

DOE 2017
Energy Efficiency
Compliant

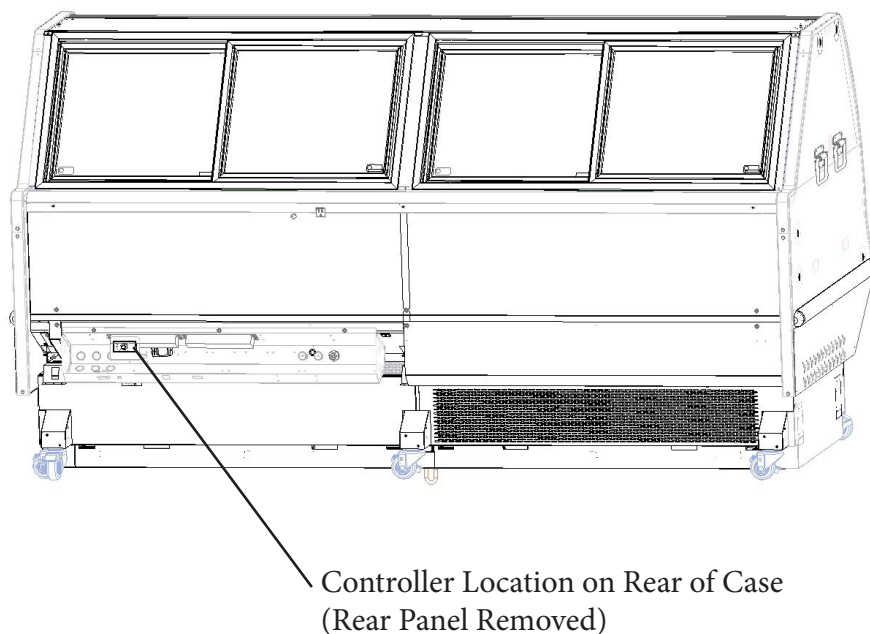
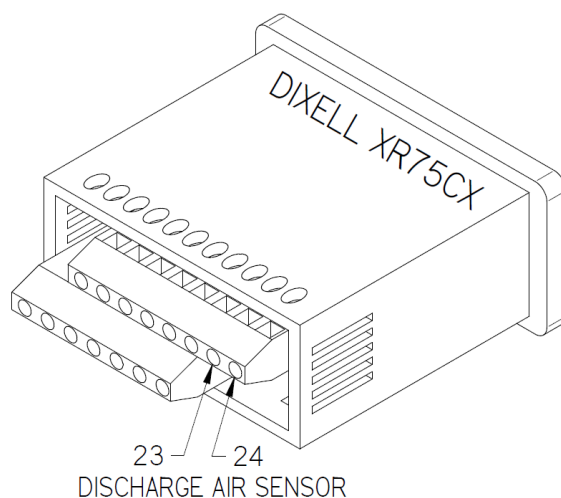
We reserve the right to change or revise specifications and product design in connection with any feature of our products. Such changes do not entitle the buyer to corresponding changes, improvements, additions or replacements for equipment previously sold or shipped.

Item	Part #	Description	Wiring Item #	Item	Part #	Description	Wiring Item #
FAN ASSEMBLIES AND THERMOSTATS				REFRIGERATION			
A.	0522287	High Efficiency Fan Motor, (2) Ambient (120V) (MO.4411037)		C.	3008655	Condensing Unit Assembly 115V	
RACEWAY				D.	0331344	Sight Glass (GL.4974431)	
B.	3044947	Controller - XR75 SSG8B		E.	0501739	Drier	
				F.	0431353	TEV	
				LAMPS AND BALLASTS			
				G.	Ballast, Electronic		(4)
					0355716	2 lamps (120V) (BA.0355716)	
					0355398	3 lamps (120V) (BA.4480188)	
				H.	Fluorescent Lamp		(5)
				<i>Replace with like fixtures</i>			

Data sheet-Excel SSG8B

Note: Revision E: added controller information. Other changes marked by bar, underline or circle.

See Section 3, P/N 3018126, **SMG8B & SSG8B Medium Temperature Self Contained Installation and Operation Manual** for detailed controller information.



Controller Parameters

Dixell XR75					
XR 75 Code	XR 75 Parameter	XR 75 Function	XR 75 Default	SSG8B	SMG8B
SEt	Temperature Setpoint	LS to US	-5	17	19
REGULATION					
Hy	Differential	(0.1 to 25.5°C / 1 to 255°F) Intervention differential for setpoint. Compressor Cut IN is setpoint + differential (Hy). Compressor Cut OUT is when the temperature reaches the setpoint.	2	9	6
LS	Minimum setpoint	(-100°C to SEt/-148°F to SEt) Sets the minimum value for the setpoint.	-50	10	12
US	Maximum setpoint	(SEt to 110°C/ SEt to 230°F) Set the maximum value for the setpoint.	110	33	26
ot	Thermostat probe calibration	(-12.0 to 12.0°C; -120 to 120°F) Allows to adjust possible offset of the thermostat probe.	0	0	0
P2P	Evaporator probe presence	n = not present: the defrost stops by time y = present: the defrost stops by temperature	Y	n	n
oE	Evaporator probe calibration	(-12.0 to 12.0°C; -120 to 120°F) Allows to adjust possible offset of the evaporator probe.	0	0	0
P3P	Third probe presence (P3)	n = not present; the terminals 18-20 operate as digital input y = present; the terminals 18-20 operate as third probe	n	n	n
o3	Third probe calibration (P3)	(-12.0 to 12.0°C; -120 to 120°F) Allows to adjust possible offset of the third probe.	0	0	0
P4P	Fourth probe presence	(n = not present; y = present)	n	n	n
o4	Fourth probe calibration	(-12.0 to 12.0°C) Allows to adjust possible offset of the fourth probe.	0	0	0
Ods	Outputs activation delay at startup	(0 to 255 min) This function is enabled at the initial start up of the device and inhibits any output activation for the period of time set in the parameter.	0	0	0
Ac	Anti-short cycle delay	(0 to 50 min) Minimum interval between the compressor stop and the following restart.	1	2	2
rtr	Percentage of the second and first probe for regulation (0 to 100; 100 = P1, 0 = P2)	Allows to set the regulation according to the percentage of the first and second probe, as for the following formula (rtr(P1-P2)/100 + P2).	100	100	100
CCt	Compressor ON time during continuous cycle	(0.0 to 24.0 hr; res. 10 min) Allows to set the length of the continuous cycle: compressor stays ON without interruption for the CCt time. Can be used, for instance, when the room is filled with new products.	0	0	0
CCS	Setpoint for continuous cycle	(-100 to 150°C) Sets the setpoint used during the continuous cycle.	-5	17	19
Con	Compressor ON time with faulty probe	(0 to 255 min) Time during which the compressor is active in case of faulty thermostat probe. With Con = 0, compressor is always OFF.	15	6	6
CoF	Compressor OFF time with faulty probe	(0 to 255 min) Time during which the compressor is OFF in case of faulty thermostat probe. When CoF = 0, compressor is always active.	30	2	2
CF	Temperature measurement unit	°C = Celsius, °F = Fahrenheit, (CAUTION! When the measurement unit is changed, the setpoint and the values of the parameters Hy, LS, US, ot, ALU and ALL have to be checked and modified if necessary).	C	F	F
rES	Resolution (for °C)	(in = 1°C; dE = 0.1°C) Allows decimal point display.	dE	dE	dE
Lod	Device display	(P1; P2, P3, P4, SEt, dtr) Selects which probe is displayed by the device: P1 = Thermostat probe P2 = Evaporator probe; P3 = Third probe (only for models with this option enabled), P4 = Fourth probe, SEt = setpoint, dtr = percentage of visualization	P1	P1	P1
Red	X- REP display (optional)	(P1; P2, P3, P4, SEt, dtr) Selects which probe is displayed by the device: P1 = Thermostat probe P2 = Evaporator probe; P3 = Third probe (only for models with this option enabled), P4 = Fourth probe, SEt = setpoint, dtr = percentage of visualization	P1	P1	P1
dLy	Display delay	(0 to 20.0 min; resul. 10 seconds) When the temperature increases, the display is updated of 1°C/1°F after this time.	0	0	0
dtr	Percentage of the second and first probe for visualization when Lod = dtr (0 to 100; 100 = P1, 0 = P2)	If Lod = dtr, it allows to set the visualization according to the percentage of the first and second probe, as for the following formula (dtr(P1-P2)/100 + P2).	50	100	100

Controller Parameters

DEFROST					
EdF	Defrost mode (only for controller with RTC)	rtC = Real Time Clock mode. Defrost time follows Ld1 to Ld6 parameters on workdays and Sd1 to Sd6 on holidays. in = interval mode. The defrost starts when the time IdF is expired.	rtC	in	in
tdF	Defrost type	EL = electrical heater in = hot gas	EL	EL	EL
dFP	Probe selection for defrost termination	nP = no probe P1 = thermostat probe P2 = evaporator probe P3 = configurable probe P4 = probe on Hot Key plug	P2	P1	P1
dtE	Defrost termination temperature	(-50 to 50°C/ -58 to 122°F) (Enabled only when EdF = Pb) Sets the temperature measured by the evaporator probe, which causes the end of defrost.	8	48	48
IdF	Interval between defrost cycles	(0 to 120 hr) Determines the time interval between the beginning of two defrost cycles.	6	24	24
MdF	(Maximum) length for defrost	(0 to 255 min) When P2P = n, (not evaporator probe: timed defrost) it sets the defrost duration, when P2P = y (defrost end based on temperature) it sets the maximum length for defrost.	30	90	90
dSd	Start defrost delay	(0 to 99 min) This is useful when different defrost start times are necessary to avoid overloading the plant.	0	0	0
dFd	Temperature displayed during defrost	(rt = real temperature; it = temperature at defrost start; SEt = setpoint; dEF = dEF la-bel)	it	Def	Def
dAd	MAX display delay after de-frost	(0 to 255 min)Sets the maximum time between the end of defrost and the restarting of the real roomtemperature display.	30	30	30
Fdt	Drip time	(0 to 120 min)Time interval between reaching defrost termination temperature and the restoring of thecontrollers normal operation. This time allows the evaporator to eliminate water drops that might have formed due to defrost.	0	0	0
dPo	First defrost after start-up	(y = immediately; n = after the IdF time)	n	y	y
dAF	Defrost delay after continuouscycle	(0 to 23.5 hr)Time interval between the end of the fast freezing cycle and the following defrost relatedto it.	0	0	0
FANS					
FnC	Fans operating mode	C-n = runs with the compressor, OFF during defrost O-n = continuous mode, OFF during defrost C-y = runs with the compressor, ON during defrost O-y = continuous mode, ON during defrost	O-n	O-y	O-y
Fnd	Fans delay after defrost	(0 to 255 min) Interval between end of defrost and evaporator fans start	10	0	0
FCt	Temperature differential avoiding short cycles of fans	(0 to 59°C; Fct = 0 function disabled) If the difference in temperature between the evaporator and the room probes is morethan the value of the FCt parameter, the fans are switched ON.	10	0	0
FSt	Fans stop temperature	(-50 to 50°C/ 122°F) Setting of temperature, detected by the evaporator probe, above which fans are always OFF.	2	2	2
Fon	Fan ON time	(0 to 15 min) With Fnc=C_n or C_y, (fan activated in parallel with compressor). Sets the evaporator fan ON cycling time when the compressor is OFF. When Fon=0 and FoF not equal to 0, the fans are always OFF, with Fon=0 and FoF=0, the fans are always OFF.	0	0	0
FoF	Fan OFF time	(0 to 15 min)With Fnc=C_n or C_y, (fan activated in parallel with compressor). Sets the evaporator fan OFF cycling time when the compressor is OFF. When Fon=0 and FoF not equal to 0, the fans are always OFF, when Fon=0 and FoF=0, the fans are always OFF.	0	0	0
FAP	Probe selection for fan management	nP = no probe P1 = thermostat probe P2 = evaporator probe P3 = configurable probe P4 = probe on Hot Key plug	P2	nP	nP
AUXILIARY THERMOSTAT CONFIGURATION (terms. 1-4) - oA3 = AUS					
ACH	Kind of regulation for auxiliary relay	Ht = heating CL = cooling	CL	CL	CL
SAA	Setpoint for auxiliary relay	(-100 to 150.0°C; -148 to 302°F) Defines the room temperature setpoint to switch auxiliary relay.	0	0	0
SHy	Differential for auxiliary output	(0.1 to 25.5°C/ 1 to 255°F)Intervention differential for auxiliary output setpoint. When ACH = CL, AUX Cut in is SAA + SHy; AUX Cut out is SAA When ACH = Ht, AUX Cut in is SAA - SHy; AUX Cut out is SAA	2	2	2
ArP	Probe selection for auxiliary	nP = no probe, the auxiliary relay is switched only by the digital input P1 = Probe 1 (thermostat probe) P2 = Probe 2 (evaporator probe) P3 = Probe 3 (display probe) P4 = Probe 4	nP	nP	nP
Sdd	Auxiliary relay OFF during defrost	n = the auxiliary relay operates during defrost y = the auxiliary relay is switched OFF during defrost	n	n	n
ALARMS					
ALP	Probe selection for alarm	nP = no probe, the temperature alarms are disabled P1 = Probe 1 (thermostat probe) P2 = Probe 2 (evaporator probe) P3 = Probe 3 (display probe) P4 = Fourth probe	P1	P1	P1
ALC	Temperature alarms configuration	(Ab; rE) Ab = absolute temperature: alarm temperature is given by the ALL or ALU values. rE = temperature alarms are referred to the setpoint. Temperature alarm is enabled when the temperature exceeds the SEt + ALU or SEt - ALL values.	Ab	Ab	Ab
ALU	Maximum temperature alarm	(SEt to 150°C; SEt to 302°F)When this temperature is reached, the alarm is enabled, after the ALd delay time.	110	56	56
ALL	Minimum temperature alarm	(-100 to SEt; -148°C to 230°F)When this temperature is reached, the alarm is enabled, after the ALd delay time.	-50	10	10
AFH	Differential for temperature alarm recovery	(0.1 to 25.5°C; 1 to 45°F) Intervention differential for recovery of temperature alarm. It is also used for the restartof the fan when the FSt temperature is reached.	2	4	4
ALd	Temperature alarm delay	(0 to 255 min) Time interval between the detection of an alarm condition and alarm signaling.	15	30	30
dAo	Exclusion of temperature alarmat start-up	(from 0.0 min to 23.5 hr)Time interval between the detection of the temperature alarm condition after devicepower ON and alarm signaling.	1.3	2	2

Controller Parameters

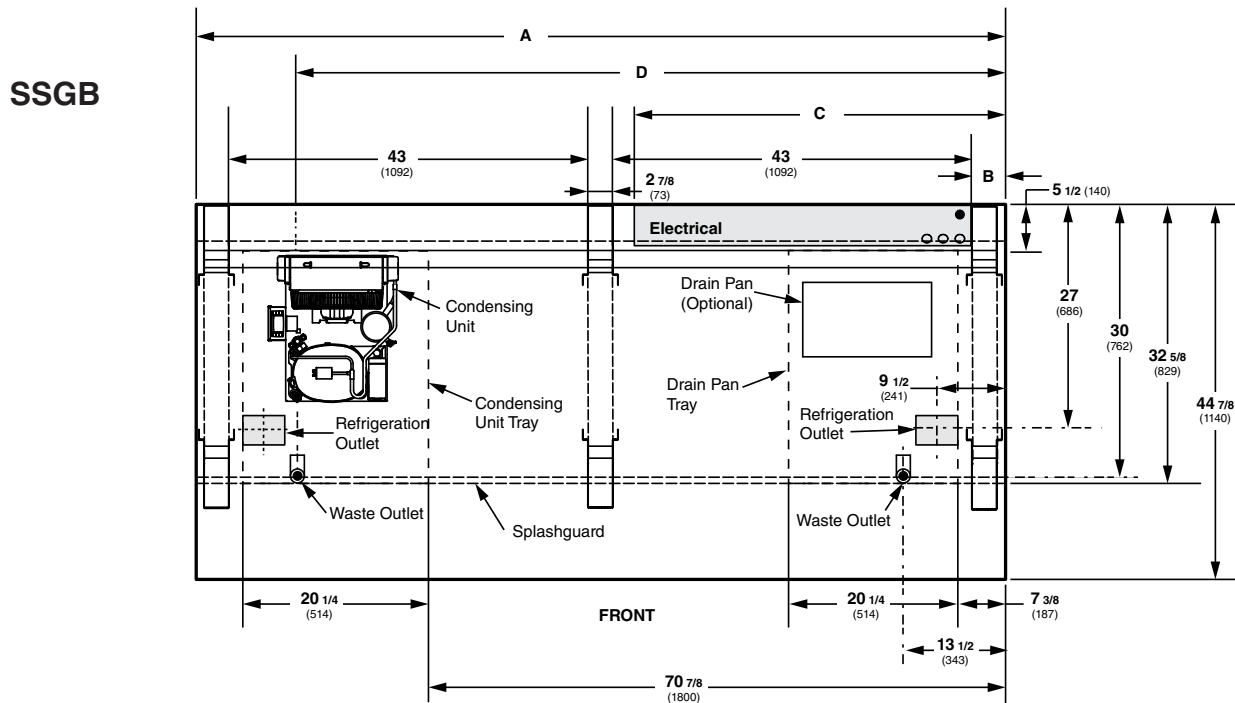
CONDENSER TEMPERATURE ALARM					
AP2	Probe selection for temperature alarm of condenser	nP = no probe P1 = thermostat probe P2 = evaporator probe P3 = configurable probe P4 = probe on Hot Key plug	P4	nP	nP
AL2	Low temperature alarm of condenser	(-100 to 150°C) When this temperature is reached, the LA2 alarm is signaled, possibly after the Ad2 delay.	-40	-40	-40
AU2	High temperature alarm of condenser	(-100 to 150°C) When this temperature is reached, the HA2 alarm is signaled, possibly after the Ad2 delay.	110	110	110
AH2	Differential for temperature condenser alarm recovery	(0.1 to 25.5°C; 1 to 45°F)	5	52	52
Ad2	Condenser temperature alarm delay	(0 to 255 min) Time interval between the detection of the condenser alarm condition and alarm signaling.	15	15	15
dA2	Condenser temperature alarm exclusion at start up	(from 0.0 min to 23.5 hr, res. 10 min)	1.3	1.3	1.3
bLL	Compressor OFF with low temperature alarm of condenser	n = no: compressor keeps on working Y = yes, compressor is switched OFF until the alarm is present, in any case regulation restarts after Ac time at minimum.	n	n	n
AC2	Compressor OFF with high temperature alarm of condenser	n = no: compressor keeps on working Y = yes, compressor is switched OFF until the alarm is present, in any case regulation restarts after Ac time at minimum.	n	n	n
AUXILIARY RELAY					
tbA	Alarm relay silencing (with oA3=ALr)	n = silencing disabled: alarm relay stays ON until alarm condition lasts y = silencing enabled: alarm relay is switched OFF by pressing a key during an alarm	y	y	y
oA3	Fourth relay configuration (1-4)	dEF, FAn: do not select it! ALr: alarm; Lig: light; AUS: Auxiliary relay; onF: always ON with device ON; db = neutral zone; cP2 = do not select it!; dEF2: do not select it!; HES: night blind	Lig	ALr	ALr
AOP	Alarm relay polarity	Set if the alarm relay is open or closed when an alarm happens. CL = terminals 1-4 closed during an alarm oP = terminals 1-4 open during an alarm	CL	CL	CL
DIGITAL INPUTS					
i1P	Digital input polarity (18-20)	oP = the digital input is activated by opening the contact CL = the digital input is activated by closing the contact	CL	CL	CL
i1F	Digital input configuration (18-20)	dor = door switch function dEF = activation of a defrost cycle	dor	dor	dor
i2P	2nd digital input polarity (18-19)	oP = the digital input is activated by opening the contact CL = the digital input is activated by closing the contact	CL	CL	CL
i2F	2nd digital input configuration (18-19)	EAL = external alarm: "EA" message is displayed bAL = serious alarm "CA" message is displayed PAL = pressure switch alarm, "CA" message is displayed dor = door switch function dEF = activation of a defrost cycle ES = energy saving AUS = auxiliary relay activation with oA3 = AUS Htr = kind of action inversion (cooling - heating) FAn = fan HdF = Holiday defrost (enable only with RTC) onF = to switch the controller OFF	EAL	EAL	EAL
did	(0 to 255 min) with i2F= EAL or i2F = bAL digital input alarm delay (18-20)	Delay between the detection of the external alarm condition and its signaling. When i2F= PAL: time for pressure switch function: time interval to calculate the number of the pressure switch activation.	15	15	15
doA	Door open signaling delay	(0 to 255 min)	15	15	15
nPS	Pressure switch number	(0 to 15) Number of activation of the pressure switch, during the did interval, before signaling the alarm event (i2F = PAL). If the nPS activation in the did time is reached, switch OFF and ON the device to restart normal regulation.	15	15	15
Odc	Compressor status when open door	no = normal Fan = fan OFF CPr = compressor OFF F_C = compressor and fan OFF	F-C	F-C	F-C
rrd	Outputs restart after doA alarm	no = outputs not affected by the doA alarm yES = outputs restart with the doA alarm	y	y	y
HES	Temperature increase during the Energy Saving cycle	(-30.0°C to 30.0°C) Sets the increasing value of the setpoint during the Energy Saving cycle.	0	0	0
OTHER PARAMETERS					
Adr	Serial address (1 to 244)	Identifies the device address when connected to a MODBUS compatible monitoring system.	1	1	1
pbC	Type of probe	Allows to set the kind of probe used by the device: Pt1 = Pt1000 probe ntc = NTC probe	ntc	ctc	ctc
onF	ON/OFF key enabling	not used = disabled oFF = enabled ES = not set it			
dP1	Thermostat probe display				
dP2	Evaporator probe display				
dP3	Third probe display - optional				
dP4	Fourth probe display				
rSE	Real setpoint	Shows the setpoint used during the energy saving cycle or during the continuous cycle.			
rEL	Software release	For internal use only			
Ptb	Parameter table code	Read-only			

Engineering Plan Views

Seafood Double Curved Hinged Glass Models

PHYSICAL DATA	
Merchandiser Drip Pipe (in.)	1 1/2
Merchandiser Liquid Line (in.)	3/8
Merchandiser Suction Line (in.)	5/8

Dimensions shown as in. and (mm).



General

- (A) Case Length (NOTE: Includes one pair ends)
Maximum O/S dimension of case back to front
(Note: Includes bumper)
Back of case to front of splashguard
Center of rear legs to center of front legs
Each End and Partition adds 1 1/2 in. (38 mm) to the length of the lineup.

Electrical Service

- (B) RH end of case to Electrical raceway right edge
(C) RH end of case to Electrical raceway left edge
Back of case to center of knockout

* Electrical Field Wiring Connection Point

Waste Outlet

- (D) RH End of case to the center of LH waste outlet
RH End of case to the center of RH waste outlet
Back O/S of case to center of waste outlets
Schedule 40 PVC drip pipe

** Field installed water seal outlets, tees, and connectors are shipped with the merchandiser.

Refrigeration Outlet

- Back of case to center of refrigeration outlet
RH end of case to center of refrigeration outlet
Outside diameter of the liquid line
Outside diameter of the suction line

8 ft

99 1/4 (2521)
44 7/8 (1140)

32 5/8 (829)
23 1/2 (598)

4 5/8 (117)
44 5/8 (1133)
1 7/8 (47)

85 3/8 (2169)
13 1/2 (343)
32 1/2 (826)
1 1/4 (32)

27 (686)
9 1/2 (241)
3/8 (9.5)
5/8 (16)

Curved Hinged Glass, Gravity, Single Display Level



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

Excel **SSGB**
Seafood

REFRIGERATION DATA

Note: This data is based on store temperature and humidity that does not exceed 75°F and 55% R.H. Schedule defrost at night while lights are off.

	SSGB
Discharge Air (°F)	21
XR75 Setting CI/CO (°F) *	
CI	26
CO	17

*See table on page 2 for additional settings.

Condensing Unit (hp)	0.50
Condensing Unit Capacity (Btu/hr at std. rating conditions)	4414

DEFROST DATA

	SSGB
Frequency (hr)	24
Defrost Water (lb/ft/day) (± 15% based on case configuration and product loading).	0.71

SSGB

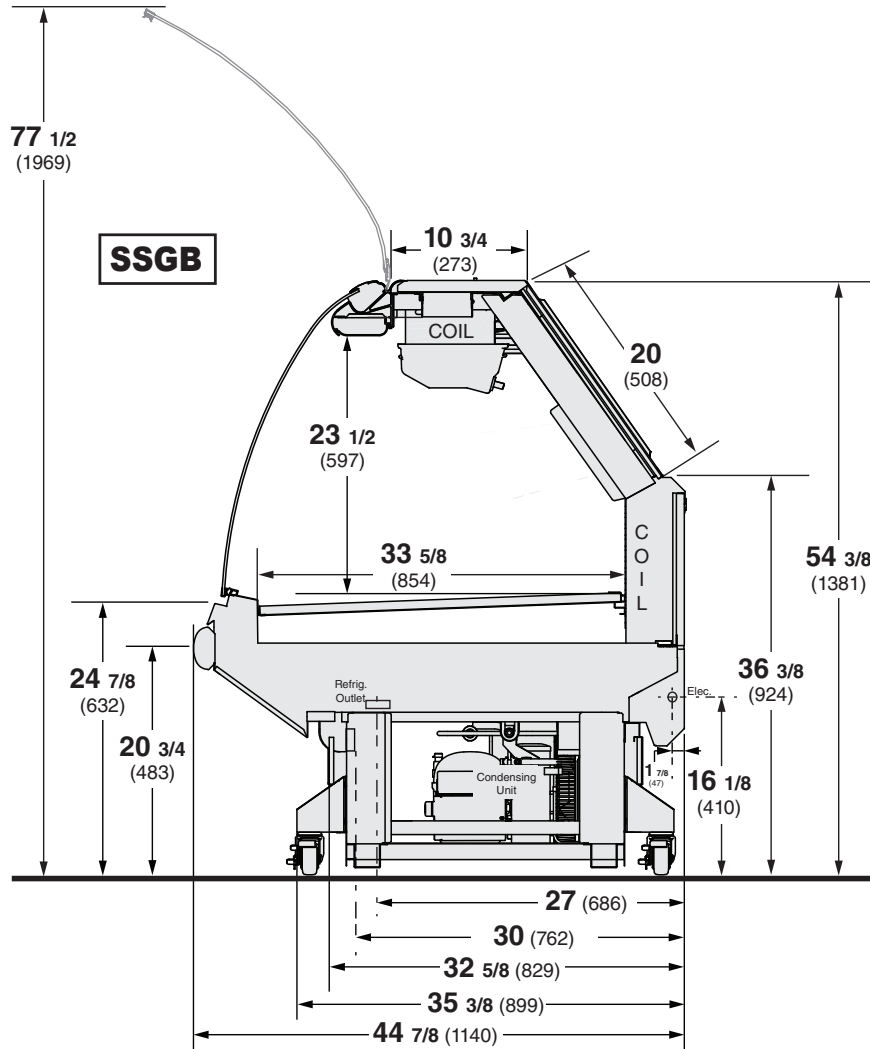
OFFTIME

Failsafe (minutes)	90
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PHYSICAL DATA

Refrigerant Charge (R404A)			
8 ft	3.63 lb	58 oz	1.64 kg

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.

Electrical Data

Number of Fans	8 ft
Ambient Air Wipe – 15W	2

	Amperes	Watts
Merchandiser	8 ft	8 ft
Ambient Air Wipe Fans		
High Efficiency (120V 60hz)	0.4	30
Constant On Anti-sweat Heaters	NA	NA
Cycling Anti-sweat Heaters	NA	NA
Condensing Unit (120V, 1ph, 60Hz)		
Minimum Circuit Ampacity	14.8	
Compressor LRA	54.5	
Compressor RLA	10.5	
Minimum Circuit Ampacity		
With Standard Fans (120V 60hz)	15.2	
Maximum Over Circuit Protection 120V	20	
Electric Defrost Heaters (208V)	NA	
Gas Defrost Heaters (208V)	NA	
Standard Lighting* (120V 60hz)	8 ft	8 ft
2 Row Canopy	0.98	116

ONLY LIGHTING CONFIGURATIONS THAT ARE COMPLIANT WITH THE U.S. DEPT. OF ENERGY (DOE) 2017 REGULATION ARE AVAILABLE FOR SALE FOR USE IN THE U.S.A.

Optional Lighting

1 Row Rear Canopy	0.49	58
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115V Lighting Circuit Total = Standard Lighting + Total Optional Lighting

230V Lighting Circuit Total = Multiply 115V 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.

Product Data

<i>Gross Refrigerated Volume</i> ¹ (<i>Cu FtlFt</i>)	3.03 ft ³ /ft (0.28 m ³ /m)
<i>AHRI Total Display Area</i> ² (<i>Sq FtlFt</i>)	3.50 ft ² /ft (1.07 m ² /m)
<i>Shelf Area</i> ³ (<i>Sq FtlFt</i>)	2.80 ft ² /ft (0.85 m ² /m)

¹ AHRI Refrigerated Volume less shelving and other unusable space: Refrigerated Volume/Unit of Length, ft³/ft [m³/m]

² Computed using AHRI 1200 standard methodology: Total Display Area, ft² [m²]/Unit of Length, ft [m]

³ Shelf surface area is composed of bottom deck, as shown in the Hussmann *Product Reference Guide*.

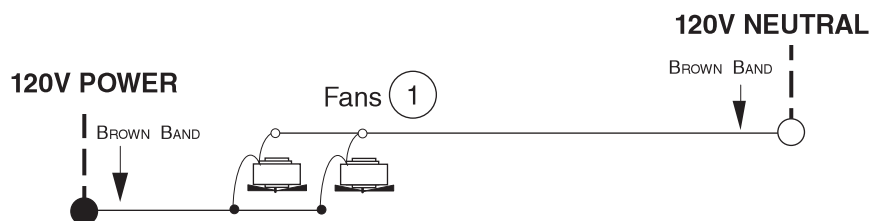
ESTIMATED SHIPPING WEIGHT ⁴

Case		Solid End	Glass / Plastic End
	<i>8 ft</i>		<i>(each)</i>
lb (<i>kg</i>)	900 (408)	70 (32)	100 (45)

⁴ Actual weights will vary according to optional kits included.

**Fan Wiring
Offtime Defrost**

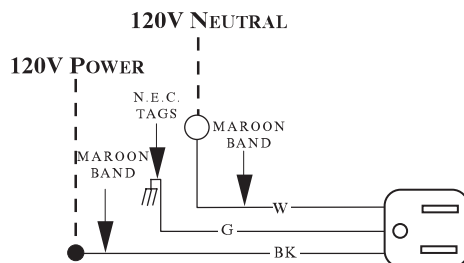
Fans



8 ft case has 2 Fans

Receptacles

Electric Service Receptacle



WARNING

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

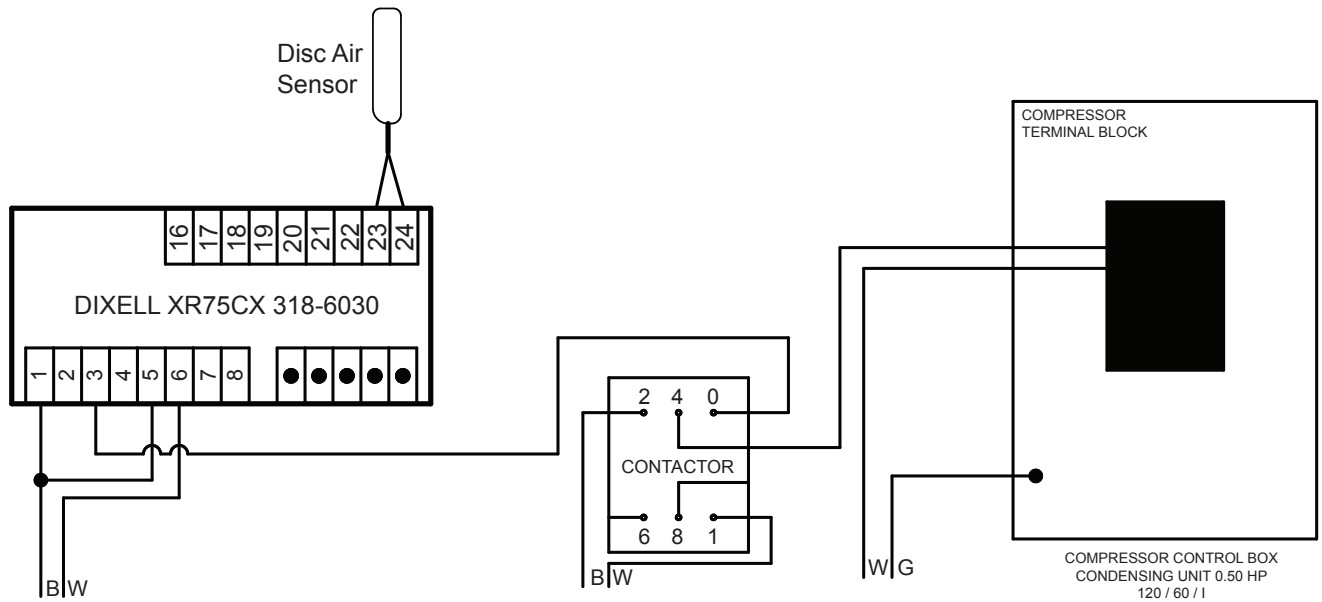
Circled Numbers = Parts List Item Numbers

Grayed components in 12 foot models only.

R = Red G = Green BL = Blue LB = Light Blue DB = Dark Blue BK = Black W = White

● = 120V Power ○ = 120V Neutral ≡ = FIELD GROUND ≡ = CASE GROUND

**XR75 & Condensing
Unit Wiring**



WARNING

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

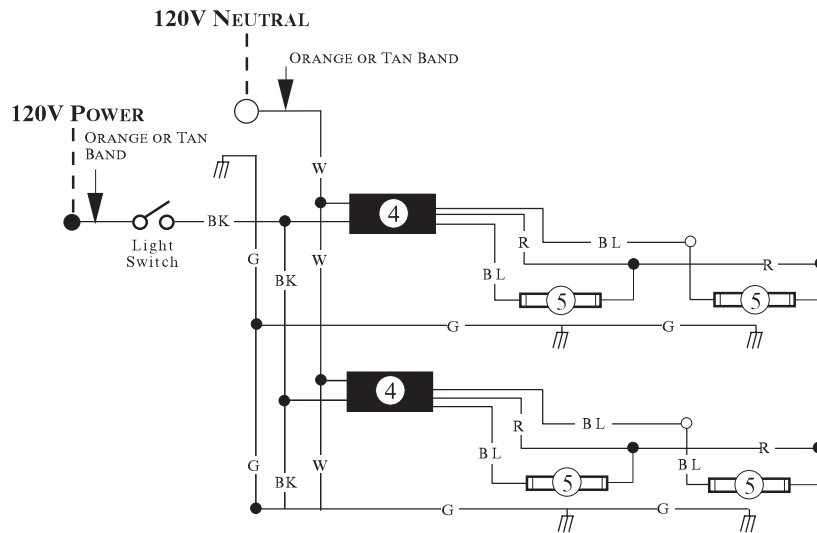
CIRCLED NUMBERS = PARTS LIST ITEM NUMBERS

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

● = 120V POWER ○ = 120V NEUTRAL \perp = FIELD GROUND $\diagup \diagdown$ = CASE GROUND

Light Circuits

Standard Lighting 2 Row Canopy



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
● = 120V POWER ○ = 120V NEUTRAL ≡ = FIELD GROUND ≡ = CASE GROUND