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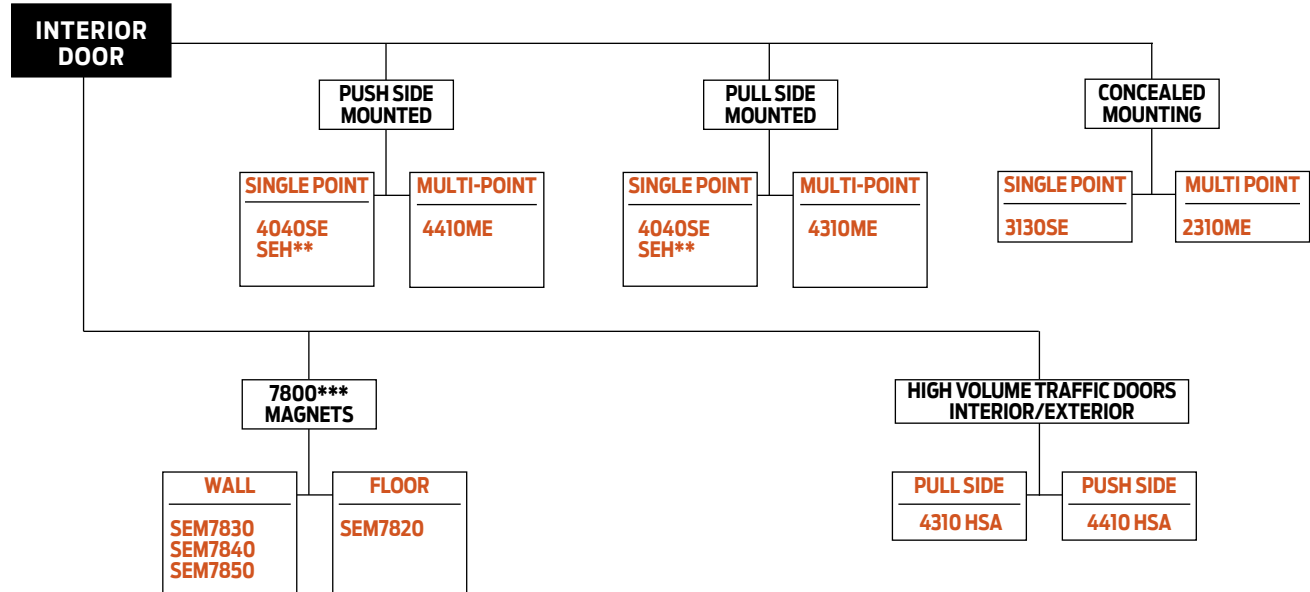


**FBH ARCHITECTURAL SECURITY**  
Commercial Doors and Hardware

**Fire/Life  
Safety  
Closers/  
Holders Series**

## Product selection guide

SENTRONIC® Series LCN closer/holders combine heavy duty closers with electrically controlled hold-open functions to control fire and smoke barrier doors. This guide is based on the desired mounting of the unit.



\*\* See SEH section (cylinder not included).

\*\*\* SEM 7800 Series are die cast.

## Product comparison

This chart shows a basic comparison of Sentronic closer/holders. Refer to the specific product chapter for complete details..

CLOSER SERIES	MOUNTING					FINISH		COVER		CYLINDER			*ARM FUNCTION						
	HINGE (PULL SIDE)	TOP JAMB (PUSH)	STOP FACE (PUSH)	CONCEALED (FRAME)	CONCEALED (DOOR)	POWDER COAT	PLATED	PLASTIC	METAL	HANDED	NON-SIZED	SIZED	SINGLE-POINT HOLD-OPEN	MULTI-POINT HOLD-OPEN	BYPASS 80/140	STANDARD (SINGLE)	REGULAR (DOUBLE)	SWING FREE	DOUBLE EGRESS
3130SE	○	○	○	○	●	●	●	○	○	●	○	●	○	○		110°	○	○	○
4040SE	●	○	●	○	○	●	●	●	●	○	●	○	○	○		110°	○	○	95°
2310ME	○	○	○	●	○	●	●	○	○	●	○	○	●	●		160°	○	○	○
4310ME	●	○	○	○	○	●	●	○	●	●	○	○	○	○		○	○	160°	95°
4410ME	○	●	○	○	○	●	●	○	●	●	○	○	○	○		○	○	150°	○
4310HSA	●	○	○	○	○	●	●	○	●	●	○	○	○	○		160°	○	○	95°
4410HSA	○	●	○	○	○	●	●	○	●	●	○	○	○	○		○	○	150°	○

● AVAILABLE  
○ NOT AVAILABLE

\* Maximum hold-open with standard template. See individual closer series for degrees of opening and hold-open per installation.

## SENTRONIC® CLOSER/HOLDERS

Automatic detection and containment of fire and smoke are the best ways to minimize danger to life and property. Patented Sentronic door closer/holders are designed to hold swinging doors open in normal use and release and automatically close the doors under fire conditions. Conforms to major building codes, life safety codes (eg. NFPA 101) and ANSI A156.15.

## SINGLE POINT HOLD-OPEN (SE)

SE Series offers adjustable single point hold-open function controlled by solenoid assembly located in the SE track.

## MULTI-POINT HOLD-OPEN (ME)

ME Series offers infinitely adjustable, multi-point hold-open function controlled by solenoid on the cylinder assembly.

## HOLDER SCANNER ACTIVATED (HSA)

Electronically controlled closer/holder designed to provide easy passage for groups of pedestrians through high traffic doors. Best suited for high traffic emergency exit doors.

## MAGNETS (SEM) - ELECTROMAGNETIC DOOR HOLDERS

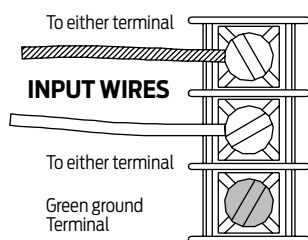
SEM Series magnets work with manual door closers to provide single point hold-open. Now available in new **tri-voltage** with 35 lbs. of holding force.

## APPLICATIONS

- For fire and smoke barrier doors.
- Integrated into larger system.
- Surface and concealed mountings.
- Remote control hold-open function of executive and conference area doors.
- Adapter plates and other installation accessories available for unusual conditions.

## GENERAL NOTES

- Note 1: For installations where 120V AC input voltage is supplied, 120V/24V transformer, 4040SE-3210, is required to reduce line voltage for 24V holding solenoid. Units are available in either 24V or 120V input, please specify.
- Note 2: Transformer 4040SE-3210 mounted on cover plate to fit 4" (102 mm) x 4" x 2-1/8" (54 mm) junction box (by others).
- Note 3: SE track quick-connector is required for 1/2" conduit.
- Note 4: SE test switch assembly includes fuse to protect solenoid. Works with ionization, photoelectric and heat sensing detectors (by others).



**SE WIRING DIAGRAM**

## LISTINGS AND APPROVALS

Sentronic closer/holders are listed by Underwriters Laboratories, Inc. in the following product categories under FIRE DOORS (GSNV), Combination Door Closers and Holders (GTIS) file R7050. SEM 7800 Series magnets are listed under Door Holders (GTPR) file R8327.

Consult the factory for other listings, such as; cUL, Department of Labor and Industry of the Commonwealth of Pennsylvania, The Board of Standards and Appeals of the City of New York, Fire and Panic Safety Standards of the California State Fire Marshal.

## HOLDING SOLENOIDS CURRENT DRAW

### SE/ME

24V AC/DC (+10% -15%) @ 90 mA max.  
120V AC/DC (+10% -15%) @ 30 mA max.

### SEM (TRI-VOLT)

12V DC (+10% -15%) @ 30 mA max.  
24V AC/DC (+10% -15%) @ 20 mA max.  
120V AC (+10% -15%) @ 20 mA max.

### HSA

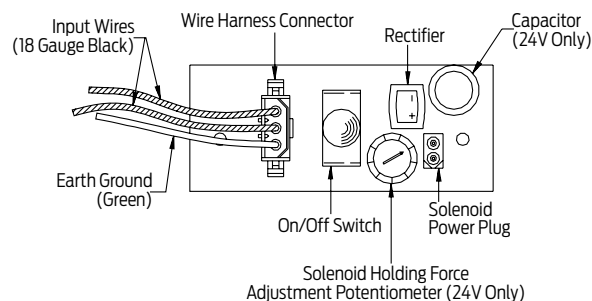
24V AC/DC (+10% -15%) @ 120 mA max.

## TRANSFORMER DATA

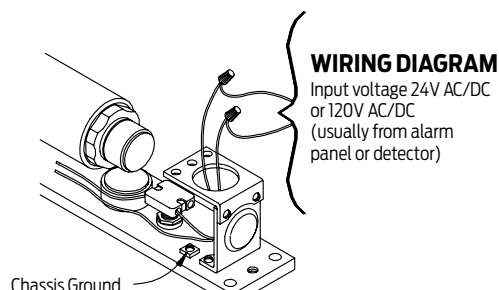
120V AC 50-60 Hz (primary); 24V AC @ 400 mA max. (secondary)  
An LCN supplied transformer will power (recommended) 2 SE, 3 SE/ME, and 15 SEM.

## ME WIRING

ME "ON/OFF" switch assembly includes trim pot to adjust pull out force and fuse to protect solenoid.



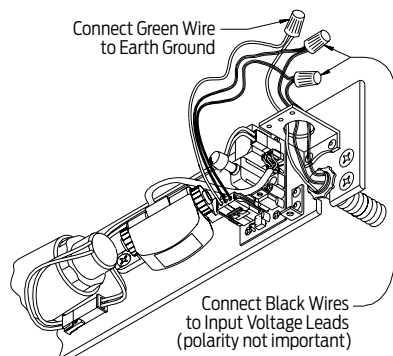
**ME (4310, 4410) WIRING DIAGRAM (24V only)**



**ME (2310) WIRING DIAGRAM**

## HSA WIRING

HSA "On/Off" switch assembly includes trim pot to adjust hold-open time and fuse to protect solenoid.



HSA WIRING DIAGRAM

## FEATURES COMMON TO FIRE/LIFE SAFETY CLOSERS

- 24V AC/DC or 120V AC input, please specify for SE or ME.
- When current is interrupted, hold-open releases and door closes.
- Adjustable hydraulic backcheck cushions opening swing prior to 90°.
- Separate regulation of general closing speed and latching speed.
- Available in a wide range of powder coated finishes to blend with door and frame. SEM magnets available in Aluminum and Dark Bronze only.
- Circuit automatically handles AC or DC input.
- Can be pushed safely and easily out of hold-open.
- Functions as a full rack and pinion door closer when hold-open is not engaged or current is interrupted.
- Works with ionization, photoelectric and heat sensing detectors (by others).

## WARRANTY

2 year limited warranty. See General Information Section for complete warranty details..

## SPECIFICATIONS

Refer to "SPECIFICATIONS" section for suggested architectural specifications.

## DESIGN ASSISTANCE

LCN has been providing reliable solutions to unique door control problems since 1925.

Contact LCN for assistance or technical information at **877-671-7011** or FAX **800-248-1460 (order entry)**, Fax **815-879-1495** for Application Engineering.

## MATERIALS

- High strength **cast iron** cylinder.
- **Forged steel** main arm.
- One piece **forged steel** piston.
- **All weather fluid** eliminates seasonal adjustments.
- **High efficiency, full complement**, low friction bearings.
- Tamper resistant regulating screws.
- Quiet, low friction track and roller combination for all single lever arm closers.

## FINISHES

- Available in six standard or a wide selection of optional custom powder coat finishes to blend with door and frame.
- LCN's powder coat finishes surpass 100 hours of salt spray which is over four times the ANSI standard for corrosion resistance.
- Plated finishes are available as an option to accent door and frame.

## MAINTENANCE

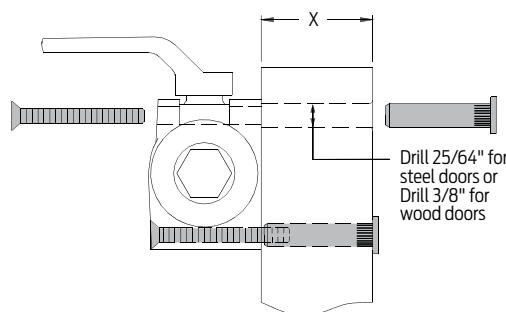
Closers mounted according to LCN installation instructions require no periodic adjustments. Quarterly inspections are recommended. Refer to the installation instructions for complete, product specific details.

## POSITIVE PRESSURE

LCN closers have been certified for three hours by UL to be in compliance with UL 10 C. Contact LCN for specific details on door closer fire ratings.

## FASTENERS

Standard WOOD and MACHINE SCREW (WMS) pack contains phillips head wood and machine screws to install the closer. Thru Bolts and/or TORX® machine screws are available for most closers. LCN thru bolts (TB) can be installed on 1-3/4" thick doors with either the 1/4-20 machine screws or optional TORX screws supplied with the closer. Optional sizes are available for 1-5/8" or 1-3/8" door thicknesses, but this must be specified when ordering.



NOTE 1: For Thru Bolts, specify door thickness if other than 1-3/4" (44 mm).

NOTE 2: Phillips head, metric machine screws are available on special order.





The Sentronic® SEM 7800 Series are heavy duty, electrically controlled door holding magnets. Magnets are fail safe and hold until the current is interrupted. A manual door closer is used to control and close the door. A choice of floor, recessed wall, or surface mounted wall magnets are available.

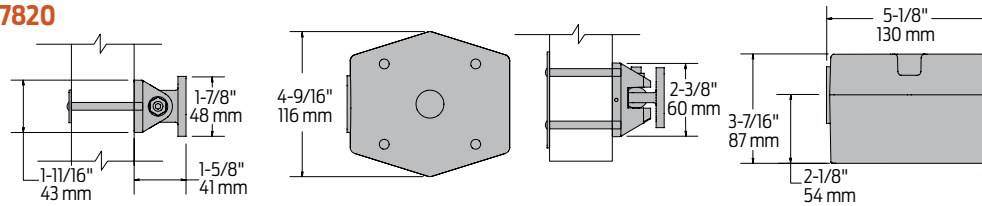
<b>Certifications</b>	Grade 1 - ANSI A156.15, UL 10C for metal smoke barrier or labeled door, ADA, Life Safety Code, NFPA 101, 100 Hour Salt Spray, Meets BAA - Buy American Act
<b>Voltage</b>	Tri-voltage design with 35 lbs. of holding force
<b>Housing</b>	Die cast
<b>Fasteners</b>	Wood and machine screw pack
<b>Finishes/Colors/ Powder Coat</b>	Available in Aluminum and Dark Bronze only
<b>Options</b>	Now available with armature extensions (see page 11)

# SEM7800 Series

## Magnets

Features and mounting details

### 7820



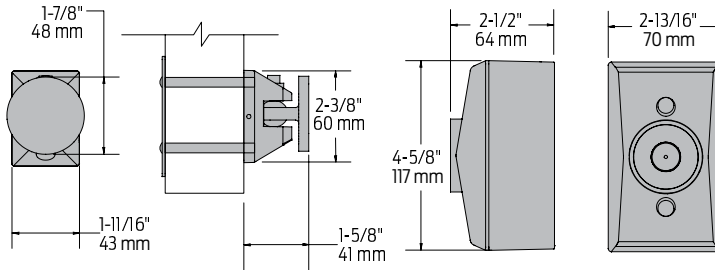
#### Mounting

Floor mounted

#### Total Projection

6-3/4" (171 mm)

### 7830



#### Mounting

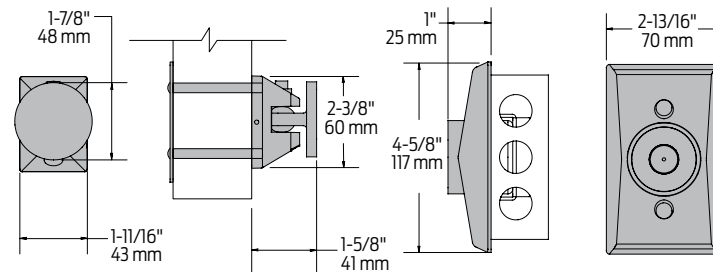
Surface wall mounted

#### Total Projection

4-1/8" (105 mm)

- Suitable for use in pocket door installations

### 7840



#### Mounting

- Low profile recessed wall mount
- 2" (51 mm) x 4" (102 mm) x 1-1/2" (38 mm)

#### Total Projection

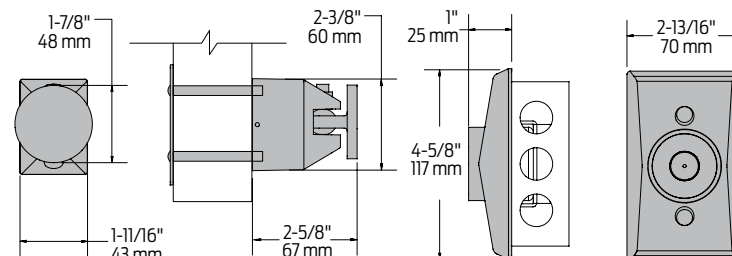
2-5/8" (67 mm)

- Suitable for use in pocket door installations

Note:

Outlet box not included.

### 7850



#### Mounting

- Standard profile recessed wall mount
- 2" (51 mm) x 4" (102 mm) x 1-1/2" (38 mm)

#### Total Projection

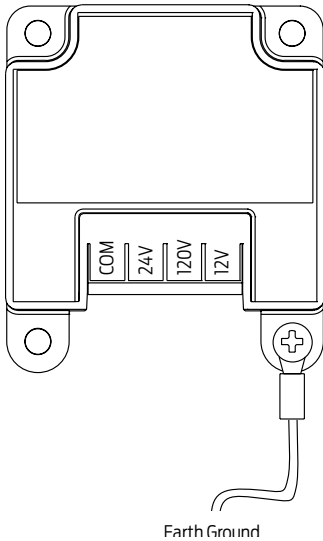
3-5/8" (92 mm)

- Suitable for use in pocket door installations

Note:

Outlet box not included.

### Voltage input



### Electrical schematic

#### Operation:

Electromagnets are typically used with fire alarm systems. Doors are held open in the non-alarm condition. When the fire alarm panel enters the alarm condition, power to the electromagnets is removed, the doors close under door closer control, and function as a manual door. When the fire alarm panel returns to the non-alarm condition, power is reapplied to the electromagnets and the doors can be held open again.

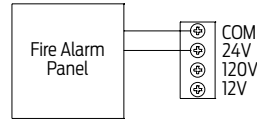


Fig. 1 24V AC/DC Wiring  
Polarity is inimportant

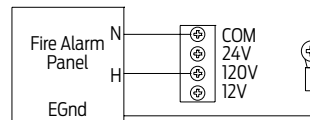


Fig. 2 120V AC Wiring

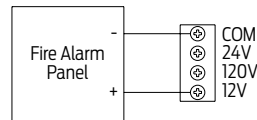


Fig. 3 12V DC Wiring  
Polarity as shown

Electrical Specifications  
Max. Current Draw  
.030A @ 12VDC  
.020A @ 24VAC/DC  
.020A @ 120VAC

<b>Holding Force</b>	35 lbs. @ nominal input voltage
<b>Maximum Current Draw</b>	■ .020A @ 24VAC/DC, 120VAC ■ .030A @ 12VDC

## Magnets



**SEM7820-516**  
Floor Magnet

- Magnet coil
- Standard



**SEM7830-516**  
**SEM7840-516**  
**SEM7850-516**  
Wall Magnet

- Magnet coil
- Standard

## Armatures



**SEM7820-825**  
**SEM7830-825**  
**SEM7840-825**  
Door Armature

- Die cast low profile armature
- Standard



**SEM7850-828**  
Door Armature

- Die cast armature
- Standard

## Cover



**SEM7830-72**  
**SEM7840-72**  
**SEM7850-72**  
Standard Cover

- Die cast cover
- Standard

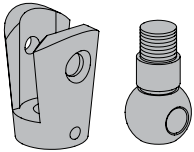
## Box



**SEM7830-268**  
Wall Box

- Die cast surface wall mount box
- Standard

### Extensions



#### **SEM7810-514** Coupler Assembly Kit

- Required for each door needing extension(s)
- Kit includes coupler link and ball pivot (alone serves as a 1-1/2" extension)



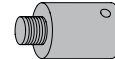
#### **SEM7810-E050** Extension - 1/2"

- Metal
- Standard



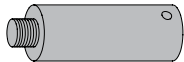
#### **SEM7810-E075** Extension - 3/4"

- Metal
- Standard



#### **Extension, SEM7810-E100** Extension - 1"

- Metal
- Standard



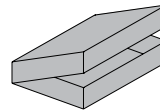
#### **SEM7810-E200** Extension - 2"

- Metal
- Standard



#### **Extension, SEM7810-E400** Extension - 4"

- Metal
- Standard



#### **SEM7810-517** Extension kit

Extension kit includes:

- 10 ..... 7810SEM-E050
- 10 ..... 7810SEM-E075
- 10 ..... 7810SEM-E100
- 5 ..... 7810SEM-E200
- 20 ..... 7810SEM-514

*Note: Using just the Coupler Assembly Kit (SEM7810-514) will create a 1-1/2" link.*

*Extension Links are available in different lengths and can be combined together to achieve the desired length. Max. recommended length = 12"*

SEM7800  
Series

Ordering Information

How-to-order SEM 7800 series magnets

Select magnet series

- ☐ SEM7820
- ☐ SEM7830
- ☐ SEM7840
- ☐ SEM7850

Specify finish

- ☐ Standard Powder Coat \_\_\_\_\_  
Aluminum, Dark Bronze

Magnets will be shipped with:

- Die cast housing
- Cover
- Armatures
- WMS screw pack

How-to-order SEM 7810 extensions

Select magnet series

- ☐ SEM7810-514 (qty.) \_\_\_\_\_
- ☐ SEM7810-E050 (qty.) \_\_\_\_\_
- ☐ SEM7810-E075 (qty.) \_\_\_\_\_
- ☐ SEM7810-E100 (qty.) \_\_\_\_\_
- ☐ SEM7810-E200 (qty.) \_\_\_\_\_
- ☐ SEM7810-E400 (qty.) \_\_\_\_\_
- ☐ SEM7810-517 (qty.) \_\_\_\_\_

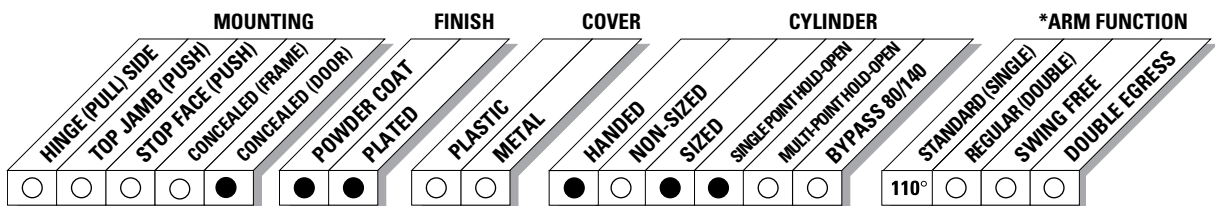


The 3130SE SENTRONIC® is a concealed in the door, closer/ holder designed to provide single point hold-open for fire and smoke barrier doors. Door is held open until current interruption releases the holding mechanism and the door closes. Single lever (track) arm closer is specifically designed for interior doors.

<b>Certifications</b>	Grade 1 - ANSI A156.15, UL/for metal smoke barrier or labeled door, ADA, Life Safety Code, NFPA 101, 100 Hour Salt Spray, Meets BAA - Buy American Act	<b>Fasteners</b>	Wood and machine screw pack
<b>Body Construction</b>	<ul style="list-style-type: none"> <li>■ Cast Iron Body</li> <li>■ Full Complement Bearing</li> <li>■ 1-1/8" Diameter Piston</li> <li>■ 9/16" Diameter Double Heat Treated Pinion Journal</li> </ul>	<b>Mounting</b>	Concealed (in door) for interior smoke barrier and labeled doors
<b>Fluid</b>	All Weather Fluid	<b>Arms</b>	Standard, handed arm and non-handed track
<b>Handing</b>	Handed	<b>Finishes/Colors/ Powder Coat</b>	<ul style="list-style-type: none"> <li>■ Aluminum (689)</li> <li>■ Statuary Bronze (690)</li> <li>■ Light Bronze (691)</li> <li>■ Black (693)</li> <li>■ Dark Bronze (695)</li> <li>■ Brass (696)</li> <li>■ Custom colors optional</li> <li>■ Optional SRI primer - powder coat only</li> <li>■ Optional plated finishes</li> </ul>
<b>Size</b>	Size 3 or 4, non-adjustable		
<b>Warranty</b>	2 years		

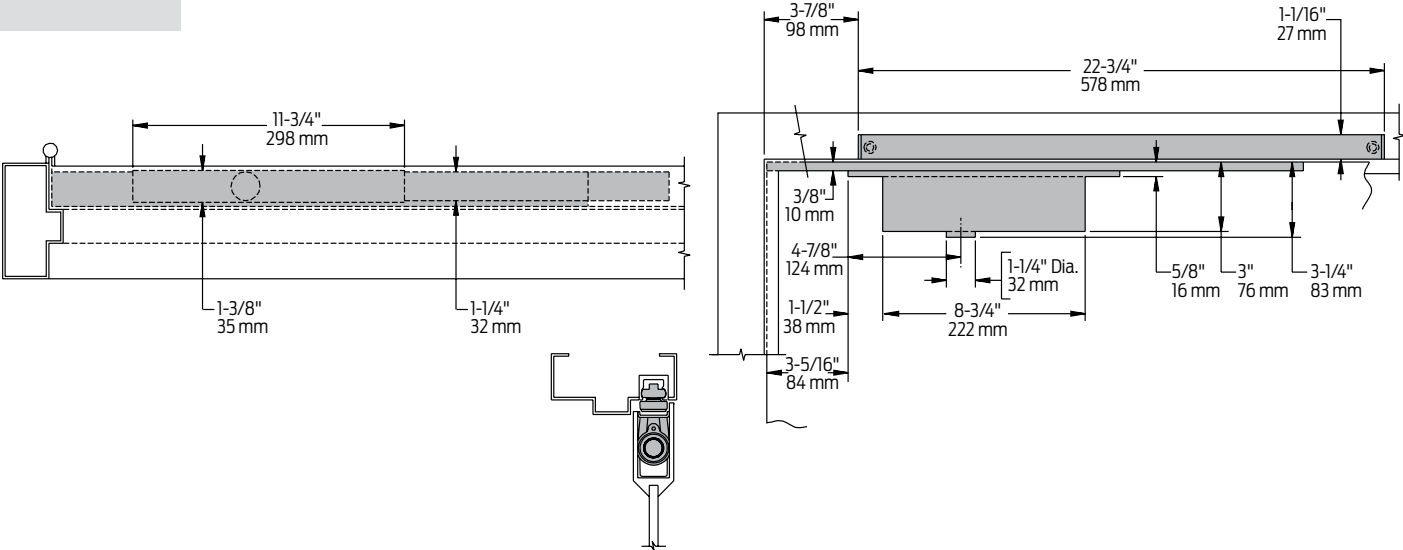
### Special Templates

Customized installation templates or products may be available to solve unusual applications. Contact LCN Product Support for assistance.



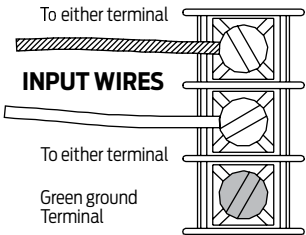
● AVAILABLE  
○ NOT AVAILABLE

\* Maximum opening/hold-open point with standard template. See individual closer series for degrees of opening per installation.



Butt Hinges	<ul style="list-style-type: none"><li>Should not exceed 5" (127 mm) in width</li><li>Consult factory for pivot hung installations</li></ul>
Auxiliary Stop	Recommended at hold-open point
Top Rail	Minimum 4" (102 mm)
Door Thickness	<ul style="list-style-type: none"><li>1-3/4" (44 mm) minimum</li><li>Please consult the door manufacturer to assure that the door integrity and warranty is maintained after installing the 3130SE Series door closer in 1-3/4" (44 mm) thickness wood doors</li></ul>
Door Width	<ul style="list-style-type: none"><li>2' 4" (711 mm) minimum for single door with SE</li><li>2' 8" (813 mm) minimum for door with SEL</li></ul>
Maximum Opening	<ul style="list-style-type: none"><li>Templating allows 110°</li><li>Hold-open points between 85° and 110° in approximately 3° increments</li><li>SEL arm and track locate hold-open at 110°, 120° and 130°</li></ul>
SE, SEL Electrical Options	<ul style="list-style-type: none"><li>These track assemblies require a single power circuit for the holding solenoid</li><li>SE or SEL holding solenoid is either 24V or 120V input, please specify</li><li>An optional 4040SE-3210 or 8310-824 TRANSFORMER reduces 120V AC line voltage to 24V AC</li><li>Circuitry accepts either AC or DC input</li></ul>
Options	<ul style="list-style-type: none"><li>Long (SEL) track and arm</li><li>24V or 120V input, please specify</li></ul>

SE Wiring Diagram



- For interior smoke barrier and labeled fire doors
- Functions as full rack and pinion door closer when hold-open is not engaged or current is interrupted
- Interfaces with fire alarm system

### Cylinder



**3130SE-3071**  
SE Cylinder Assembly

- Handed
- Cast iron
- For various applications see "Table of Sizes" on 3130SE Series page 16
- Standard

### Arms



**3130SE-3077T**  
Standard Arm

- Handed
- Adjustable to select hold-open point
- Standard



**3130SEL-3077T**  
Long Arm

- Handed
- Provides hold-open point from 110° to 130°, determined by track templating
- Used with SEL TRACK 3130SEL-3038 only
- Optional

### Tracks



**3130SE-3038**  
SE Track

- Non-handed
- Circuitry accepts either AC or DC input
- 24V holding solenoid (24) or 120V holding solenoid (120), please specify
- Standard



**3130SEL-3038**  
SEL Long Track

- Non-handed
- Used with LONG ARM, 3130SEL-3077T, only
- Provides hold open point from 110° to 130°, determined by templating. Circuitry accepts either AC or DC input
- 24V holding solenoid (24) or 120V holding solenoid (120), please specify
- Optional

### Installation Accessories



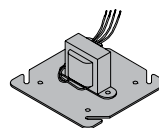
**3130SE-81**  
Conduit Quick-Connector

- Two piece connector for use with 1/2" conduit
- See page 21 for illustration



**3130SE-3034SE**  
Track Roller & Track Slider

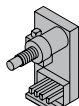
- Quiet, low friction roller assembly
- Shoulder dimension "X" = 1/8" (3 mm)
- Alloy metal slider for use in SE series tracks only



**4040SE-3210**  
Transformer

- Reduces line voltage from 120V to 24V AC
- Mounted on plate for 4" (102 mm) x 4" x 2-1/8" (54 mm) junction box (by others)

### Switch



**3130SE-3436**  
Test Switch

How-to-order 3130SE Series closers

Select cylinder size

- ☐ 3133SE
- ☐ 3134SE

Select hand

- ☐ RH
- ☐ LH

Voltage

- ☐ 24V AC/DC
- ☐ 120V AC/DC

Specify finish

- ☐ Standard Powder Coat \_\_\_\_\_  
Aluminum, Dark Bronze, Statuary, Light Bronze, Black, Brass

Closer will be shipped with:

- Standard arm
- Track roller and slider
- Standard track
- Wood & machine screw pack  
unless options listed below are selected.

Closer options

Arm

- ☐ Long Arm\* (LONG)  
\* use with SEL track only

Finishes

- ☐ Custom Powder Coat (RAL) \_\_\_\_\_
- ☐ Plated Finish, US \_\_\_\_\_

Installation accessories

- ☐ Transformer, 4040SE-3210

Screw pack

- ☐ TORX Machine Screw (TORX)

Special template

- ☐ ST- \_\_\_\_\_

Table of sizes

- Select closer based on width of door
- Sized 3130SE series cylinders available in size 3 or 4
- Closing power of all 3130SE Series closers is not adjustable

Interior door width

	28" 711mm	34" 864mm	38" 965mm	48" 1219mm
			size 3	size 4
3133SE			→	
3134SE				→

Minimum door width

→ Indicates recommended range of door width for closer size.

NOTE: For SE, minimum door width 28" (711mm)  
For SEL, minimum door width 32" (813mm)



The 4040SE SENTRONIC® is a heavy duty, non-handed, nonsized closer/holder designed to provide single point hold-open for fire and smoke barrier doors. The door is held open until current interruption releases the holding mechanism and the door closes. Single lever (track) arm closer is specifically designed for interior doors. Choice of finishes, track functions, and installation accessories meet virtually all life safety requirements.

**Certifications** Grade 1 - ANSI A156.15, UL 10C, ADA, 100 Hour Salt Spray, Meets BAA - Buy American Act, NFPA 101

**Body Construction**

- Cast Iron Body
- Full Complement Bearing
- 1-1/2" Diameter Piston
- 3/4" Diameter Double Heat Treated Pinion Journal

**Fluid** All Weather Fluid

**Handing** Non-Handed

**Size** Adjustable Spring Size, up to 4

**Warranty** 2 years

**Cover**

- Clip-on plastic, standard
- Metal, optional

**Fasteners** Wood and machine screw pack

**Mounting** Hinge (Pull Side), Stop Face (Push Side)

**Arms** Standard arm and SE track, standard  
Double egress arm and SEL track, optional

**Finishes/Colors/  
Powder Coat**

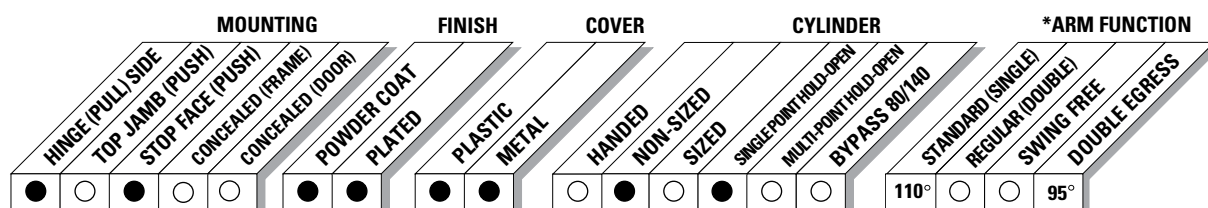
- Aluminum (689)
- Statuary Bronze (690)
- Light Bronze (691)
- Black (693)
- Dark Bronze (695)
- Brass (696)
- Custom colors optional

- Optional SRI primer - powder coat only
- Optional plated finishes

**Wiring** Concealed or surface, interfaces with fire alarm systems

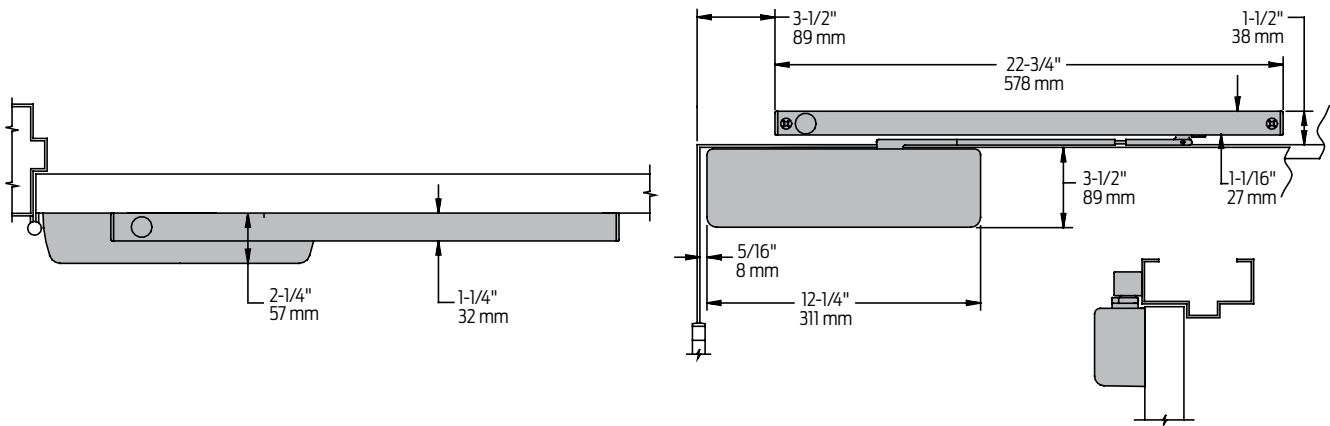
### Special Templates

Customized installation templates or products may be available to solve unusual applications. Contact LCN Product Support for assistance.



Mounting details

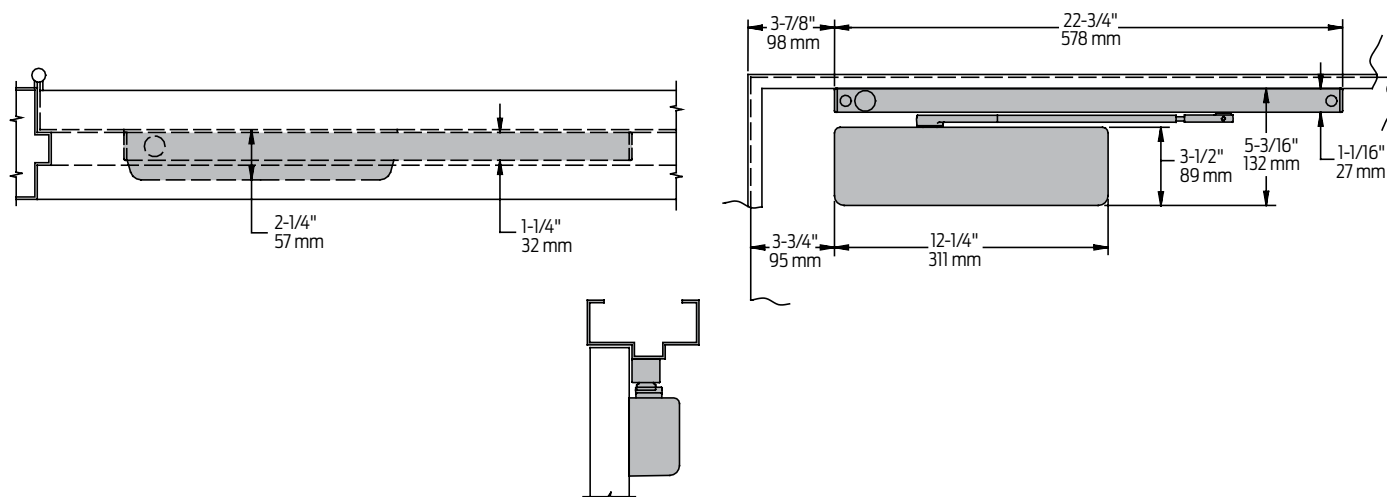
Hinge (Pull)  
Side Mounting



<b>Butt Hinges</b>	Should not exceed 5" (127 mm) in width
<b>Swing Clear Hinges</b>	Consult factory
<b>Auxiliary Stop</b>	Recommended at hold-open point
<b>Reveal</b>	<ul style="list-style-type: none"><li>Should not exceed 1/8" (3 mm) for standard arm</li><li>Should not exceed 2-11/16" (68 mm) for double egress arm</li></ul>
<b>Top Rail</b>	<ul style="list-style-type: none"><li>Minimum 3-1/2" (89 mm)</li><li>Installation with PLATE, 4040SE-18 requires SPECIAL TEMPLATE and 1-3/4" (44 mm) minimum top rail</li></ul>
<b>Head Frame</b>	Requires 2" (51 mm) minimum
<b>Flush Ceiling</b>	2" (51 mm) head frame does not require special templating
<b>Door Width</b>	<ul style="list-style-type: none"><li>2' 4" (711 mm) minimum for single door with SE</li><li>4' 8" (1422 mm) minimum for paired doors with SE</li></ul>
<b>Flush Ceiling</b>	2-3/8" (60 mm) behind door required for 90° installation
<b>Maximum Opening</b>	<ul style="list-style-type: none"><li>Templating allows 110°</li><li>Hold-open points between 85° and 110° in approximately 3° increments</li><li>Pull side mounting on a double egress frame requires a handed double egress arm</li><li>Maximum hold-open to 95°</li><li>2-11/16" (67 mm) maximum reveal on pull side</li><li>SEL track provides hold-open points between 90° and 120°, in approximately 3° increments</li></ul>
<b>SE, SEL Electrical Options</b>	<ul style="list-style-type: none"><li>These track assemblies require a single power circuit for the holding solenoid</li><li>SE or SEL holding solenoid is either 24V or 120V input, please specify</li><li>An optional 4040SE-3210 or 8310-824 TRANSFORMER reduces 120V AC line voltage to 24V AC.</li><li>Circuitry accepts either AC or DC input</li></ul>
<b>Options</b>	<ul style="list-style-type: none"><li>Long (SEL) track</li><li>Handed double egress arm for reveal under 2-11/16" (67 mm)</li></ul>
<b>SE Wiring Diagram</b>	See "FIRE/LIFE SAFETY" section page 19 for typical wiring and electrical diagram

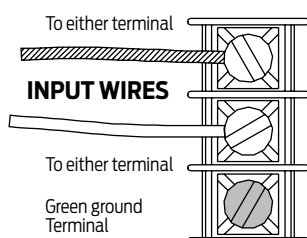
Notes:

- Information applies to 4040 SE unless otherwise specified
- Hold-open force is adjustable
- Momentary on/off switch board assembly for testing door release also provides over-voltage protection. Field replaceable
- Functions as a full rack and pinion closer when hold-open is not engaged or current is interrupted



<b>Butt Hinges</b>	Should not exceed 5" (127 mm) in width
<b>Auxiliary Stop</b>	Recommended at hold-open point
<b>Top Rail</b>	<ul style="list-style-type: none"> <li>Minimum 5-3/4" (146 mm)</li> <li>Installation with PLATE, 4040SE-18PA requires SPECIAL TEMPLATE and 2" (51 mm) minimum top rail</li> </ul>
<b>Stop Width</b>	1-1/4" (32 mm) minimum
<b>Door Width</b>	<ul style="list-style-type: none"> <li>2' 4" (711 mm) minimum for single door with SE</li> <li>4' 8" (1422 mm) minimum for paired doors with SE</li> </ul>
<b>Maximum Opening</b>	<ul style="list-style-type: none"> <li>Templating allows 110°</li> <li>Hold-open points between 85° and 110° in approximately 3° increments</li> <li>SEL track provides hold-open points between 90° and 120°, in approximately 3° increments</li> </ul>
<b>SE, SEL Electrical Options</b>	<ul style="list-style-type: none"> <li>These track assemblies require a single power circuit for the holding solenoid</li> <li>SE or SEL holding solenoid is either 24V or 120V input, please specify</li> <li>An optional 4040SE-3210 or 8310-824 TRANSFORMER reduces 120V AC line voltage to 24V AC</li> <li>Circuitry accepts either AC or DC input</li> </ul>
<b>Options</b>	<ul style="list-style-type: none"> <li>Long (SEL) track</li> </ul>

#### SE Wiring Diagram



#### Notes:

- Information applies to 4040 SE closers unless otherwise specified
- Momentary on/off switch board assembly for testing door release also provides over-voltage protection. Field replaceable
- Functions as a full rack and pinion closer when hold-open is not engaged or current is interrupted

### Cylinder



**4040SE-3071**  
Cylinder Assembly

- Non-handed
- Cast iron
- Standard

### Covers



**4040SE-72**  
Plastic Cover

- Non-handed
- Clip-on
- Standard



**4040SE-72MC**  
Metal Cover

- Handed
- Required for plated finishes and custom powder coat finishes
- Optional

### Arms



**4040SE-3077T**  
Standard Arm

- Non-handed
- Adjustable to select hold-open point



**4040SE-3077DE**  
Double Egress Arm

- Handed
- For pull side installations on double egress doors and frames
- Not required for push side mounting on double egress frames
- Optional

### Tracks



**4040SE-3038**  
SE Track

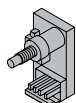
- Non-handed
- For SE closers. Mounts on either head frame or stop
- 24V or 120V AC/DC input for holding solenoid, please specify.
- Includes test switch assembly with fuse
- Standard



**4040SEL-3038**  
SEL Long Track

- Non-handed
- Mounts on either head frame or stop
- 24V or 120V AC/DC input standard for holding solenoid, please specify
- Includes test switch assembly with fuse
- Optional

### Switch



**4040SE-3436**  
Test Switch

### Installation Accessories



**4040SE-18**  
Plate

- Required where top rail is less than 3-1/2" (89 mm)
- Requires minimum 2" (51 mm) top rail
- Installations require a SPECIAL TEMPLATE



**4040SE-18PA**  
Plate

- Required where top rail is less than 5-3/4" (146 mm)
- Requires minimum 2" (51 mm) top rail
- Installations require a SPECIAL TEMPLATE



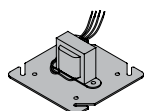
**4040SE-81**  
Conduit Quick-Connector

- Two piece connector for use with 1/2" conduit



**4040SE-3034SE**  
Track Roller & Track Slider

- Quiet, low friction roller assembly
- Shoulder dimension "X" = 1/8" (3 mm)
- Alloy metal slider for use in SE series tracks only



**4040SE-3210**  
Transformer

- Reduces line voltage from 120V to 24V AC
- Mounted on cover for 4" (102 mm) x 4" x 2-1/8" (54 mm) junction box (by others)

How-to-order 4040SE Series closers

Select cylinder size

- ☐ SE
- ☐ SEL

Voltage

- ☐ 24V AC/DC
- ☐ 120V AC/DC

Specify finish

- ☐ Standard Powder Coat \_\_\_\_\_  
Aluminum, Dark Bronze, Statuary, Light Bronze, Black, Brass.

Closer will be shipped with:

- Standard cylinder
- Standard clip-on cover
- Standard arm
- Standard track
- Wood & machine screw pack  
unless options listed below are selected.

Closer options

Cover

- ☐ Metal (MC) (please specify right or left hand)

Finishes

- ☐ Custom Powder Coat (RAL) (handed metal cover required)
- ☐ Plated Finish, US \_\_\_\_\_ (handed metal cover required)

Arm

- ☐ Double Egress (DE) (please specify right or left hand)

Screw pack

- ☐ TB\*, Wood & Machine Screw (TBWMS)
- ☐ TORX Machine Screw (TORX)
- ☐ TB\* & TORX Machine Screw (TBTRX)

\* Specify door thickness if other than 1-3/4"

Installation accessories

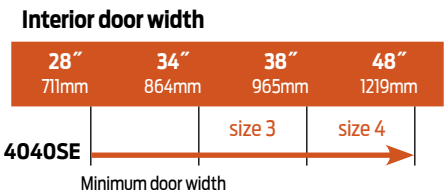
- ☐ Plate, 4040SE-18
- ☐ Plate, 4040SE-18PA
- ☐ Transformer, 4040SE-3210

Special template

- ☐ ST- \_\_\_\_\_

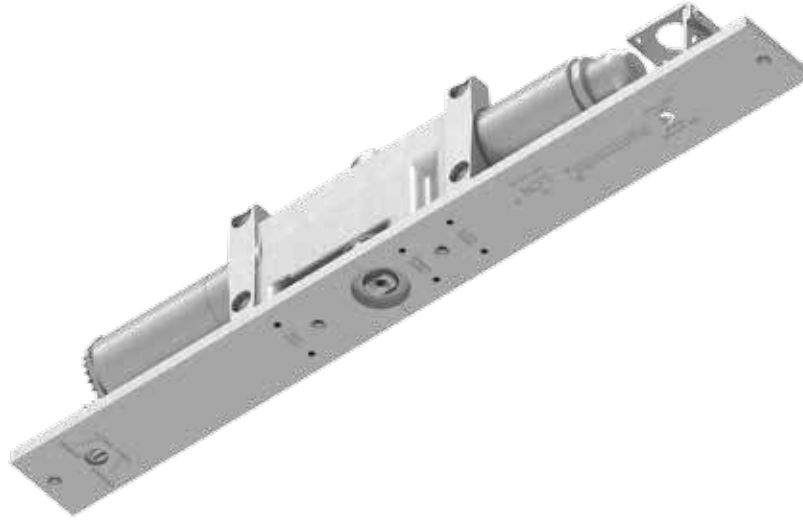
Table of sizes

- 4040SE series cylinders accommodate interior doors up to 48" (1219 mm) wide
- Closing power of 4040SE Series closers is adjustable through a range of sizes up to size 4



→ Indicates recommended range of door width for closer size.

NOTE: For SE on paired door, min. width 60" (1524 mm).  
For SE, minimum door width 28" (711 mm).  
For SEL, minimum door width 30" (762 mm).  
Details are listed on the MOUNTING DETAILS pages.

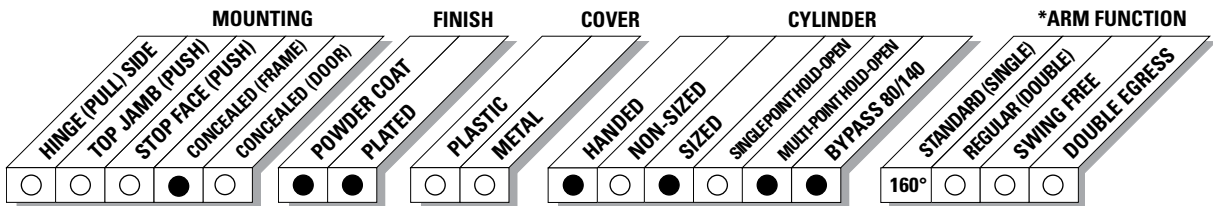


The 2310ME SENTRONIC® is a concealed heavy duty, electrically controlled closer/holder designed to provide infinitely adjustable hold-open for fire and smoke barrier doors. Door is held open until current interruption releases mechanism and the door closes. Single lever (track) arm closer is specifically designed for interior doors. Choice of finishes, cylinder functions, and installation accessories meet virtually all life safety requirements.

<b>Certifications</b>	Grade 1 - ANSI A156.15, UL 10C, ADA, 100 Hour Salt Spray, Meets BAA - Buy American Act, NFPA 101	<b>Fasteners</b>	Wood and machine screw pack
		<b>Mounting</b>	Concealed (in frame)
		<b>Arms</b>	Standard handed arm and non-handed track ( two piece metal finish plate)
<b>Body Construction</b>	<ul style="list-style-type: none"> <li>Cast iron Body</li> <li>Full Complement Bearing</li> <li>1-1/2" Diameter Piston</li> <li>11/16" Diameter Double Heat Treated Pinion Journal</li> </ul>	<b>Finishes/Colors/ Powder Coat</b>	<ul style="list-style-type: none"> <li>Aluminum (689)</li> <li>Statuary Bronze (690)</li> <li>Light Bronze (691)</li> <li>Black (693)</li> <li>Dark Bronze (695)</li> <li>Brass (696)</li> <li>Custom colors optional</li> </ul>
<b>Fluid</b>	All Weather Fluid		<ul style="list-style-type: none"> <li>Optional SRI primer - powder coat only</li> <li>Optional plated finishes</li> </ul>
<b>Handing</b>	Handed	<b>Wiring</b>	<ul style="list-style-type: none"> <li>Concealed or exposed</li> <li>Built in on/off switch controls hold-open function</li> <li>Interfaces with fire alarm system</li> </ul>
<b>Size</b>	Sized, 4 only		
<b>Warranty</b>	2 years		

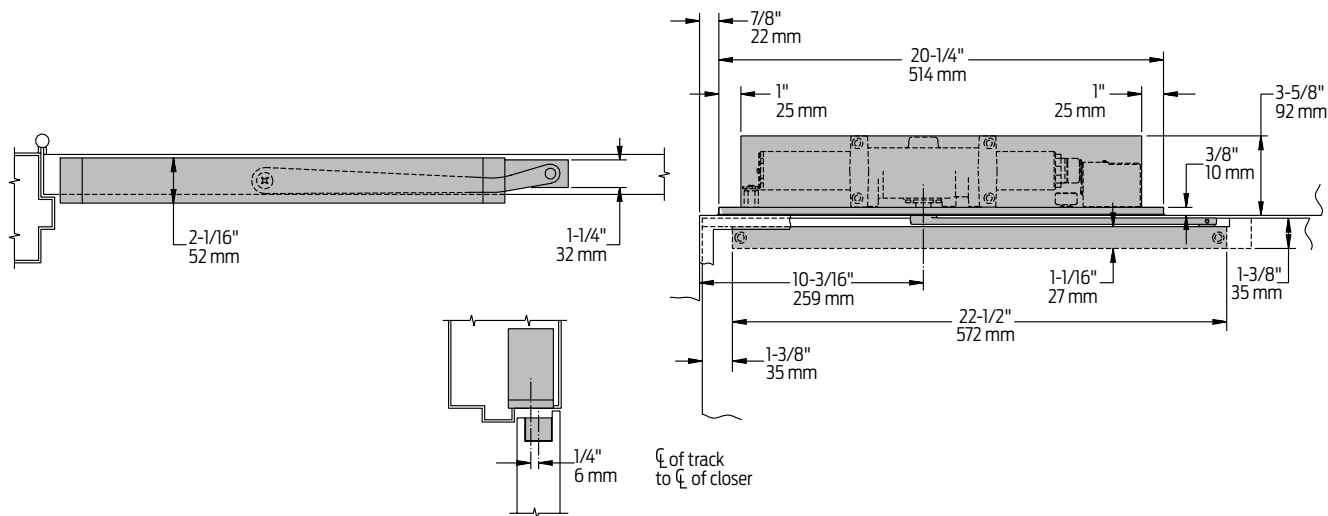
### Special Templates

Customized installation templates or products may be available to solve unusual applications. Contact LCN Product Support for assistance.



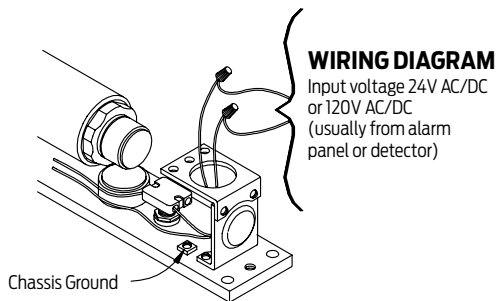
● AVAILABLE  
○ NOT AVAILABLE

\* Maximum opening/hold-open point with standard template. See individual closer series for degrees of opening per installation.



Butt Hinges	Should not exceed 5" (127 mm) in width
Top Rail	<ul style="list-style-type: none"><li>1-3/8" (35 mm) mortise required</li><li>5/16" (8 mm) cutout required at top of door, stop face only</li></ul>
Door Thickness	1-3/4" (44 mm) minimum
Door Width	2' 4" (711 mm) minimum
Hollow Metal Frame	<ul style="list-style-type: none"><li>Requires minimum 4" (102 mm) x 4" frame</li><li>Consult factory or template for preparation details</li></ul>
Bypass	<ul style="list-style-type: none"><li>(suffix "B80" or "B140") eliminates hold-open function up to a specified point of door swing</li><li>B80 cylinder from 0° to 80°</li><li>B140 cylinder from 0° to 140°</li></ul>
Maximum Opening	Templating allows 180° with hold-open points up to 160°
Options	<ul style="list-style-type: none"><li>Hold-open bypass</li><li>24V or 120 volt input, please specify</li></ul>

Me (2310) Wiring Diagram



Notes

- For interior smoke barrier and labeled fire doors
- Functions as full rack and pinion door closer when hold-open is not engaged or when current is interrupted

### Cylinders



**2310ME-3971**  
ME Cylinder Assembly

- Handed
- Cast iron
- Specify 24V or 120V
- Standard



**2310ME-3071**  
ME Cylinder/Plate Assembly

- Handed
- "On/Off" switch assembly controls the hold-open function.
- Circuitry accepts either AC or DC input. Specify 24V or 120V
- Standard

### Arm



**2310ME-3077T**  
Standard Arm

- Handed

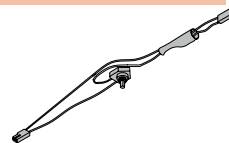
### Track



**2310ME-3038**  
Standard Track

- Non-handed
- Standard

### Switch



**2310ME-3351**  
Switch

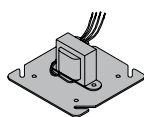
- "On/Off" switch assembly provides continuous hold-open function
- 24V or 120V, please specify

### Installation Accessories



**2310ME-420**  
Fire Shield

- 22 gauge steel liner mounts in the track mortise of the door's top rail for 20 minute labeled wood doors with hollow metal frames



**2310ME-3210**  
Transformer

- Reduces line voltage from 120V to 24V AC
- Mounted on plate for 4" (102 mm) x 4" x 2-1/8" (54 mm) junction box (by others)



**2310ME-3034**  
Track Roller

- Quiet, low friction roller assembly
- Shoulder dimension "X" = 1/16" (2 mm)

### How-to-order 2310ME Series closers

#### Select hand

- ☐ RH
- ☐ LH

#### Voltage

- ☐ 24V AC/DC
- ☐ 120V AC/DC

#### Specify finish

- ☐ Standard Powder Coat \_\_\_\_\_  
Aluminum, Dark Bronze, Statuary, Light Bronze, Black, Brass.

#### Closer will be shipped with:

- Finish plates
- Standard arm
- Standard track
- Track roller
- Wood & machine screw pack  
unless options listed below are selected.

## Closer options

#### Cylinder function

- ☐ Bypass 80° (B80)
- ☐ Bypass 140° (B140)

#### Finishes

- ☐ Custom Powder Coat (RAL) \_\_\_\_\_
- ☐ Plated Finish, US \_\_\_\_\_

#### Screw pack

- ☐ TORX Machine Screw (TORX)

#### Installation accessories

- ☐ Fire Shield, 2310ME-420
- ☐ Transformer, 2310ME-3210

#### Special template

- ☐ ST- \_\_\_\_\_

## Table of sizes

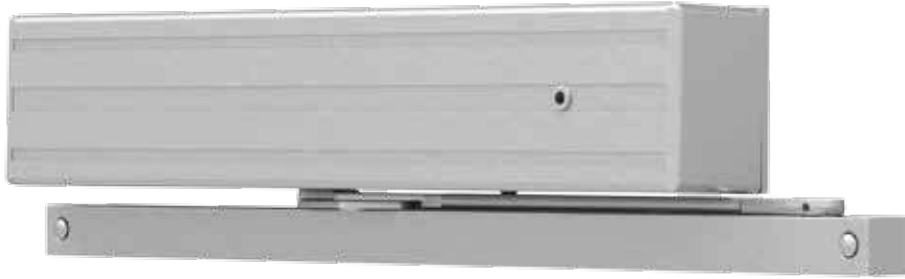
- Closing power of 2314ME Series closers may be increased 15%

#### Interior door width

28"	34"	38"	48"
711mm	864mm	965mm	1219mm
<div> <div>2314</div> <div> <div></div> <div></div> <div></div> <div>size 4</div> </div> <div>Minimum door width</div> </div>			

→ Indicates recommended range of door width for closer size.

NOTE: For SE, minimum door width 28" (711mm)  
For SEL, minimum door width 32" (813mm)

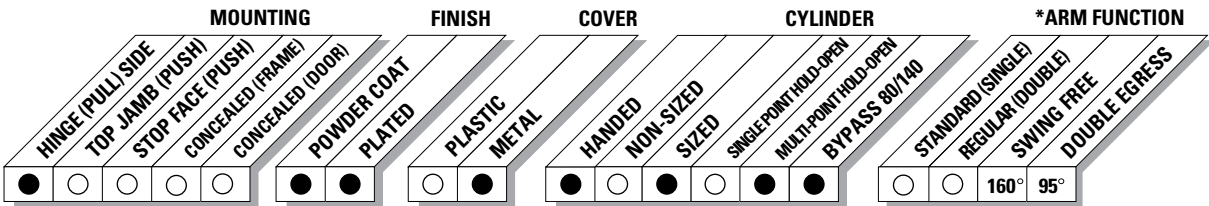


The 4310ME SENTRONIC® is a heavy duty, electrically controlled closer/holder designed to provide infinitely adjustable hold-open for fire and smoke barrier doors. Door is held open until current interruption releases mechanism and the door closes. Single lever (track) arm closer is specifically designed for interior doors. Choice of finishes, cylinder functions, and installation accessories meet virtually all life safety requirements. An ME provides only the closer / holder function.

<b>Certifications</b>	Grade 1 - ANSI A156.15, UL 10C, ADA, 100 Hour Salt Spray, Meets BAA - Buy American Act, NFPA 101	<b>Cover</b>	Metal, Standard
<b>Body Construction</b>	<ul style="list-style-type: none"> <li>■ Cast Iron Body</li> <li>■ Full Complement Bearing</li> <li>■ 1-1/2" Diameter Piston</li> <li>■ 11/16" Diameter Double Heat Treated Pinion Journal</li> </ul>	<b>Fasteners</b>	Wood and machine screw pack
<b>Fluid</b>	All Weather Fluid	<b>Mounting</b>	Hinge (Pull Side)
<b>Handing</b>	Handed	<b>Arms</b>	Swing free arm, standard Double egress, optional
<b>Size</b>	Sized, 4 only	<b>Finishes/Colors/ Powder Coat</b>	<ul style="list-style-type: none"> <li>■ Aluminum (689)</li> <li>■ Statuary Bronze (690)</li> <li>■ Light Bronze (691)</li> <li>■ Black (693)</li> <li>■ Dark Bronze (695)</li> <li>■ Brass (696)</li> <li>■ Custom colors optional</li> </ul>
<b>Warranty</b>	2 years		<ul style="list-style-type: none"> <li>■ Optional SRI primer - powder coat only</li> <li>■ Optional plated finishes</li> </ul>
<b>Wiring</b>	<ul style="list-style-type: none"> <li>■ Concealed or exposed electrical connectors</li> <li>■ Built in "On/Off" switch controls hold-open function</li> <li>■ Interfaces with fire alarm systems</li> </ul>		

### Special Templates

Customized installation templates or products may be available to solve unusual applications. Contact LCN Product Support for assistance.

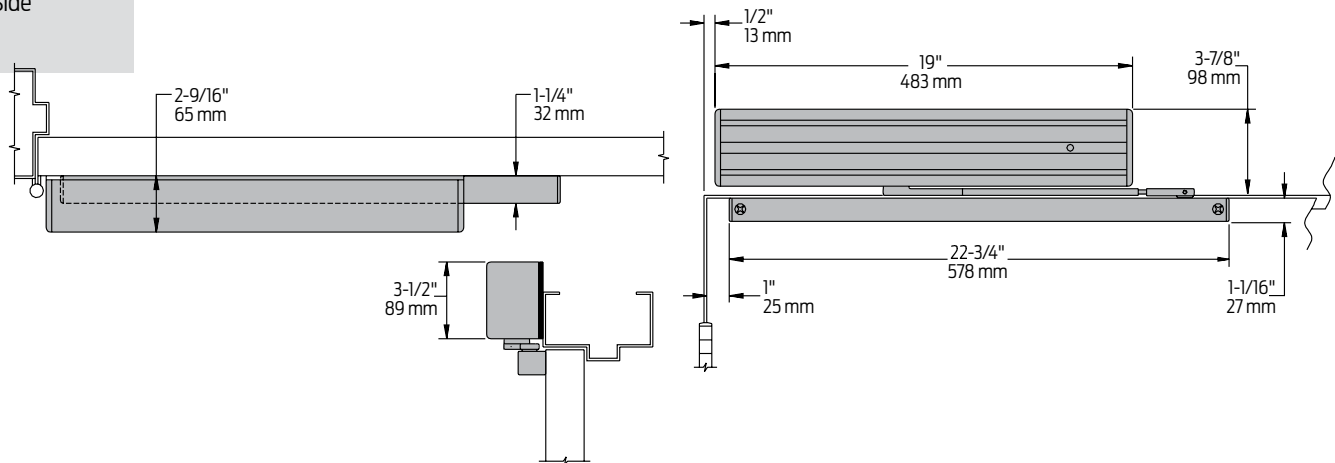


● AVAILABLE  
○ NOT AVAILABLE

\* Maximum opening/hold-open point with standard template. See individual closer series for degrees of opening per installation.

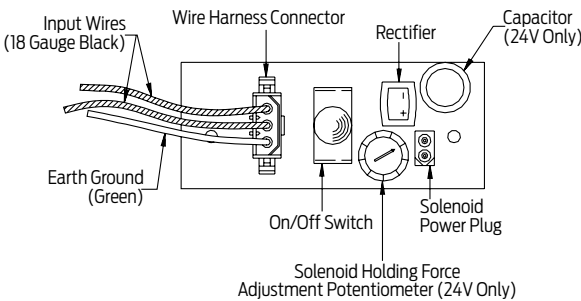
Mounting details

Hinge (Pull) Side  
Mounting



<b>Butt Hinges</b>	Should not exceed 4-1/2" (114 mm) in width
<b>Top Rail</b>	1-1/16" (27 mm) minimum
<b>Reveal</b>	<ul style="list-style-type: none"><li>Should not exceed 1/8" (3 mm) for Swing-Free arm</li><li>Should not exceed 2-11/16" (68 mm) for double egress arm</li></ul>
<b>Head Frame</b>	Requires 2" (51 mm) minimum
<b>Clearance</b>	1-1/4" (32 mm) behind door required for installation
<b>Bypass</b>	<ul style="list-style-type: none"><li>(suffix "B80 or B140") eliminates hold-open function up to a specified point of the doors swing</li><li>B80 cylinder from 0° to 80°</li><li>B140 cylinder from 0° to 140°</li></ul>
<b>Maximum Opening</b>	<ul style="list-style-type: none"><li>Templating allows 180° with hold-open points up to 160°</li><li>Optional double egress arm limited to 95°</li><li>Please note that many track style door closers are capable of allowing 180° of door swing.</li><li>Be aware that the majority of track style closers are at their weakest closing force in the 180° – 130° range</li><li>Consult factory for applications where exterior or large/heavy door must swing 180°</li></ul>
<b>ME Electrical Options</b>	<ul style="list-style-type: none"><li>These assemblies have a single electrical circuit with a choice of voltages</li><li>A separate TRANSFORMER, 4040SE-3210, can be used to reduce line voltage to 24V AC</li><li>Circuitry accepts either AC or DC input</li><li>Please specify 24V or 120V</li></ul>
<b>Options</b>	<ul style="list-style-type: none"><li>Hold-open bypass</li><li>24V or 120 volt input, please specify</li></ul>

ME (4310, 4410)  
Wiring Diagram



Notes:

- Information applies to ME closer
- Functions as full rack and pinion door closer when hold-open is not engaged or when current is interrupted with Swing-Free arm engaged
- Swing free arm allows door to be moved without door closer resistance

### Cylinder



**4310ME-3971**  
ME Cylinder Assembly

- Handed
- Cast iron
- Specify 24V or 120V
- Standard



**4310ME-3071**  
ME Cylinder/Plate Assembly

- Handed
- "On/Off" switch assembly controls hold-open function
- Circuitry accepts either AC or DC input
- 24V or 120V, please specify
- Standard

### Cover



**4310ME-72MC**  
Metal Cover

- Handed
- Standard

### Arms



**4310ME-3077SF**  
Swing-Free Arm

- Handed
- After door is placed in hold-open, secondary pivot point allows up to 160° swing without door closer resistance



**4310ME-3077DE**  
Double Egress Arm

- Handed
- For double egress doors and frames
- 2-11/16" (68 mm) maximum reveal
- Optional

### Track

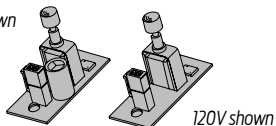


**4310ME-3038**  
Track

- Non-handed
- Standard

### Switch

24V shown



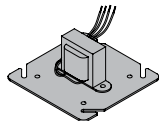
#### **4310ME-3351** Switch Assembly

- Provides continuous hold-open function
- 24V or 120V, please specify



#### **4310ME-3034** Track Roller

- Quiet, low friction roller assembly
- Shoulder dimension "X" = 1/8" (3mm)



#### **4310-3210** Transformer

- Reduces line voltage from 120V to 24V AC
- Mounted on cover for 4" (102 mm) x 4" x 2-1/8" (54mm) junction box (by others)



#### **4310ME-3354** ME Wiring Harness

- Three wire harness with 6" (152 mm) leads for field wiring connections

### How-to-order 4310ME Series closers

#### Select hand

- ☐ RH
- ☐ LH

#### Voltage

- ☐ 24V AC/DC
- ☐ 120V AC/DC

#### Specify finish

- ☐ Standard Powder Coat \_\_\_\_\_  
Aluminum, Dark Bronze, Statuary, Light Bronze, Black, Brass.

#### Closer will be shipped with:

- Standard cover
- Swing-free (sf) arm
- Standard track
- Track roller
- Wood & machine screw pack  
unless options listed below are selected.

### Closer options

#### Cylinder function

- ☐ Bypass 80° (B80)
- ☐ BBypass 140° (BI40)

#### Arm

- ☐ Double Egress (DE)

#### Finishes

- ☐ Custom Powder Coat (RAL) \_\_\_\_\_
- ☐ Plated Finish, US \_\_\_\_\_

#### Screw pack

- ☐ TB\*, Wood & Machine Screw (TBWMS)
- ☐ TORX Machine Screw (TORX)
- ☐ TB\* & TORX Machine Screw (TBTRX)
- \*Specify door thickness if other than 1-3/4".

#### Installation accessories

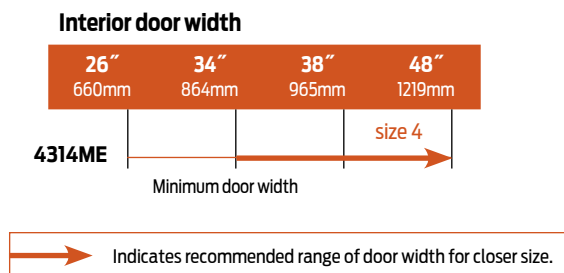
- ☐ Transformer, 4310ME-3210

#### Special template

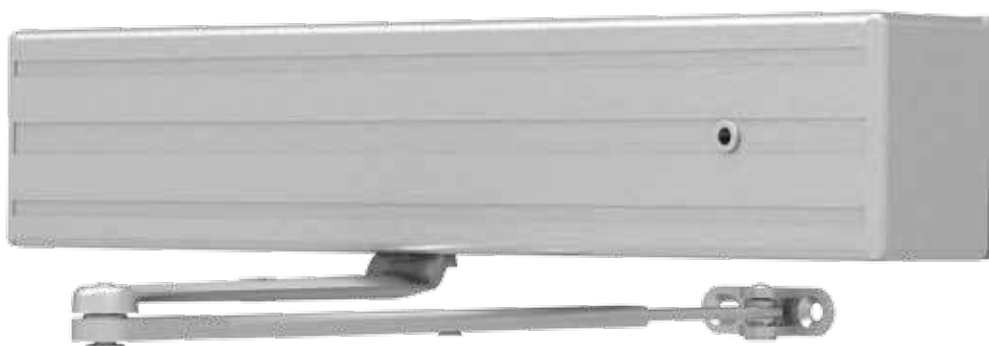
- ☐ ST- \_\_\_\_\_

### Table of sizes

- Closing power of 4314ME Series closers may be increased 15%





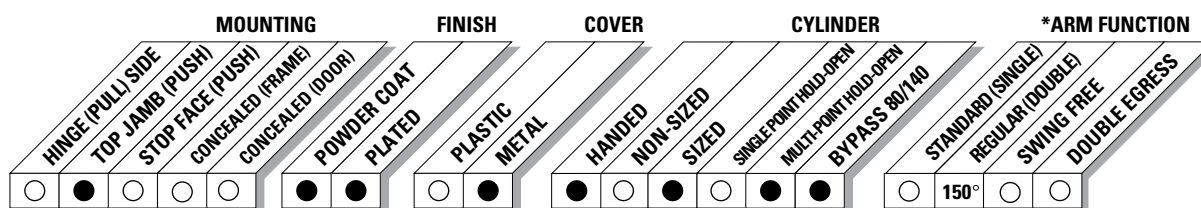


The 4410ME SENTRONIC® is a heavy duty, electrically controlled closer/holder designed to provide infinitely adjustable hold-open for fire and smoke barrier doors. Door is held open until current interruption releases mechanism and the door closes. Double lever arm closer is specifically designed for interior doors. Choice of finishes, cylinder functions, and installation accessories meet virtually all life safety requirements.

<b>Certifications</b>	Grade 1 - ANSI A156.15, UL 10C, ADA, 100 Hour Salt Spray, Meets BAA - Buy American Act, NFPA 101	<b>Cover</b>	Metal, Standard
<b>Body Construction</b>	<ul style="list-style-type: none"> <li>■ Cast iron Body</li> <li>■ Full Complement Bearing</li> <li>■ 1-1/2" Diameter Piston</li> <li>■ 11/16" Diameter Double Heat Treated Pinion Journal</li> </ul>	<b>Fasteners</b>	Wood and machine screw pack
<b>Fluid</b>	All Weather Fluid	<b>Mounting</b>	Top jamb (Push Side)
<b>Handing</b>	Handed	<b>Arms</b>	Regular arm
<b>Size</b>	Sized, 4 only	<b>Finishes/Colors/ Powder Coat</b>	<ul style="list-style-type: none"> <li>■ Aluminum (689)</li> <li>■ Statuary Bronze (690)</li> <li>■ Light Bronze (691)</li> <li>■ Black (693)</li> <li>■ Dark Bronze (695)</li> <li>■ Brass (696)</li> <li>■ Custom colors optional</li> <li>■ Optional SRI primer - powder coat only</li> <li>■ Optional plated finishes</li> </ul>
<b>Warranty</b>	2 years	<b>Wiring</b>	<ul style="list-style-type: none"> <li>■ Concealed or surface</li> <li>■ Interfaces with fire alarm systems</li> </ul>

### Special Templates

Customized installation templates or products may be available to solve unusual applications. Contact LCN Product Support for assistance.

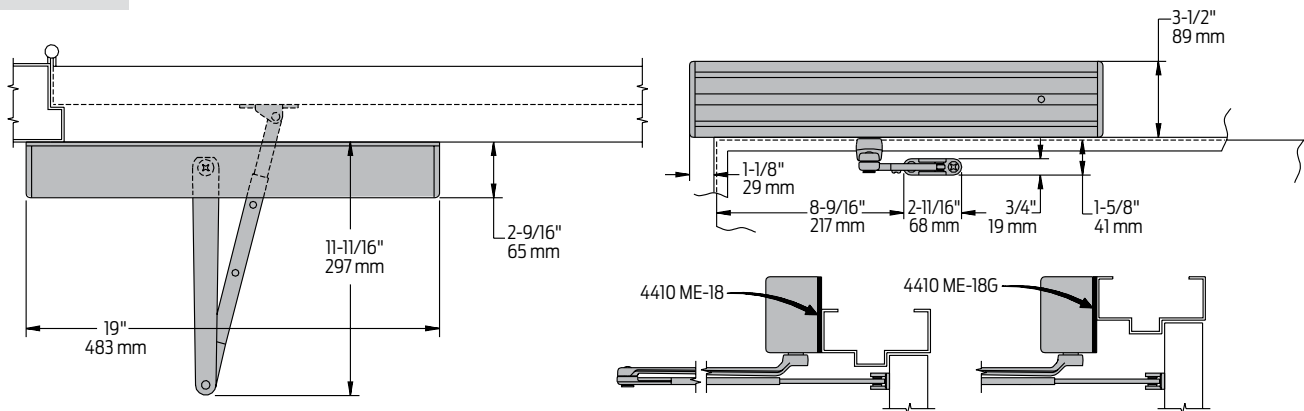


● AVAILABLE  
○ NOT AVAILABLE

\* Maximum opening/hold-open point with standard template. See individual closer series for degrees of opening per installation.

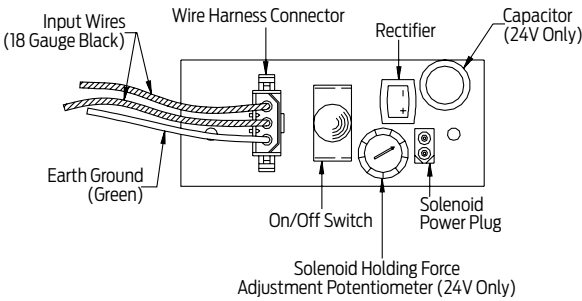
Mounting details

Top Jamb (Push Side)  
Mounting



<b>Butt Hinges</b>	Should not exceed 4-1/2" (114 mm) in width
<b>Top Rail</b>	<ul style="list-style-type: none"><li>1-3/4" (44 mm) minimum</li><li>3-3/4" (95mm) minimum with flush ceiling</li></ul>
<b>Reveal</b>	<ul style="list-style-type: none"><li>3-7/8" (98 mm) maximum regular or long arm</li><li>For reveals greater than 3-7/8" consult factory</li></ul>
<b>Head Frame</b>	<ul style="list-style-type: none"><li>Requires 1-1/2" (38 mm) minimum</li><li>2" (51 mm) minimum with flush ceiling</li></ul>
<b>Flush Ceiling</b>	Requires PLATE, 4410ME-18G substituted for standard mounting plate
<b>Bypass</b>	<ul style="list-style-type: none"><li>(Suffix "B80" or "B140") eliminates hold-open function up to a specified point of door swing</li><li>B80 cylinder from 0° to 80°</li><li>B140 cylinder from 0° to 140°</li></ul>
<b>Maximum Opening</b>	<ul style="list-style-type: none"><li>Templating allows 160°, with hold-open points up to 150°</li><li>Optional long arm allows 180°, hold-open points up to 170°</li></ul>
<b>ME Electrical Options</b>	<ul style="list-style-type: none"><li>These assemblies have a single electrical circuit with a choice of voltages</li><li>A separate TRANSFORMER, 4040SE-3210, can be used to reduce line voltage to 24V AC. Circuitry accepts either AC or DC input</li><li>Please specify 24V or 120V</li></ul>
<b>Options</b>	<ul style="list-style-type: none"><li>Hold-open bypass</li><li>Optional long arm allows 180° with hold-open points up to 170°</li><li>Optional -18G plate accommodates flush ceiling conditions</li><li>24V or 120V volt input, please specify</li></ul>

ME (4310, 4410)  
Wiring Diagram



### Cylinders



#### 4414ME-3971

##### ME Cylinder Assembly

- Handed
- Cast iron
- Specify 24V or 120V
- Standard



#### 4414ME-3071

##### ME Cylinder/Plate Assembly

- Handed
- "On/Off" switch assembly controls hold-open function
- Circuitry accepts either AC or DC input
- Please specify 24V or 120V
- Standard

### Cover



#### 4410ME-72MC

##### Metal Cover

- Handed

### Arms



#### 4410ME-3077

##### Regular Arm

- Non-handed
- 3-7/8" (98 mm) maximum reveal

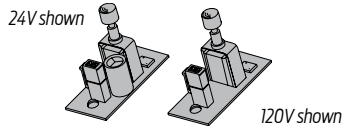


#### 4410ME-3077L

##### Long Arm

- For increasing opening to 180°
- 3-7/8" (98 mm) maximum reveal
- Optional

### Switch



#### **4410ME-3351** Switch Assembly

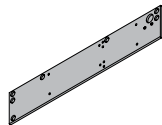
- Provides continuous hold-open function
- Available as 24V or 120V, please specify

### Installation Accessories



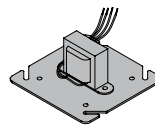
#### **4410ME-18** Mounting Plate

- Standard



#### **4410ME-18G** Mounting Plate

- Substituted for standard plate on flush ceiling installations
- Optional



#### **4410ME - 3210** Transformer

- Reduces line voltage from 120V to 24V AC
- Mounted on cover for 4" (102 mm) x 4" x 2-1/8" (54 mm) junction box (by others)



#### **4410ME-3354** ME Wiring Harness

- Three wire harness with 6" (152 mm) leads for field wiring connections

### How-to-order 4410ME Series closers

#### Select hand

- ☐ RH
- ☐ LH

#### Voltage

- ☐ 24V AC/DC
- ☐ 120V AC/DC

#### Specify finish

- ☐ Standard Powder Coat \_\_\_\_\_  
Aluminum, Dark Bronze, Statuary, Light Bronze, Black, Brass.

#### Closer will be shipped with:

- Standard cover
- Regular arm
- Wood & machine screw pack  
unless options listed below are selected.

### Closer options

#### Cylinder function

- ☐ Bypass 80° (B80)
- ☐ Bypass 140° (B140)

#### Arm

- ☐ Long (LONG)

#### Finishes

- ☐ Custom Powder Coat (RAL)
- ☐ Plated Finish, US

#### Screw pack

- ☐ TB\*, Wood & Machine Screw (TBWMS)
- ☐ TORX Machine Screw (TORX)
- ☐ TB\* & TORX Machine Screw (TBTRX)
- \*Specify door thickness if other than 1-3/4"

#### Installation accessories

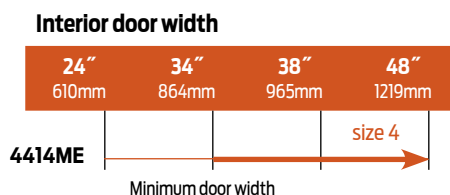
- ☐ Plate, 4410ME-18G  
(substituted for standard mounting plate)
- ☐ Transformer, 4410ME-3210

#### Special template

- ☐ ST- \_\_\_\_\_

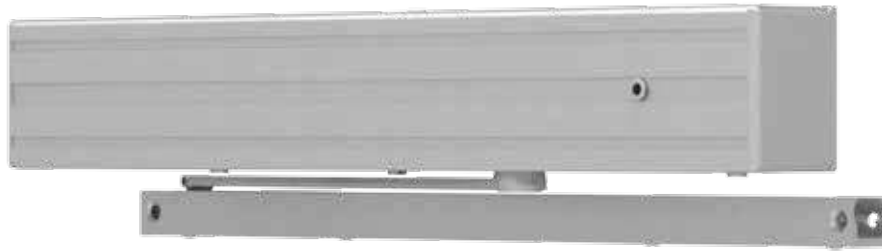
### Table of sizes

- Closing power of 4414ME Series closers may be increased 15%



→ Indicates recommended range of door width for closer size.



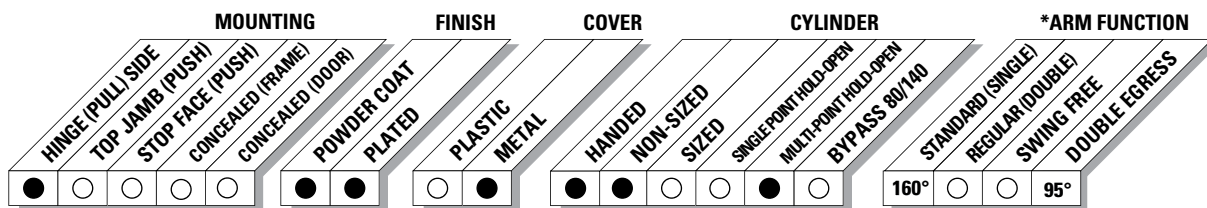


The 4310HSA SENTRONIC® is an electrically controlled closer/holder designed to provide easy passage for groups of pedestrians through high traffic doors. Pedestrians, moving through the doorway, trigger the built-in scanner. When the door is opened to 80° or more, the door is electrically held open to minimize wear and tear on applied door hardware. After the last pedestrian in a group passes through the doorway, the system timer releases the hold-open, closing the door under control of the heavy duty closer. Single lever (track) arm closer is specifically designed for pull side mounting. Choice of finishes and accessories meet virtually all high traffic installation requirements.

<b>Certifications</b>	Grade 1 - ANSI A156.4, ANSI 156.15, NFPA 101, UL 10C, ADA, 100 Hour Salt Spray, Meets BAA - Buy American Act	<b>Cover</b>	Metal, Standard
<b>Body Construction</b>	<ul style="list-style-type: none"> <li>Cast Iron Body</li> <li>Full Complement Bearing</li> <li>1-1/2" Diameter Piston</li> <li>11/16" Diameter Double Heat Treated Pinion Journal</li> </ul>	<b>Arms</b>	<ul style="list-style-type: none"> <li>Standard arm (with track)</li> <li>Double egress arm, optional</li> </ul>
<b>Fluid</b>	All Weather Fluid	<b>Finishes/Colors/ Powder Coat</b>	<ul style="list-style-type: none"> <li>Aluminum (689)</li> <li>Statuary Bronze (690)</li> <li>Light Bronze (691)</li> <li>Black (693)</li> <li>Dark Bronze (695)</li> <li>Brass (696)</li> <li>Custom colors optional</li> </ul>
<b>Handing</b>	Handed	<b>Wiring</b>	<ul style="list-style-type: none"> <li>Optional SRI primer - powder coat only</li> <li>Optional plated finishes</li> <li>Concealed or surface wiring</li> <li>24V AC/DC input only</li> <li>120V requires 4310HSA-3210 transformer</li> <li>HSA features a scanner activated hold-open function, fixed 15 seconds or 30 seconds</li> </ul>
<b>Size</b>	Field adjustable, shipped at size 3		
<b>Warranty</b>	2 years		
<b>Fasteners</b>	Wood and machine screw pack		
<b>Mounting</b>	Hinge (Pull Side) interior doors		

### Special Templates

Customized installation templates or products may be available to solve unusual applications. Contact LCN Product Support for assistance.



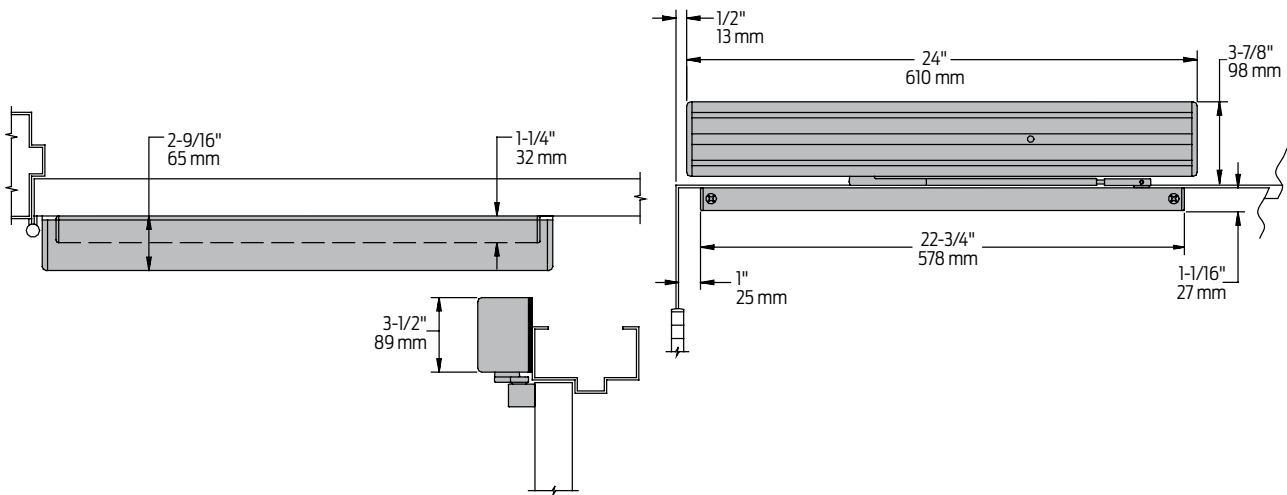
● AVAILABLE  
○ NOT AVAILABLE

\* Maximum opening/hold-open point with standard template. See individual closer series for degrees of opening per installation.

4310 HSA  
Series

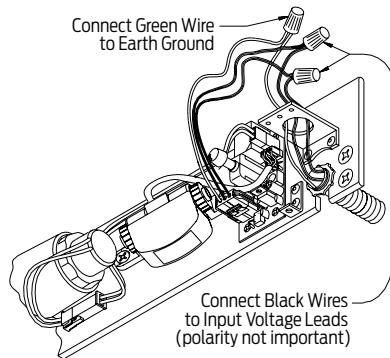
Mounting details

Hinge (Pull) Side  
Mounting



Butt Hinges	Should not exceed 4-1/2" (114 mm) in width
Top Rail	1-1/16" (27 mm) minimum
Reveal	<ul style="list-style-type: none"><li>Should not exceed 1/8" (3 mm) for standard arm</li><li>Should not exceed 2-11/16" (68 mm) for double egress arm</li></ul>
Head Frame	Requires 2" (51 mm) minimum
Clearance	1-1/4" (32 mm) minimum.
Maximum Opening	<ul style="list-style-type: none"><li>Templating allows 180°</li><li>Optional double egress arm limited to 95°</li><li>Infinite hold-open points from 80° up to 160°</li></ul>
Options	<ul style="list-style-type: none"><li>120 volt input requires 4310HSA-3210 transformer to change 120V AC to 24V AC</li></ul>

HSA (4310)Wiring Diagram



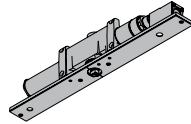
- Notes:
- Functions as full rack and pinion door closer when current is interrupted or continuous hold-open is not engaged
  - Built-in "On/Off" switch provides continuous hold-open function

### Cylinders



**4311HSA-3971**  
HSA Cylinder Assembly

- Handed
- Cast iron
- 24V AC/DC input only for holding solenoid
- Standard



**4311HSA-3071**  
HSA Cylinder/Plate Assembly

- Handed
- Includes scanner module and system timer module
- "On/Off" switch assembly provides continuous hold-open function
- 24V AC/DC input only for holding solenoid and electronics modules
- Standard

### Cover



**4310HSA-72MC**  
Metal Cover

- Handed
- Standard

### Track



**4310HSA-3038**  
Track

- Non-handed
- Standard

### Arms



**4310HSA-3077T**  
Standard Arm

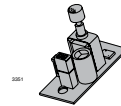
- Handed



**4310HSA-3077DE**  
Double Egress Arm

- Handed
- For double egress doors and frames
- 2 11/16" (67 mm) maximum reveal
- Optional

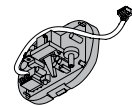
### Switch



**4310HSA-3448**  
Switch Assembly

- Provides continuous hold-open function
- Available in 24V only

### Scanner



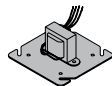
**4310HSA-3428**  
Scanner Module

### Installation Accessories



**4310HSA-3034**  
Track Roller

- Quiet, low friction roller assembly
- Shoulder dimension "X" = 1/8" (3 mm)



**4310HSA-3210**  
Transformer

- Reduces line voltage from 120V to 24V AC
- Mounted on plate for 4" (102 mm) x 4" x 2-1/8" (54 mm) junction box (by others)

How-to-order 4310 HSA Series closers

Select hand

- ☐ RH
- ☐ LH

Voltage

- ☐ 24V AC/DC

Specify finish

- ☐ Standard Powder Coat \_\_\_\_\_  
Aluminum, Dark Bronze, Statuary, Light Bronze, Black, Brass.

Closer will be shipped with:

- 24 AC/DC HSA cylinders
- Metal cover
- Standard arm
- Standard track
- Track roller
- Wood & machine screw pack  
unless options listed below are selected.

Closer options

Arm

- ☐ Double Egress (DE)

Finishes

- ☐ Custom Powder Coat (RAL) \_\_\_\_\_
- ☐ Plated Finish, US \_\_\_\_\_

Screw pack

- ☐ TB\*, Wood & Machine Screw (TBWMS)
- ☐ TORX Machine Screw (TORX)
- ☐ TB\* & TORX Machine Screw (TBTRX)  
\* Specify door thickness if other than 1-3/4"

Installation accessories

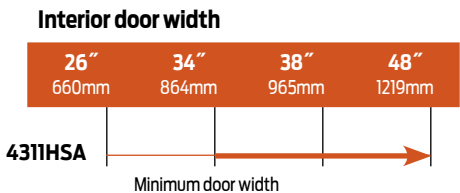
- ☐ Transformer, 4310HSA-3210

Special template

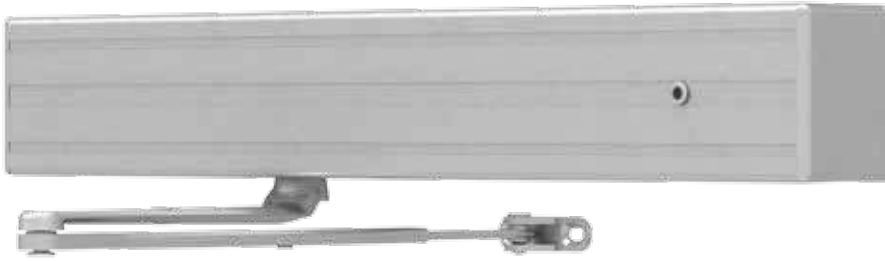
- ☐ ST- \_\_\_\_\_ (if required)

Table of sizes

- Closing power of 4310 HSA Series closers is field adjustable, shipped at size 3



→ Indicates recommended range of door width for closer size.



The 4410HSA SENTRONIC® is an electrically controlled closer/holder designed to provide easy passage for groups of pedestrians through high traffic doors. Pedestrians, moving through the doorway, trigger the built-in scanner. When the door is opened to 80° or more, the door is electrically held open to minimize wear and tear on applied door hardware. After the last pedestrian in a group passes through the doorway, the system timer releases the hold-open, closing the door under control of the heavy duty closer. Double lever arm closer is specifically designed for push side mounting. Choice of finishes and accessories meet virtually all high traffic installation requirements.

#### Certifications

Grade 1 - ANSI A156.4, ANSI 156.16, NFPA 101, UL 10C, ADA, 100 Hour Salt Spray, Meets BAA - Buy American Act

#### Body Construction

- Cast Iron Body
- Full Complement Bearing
- 1-1/2" Diameter Piston
- 11/16" Diameter Double Heat Treated Pinion Journal

#### Fluid

All Weather Fluid

#### Handing

Handed

#### Size

Field adjustable, shipped at size 3

#### Warranty

2 years

#### Fasteners

Wood and machine screw pack

#### Mounting

Top Jamb (Push Side)

#### Cover

Metal, Standard

#### Arms

- Regular Arm
- Long arm, optional

#### Finishes/Colors/ Powder Coat

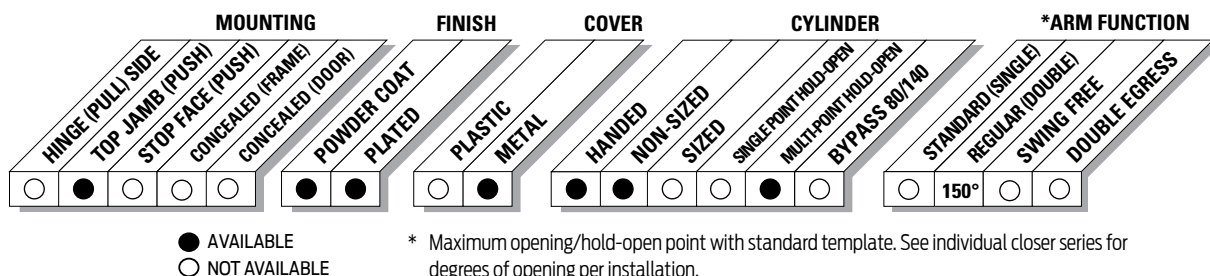
- Aluminum (689)
- Statuary Bronze (690)
- Light Bronze (691)
- Black (693)
- Dark Bronze (695)
- Brass (696)
- Custom colors optional
- Optional plated finishes

#### Wiring

- Concealed or surface
- 24V AC/DC input only
- 120V AC input requires 4410HSA-3210 transformer
- HSA features a scanner activated hold-open function, adjustable 15 seconds or 30 seconds
- Built-in "On/Off" switch provides continuous hold-open feature

#### Special Templates

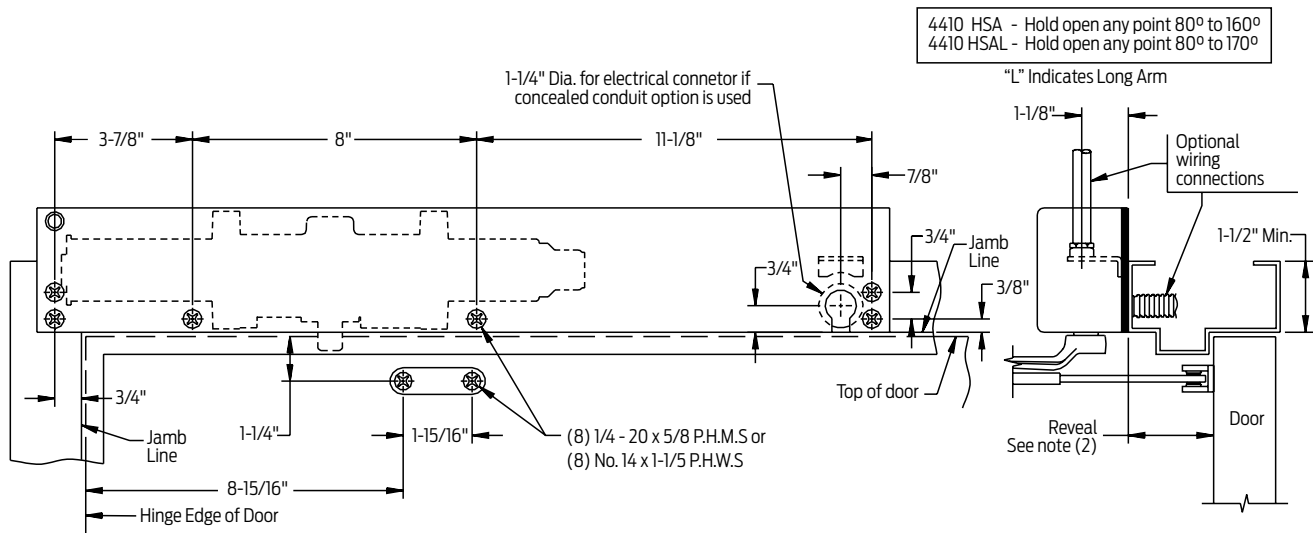
Customized installation templates or products may be available to solve unusual applications. Contact LCN Product Support for assistance.



4410 HSA  
Series

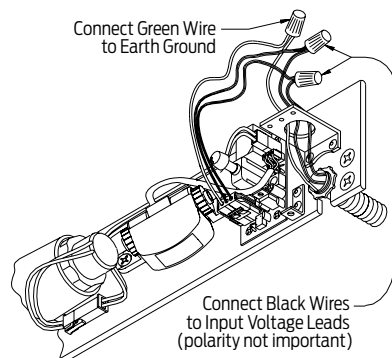
Mounting details

Top Jamb (Push) Side  
Mounting



Butt Hinges	Should not exceed 4-1/2" (114 mm) in width
Top Rail	<ul style="list-style-type: none"><li>1-3/4" (44 mm) minimum</li><li>3-3/4" (95 mm) minimum with flush ceiling</li></ul>
Head Frame	<ul style="list-style-type: none"><li>Requires 1-1/2" (38mm) minimum</li><li>2" (51 mm) minimum with flush ceiling</li></ul>
Reveal	<ul style="list-style-type: none"><li>3-7/8" (98 mm) maximum for regular or long arm</li><li>For reveals greater than 3-7/8" consult factory</li></ul>
Maximum Opening	<ul style="list-style-type: none"><li>Templating allows 160°</li><li>Infinite hold-open points from 80° up to 150°</li><li>Optional long arm allows 180°, hold-open points up to 170°</li></ul>
Options	<ul style="list-style-type: none"><li>Optional long arm allows 180° with hold-open points up to 170°</li><li>Optional -18G plate accommodates flush ceiling conditions</li><li>120 volt input requires 4410HSA-3210 transformer to change 120V AC to 24V AC</li></ul>

HSA Wiring Diagram

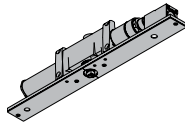


### Cylinders



#### 4412HSA-3971

- Handed
- Cast iron
- 24V AC/DC input only for holding solenoid
- Standard



#### 4412HSA-3071

##### HSA Cylinder / Plate Assembly

- Handed
- Includes scanner module and system timer module
- "On/Off" switch assembly provides continuous hold-open function
- 24V AC/DC input only for holding solenoid and electronics modules
- Standard

### Cover



#### 4410HSA-72MC

##### Metal Cover

- Handed
- Standard

### Arms



#### 4410HSA-3077

##### Regular Arm

- Non-handed
- 3-7/8" (98 mm) maximum reveal

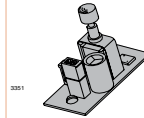


#### 4410HSA-3077L

##### Long Arm

- For increased opening
- 3-7/8" (98 mm) maximum reveal
- Optional

### Switch

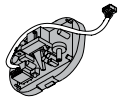


#### 4410HSA-3448

##### Switch Assembly

- Provides continuous hold-open function
- Available in 24V only

### Scanner



#### 4410HSA-3428

##### Scanner Module

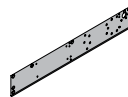
### Installation Accessories



#### 4410HSA-18

##### Mounting Plate

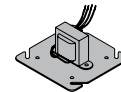
- Standard



#### 4410HSA-18G

##### Transformer Mounting Plate

- Substituted on flush ceiling installations
- Optional



#### 4410HSA-3210

##### Transformer

- Reduces line voltage from 120V to 24V AC
- Mounted on plate for 4" (102 mm) x 4" x 2-1/8" (54 mm) junction box (by others)

4410 HSA Series

Ordering Information

How-to-order 4410 HSA Series closers

Select hand

- ☐ RH
- ☐ LH

Voltage

- ☐ 24V AC/DC

Specify finish

- ☐ Standard Powder Coat \_\_\_\_\_  
Aluminum, Dark Bronze, Statuary, Light Bronze, Black, Brass.

Closer will be shipped with:

- 24 AC/DC HSA cylinders
- Metal cover
- Regular arm
- Wood & machine screw pack  
unless options listed below are selected.

Closer options

Arm

- ☐ Long Arm (LONG)

Finishes

- ☐ Custom Powder Coat (RAL) \_\_\_\_\_
- ☐ Plated Finish, US \_\_\_\_\_

Screw pack

- ☐ TB\*, Wood & Machine Screw (TBWMS)
- ☐ TORX Machine Screw (TORX)
- ☐ TB\* & TORX Machine Screw (TBTRX)  
\* Specify door thickness if other than 1-3/4"

Installation accessories

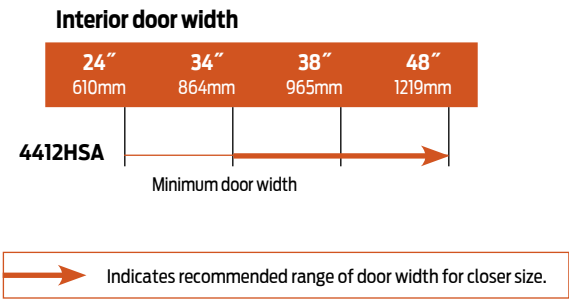
- ☐ Plate, 4410HSA-18
- ☐ Plate, 4410HSA-18G  
(substituted for standard mounting plate)
- ☐ Transformer, 4410HSA-3210

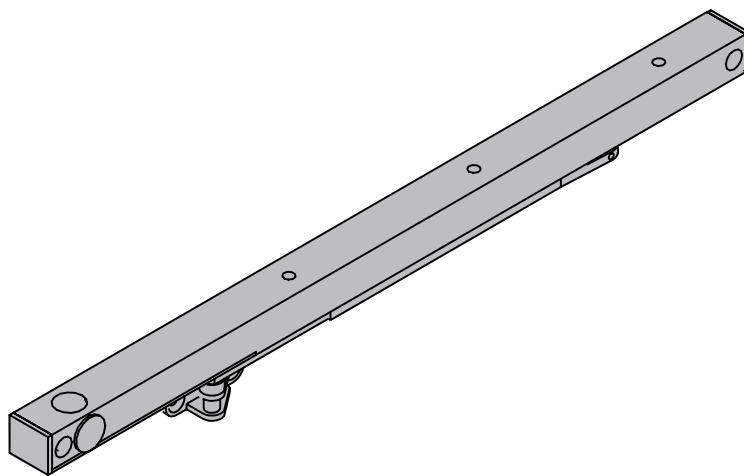
Special template

- ☐ ST- \_\_\_\_\_ (if required)

Table of sizes

- Closing power of 4410 HSA Series closers is field adjustable, shipped at size 3





The SEH SENTRONIC® is a holder designed to provide single point hold-open for fire and smoke barrier doors that must be used with an opposite side mounted UL listed door closer. The door is held open until current interruption releases the holding mechanism and the door closes. Single lever (track) arm is specifically designed for interior doors. Choice of finishes, track functions, and installation accessories meet virtually all life safety requirements.

<b>Certifications</b>	Grade 1 - ANSI A156.15, UL 10C, ADA, 100 Hour Salt Spray, Meets BAA - Buy American Act, NFPA 101
<b>Handing</b>	Non-Handed
<b>Templating</b>	22 3/4" x 1 1/4"
<b>Warranty</b>	2 years
<b>Fasteners</b>	Wood and machine screw pack
<b>Mounting</b>	Hinge (Pull Side)
<b>Arms</b>	<ul style="list-style-type: none"> <li>Standard, non-handed arm for any 4040SE Series</li> <li>Standard, non-handed track for SEH</li> <li>Specify 24V or 120V AC/DC input for holding solenoid</li> <li>Includes test switch assembly with fuse</li> </ul>

#### Finishes/Colors/ Powder Coat

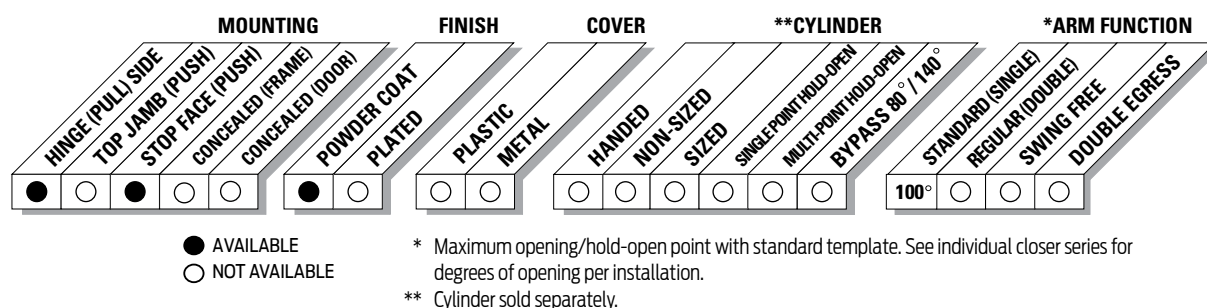
- Aluminum (689)
- Statuary Bronze (690)
- Light Bronze (691)
- Black (693)
- Dark Bronze (695)
- Brass (696)
- Custom colors optional
- Optional SRI primer - powder coat only
- Optional plated finishes

#### Wiring

- Concealed or surface
- 24V or 120V, please specify
- Interfaces with alarm system, please consult with factory for full details

#### Special Templates

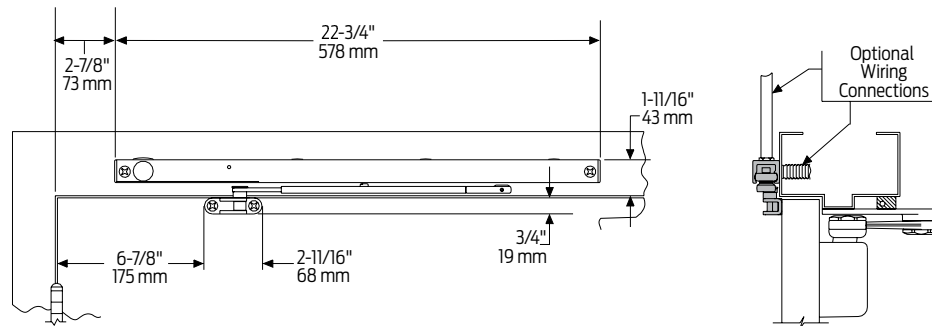
Customized installation templates or products may be available to solve unusual applications. Contact LCN Product Support for assistance.



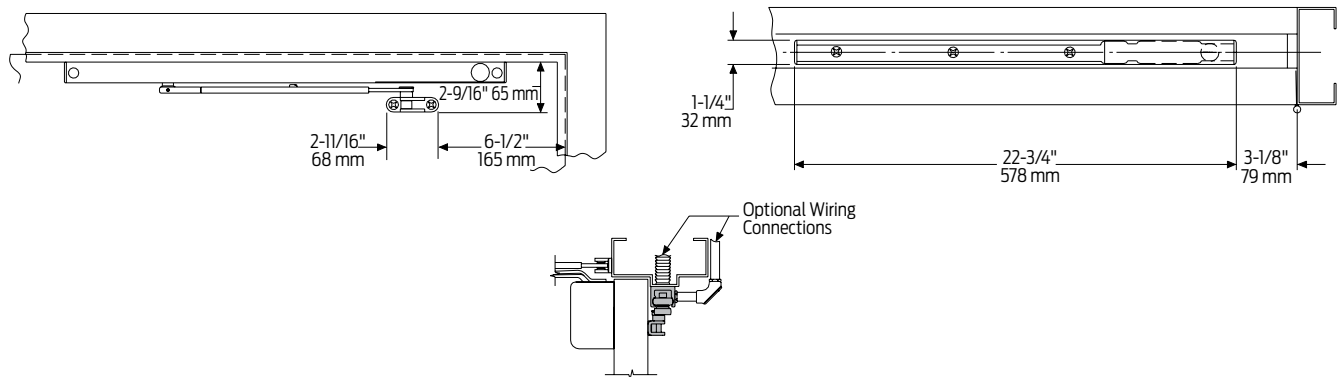
## Mounting details

### Hinge (pull) side & Stop face (push side) Mountings

Hinge (pull) side mount



Stop face (push side) mount

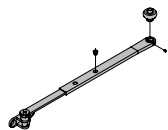


<b>Butt Hinges</b>	Should not exceed 5" (127 mm) in width
<b>Swing Clear Hinges</b>	Consult factory
<b>Auxiliary Stop</b>	Recommended at hold-open point
<b>Reveal</b>	Should not exceed 1/8" (3 mm) for standard arm
<b>Head Frame</b>	Requires 2" (51 mm) minimum
<b>Stop Width</b>	1-1/4" (32 mm) minimum
<b>Flush Ceiling</b>	2" (51 mm) head frame does not require special templating
<b>Door Width</b>	<ul style="list-style-type: none"> <li>2' 4" (711 mm) minimum for single door with SEH</li> <li>4' 8" (1422 mm) minimum for paired doors with SEH</li> </ul>
<b>Maximum Opening</b>	<ul style="list-style-type: none"> <li>Templating allows 100°</li> <li>Hold-open points between 80° and 100° in approximately 3° increments</li> </ul>
<b>SEH Electrical Options</b>	<ul style="list-style-type: none"> <li>These track assemblies require a single power circuit for the holding solenoid</li> <li>SEH holding solenoid is either 24V or 120V input, please specify</li> <li>An optional 4040SE-3210 TRANSFORMER or 8310-824 reduces 120V AC line voltage to 24V AC. Circuitry accepts either AC or DC input</li> </ul>
<b>Options</b>	<ul style="list-style-type: none"> <li>24V or 120V volt input for SEH, please specify</li> </ul>
<b>Wiring Diagram</b>	See "FIRE/LIFE SAFETY" section page 19 for typical wiring and electrical diagram

#### Notes:

- Information applies to SEH unless otherwise specified
- Standard SEH Series is a door holder that must be installed in conjunction with an opposite side mounted, UL listed door closer
- Hold-open force is adjustable
- Momentary on/off switch board assembly for testing door release also provides over-voltage protection. Field replaceable
- All SEH type holders require a separate closer for fire or smoke barrier door applications

### Arm



**SEH-3077T**  
Holder Arm

- Non-handed
- Can be combined with any 4040SE Series track to provide an electrically controlled hold-open function on either side of the door
- All SEH type holders require a separate closer for fire or smoke barrier door applications

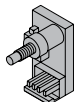
### Track



**SEH-3038**  
SEH Track

- Non-handed
- Mounts on either head frame or stop
- 24V or 120V AC/DC input for holding solenoid, please specify
- Includes test switch assembly with fuse
- Standard

### Switch



**SEH-3436**  
Test Switch

### Installation Accessories



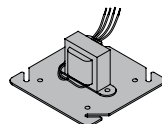
**SEH-81**  
Conduit Quick-Connector

- Two piece connector for use with 1/2" conduit



**SEH-3034SE**  
Track Roller & Track Slider

- Quiet, low friction roller assembly
- Shoulder dimension "X" = 1/4" (6 mm)
- Alloy metal slider for use in SE series tracks only



**4040SEH-3210**  
Transformer

- Reduces line voltage from 120V to 24V AC
- Mounted on cover for 4" (102 mm) x 4" x 2-1/8" (54 mm) junction box (by others)

### How-to-order SEH Series closers

#### Voltage

- ☐ 24V AC/DC
- ☐ 120V AC/DC

#### Specify finish

- ☐ Standard Powder Coat \_\_\_\_\_  
Aluminum, Dark Bronze, Statuary, Light Bronze, Black, Brass.

#### Closer will be shipped with:

- Standard arm
- Standard track
- Wood & machine screw pack  
unless options listed below are selected.

## Options

#### Finishes

- ☐ Custom Powder Coat (RAL)

#### Screw pack

- ☐ TB\*, Wood & Machine Screw (TBWMS)
- ☐ TORX Machine Screw (TORX)
- ☐ TB\* & TORX Machine Screw (TBTRX)  
\* Specify door thickness if other than 1-3/4"

#### Installation accessories

- ☐ Transformer, 4040SE-3210

#### Special template

- ☐ ST- \_\_\_\_\_ (if required)