



UPS EMERGENCY SUPPLY

R050-1423 / 24

Version 1.0

ENGLISH

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Version number	Description
Version 1.0	The Document belongs to software Ver.5.65 and onwards.

Chapter 1 – Instruction and Installation

Introduction

The UPS emergency supply is a flexible emergency power system that at a fire and at lacking building supply can supply 1x230VAC for, for example, gates, doors and windows.

The system can be configured to operate as either ABA / ABV or ABDL.

The system is approved in accordance with EN12101-10 class A and follows the DBI Fire and Security guideline 027.

The system has min. 72 hours' standby time with fully recharged and full-capacity batteries.

No more than one system per unit must be connected to ensure that it complies with EN12101-10.

Service / Maintenance

Maintenance takes place at battery replacement and periodic service testing.

The system has a built-in timer. With an interval of 6 months' operation it gives a message about service.

Service is indicated by the red lamp at the front of the steel cabinet with a constant red light.

Resetting can only be done by making a service test.

Important! If the red light flashes or if both lamps are off, the equipment is malfunctioning.

Battery life may vary, but we recommend changing them every two years.



If an active fan is installed, check that the fan is running at C60.

The battery type **MUST** be designed for high load capacity UPS over a short period of time (Hitachi UPS 12580 or similar). We therefore recommend ordering 2 x M015-1209 (12V 8.5Ah) from TNV.

Please notice. There is no warranty on batteries.

General Considerations / Warnings

- If the system is connected to an alarm panel, you must remember to report service.
- If there is a lack of building power for a longer time, the 2 large 6-pole plugs must be pulled apart, otherwise the batteries in the UPS will be discharged, which in the worst case will prevent the UPS from starting.

Every 6 months.

A service test must be run that checks the system for errors. This will usually be indicated by the red light at the front being constantly lit.

At the same time, the fan is checked in the UPS.

Function description

In normal operation, the UPS emergency supply ensures that the batteries are recharged and ready for use, and if an alarm should occur, output signals are provided to the connected equipment and the power supply in the event of a failure is ensured.

In normal operation, the connected equipment (in this manual shown as a door control) will operate via the building supply. The door can be operated daily in the normal way.

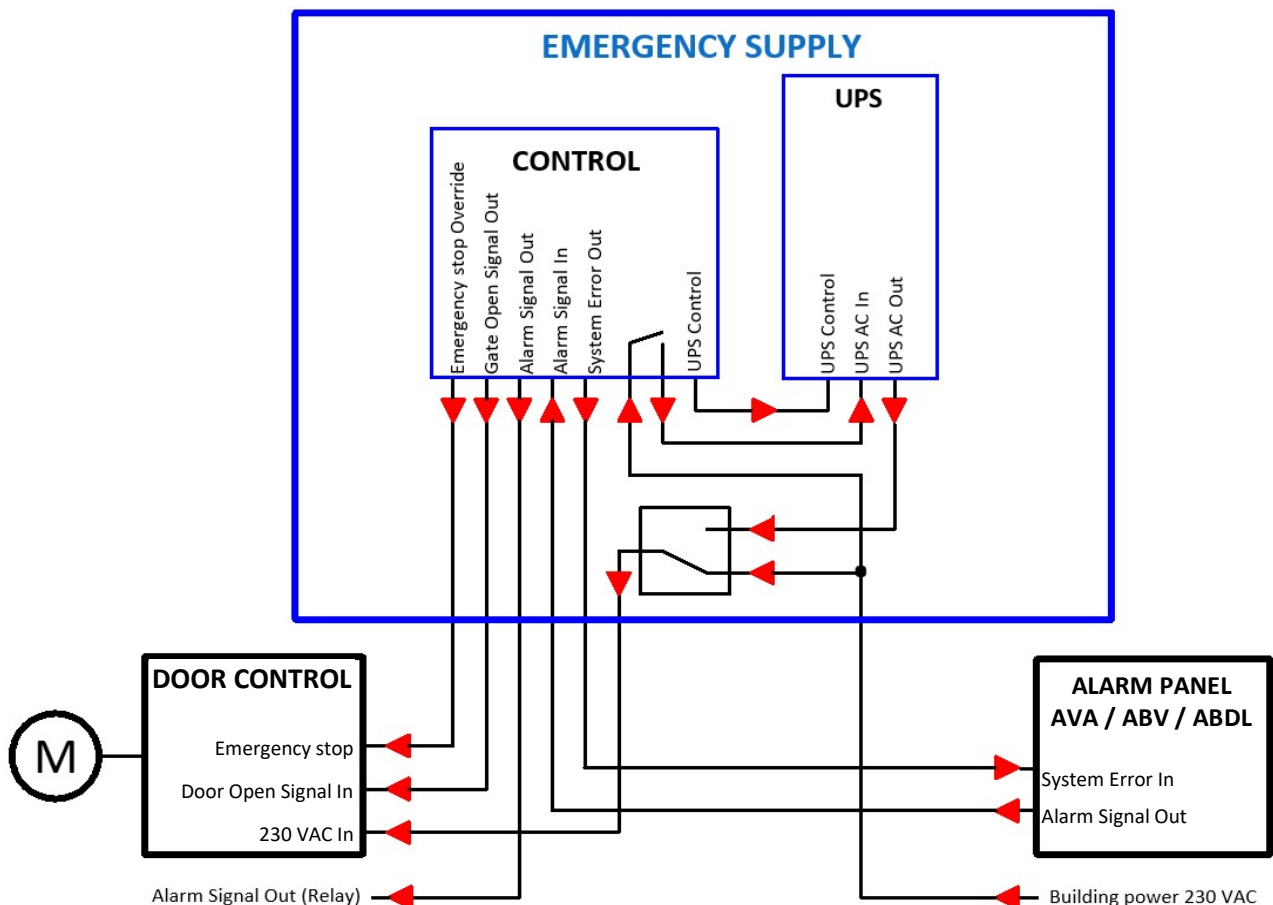
In the event of an alarm signal from the ALARM PANEL, the UPS emergency supply will send a signal to the door control which, depending on how the setup is, will either open or close the door.

If the building supply disappears, the UPS emergency supply will remain dormant, consuming as little battery power as possible.

If a fire alarm occurs during a power failure, the UPS emergency supply will start the UPS and shortly thereafter it will send a signal to the door control, which will either open or close the door.

If the door emergency stop is activated, the UPS emergency supply will be able to override the emergency stop so that the door can still be opened or closed.

If a fault occurs in the system, a signal is sent to the error output. This output is connected to the ALARM PANEL.





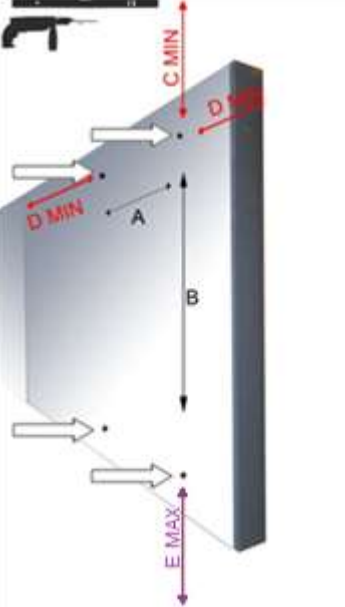

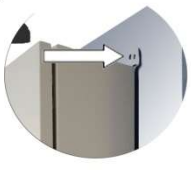



ABA / ABV ALARM:	<p>During normal operation, the ABA input of the EMERGENCY SUPPLY is open and if a fire occurs, the ALARM PANEL will supply a close signal to the ABA input of the EMERGENCY SUPPLY and it will send a signal to the door control, which will then open or close the door depending on the setup.</p> <p>If the alarm signal from the ALARM PANEL disappears, the alarm will automatically stop and the red lamp at the front will stop flashing.</p>	
ABDL ALARM:	<p>During normal operation, the ALARM PANEL supplies 24 VDC to the ABDL input of the EMERGENCY SUPPLY. If a fire occurs, this voltage will disappear and the EMERGENCY SUPPLY sends a signal to the door control, which will then open or close the door depending on the setup.</p> <p>If the alarm signal from the ALARM PANEL disappears, the alarm will automatically stop and the red lamp at the front will stop flashing.</p>	
Power failure:	<p>In the event of a power failure, the EMERGENCY SUPPLY will shut down the UPS, saving as much as possible on the battery for any alarm. If an alarm occurs during a power failure, the UPS in the EMERGENCY SUPPLY will start up and provide supply for the door control and motor.</p>	
Monitoring:	<p>The system monitors the ABA / ABV connection via a pair of resistors mounted at the ALARM PANEL. If the connection is broken or shorted, the red lamp at the front will start flashing and system failure will be indicated by a relay output.</p>	
Emergency stop:	<p>If the emergency stop for the door control is activated, the EMERGENCY SUPPLY will override the emergency stop button so that the door can still be controlled by the EMERGENCY SUPPLY.</p>	
Prohibitions:	<p>Mechanical locking devices, such as shute bolts, must not be mounted on the door. The control must also not be electronically locked.</p> <p>Voltage must also not be provided to the ABA / ABV input.</p>	
Signal type:	<p>The ABA / ABV or ABDL panels can provide an alarm signal either as a potential-free connection signal to the ABA / ABV input or as 24VDC that is broken by alarm to the ABDL input.</p>	
Abbreviations:	ABA	Automatic Fire Alarm System.
	ABV	Automatic Fire Ventilation System.
	ABDL	Automatic Fire Door Closure.
	UPS	Uninterruptible Power Supply.

Installation instructions

To perform the installation, the battery in the UPS must be fully recharged, as the test must open or close the door without building power. So if there is any doubt about the battery charge, let it recharge with a separate power cable (IEC-C13 plug type) for 24 hours before installation.

Mounting of cabinet (cabinet dimensions B x H x D = 400x600x200)

<p>INKLUDERET / INCLUDED</p> <p>4X </p> <p>IKKE INKLUDERET / NOT INCLUDED</p> <p>4X </p> <p>4X </p> <p> </p> <p><small>SCREW AND PLUGS AS REQUIRED BY SUPPLIER SKRUE OG PLUGS I HENHOLD TIL LEVERANDØR</small></p> <p>Tools and mounting materials for screw solid surface.</p>	 <p>A = 355mm B = 560mm C = 25mm D = 25mm E = 170 cm</p>	 <p>Dowel compliant to requirements for surface.</p>
<p>OUTSIDE</p>   <p>INSIDE</p> <p>Mounting of bracket.</p>	 <p>Cabinet is lifted up and mounted with screws.</p>	 <p>The installation of the UPS starts on the next page.</p>

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Installing the UPS



Open the cabinet.

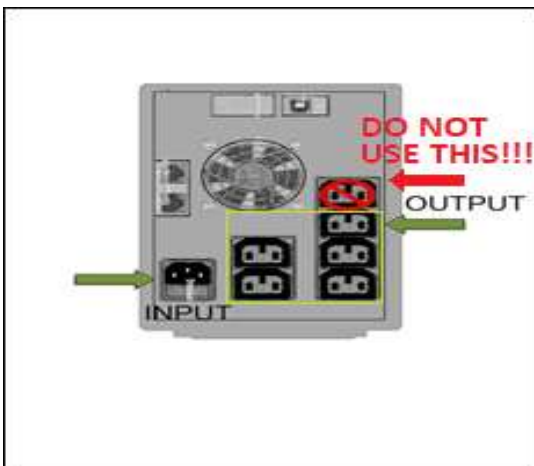


Mount the UPS with the 6-poled plug facing upwards.



Place the wires in front of the print

- 1 - Connect the 2 IEC power plugs as described here.
- 2 - Do not assemble the 6-poled plug, this will be done during start-up.



The plug indicated in red in the picture on the left must NOT be used.



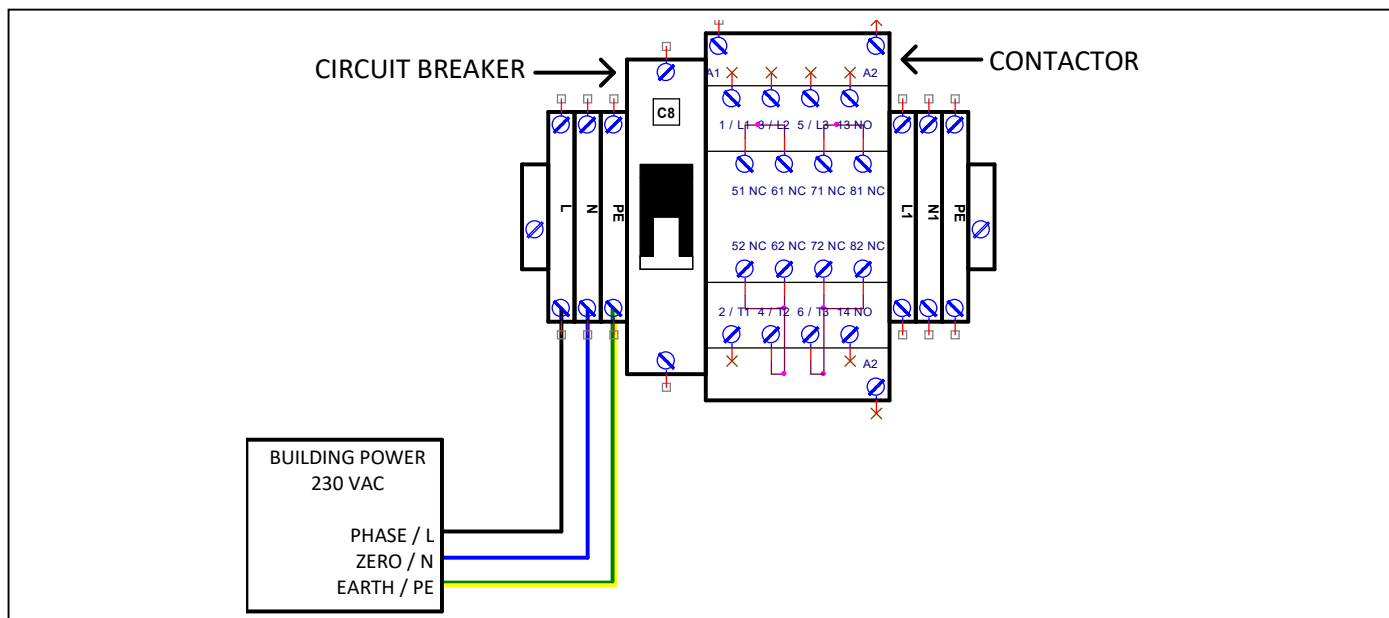
DO NOT connect the input and output power plugs. They must be mounted in the UPS.

Connection SUPPLY 1x230V + PE

It is assumed that the door control is fully functional.

Before connecting the building supply make sure the circuit breaker is OFF.

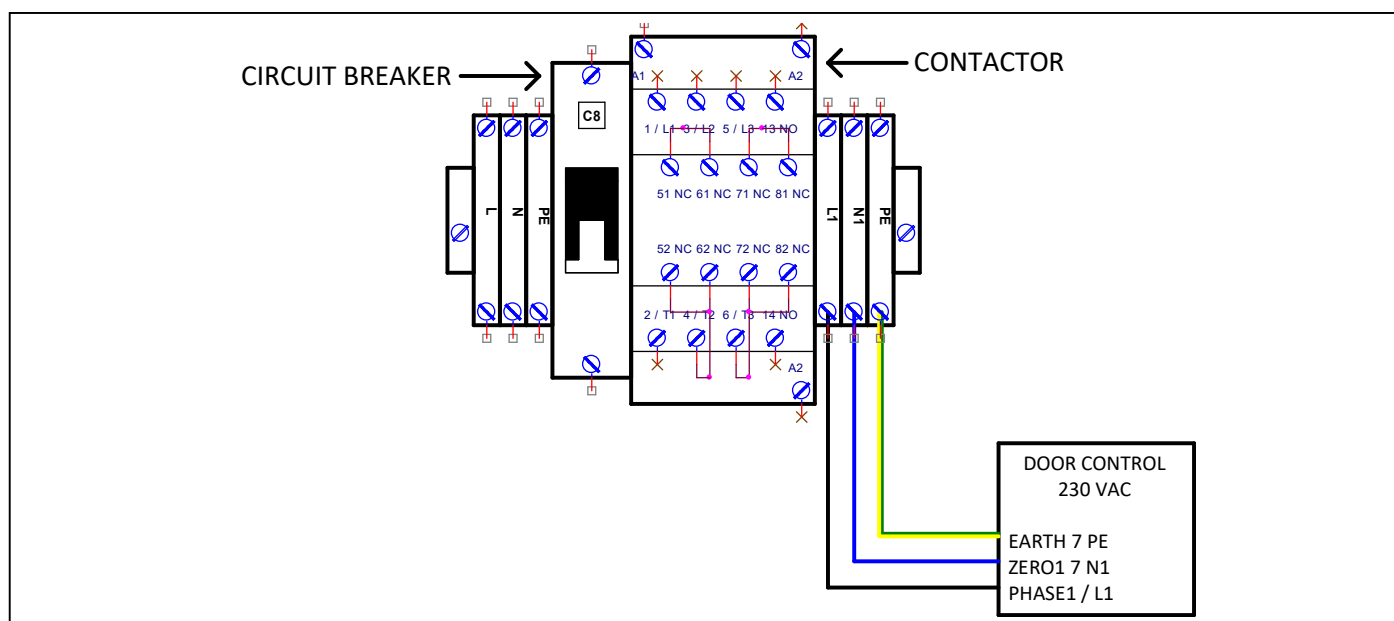
Connect building power (230 VAC) to L, N and PE, as shown below.



MUST BE CORRECTLY CONNECTED, OR THE SYSTEM MAY BE DAMAGED.

Check with a pole indicator or a multimeter that there is phase on L and **NOT** on N. With a multimeter, there must be 230 VAC between L and PE and 230 VAC between L and N; there must be 0 VAC between N and PE

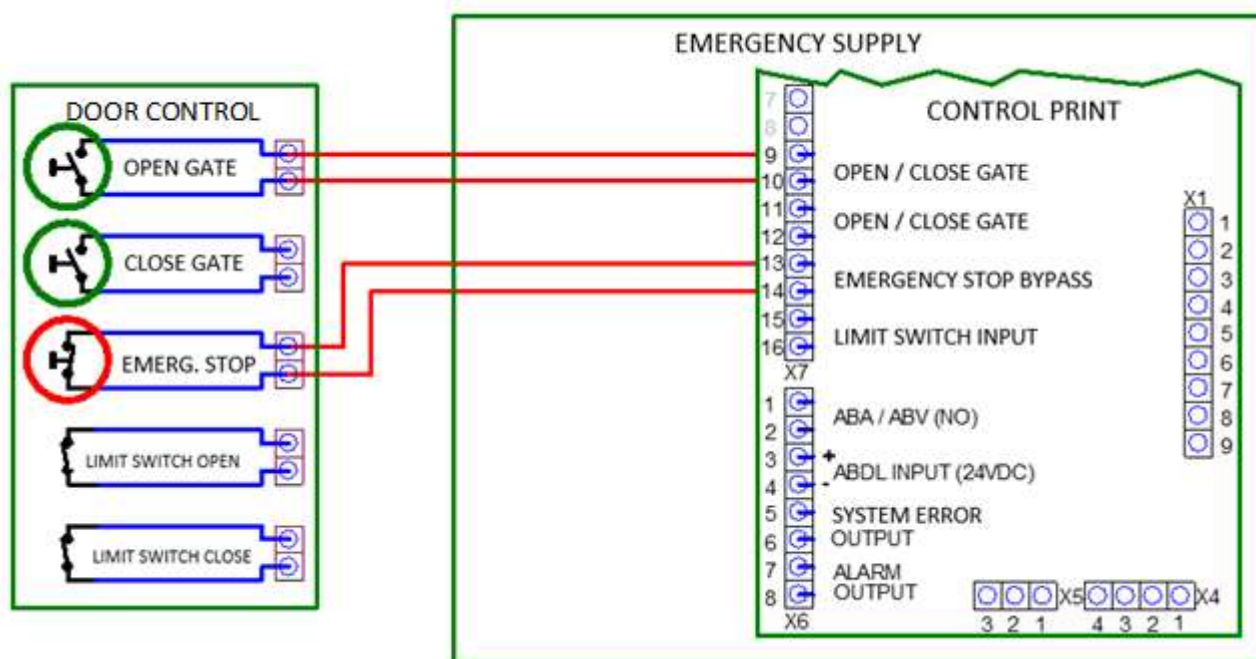
Connection SUPPLY for DOOR CONTROL 230 VAC



Connecting the connections from control board to DOOR CONTROL

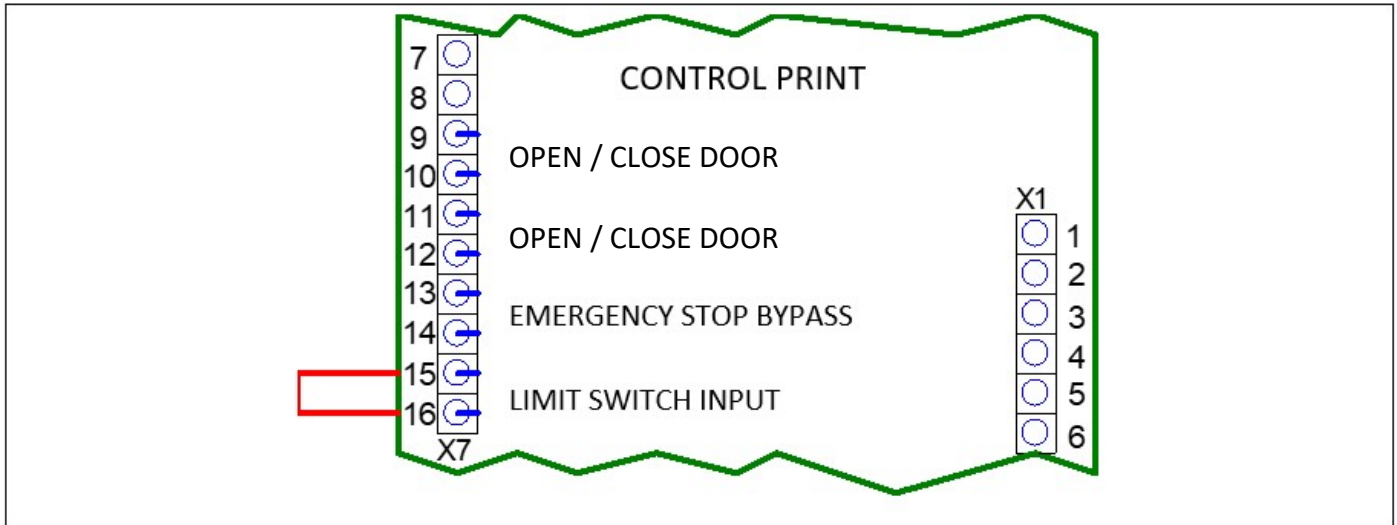
X7	In / Out	Type	Description
9	Output	Relay. NO Potential-free switches. Max.: 0,5 A / 125 VAC 1 A / 30 VDC	OPEN / CLOSE DOOR signal for the DOOR CONTROL. Primary. With several options.
10			
11	Output	Relay. NO Potential-free switches. Max.: 0,5 A / 120 VAC 1 A / 24 VDC	OPEN / CLOSE DOOR signal for the DOOR CONTROL. Secondary. Only with standard close function. Not normally used!
12			
13	Output	Relay. NO Potential-free switches. Max.: 0,5 A / 120 VAC 1 A / 24 VDC	EMERGENCY STOP BYPASS signal to the DOOR CONTROL.
14			
15	Input	Close NO	LIMIT SWITCH for the DOOR CONTROL. If this function is used, a relay must be used on the input. Order number R050-1486 Used for extra control of the opening during battery operation. As STANDARD, this feature is disabled with a jumper mounted between these 2 terminals.
16			

Connection at the OPEN function during alarm.



Connection LIMIT SWITCH input

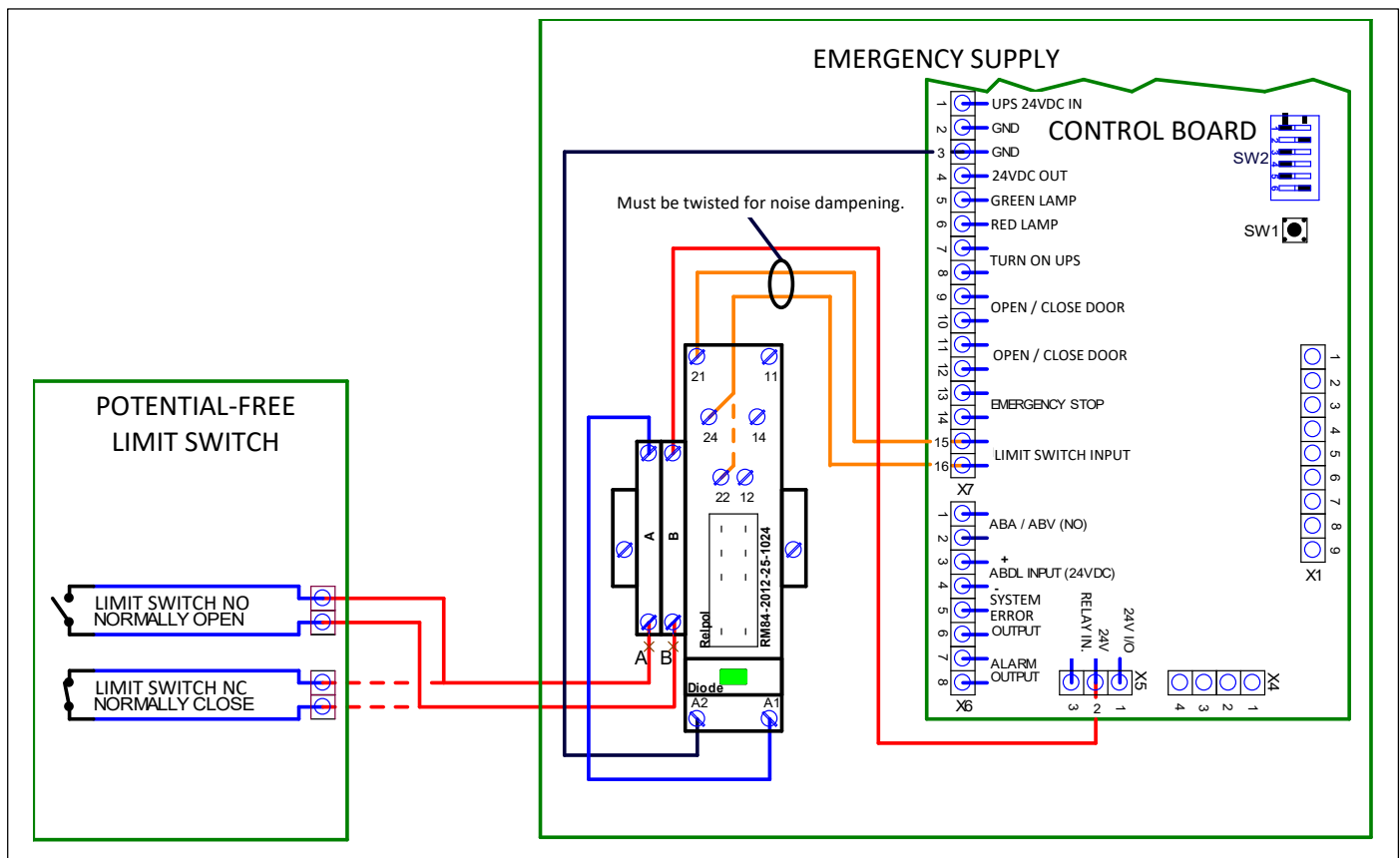
Shown as standard installation.



Mounting of a mechanical limit switch.

Used for extra control of the opening during battery operation.

The mounting of the relay and limit switch must be as shown in the diagram below ↓



Connection of FIRE ALARM inputs / outputs

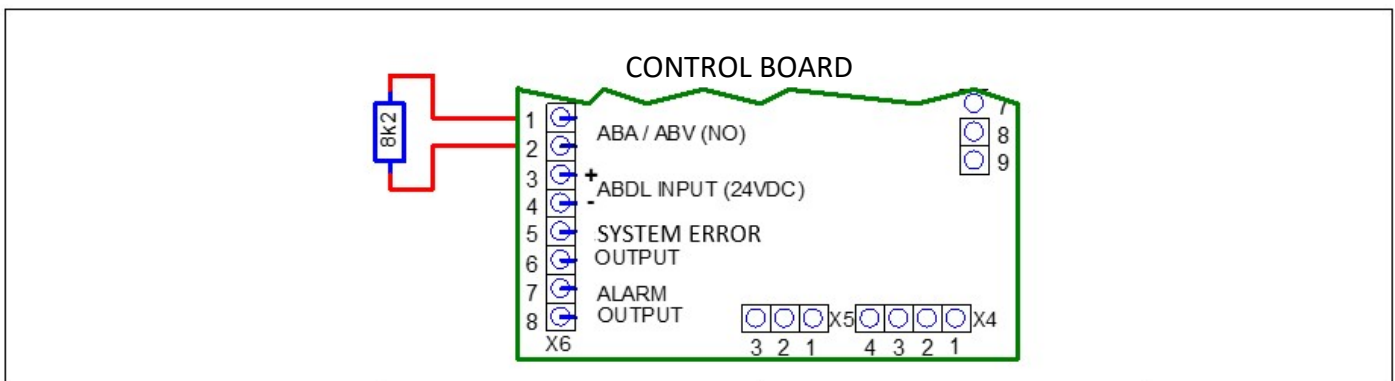
X6	In / Out	Type	Description
1	Input	Close NO potential-free	ABA / ABV Signal from ALARM PANEL. Resistance monitoring. SW2 : dip-1 in OFF position
2			
3	Input	24 VDC	ABDL Signal from ALARM PANEL. Plus on leg 3 and minus on leg 4. SW2: dip-1 in the ON position
4			
5	Output	Bi-stable Relay. Potential-free switches. Max.: 0,5 A / 120 VAC 2 A / 30 VDC	SYSTEM ERROR OUTPUT. Connected: Breaks at mistake. (Default) SW2: dip-5 in OFF Position = connected output. (NC) SW2: dip-5 in the ON position = open outlet. (NO)
6			
7	Output	Relay. NO Potential-free switches. Max.: 0,5 A / 125 VAC 1 A / 30 VDC	ALARM OUTPUT. Follows Alarm. This output may be used to forward the fire alarm signal to another door control (slave)
8			



When using the wrong output, the fire alarm panel must be able to monitor the cable connection itself, possibly with resistance in the terminals X6:5-6

Connection without Alarm Panel

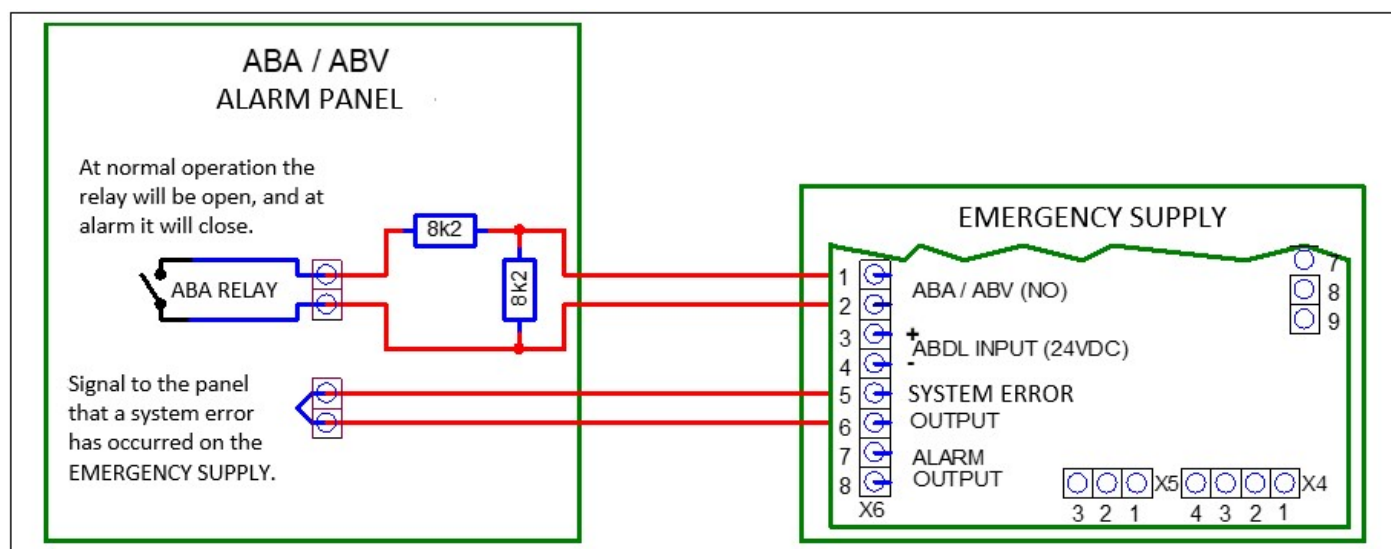
Mount an 8.2 kohm resistor between pins 1 and 2 on the X6 as shown below. (SW2 dip1 must be in OFF)



Connection of ABA / ABV fire signal



The resistance connection MUST consist of 2 pcs. 8.2 kohm resistors and MUST be mounted at the Alarm panel. In this way, the cable connection between the alarm panel and the emergency supply is monitored against breakages and short circuits. Do NOT connect anything else with the connections. (SW2 dip1 must be in OFF). Error output is connected.



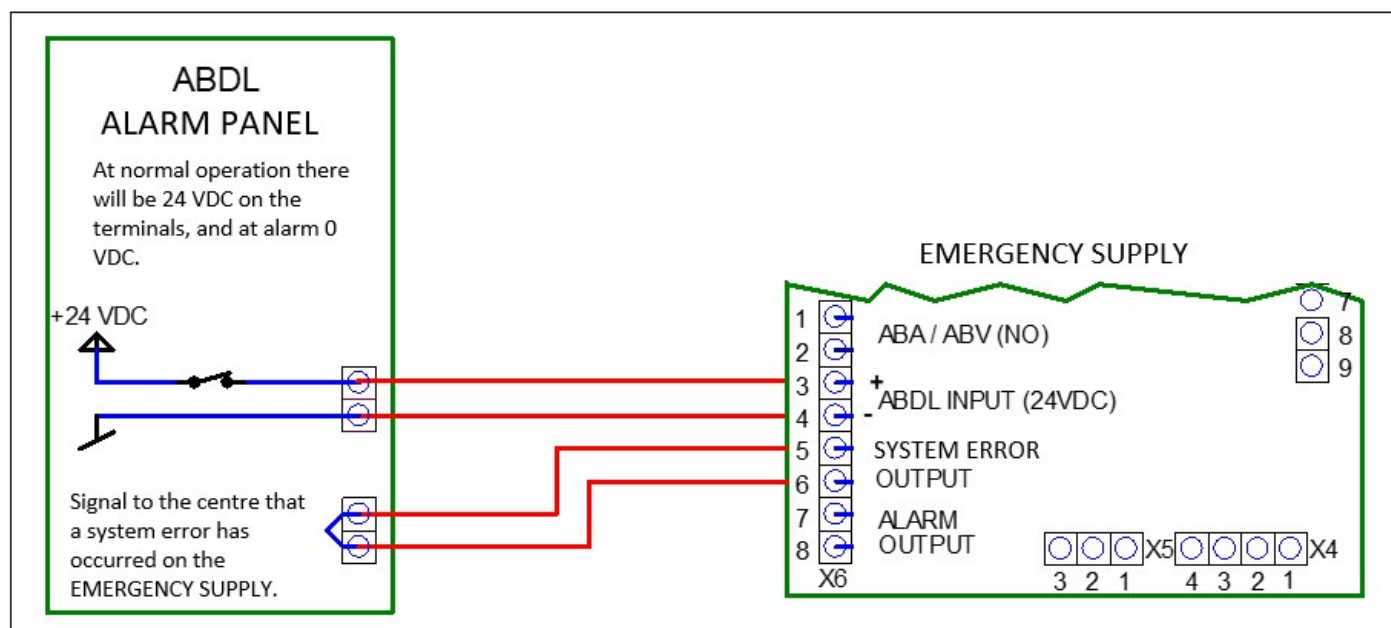
Connection of ABDL fire signal

24VDC Fire signal from ABDL PANEL, must be mounted in terminal X6:3-4, as in the diagram below.



It is important that the 24VDC are properly polarised in the X6 terminals. (SW2 dip1 must be in ON) Error output is connected

+ in terminal 3
- in terminal 4



EMC Protection Requirements

It is required to mount ferrite cores on both alarm input and fail output lines for EMC protection.

If 2 wires are used, where each wire contains 2 conductors, a ferrite core shall be mounted on each wire as shown in the pictures below (in total 2 ferrite cores).



With ABA-alarm



With ABDL-alarm

If one wire is used, where contains 4 conductors, then 2 ferrite cores shall be mounted on the wire as shown in the pictures below (in total 2 ferrite cores).



With ABA-alarm

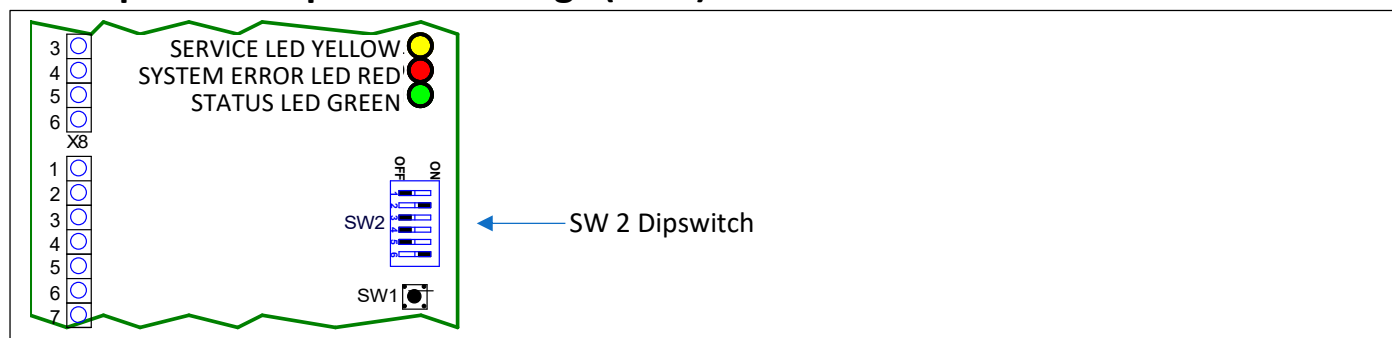


With ABDL-alarm



Remember to mount the supplied strips to the end of the ferrite cores as shown in the pictures above so the ferrite cores wouldn't move loose.

Description of Dipswitch settings (SW2)



SW 2 Dipswitch choice of functions.

SW 2	OFF	ON	Conditioned	Description
DIP 1	ABA/ABV	ABDL	(None)	Automatic fire alarm system (ABA system) or Automatic fire ventilation system (ABV system). ABA / ABV The system usually has automatic opening and alarm transmission to the fire department. Automatic fire door extinguishing system (ABDL system) maintains self-closing fire doors and fire sliding doors in open position. These are released in case of fire.
DIP 2	0 SEC.	3 SEC.	If DIP 2 is ON DIP 3 must be OFF	A delay can be selected on the open/close door signal, as some door controls just need some time to start up after receiving 230 VAC before they can receive an open/close signal. Here you can select 0 or 3 sec. Only applies to X7 terminal 9-10
DIP 3	Close Signal	Pulse Signal	If DIP 3 is ON DIP 2 must be OFF	Open/close door Signal type. Default OFF. At ON, it switches between close and break with 1 sec. interval. Only applies to X7 terminal 9-10
DIP 4	AUX Error Disabled	AUX Error Activated	(None)	The input is used for error registration from door control. The input is (NO) and the input must be potential-free. X8 terminal 4-6.
DIP 5	System Error Output NC	System Error Output NO	(None)	System Error output is a potential-free switch signal. Red LED flashes if there is an error in the system itself. Switch OFF / no error switches connected. Switch ON / no error switches broken.
DIP 6	In/Out Power Cable Monitoring on UPS (Disabled)	In/Out Power Cable Monitoring on UPS (Activated)	(None)	Monitoring on the 230VAC power plugs on the UPS. Both on input and on output.

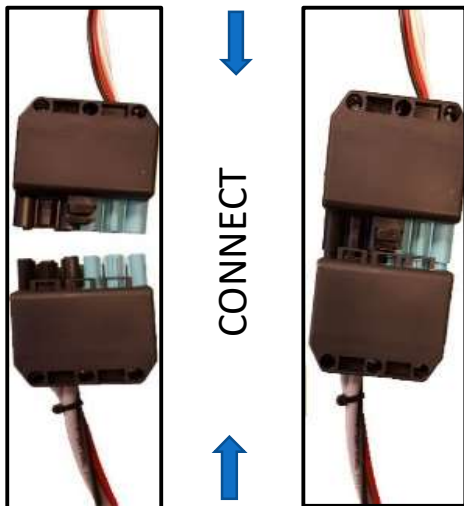
Start-up of EMERGENCY SUPPLY

TESTING the UPS installation:

We are now going to start operating the door, (depending on setup, up or down).
Therefore, please make sure the door is operating normally.

The service switch must remain on "1".

If a R050-1424 is used, the installation with the frequency converter must be followed first.



When ALL cable connections are mounted, the 6-poled plug from UPS and Board is assembled.



NB! If there is no building supply, there will be consumption on the UPS batteries when these plugs are connected, which may result in too low battery voltage

Please pay attention to this at building power.

Please notice that the LEDs on the circuit board flash briefly and then turn off.

The circuit breaker must be ON.

The door is placed in the opposite position of the function.

The circuit breaker must then be OFF.

If Emergency Stop is connected to the door control, activate the Emergency Stop button.

Push and hold SW1 for 6 sec. The yellow LED starts to flash, the button can be released.

The door starts to move after some time. Make sure the door is moving steadily and to fully opened or closed.

The test takes approx. 70 seconds with the yellow LED flashing during the process.

The door must not be operated during this time.

If the test is successful, the LEDs on the control board will be off.

The circuit breaker can then be set to ON.

The door can then be operated normally.

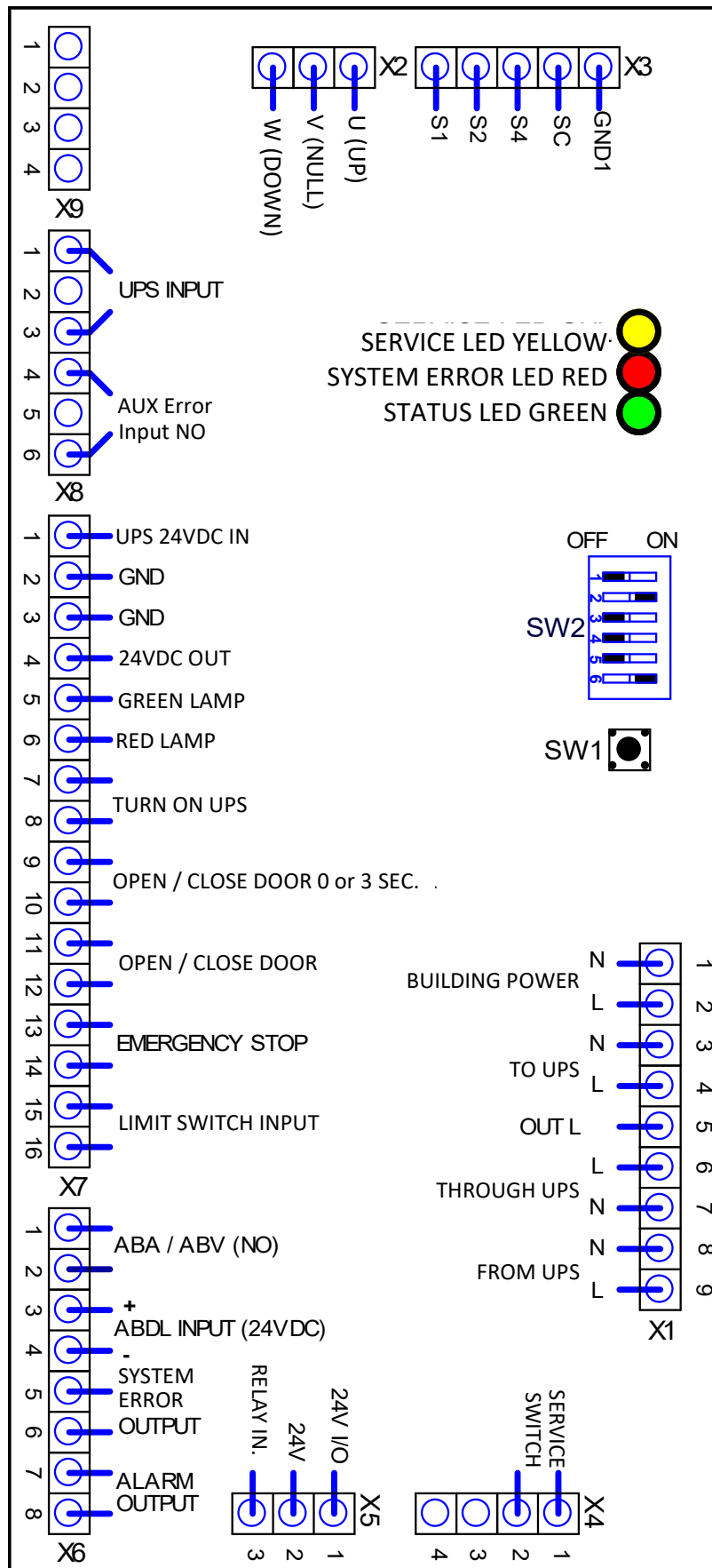
Testing the signal coupling for the fire department

Activate a test alarm from the ALARM PANEL.



If the alarm panel is connected to the fire department, remember to report it.

Control board overview

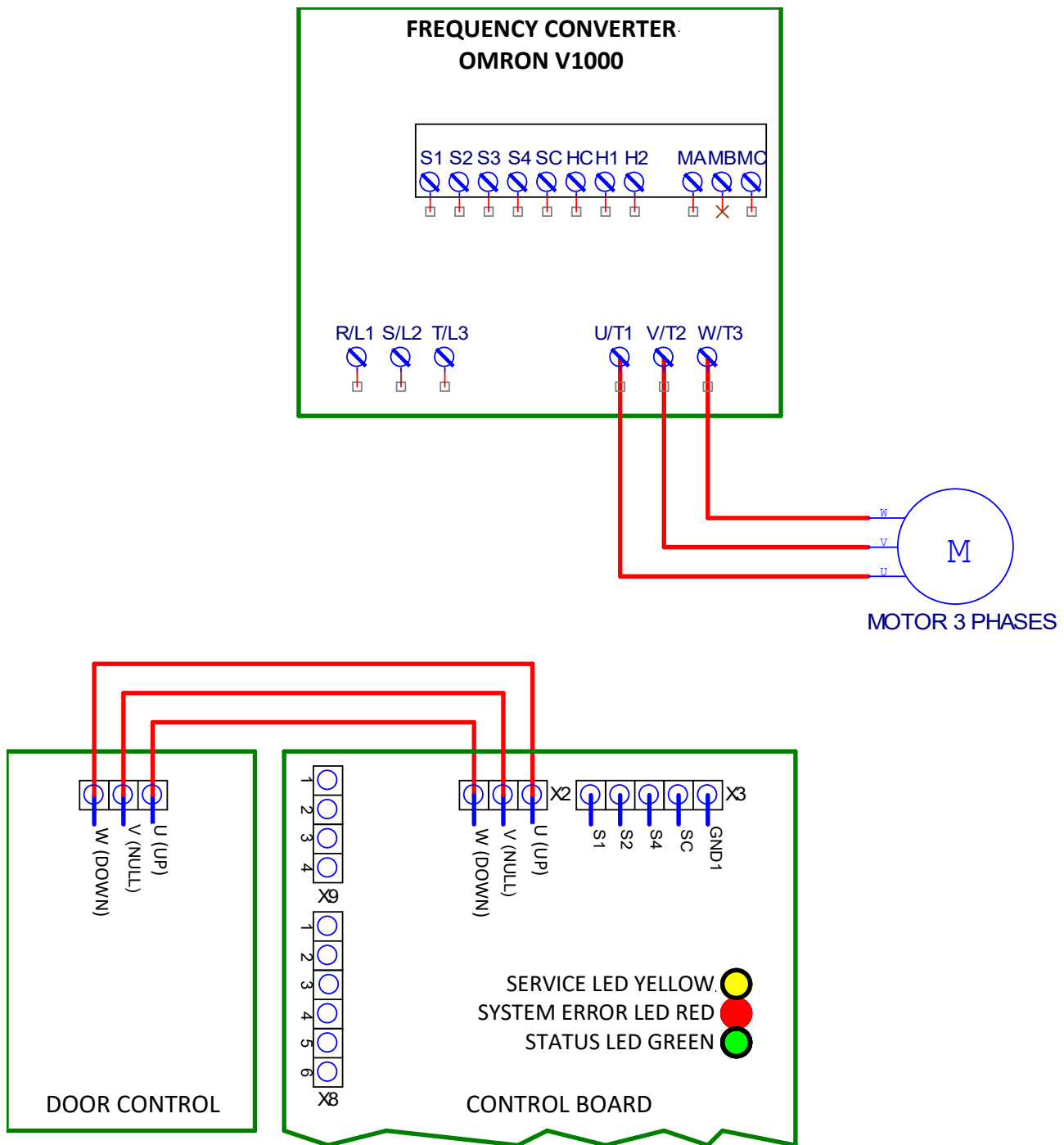


Frequency converter: OMRON V1000 (Only in the R050-1424 model)

Note that all door controls with phase up / down contactors do not have the same terminal names on motor output (U, V and W). Therefore, one must pay close attention to what is common zero for both phases!

When using the Omron V1000 frequency converter, switch SW2 dip2 to ON (3 second's delay). This ensures that the frequency converter is ready to receive a signal after power on.

Mount motor cables as shown in the illustration below.



After mounting the motor cables, set the circuit breaker to ON.

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It is possible to adjust the speed as needed. The frequency speed is varied between 10 - 50 Hz, with 50 Hz being the full set speed. Using higher values is not recommended.

However, a min. of 2 m / 60 sec. is requested.

Frequency converter features.

Button		Description
		The display
ESC		Back to menu.
RESET		Moves the cursor to the right or Reset.
RUN		Starts the frequency converter in the LOCAL mode. RUN LED Lights when the motor rotates. FLASHES during deceleration to stop. Flashes quickly if a RUN command is activated during start-up
OP		Change value UP-wards
NED		Change value DOWN-wards
STOP		Stop of frequency converter
ENTER		Enter confirms the choice of values / parameters.
LOCAL/ REMOTE		LO / RE switches between local display and remote display
LED		
ALARM		FLASHES - ERROR in frequency converter or disconnected.
REV		DIRECTION LED Off: Rotation forwards. DIRECTION LED On: Rotation backwards.
DRV		DRV LED On: Frequency converter is ready. DRV LED Off: Setup.
FOUT		FOUT LED On: Shows FQ in the display. FOUT LED Off: Displays other information in the display.

Adjustment of Normal and Low Speed with Frequency Converter.

























It is expected that F50.00 will be displayed on the frequency converter's display at start-up.

When operating on building power, the frequency converter operates at normal speed and when operating without building power, the frequency converter operates at slow speed.

There are a total of 4 parameters that can be set

Parameter	Description	Default speed frequency
d1-01	Open Normal Speed	50.00 Hz
d1-02	Close Normal Speed	50.00 Hz
d1-03	Open Low Speed	30.00 Hz
d1-04	Close Low Speed	30.00 Hz

The procedure for changing the speed of one of the 4 parameters mentioned - for example (d1-03):

FREQUENCY CONVERTER parameter (d1-03) - Speed change.		
①	Push 2 x 	Display: par 
②	Push 1 x 	Display: a1-01 
③	Push 3 x 	Display: d1-01 
④	Push 2 x 	Display: d1-01 
⑤	Push 2 x 	Display: d1-03 
⑥	Push 1 x 	Display: 030.000 
⑦	Push 1 x 	Display: 030.000 
⑧	Push  Or 	Display: 030.000 (Change the flashing decimal between 0-5) 
⑨	Push 1 	Display: 030.000 
⑩	Push  Or 	Display: 030.000 (Change the flashing decimal between 0-9) 
⑪	Push 1 	Display: end (for 1 sec.) 030.000 (for 0.3 sec.) d1-03 (at last)
⑫	Push 3 x 	Display shows: f50.00

When the door control is run in, you revert to Testing of UPS installation.

Technical data

Applies to C60/C200/Netys UPS

Technical data	C60 2000VA	C200 2000VA	NETYS PR 2000VA
Maximum Power VA	2000 VA	2000 VA	2000 VA
Maximum Power W	1200 W	1400 W	1400 W
Input/Output	1 / 1	1/1	1/1
INPUT			
Rated voltage	230 VAC	230 VAC	230 VAC
Voltage tolerance	162 - 290 VAC	162 - 290 VAC	170 - 280 VAC
Rated frequency	50 / 60 Hz	50/60 Hz	50/60 Hz Automatic choice
Power connection	IEC320 Socket	IEC320 Socket	IEC320 Socket
OUTPUT			
Automatic voltage regulation (AVR)	Yes	Yes	Yes
Rated voltage	230 V \pm 10%	230 V \pm 10%	230 V \pm 10%
Rated frequency	50/60 Hz \pm 1 Hz	50 / 60 Hz \pm 1 Hz	50/60 Hz \pm 1 Hz
Waveform	Simulated Sinus	Sinus	Sinus
Protection	Overload, battery discharge and overcharge protection	Overload, battery discharge and overcharge protection	Overload, significant discharge and short circuit
Connection	5 x IE320 (C13)	5 x IE320 (C13)	6 x IE320 (C13)
Batteries			
Type	2 x 12VDC / 9.0 Ah maintenance free lead battery	2 x 12VDC / 10.0 Ah maintenance free lead battery	2 x 12VDC / 8.5 Ah maintenance free lead battery
Communication			
User interface	USB	USB	USB
The local communication software	ViewPower	ViewPower	Local View
UPS Cabinet			
Dimensions (W x D x H)	146 x 397 x 205 mm	146 x 397 x 205 mm	145 x 390 x 205 mm
Weight	11.5 kg	13.7 kg	13.2 kg
Standards			
Safety	EN 62040-1	EN 62040-1	IEC/EN 62040-1, AS 62040.1.1, AS 62040.1.2
EMC	EN 62040-2	EN 62040-2	IEC/EN 62040-2, AS 62040.2
Product declaration	CE	CE	CE, RCM (E2376)

INPUT		
Rated voltage	230 VAC ± 10%	
Rated frequency	50 Hz	
Input Safety	Circuit breaker 13A	
Input Safety (Control Board)	2.5 AT	
OUTPUT		
Rated voltage	230 VAC ± 10%	
Rated frequency	50 Hz ± 1Hz	
Waveform building power	Building Power Waveform (Typically Pure Sinus)	
Waveform CertaUPS C60	Simulated Sinus Waveform	
Waveform CertaUPS C200 / Netys	Pure Sinus Waveform	
Output Power	C60-Max. 2.7 A	C200/Netys-Max. 3.05 A
Maximum interruption during power change	10 ms (< 10 sec at lacking building power)	
Batteries		
Type: Lead batteries, maintenance-free	2 x 12VDC / 8.5 Ah High load capacity	
Recharging time	< 1 day	
Emergency Supply Cabinet		
Dimensions (W x D x H)	400 x 200 x 600 mm	
Weight without UPS	18 kg	
Weight with CertaUPS C60	29.5 kg	
Weight with CetaUPS C200	31.7 kg	
Weight with Netys UPS	31.2 kg	
Frequency converter (R050-1424)		
Omron V1000	1 x 230VAC, 1.5 kW	

Declaration of Conformity / Performance



Declaration of Conformity

Dalmatic TNV A/S, Lægårdsvej 9, 8520 Lystrup, Denmark

Declares that:

Category: Emergency Power supply for Door operating systems in use for smoke and heat Ventilation.

Model: The below part numbers must contain C60-Chassis or C200-Chassis or Netys-Chassis to fulfill build requirements according to class A. (TNV 13003 Control board).

- R050-1404 1-phased UPS Semi control unit (freq. controlled 3-phased motor)
- R050-1406 1-phased UPS full control unit (freq. controlled 1,5kW 3-phased motor)
- R050-1407 1-phased UPS full control unit (freq. controlled 2,2kW 3-phased motor)
- R050-1423 1-phased UPS control unit (for Door operator)
- R050-1424 1-phased UPS control unit (freq. controlled 3-phased motor)
- R050-1434 1-phased UPS control unit (Combined with Door operator 0,75kW)
- R050-1435 1-phased UPS control unit (Combined with Door operator 2,2kW)

Description: Emergency Backup Power supply for existing Door operators and new Door operators for emergency opening triggered by ABDL/ABA-ABV Control systems.
Supply 1x230VAC, output for motor 1x230VAC, UPS 230VAC, 2000VA
Supply 1x230VAC, output for motor 3x230VAC, UPS 230VAC, 2000VA

Essential characteristics	Niveau/Class	Harmonized technical specification
Environmental class	Class 1	Chapter 7, EN 12101-10:2005/AC:2007
Performance parameters	Class A	Chapter 4.1, EN 12101-10:2005/AC:2007

is in accordance with, and meets all relevant requirements in:

Low Voltage Directive 2014/35/EU
EMC Directive 2014/30/EU

and the following harmonized standards:

EN 12101-10
EN 61000-6-3
EN 61000-6-2
EN 60204-1

and the following guidelines:

DBI guideline 027 (DBI = The Danish Institute of Fire and Security Technology).

The declaration is valid only when the Emergency Power Supply is installed according to the included instructions.
This declaration is invalid in case of changes in the Emergency Power Supply, that has not been approved by TNV.

Director Hans Hilmar Dall

Date of issue: 08-03-2019



Declaration of Performance

No. 0402-CPR-SC0787-18

1.Product Type: Unique identification code of the product-type	C60-Chassis, C200-Chassis, Netys-Chassis
2.Type, batch or serial number or any other element allowing identification of the construction product as required under Article 11(4):	C60-Chassis, C200-Chassis, Netys-Chassis For serial number see product numbering
3.Intended use or uses of the construction product, in accordance with the applicable harmonized technical specification, as foreseen by the manufacturer:	Emergency Power supply for Door operating systems in use for smoke and heat Ventilation
4.Name, registered trade name or registered trade mark and contact address of the manufacturer as required under Article 11(5):	Dalmatic TNV A/S Lægårdsvej 9 8520 Lystrup, Denmark Email: tnv@tnv.dk
5.Contact Address: Where applicable, name and contact address of the authorized representative whose mandate covers the tasks specified on Article 12(2):	Not applicable
6. AVCP: System or systems of assessment and verification of constancy of performance (AVCP) of the construction product as set out in CPR, Annex V:	AVCP System 1
7.Notified body (hEN): In case of the declaration of performance (DoP) concerning a construction product covered by a harmonized standard:	Notified Body No. 0402 Rise Research Institutes of Sweden Box 857 SE-501 15 Borås, Sweden
8.Notified body (ETA): In case of the declaration of performance concerning a construction product for which a European Technical Assessment (ETA) has been issued:	Not applicable (see7)
9.Declared performance:	Essential Characteristics: Environmental class 1 Performance: Class A Harmonized Standard: EN 12101-10:2005 / AC:2007
10.Declaration The performance of the product identified in points 1 and 2 is in conformity with the declared performance in point 9. This declaration of performance (DoP) is issued under the sole responsibility of the manufacturer identified in point 4.	

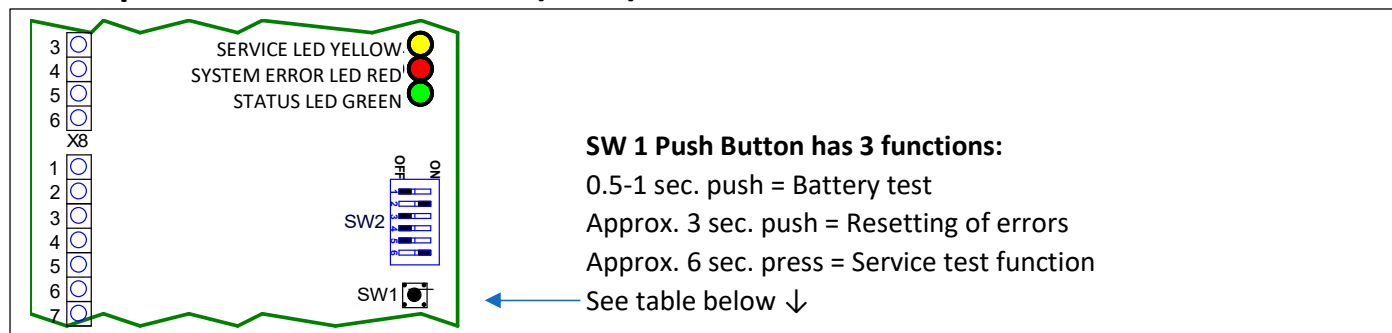


Director Hans Hilmar Dall

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Chapter 2 - Service manual

Description of Service Switch (SW1)



Function	SW1	Expected Reaction
UPS Test (Not available at lack of building power)	Push and hold between 0.5 - 1 sec. (Green LED turns on in battery test function)	<p>The system turns off recharging to the UPS and starts the UPS Test function. The system turns on the UPS and checks that the UPS's 230VAC output is available.</p> <p>If the output voltage from the UPS is not available, it will be indicated by 4 flashes on the red LED and continue to the next step.</p> <p>The system turns off the UPS.</p> <p>The system uses the battery and the voltage is measured afterwards.</p> <p>If the voltage is too low, it will be indicated by 1 flash on the red LED and continue to the next step.</p> <p>In case both error scenarios are registered, it will be displayed as 1 and 4 flashes per repeating round on red LED.</p> <p>The system finalises the UPS Test function and turns on the recharging for the UPS.</p>
Resetting of errors	Push and hold for approx. 3 seconds until the green LED flashes once.	<p>If the red LED flashes, a system error has occurred. The error can then be reset by holding down the SW1 button until the green LED flashes just once.</p> <p>If the red LED continues to flash, the error(s) must be rectified before a reset can be made.</p> <p>The error can be seen in the chapter "Indication of System Error and Alarm"</p>
SERVICE TEST FUNCTION - Tests if the door can be fully opened via the capacity of the UPS.	Push and hold for approx. 6 seconds until the yellow LED starts to flash.	<p>REMEMBER to turn off the 230V power supply to the system before carrying out service tests. (The service switch still needs to be ON).</p> <p>If not, the test will not be performed, and the red LED will flash 5 times.</p> <p>When the 230V power supply is switched off, the error output X6:5-6 is activated, pay attentions to any notifications to be performed before testing.</p> <p>The system goes into service mode. The UPS starts after either 4 sec. (C60) or 7 sec. (C200 or Netys) and will supply the door control with 230 VAC. The system will send an open / close signal to the door control, (relay output terminal X7:9-10).</p> <p>If SW 2 position 2 is OFF, signal will be sent immediately.</p> <p>If SW 2 position 2 is ON, there will be a delay of 3 seconds before the signal is sent.</p> <p>The door signal is active for approx. 70 seconds.</p> <p>If a limit switch is used on x7 terminal 15-16, the signal will be disabled if the limit switch signal is registered within the mentioned 70 seconds.</p> <p>The system will self-acknowledge and switch back to normal operation mode.</p>

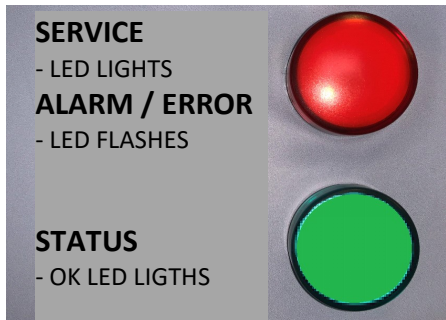
Description of System Error and Alarm

On the front of the cabinet there are 2 lamps, one red and one green, which are for indication of condition.

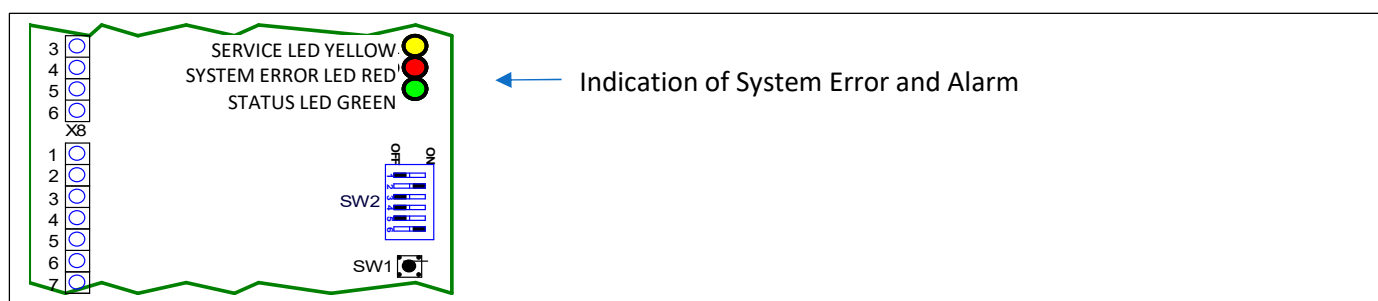
Green	Red	Description
Turned off	Turned off	Error! The batteries are defective. Or equipment error. IMPORTANT TO DRAW THE CUSTOMER'S ATTENTION TO THIS!!
Lights	Turned off	Everything ok
Turned off	Flashes	Lack of building supply or error (or Alarm) Check error codes on control board.
Lights	Flashes	Error (or Alarm) Check error codes on control board.
Lights	Lights	Time for service (Functional test)

SERVICE
- LED LIGHTS
ALARM / ERROR
- LED FLASHES

STATUS
- OK LED LIGHTS



If the red light is flashing, it is possible to get more information by looking at the 3 LEDs inside the cabinet.



STATUS GREEN LED

X-FLASH(ES)	DESCRIPTION
1	Flashes once when you choose to reset one or more errors. Only at resetting of errors.
4	ABA alarm is active.
5	ABDL alarm is active.

SYSTEM ERROR RED LED (Multiple errors can be indicated simultaneously)

X-FLASH(ES)	DESCRIPTION
1	The battery voltage is too low.
2	The ABA cable has been cut off.
3	The ABA cable has been shorted.
4	The UPS 230VAC output is not present.
5	The building power is active while attempting to run a service function.
6	Error on limit switch.
7	The service switch has been turned to "0", turn it to "1".
8	AUX error input is registered (X8:4-6 - NO function).
9	Input and output mains sockets for the UPS are not connected (Connect immediately!!).
10	The recharge function in the UPS does not work.
11	Critically low battery voltage.

SERVICE YELLOW LED

LIGHT DIODE	DESCRIPTION
LIGHTS	Time for service
FLASHES	Service function is running. Upon completion of the test, the yellow LED will either be lit: ERROR in test, test must be performed again. be turned off: SERVICE TEST OK

Troubleshooting

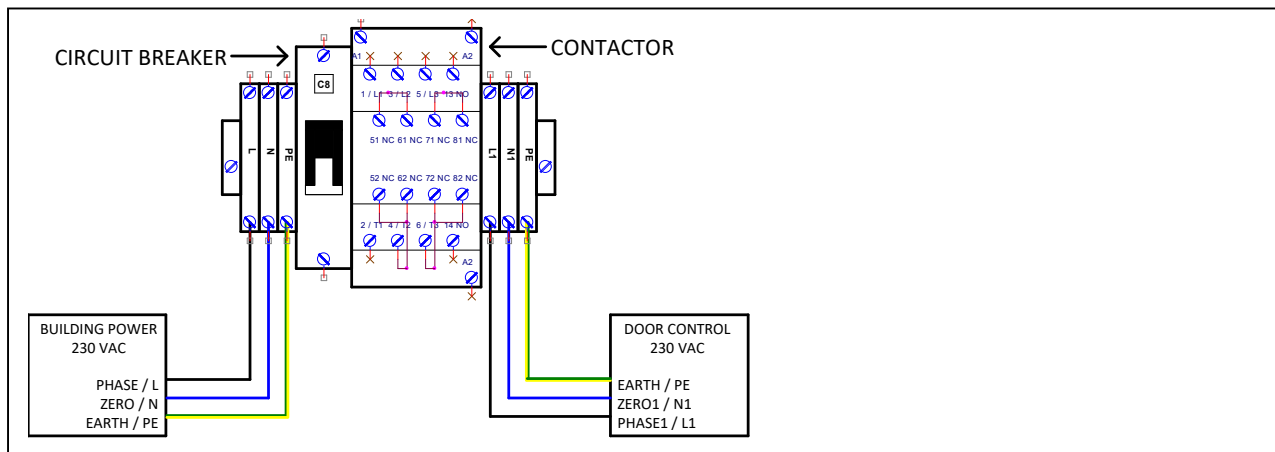
Description of flash error code.

SYSTEM ERROR RED LED (Multiple errors can be indicated simultaneously)	
X-FLASH(ES) and solution	DESCRIPTION
1	Battery voltage is too low.
1.A	If the system has been out of building power or the circuit breaker has been switched off for an extended period, the battery may be discharged and must be recharged. The equipment cannot always handle this by itself. Therefore, the UPS must be removed and recharged. Make sure there is building power and turn on the circuit breaker. Leave it on for 24 hours and check that the error is not indicated any more. If the error is still indicated, the batteries must be replaced.
2	The ABA cable has been cut off.
2.A	The connection between the ALARM PANEL and the EMERGENCY SUPPLY is disconnected. Check the connection from the alarm panel's ABA / ABV output to the EMERGENCY SUPPLY. Check that the resistance network is properly installed. This can be seen in the Installation manual in the chapter "Connection of FIRE ALARM inputs"
3	The ABA cable has been shorted.
3.A	The connection between the ALARM PANEL and the EMERGENCY SUPPLY has been shorted. Check the connection from the alarm panel's ABA / ABV output to the EMERGENCY SUPPLY. Check that the resistance network is properly installed. This can be seen in the Installation manual in the chapter "Connection of FIRE ALARM inputs"
4	The UPS 230VAC output is not present.
4.A	If it also flashes 9 times, it may be the power plug that is not mounted in the UPS.
4.B	UPS output plug mounted in "Red" output. Attach the plug correctly.
4.C	Possible battery failure in UPS, measure if there is 24VDC between terminals 1 and 2 on X7
4.D	Possible error in UPS, contact supplier.
5	The building power is active while attempting to run a service function.
5.A	Turn off the circuit breaker and try again.
6	Error on test limit switch.
6.A	(If running without limit switch). A jumper must be mounted on X7:15-16, mount it and run the test again. If the error is still registered, there may be an error in the control board. Read more in the chapter "Connection LIMIT SWITCH input"
6.B	(If running with limit switch). Check that the limit switch is mounted and that it works properly. Measure if there is 3 VDC between terminals 15 and 16 on X7 when door is <i>not</i> open and 0 VDC when door is open. If the correct values are measured, there may be an error in the control board, contact the supplier.
7	The service switch has been turned to "0".
7.B	If no service is performed, turn the service switch to "1".
8	AUX error input is active (X8:4-6 - NO function).
9	Input and / or output power plugs to the UPS are not connected.
9.A	Connect both power plugs to the UPS.
10	The recharge function in the UPS does not work.
10.A	Internal error in UPS, contact supplier
11	Critically low battery voltage.
11.A	Battery voltage is critically low, may not be recharged via UPS, replace batteries in UPS.

The Service Test

To perform the service test:

1. The door must be in the right position before the test; if it is to open in case of fire, the door must be closed, and if it is to close in case of fire, it must be open.
2. Turn off the circuit breaker.



3. The service switch at the bottom of the cabinet must be set to "1".
4. Push and hold SW1 for 6 sec. The yellow LED starts to flash, the button can be released. The door starts to move after some time.
5. Make sure the door is moving steadily and to fully opened or closed. The test takes approx. 70 seconds with the yellow LED flashing during the process. The door must not be operated during this time. After the test, all LEDs should be turned off.



PLEASE NOTICE! The service test is performed to check the battery condition and capacity. It is the service installer who assesses the batteries. The test may be repeated for capacity testing.

6. When the test is completed, turn on the circuit breaker.

Battery replacement in UPS



If the alarm panel is connected to the fire department, remember to report it.

1. Turn the UPS upside down and remove the screws



2. Turn back the UPS. Pull off the UPS front door, from the bottom, as shown here ->

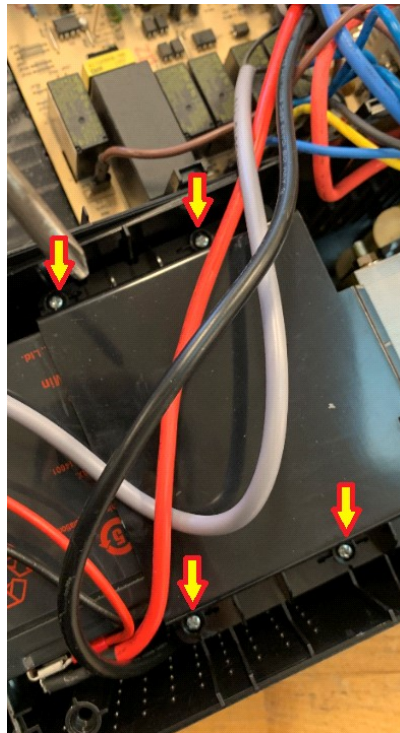


Dalmatic TNV A/S

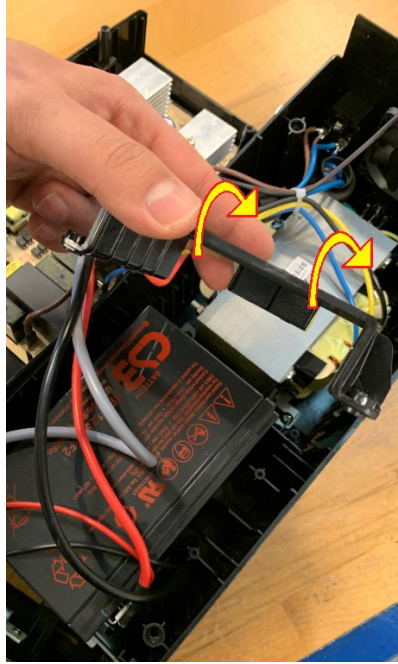
3. Pull off the UPS top cabinet, as shown here ->



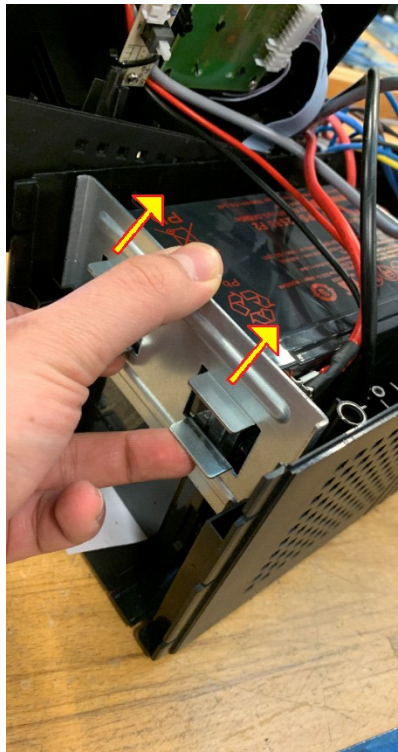
4. Remove the screws on the battery cover.



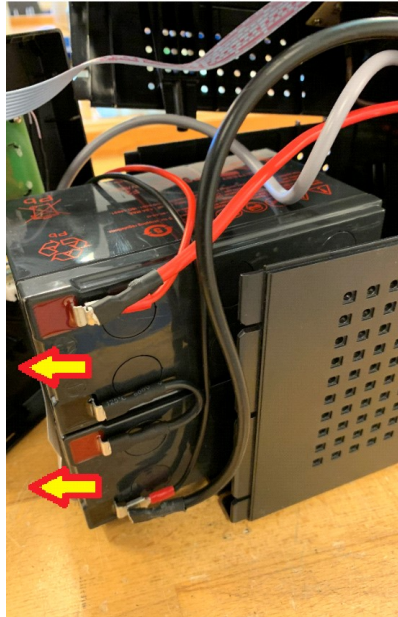
5. Remove the battery cover as shown here
->



6. Pull off the battery front bracket as shown here ->



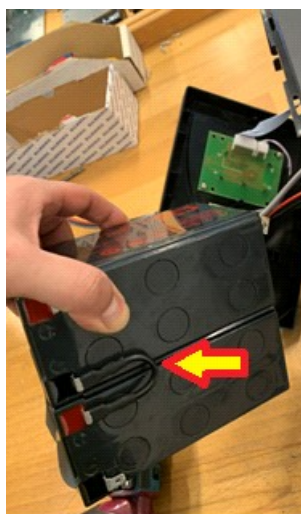
7. Pull the batteries slightly forward as shown here ->



8. Remove the plus and minus cable clamps from the battery terminals as shown here ->



9. Replace the batteries with new ones.
Remember the jumper for the connection as shown here ->



10. Follow the instructions in the reverse order to reassemble the UPS.

