

# Life-Safety Damper Actuator Locations

Models: All Combination Fire/Smoke and Smoke Damper Models

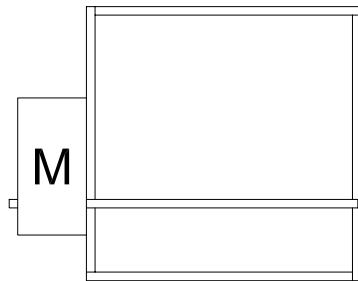
### Scope

Per UL555 and UL555S, "Actuators shall be factory-mounted securely in position". Depending on the size of the assembly, there may be a combination of master and slave actuators. This document will provide details as to where these actuators will be located based on the configuration you've ordered, as well as give details as to what will be provided in terms of factory wiring.

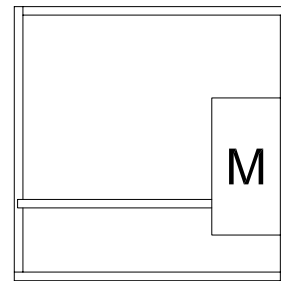
### Master Actuators

Each damper has at least one master actuator ("M"). The master is the actuator the electrical contractor will need to connect to, and is where the heat response device (s) will be located. Refer to SD-EHRD or PHRD for additional information on heat response devices.

When you select external left (EL) or internal right (IR), you're selecting where the master actuator will be located when viewed from the jackshaft side of the damper.

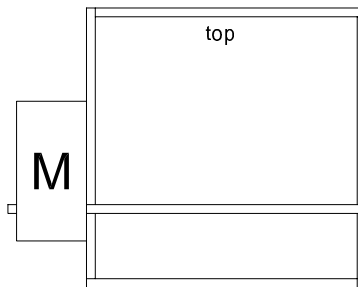


External Left (EL)

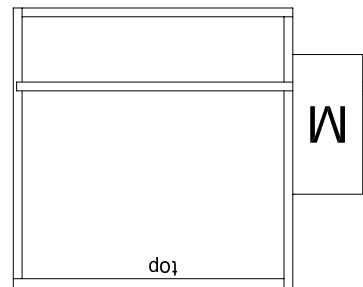
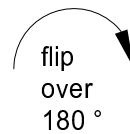


Internal Right (IR)

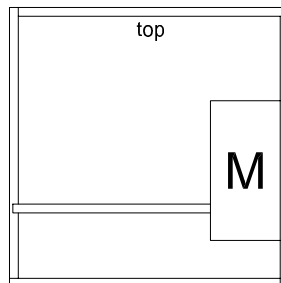
If your application calls for the actuator to be on the opposite side of the damper (i.e. ER or IL), our approvals allow for the damper to simply be flipped 180°, such that the top is the bottom and the bottom is the top, to achieve the opposite mounting location.



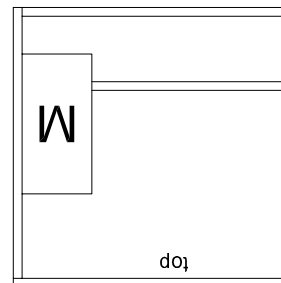
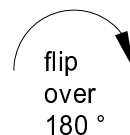
External Left (EL)



External Right (ER)



Internal Right (IR)



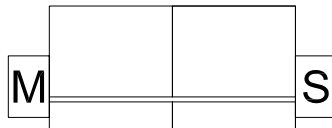
Internal Left (IL)

### Slave Actuators

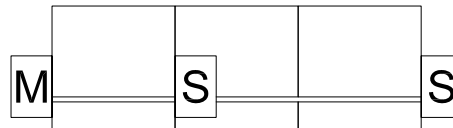
Depending on the dampers size, an assembly may require one or more slave actuators ("S"). Slaves are factory wired to the master actuator, and as such, with one exception, require no additional field wiring.

In the case of multiple panel high, single ship section assemblies that don't utilize vertical interconnections, if position indicator switches were ordered, a slave actuator on the top horizontal run of jackshaft would be equipped with a position indication switch, and therefore is the one exception for field wiring of slave actuators mentioned above. Refer to SD-SWITCH for complete details on where switches are required on larger dampers assemblies. On this document, slave actuators that require a switch will be indicated with an asterisk (\*) beside the "S".

Slave actuators will be placed in positions best suited to evenly distribute the torque to the damper blades. Slave actuators will be mounted internally, unless the order has been configured as external left/external right (EL/ER) actuator mount. In the case of EL/ER, the master will be located on the external left hand side of the damper (when facing the jackshaft side), and the slave will be on the external right hand side of the assembly, as shown below. If more than two actuators are required, the third (and any additional) actuator (s) will be internal, even when configured as EL/ER; "piggy-backing" of actuators, such as would be required to allow three actuators to be mounted externally is not permitted by our approvals.



External Left/External Right  
(EL/ER)



External Left/External Right  
(EL/ER)

### Ship Sections

Damper Assemblies that require wider than 108", or taller than 96", or that have a face area greater than 48 sqft will be shipped in multiple sections. Per UL555S, unless ship sections are mechanically fastened together such to ensure closure in unison, each independent ship section requires a heat response device (ie master actuator). As such, we break our larger assemblies into three possible sections, Ship Section Type 1A, Ship Section Type 1B, and Ship Section Type 2.

Most assemblies will fall under the category of a Ship Section Type 1A, but once any of the three limitations listed above are breached then assembly is broken down in sections designed to make the most effective use of, and minimize the required number of actuators. The various ship section configurations are illustrated by the following examples.

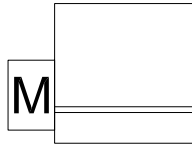
### "Exact" Actuator Locations

The following illustrations show where the master and slave actuators will be located, but it does not show the exact location of the actuator's footprint. Given the various blade schedules required for the different models of dampers, a document that showed each location for each models' height would be too large and confusing to be comprehensible. Therefore, if your application requires that you know the exact location of the actuator (s) for a given size and model of damper, please contact the factory and we'll be happy to let you know exactly where the actuator will be located and how it will be oriented.

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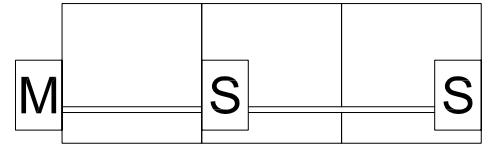
## Ship Section Type 1A - EXTERNAL LEFT



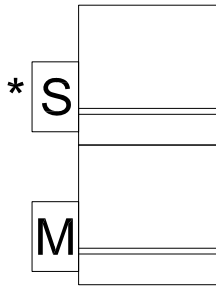
1X1 assy



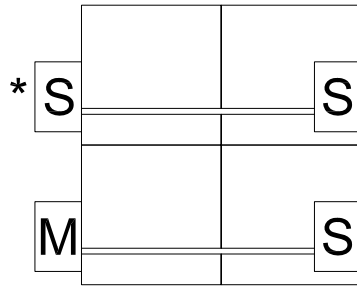
2X1 assy



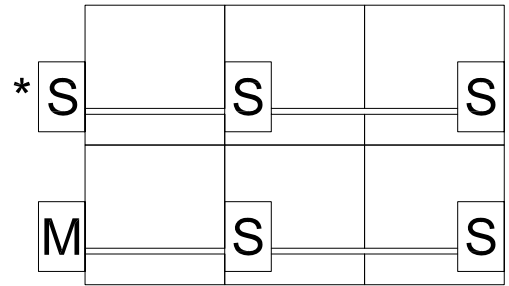
3X1 assy



1X2 assy

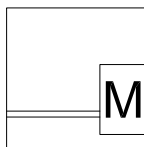


2X2 assy

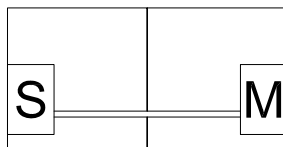


3X2 assy

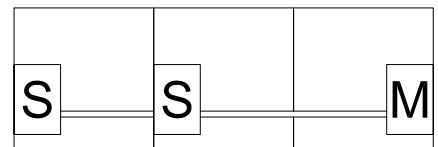
## Ship Section Type 1A - INTERNAL RIGHT



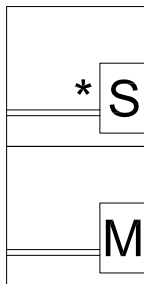
1X1 assy



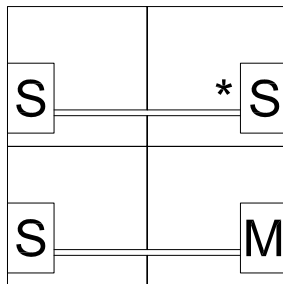
2X1 assy



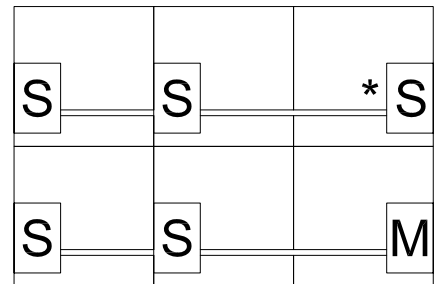
3X1 assy



1X2 assy



2X2 assy

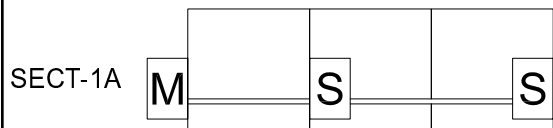
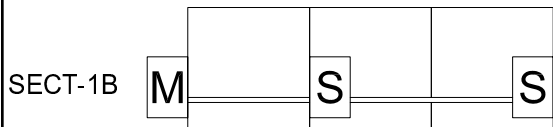


3X2 assy

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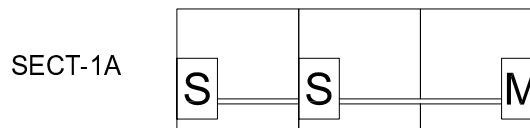
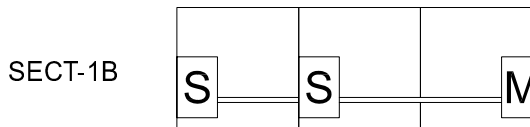
Models: All Combination Fire/Smoke and Smoke Damper Models

## Ship Section 1A & 1B - EXTERNAL LEFT



3x2 assy  
qty 2 - 3x1 ship sections

## Ship Section 1A & 1B - INTERNAL RIGHT

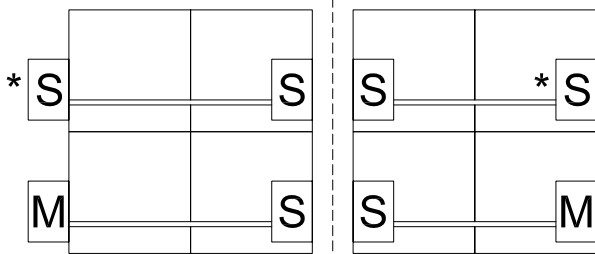


3x2 assy  
qty 2 - 3x1 ship sections

## Ship Section 1A & 2 - EXTERNAL LEFT

Section - 1A

Section - 2

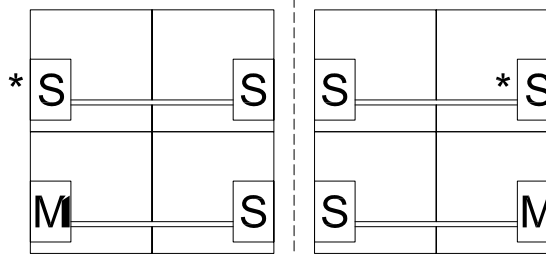


4x2 assy  
qty 2 - 2x2 ship sections

## Ship Section 1A & 2 - INTERNAL RIGHT

Section - 1A

Section - 2

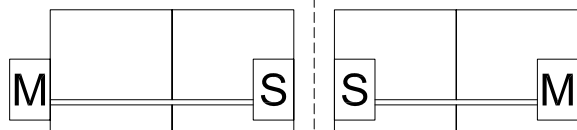


4x2 assy  
qty 2 - 2x2 ship sections

## Ship Section 1A & 2 - EXTERNAL LEFT

Section - 1A

Section - 2

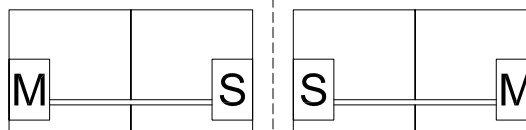


4x1 assy  
qty 2 - 2x1 ship sections

## Ship Section 1A & 2 - INTERNAL RIGHT

Section - 1A

Section - 2

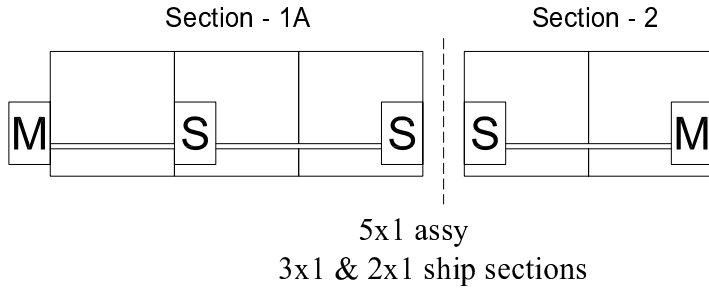


4x1 assy  
qty 2 - 2x1 ship sections

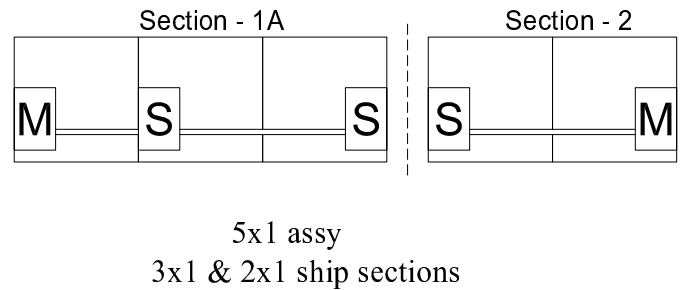
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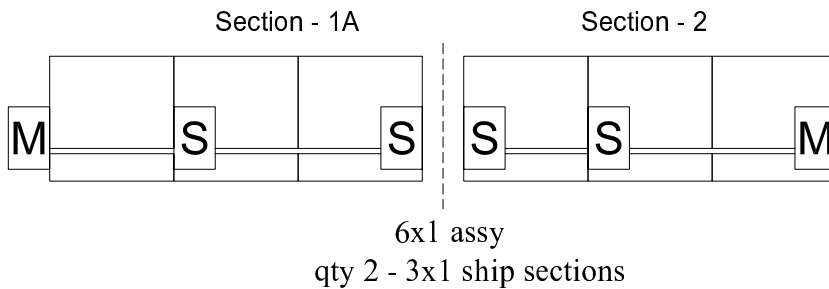
## Ship Section 1A & 2 - EXTERNAL LEFT



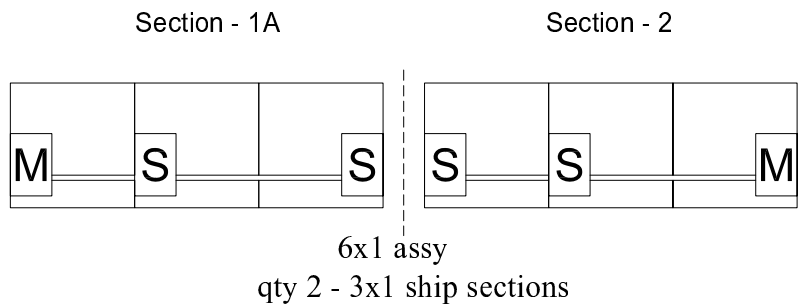
## Ship Section 1A & 2 - INTERNAL RIGHT



## Ship Section 1A & 2 - EXTERNAL LEFT



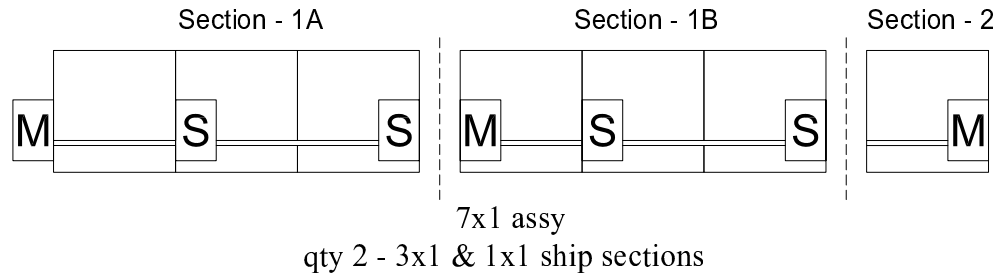
## Ship Section 1A & 2 - INTERNAL RIGHT



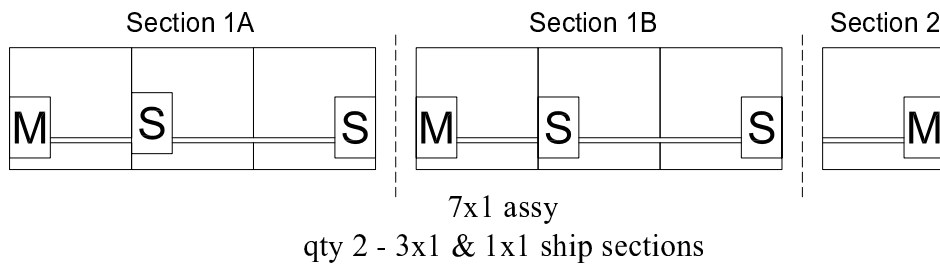
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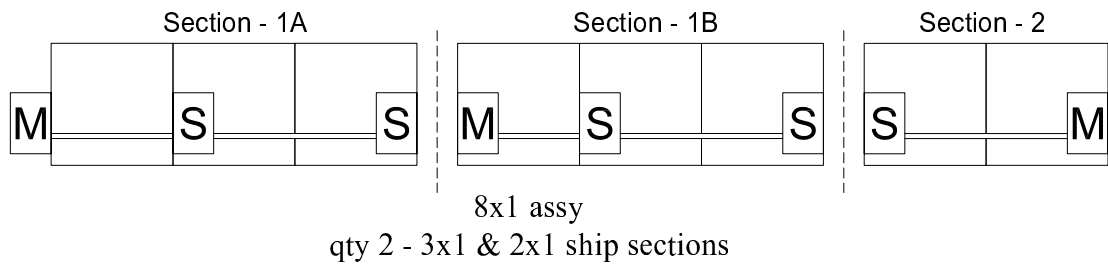
## Ship Section 1A & 1B & 2 - EXTERNAL LEFT



## Ship Section 1A & 1B & 2 - INTERNAL RIGHT



## Ship Section 1A & 1B & 2 - EXTERNAL LEFT



## Ship Section 1A & 1B & 2 - INTERNAL RIGHT

