



# ELEVATOR CONTROL

## OVERVIEW

An additional layer of security can be added by restricting elevator use in one of the following methods.

1. Elevator Cab-Call Access - The most simplistic option, this method restricts access to the elevator cab. One Reader and one Relay Output are required for each Cab-Call Button to be secured. A valid card read is required to enable the Cab-Call Button. Cab-Call Buttons without a Reader and Relay Output operate without restriction.
  
2. Floor Select Elevator Control - is a more selective and typical method. A Reader is placed in each Elevator Cab. System is programmed to automatically secure or unsecure any or all Floor Select Buttons by time and day. Once secured, a valid access code is required to enable the Floor Select Buttons. Only Floor Select Buttons authorized by the access code are enabled. Card Holders are unable to select an unauthorized floor. History of Floor Selection by access code can be recorded with connection to an input on the DSX panel. A Card Holder's access code may enable more than one Floor Select Button. To prevent unauthorized access, the system can reset all other Floor Select Buttons that were enabled by the access code to prevent multiple floor selections from a single access code entry.

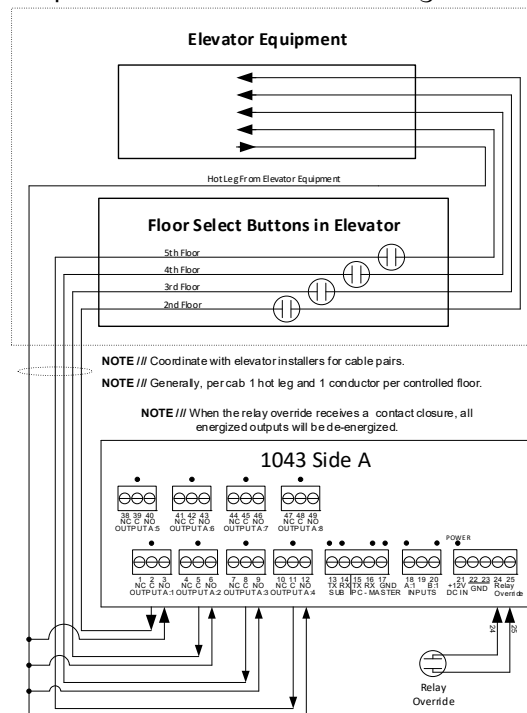


Figure 1 Floor Select Button control.

Some floors such as the ground floor do not always need to be secured. Typically, there is at least one Floor Select Button per cab that is accessible to all elevator passengers.

## ELEVATOR MONITORING

Any combination of Cab-Call and Floor Select restrictions may be designed and implemented to meet the specific access needs of the user. With the flexibility that code linking gives the DSX System, each user's access code can enable different floors and devices depending on:

Reader used                      Time of Day                      Day of Week

Floor select elevator control can always be overridden at the PC.

Floor Select and Cab-Call Buttons are secured by the Time Zones assigned to the DSX outputs used for Elevator Control.

- Up to four Time Zones can be assigned to each output.
- Individual floors may be secured separately (especially useful in multi-tenant buildings).
- Linking Levels are used to determine Card Holder access to the Floor Select and/or Cab Call Buttons.
- Access Level determines which reader or keypads and at what days and times the Card Holder code will be granted access.
- Once the Card Holder is granted access, the Linking Level determines which Floor Select and /or Cab Call Buttons will be enabled for the user to press.

Linking Levels for Cards (or codes) are managed through the WinDSX software with a simple but flexible approach.

1. Every Output is placed in a Linking Group by itself and assigned a name.  
Example:      Linking Group 1 “East Elevator Cab Floor 2”      Linking Group 2 “East Elevator Cab Floor 3”  
Each Output is governed by a Time Zone to determine times/days access is allowed for each Card.
2. Define the Linking Level for the Card.
  - Select the reader or keypad to be used.
  - Select each Linking Group (Floor Select Button) to be activated (enabled) when the card is used at that reader.
  - The Linking Groups selected are the authorized Floor Select and/or Cab Call Buttons for this Card.
  - Using the same Linking Level, select the next reader to be used (Example: a second elevator cab),
  - Select the Linking Groups (Floor Select Buttons) to be activated (enabled) from this reader.
  - Repeat for additional readers.
  - **Note:** Different Readers may have different Linking Groups

Example using the same Card:

1. Card read at Reader 2 in the West Elevator Lobby allows access to Floors 1, 3 & 5 in the West Wing.
2. The same Card used at Reader 7 in the East Elevator Lobby allows access to Floors 27, 34 & 36 in the East Wing.

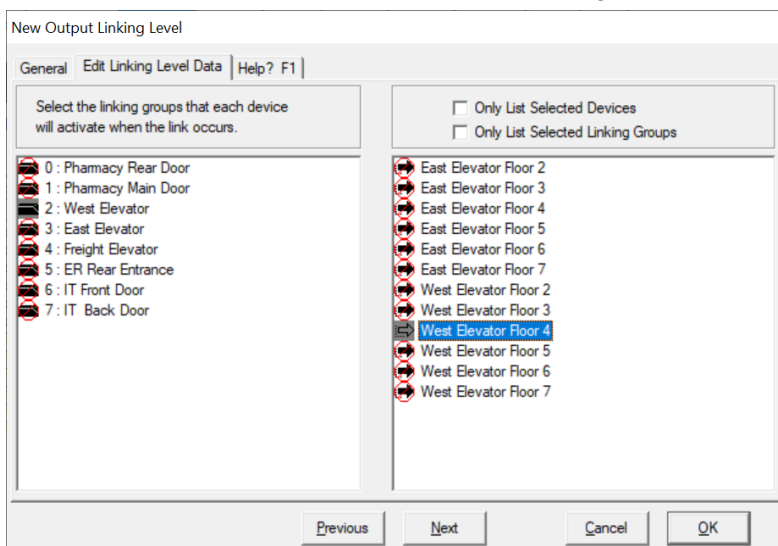


Figure 2 WinDSX Elevator Control Output Linking Level Manager

## ELEVATOR CONTROL EQUIPMENT REQUIRED

Elevator Cab-Call Access Method: One Reader for each Cab-Call Button to be secured.  
One Relay Output for each Cab-Call Button to be secured.

Floor Select Method: One Reader in each Elevator Cab.  
One Relay Output for Every Floor Select Button in each Elevator Cab.

Choose any combination of the following equipment to reach the number of Readers and Relay Outputs needed.

DSX Intelligent Control Panel Configurations:

DSX-1042	2 Readers	2 Relay Outputs
DSX-1022	2 Readers	4 Relay Outputs
DSX-1020	1 Reader	2 Relay Outputs
DSX-OX4 Output Extender		4 Relay Outputs
DSX-1043 Output Controller		16 Relay Outputs

- The DSX-1020 Controller is an efficient option when the controller is located on the elevator cab instead of the control or equipment room.
- The DSX-OX4 and the DSX-1043 Output Extenders can be connected to DSX-1042, and DSX-1022 Controllers.
- Only one extender per panel is allowed.
- Readers attached to the DSX-1042 and 1022 Controllers can activate relays on any controller or output extender in the location. This operation is indicative of the Global Code-to-Linking Logic feature available with the WinDSX System.

## LOCATION PARTITIONING FOR ELEVATOR CONTROL

Floor Select Elevator Control should be partitioned into a Location separate from the door controllers.

In a large system with high traffic, designing a system that separates (partitions) different elevator risers to separate locations allows for quicker response times and orderly additions and upgrades.

Example: Elevators for

Floors 1-20 in Location 15

Floors 21-40 in Location 25

Parking Garage in Location 12

# TYPICAL CONNECTION

