ENGLISH

MASTER

SLAVE

EN

Skycom CE 24V/8A

User manual and installation instructions

Release: 02-2021

SKYLUX
Hello daylight!

YOUR SHE-SYSTEM DESCRIPTION

Address of installation

Name:
.....

Address:
.....

Phone no.:
.....

Contact person:
.....

Date of installation:
.....

SYSTEM Description

Number of SHE control:

Master(s) (24V/8A): .....

Slave(s) (24V/8A): .....

Skymax (24V/5A): .....

Number of opening system(s):

Skylux 160° CE: .....

Skymax CE: .....

Skymax Standard: .....

Cintramax CE: .....

Skyvent CE: .....

Other systems: .....

External controls (AFA: Automatic Fire Alarm - CCS: Climate Control System):
.....

230V power supply from circuit N°:
.....

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INTRODUCTION

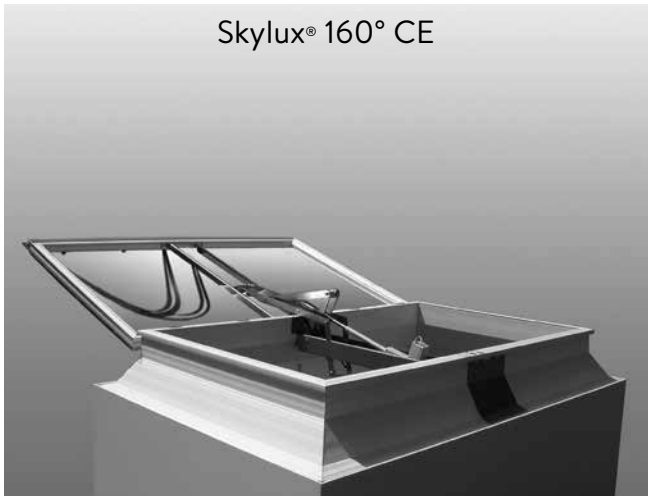
Why do you need to foresee Smoke and Heat Extraction (SHE)?

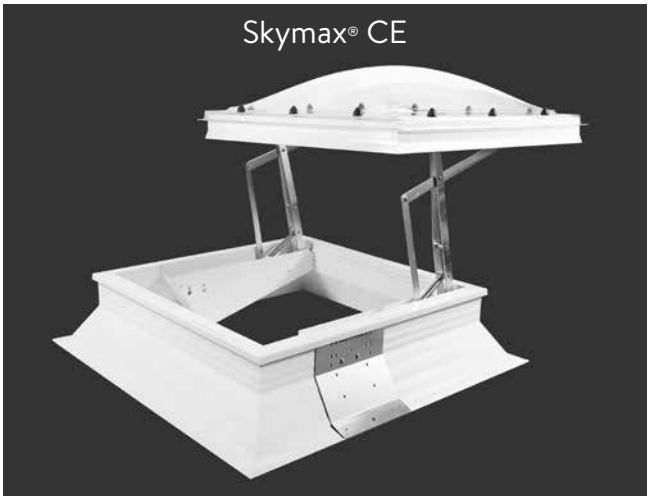
In case of fire, it is not the fire itself, but the smoke gasses that make most victims. The heat and smoke gasses fill the building, which complicates evacuation. Skylux developed different natural SHE systems which create smoke free zones and bring down temperature during fire, which enables a quick and safe evacuation.

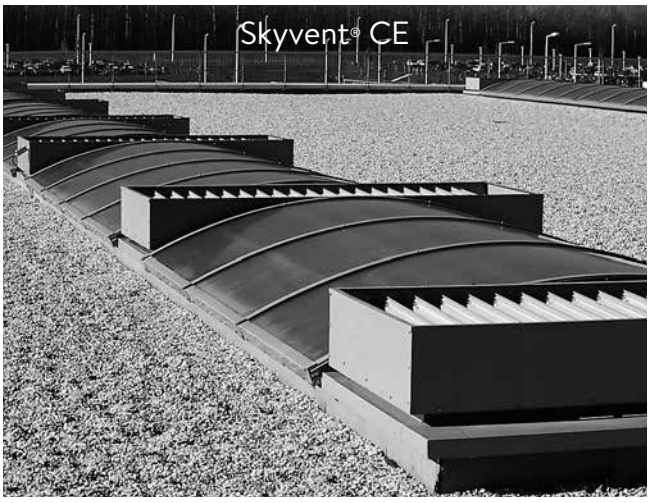
SHE systems are legally required in specific buildings. In such buildings, only CE certified systems, in accordance with European (and Belgian) norms, are allowed to be used.

At the same time, our SHE systems provide free natural daylight and daily ventilation.

Skylux‘ SHE systems:





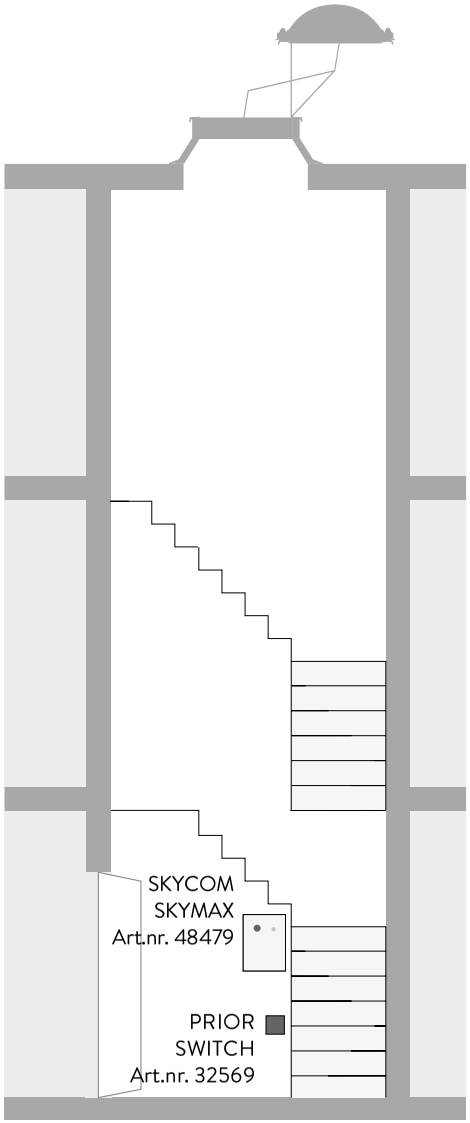


Each of these SHE systems can be operated by a Skycom® CE Master control, possibly in combination with a Skycom® CE Slave control.
We developed also a control unit fort he Skymax® CE : the Skycom® Skymax® CE control.

The SHE survey mentions the combinations of control units and smoke hatches allowed and supported by Skylux.

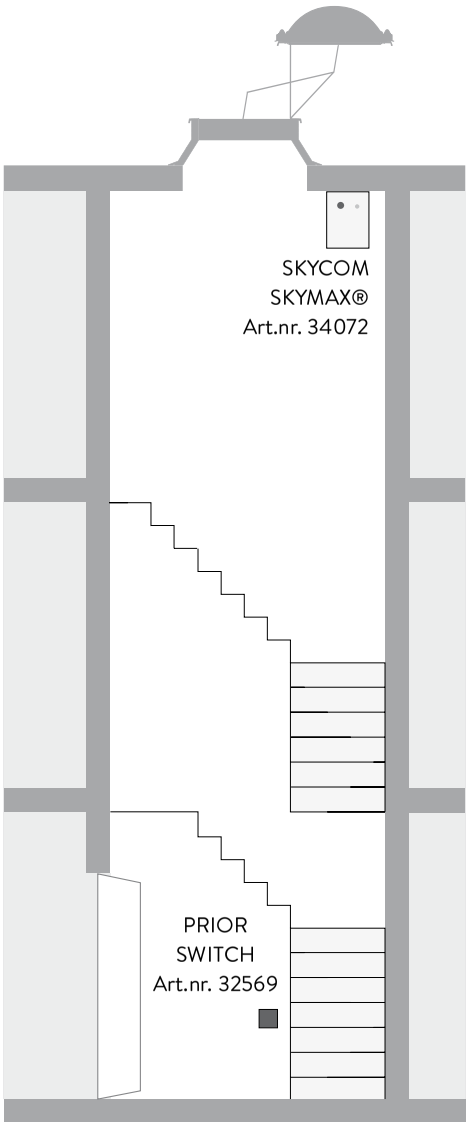
with Skymax CE

without positive safety (does NOT open automatically)
Cable sections in function of the distance
according to NBN S21-208-3:2018



with Skymax CE *

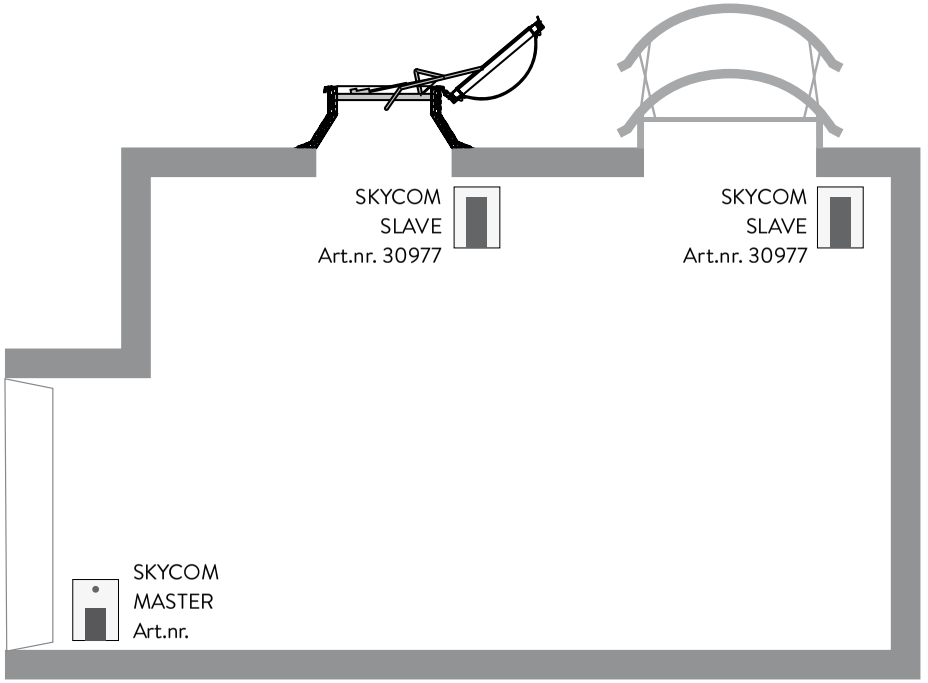
with positive safety (opens automatically)
according to NBN S21-208-3:2006



* Important: with positive safety: always install a Skycom control unit (Slave or Skymax) at the ceiling, as near as possible to the opening system (max 5m).

with Skylux 160° CE *

with Cintramax CE *



SHE TABLE

SKYLUX hello daylight!

ENGLISH

SAFETY & WARNINGS

1. The SHE-control must be installed or serviced by a qualified person, authorised for working at electrical Smoke and Heat Extraction systems. The control and accessories must be installed according to the local norms.

2. Service!
Before installation or service disconnect electrical power and remove the indicated terminal of the battery. Afterwards reconnect the terminal, mount the housing before switching on electrical power. Now you can test the complete installation.

3. Service of opening system
Apply the Lockout-Tagout as follows:
Before servicing the opening system, make sure the opening system can not start to move unexpectedly. Therefore remove the 8 A glass-fuse before starting service at the opening system. This disables the main supply and the battery supply of the opening system.

4. Batteries:
- To avoid explosion danger follow these safety rules:
    - Never short circuit a battery.
    - Do not use external chargers. Explosive gasses can be released.
    - Always handle batteries with care as they contain strong acids.
- Avoid to store controls with batteries for a long time. Batteries which are not used must be recharged (unload & load) every 3 months to slow down the capacity loss.
- Don't discharge batteries to deep as they might be damaged.
- There is no guarantee on batteries.

5. Guarantee expires:
- If controls or cables (especially motor cable) are wrongly dimensioned;
- If non-original parts are used. Use only original parts delivered by Skylux. Especially take care to use a control which is suitable for the SHE opening system;
- If opening systems are not connected according the installation instructions. Most opening systems must be connected through a limit switch. Please consult thoroughly the electric scheme of the appropriate SHE system before connection.

6. Next to the installation of a SHE system, make sure you take all necessary steps to be able to proceed to a smooth evacuation. Foresee several escape routes, make sure the firemen can reach easily the fire place. See to the possibility of a quick signal to the fire department in case of fire by a full fire detection system,... Consult your architect, constructor and fire-department.

7. The SHE-system needs mains voltage. In case of power failure, the system will continue to operate on its batteries in a limited period of time (min 72 h).

8. Mains power failure > putting out of service:
If the mains voltage is switched off for a longer period of time (> 1 day), disconnect the indicated pin of the battery and insulate the wire end. Otherwise, you will risk that the batteries discharge and will be damaged.

9. There is a possibility that the smoke does not reach the detector due to chimney effects through walls, shafts, roofs. Also behind a closed door or at another floorlevel may the smoke not be detected. A detector may be less sensitive to certain types of fire so that the signal is given in a later phase. Make sure to install sufficient detectors at right places.

10. It may occur that the opening system is not correctly operated due to a panic situation in case of fire.

11. The SHE-control does not protect people or objects from being stuck when the actuators are activated. This must be done externally.

12. The manufacturer is not responsible for the loss of a life or materials caused by fire, smoke, wind, rain; even when the rain- and wind detector is connected. Make sure no damage (wind, rain, ...) can be caused during uncontrolled opening of the system.

13. The SHE-control and accessories must not be used as connector box for cables ! Use an external connector box.

14. The wiring for the accessories (fire push buttons, detectors, prior key contact, ...) must be at least 1 m off other current wires (not in the same wire drain) to prevent from interference.

15. We reserve the right to modify this manual or the products without prior notice. The newest version is always on www.skylux.be.

16. The responsible person must keep this manual, if possible near the control unit.

17. In particular cases due to fall-through safety, it's forbidden to open the smoke hatches more than 30 cm for ventilation.

GENERAL DESCRIPTION

The Skycom CE control is intended for opening of skylights, smoke hatches, ... for Smoke and Heat Extraction (SHE) and comfort ventilation of 1 fire zone.

Generally the fire zone is controlled by 1 Skycom CE MASTER control and as many Skycom CE SLAVE controls as there are opening systems. So each opening system needs its own Skycom CE Slave control (except with opening systems with mechanical positive safety).
The Skycom CE control has the following operation possibilities:

Operation for Smoke and Heat Extraction (control in Alarm-status):

1. Automatically activated: by smoke or heat detectors. Each control has also an internal T-sensor which generates alarm at 75°C.
2. Activated by passer-by: on 'break-glass' fire-switches (on control or external)
3. Operation by firemen: possibility for priority open and close on the control OR on an external priority switch for firemen

Operation for comfort ventilation:

Activated by open-close switches (on control or external) or by weekly timer, room thermostat, outdoor weather sensor.

The operation status (OK / Alarm / Fault / Window open) is indicated by Led's and is also available on outputs for connection with other systems (AFA-systems, Air-gates, buzzer, ...) in the building.

INSTALLATION

We advise to consult your fire department to choose the best installation place for the Skycom CE Master control.
Generally install the Skycom CE Master control at a visible place and easy to be reached, on the access road of the firemen with the bottom at 1,35 - 1,45 m above the floor in the entrance hall of the (main) building.
When for some reason the master control can not be installed on the best accessible place for the firemen, you can install the external priority switch for firemen instead. In such cases the Master control will be installed in a technical room.

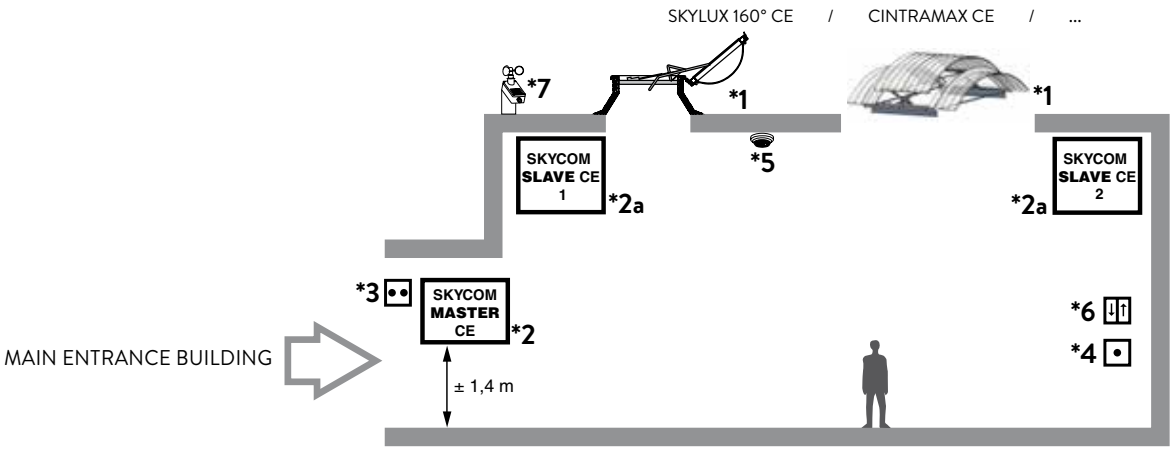
The Skycom CE Slave control must be installed as close as possible (max. 5 m) to the opening system, i.e. at the ceiling of the building or against the roof opening. The Slave detection unit must not always be installed. For some opening systems, the legal requirement of the positive safety is obtained mechanically (Skymax®). Use always a Slave detection unit for systems without integrated temperature sensor (Skylux® 160° / Cintramax® / Skyvent®).

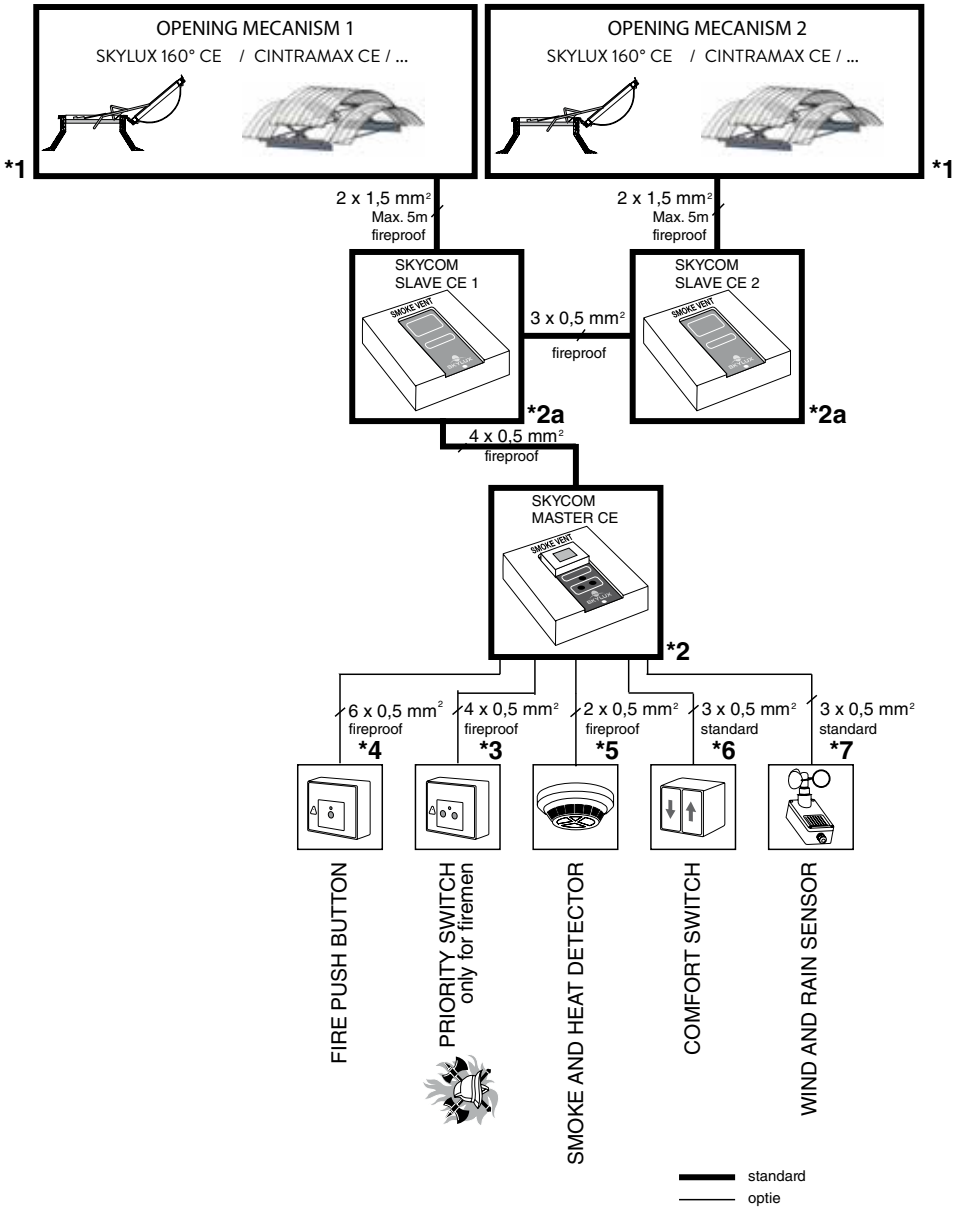
The control unit weights 7,5 kg and must be installed on a stable underground. The mounting holes for wall mounting are placed on the metal plate underneath the plastic lid.

Foresee (at least) a separate 230V power circuit with its own automatic circuit breaker for each fire zone. Don't connect other devices to this circuit!

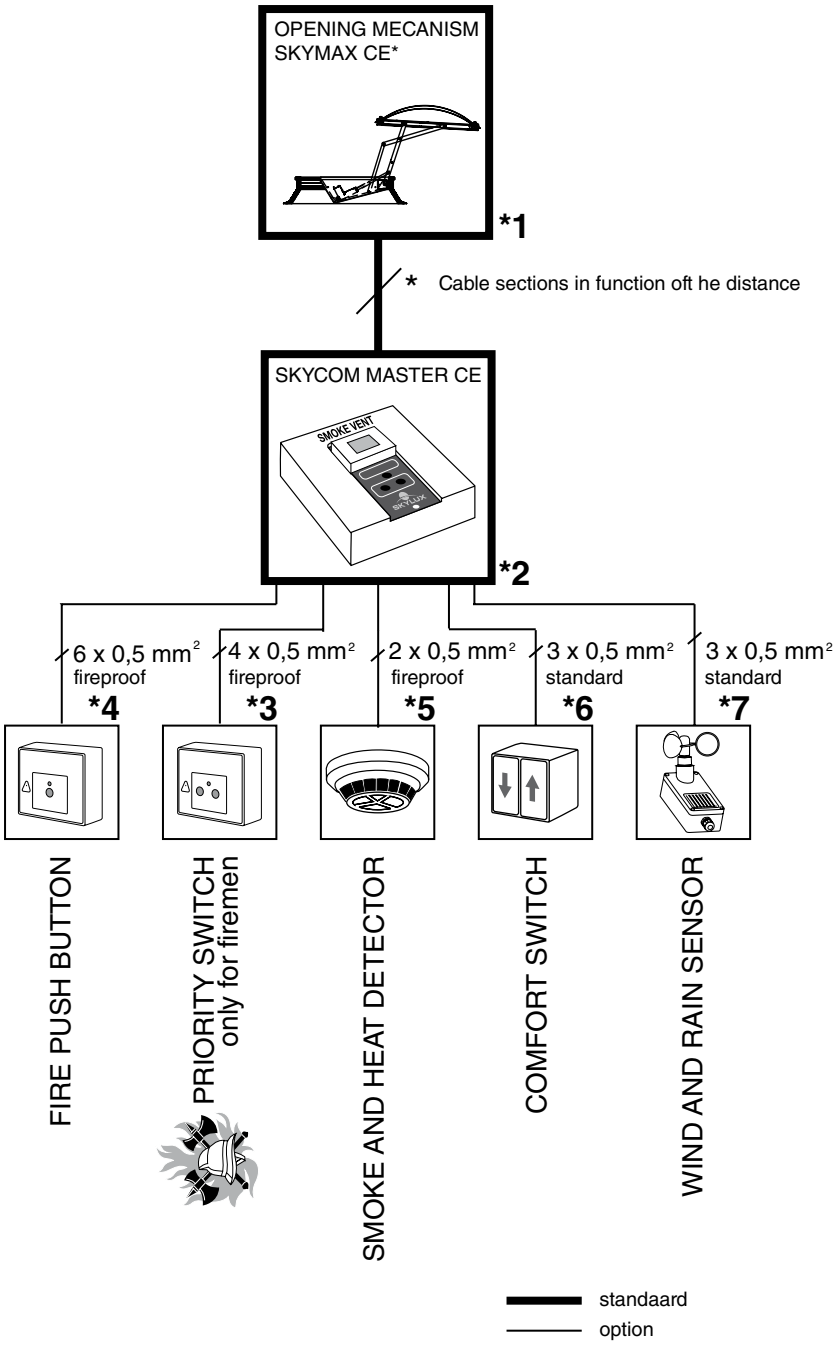
It is sometimes required to supply the control unit with a 230V circuit with separate earth leakage circuit breaker and that a circuit breaker is installed on the actuator line.

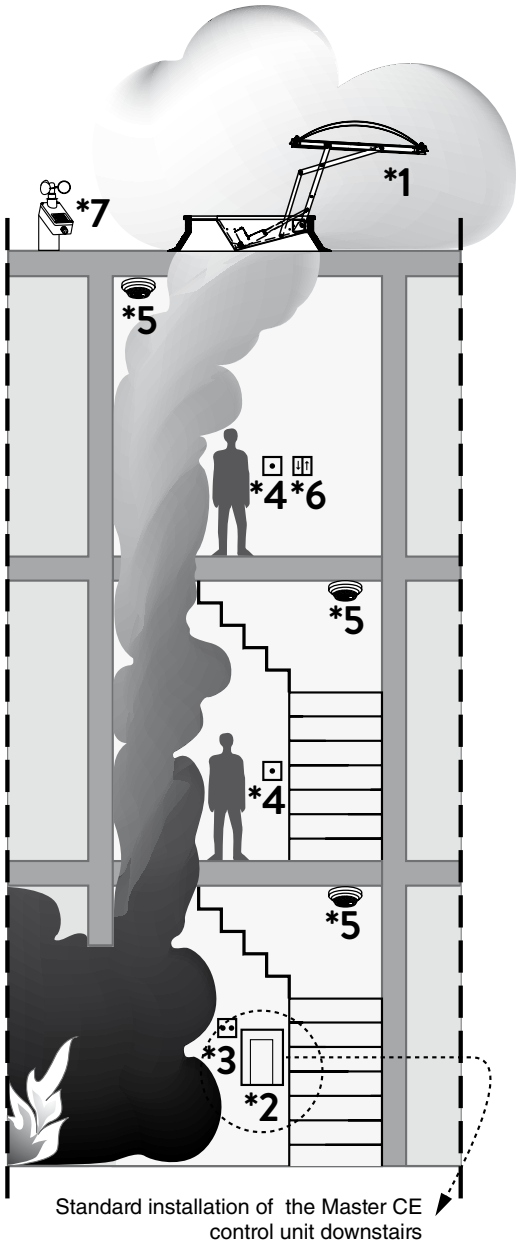
With positive safety (opens automatically)





Without positive safety (does not open automatically)





Standard installation of the Master CE control unit downstairs

Connection, operation and settings

Motor (actuator)

The actuators must be connected to output terminals 2-3. The max. load is 8 A.
It is possible to disable the line monitoring on the motor output. The cables can be connected in series or parallel or a combination of these (see drawings motor and electrical schemes).
It is important to keep the right polarity. The motors of most systems must be connected via a limit switch - see electrical scheme of the specific opening system.
See table at the end for cable sections and max. motor cable length.

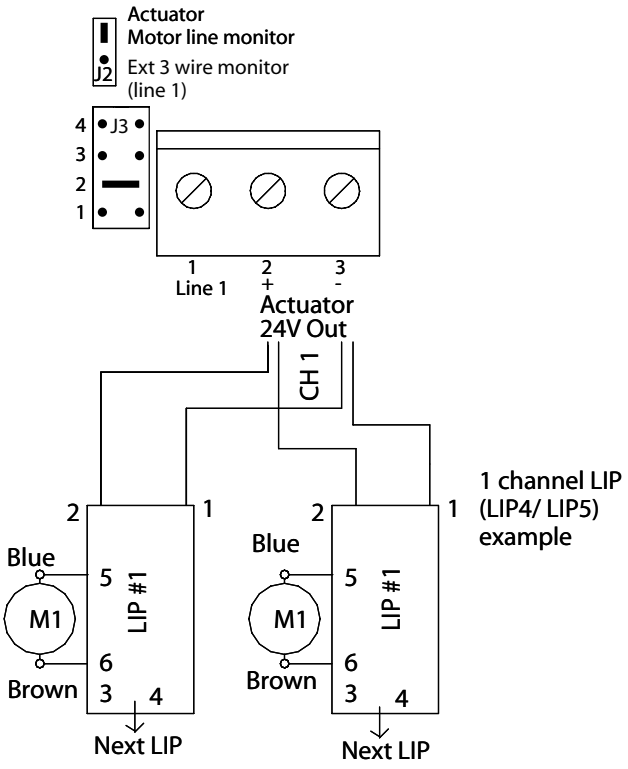
Cable monitoring (line monitoring) on the motor output

The control is equipped with 3 possible settings for cable monitoring (line monitoring), which can be configured by means of jumper J2.

	Jumper description
J3	Number of connected 27Kohm terminal resistors for actuator output
J2	Chooses line monitoring through motor terminals 2-3 (Mot Mon) or separate wire terminals 1-3 (Ext Li Mon), or no line monitoring when J2/J3 is removed
F1	Fuse 8A for actuator output

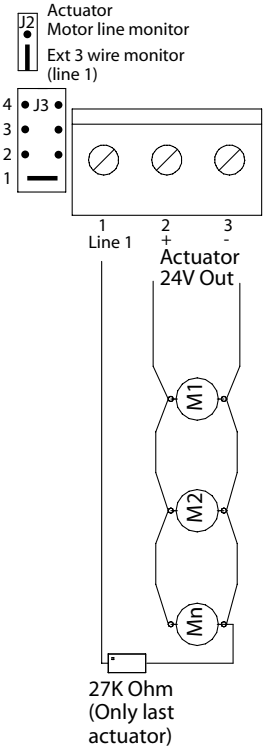
a. Jumper J2 mounted in pos. “Motor line” (Setting for Skylux® 160° CE, Skymax® CE old and new and Cintramax® CE)

Known motor: line monitoring (2-3) with double wired motor connexion.
Jumper J3 (actuator output) is set according to the number of termination resistors (27KΩ) to be detected – 1 to max. 4 lines can be detected by moving jumper J3 – this means that the cable installation between the control unit and the motors can be established in series connection (cable connection from smoke hatch 1, further to smoke hatch 2, etc.), or parallel connection (cable connection from each smoke hatch to the control), or a combination of these. However, as mentioned max. 4 different lines can be detected, each of them connected to the end resistor of 27KΩ.



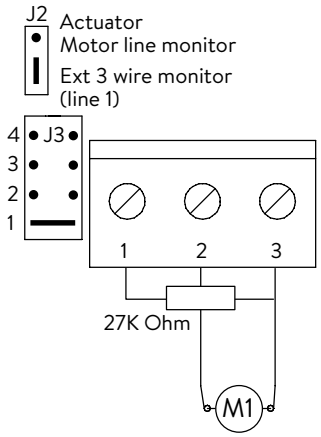
b. Jumper J2 in pos. “Ext 3 wire” (Setting for Skymax® standard / Cintramax® CE (old) / Skyvent® CE)

Unknown motor: line monitoring (1-3) with 3 wired motor connexion.
With jumper J3 (actuator output): you choose how many lines (number of 27KΩ) you wish to detect - the same way as the motor line.
This setting demands 3 wire cable from motor output to motor.



c. No line monitoring (never recommended)

Position 27KΩ resistor: in terminals 1 and 3
Position J2: “Ext 3-wired monitor (line 1)”
Position J3: “1”.
Position actuator: in terminals 2 and 3



Electronic current limiter, type LIP function and setting (Skylux 160°CE, Cintramax CE, Skymax CE)

The current limiter type LIP (mounted on the opening system) is used as current limiter for the actuator. On the LIP5, and younger version max. 3 times overload cut outs in the same direction is allowed. After which it will not be possible to run in this direction again, before the motor has run in the opposite direction. Please note that when opening, the red LED in the LIP must light. This indicates that polarity of the actuator is correct.

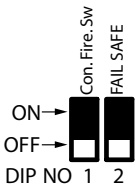
Table of LIP settings

Opening system	Skylux 160° LM	Skylux 160° LM Cintramax	Skylux 160°: Mini + RM Skymax
current limit	3A	4A	2,5A
DIP 1	ON	OFF	ON
DIP 2	OFF	ON	ON

Type	DIP 1	DIP 2	DIP 3	DIP 4	DIP 5	DIP 6	DIP 7	DIP 8
LIP5 Single	See diagram above		27K ON	not present				
LIP6 * Double			ON	OFF ** = Tandem	27K ON	M1-M2 delay=OFF	not present	
LIP7 Single Basic			27K ON	not present				
LIP7 Single Tandem			27K ON	ON = COM	OFF = Slave ON = Master	OFF = Synchro Mode ON = Tandem Mode	off: no delay on: 7s delay	no function

* SA Power LM Large - parallel operation: Jumper OPT mounted - both motors stop at the same time if one stops because of overload.
** When DIP4 is OFF = Tandem Mode - both motors stop at the same time if no current flows in one (1,5 sec. reaction time).
*** Required: an actuator with “reed” sensor (3-wire sensor black cable included).

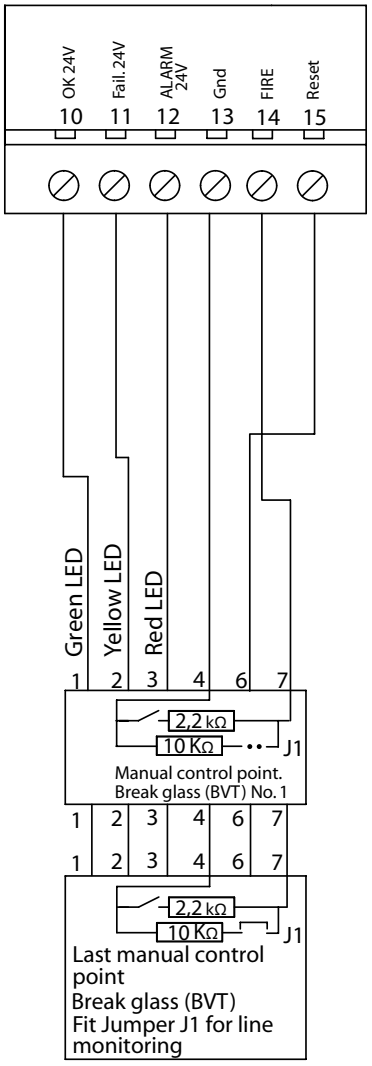
Fire switches



The fire switch will contain the following:

- Breakable glass window and red control button, activated by pressure - this puts the control unit in ALARM status, by which the motor output is activated (for normal service and testing the lid can be opened with a key).
- RESET button which brings the control unit out of the alarm status and starts the closing sequence for about 180 seconds. Please note that RESET does not cancel errors in the system, e.g. line errors etc. These must be found and corrected. When a detector is still alive after reset, the control will go immediately in alarm status again.
- RED LED indicates that the control unit is in ALARM status and that the motor output either is or has been activated.
- YELLOW LED indicates faults on the system - please call for a service technician.
- GREEN LED indicates that the system is in normal operation status without errors.

The master control has an integrated priority fire switch.

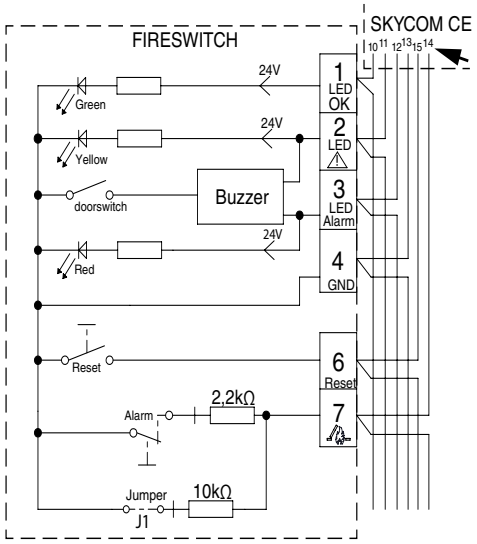


Additional connection of the external fire switches are made as shown on the drawing.
When the control is fully loaded (8A), max. 8 external fire switches can be connected. When there is no load (Master), max. 10 fire switches can be connected. The installation with fire switches must be terminated with a resistor (10kΩ - 27kΩ) in the last switch in order to establish the line monitoring correctly – this can either be done by moving the factory mounted resistor from the terminal strip to the last fire switch or connect **jumper J1** in the fire switch (by this a 10KΩ resistor is also connected).

By means of DIP switches the control unit has different possibilities of settings for the input to the fire switch:
DIP 1 (Con.Fire.Sw):
On = ALARM status from 500-3KΩ, (indication of line error by direct short circuit or open circuit).
Off = ALARM status from 0-3KΩ (indication of line error by open circuit).
DIP 2 (Fail Safe):
On = Any line error on fire switch or smoke detector puts the control unit in ALARM status. This function can be used if cables to fire switches and smoke detectors are not fireproof.
Off = An error status does not report ALARM status.

Terminals BVT

1. green LED OK (lights when OK and while closing)
2. yellow LED (lights on error)
3. red LED alarm (emergency opening)
4. ground (-)
5. not used
6. fire switch reset
7. fire switch emergency opening
   Jumper J1 must only be set in the last or only fire switch



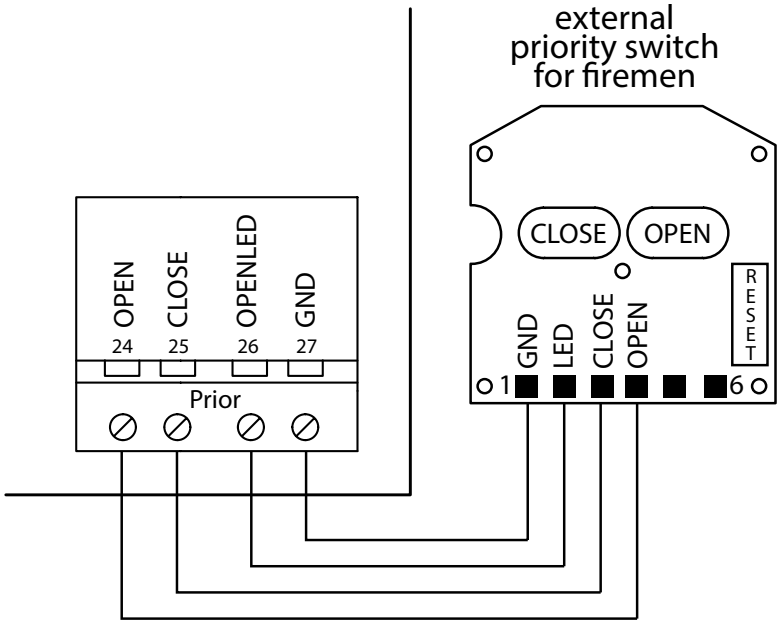
Firemen priority open/close buttons on front panel

On the front panel of the master control, below the fire switch there is a “priority close button” (not for export version). When the control is in alarm status, firemen can use this button to close the smoke hatches. The control stays in alarm status to make sure that the smoke hatches will not be opened unintended. In this status the smoke hatches can only be opened again by the priority fire switch on the front panel (or first reset the alarm).

External priority switch for firemen (art. 32569)

When for some reason the master control can not be put at the entrance hall of the building, you have the possibilty to install the external priority switch at the entrance hall so that firemen can still easily operate the SHE-system. In this case the master control will e.g. be installed in a technical room.

The priority switch for the fire brigade is an overruling switch allowing the fireman to control the panel regardless of the sensor inputs.



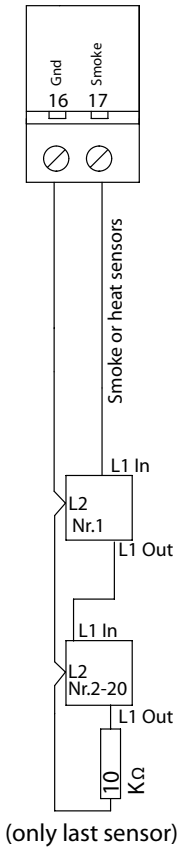
Connection / function

- The CLOSE switch closes the smoke vent for 180 seconds and the control unit remains in alarm status.
- The OPEN switch opens the smoke vent and sets the control unit in alarm status.
- The blue LED:
  - o turns on if the smoke vent is open
  - o flashes slowly if the smoke vent opens or closes
  - o flashes quickly if there is a malfunction
- If no priority switch is used, the 10 kΩ resistors (24-27 / 25-27) must remain in place.
- Only 1 priority switch for the fire brigade can be connected.
- If OPEN and CLOSE are activated simultaneously = a reset will be conducted.

Smoke- / heat detectors

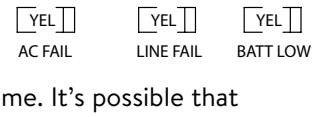
Smoke- and heat detectors are connected as shown.
Line monitoring: Correct line monitoring can only be guaranteed with detectors delivered from the supplier. Other detectors may have different internal resistances and stand by power consumption.

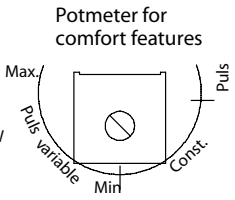
Smoke-/heat detectors can be connected to the master and/or slave controls, so you can avoid long wiring.
Connect max 20 pc per control.



Comfort ventilation

The motor output can be controlled separately with comfort switch(es).
The master control has already integrated comfort open/close buttons.

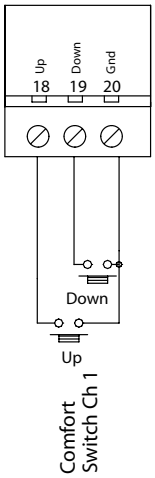




Additionally external comfort switches can be connected as shown on the scheme. It's possible that due to fall-through safety, it's forbidden to open the smoke hatches more than 30 cm for ventilation. For comfort ventilation there are the following possibilities:

Potentiometer in Puls position:
It is possible to press the »up« button 3 times, which each gives 10 seconds of opening time - after that nothing happens – Continuous »up« signal gives 3x10 sec.= 30 sec. - One press on »down« closes the actuator completely; it takes 18s longer compared to fully closing time - In order to avoid »actuator pumping« max. 3 successive closing attempts will be allowed.
Potentiometer in Constant position:
As long as »up« signal or »down« signal are given, the actuators are running
Potentiometer in Puls variable position:
The time on the above mentioned pulse opening can be adjusted from 1-60 sec. on the potentiometer.

When moving the potentiometer into the different positions the LED batt low will flash for about 4 sec. to indicate when in puls mode. LED line fail flashes 4 sec. when in Constant and AC fail flashes when in puls Variable.



Put the potentiometer of all connected detection units (also Master) in the same position.

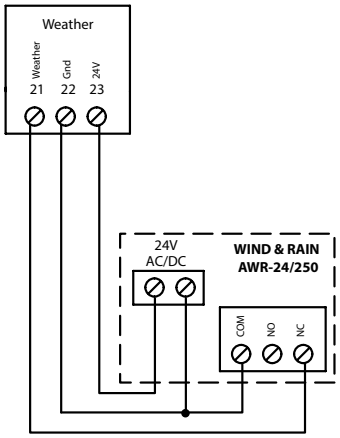
Room thermostats, weekly timers, CCS and other external control equipment for comfort ventilation can be connected to the input of the comfort control.

Weather sensor / Close all function

Install the rain- and wind detection as close as possible to the smoke hatch, at a place, where the wind speed is equal to the wind speed of the smoke hatch (do not install the detector at eg the outside of the roof edge trim).
The smoke hatches should be closed when the wind is above 6 m/s.
LED LD3 on the main board indicates active weather sensor - lights as long as input is active.

As long as the weather sensor is active, the smoke hatches cannot be opened with comfort switches.

The weather sensor closes on all controls which are connected through bus connection.
On the input to weather station a weekly timer can be connected which makes sure that everything is closed, e.g. by end of a working day.

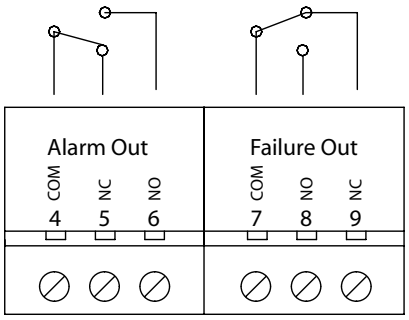


The 24V power supply (terminal 22 & 23) for the weather sensor is standard set this way (J11) that it does not function on batteries.
If battery functioning is needed, then mount J11.
This is possible at PCB V5 and the following versions (as from March 2015).
Be aware of the reduced standby time due to current consumptions.

Factory setting weather sensor = test = Pos 0 = delay 10s + highest sensibility.
Recommended settings weather sensor: Pos 4 = 4m/s (delay = 10 min)

For more details, consult the installation instructions of the wind-and rain detector AWR-24/250.

External signal output, Fire Alarm Panel and other control systems



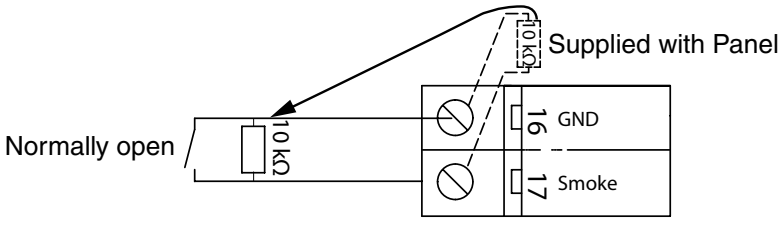
The control panel can forward alarm situation to external connected systems by means of potential free contacts on the terminals 4 (com), 5 (NC) and 6(NO).
The control panel can forward failure condition to external connected systems by means of potential free contacts on the terminal 7 (com), 8(NO) and 9(NC).
Alarm and error contacts work parallel on all controls connected with bus connection.

DIP6 (fail relay):
On = Fail relay changes function to indicate open/closed smoke hatcheswww.

How to make a connection from a Fire Alarm Panel

The control panel can receive potential free alarm signals from e.g.
AFA systems on the input to fire switch or smoke-/heat detector.
Terminal 16 and 17.
Line monitoring resistor must be fitted over the contact of the AFA system.

For automatic reset: see DIP 8 settings (p. 23).

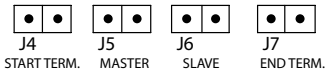


Potential free ALARM contact.
Com + NO connected by alarm.
Max 48V 0,5A

Potential free Failure contact.
Com + NC connected by failure.
Max 48V 0,5A

More controls connected in one fire group (bus connection)

When there is only 1 control unit in the fire group, terminals A 1 2 3 4 and B 1 2 3 4 are not used. The communication is interrupted by removing all the jumpers.



By means of a bus communication it is possible to make 2 – 35 control units to work as a complete system. The control units communicate with each other via a 3 wire bus connection.

Terminal no. A1, A2, A3, A4 are for the incoming connection and B1, B2, B3, B4 for the outgoing connection.
In the first control unit start Bus J4 has to be on. This control is Master and J5 must therefore also be on. Following control unit is a slave and therefore J6 must be connected. In the last slave unit, J7 and J6 must be connected to terminate the bus cable.

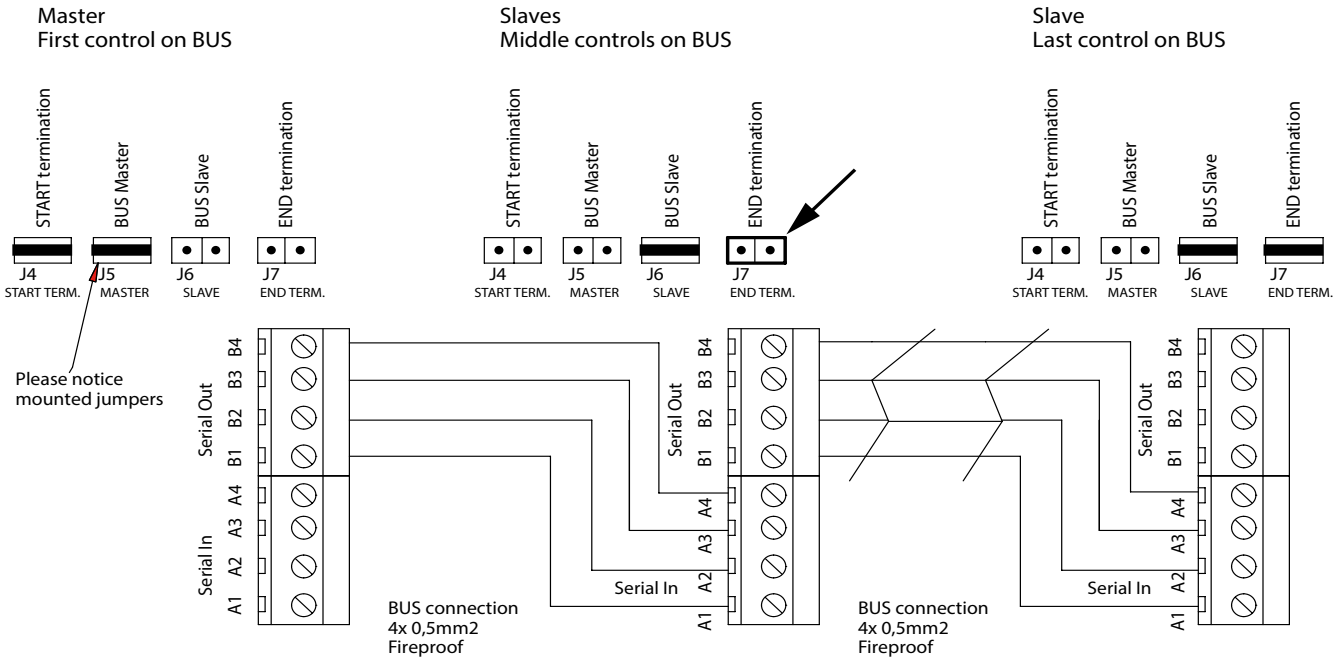
ALARM: Alarms from Manuel Control Point smoke-/heat detectors are controlled locally. When DIP11 is set, the control will go into alarm state if another control connected on the BUS enters alarm state.
RESET: If the reset button on one control or in one fire switch is activated, the reset function on all connected controls is activated and starts the closing function on all motor output for approx. 180 sec.
COMFORT: The comfort operation can work locally on each control. When DIP10 is set the control will react on any comfort signal send on the bus from another control.
If a wind- and rain sensor is connected, it will work on all control on the bus matter dip settings.

Function description for control units connected with bus connection
If more control units are connected by means of a bus connection, the following are monitored/communicated between the control units:

- A detected bus error makes the LED LD7 on the main board light/flash.
- A detected bus error brings all controls on the bus connection in error condition (line error).
- If one of the control units in the network goes into alarm status, all go into alarm status.
- If one of the control units goes into a certain error status (line error, AC error, battery error or bus error), the other control units also go into error status – the type of the error is indicated on the board of the front plate of all control units – on the control unit(s) which have not caused the error, the ok LED on the board of the front plate flashes at the same time as the error. On the control unit(s) which have caused the error, the OK LED is switched off.

Factory settings of Master & Slave

	J4	J5	J6	J7
Master	ON	ON	OFF	OFF
Slave	OFF	OFF	ON	ON



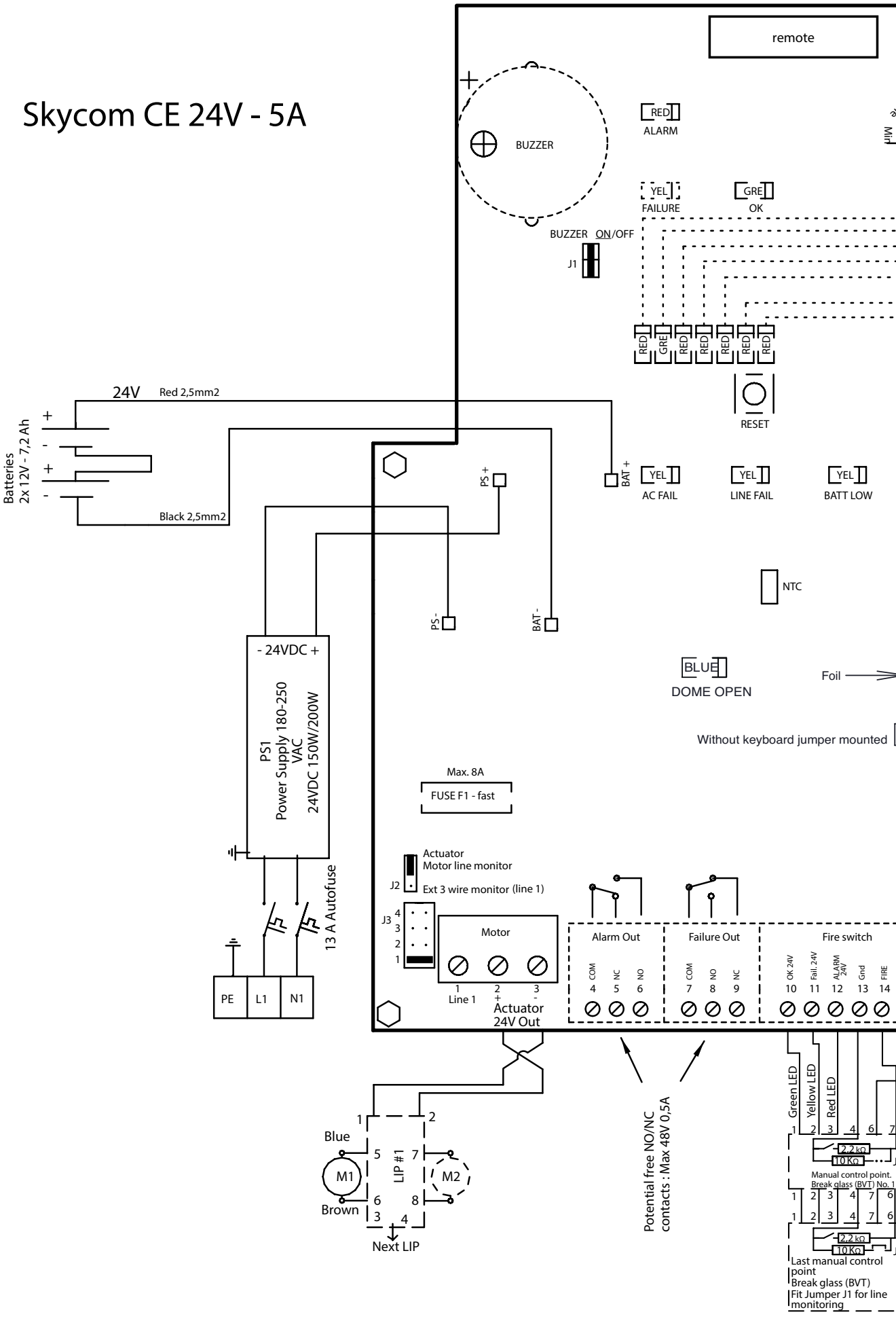
Special functions

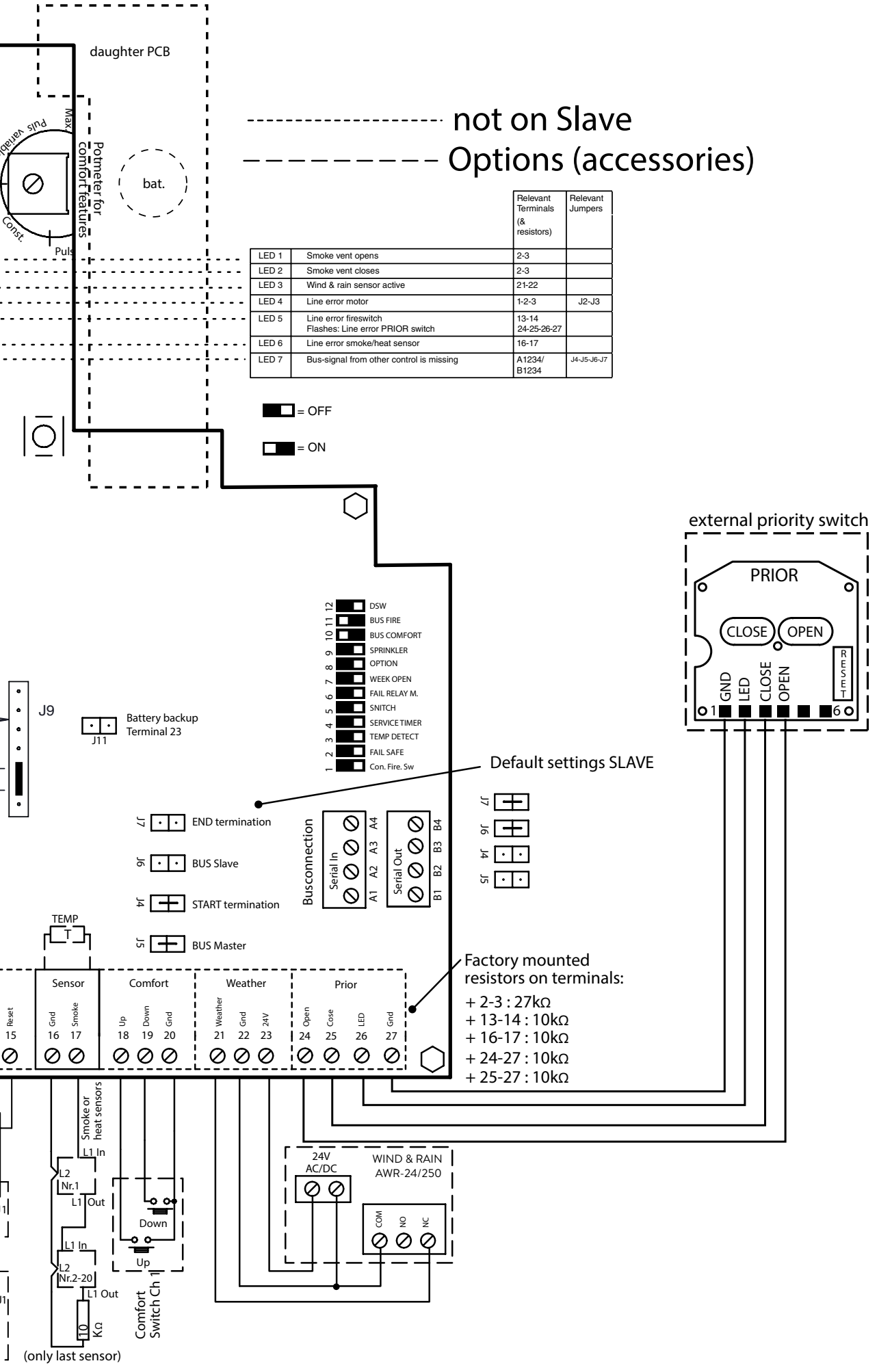
Sprinkler function:
DIP 9 On - a special function comes in use where sprinkler systems are installed. With this function activated, the actuator output closes, if smoke-/heat detector input is activated.
If the fire switch is activated, the actuator output opens.

Weekly open/close:
DIP 7 On - the motor output opens shortly (3 seconds) once a week and closes immediately after -
This function is used to give the right tension on the smoke vents to keep them airtight.

Function of heat detector in LIP:
DIP 3 On - a heat detector 70-100° can be mounted in each LIP. If the temperature is exceeded, the control unit goes into alarm status and the opening system opens.

Skycom CE 24V - 5A

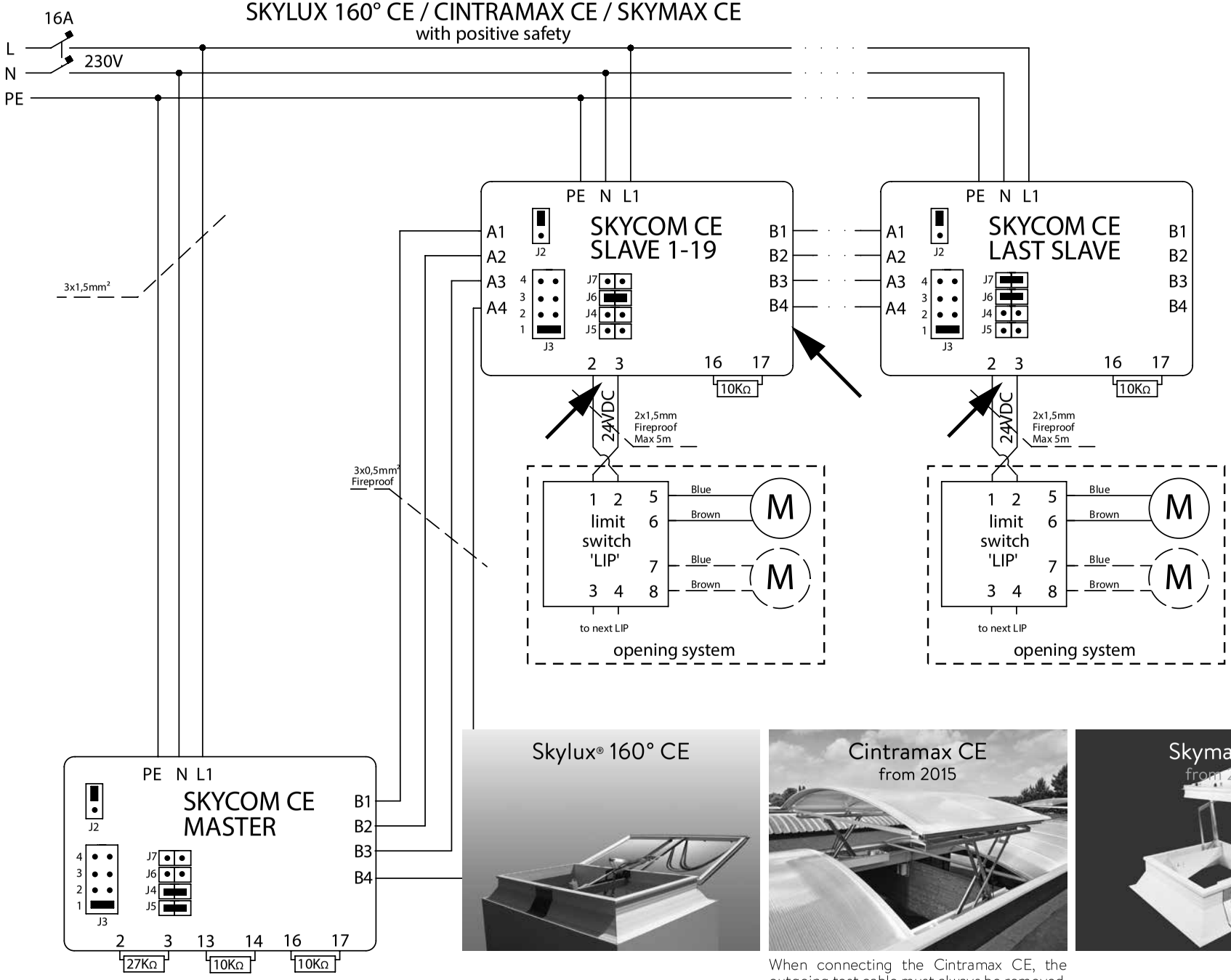




		Relevant Terminals (& resistors)	Relevant Jumpers
LED 1	Smoke vent opens	2-3	
LED 2	Smoke vent closes	2-3	
LED 3	Wind & rain sensor active	21-22	
LED 4	Line error motor	1-2-3	J2-J3
LED 5	Line error fireswitch Flashes: Line error PRIOR switch	13-14 24-25-26-27	
LED 6	Line error smoke/heat sensor	16-17	
LED 7	Bus-signal from other control is missing	A1234/ B1234	J4-J5-J6-J7

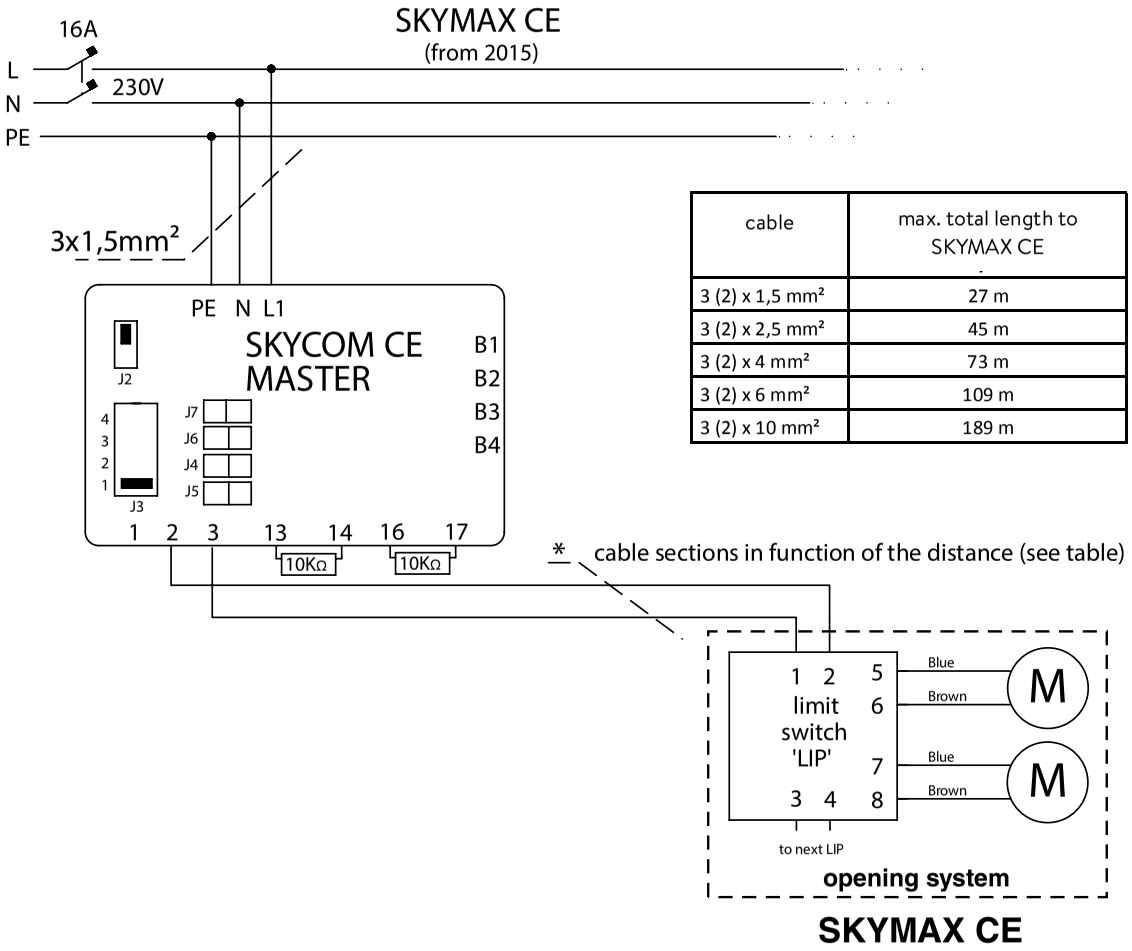
SKYLUX 160° CE / CINTRAMAX CE / SKYMAX CE

with positive safety

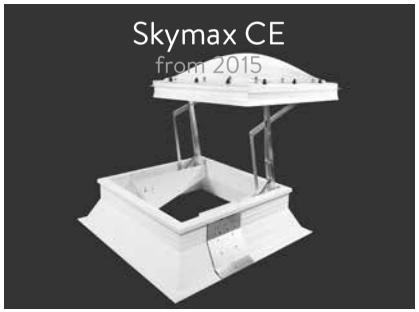


When connecting the Cintramax CE, the outgoing test cable must always be removed.

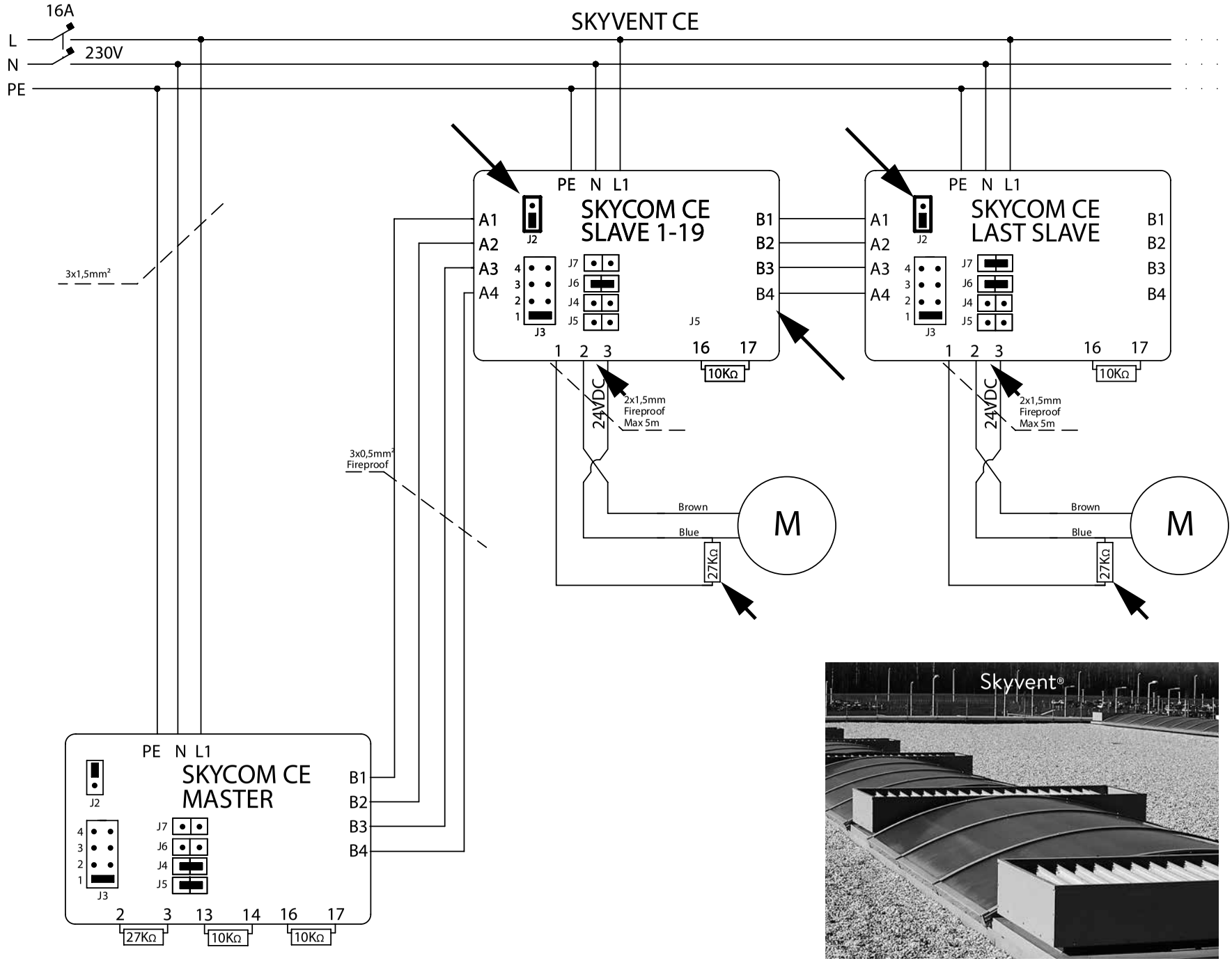
SKYMAX CE
without positive safety



cable	max. total length to SKYMAX CE
3 (2) x 1,5 mm²	27 m
3 (2) x 2,5 mm²	45 m
3 (2) x 4 mm²	73 m
3 (2) x 6 mm²	109 m
3 (2) x 10 mm²	189 m



ENGLISH

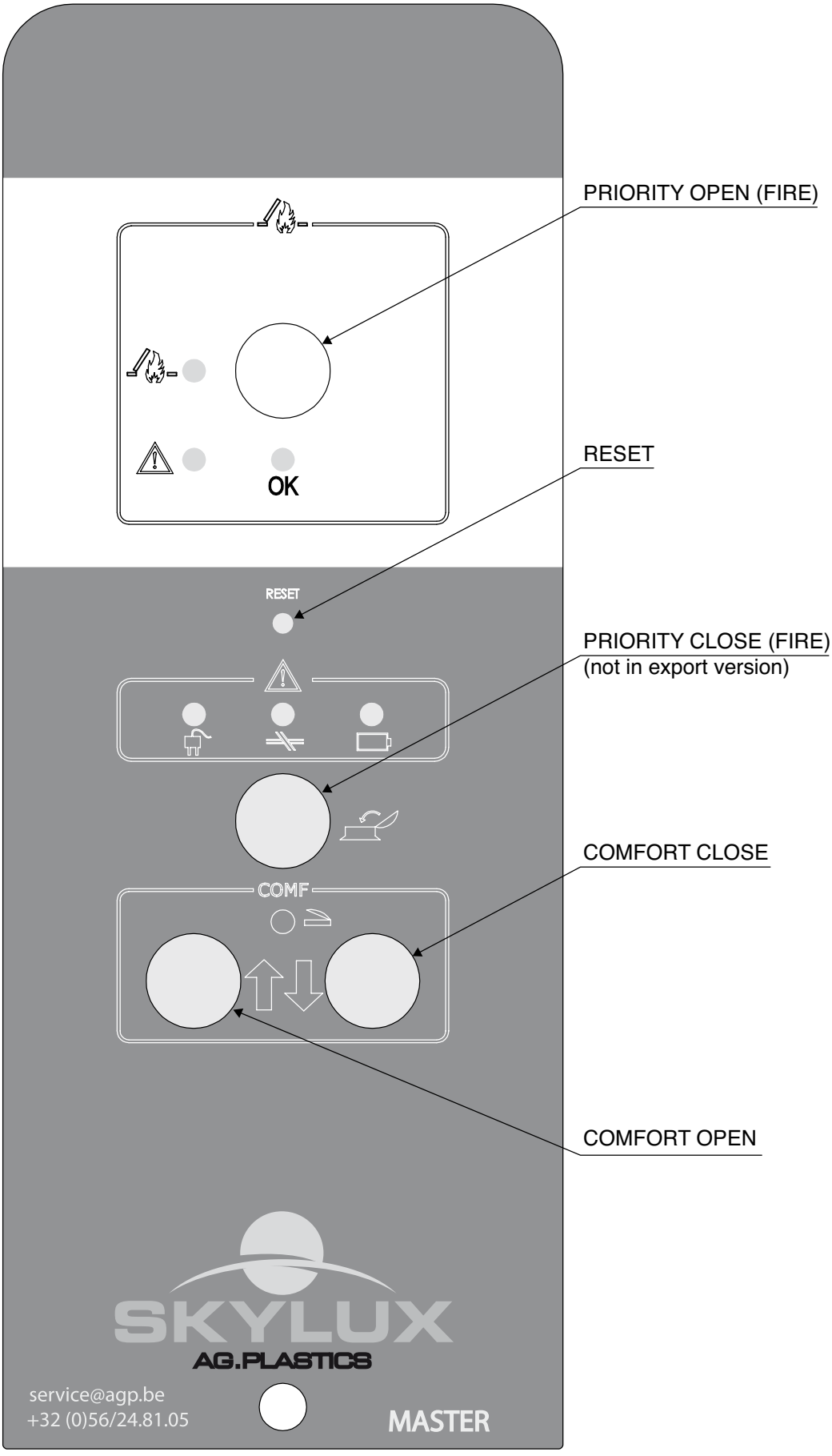

SKYVENT CE
16A
L
N
PE
230V
3x1,5mm²
3x0,5mm²
Fireproof
PE N L1
SKYCOM CE
MASTER
J2
J3
J4
J5
J6
J7
B1
B2
B3
B4
2 3 13 14 16 17
27KΩ
10KΩ
10KΩ
PE N L1
SKYCOM CE
SLAVE 1-19
A1
A2
A3
A4
1 2 3 16 17
10KΩ
24VDC
2x1,5mm
Fireproof
Max 5m
Brown
Blue
27KΩ
M
PE N L1
SKYCOM CE
LAST SLAVE
Skyvent®

Settings (factory setting: marked in bold)
By means of jumpers and dip switches it is possible to enable/disable several functions.
Factory settings are for 1 opening system Skylux 160° CE with 1 Master and 1 Slave control. Correct settings for other opening systems are mentioned on the individual electrical schemes and are marked with an arrow.

	Text on board	Default setting	Mounted / ON function	Dismounted / OFF function
DIP 1	Conf. Fireswitch	OFF	Fire switch active from 500-3KΩ	**Fire switch active from 0-3KΩ**
DIP 2	Failsafe	OFF	Line error on fire switch or detector puts the control in alarm	**Normal mode**
DIP 3	Temp. Detekt	OFF	Line error on motor line (upper resistor area) = alarm	**Normal mode**
DIP 4	Service T	OFF	Active	**Inactive**
DIP 5	Snitch	OFF	LED's "remember" errors (line errors, AC/Batt. error, bus error). The LED's can only be switched off/reset again by setting dip switch off	**Normal mode**
DIP 6	Fail Relay	OFF	Failure relay works as indication that skylight is open	**Normal mode (works as failure relay)**
DIP 7	Week open	OFF	Weekly open (2 sec.) /close (5 sec.) cycle activated	**Weekly open/close not activated**
DIP 8	Option	OFF	SW 1.000: prior input functions as roof access, non-functional / SW 1.003: prior input functions as roof access / SW 1.005: automatic reset of the alarm 2 s after the fire signal of the sensor input (terminals 16-17) has ended	**Normal mode**
DIP 9	Sprinkler	OFF	Motor output closes by active detector (opens by activating the fire switch) or internal T-detection	**Normal mode - motor output opens by ative detectors or fire switches**
DIP 10	Bus comfort	ON	**The control reacts on comfort signal via bus activity**	The control does not react on comfort signals via bus activity // Always reaction on weather signal and failures via bus activity and own comfort signal
DIP 11	Bus fire	ON	**The control reacts on alarm signal via bus activity**	The control does not react on alarm signal via bus activity // Always reaction on weather signal and failures via bus activity and own alarm signal (detector or fire switch)
DIP 12	Lock-out	OFF	Slaves can go in lock-out mode	**Normal mode**
J1		ON	**Buzzer functional**	Buzzer off
J2 (motor)	Mot Mon act.	yes	**Known actuator: line monitoring with 2-wired motor connexion**	No line monitoring
	Ext Li Mon act.	no	Unknown actuator: line monitoring with 3-wired motor connexion.	
J3 (motor)	1 - 2 - 3 - 4	Pos. 1	**Set up according to number of 27KΩ resistors on actuator exit**	No line monitoring (J3 and J2 not connected)
J4(Bus)	Start term. + Master	Yes (Master) No (Slave)	First control unit in the bus network which is also master	See section concerning connection of controls units in bus connection, page 14
J5(Bus)		Yes (Master) No (Slave)		
J6(Bus)	Slave	No (Master) Yes (Slave)	Middle and last control unit in the bus network	
J7(Bus)	End term.	No (Master) Yes (Slave)	Last control unit in the bus network	
J9	FOIL	No (Master) Yes (Slave)	Line monitoring of keypad foil	Line error flashes
J11	BatSup -> Ø 23	No	Battery backup of terminal 23	Terminal 23 only AC supplied

Others: Reset time = 180 sec. closing // Cut-off motor output and loading after 360 sec. // Comfort variable (potentiometer): 1-60 sec.

FRONT PANEL: LED's (MASTER & SLAVE) & BUTTONS (MASTER ONLY)



LED INDICATIONS

Front panel

Symbol	Colour & Visibility	Operation possibilities for:	Alarm/ fire	Comfort operation
OK	Green	**lights** if everything is ok **switched off** by local error on this control **flashes** by error message from other controls received by bus	Yes	Yes
	Red	**Alarm:** Control in alarm via own entry **Flashes:** Control in alarm via other control	Yes	No
	Yellow (flashes)	**Fault:** AC or DC or line error.	Yes	Only close
	Yellow * (flashes)	**AC error:** No Mains voltage - Circuit breaker switched off? - Internal 24V supply defect?	Yes	Only close
	Yellow * (flashes)	**DC error:** Battery low, charging - Mains voltage disconnected? - Battery not connected? - More than 1 day => batteries defect - Flashes quickly if the battery is below 19 V.	Yes	Only close
	Yellow * (flashes)	**Line error** - See Led 4-7 for details - No other Led: connector keypad fail (J9) - Check settings (arrows) and connections according the schemes	Yes	Only close
	Blue (constant)	lights when smoke vents are open flashes when the smoke hatch opens or closes	Yes	Yes
	lights with *	time for yearly service - please contact SHE service (running light)	Yes	Yes

Main board (Internal PCB)

		Relevant Terminals (& resistors)	Relevant Jumpers	Operation possibilities:	
				Alarm: - fire - prior	Comfort
LED 1	Smoke vent opens	2-3			
LED 2	Smoke vent closes	2-3			
LED 3	Wind & rain sensor active	21-22		Yes	No
LED 4	Line malfunction on the actuator output: - Continuous light: wire is broken - Light flashes quickly: output connected to the ground - Light flashes slowly: short circuit output PLEASE NOTE: RESET or closing are not possible when the actuator is working.	1-2-3	J2-J3	Yes	Only close
LED 5	Line error fireswitch Flashes: Line error PRIOR switch	13-14	J1 in fire button	Yes	Only close
LED 6	Line error smoke/heat sensor Flashes : temperature exceeds 75°C	16-17		Yes	Only close
LED 7	Bus-signal from other control is missing (only relevant if J4-J7 are mounted)	A1234/ B1234	J4-J5-J6-J7	Yes	Only close

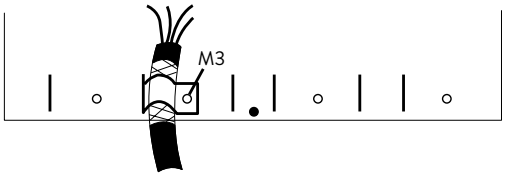
Cables

It is very important to use the correct cable sections and sizes to make sure that the Smoke and Heat Extraction system meets the standards and works correctly in case of emergency.
The two most important factors are the ability of the cables to resist heat and to make sure that the voltage drop in the cables to the actuators does not exceed the max. value (15% for most systems) at full load of the SHE-hatches.

Fire resistant cables according to IEC 60331 must be used for the following functions:

Opening systems with actuators 24V	2 or 3 wires: section: see table "Max motor cable length"	Maximum distance
Fire switch	6 x 0,5 mm²	max. 100 m
Smoke detector	2 x 0,5 mm²	max. 100 m
Heat detector	2 x 0,5 mm²	max. 100 m
Cable between control units (bus)	4 x 0,5 mm²	total length max. 300 m
Priority switch	4 x 0,5 mm²	max. 100 m

For cable lengths > 100 m, a shielded cable must be used



Normal cables can be used for the following functions:

Supply for control 230VAC	3 x 1,5 mm²
Comfort ventilation button	3 x 0,5 mm²
Wind- and rain sensor	3 x 0,5 mm²

Nominal motor current for each opening system (current per system):

	NOMINAL	Max. Systems per Control	THEORETICAL *
system E (1A)	1 A	8	1,25 A
Skymax standard	1,1 A	7	1,1 A
Skymax CE (old version)	4 A	2	4 A
Skymax CE **	2 x 2,5 A	(1)	3,75 A
Skylux 160°CE LM **	4 A	(2)	3 A
Skylux 160°CE LM (2 motors) **	2 x 4 A	(1)	6 A
Skylux 160°CE RM **	2,5 A	(3)	1,875 A
Cintramax ** (old version)	2 x 1,1 A	(3)	2,2 A
Cintramax CE **	2 x 4 A	(1)	6A
Skyvent **	0,8 A	(10)	0,8 A
**Monoflap 2 x 2 m ** **	6A	(1)	4,5 A

* **Only to be used to determine the max motor cable length with the table below.**

* * Generally use 1 Slave control per opening system. This results in short motor cables.

Max. motor cable length:

I total (theoretical)	1 A	2 A	3 A	4 A	5 A	6 A	7 A	8 A
Cable 3 (2) x 1,5 mm²	109 m	54 m	36 m	27 m	21 m	18 m	15 m	13 m
Cable 3 (2) x 2,5 mm²	181 m	90 m	60 m	45 m	36 m	30 m	26 m	22 m
Cable 3 (2) x 4 mm²	292 m	146 m	97 m	73 m	58 m	48 m	41 m	36 m
Cable 3 (2) x 6 mm²	439 m	219 m	146 m	109 m	87 m	73 m	62 m	54 m
Cable 3 (2) x 10 mm²	759 m	379 m	253 m	189 m	151 m	126 m	108 m	94 m

MAINTENANCE

The functions of the control unit and the opening system must be tested by authorized personnel at least once a year. The control unit informs when the maintenance should be done. The external LEDs on the front panel flashes fast (running light). The control unit and opening system are of course still full operating. Please call a service technician at your earliest convenience in order to carry out the maintenance and to test the control and opening system, in order to prepare it for another year of operation. The legal requirements for this must be observed and the testing and control must as a minimum include the following:

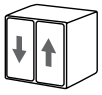
- Control that all opening systems move to full opening when the fire function is activated - should not be carried out if the wind is more than 6 m/sec. as there might be a risk that the opening system cannot close automatically.
- Control of the batteries. If the batteries are replaced it is important to use the correct type.
- Control of in- and outputs on the control.
- Control of fire switches and smoke- and heat detectors.

The batteries should be replaced as required, however at least every third year!
Clean dust from components (fan, ...) inside.
Clean wind & rain sensor as required.

Please contact our SHE service for more information or inquiries: Tel: +32 (0)56 24 81 05 - Email: service@agp.be

	Maintenance Date	Maintained by	System Check	Battery Check	Remarks
Year 0	...../...../20.....				
Year 1	...../...../20.....				
Year 2	...../...../20.....				
Year 3	...../...../20.....				
Year 4	...../...../20.....				
Year 5	...../...../20.....				
Year 6	...../...../20.....				
Year 7	...../...../20.....				
Year 8	...../...../20.....				
Year 9	...../...../20.....				
Year 10	...../...../20.....				
Year 11	...../...../20.....				
Year 12	...../...../20.....				
Year 13	...../...../20.....				
Year 14	...../...../20.....				
Year 15	...../...../20.....				
Year 16	...../...../20.....				
Year 17	...../...../20.....				
Year 18	...../...../20.....				
Year 19	...../...../20.....				
Year 20	...../...../20.....				
Year 21	...../...../20.....				
Year 22	...../...../20.....				
Year 23	...../...../20.....				
Year 24	...../...../20.....				
Year 25	...../...../20.....				
Year 26	...../...../20.....				

SPARE PARTS AND ACCESSORIES

Part no.	Description
25774	Wind and rain sensor 24VAC/DC: closes everything if rain or strong wind 
25776	Heat detector 
25775	Optical smoke detector 
25773	Comfort switch Opus complete with housing 
25772	Fire switch 
30391	replacement glass for fire switch (also for priority switch) 
31441	WCP111720: Key for fire switch for operation without breaking glass (until 2014)
31440	IP65 protection box for fire switch
32569	External priority switch 
31021	Battery 12V/7,2AH 151x65x98mm (always order 2 pieces per control)
31782	Main board Skycom CE Master - all versions until 2014
35370	Main board Skycom CE all versions from 2015
31786	Main Board Skycom CE Slave until 2014 - until stock lasts
73678	Main PCB Skycom CE – all models from 2020 onwards
31783	Power supply 230 VAC / 28,5 VDC 8A
31784	Circuit breaker 10A (input terminal)
31442	Set Spare parts for Skycom CE (10x jumper / 10x R27k / 10x R10k / 2x Fuse 8A)
35347	Plastic Housing for Skycom CE master Belgium until 2014
35351	Plastic Housing for Skycom CE master Belgium from 2015
35349	Plastic Housing for Skycom CE slave
35350	Plastic Housing for Skycom CE Skymax
32541	Sticker 'Hide comfort switches' (for public places)
28662	LIP 5: Electronic limit switch for Skylux 160° CE with 1 motor
26811	LIP 6: Electronic limit switch for Skymax CE, Cintramax CE and Skylux 160 CE with double motor
31439	IP65 Protection box for limit switch (LIP)
19794	LA 1: Electronic limit switch for Skymax standard
20653	LA-TR: Electronic limit switch for Cintramax (old version)

CE

DECLARATION OF CONFORMITY

We, Skylux
Spinnerijstraat 100
8530 Harelbeke-Stasegem
Belgium

declare under our sole responsibility that the product:

Skycom CE 24V-8A

(name, type or model, lot, batch or serial number, possible sources and numbers of items)

to which this declaration relates is in conformity with the following standard(s) or other normative document(s).

EN12101-10:2006
EN61000-6-2:2005 EN61000-6-4:2001
EN61000-3-2:2005 EN61000-3-3:1995

(Title and/or number and date of issue of the standard(s) or other normative document(s)

following the provisions of Directive 73/23/EEC - 89/336/EEC and 93/68/EEC.

Stasegem 1 January 2011	**Tom Vandamme**
(Place and date of issue)	(Name and signature or equivalent marking of authorized person)

TECHNICAL SPECIFICATIONS
CONTROL FOR 1 FIRE ZONE AND 1 COMFORT ZONE

Power supply	: 230V AC / max. 1,7A
Operating conditions	: - 5 °C to + 60 °C / Humidity max 90%, non- condensing/ internal use without aggressive vapers & gases
Protection degree	: IP54
Colour	: RAL 9003 (white)
Dimensions WxHxD	: 286x238x113 mm
Weight incl. batteries	: 7,5 kg
Autonomy battery	: Min. 72 hours
Internal T-sensor	: Alarm generated at 75°C
Max. load	: 24V / 8A (Fuse F1: 8A Fast acting)
Motor output	: 1 pc. (terminals 6mm^2) – line detection: 1-4 lines
Fire switches & zones *	: 1 fire zone, 8 - 10 pcs. external fire switches, depending on the load
Comfort zones *	: 1 comfort zone - unlimited number of switches
Smoke- and heat detectors	: 1 input - max. 20 pcs. detectors per control
Priority switch	: 1 input for an external Priority switch (Option PCB)
Wind- and rain sensor *	: Input for close all
Connection of control units	: Bus connection integrates most functions - Max. 35 controls in the same bus connection
Alarm output *	: Potential free SPDT change over max. 48V 0,5A
Fault output *	: Potential free SPDT change over max. 48V 0,5A
Supply output *	: 24VDC 0,5A at 230VAC operation
Line surveillance on	: Motor lines, fire switches,smoke detector Priority switch, and communication bus
Visual indication (LED)	: OK, AC fault, Low battery, Line fault, Alarm, comfort open

* not present on Slave

Manufacturer:

SKYLUX, Spinnerijstraat 100, B-8230 Harelbeke, Belgium, website: www.skylux.be
SHE service: Tel.: +32 (0) 56 24 81 05 | e-mail: service@agp.be

REVISIONS

Skycom CE Control:

Version	Date	Description
01	Nov. 2012	First release
02	Nov. 2013	Software update (version 042) for option PCB for external priority close switch (Master & Slave)
03	March 2015	New PCB with low consumption, keypad, J9, J11, T-sensor, ...
04	Oct. 2016	SW update EMC (communication bus)
05	February 2021	New main PCB: priority integrated on main PCB

Skycom CE Manual:

Version	Release date	Description
01	May 2013	First release
02	Nov. 2013	Add external priority switch + general review
03	March 2015	Add new Skymax CE, Cintramax CE, Skylux 160°CE with 2 motors Add lip 7, new fireswitch, new main board
04	Oct. 2016	Skymax CE without positive safety: added New wind and rain detector AWR-24/250 added SHE survey added / EMC update PRIOR: ferrite + GND Old schemes Cintramax and Skymax: removed
05	February 2021	New main PCB: priority integrated on main PCB