# HUSSMANN® Excel

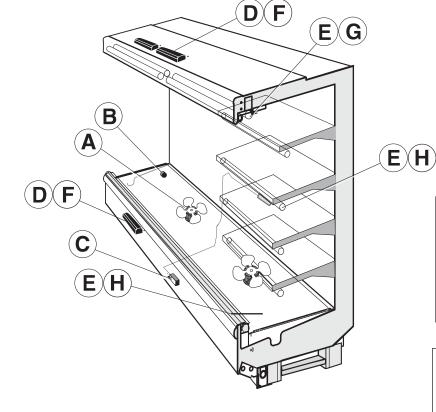


# C5NX-LE

**Technical Data Sheet** P/N 0480109 L **NSF®** Certified **April 2017** 

> **DOE 2017** Compliant

**Energy Efficiency** 





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We reserve the right to change or revise specifications and product design in connection with any feature of our products. Such changes do not entitle the buyer to corresponding changes, improvements, additions or replacements for equipment previously sold or shipped.

Item	Part #	Description	Wiring I	tem #	Item	Part #	Description	Wiring Item #
	ASSEMBLIES & 12 Ft 7W Standard 0477654 0142780	Energy Efficient I Fan Motor, Eva (MO.4410545) Fan Blade (FB.0	porator	y (1)		PS AND BALLA Ballast, Ele 0480130 0480131 0480132		654) 677) p (5)
	emostats 0411744 Optional Adj	Standard Non-a Defrost Thermo (CT.0411744) justable Refrigera	stat	(2) ostat(3)		FIXTURES AN 0501213	D POWER SUPPLY Power Supply (El LED Canopy Fix Replace with like fi LED Shelf Fixtur Replace with like fi	ixtures (7) re (8)

Data sheet-Excel-C5NX-LE

Note: Revision L: April 2017. Updated LED energy values. Other changes marked with a bar, circle or underline.

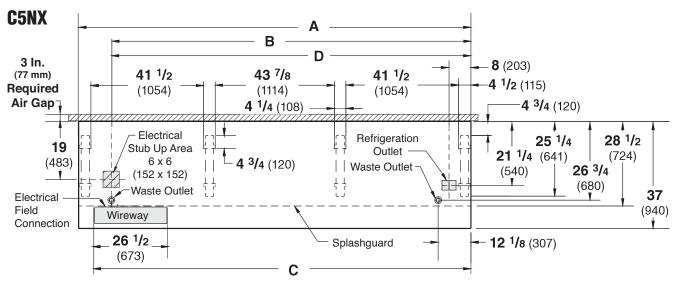
# Engineering Plan Views

PHYSICAL DATA
Merchandiser Drip Pipe (in.) 1 1/4
Merchandiser Liquid Line (in.) 3/8
Merchandiser Suction Line (in.) 7/8

### Convertible

Dimensions shown as in. and (mm).

09-2005



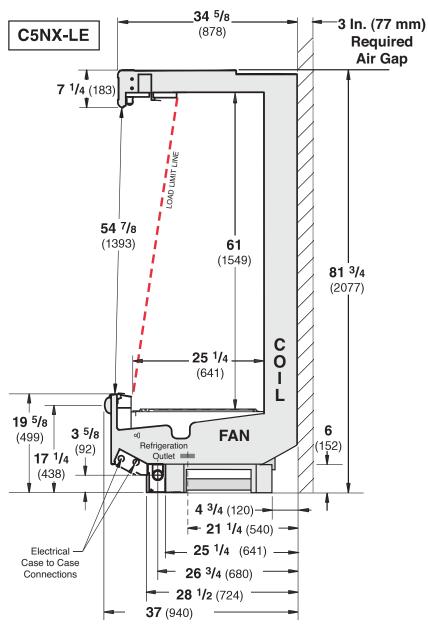
NOTE: Case-to-Case Electrical Connections are made IN FRONT OF SPLASHGUARD.

**FRONT** 

	8 ft	12 ft
General		
(A) Case Length (without ends or partitions)	96 3/8 (2448)	144 1/2 (3670)
(Each end and insulated partition adds $1^{-1}$ /2 in. (38 mm) to case line up.)		
Maximum O/S dimension of case back to front		
(includes bumper)	37 (940)	37 (940)
Back of case to front of splashguard	28 1/2 (724)	28 1/2 (724)
Back of case to O/S edge of front leg	25 1/4 (641)	25 1/4 (641)
Distance between edges of external legs and center legs	41 1/2 (1054)	41 1/2 (1054)
Distance between edges of center legs	NA	43 7/8 (1114)
Distance between front legs and splashguard	2 3/4 (70)	2 3/4 (70)
Electrical Service (Electrical Field Wiring connection point)		
<b>(B)</b> RH End of case to center of stub up area	84 1/4 (2140)	132 3/8 (3363)
Back of case to center of stub up area	19 (483)	19 (483)
Length of electrical wireway Wireway	26 1/2 (673)	26 1/2 (673)
(C) RH End of case to LH end of wireway	90 1/8 (2289)	138 1/4 (3511)
Waste Outlets (One each end)		
(D) RH End of case to the center of LH waste outlet	84 1/4 (2140)	132 3/8 (3363)
RH End of case to the center of RH waste outlet	12 1/8 (307)	12 1/8 (307)
Back O/S of case to center of waste outlets	26 3/4 (680)	26 3/4 (680)
Schedule 40 PVC drip pipe	1 1/4 (32)	1 1/4 (32)
Refrigeration Outlet		
Back of case to center of refrigeration outlet	21 1/4 (540)	21 1/4 (540)
RH end of case to center of refrigeration outlet	8 (203)	8 (203)

DOE 2017 Energy Efficiency Compliant Hussmann refrigerated merchandisers configured for sale for use in the United States meet or surpass the requirements of the DOE 2017 energy efficiency standards.

### Dimensions shown as in. and (mm).



### **NSF** Certification

This merchandiser model is manufactured to meet NSF/ANSI (National Sanitation Foundation) Standard #7 requirements for construction, materials & cleanability.

Estimat	ed Charge**	C5NX-LE		
8 ft	3.2 lb	51 oz	1.4 kg	
12 ft	4.5 lb	72 oz	2.0  kg	

<sup>\*\*</sup>This is an average for all refrigerant types. Actual refrigerant charge may vary by approximately half a pound (8 oz/0.2 kg).

# Excel C5NX-LE Dairy & Delicatessen

### REFRIGERATION DATA

**Note:** This data is based on store temperature and humidity that does not exceed 75°F and 55% R.H.

C5NX-LE§	Deli	Dairy
Discharge Air °F	29	31
Evaporator °F	21	24
Unit Sizing °F	19	22

§ Average evaporator temperature shown. Use dew point for high glide refrigerants for unit sizing. Care should be taken to use the dew point in PT tables for measuring and adjusting superheat. Adjust evaporator pressure as needed to maintain discharge air temperature shown.

### Btu/hr/ft — Unlit Shelves ‡

C5NX-LE	Parallel	Conventional
DELI	1699	1774
DAIRY	1374	1509

<sup>‡</sup> Add 10 Btu/hr/ft *per shelf row* for LED fixtures. Add 20 Btu/hr/ft *per shelf row* for fluorescent lamps.

### **DEFROST DATA**

### C5NX-LE

Frequency Hr 6
Defrost Water (lb/ft/day) 10.50
(± 15% based on case configuration and product loading).

OFFTIME	C5NX-LE
Temp Term °F	48
Failsafe Minutes	35

**ELECTRIC OR GAS** Not Recommended

### **Standard Defrost Thermostat**

Close on rise: close 48°F — open 33°F

### **CONVENTIONAL CONTROLS**

### **Low Pressure Backup Control**

CI/CO*	C5NX-LE
Deli	Dairy
14°F / 4°F	17°F / 7°F

#### **Indoor Unit Only, Pressure Defrost**

I ermination <sup>*</sup>	48°F
*Use a Temperature Pressure Chart to	determine
PSIG conversions.	

# Excel C5NX-LE Dairy & Delicatessen

Electrical Data				
	8 ft	12 ft		
Number of Fans—7W	4	6		
	Amp	eres	Watt	ts
	8 ft <sup>1</sup>	12 ft	8 ft	12 ft
Evaporator Fan				
120V 50/60Hz Standard Energy Efficient	0.76	1.14	56	84
230V 50/60Hz Standard Energy Efficient	0.40	0.60	56	84
230V 60Hz Export	1.00	1.50	156	234
230V 50Hz Export	1.12	1.68	168	252
Minimum Circuit Ampacity				
120V 50/60Hz Standard Energy Efficient	0.96	1.34		
230V 50/60Hz Standard Energy Efficient	0.60	0.80		
230V 60Hz Export	1.20	1.70		
230V 50Hz Export	1.32	1.88		
M : 0 C (P (1 120))	20	20		
Maximum Over Current Protection 120V	20	20		
Maximum Over Current Protection 230V	15	15		
Standard Lighting (T-8 Fluorescent)				
1 Row Canopy	0.51	0.77	59	85
1 Row Canopy	0.31	0.77	39	63
ONLY LIGHTING CONFIGURATIONS THAT ARE COMPLIANT W	ІТН ТНЕ U.S. <b>D</b> EPT. OF <b>E</b>	NERGY (DOE) 20	012 REGULATION AR	E AVAILABLE I
SALE FOR USE IN THE U.S.A.				
Optional Lighting (T-8 Fluorescent)				
Additional 1 Row Canopy	0.51	0.77	59	85
Additional 2 Row Canopy	1.02	1.54	118	170
Additional 3 Row Canopy	1.53	2.31	177	255
1 Row Rail Light	0.51	0.77	59	85
4 Rows of Shelves	2.04	3.08	236	340
5 Rows of Shelves	2.55	3.85	295	425

120V Lighting Circuit Total = Standard Lighting + Total Optional Lighting + Optional Shelf Lighting 120V LED Lighting Circuit Total = Canopy Lighting + Shelf Lighting + Optional Rail Lighting 230V Lighting Circuit Total = Multiply 120V Lighting Circuit Total by 0.52

Please note: some combinations of fluorescent lights on this case model may not be compliant with DOE 2017 and may not be available to order in the US and Canada. More lighting options are available with LED lights. The Hussmann Product Configurator will not allow lighting options that do not comply with the DOE 2017 standards.

3.06

0.32

0.44

0.16

0.66

0.82

0.99

4.62

0.48

0.66

0.25

0.99

1.24

1.48

6 Rows of Shelves

EcoShine II Canopy
EcoShine II

EcoShine II HO

EcoShine II Shelves
4 Rows of Shelves

5 Rows of Shelves

6 Rows of Shelves

EcoShine II Rail Light —1 Row

354

38.6

53.0

19.8

79.1

98.9

118.6

510

58.0

79.4

29.7

118.6

148.3

178.0

FOR

## Excel C5NX-LE

Dairy & Delicatessen

### **Product Data**

Recommended Usable Cube <sup>1</sup> (Cu Ft/Ft) AHRI Total Display Area <sup>2</sup> (Sq Ft/Ft) Shelf Area <sup>3</sup> (Sq Ft/Ft) 7.10 ft<sup>3</sup>/ft (0.66 m<sup>3</sup>/m) 4.58 ft<sup>2</sup>/ft (1.40 m<sup>2</sup>/m) 7.47 ft<sup>2</sup>/ft (2.28 m<sup>2</sup>/m)

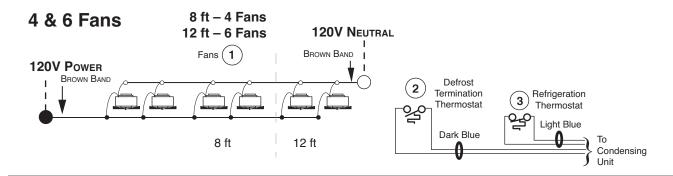
<sup>&</sup>lt;sup>3</sup> Shelf surface area is composed of bottom deck plus standard shelf complement, as shown in the Hussmann *Product Reference Guide*. The standard shelf complement for this model is (4) rows of 16-inch shelves.

ESTIMATED SHIPPING WEIGHT 4						
Case			Solid End			
	8 ft	12 ft	(each)			
$\mathbf{lb}\;(kg)$	1200 (544)	1400 (635)	100 (45)			
<sup>4</sup> Actual weights will vary according to optional kits included.						

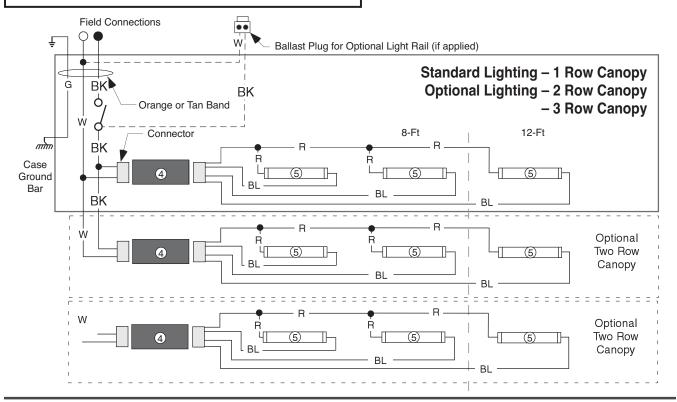
<sup>&</sup>lt;sup>1</sup> AHRI Refrigerated Volume less shelving and other unusable space: Refrigerated Volume/Unit of Length, ft³/ft [m³/m]

<sup>&</sup>lt;sup>2</sup> Computed using AHRI 1200 standard methodology: Total Display Area, ft<sup>2</sup> [m<sup>2</sup>]/Unit of Length, ft [m]

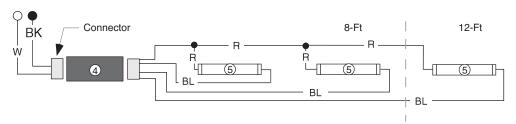
# Fan Wiring Offtime Defrost



## **Light Circuits — Fluorescent Fixtures**



### Optional Lighting - 1 Row Rail



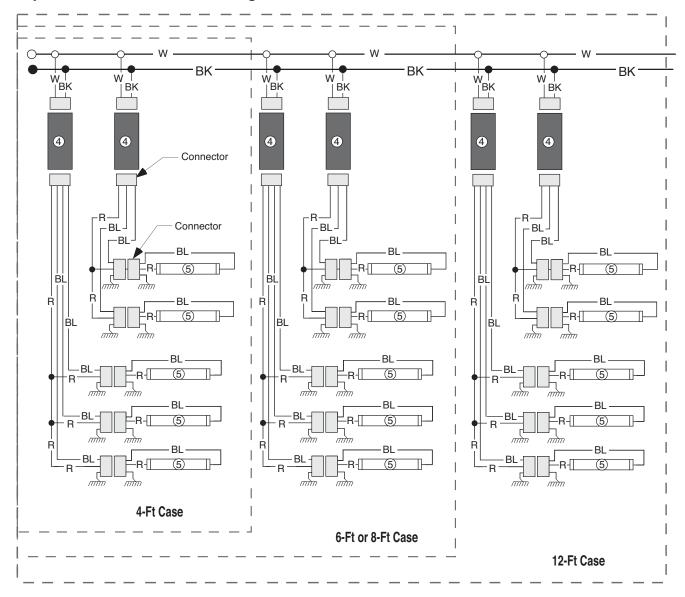
### **WARNING**

All components must have mechanical ground, and the merchandiser must be grounded.

CIRCLED NUMBERS = PARTS LIST ITEM NUMBERS

R = Red Y = Yellow G = Green BL = Blue BK = Black W = White  $\bullet$  = 120V Power  $\bigcirc$  = 120V Neutral  $\bot$  = Field Ground  $\longrightarrow$  = Case Ground

### **Optional Shelf Harness and Light Circuits for Five Rows of Shelves**



### **WARNING**

All components must have mechanical ground, and the merchandiser must be grounded.

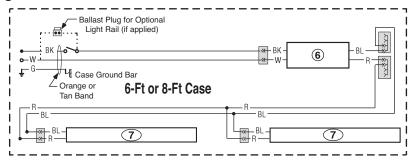
CIRCLED NUMBERS = PARTS LIST ITEM NUMBERS

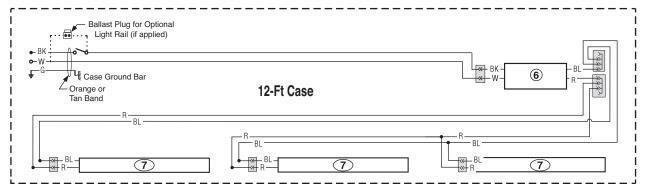
R = Red Y = Yellow G = Green BL = Blue BK = Black W = White

• = 120V Power  $\bigcirc$  = 120V Neutral  $\frac{1}{2}$  = Field Ground  $\frac{1}{120}$  = Case Ground

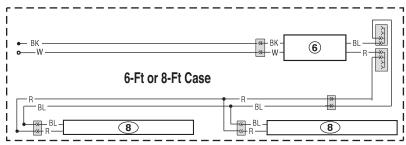
### Optional Canopy and Rail Light Circuits — LED Fixtures

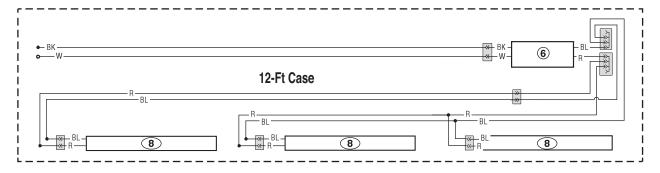
### EcoShine II LED Canopy Lighting - 1 Row





### EcoShine II LED Rail Lighting - 1 Row





### **WARNING**

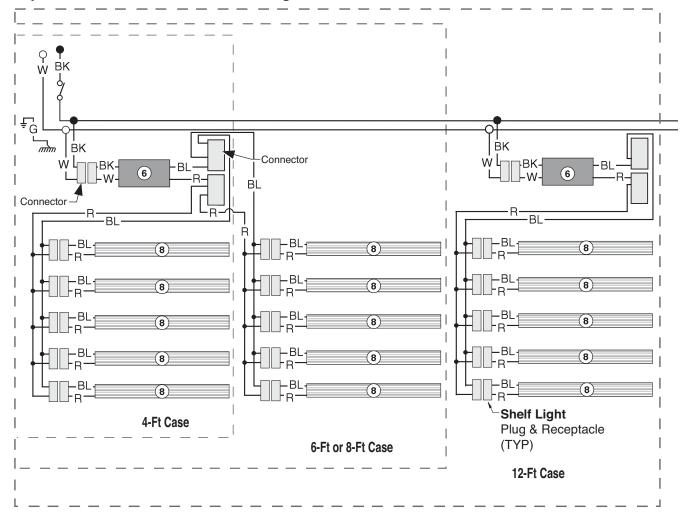
All components must have mechanical ground, and the merchandiser must be grounded.

CIRCLED NUMBERS = PARTS LIST ITEM NUMBERS

R = Red Y = Yellow G = Green BL = Blue BK = Black W = White

• = 120V Power  $\bigcirc$  = 120V Neutral  $\frac{1}{2}$  = Field Ground  $\longrightarrow$  = Case Ground

## Optional Shelf Harness and LED Light Circuits for 4 or 5 Rows of Shelves



### **WARNING**

All components must have mechanical ground, and the merchandiser must be grounded.

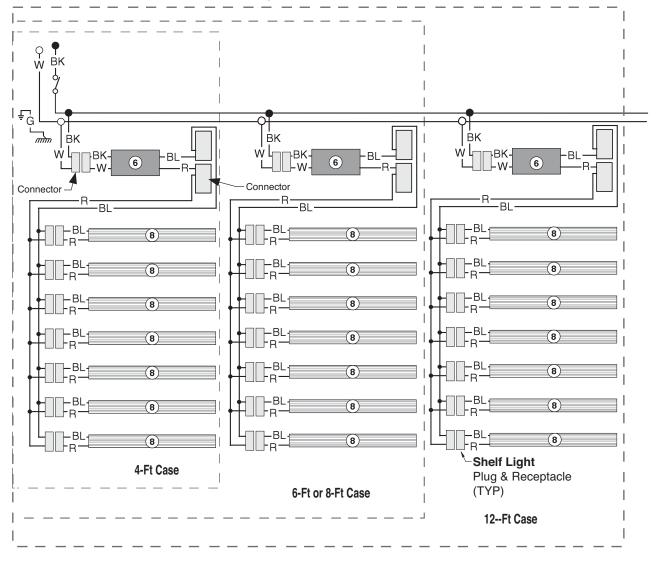
CIRCLED NUMBERS = PARTS LIST ITEM NUMBERS

R = Red G = Green BL = Blue BK = Black W = White

• = 80V Power  $\bigcirc$  = 80V Neutral  $\frac{1}{7}$  = Field Ground  $\implies$  = Case Ground

# Optional Shelf Lighting LED Fixtures

## Optional Shelf Harness and LED Light Circuits for 6 or 7 Rows of Shelves



### **WARNING**

All components must have mechanical ground, and the merchandiser must be grounded.

CIRCLED NUMBERS = PARTS LIST ITEM NUMBERS

R = Red G = Green BL = Blue BK = Black W = White

• = 80V Power  $\bigcirc$  = 80V Neutral  $\frac{1}{7}$  = Field Ground  $\stackrel{min}{m}$  = Case Ground