

Cold Door 4 LED Refrigerated Door Lighting

Center and End LED Lights and Retrofit Kit

Installation Guide for 701906-(XXXXX)

General Information

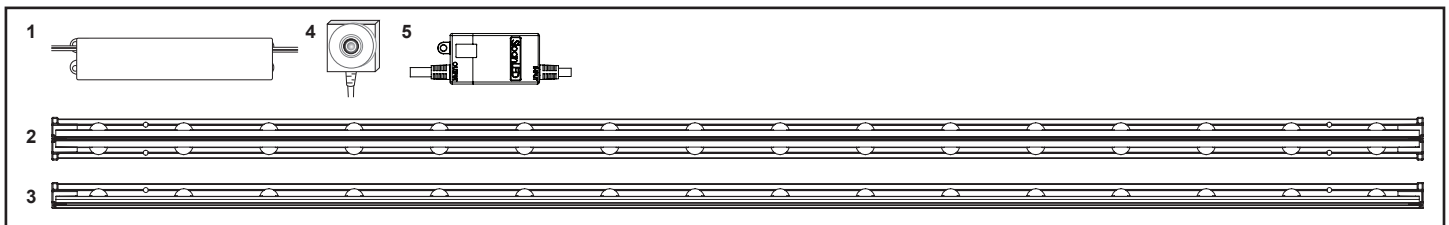
- Cold Door 4 is intended for use inside commercial refrigeration cases with packaged foods only
- Do not cut or remove existing primary wiring in cases being retrofitted
- Complete Retrofit Kit is assembled during on-site audit of each merchandiser prior to installation
- Prior to removing incumbent lights, verify all required Cold Door 4 inventory and recommended installation accessories are present
- Cold Door 4 LED Luminaire should only be used with SloanLED, UL Listed, Class 2, 100 W 24 VDC, or 60 W 24 VDC power supplies, or a UL Listed Class 2 equivalent

Cold Door 4 Lighting System Parts

- | | |
|---|--|
| 1 Power supply -
UL Listed Class 2,
24 V DC, 100 W max. | 4 PIR sensors,
single or double |
| 2 Center lights | 5 Hybrid dimmer and
power controllers (PWM) |
| 3 End lights | |

Installation Accessories (recommended, not included):

- Solid core wire:
16-18 AWG (1.5 - 1.0 mm²)
- Wire strippers
- Angle drill
- Self-drilling/Self-tapping screws,
hex-head (recommended) or
pan-head #8
- Safety glasses or goggles
- Gloves
- UL listed wire connectors
- Wire ties
- Electrical tape
- Measuring tape
- Screw drivers



FOR YOUR SAFETY

- Read and observe all NOTES, CAUTIONS and WARNINGS shown throughout these instructions.
- WARNING – Risk of fire or electric shock. LED Retrofit Kit installation requires knowledge of refrigerator/freezer electrical systems. If not qualified, do not attempt installation. Contact a qualified electrician.
- Installation to be performed by factory trained service personnel only.
- Gloves and safety glasses or goggles should be worn while performing installation.
- This product is UL listed for dry and damp locations.
- Only those open holes indicated in the photographs and/or drawings may be made or altered as a result of kit installation. Do not leave any other open holes in an enclosure of wiring or electrical components.
- Electrical specifications for highest powered luminaire: 0.903 A, 24 VDC, Class 2 circuit. Check individual product label for more details.
- WARNING – Risk of fire or electric shock. Install kit only in refrigerators/freezers that have construction features and dimensions shown in photographs and/or drawings. Input rating of retrofit kit must not exceed input rating of luminaire (case).
- RETROFIT ASSEMBLY IS ACCEPTED AS A COMPONENT WHERE SUITABILITY OF COMBINATION SHALL BE DETERMINED BY UL OR AUTHORITIES HAVING JURISDICTION.

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Preparation for Installation:

1. De-energize system and remove existing lighting system including: bulbs, ballasts, reflectors, clips, LED lights, power supplies, etc. Ballasts and power supplies are normally located in mullions, raceways, or on top of cases.

WARNING – Risk of electric shock. Locate main circuit breaker panel, de-energize, and perform lock-out/tag-out prior to retrofitting case. All primary wiring must be done by a licensed electrician.

Power Supply and Dimming/Controllers

Only one power supply is needed for each frame up to 5-doors regardless of length. See Power Supply Selection Guide to ensure you have most energy efficient solution for frame being retrofitted.

Power Supply Selection Guide (Class 2 power supply)

Cold Door 4 ECO Total power (W, DC)

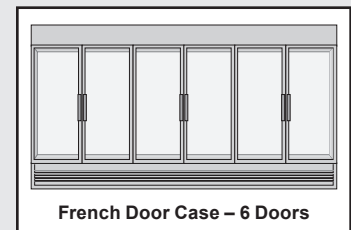
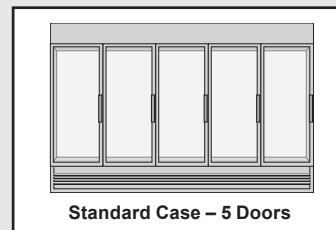
Door height	Doors per frame				
	5	4	3	2	1
4'	37.5	30.0	22.5	15.0	7.5
5'	50.5	40.4	30.3	20.2	10.1
6'	50.5	40.4	30.3	20.2	10.1
7'	50.5	40.4	30.3	20.2	10.1

Cold Door 4 Performance Total power (W, DC)

Door height	Doors per frame				
	5	4	3	2	1
4'	52.5	42.0	31.5	21.0	10.5
5'	63.4	50.8	38.1	25.4	12.7
6'	74.4	59.5	44.6	29.8	14.9
7'	79.8	63.9	47.9	31.9	16.0

Cold Door 4 French Door Total power (W, DC)

Door height	Doors per frame		
	6	4	2
4'	42.8	28.5	14.3
5'	51.7	34.4	17.2
6'	60.6	40.4	20.2
7'	65.0	43.3	21.7



	UL Listed Class 2, 24 V, 60 W power supply
	UL Listed Class 2, 24 V, 100 W power supply

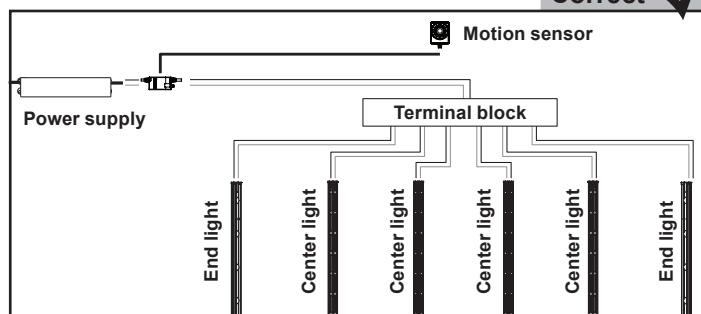
Choose one former ballast location for power supply to be installed in. Mount power supply with two self-drilling/self-tapping screws through tabs in both end caps.

NOTE: If dimming/occupancy sensing is required or application, one dimming/power controller is required per power supply.

Installation:

Wiring diagram: Typical 5-Door installation with one (1) power supply, four (4) center lights, and two (2) end lights

Preferred wiring method for refrigerators with any number of doors (shown with optional dimming controller):

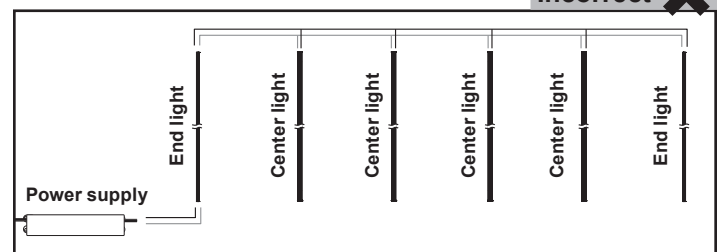


Incorrect wiring method:

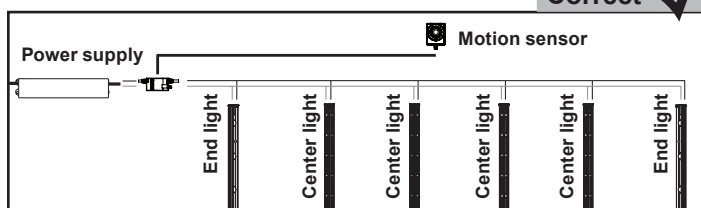
Connect to one end of end luminaire

ONLY. All luminaires **MUST** be connected electrically in parallel.

WARNING: Incorrect wiring as shown below may damage product.



Alternate wiring method for refrigerators with 5 doors or less (shown with optional dimming controller):

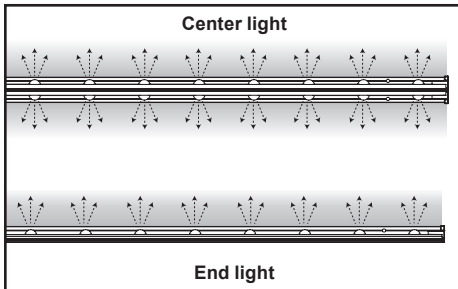


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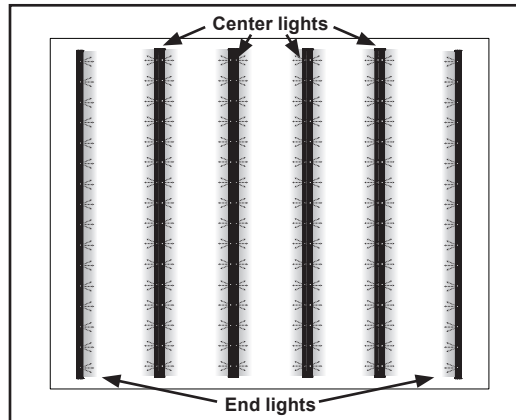
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LED Light Directivity

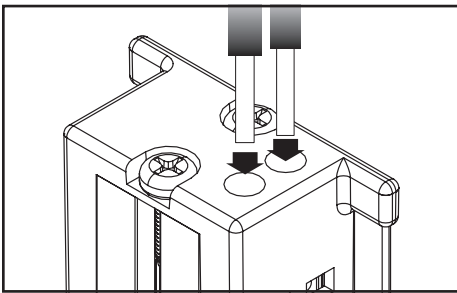


Cold Door 4 4 Center luminaires emit light on two directions. Cold Door 4 End luminaires emit light in one direction only.



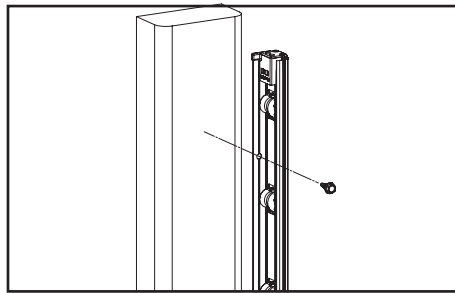
End luminaires can go on right or left sides of refrigerator case.

Wires



7. Only 16 - 18 AWG (1.5 - 1.0 mm²) solid core wires should be used for insertion into end caps of Cold Door 4 terminal blocks. Run secondary wire from power supply through holes in door frame mullions to luminaire. Use end cap as strip length guide, and strip wires 7-9 mm (0.28-0.35"). Push wires through holes in end caps until engaged in terminal block. Cold Door 4 is polarity insensitive, and cannot be daisy chained in a series. Refer to appropriate wiring diagram. **NOTE:** Cold Door 4 Centers have connectors on one end only. Ensure luminaires are oriented correctly for electrical connection.

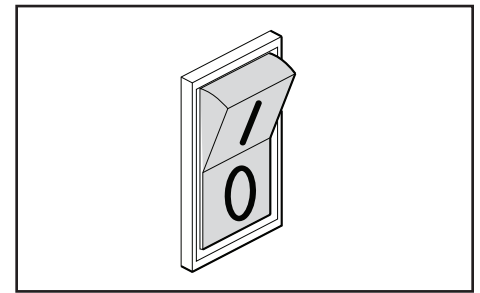
Light Installation



8. Cold Door 4 mounts directly to mullion. Seat Cold Door 4 luminaires flat to mullion and use #8 self-drilling/self-tapping screws through holes in extrusion to secure.

WARNING – To prevent wiring damage or abrasion, do not expose wiring to edges of sheet metal or other sharp objects.

Test System



9. Prior to closing all mullions and raceways, re-energize system and verify performance.

Close Case and Clean Up

Replace all covers and guards removed during preparation and installation.

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Dimming Controller Settings

Factory setting is 100% Brightness, 0% Dimming.

Brightness level

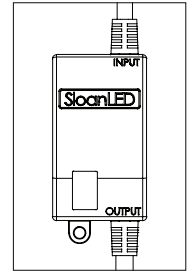
Selectable Duty Cycle output via SW 1 and SW 2
(Brightness level when shopper in area)

SW 1	SW 2	SW 3	SW 4	Brightness level
OFF	OFF	X	X	100% – No dimming mode
ON	OFF	X	X	50%
OFF	ON	X	X	75%
ON	ON	X	X	100%

Dimming

Selectable Duty Cycle output via SW 3 and SW 4
(Brightness level when area is not occupied)

SW 1	SW 2	SW 3	SW 4	Brightness level
OFF	ON	OFF	OFF	100%
OFF	ON	ON	OFF	12.5%
OFF	ON	OFF	ON	25%
OFF	ON	ON	ON	45%



Dimming Controller
P/N 701890-PWR

Removal Instructions

1. De-energize system as outlined in Preparation for Install section on page two of this installation guide and undo electrical connections to LED lights.
2. Repeat process for remaining lights. Make sure to continually support LED lights with a free hand during removal.
3. Open mullions or raceway, remove power supplies.
4. Cap or remove all primary wires.

US patents and foreign patents pending

Customer service and technical support

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