

Configuring sequential control between a window and a sunshade

Purpose

This document describes how to configure FlexiSmoke™, CompactSmoke™ or CompactComfort™ MotorLines, when used in places where there is a risk of the window hitting the sun shading mounted in front or above it.



General

The correct configuration will result in:

1. The window stops opening before hitting the sunshade if the sunshade is down.
2. The sunshade will not run down if the window is opened to a position so the sunshade will hit it if it will run down.
3. This guide is valid for panels running firmware versions:
 - a. FlexiSmoke™ 0.87
 - b. CompactSmoke/Comfort™ 1.18, 1.01

Setup

1. The window actuator is running in MotorLink™ mode.
2. The sunshade actuator is running in +-24V mode.
3. The 2 MotorLines are connected on the same FlexiSmoke™ section or the same CompactSmoke™/CompactComfort™ panel.
4. When the sunshade is up (not covering the window) it is in 0% position. When the sunshade is down (covering the window) it is in 100% position.

Configuration

Sequential control between the 2 MotorLines is used to implement the solution. In this example:

- MotorLine S5X1 is for the sunshade actuator and MotorLine S4X1 is used for the window actuator.
- It takes the sunshade 30 seconds to run from 100% to 0% position.
- 2 Open/Close local inputs are used S5X5 for comfort controlling the sunshade, S4X5 for comfort controlling the window.
- The window MotorLine will be associated with one Motor Group and one Smoke zone. The sunshade MotorLine will be associated with another Motor Group and another Smoke zone.

1. MotorLine S5X1 configuration

We want to prevent the sunshade from running down if the window is more than 20% opened.

In the S5X1 MotorLine configuration menu:

✓ Configuration, Motor line, S5 X1

Manual command – auto. off period	1 min.
Retry during alarm	No
Sequential control type	Open
Sequential control position limit	Closed 0%

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Shade travels down to 100% position which is an 'Open' movement internally in the controller.

Shade must stay at UP – 0% position if window is not closed enough. 0% is a 'Closed' position internally in the controller.

✓ Configuration, Motor line, S5 X1

Sequential control with	Motor line
Sequential control with no	S4 X1
Sequential control position logic	Less than or equal
Sequential control position	20%

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Sequential control with a Motor line.

Sequential control with the windows MotorLine.

The shade is allowed to run if the window position is less than or equal the 'Sequential control position'.

20% is the max window position where the shade is allowed to run.

 **Configuration, Motor line, S5 X1**

Sequential control max. wait time	60 s
Sequential control only continue after wait if fire	Yes
Pos. limitation watchdog	None
High priority open is 1st comfort priority	Yes

 

Wait 60 seconds for the window to close, before running down.

Do not run down after the waiting time, if the window is still more than 20% opened.

2. **MotorLine S4X1 configuration**

We want the window to wait for the sunshade to move up before it is going on and opens more than the position it can open, without hitting the sunshade.

In the S4X1 MotorLine configuration menu:

 **Configuration, Motor line, S4 X1**

Max. unexpected overcurrent	255
Max. unexpected overcurrent (motor)	2
Sequential control type	Open
Sequential control position limit	20%

  

Sequential control in Open direction

Window can always open up to 20% - the opening without hitting the sunshade when the shade is in Down – 100% position.

 **Configuration, Motor line, S4 X1**

Sequential control with	Motor line
Sequential control with no	S5 X1
Sequential control position logic	Less than or equal
Sequential control position	Closed 0%

  

Sequential control with a Motor line

Sequential control with the shades MotorLine.

Only run if the shade is less than or equal the 'Sequential control position'.

The shades position must be UP – 0% to allow the window to run. 0% position is internally a 'Closed' position in the controller.

✓ Configuration, Motor line, S4 X1

Sequential control max. wait time	30 s
Sequential control only continue after wait if fire	Yes
Pos. limitation watchdog	None
High priority open is 1st comfort priority	Yes

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30 seconds is the time it takes the shade to run from fully Down position to fully Up position, in this example.

The window will continue opening after 30 seconds, even if the shade is not in its UP position, only if the 'Open' command came from a Fire Alarm. It will not continue if the command was a comfort command.

3. Smoke zone configuration

In this example:

- The window is associated with Smoke zone 1, the sunshade is associated with Smoke zone 2. In the configuration menu of Smoke zone 1

✓ Configuration, Smoke zone, no. 1

Reset higher priority than break glass unit (Line A)	No
Buzzer active during alarm	Yes
Controlled smoke zone	2
Function in target smoke zone	Line D, Reset

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Smoke zone 1 controls Smoke zone 2 with functions Line D and Reset

✓ View all details, Smoke zone, no. 2

Line D smoke opening pos.	0%
Line E highest priority	No
Line E smoke opening pos.	100%
Line F highest priority	No

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In the All details menu of Smoke zone 2 Make sure Line D smoke opening position is 0%.

When the smoke alarm is triggered, the window will open to 20% and wait for the sunshade to run Up to 0% position. When the sunshade is UP or 30 seconds after the window has reached the 20% position, the window will continue to open fully.