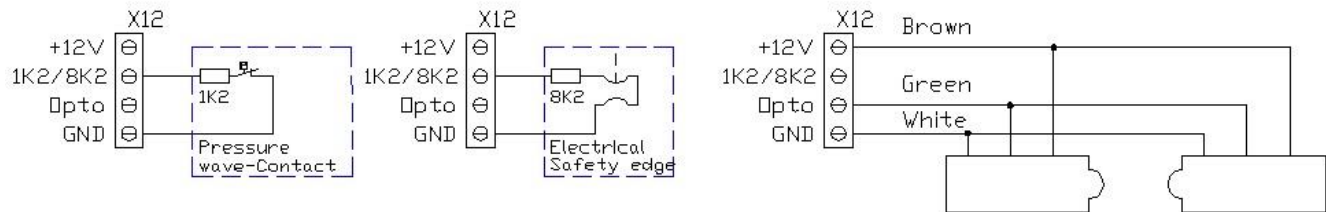
Figure 14 connecting safety edge

⚠️ **Caution, in the application of an safety edge, it is necessary to check and be determined whether the door with electric actuator complies with the Guidelines: EN 12445 and 12453. Locally applicable standards should also be to be maintained!**

9.16 Siren/Alarm:

On X13 two outputs are present as potential-free changeover contacts. One is **siren**. This switches when the door/roller shutter is in motion and during the pre-warning before the door/roller shutter closes depending on the menu's setting 4.1.
The other is **Alarm**. It switches at fire alarm, smoke detection and if it is chosen to close at low battery voltage (see Fig. 15).
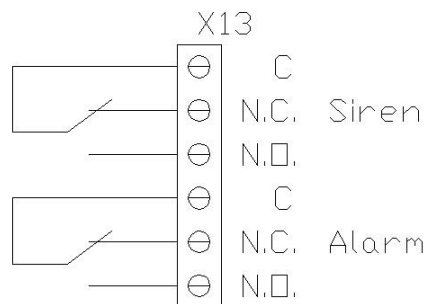
Figure 15 outputs alarm and siren

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9.17 Outputs:

On connector X15 (Fig. 16), 8 outputs are as potential-free N.O./contact with one common connection. These outputs pass 8 notifications.
These are the following notifications on connection:

> 2. Limit switch Open reached (door/roller shutter open)
> 3. Limit switch Close reached (door/shutter shut)
> 4. Extra limit Switch reached
> 5. Motor safety chain interrupted (one of the emergency switches activated or the thermal contact interrupted).
> 6. Roll-off protection activated
> 7. Safety edge activated or defect (can be changed from the menu to photocell or both parameter 0.7)
> 8. Low battery voltage
> 9. No power supply available
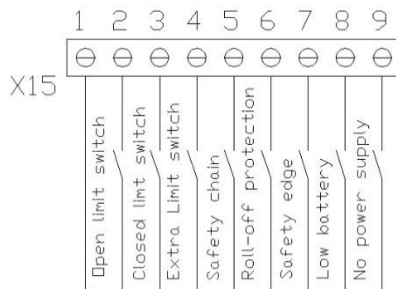
Figure 16 message on connector X15

9.18 Smoke detection (only in combination with inflatable bellows):

In the case of smoke detection, the same as a fire alarm occurs. Only there are two options that can be chosen with parameter 4.3. If the smoke message is over, a reset command must first be offered after the door/roller shutter is cleared again.
After the reset command, the door will only active after a set time (parameter 4.5). In the meantime, the door cannot be operated. Only then will the door/roller shutter function normally.
If the mains supply has switched off, the position of the door/roller shutter can be chosen with parameter 4.4 (see section 10.8).

If a separate smoke detection is selected for situations with air bellows for smoke sealing , it can be connected to X9 (Fig. 17) Connection 1 and 2 is a potential free N.C. (NC) Contact. The Reset (parameter 4.5, 0 to 240 sec., default setting 60 sec.) for this you can connect to X9 connections 3 and 4 as potential free N.O. contact. To indicate that the door is closed when the RMC (Smoke-detection contact) input is activated, output X14(Fig. 18) is present as a potential-free changeover contact. If the door is equipped with Air Bellows , the compressor valve can be controlled with this. See Figure 19 for the schedule off controlling a 24vdc valve.
When inflated air bellows for smoke sealing, the escape button function (9.13 escape button) no longer works.
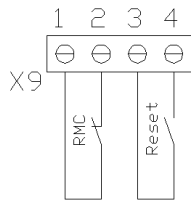
Figure 17 input smoke detection and reset after smoke detection
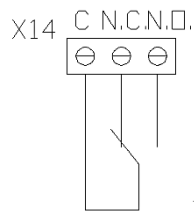
Figure 18 Potential-free contact door/roller shutter close to smoke detection

Figure 19 connecting valve compressor for air bellows

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10 Setting control

⚠️ **Caution: Before you make any connections, check that all poles of the power supply are interrupted!**

10.1 Adjust limit switches NES

Check the motor adjustment. When the factory setting is loaded on the controller, the controller runs in both directions in hold to run operation. Check carefully if the limit switches are set to open and close correctly. Set the emergency limit switches (red cams) just behind the limit switches open/close so that the control stops when a limit switch refuses.
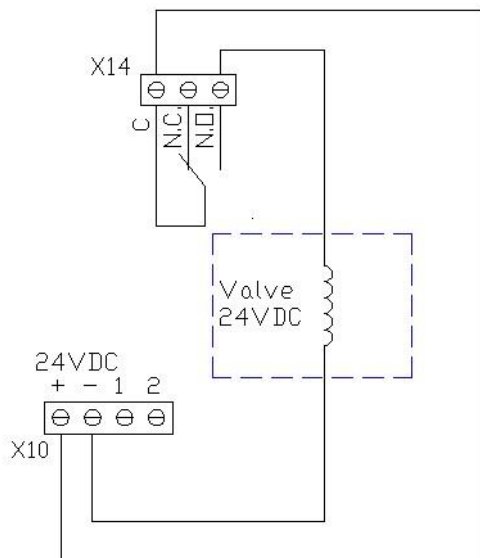If desired, set the extra limit switch if the menu is chosen to use for fire. This can be as "overclose" limit switch, to allow the door to close at fire, smoke or low battery voltage lower than in normal operation or as a half aperture when escaping at fire, smoke or low battery voltage (parameter 2.1) or stopover (parameter (4.1 and 4.2). Set this limit switch to the position where the door should stop in case of fire or if the battery is low and the menu is chosen to drop the door.
If an safety edge is present, set the front end switch so that it shuts down just before the actual end switch so that the bottom return function is turned off and the door then only stops when the bottom loop is activated, so that the door does not open back when it is on the ground, or is switched off if it is set in the menu by using parameter 0.6 so that the door always runs until this limit switch has reached close. If the door/roller shutter closes with fire, smoke or low battery voltage, the bottom of the front limit switch is completely switched off. **Please Note! The door closes the last piece without security.** This will allow the door/roller shutter to close completely and not be ajar due to the underrun protection.

10.2 Adjust limit Switches

After switching on the power supply the door can be operated with the pushbutton on the print Hold to run *. The direction of rotation must correspond to the keys. If this is not the case, the mains supply must be disconnected and 2 phases (U and W) have to be switched at connector X2. After checking the direction of rotation, the end positions can be set. The controller must first set its direction. To do this, send the control a random direction for about 4 seconds.

1.   Door or gate with the arrow keys "∧" and "∨" on the control print send to the desired position "open", at least 4 seconds to run One direction. The upper vertical segments Flash In the meantime (Fig. 1).
2.   Press the STOP/OK button on the control PCB for approx. 3 seconds until the upper vertical segments are extinguishing and the lower vertical segments are lit (fig. 2).
3.   Door or gate with the arrow keys "∧" and "∨" on the control print send to the desired position "close". Meanwhile, the lower vertical segments Flash (Fig. 3).
4.   Press the STOP/OK button on the control PCB for approx. 3 seconds until the display changes as shown above (Fig. 4).

The door or gate can now be operated by Hold to run *. Fine-adjustment and replacing the end positions can be done via the menu (1.1 to 1.9). The "overclose" position is automatically set, which can be adjusted by means of a fine adjustment. There can also be an intermediate position that can be used in case of calamity to allow the door/shutter to be stopped and to be closed after set time or to use as a half-opening for escape with fire.
* Hold to run operation: The door or port moves as long as one arrow key is pressed

After setting the end positions, the control can be configured via the menu as desired. An important parameter to configure is the door mode (0.1). Leave this parameter to 1 for hold to run operation or set it to 2 for pulse operated opening and closing hold to run or opening and closing at 3 for Pulse operated.

| Display flashes | Display | Display flashes | Display |
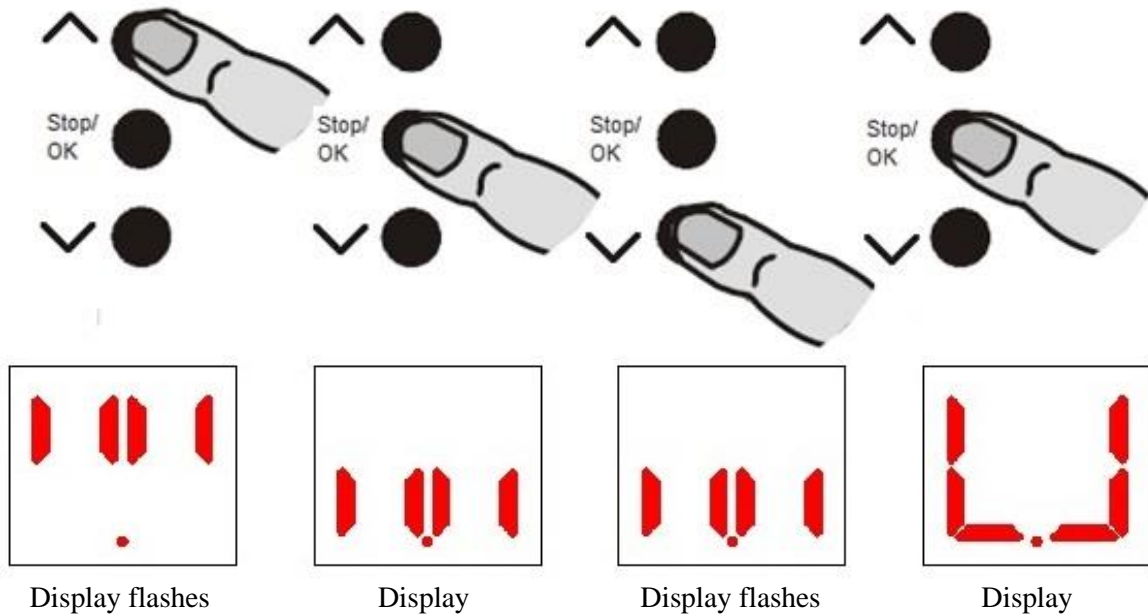
The position of the door is indicated by the symbols shown on the display.

DISPLAY :

| Move open | End position Open | Move close | End position Close | Random Position | Pre-end Position |
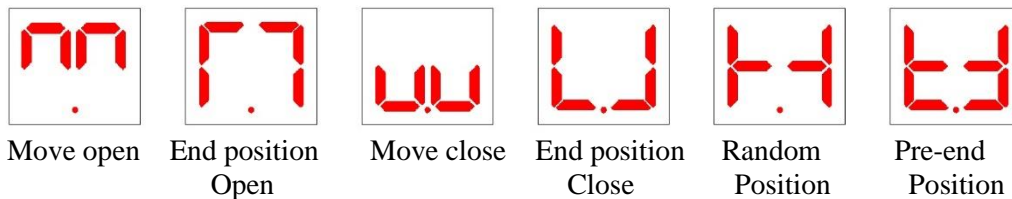
10.3 Automatic or hold to run operation

The door runs in hold to run open and close when the controller is set to factory settings.
If desired, the door can be opened automatically by setting parameter 0.1 to 2 in the menu.
Automatically open and close can be set by setting parameter 0.1 to 3.

10.4 Duration NES Motor

Make sure that the duration of a motor with cam/mechanical limit switches, parameter 2.1, is not set too short. Set it longer than the time the door needs to move from completely close to completely open position. When the duration is to short, the door will be stopped and the Stop button must be pressed first before a new command can be given to give the door a new open or close command.

Please keep this manual with attachments carefully!

10.5 Protections

The control has the ability to connect an safety edge. This can be an opto sensor, 1K2 air pressure contact or an 8K2 contact. It can be connected to X12. Parameter 0.3 can be chosen whether it is automatically detected or the connected security can be fixed. If no security is detected with startup error message 2.0 appears on the display. If there is chosen to close hold to run in normal operation there will appear once an error message 2.0. If automatic closing is selected, this will be repeated continuously.

Parameter 0.3 can be used to set the function of the safety edge in normal operation. At factory defaults, the door stops and then opens completely. Option 2 can be chosen to stop if the safety edge is activated and then a needs a new command to move the door further.
Applies only when an OSE light list/curtain is connected.

Parameter 0.4 can be used to set the function of the safety edge and/or photocell protection when closing with fire alarm or smoke detection, or if it is chosen to close at low battery voltage (parameter 3.7 set to 2). If the voltage is below the voltage set to parameter 3.8. At factory setting (option 1), the safety edge is disabled. With option 2, 4 and 6, the door or roller shutter stops with closing and waits a set time (parameter 0.5) and then closes further. With option 3, 5 or 7 the roller shutter (if the mains supply is still present), waits for the time set to parameter 0.5 and then closes again. If the mains supply is not present, the door/shutter stops and continue to close after the set time (parameter 0.5). For option 2, 3, 6, and 7, safety edge is turned on, and Option 4, 5, 6, and 7 enables the Photocell protection.
Parameter 3.6 can be chosen to disable the safety edge and/or photocell if it is not present or interrupted when the fire alarm, smoke detection or low voltage becomes active.
With parameter 3.5, you can limit the number of stops by the safety edge or photocell. If this is chosen, parameter 3.9 sets that the safety edge or photocell can be ignored if the maximum number of attempts is reached (i.e. to close without an safety edge or photocell) or that the door or shutter is sent up 2 seconds and then stops or stops immediately.

The photocell only works with normal operation if automatically Closing is selected. The door or roller shutter will stop if it is activated and then open fully .

10.6 Impulse function

An impulse input is available on the controller. If in hold to run, the impulse must be held in that . When it is released, the motor stops. If it is pressed again, the other direction is active.
If automatically-Opening is selected, the door will (according to factory settings) run until the limit switch open is reached and can then be sent back down by the impulse input. By converting parameter 2.2 to setting 2, the door can also be stopped during open running by activating the impulse input again. At the next activation of the impulse input, the door is in hold to run as long as the impulse input remains active.

10.7 BM (Fire alarm) function

If the BMC (Fire alarm Contact) is activated the door will close because the voltage on the electric brake of the motor is disconnected. At factory default settings, the door drops until the close limit switch is reached. If the door has to be lowered further than the close limit switch or to another position the additional limit switch (S6) can be used as "overclose" limit switch. To achieve this, parameter 3.1 must be set to setting 2.

The normal Open button can be switched on or off with parameter 3.3 if the BM function is active. If it is active, the door will open hold to run, and when releasing it immediately close again.
The BM function can be extended after the BMC input is closed . This is adjustable with parameter 3.4 from 0 to 240 second.
An input is available to connect an escape button. By activating this button, the door will open. This can be completely open or the extra limit switch can be used to set an intermediate position so that the door or roller shutter goes partial open (parameter 3.1 to 3). If the waiting time, which is adjustable from 1 to 240 second in Parameter 3.2, is reached the door/roller shutter will close . During this waiting time, the button can be used to close the door/roller shutter immediately.

This intermediate position can also be used to make a stopover (parameter 4.1) when closing while the BMC contact is active. The door/roller shutter first drops to this position and will wait for a set time (parameter 4.2) and then close further.

10.8 RM (Smoke detection) with Reset function

In the case of smoke, the same as a fire alarm occurs. Here are two options that can be chosen with parameter 4.3. The first is to allow the roller shutter to close completely. If the door/shutter is completely closed, an output indicates that the air bellows of the door/roller shutter can be filled. The door/roller shutter can now no longer be opened, so the escape functions are now disabled. If the smoke detection is over, a reset command must first be offered after the door/roller shutter is cleared again.
After the reset command, the door will only be active after a set time (parameter 4.5). In the meantime, the door cannot be operated. Only then will the door/roller shutter function normally. The second option is to send the door/roller shutter to a partial opening. In the case of digital limit switches, the door/roller shutter (If the mains supply is still present) opens to a partial opening. In the case of CAM/mechanical limit switches, the door/roller shutter will be sent open if it is located between the limit switch positions. If the position is above the set position, the door will first open completely and then close to the set position, This is only possible if the mains supply is still present.
Opening is only possible if the mains supply is still present.
If the mains power is switched off, can with parameter 4.4 be chosen if the door/roller shutter should remain in position if not open at the end position or at DES below the set partial opening. Or you can choose to close the door/roller shutter completely if it is below the set position.

10.9 Continuing when empty or disconnected battery:

If the door/roller shutter has passed the limit switches and the emergency switches are activated because the batteries are empty or not connected, the door/roller shutter can be sent back up. This can only in normal operation by pushing the open control Knob on the PCB at least 5 seconds, after this 5 second the door/roller shutter will continue to open hold to run and can be put back in between the end positions.

Please note!

This function does not monitor the end positions, direction of rotation and movement. Do Not allow the door to move until halfway through the opening, in the correct direction of rotation.

10.10 Opening after passing digital limit switches

If the door/roller shutter is passed the limit switches because the batteries of the controller are discharged too far, they can be put back in the correct position by pushing the open control Knob on the PCB, if a motor with digital switches is applied, Press it for 5 seconds, after 5 seconds the door/shutter will open in hold to run as long as the menu button is pressed. This allows the door to be put back in the correct position to function normally again.

Please note!

This function does not monitor the end positions, direction of rotation and movement. Make sure that the button is released in time.

10.11 Low battery voltage

The level at which a notification should be given that the battery has a low voltage (< 20 volts) is adjustable by parameter 3.8 from 20 to 25 volts. A message will be displayed on the display and the red led on the controller light up.

In the case of a voltage outage, you can chose by using parameter 3.7 to allow the door/shutter to close in the same way as activating the BMC input.

10.12 Notifications

A potential-free changeover contact **siren** is present on the controller on which a siren or warning lamp can be connected. The function of this contact can be set in Parameter 5.1. Furthermore, there is another potential-free switch, **alarm**, which switches when the BMC input is active.

There are 8 notifications that have a joint common and all are potential free N.O. contacts. These are the following notifications:

- Limit switch Open reached
- Limit switch Close reached
- Extra limit Switch reached
- Safety chain motor interrupted
- Roll-off protection activated
- Safety edge activated/defective, adjustable with parameter 2.3 or only notification of the safety edge or only of the photocell or both.
- Low battery voltage (limit value set at parameter 3.8 exceeded)
- No mains supply available

If the smoke detection is not used, the contact "RM close" can be made to make a notification that an error message is active. This can be set by parameter 2.6 to 2.

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10.13 Maintenance counter

In the menu, a maintenance counter can be activated with parameter 8.7. Parameter 8.5 can then set the number of openings (per 1,000) before a maintenance notification is given. When this counter reaches zero the Led on the display turns red and the green Led flashes (if no error message is active) and the display shows the message C.S.

11 Menu
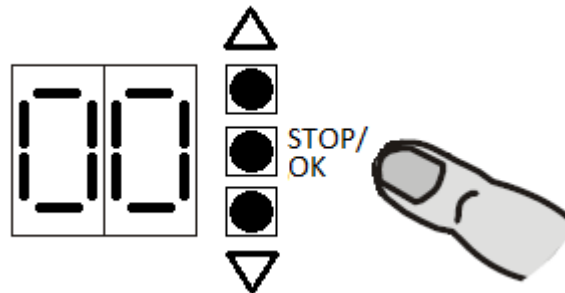
Settings can be set in the menu. On the PCB you will find 3 pushbuttons on the right side of the display: "∨", "∧" and "**stop/OK''** (see image). These work in normal operation as up-stop-down operation.

The menu can be opened by pressing the "**stop/OK**" button for about 3 seconds. The parameters can then be scrolled with buttons "∨" and "∧". If the correct parameter is reached it can be opened by pressing "**stop/OK**". Then it can be changed with the buttons "∨" and "∧". To go back to the menu and confirm the change, press "**stop/OK**" briefly. To exit the menu go to parameter 0.0 and press "**stop/OK**" briefly.

11.1 Parameter settings 0. :

Parameter	Description	Settings	🖹
0.0	Exit Menu	Exit the menu by pressing "Stop/OK"	
0.1	Operating mode	.1 Hold to run Open, Hold to run close	🏭
		.2 Automatically open, Hold to run close	
		.3 Automatic open and close with external operation out of sight*	
0.2	Type safety edge	.1 Automatically detect	🏭
		.2 Choice opto sensors	
		.3 choice 1K2 DW/air pressure contact	
		.4 choice 8K2 electric contact	
		.5 No safety edge (only hold to run close possible)	
0.3	Operation safety edge (parameter 0.1 op 3)	.1 Stop and send the door/roller shutter completely open	🏭
		.2 Stop when safety edge is activated and continue only after re-pressing close button	

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| 0.4	Choice of safety edge input (X12) and/or photocell input(X10) in case of fire	.1 Disable safety edge and photo cell	
		.2 Turn off photo cell. Enable safety edge. Stop if safety edge is activated and after set time (parameter 0.5) continues to close.	
		.3 Turn off photo cell. Enable safety edge If power supply is still present, open completely, and if power supply is not present reclose after set time (parameter 0.5).	
		.4 Disable safety edge. Enable photocell. Stop when Photocell is activated and continue closing after set time (parameter 0.5).	
		.5 Disable safety edge. Enable photocell If power supply is still present, open completely, and if power supply is not present stop and reclose after set time (parameter 0.5).	
		.6 activate safety edge and photo cell. Stop when Photo Cell is activated and continue closing after set time (parameter 0.5).	
		.7 Enable safety edge and photocell If power supply is still present, open completely, and if power supply is not present reclose after set time (parameter 0.5).	
0.5	Reclose time in case of fire after activation safety edge and/or photo cell	2 t/m 60 seconds	3 sec.
0.6	Action when reaching pre end position closed	.1 Stop if safety edge is activated	
		.2 Disable/ignore safety edge	
0.7	Return time safety edge closing direction	.0 ± 50ms	
		.1 ± 120ms	
		.2 ± 220ms	
		.3 ± 480ms	
0.9	Type limit switch	.0 Automatically	
		.1 DES GFA	
		.2 DES Kostal	
		.3 NES	

* Check the door if it does not exceed the maximum permissible compressive force in case of a entrapment! If the remote control does not have sight on the door then set to parameter. 3. If the entrapment protection is activated/defective, the door will no longer close with the remote control.

11.2 Parameter settings 1. :

Parameter	Description	Settings	📄
1.1	End position open	Open the door/roller shutter to the desired end position and then press the stop/ok button on the print to confirm or press the lid button to cancel.	📱 1x
1.2	End position closed	Close the door/roller shutter to the desired end position and then press the stop/ok button on the print to confirm or stop button on lid to cancel.	📱 1x
1.3	Fine adjustment end position open	Adjust open position upwards or down. +/- 0 t/m 9.	
1.4	Fine adjustment end position close	Adjust close position upwards or down. +/- 0 t/m 9.	
1.5	Adjust pre end position close	Adjust pre end position upwards or down+/- 0 t/m 9.	
1.6	Partial opening for fire escape (Parameter 1.7 must be set)	.1 Switched off, door opens completely in case of fire	
		.2 Enabled, door goes to the set position when fire, parameter 1.7.	
1.7	Partial opening for fire functions	Desired end position partial open escape when fire. Send the door/roller shutter to the desired position and then press the stop/ok button on the print to confirm or press stop button on lid to cancel.	📱 1x
1.9	Fine adjustment overclose limit switch	Adjust "Overclose" position upwards or down. +/- 0 up to 9. (limit switch, to allow the door to close in case of fire, smoke or low battery voltage further than at normal operation or as partial opening when escape in case of fire, smoke or low battery voltage (parameter 2.1) or stopover (parameter (4.1 and 4.2)).	

11.3 Parameter settings 2. :

Parameter	Description	Settings	📄
2.1	Motor duration monitoring	1 t/m 240 seconds	120 sec.
2.2	Function pulse input when selecting parameter 0.1 on automatic opening	.1 Can't stop in open direction	1
		.2 Can stop in open direction	
2.3	Automatically close time with normal operation.	0 = Disabled 1 t/m 240 seconds	0
2.4	Photo cell function during countdown automatically closes time at normal operation.	.0 Time restarts at photocell interruption	0
		.1 After interruption photo cell, the door will close after 3 seconds regardless of the time left	
2.5	Number of re-openings at automatic closing and ratification underrun	1 t/m 10	2
2.6	Function potential-free alternating contact RM close	.1 RM close, reports at smoke detection door is fully closed	1
		.2 Reports that a fault notification is active	
2.7	Pre-warning for closing at normal operation	0 t/m 60 Seconds	0 sec.
2.8	Pre-warning for closing when fire, smoke or empty battery	0 t/m 60 Seconds	0 sec.
2.9	Disable photo cell function for certain range (DES only)	.0 Off	0
		.1 enable, teach twice reference position	

11.4 Parameter settings 3. :

Parameter	Description	Settings	🖹
3.1	Select limit switches in case of fire	NES:	1
		.1 Use normal limit switch close to additional limit switch (S6 off)	
		.2 Extra limit switch (S6) as "Overclose" limit switch	
		.3 Use the normal limit switch close and use additional limit switch (S6) as an end switch (intermediate position) in case of fire	
		DES:	
		.1 Use normal end position close as end position close to fire	
		.2 "Overclose" end position as terminal position close to fire	
3.2	Automatic closing time when using escape button when fire	1 t/m 240 seconds	1 sec.
3.3	Function normal open button when fire	.1 Open button disabled	1
		.2 Hold to run open when pressing and immediately close again after releasing	
3.4	BM function after BMC has been active	0 t/m 140 seconds	0 sec.
3.5	Number of attempts activation safety edge or photocell in case of fire.	0 t/m 10 Attempts 0 = number of attempts infinitely.	0
3.6	Ignore underflow and/or photo cell if it is not detected when active BMC or RMC	.1 Enable roller shutter/door closes without security	1
		.2 Switching off roller shutter/door remains open	
3.7	Function at low battery voltage	.1 Only report	1
		.2 Close shutter/door and report	
3.8	Level low battery voltage in Volt	20 t/m 25 Volt	20
3.9	Function of the safety edge and/or photocell after reaching the number of attempts. (Parameter 0.4 > .1 and parameter 3.5 > 0).	.1 Continue closing without safety edge	1
		.2 Open and stop two seconds (only possible if the mains power supply is still present)	
		.3 Only stop (brake remains energized until batteries have insufficient capacity when mains power has failed)	

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11.5 Parameter settings 4. :

Parameter	Description	Settings	📄
4.1	Action at fire alarm	NES:	1
		.1 Door/roller shutter immediately completely closed	
		.2 Stop at additional limit switch (S6) Then close at set time (parameter 4.2) (not possible if parameter 3.1 is on 2)	
		DES:	
		.1 Door/roller shutter immediately completely closed	
		.2 Stop at additional limit switch Then close at set time (parameter 4.2) (set via parameter 1.7)	
4.2	Waiting time at additional stop (Parameter 4.1 on .2)	1 t/m 240 seconds	1
4.3	Function smoke detection.	NES:	1
		.1 Close completely	
		.2 Partial opening For partial opening, the door is sent to position of S6. Parameter 3.1 may not be set to .2	
		DES:	
		.1 Close completely	
		.2 Partial opening For partial opening, the door is sent to position set with parameter 1.7. Parameter 1.7 must be set before option .2 can be selected	
4.4	Function no power supply present. (if parameter 4.3 option ".1 is chosen).	NES:	1
		.1 Stays at current position if door/roller shutter is not open at the end position. Close to intermediate position at end position.	
		.2 Close completely if it is below the position set on S6	
		DES:	
		.1 Door/roller shutter remains standing if it is below the position set at 1.7.	
		.2 Door closes completely if it is below the position set.	
4.5	Disable operation after reset smoke detection.	0 t/m 240 seconds	60 sec.

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11.6 Parameter settings 5. :

Parameter	Description	Settings	🖹
5.1	Function "siren" output	.1 Switches during pre-warning and when the door/roller shutter is moving	1
		.2 Switches only if the door/roller shutter is moving	
		.3 Switches only in case of fire alarm, smoke detection or low battery voltage during pre-warning and if the door/roller shutter is moving	
		.4 Switches only in case of fire alarm, smoke detection or low battery voltage when the door/roller shutter is moving	
		.5 Test function light curtain	
5.2	Function (potential-free N.C. contact with common) notification security interrupted/defective	.1 Interrupted/defective message only for safety edge	1
		.2 Report only photo cell interrupted/defective	
		.3 Photo cell notification and safety edge interrupted/defective	
		.4 Test function light curtain	
5.3	Function "alarm" output	.1 Switches when the door closes in case of calamity	1
		.2 Test function light curtain	

11.7 Parameter settings 8. :

Parameter	Description	Settings	🖹
8.5	Number of cycles till maintenance	1 t/m 99 per 1.000 cycles adjustable from 1.000 (= 1) to 99.000 (= 99)	
8.7	Turn on or off maintenance counter	.1 Disabled	1
		.2 Enabled	
8.9	Maintenance cycle counter	Maintenance cycle counter is displayed. It counts from the set value to 0. At zero, a notification is given to carry out maintenance.	

11.8 Parameter settings 9. :

Parameter	Description	Settings	🖹
9.1	Cycle counter	Number of door openings.	
9.2	Last two error messages	Displays the last two error messages.	
9.3	Programming-changes	The number of changes in the menu is displayed.	
9.4	Read software version	Software version is displayed	
9.5	Reset to factory settings	.0 Do not reset go back to menu	
		.1 Run reset, restart control	

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12   Notifications

If the 24 Volt DC power supply is present, the point on the left of the display will be lid.
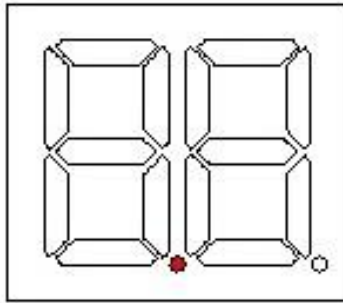
24 VDC present

When the control is switched off by means of the key switch on the cover, the point on the right side of the display will be lid.
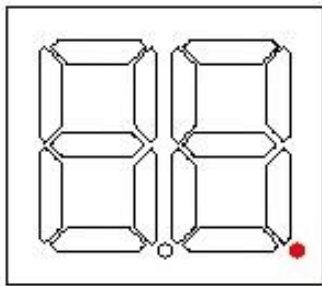
Key switch activated

12.1 E; Status notifications :

Notification	Description
E 1.1	Operation open active
E 1.2	Operation stop active
E 1.3	Close operation active
E 1.4	BMC input active/interrupted
E 1.5	Escape button active
E 1.7	RMC input active or not reset yet
C.S.	Maintenance cycle (foster maintenance at the door/roller shutter and reset parameter 8.5)

12.2 F; Error messages:

If the mains supply is present and there is no malfunction, the LED on the lid lights up green. When a malfunction occurs or the BMC or RMC input is active and the smoke detection is not reset, it lights red. If the maintenance cycle counter has passed, it flashes alternately red and green. Carry out maintenance at the door and control. And then set the parameter 8.5 to the desired position so that the maintenance counter can start again

Notification	Description	Recommendation/explanation
F 1.3	Safety chain DES Motor	Thermo contact activated. Allow the motor to cool down.
F 1.6	Safety break activated	Make sure the roll off protection has been activated. If so, make sure the door is mechanically okay. If it is in order replace the roll off protection or, if possible, restore it. If it is not activated, check the electrical circuit on connector X6. It must be closed if the safety break is not activated. If there is no safety break place a wire bridge on this connection.
F 2.0	No safety edge present	This notification is given when it is chosen to automatically detect the safety edge. If the safety edge is not detected during the start-up of the control, this notification will appear once. If a safety edge is connected, make sure it is connected correctly to connector X12. The opto sensors must see each other during the start-up of the control. A 1K2 or 8K2 resistance must be present on the connectors at the start-up of the control. If necessary, set the type of safety edge manually from the menu.
F 2.1	Photo cell activated	The photo cells have been interrupted. This may be by passing the door. If this notification remains check that the photo cell is well aligned and that the lens is clean. Check the electrical circuit connected to X10. If the photo cells are not interrupted, the electrical circuit must be closed on X10 (1 & 2). If no photo cells are used, place a wire bridge at this connection.
F 2.2	Number of attempts safety edge (set at parameter 2.5) achieved	Check that there is no obstacle in the door opening. If so remove it and give an new command to close the door. If this is not the case, make sure that the safety edge is still in order and pre limit switch close is correctly set.

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F 2.4	8K2 safety edge activated	The 8K2 safety edge is activated, this may be due to a obstacle in the door opening. If there is no on obstacle in the door opening and this notification continues to appear please check that the resistance on connector X11 (GND and 1K2/8K2 input) is still 8,2KOhm
F 2.5	8K2 safety edge defect	check the resistance of connector X11 (GND and 1K2/8K2 input) is still 8,2KOhm. Check the spiral cord for any cable breaks.
F 2.6	1K2 safety edge activated	The 1K2 safety edge is activated, this may be due to a obstacle in the door opening. If there is no obstacle in the door opening and this notification continues to appear please check that the resistance of connector X11 (GND and 1K2/8K2 input) is still 1,2KOhm
F 2.7	1K2 safety edge defect	Check that the resistance of connector X11 (GND and 1K2/8K2 input) is still 1.2KOhm. Check the spiral cord for any cable breaks.
F 2.8	1K2 safety edge test negative	Check that the resistance of connector X11 (GND and 1K2/8K2 input) is still 1.2KOhm. Check the spiral cord for any cable breaks. Check pre limit switch is correctly and ensure that the safety edge rubber is pressed sufficiently when the door/roller shutter is closed.
F 2.9	Opto sensor activated	The opto safety edge has been interrupted. This can be done through an obstacle in the door opening. If there is no obstacle and this notification continues to appear, check if the opto sensor still see each other. Also check the connections to X12 (+12V and – for the 12V power supply and input for the signal). Make sure the sensors are still working or need to be replaced.
F 3.1	NES: Safety chain motor activated (thermo contact, safety limit switches or emergency control)	NES:
		Make sure that the emergency limit switches (red cams) are activated. If this is the case, check that the open and closed limit switches are set correctly. It may also be that the thermo contact of the motor is activated. Then wait for the motor to cool down.
	DES: Emergency limit switch activated.	DES:
		The door is outside the set limit switch range. If DES is not recognized and the control on changes to NES, reset the control via parameter 0.9 and set it to the correct DES type.

F 4.6	Light curtain activated	Light curtain is activated. Photocell entrance interrupted. Make sure the beam of light is not interrupted. Whether the light curtain is properly connected and is not faulty. Check parameter 5.1, 5.2 or 5.3, if light curtain has been chosen. If no light curtain is connected, disable it at the appropriate parameter.
F 4.7	Light curtain defect	Test function of the light curtain negatively. Check the light curtain. Check connections. Replace in case of malfunction. Test function should be activated by the selected output in menu 5. Check parameter 5.1, 5.2 or 5.3, if light curtain has been chosen. If no light curtain is connected, disable it at the appropriate parameter.
F 5.1	Error in Rom memory	Rom memory check failed. Restart the controls, if this does not work, switch off the controls.
F 5.5	DES (digital limit switch) error	Cannot communicate with Digital switch. Check the connections of digital limit switch at X5. Check the power supply for the DES at X5 connections +12V and GND. Check the connections X5 A and B. Switch the digital limit switch of the motor if it is defective.
F 5.6	Door movement error	Check the door mechanically.
F 5.7	Error in direction of rotation	Direction of rotation has been changed after entering the end positions. Make sure that the door opens with the up button if this is not the case, reset the control to factory setting with parameter 9.5 of the menu. And re-learn the end positions. If the motor has the wrong direction of rotation, switch connection U and W at connector X2 (Fig.5) to change the direction of rotation of the motor.
F5.9	Duration monitoring	Maximum duration exceeded. Check the door/roller shutter mechanically. Verify that the time set at parameter 2.1 is sufficient and adjust it if necessary.
F 7.0	No power supply available	This notification appears if the mains power is not present. The control only works on the batteries. The door can no longer be operated. This will only close if the fire, smoke alarm contact is activated or if it is chosen to close at low battery voltage. If the batteries are completely empty, the door will also close, but then the protections and limit switch will no longer work.
F 7.1	Low battery voltage or 24V overloaded	This notification is displayed when the voltage of the batteries comes under the in the menu set level, or if the power supply collapses due to overload.

Please keep this manual with attachments carefully!

12.3 Common Errors

Notification	Description	Recommendation/explanation
F 3.1	Door past limit switch closed	hold the open button on the circuit board for at least 5 seconds, after this 5 second the door/roller shutter will open when holding this button Hold to run open and can be set back between the final positions. Watch out! This function does not monitor the end positions, direction of rotation and movement. Do not allow the door to move further then partial opening, with a correct direction of rotation.
F 1.3+5.5	DES not recognized	Press the middle (sw2) and bottom (sw3) menu buttons on the print at the same time and hold it for 3 seconds Parameter 0.9 now appears Change value from parameter 0.9 to : 0 = Automatic or 1 = DES GFA Watch out! The change in value must be done quickly because the time for this is limited. Press SW2, control starts again. Should this not produce the desired result, disconnect the DES connector on the circuit board under voltage and reconnect it under voltage.

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13 Declaration of Conformity

As referred to in the guidelines:
1.   EMC Directive 2014/30/EU
2.   Low voltage Directive 2014/35/EU
3.   RoHS Directive 2011/65/EU

RDA BV, located at Spoorakkerweg 6 , 5071 NC Udenhout hereby declares that the product listed below complies with the above-mentioned EC directive and is intended solely for installation in a doorway as described in the manual.

FirePro
(FirePro, Fire door control, 2016-TT-SG-FP, Sr. Nr.......................................)

Applied (parts of) European standards:

EN 60204-1   Safety of machinery-electrical equipment of machinery-Part 1:
                                     General requirements
EN 61000-6-2   Electromagnetic compatibility (EMC) part 6-2 general standard –
                                     interference immunity for industrial environments
EN 61000-6-3   Electromagnetic compatibility (EMC) part 6-3 general standards
                                     – interference emission for household, commercial and light
                                     industrial environments

On the reasoned request of the national authorities, we shall provide the relevant information of this incomplete machine

Authorized representative for the composition of the technical documents
(EU address internally)
Ing. Teun Tielemans
Documentation authorized representative

This product is an unfinished machine as referred to in the EC Directive 2006/42/EC and is intended to be incorporated into other machinery (or other unfinished machinery/installations) or merged with it to form a complete machine as referred to in the directive. This product may therefore only be put into operation if it is established that the entire machinery/installation in which it is incorporated complies with the provisions of the abovementioned directive.

Udenhout 03-10-2018   Corné Ribbers
                                    Director   Signature

Please keep this manual with attachments carefully!

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Your installer:

Please keep this manual with attachments carefully!