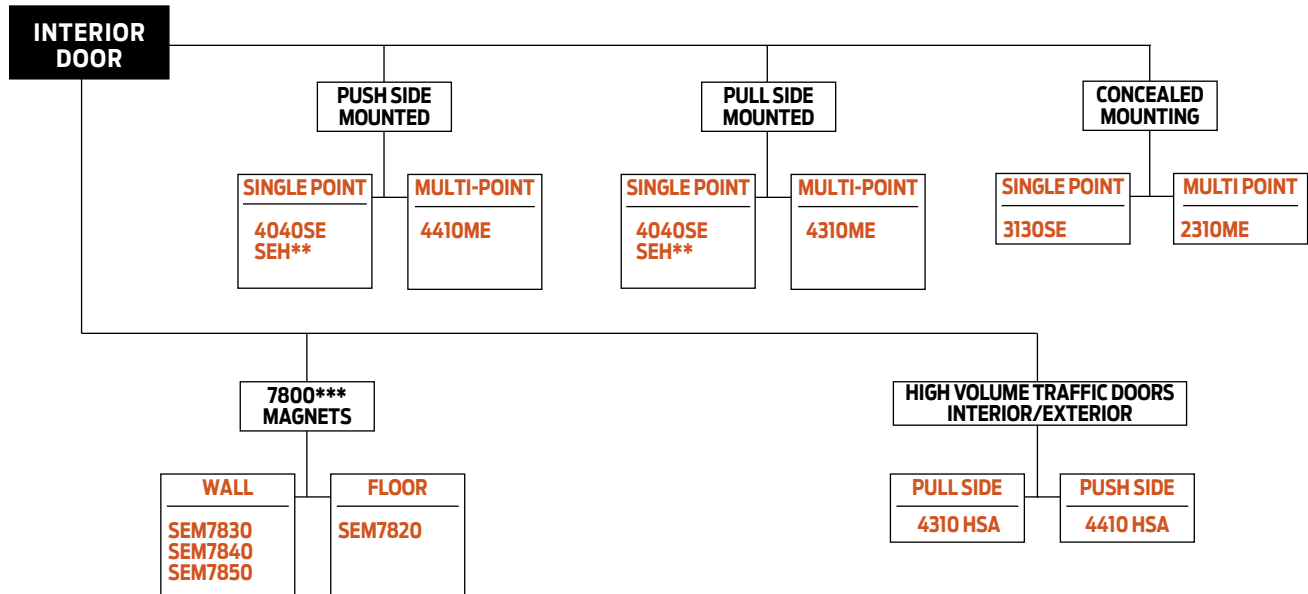


Product selection guide

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
3130SE	○	○	○	○	●	●	●	○	○	●	○	●	○	○	○	○	○	○
4040SE	●	○	●	○	○	●	●	●	●	○	●	○	○	○	○	○	○	○
2310ME	○	○	○	●	○	●	●	○	○	●	○	○	○	○	○	○	○	○
4310ME	●	○	○	○	○	●	●	○	○	●	○	○	○	○	○	○	○	○
4410ME	○	●	○	○	○	●	●	○	○	●	○	○	○	○	○	○	○	○
4310HSA	●	○	○	○	○	●	●	○	○	●	○	○	○	○	○	○	○	○
4410HSA	○	●	○	○	○	●	●	○	○	●	○	○	○	○	○	○	○	○

● 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

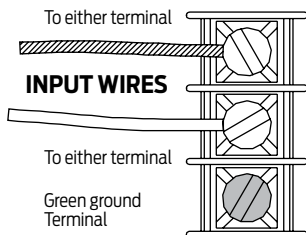
SEM Series magnets work with manual door closers to provide single point hold-open. Now available in new **tri-voltage** with 35 lbs. of holding force.

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

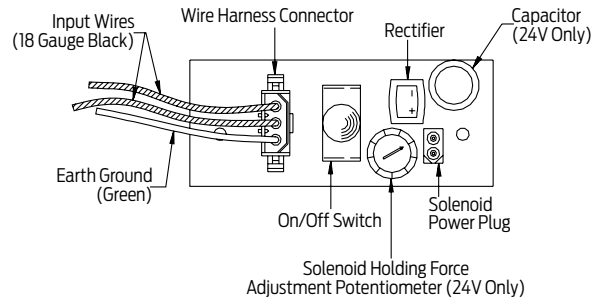
24V AC/DC (+10% -15%) @ 120 mA max.

TRANSFORMER DATA

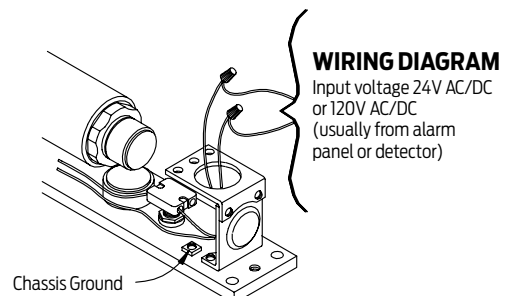
120V AC 50-60 Hz (primary); 24V AC @ 400 mA max. (secondary)
An LCN supplied transformer will power (recommended) 2 SE, 3 SE/ME, and 15 SEM.

ME WIRING

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



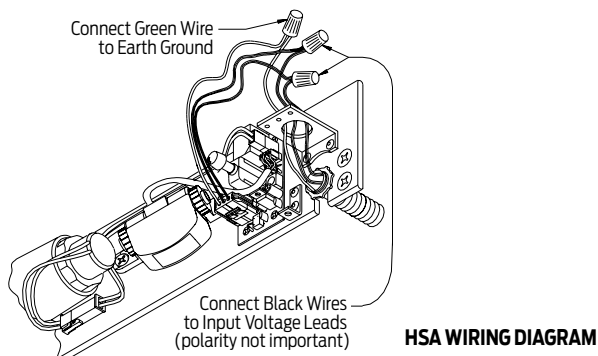
ME (4310, 4410) WIRING DIAGRAM (24V only)



ME (2310) WIRING DIAGRAM

HSA WIRING

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



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.

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

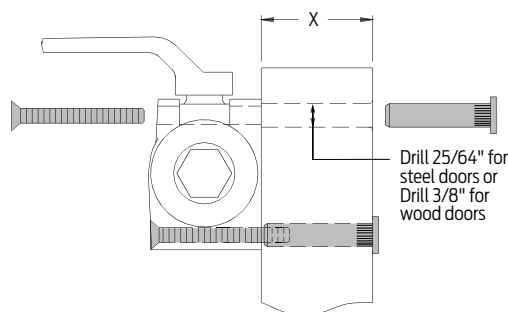
Closers mounted according to LCN installation instructions require no periodic adjustments. Quarterly inspections are recommended. Refer to the installation instructions for complete, product specific details.

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.



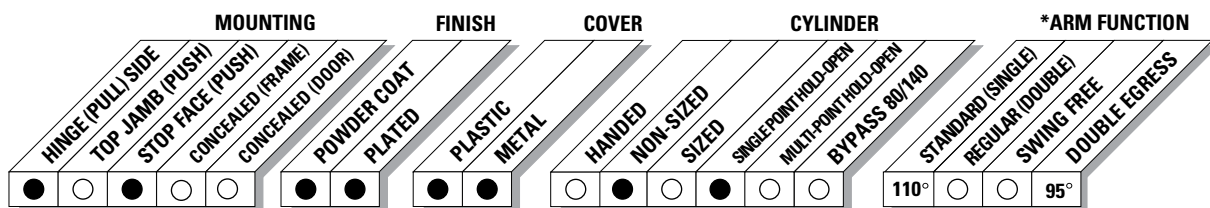
The 4040SE SENTRONIC® is a heavy duty, non-handed, nonsized closer/holder designed to provide single point hold-open for fire and smoke barrier doors. The door is held open until current interruption releases the holding mechanism and the door closes. Single lever (track) arm closer is specifically designed 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	<ul style="list-style-type: none"> ■ 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	<ul style="list-style-type: none"> ■ 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	<ul style="list-style-type: none"> ■ Aluminum (689) ■ Statuary Bronze (690) ■ Light Bronze (691) ■ Black (693) ■ Dark Bronze (695) ■ Brass (696) ■ Custom colors optional
Wiring	<ul style="list-style-type: none"> ■ Optional SRI primer - powder coat only ■ Optional plated finishes
	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.



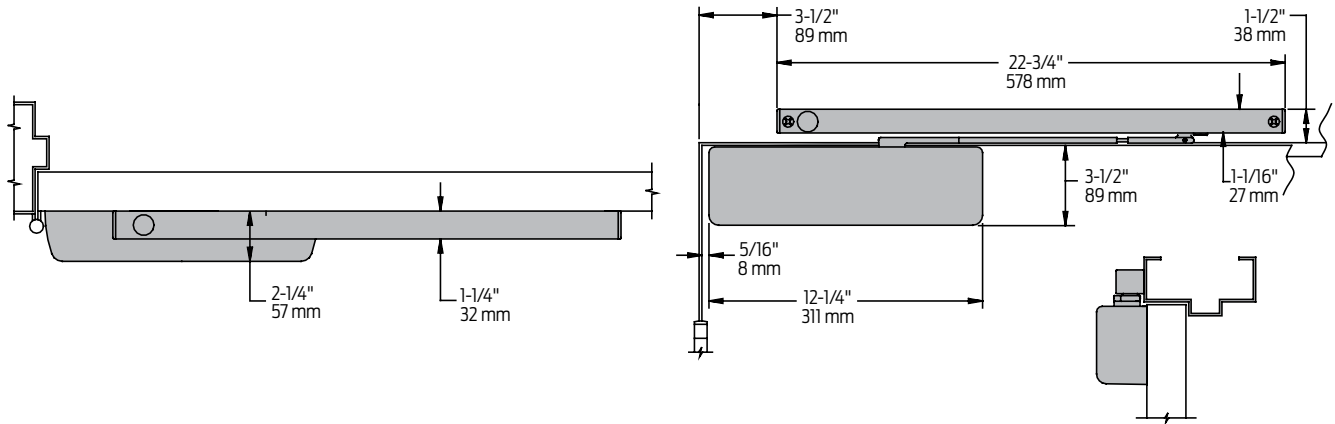
● AVAILABLE
○ NOT AVAILABLE

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

4040SE Series

Mounting details

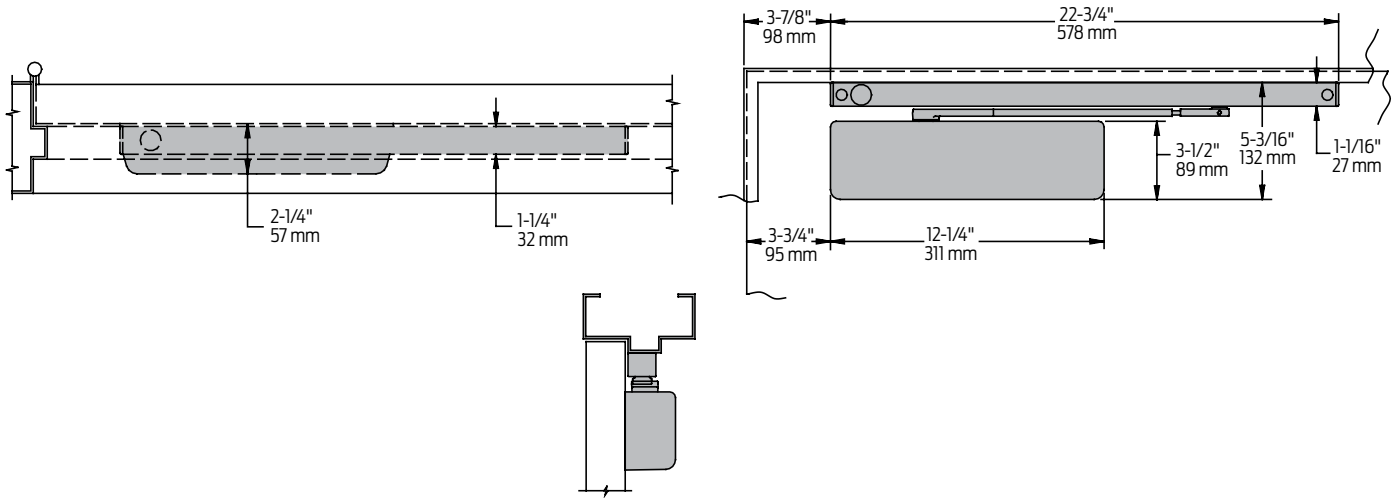
Hinge (Pull)
Side Mounting



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

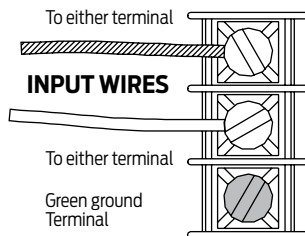
Notes:

- 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



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

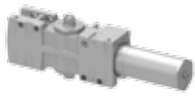
SE Wiring Diagram



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

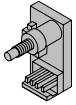
- Non-handed
- For SE closers. Mounts on either head frame or stop
- 24V or 120V AC/DC input for holding solenoid, please specify.
- Includes test switch assembly with fuse
- Standard



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



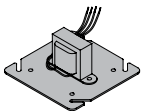
4040SE-81
Conduit Quick-Connector

- 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

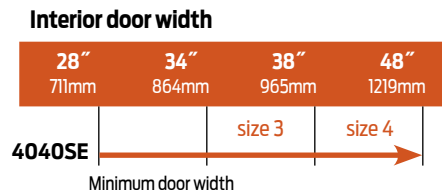
- Plate, 4040SE-18
- Plate, 4040SE-18PA
- Transformer, 4040SE-3210

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.*