



# Smoke Control Application Supplement

*Installing a Model 600 for use  
as a dedicated smoke control device*

This supplement provides additional wiring information for Model 600 units that are equipped with optional features required for smoke control systems.

In addition to the standard instructions in the *Installation Overview* and the *Wiring Guide*, refer to this supplement for information about providing additional circuits to monitoring equipment in a smoke control system.

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The Smoke Control option for the Model 600 is designed to interface with a Firefighter's Smoke Control Station (FSCS) or other building alarm system as allowed to deliver the functionality of a dedicated smoke control device as part of a HVAC system used for smoke control purposes. This option provides automatic operation and override functions allowing firefighters to operate the Model 600 remotely for smoke control purposes.

The smoke control option has two command inputs: open curtain and close curtain. If neither input is active the Model 600 will respond in accordance with the local smoke alarm. However, these inputs are given a higher system priority so that they override the state of the local smoke alarm. This is to grant the firefighter final authority on the state of the Model 600 curtain.

Three output relays convey Model 600 system status back to the FSCS. These outputs are potential free. The trouble alert relay is activated when the system is in a normal state but will deactivate when the system is in an error state. (These errors are described in the Installation Overview.) The close confirm relay will activate when the curtain is deployed, likewise the open confirm relay will activate when the curtain is retracted. If both of these relays are deactivated, the curtain is in transition or has encountered an obstruction, in which case the trouble alert relay will be deactivated, denoting an error state. The relays are provided in order to switch a signaling device, such as an LED, at the FSCS panel.

The Model 600 provides the FSCS option through a cable (Smoke Guard P/N 13014) that requires connection (by others) to the wiring originating at the FSCS panel. Connections to the cable can be made within the junction box located on the right end of the Model 600 housing. Wiring from the Model 600 must be within 20 conduit feet of the FSCS hardware, since the Model 600 does not supervise these signal lines. 22 AWG stranded wire is recommended.

The open curtain and close curtain input wires are to be connected through a switch or relay originating at the FSCS panel. The signal level on these wires is 12VDC. Simultaneous open and close commands should not be permitted. The common wires may be connected together if required. The precise implementation is at the discretion of the Fire Protection Engineer.

The following table indicates the cable information for these inputs:

<b>Cable Wire Group</b>	<b>Wire Color</b>	<b>Function</b>	<b>Connection</b>
OPEN CURTAIN	Orange/Black	Signal	FSCS Open Curtain switch
OPEN CURTAIN	Blue/Black	Common	FSCS Open Curtain switch
CLOSE CURTAIN	Black/White	Signal	FSCS Close Curtain switch
CLOSE CURTAIN	Red/White	Common	FSCS Close Curtain switch

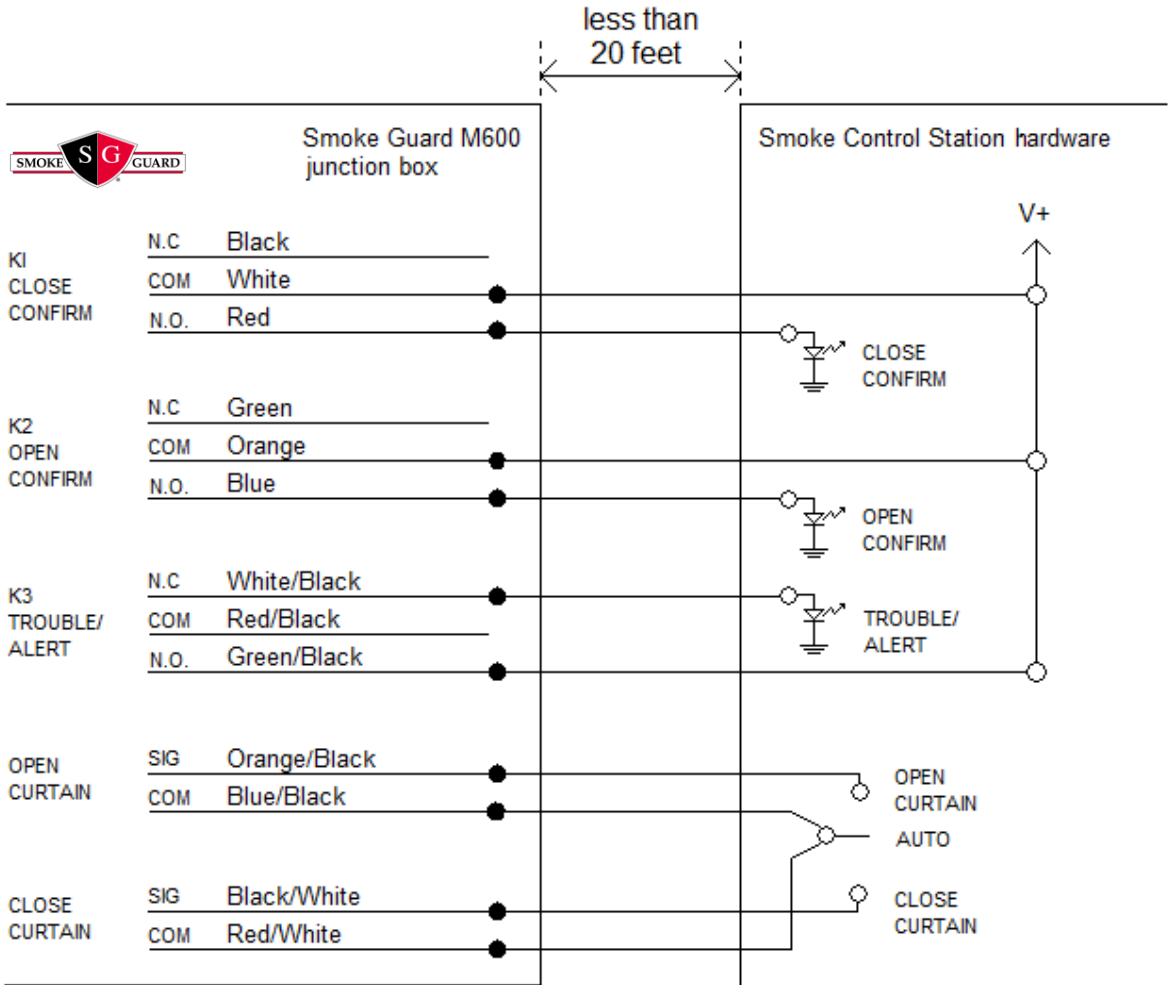
The three status relays provide both normally open (NO) and normally closed (NC) contacts that may be utilized at the discretion of the smoke control system designer. The relay contact ratings are 2A @30VDC or 3A@250VAC. A simplified typical installation is shown in the diagram on the back of this supplement.

The following table indicates the contact state when the relay status is active:

<b>Cable Wire Group</b>	<b>Wire Color</b>	<b>Relay Contact</b>	<b>Status When Active</b>
K1 – CLOSE CONFIRM	Black	NC Contact	Open when curtain is closed
K1 – CLOSE CONFIRM	White	Common	
K1 – CLOSE CONFIRM	Red	NO Contact	Closed when curtain is closed
K2 – OPEN CONFIRM	Green	NC Contact	Open when curtain is open
K2 – OPEN CONFIRM	Orange	Common	
K2 – OPEN CONFIRM	Blue	NO Contact	Closed when curtain is open
K3 – TROUBLE/ALERT	White/Black	NC Contact	Closed in trouble state
K3 – TROUBLE/ALERT	Red/Black	Common	
K3 – TROUBLE/ALERT	Green/Black	NO Contact	Open in trouble state

# Smoke Guard M600—Smoke Control System

## Simplified, typical wiring of junction box connections



All electrical by others