User manual and Installation Instructions Flat Roof Dome - Automatic Opening Vent Control Panel AOVCP24-5A / AOVCP24-8A

Fire ventilation

Comfort ventilation

24VDC max. 5A/8A
1 fire ventilation group, 1 comfort group
Connection for manual control points, wind- and rain sensor, comfort switches, smoke detectors
Option of bus connection of 35 control units

#211744

keylite® Roof Windows

Address of installation

Name:

Address:

Phone no.:

Contact person:

Date of installation:

Installation

Number of control units and type (eg. AOVCP24-5A):

Number of fire ventilation groups:

Type of opening system:

Type of opening system:

Type of opening system:

External controls (eg. AOVMCP, AOVFPS)

Comfort control:

Wind- and rain sensor (AOVWS):

230V power supply from group:

Control for Fire and Comfort Ventilation Type AOVCP24-5A / AOVCP24-8A

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General description

The control unit can be used for electrical opening and closing of smoke hatches or similar in connection with fire and comfort ventilation.

The control unit has different inputs with line monitoring which can be activated by e.g. Firemans Priorty Switches, manual control points,smoke detectors, heat detectors, AFA systems and CCS systems. For control of the indoor climate (comfort ventilation) manual switches, weekly timer, room thermostat and outdoor weather sensors can be connected.
By means of LEDs in the the front panel the control indicates the operating condition (ok operation and error- and alarm condition). Also by means of the built-in potential free relay contacts can relay operating information about ok operation and error- and alarm condition to other systems in the building.

The polarity of the motor supply is reversed when opening or closing.
The control unit has built-in 72 hours battery back-up.
By a unique bus system consisting of a 3 wire cable the control units can be mutually connected so that up to 35 control units can be connected and operate as an integrated system.

If the temperature exceeds 75°C, the contol panel will enter ALARM condition

Connection of cables to the inputs and outputs of the control unit is described in the connection drawing on page 12-13.
A more detailed connection to the individual inputs and outputs is described in the individual sections in this manual. Selection of cable sizes on page 18-19.

By means of jumpers and dip switches the control unit has different setting possibilities for inputs and outputs. These settings are indicated in a complete table (please see section with jumper settings on page 15).

Examples of types of openings systems and the max. power consumption which can be connected to the control unit:

Type:	**24V power supply:**
(SA Power Single): LM up to 160 cm LM 120-130 cm LM 100-110 cm	4A
(SA Power Double): LM Tandem	8A (2x4A)
(SA Power Mini): LM70-100 cm	2.5A

See specification of max. power consumption on the opening system

Safety rules during installation and operation

The smoke control panel may only be installed and maintained by personnel authorised for installation of automatic electrical fire ventilation equipment.

Explosion danger

The control unit is supplied with back-up batteries, which contain large amounts of energy which can be released as explosion in case of wrong handling - the following safety rules must therefore always be observed:

- Never short-circuit a back-up battery.
- Do not use external chargers on installed batteries. If unauthorised chargers are used explosive gasses can be released from the battery.
- Do not drop back-up batteries as strong acids can be released if they are broken.

Installation

The control unit can weigh up to 7 kg and must be installed on a stable wall. The mounting holes for wall mounting are placed on the metal plate underneath the platic lid.
All cables are connected according to the drawing on the central pages and are dimensioned according to table page 18. Keep in mind that the operating voltage from the control unit is 24V and that the max. voltage drop is 15% which demands correct cable dimension according to table on page 19.
Please be aware that it often may be required (in order to keep the demands on the CE marking of the complete installation or another law) that the control unit is supplied with 230V AC from separate powerline with its own ground error circuit interruper, and that a repair interrupter is mounted on the motor line.
After connection the control unit must charge the batteries min. 12 hours before complete testing.

Yearly requirement of maintenance and control (authorised)

The functions of the control unit and the opening system must be tested by authorized personnel at least once a year. If DIP switches are set the control unit informs when the maintenance should be done. The external LEDs on the front panel flashes fast. 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 same type as the batteries are carefully chosen to be able to deliver the current, for which the control is specified.
- Control of in- and outputs on the control.
- Control of manual control points and smoke- and heat detectors.

The batteries should be replaced as required, however at least every third year!
Use the same brand.

See service scedule on page 23.

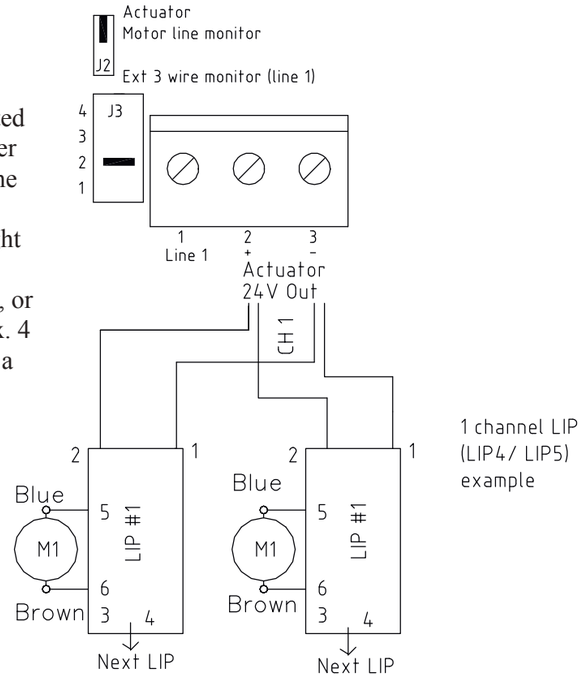
Connection to motor- (actuator-) output and line monitoring

The actuators (motors) must be connected to the actuator output on the output terminals 2-3.
It is possible to connect and disconnect the line monitoring on the actuator output (the factory setting is "connected"). The cables to the actuators can be connected in series or parallel or a combination of these (please see drawing with examples or connection diagramme on the central pages).
It is important to keep the right polarity of the cables - The actuators must always be connected through a current limiter, e.g. the Actulux LIP or similar.

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.

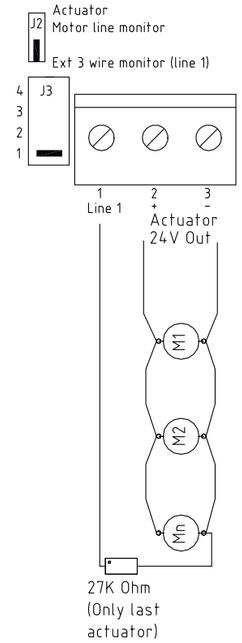
Jumper J2 mounted in pos. »Motor line«
Line monitoring between terminal 2-3.
Jumper J3 (actuator output) is set according to the number of termination resistors (27KΩ) to be detected – 1 to max. 4 lines can be detected by moving jumper J3 – this means that the cable installation between the control unit and the actuators can be established in series connection (cable connection from e.g. skylight 1, further to skylight 2, etc.), or parallel connection (cable connection from each skylight to the control), or a combination of these. However, as mentioned max. 4 different lines can be detected each terminated with a 27KΩ resistor.

For AOVCP24-5A the max. allowed current is 5A, For AOVCP24-8A it is 8A.



	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*

Jumper J2 in pos. »Ext 3 wire«.
Line monitoring between terminal 1-3:
With jumper J3 (actuator output) it is chosen, 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.
Jumper J2/J3 is not mounted - No line monitoring for actuator output.



Current limiter type LIP function and setting (if mounted)

The current limiter type LIP (mounted on the opening system) is used as current limiter between the 24V/48V DC supply and 1 or 2 actuators. When the adjusted current limit is reached, the speed of the actuators is reduced. When the max. power on the actuator is exceeded, the actuator stops. On the 24V /48V types (LIP5 or LIP6) max. 5 times overload cut outs in the same direction is allowed. After that it will not be possible to run in this direction again, before the motor has run in the opposite direction. This in order to protect the actuator gear mechanism.

Please note that when opening, the red LED in the LIP must light. This indicates that polarity to actuator is correct.

Table of LIP settings

Opening system 24V/48V	3A LM Actuator	4A LM Actuator. Inc Tandem	2.5A LMM (Mini)	2.5A LM Rotary
DIP 1	ON	OFF	ON	ON
DIP 2	OFF	ON	ON	ON

Type	Part no. board	Board description	Voltage and function	DIP 1	DIP 2	DIP3	DIP4	DIP5	DIP6
LIP5	121315	A043	24/48V 1 channel			27K ON	Not mounted		
LIP6 *	121330	A044	24/48V 2 channels			OFF	ON**	27K ON	M1-M2 delay =ON
LIP7 Basic	121301	LIP7	24/48V 1 channel	See diagram above		27K ON	Not mounted		
LIP7	121303	LIP7	24/48V 1 channel w/position indication			27K ON	Not mounted		
LIP7	121302-4	LIP7	24/48V 1 channel Syncro			27K ON	ON= Synchro	OFF = Slave ON = Master	OFF = Tacho Mode ON = Tandem Mode

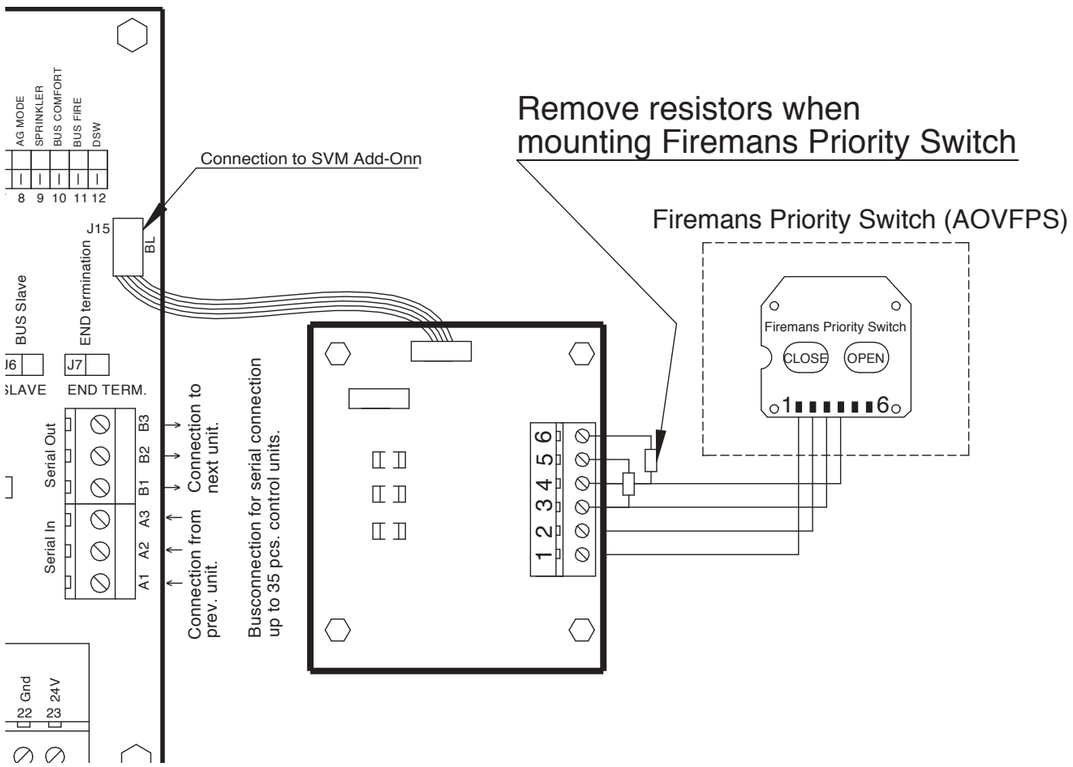
* LM Tandem Actuator - parallel operation: Jumper OPT mounted - both motors stop at the same time if one stops because of overload.

**When DIP4 is OFF = Syncro mode - both motors stop at the same time if no current flows in one. (1.5 sec. reaction time)

Firemans Priority Switch

There are no fire open or close buttons visible on the Front Panel so there is normally a Firemans Priority Switch installed.
When the control is in alarm status, firemen can use this button to close the smoke vents. The control stays in alarm status to make sure that the smoke vents will not opened unintended. In this status the smoke vents can only be opened again by the Firemans Priority Switch (or first reset alarm).

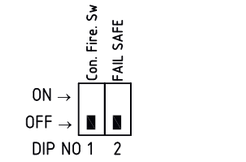
Information about LED-indications: see page 14

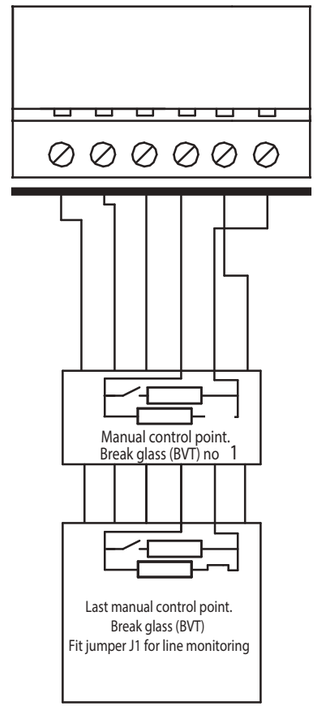


Operation and connection of Manual Control Point Break glass (AOVMCP)

The Manual control Point will generally contain the following:

- Breakable glass window and red control button is activated by pressure - this puts the control unit in ALARM condition, 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 condition and starts the closing sequence for about 180 seconds. Please note that RESET does not cancel errors on the system, e.g. line errors etc. These must be found and corrected.
- RED LED indicates that the control unit is in ALARM condition 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 condition without errors.



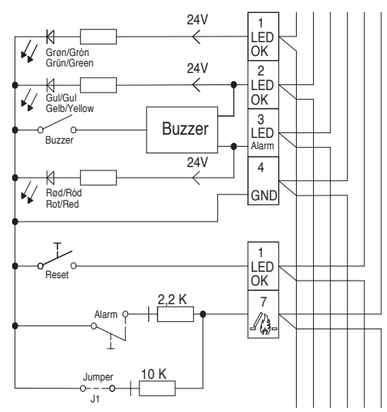


CONNECTION of the manual control point is made as shown on the drawing.
The installation with manual control pointes must be terminated with a 10KΩ or 27KΩ resistor in the last switch in order to establish the line monitoring correctly – this can either be done by moving the factory mounted resistor from the terminal strip to the last manual control point or connect **jumper J1** in the manual control point type EVSMCP is mounted (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 manual control point:
DIP 1 (Conf. firesw.):
On = ALARM condition from 500-3KΩ, (indication of line error by direct short circuit or open circuit).
Off = ALARM condition from 0-3KΩ (indication of line error by open circuit).
DIP 2 (Failsafe):
On = Any line error on manual control point or smoke detector puts the control unit in ALARM condition. This function can be used if cables to manual control pointes and smoke detectors are not fireproof.

EVSMCP

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 manual control point reset
7 manual control point emergency opening
Jumper J1 must only be set in the last or only manual control point



Connection of 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.

Comfort ventilation – Connection and settings

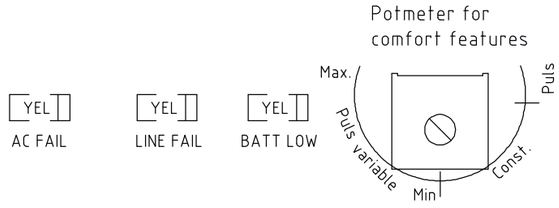
The motor output can be controlled separately with a comfort switch.
For comfort ventilation there are the following possibilities:

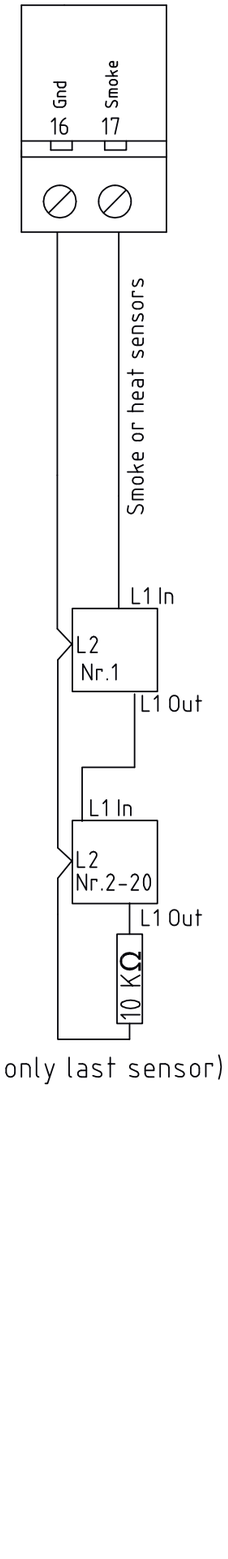
Potentiometer in Puls pos.:
It is possible to press the »up« button 3 times, which each gives 6 seconds of opening time - after that nothing happens – Continuous »up« signal gives 3x6 sec.=18 sec.
- One press on »down« closes the actuator completely for a period which is the double of the complete opening time - In order to avoid »actuator pumping« max. 3 successive closing attempts will be allowed.

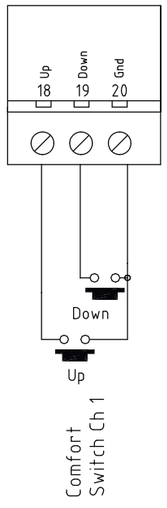
Potentiometer in Const. pos.:
As long as »up« signal or »down« signal are given, the actuators are running

Potentiometer in Puls variable pos.:
The time on the above mentioned pulse opening can be adjusted from 1-60 sec. on the potentiometre.

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 varaiable.







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

Control for Fire and Comfort Ventilation Type AOVCP24-5A / AOVCP24-8A

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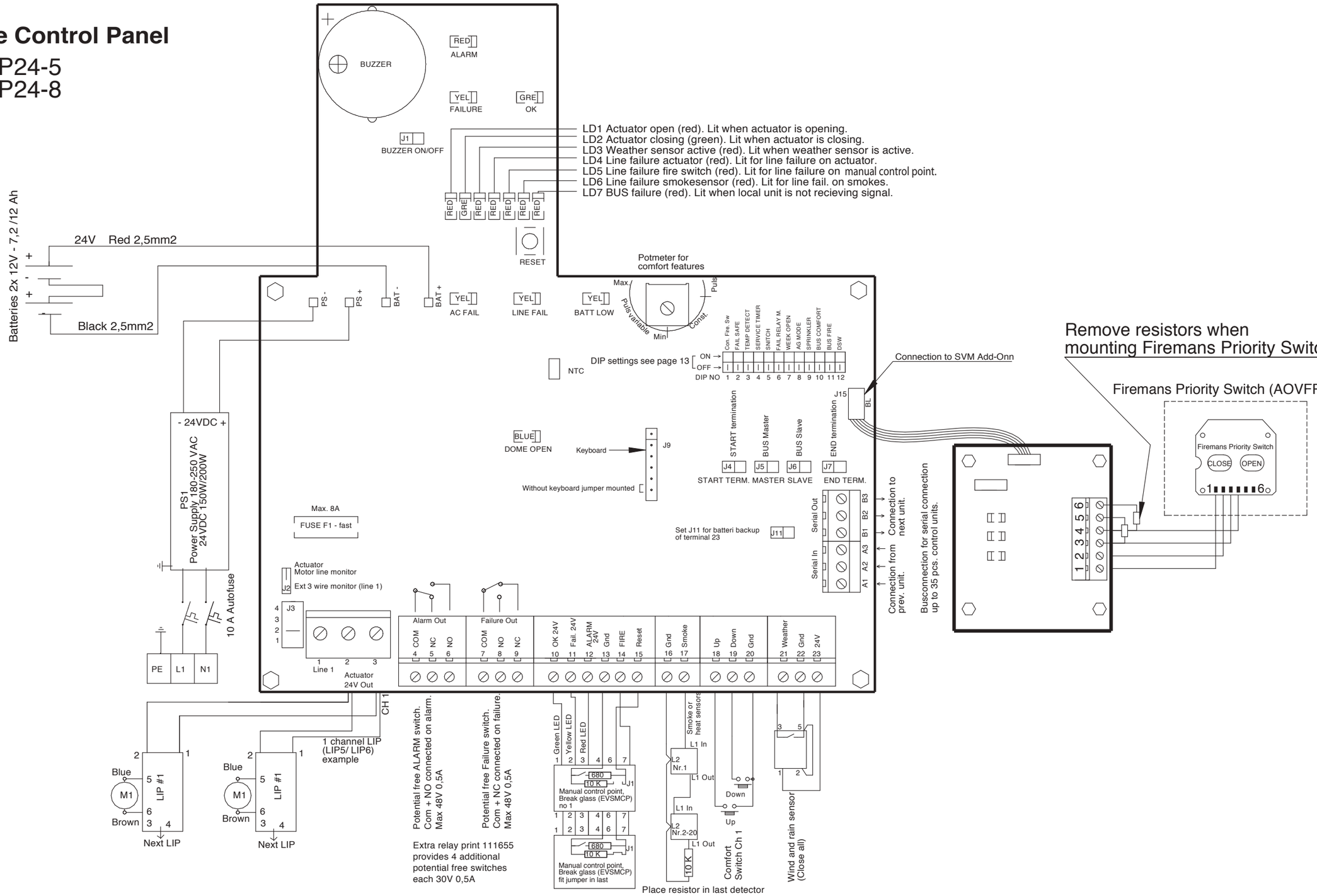
Smoke Control Panel

AOVCP24-5
AOVCP24-8



LED Indication on main board and front panel

Front panel

Colour & Visisbility	Symbol	Operation possibilities for:	Alarm/ fire	Comfort operation
Green Board + Front	OK	**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
Yellow Board + Front	⚠	**Fault** **lights** by local error on this control or by error message from other controls received by bus	Yes	Only close
*Yellow Board + Front		**Line error** **flashes** by local error on this control or by error message from other controls received by bus	Yes	Only close
*Yellow Board + Front		**AC error** **flashes** by local error on this control or by error message from other controls received by bus	Yes	Only close
Red Board + Front		**Alarm** **lights** red constantly	Yes	No
*Yellow Board + Front		**DC error** **flashes** by local battery error on this control or by error message from other controls received by bus		
Blue Board + Front		Lights blue constantly in open condition (when windows are open)		
Lights with*		Time for yearly service - please call for supplier (Running light)	Yes	Yes

Main board (Internal PCB)

LED 1	red	Actuator open (red). Lights when actuator opens		
LED 2	green	Actuator close (green). Lights when actuator closes		
LED 3	red	Weather sensor active (red). Lights when weather sensor is active	Yes	No
LED 4	red	Line error on actuator (red). Lights when actuator has line error	Yes	Only close
LED 5	red	Line error on manual control point (red). Lights when manual control point has line error	Yes	Only close
LED 6	red	Line error on smoke detector (red). Lights when smoke detector has line error	Yes	Only close
LED 7	red	Bus error (red). Lights when BUS signal from other controls is missing. Only relevant if J24 or J25 is mounted.	Yes	Only close

PCB for Firemans Priority Switch

LD1	grenn	Lights when power is on	Yes	Yes
LD2	red	Line error on 'priority open' switch	No	No
LD3	red	Line error on 'priority close' switch	No	No

Fuse specifications

Placement / Fuse value	**24V**
F1 8A fast ading fuse	1 pc. for 24V motor output

Complete jumper settings

	Text on board	Factory mounted	Mounted / ON function	Dismounted / OFF function
DIP 1	Conf. Fireswitch	No	Manual control point active from 500-3KΩ	Manual control point active from 0-3KΩ
DIP 2	Failsafe	No	Line error on manual control point or detector puts the control in alarm	Normal mode
DIP 3	Temp. Detekt	No	Line error on motor line (upper resistor area) = alarm	Normal mode
DIP 4	Ser	Yes	Active - Service warning after 1 year	Inactive
DIP 5	Snitch	No	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	No	Failure relay works as indication that skylight is open	Normal mode (works as failure relay)
DIP 7	Week open	No	Weekly open (2 sec.) /close (5 sec.) cycle activated	Weekly open/close not activated
DIP 8	AG Mode special	No	Special "Fire close" button enabled	Normal mode
DIP 9	Sprinkler	No	Motor output closes by active detector (opens by activating the manual control point)	Normal mode - motor output opens by ative detectors or manual control points
DIP 10	Bus comfort	No	The control reacts on comfort signal via bus activity	The control does not react on comfort signals via bus activity // NB! Always reaction on weather signal and failures via bus activity and own comfort signal
DIP 11	Bus fire	No	The control reacts on alarm signal via bus activity	The control does not react on alarm signal via bus activity //NB! Always reaction on weather signal and failures via bus activity and own alarm signal (detector or manual control point)
DIP 12	BR Mode special	No	Special manual control point/alarm mode and comf. active at all failures	Normal mode
J3 (motor)	1 - 2 - 3 - 4	Pos. 1	Connect according to number of 27KΩ terminal resistors on actuator	No line monitoring
J2 (motor)	Mot Mon act.	Yes	2 wire line monitoring via 27KΩ terminal 2-3	No line monitoring
	Ext Li Mon act.	No	3 wire line monitoring with direct motor connection actuator	
J4(Bus)	Start term. + Master	No	First control unit in the bus network	See section concerning connection of controls units in bus connection, page 16
J5(Bus)		No		
J6(Bus)	Slave	No	Middle and last control unit in the bus network	
J7(Bus)	End term.	No	Last control unit in the bus network	
J9	FOIL	Yes in Basic	Line monotoring of front cabinet	Line error flashes
J11	BatSup->Ø23	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. // Comf. var (potetiometer): 1-60 sec.

Connection of more controls to one fire group (bus connection)

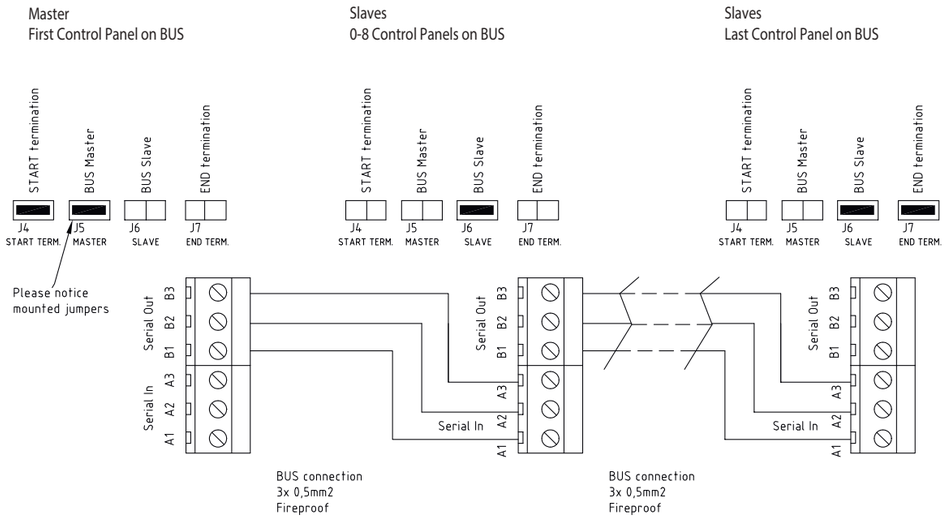
By means of a bus communication it is possible to make 2 – 35 control units to work as a complete system. The control units communicate with each other via a 3 wire bus connection. This could e.g. be a 3x0.5 mm² fireproof cable.
Terminal no. A1, A2, A3 are for the incoming connection and B1, B2, B3 for 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. The bus cable is connected on the output terminals B1, B2, B3 and lead to the next control unit which is a slave, J6 must therefore be on. The cable is connected to the input terminals A1, A2, A3 of the next control unit and further to the next slave control unit from terminal B1, B2, B3. In the last slave control unit J7 and J6 must be on in order to terminate the bus connection.

ALARM: Alarms from Manuel Control Point smoke-/heat detectors are controlled locally. When DIP11 is set the unit will go into alarm state if another control unit connected on the BUS enters alarm state
RESET: If the reset button on one control or in one manual control point is activated, the reset function on all connected controls is activated and starts the closing function on all motor output in approx. 180 sec.
COMFORT: The comfort control can work locally on each control unit. When DIP 10 is set the control unit will react on any comfort signal send on the bus from another control unit.
If a wind- and rain sensor is connected, it will work on all control panels on the bus no 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 condition, all go into alarm condition.
- If one of the control units goes into a certain error condition (line error, AC error, battery error or bus error), the other control units also go into error condition – 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.

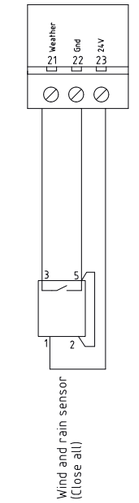


Connection of weather sensor / Close all function

A weather sensor can be connected to the control unit.
The weather sensor is adjusted according to the instructions.
Actuators 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, motor inputs 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.

Power Supply to terminal 22 and 23 is only AC supplied as standard.
If battery backup is needed, then mount J11 .
This is only possible at PCB V5 and following versions.
NOTE: Be aware of standby time due to current consumption.



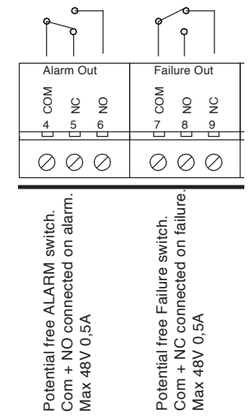
External signal output, connection to Fire Alarm Panel and other control systems

The control unit can forward alarm condition to external connected systems by means of potential free contacts on the terminals 4 (com), 5(NC) and 6(NO).

The control unit can forward failure condition to external connected systems by means of potential free contacts on the terminals 7 (com), 8(NO) and 9(NC).

Alarm and error contacts work parallel on all controls connected with bus connection.

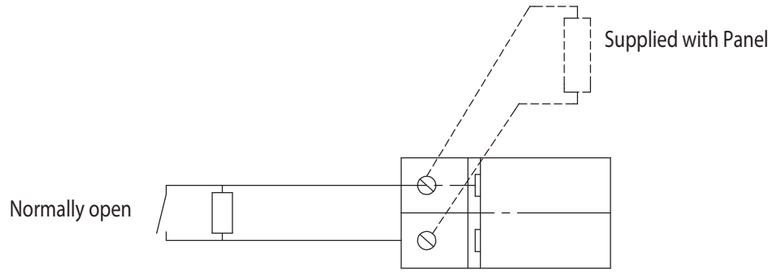
DIP6 (fail relay):
On = Fail relay changes function to indicate open/closed window.



Extra relay print 111655 provides 4 additional potential free switches each 30V 0,5A

How to make a connection from a Fire Alarm Panel

The control unit can receive potential free zero volt alarm signals from e.g. AFA systems on the input to manual control point or smoke-/heat detector Terminal 16 and 17.
– Line monitoring resistor must be fitted on the contact in the AFA system



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 manual control point 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 packing of the skylights to keep them watertight.

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

Special mode:
DIP 12 On - possible to use comfort switch also during line fault, low batt., no AC, Alarm only as long as fire input is active or detector is activated.

Cable sizes

It is very important to use the correct cable types and sizes to make sure that the fire ventilation system meets the standards and works correct in an 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 do not exceed 15% at full load on the fire ventilation hatches.

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

Opening systems with actuators 24V	2 wires, see diagramme (3 wire by external line surveillance)
Manual control point 24V	Min. 6 x 0,5 mm²
Smoke detector 24V	Min. 2 x 0,5 mm²
Heat detector	Min. 2 x 0,5 mm²
Cable between control units (bus)	3 x 0,5 mm²
Firemans priority switch	4 x 0,5 mm²

Normal cables can be used for the following functions:

Supply for control 230VAC	e.g. 3 x 1,5 mm² PVIK-J
Comfort ventilation button 24V	Min. 3 x 0,5 mm²
Wind- and rain sensor 24V	Min. 4 x 0,5 mm²

Control for Fire and Comfort Ventilation Type AOVCP24-5A / AOVCP24-8A

Table for AOVCP 24 5A/8A allowed voltage drop 15% = 3,6V

Max Motor Cable Length

Power consumption per group in ampere	Cable cross section and amount of cores						
	2x1,5 mm²	2x2,5 mm²	4x1,5 mm² (2x1,5+2x1,5)	4x2,5 mm² (2x2,5+2x2,5)	2x6 mm²	5x2,5 mm² (2x2,5+3x2,5)	2x10 mm²
2	74 m	123 m	148 m	246 m	295 m	307 m	292 m
4	37 m	61 m	74 m	122 m	148 m	154 m	244 m
6	25 m	41 m	50 m	82 m	98 m	102 m	164 m
8	18 m	31 m	36 m	62 m	74 m	77 m	124 m

Part nos. and accessories

Spare parts no.	Name of part	Description
17.0560	Control PCB	Main board
17.0564	Power supply 150W 27VDC MW	Power supply 230VAC/27VDC for 5A control
17.0565	Power supply 200W 27VDC MW	Power supply 230VAC/27VDC for 8A control
17.0566	Circuit breaker 10A	Automatic fuse 10A / input terminal
17.0567	Batteri 12V/7,2AH 151x65x98mm	Battery for 24A / 5A controls / 8A controls
17.0522	Manual control point/reset IP40 EVSMCP	Manual control point IP 40
17.0523	Replacement Glass	Replacement glass for manual control point
17.0528	Wind and rain sensor 24VAC/DC	Wind- and rain sensor closes everything when raining or strong wind
17.0526	Heat detector+base 75 degree	Heat detector 75 degrees temperature activation
17.0524	Smoke detector, optical	Optical smoke detector
17.4001	Retractive Switch 10A	Comfort Switch Surface Mounted
17.4002	Key Operated Switch	To provide secure means of opening for access
17.4003	Auto / Manual Switch	Auto ON/OFF, Manual OPEN/CLOSE Switch for use with thermostat
17.0004	Room Thermostat	Room thermostat for control of comfort ventilation
17.0563	EVSFPS PCB	Firemans Priority Switch spare PCB

Control for Fire and Comfort Ventilation Type AOVCP24-5A / AOVCP24-8A

keylite Roof Windows

CE EN 12101-10:2005

Declaration of Performance

No. C-AOV-0402-CPR-SC0706-14

Em-Vent Smoke Control Panel

1.Product Type: Unique identification code of the producttype	Control Panel for Natural Smoke and Heat Exhaust Ventilator (SHEV)
2.Type, batch or serial number or any other element allowing identification of the construction product as required under Article 11(4):	AOVCP24-5A and AOVCP248A
3.Intended use or uses of the construction product, in accordance with the applicable harmonised technical specification, as foreseen by the manufacturer:	Power supply for actuators used for SHEV
4.Name, registered trade name or registered trade mark and contact address of the manufacturer as required under Article 11(5):	Derryloran Industrial Est. Sandholes Road, Cookstown, Co. Tyrone, BT80 9LU T: +44 (0) 28 8675 8921 E: info@keylite.co.uk
5.Contact Address: Where applicable, name and contact address of theauthorised 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 harmonised standard:	Notified Body No. 0402 SP Technical Research Institute 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	Performance	Harmonised Standard
Environmental class 1	Class A	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.

Signed for and on behalf of the manufacturer by:

Andy Neal

Operations Director

Technical specifications	AOVCP 24-5A	AOVCP 24-8A
Power supply	230V AC / max. 1.2A (”ds” = max. 5A)	230V AC / max. 1.7A (”ds” = max. 5A)
Output supply	24V DC	24V DC
Motor outputs	1 pcs. (line detecton: 1-4 lines)	1 pcs. (line detecton: 1-4 lines)
Max. load	5A	8A
Operation temperture	-15°C - +40°C	-15°C - +40°C
Density	IP 54	IP 54
Battery back-up (72h)	Yes	Yes
Batteries	2 pcs. 12V/7.2AH	2 pcs. 12V/7.2AH
Dimensions (WxDxH)	238 x 113 x 286 mm	238 x 113 x 286 mm
Weight incl. batteries	7,5 kgs.	7,5 kgs.
Colour	White front / Black indication label	White front / Black black indication label
Fire groups	1 pcs. with line detect. / Max. power consumption for manual control points (LED+buzzer) = 17.6mA = approx. 8 manual control points	
Comfort groups	1 pcs. unlimited number of comfort switches	
Detector (smoke/heat) input	1 pcs. with line detection / Max. power consumption for detectors = 2.2 mA = approx. 22 pcs. detectors	
Weather sensor input / close all	Yes	Yes
Alarm output	Yes - potential free contact, max. 48V / 0.5A	Yes - potential free contact, max. 48V / 0.5A
Failure output	Yes - potential free contact, max. 48V / 0.5A	Yes - potential free contact, max. 48V / 0.5A
24V DC for external use	24V DC / max. 0.5A - at 230V operation	24V DC / max. 0.5A - at 230V operation
Bus communication	Yes - connection of 2-35 pcs. control panels - line detection	
Visual (LED) indication in front panel	“OK” / “AC fault” / “Low battery” / “Line fault” / “Alarm” / “Comfort open”	
Dip switch features (standard)	“Service hours (LED’s flash in front panel)” / “Comfort opening interval” / “Temperature detection via motor output” / “Extra line detection via 3 wire motor output” / Fail safe (alarm by line failure)” / “Sprinkler (close by alarm)” / “Bus comm. settings (react on Bus comm.)” / “Potential free contact for comfort open”	
Approvals / Conforms	EN12101-10:2005 approved and certified - class A (double supply) - envir. class 1 (to -15°C). Conform EN12101-9. Primary supply: 27-28.5V DC rippel 600mw P/P Secondary supply: 20-27V DC Interruption time: less than 1.5 sec.	

Manufacturer:

NI & ROI
Derryloran Industrial Est. Sandholes Road,
Cookstown, Co Tyrone BT80 9LU

T: +44 (0) 28 8675 8921
E: info@keylite.co.uk

MAINTENANCE

The functions of the control unit and the opening system must be tested by authorised 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. 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 Technical Department for further information.

	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.....				
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Year 21	...../...../20.....				
Year 22	...../...../20.....				
Year 23	...../...../20.....				
Year 24	...../...../20.....				
Year 25	...../...../20.....				
Year 26	...../...../20.....				