

Cable Sizes - Fire Ventilation System

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 most important factors are the ability of the cable 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 hatches of the fire ventilation.

Cable types:

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

Opening Systems/actuators, 24VDC: 2 wire between central and overload interrupter/actuators, please see the below cable size diagramme.

Fire switch 24VDC : Min. 6 x 0,5 mm²

Smoke detector 24VDC : Min. 2 x 0,5 mm²

Heat detector : Min. 2 x 0,5 mm²

Normal cables can be used for the following functions:

Supply for central 230VAC : e.g. 3 x 1,5PVIK-J

Comfort ventilation button 24VDC : Min. 3 x 0,5 mm² between central and pressure

Wind- and rain sensor 24 VDC : Min. 4 x 0,5 mm² between central and sensor

Power consumption and overload interrupter:

The max. power consumption of the Actulux actuators is adjusted with switches in the electronic overload interrupter, type LIP.

Important: Always remember to install the electronic overload interrupter type LIP in series with the actuator.

Table for SV 24V-XX allowable voltage drop 15% = 3,6V

Power consumption per group in ampere	Cable cross section and amount of cores						
	2x1,5 mm ²	2x2,5 mm ²	4x1,5 mm ² (2x1,5+2x1,5)	4x2,5 mm ² (2x2,5+2x2,5)	2x6 mm ²	5x2,5 mm ² (2x2,5+3x2,5)	2x10 mm ²
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
10	15 m	25 m	30 m	50 m	59 m	61 m	100 m
12	12 m	20 m	24 m	40 m	49 m	51 m	80 m
14		18 m	22 m	36 m	42 m	44 m	72 m
16		15 m	18 m	30 m	36 m	38 m	60 m

Table for SV 48V-XX allowable voltage drop 15% = 7,2V

Power consumption per group in ampere	Cable cross section and amount of cores						
	2x1,5 mm ²	2x2,5 mm ²	4x1,5 mm ² (2x1,5+2x1,5)	4x2,5 mm ² (2x2,5+2x2,5)	2x6 mm ²	5x2,5 mm ² (2x2,5+3x2,5)	2x10 mm ²
2	148 m	246 m	295 m	492 m	590 m	615 m	984 m
4	74 m	123 m	148 m	246 m	295 m	307 m	492 m
6	49 m	82 m	98 m	164 m	197 m	205 m	328 m
8	37 m	61 m	74 m	123 m	148 m	154 m	246 m
10	30 m	49 m	60 m	98 m	118 m	123 m	197 m
12	25 m	41 m	50 m	82 m	98 m	102 m	164 m
14		35 m	42 m	70 m	84 m	88 m	141 m
16		31 m	36 m	62 m	74 m	77 m	123 m