HUSSMANN®/CHINO

TY3, TY4 (ENTYCE)

ISLAND CASE

SELF-CONTAINED

Installation & Operation Manual

REV. 1023

TY3, TY4 (ENTYCE)

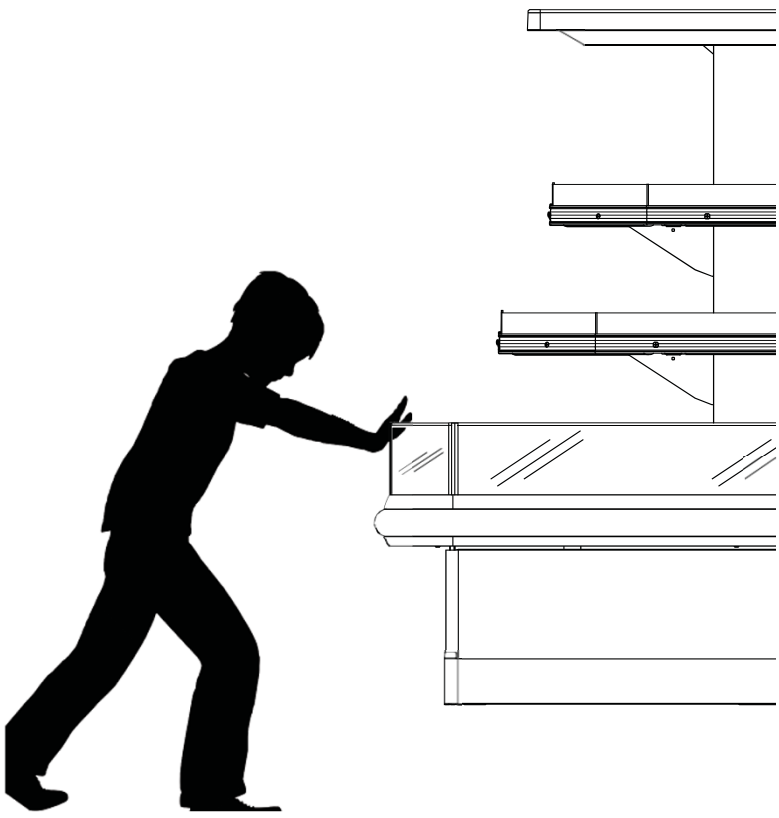
ISLAND CASE SELF-CONTAINED

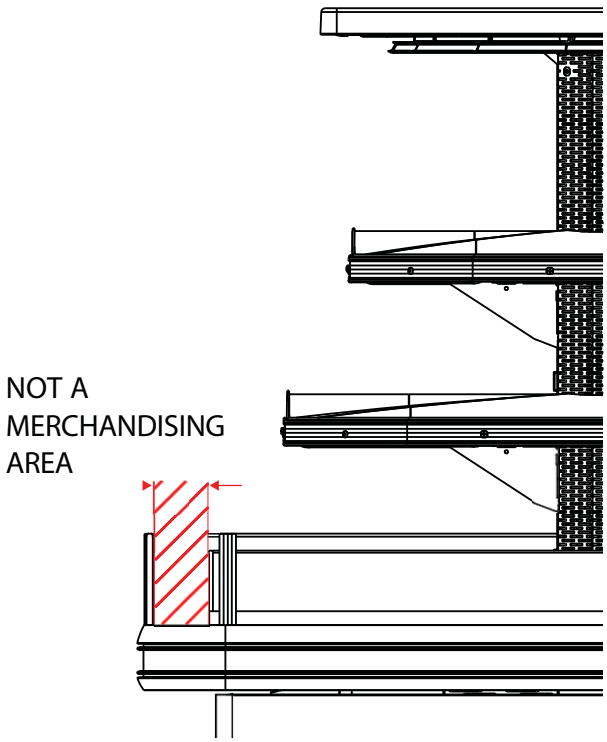
INSTALLATION & OPERATION GUIDE

Table of Contents

WARNING

1. Do Not Push, Pull, Adjust, or Manipulate the Entyce case by any glass compone.nt
   - Doing so will result in severe damage to such components
   - Glass or Acrylic Breakage may result in serious injury
   - See lifting and transport instructions for proper moving technique
2. Never stand on the Entyce Top, Deck, or any Shelves for any reason.
   These surfaces are not steps and are not designed to support such loads.
   - Misusing these surfaces as steps will result in damage to the case
   - Misusing these surfaces as steps may result in serious injury to the user
   - These surfaces are intended for the storage and merchandising of food products
   - Use a ladder or designed structure to work above the case (Do not lean on case)





Maintenace

Case cleaning

- WARNING! DO NOT USE WATER HOSES! A self contained case empties into an evaporator pan that WILL OVERFLOW IF TOO MUCH WATER IS INTRODUCED during cleaning.
- To insure long life, proper sanitation and minimum maintenace costs, the case should be thoroughly cleaned frequently. SHUT OFF FAN BEFORE CLEANING: turn controller dial to full counter-clockwise, or shut off case power at the source.
- USE WATER AND MILD DETERGENT FOR EXTERIOR USE ONLY
- Wipe interior with damp non abrasive cloth. Soap and hot water are not enough to kill bacteria; a sanitizing solution must be included with each cleaning process to eliminate bacteria.
- Clean any visible debris on-or near the case drain (drain is located under the deck pans).
- DO NOT USE A CHLORINATED CLEANER ON ANY SURFACE.
- DO NOT USE ABRAISIVES OR STEEL WOOL SCOURING PADS (these will mar the finish)
- DO NOT USE A CLEANING OR SANITIZING SOLUTION THAT HAS AN OIL BASE (these will dissolve the butyl sealants) or an AMMONIA BASE (this will corrode the copper components of the case)

Filter Replacements

- REPLACE FILTER EVERY 6 MONTHS, or as needed. A dirty/clogged air filter restricts the airflow. this will result in warmer temperatures in the case, and premature compressor failure.

Service

- SCHEDULE SERVICE EVERY 6 MONTHS. To maintain good refrigerator performance, a refrigeration service technician should regularly clean the discharge Honeycomb and remove any accumilated dirt from the condenser coil and condensate evaporator pan.
- POOR AIR CIRCULATION THROUGH THE CONDENSER WILL RESULT IN POOR REFRIGERATION PERFORMANCE, IN INCREASED PRODUCT TEMPERATURES, AND PERMANENT COMPRESSOR FAILURE
- Dirt accumilation inside the condensate evaporator pan will reduce the pan's capacity and reduce the efficiency of the heater causing a burned out heater an an overflow of defrost water onto the store floor.

Tips and Troubleshooting

Before calling for service:

- Check power. Ensure reliable electrical power supply to the equipment.
- Check shelf loading. Overstocking will adversely affect case performance.
- If Frost is collecting on fixture or product, verify that store Humidity Control is working properly, and that no outside doors or windows allow moisture into store.

Installation

Store Conditions

- Case is designed to operate at temperatures 80°F at 55% relative humidity. Case must be kept in that environment to ensure case performance and product safety.
- DO NOT position the case near HVAC vent. a minimum of 15' clearance is required.
- DO NOT position the case near an entrance door. Outside Ambient conditions have adverse affect on refrigeration performance.
- DO NOT position case against ceiling or soffit. a mini mum clearnace of 8" above the unit is required for proper compressor discharge airflow.
- DO NOT block case front panel vent (supplies critical intake airflow to the compressor). INTAKE AIR temperature should not exceed 80°F.

For prompt service when contacting the factory regarding problems, be sure to have the Case Model and Serial Number handy. This imformation is on a platelocated on itself.
www.hussmann.com (909) 590-4910 (800) 395-9229

1H62575650

HUSSMANN®

General Information

Case Description:
This Booklet specifically covers the following models:
- **TY3**
- **TY4**

Description: The ENTYCE-SC model series are multi-deck, spot merchandisers designed for medium temperature applications such as: Deli/Dairy/Beverage. They are available as either remote type models, which require separate condensing unit connections, or self-contained models. Each self-contained model will have it's own condensing unit, factory installed beneath the display area of the case ready for operation when electrical service is connnected.

Shipping Damage: All equipment should be thoroughly examined for shipping damage before and during unloading. This equipment has been carefully inspected at our factory and the carrier has assumed responsibility for safe arrival. If damaged, either apparent or concealed, claim must be made to the carrier.

Apparent Loss or Damage: If there is an obvious loss or damage, it must be noted on the freight bill or express receipt and signed by the carrier's agent; otherwise, carrier may refuse claim. The carrier will supply necessary claim forms.

Concealed Loss or Damage: When loss or damage is not apparent until after all equipment is uncrated, a claim for concealed damage is made. Make request in writing to carrier for inspection within 15 days, and retain all packaging. The carrier will supply inspection report and required claim forms.

Location/Store Conditions: The refrigerated merchandisers have been designed for use only in air conditioned stores where temperature and humidity are maintained either 75°F ambient and 55% RH or 80°F aND 55% RH . DO NOT allow air conditioning, electric fans, ovens, open doors or windows (etc.) to create air currents around the merchandiser, as this will impair its correct operation.

Shortages: Check your shipment for any possible shortages of material. If a shortage should exist and is found to be the responsibility of Hussmann Chino, notify Hussmann Chino. If such a shortage involves the carrier, notify the carrier immediately, and request an inspection. Hussmann Chino will acknowledge shortages within ten days from receipt of equipment.

Hussmann Chino Product Control: The serial number and shipping date of all equipment has been recorded in Hussmann's files for warranty and replacement part purposes. All correspondence pertaining to warranty or parts ordering must include the serial number of each piece of equipment involved, in order to provide the customer with the correct parts.

Keep this booklet with the case at all times for future reference.

HUSSMANN®/CHINO
A publication of HUSSMANN® Chino
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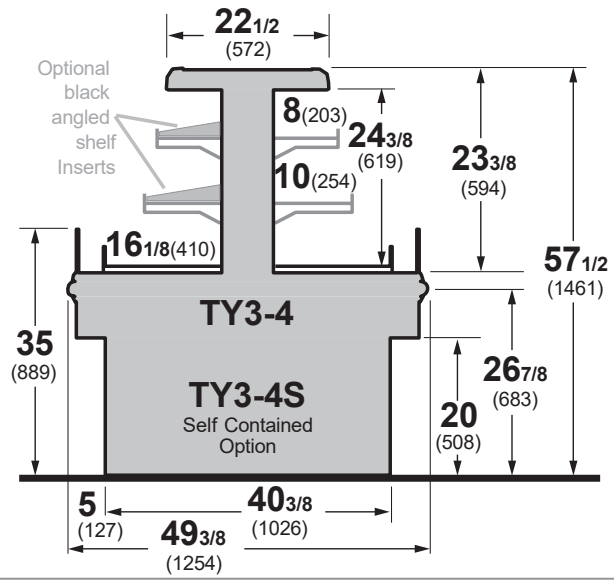
(909) 590-4910
(800) 395-9229

ATTENTION INSTALLER

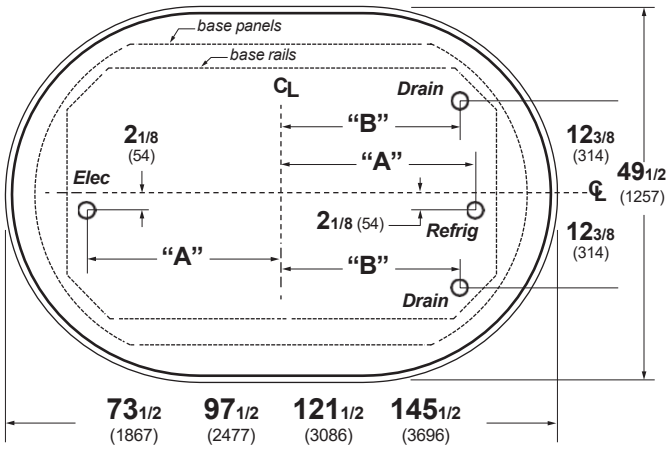
This equipment is to be installed to comply with the applicable NEC, Federal, State, and Local Plumbing and Construction Code having jurisdiction.

Cut and Plan Views

TY3-4 4' wide Merchandiser

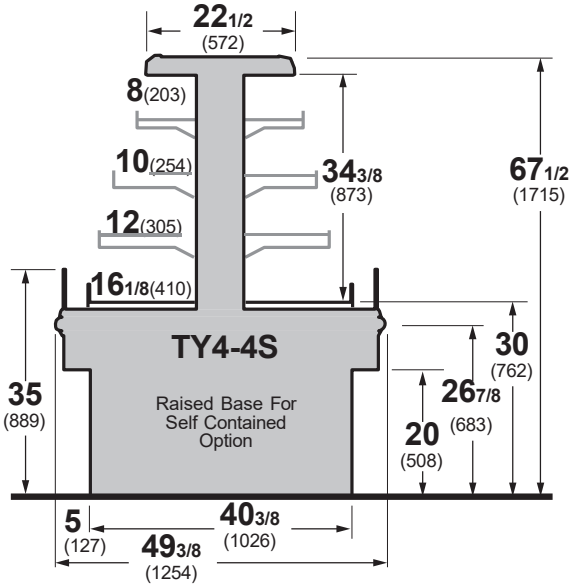


TY-4 4' wide Island Merchandiser

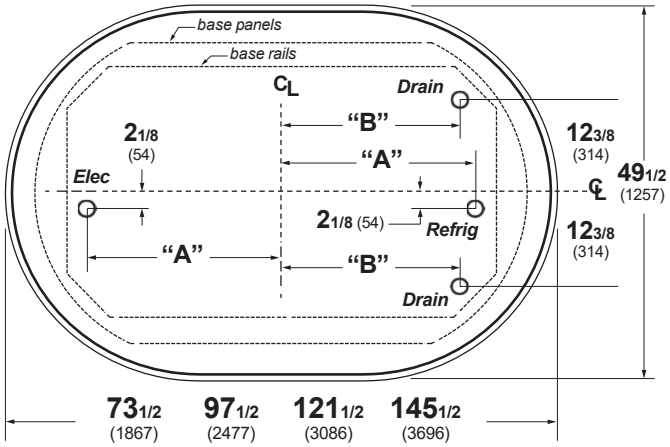


	73 1/2 (1867)	97 1/2 (2477)	121 1/2 (3086)	145 1/2 (3696)
"A"	25 5/8 (651)	35 1/2 (902)	44 5/8 (1133)	*consult factory*
"B"	23 1/2 (648)	32 5/8 (827)	41 1/2 (1054)	*consult factory*

TY4-4 4' wide Merchandiser

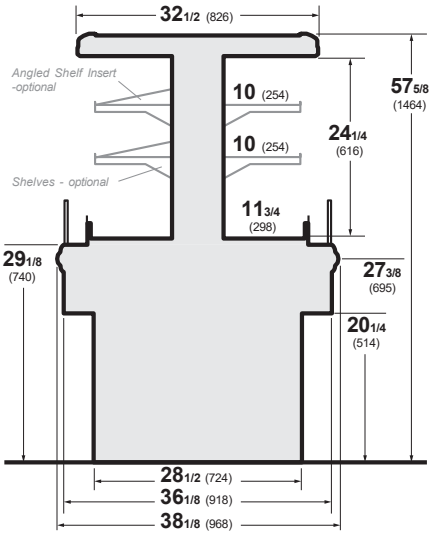


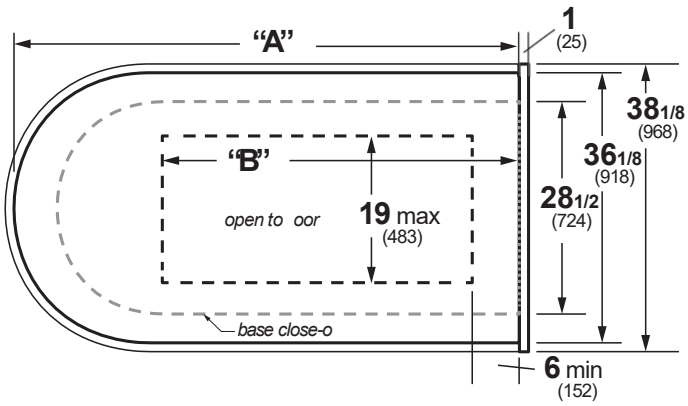
TY-4 4' wide Island Merchandiser



	73 1/2 (1867)	97 1/2 (2477)	121 1/2 (3086)	145 1/2 (3696)
"A"	25 5/8 (651)	35 1/2 (902)	44 5/8 (1133)	*consult factory*
"B"	23 1/2 (648)	32 5/8 (827)	41 1/2 (1054)	*consult factory*

TY3-3 3' wide Merchandiser

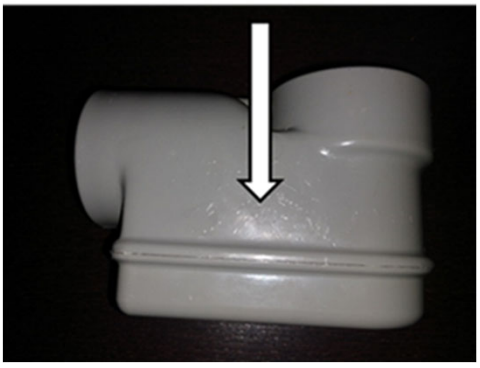




	4.5'	5.5'
"A"	54 1/2 (1384)	66 1/2 (1689)
"B"	34 (864) max	46 (1168) max

WARNING!

Do NOT apply thread sealer to ABS P-Trap.

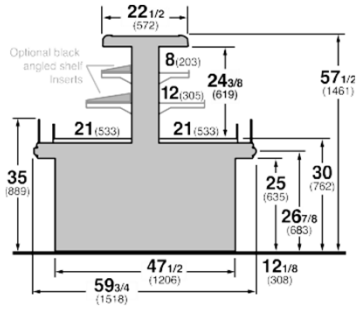


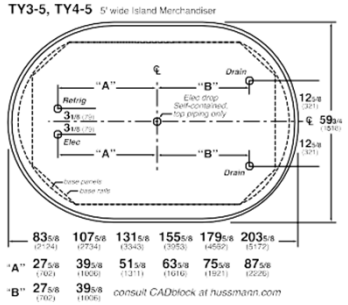
SELF-SERVICE DELI CHEESE REVISION DATE 09/30/19

HUSSMANN - TY3-5-SC (CHINO)

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.

TY3-5 Entyce 3 level 5' wide island





REFRIGERATION DATA:

CASE LENGTHS	CASE USAGE	CONVENTIONAL CAPACITY ** (BTU/HR)	AVERAGE DISCHARGE AIR* (°F) (SEE SETPOINTS BELOW)	VELOCITY (FT/MIN)
7I	SS DELI	12,385	29~33	125~175

CASE LENGTHS	EST. REFG. CHRG. (LBS)
7I	1.1

***FRONT DISCHARGE AIR MEASURED INSIDE AIR CURTAIN HONEYCOMB**

****REFRIGERATION NOTES:**

1) CAPACITY FOR REFERENCE ONLY.
2) USE DEW POINT FOR HIGH GLIDE REFRIGERANTS. CARE SHOULD BE TAKEN TO USE THE DEW POINT IN P/T TABLES FOR MEASURING AND ADJUSTING SUPERHEAT. ADJUST EVAPORATOR PRESSURE AS NEEDED TO MAINTAIN THE DISCHARGE AIR TEMPERATURE SHOWN.
3) RATING CONDITION IS NSF TYPE I, 75°F/55% RH

REFRIGERATION DATA CONTINUED:

CONTROLLER / AIR SENSOR SETTINGS			DEFROST TYPE	FAILSAFE TIME (MIN)	DEFROST FRE-QUENCY (#/DAY)	TERM. TEMP (°F) AIR	DRIP TIME (MIN)	DEFROST WATER (LBS/DAY/ FT)
USAGE	SET POINT (°F)	DIFFER-ENTIAL (°F)						
DELI	26	10	OFF TIME	50	6	52	NA	11

4) DEFROST IS BASED ON TERMINATION TEMP, WHICH UNDER NORMAL CIRCUMSTANCES, IS SHORTER THAN FAILSAFE TIME.

END PANEL WIDTH KEY		
# OF END PNLS	END PNL WIDTH (IN.)	TOTAL ADDED LENGTH (IN.)
1	1.125	1.125
2	1.125	2.25

ELECTRICAL DATA:

STANDARD FANS, HEATERS, LED LIGHTS (115 VOLT)

CASE LENGTH	EVAPORATOR FANS					CANOPY LIGHTS LED		OPTIONAL LED SHELF LIGHTS		MAX. LED LOAD (W/ ALL OPTIONS)		ANTI-SWEAT HEATERS		CONVENIENCE OUTLETS (OPTIONAL)			LIGHT MATRIX
	# OF EVAP FANS	BLADE DIA. (IN.)	BLADE PITCH (°)	AMPS	WATTS	AMPS	WATTS	AMPS	WATTS	AMPS	WATTS	AMPS	WATTS	# OUTLETS	VOLTS	AMPS	FEET
7I	6	8	15	1.8	48	0.1	14	0.3	37	0.4	52	0.4	50	1	115	15	22

CONDENSING UNIT AND EVAPORATIVE PANS

CASE LENGTH	CONDENSING UNIT					EVAPORATIVE PAN			PLUG TYPE
	NOM. HP	REFRIG.	Hz/Ph	Volts	RLA	VOLTS	AMPS	WATTS	
7I	2	R-404A	60 / 1	240	12.0	208	7.2	1500	L14-30P
7I	2 1/4	R-448A	60 / 1	240	15.7	208	7.2	1500	CS-6365-C

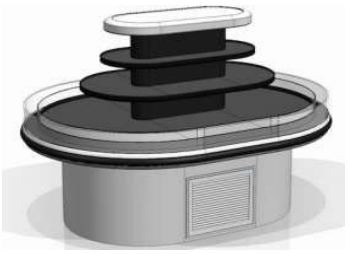
OPTIONAL HIGH OUTPUT LED LIGHTS (115 VOLT)

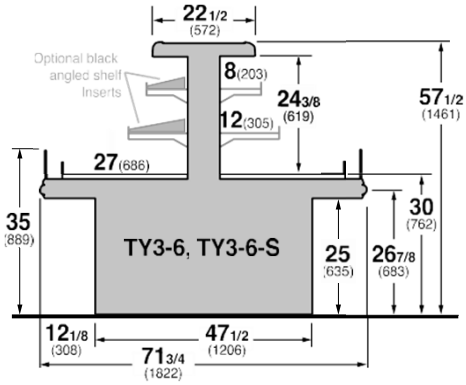
CASE LENGTH	CANOPY LIGHTS H.O. LED		OPTIONAL SHELF		MAX. H.O. LED LOAD	
	AMPS	WATTS	AMPS	WATTS	AMPS	WATTS
7I	N/A	N/A	N/A	N/A	N/A	N/A

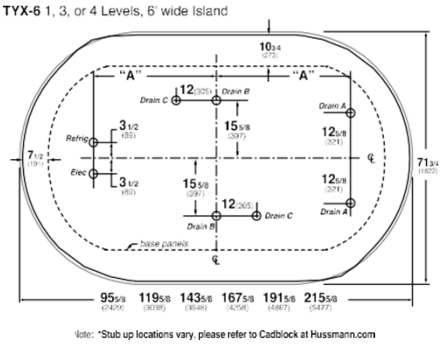
SELF-SERVICE DELI / PRODUCE REVISION DATE 10/09/19

HUSSMANN - TY3-6 I-SC (CHINO)

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.







Note: *Stub up locations vary, please refer to Cadblock at Hussmann.com

REFRIGERATION DATA:

CASE LENGTHS	CASE USAGE	CONVENTIONAL CAPACITY ** (BTU/HR/FT)	AVG DISCHARGE AIR* (°F) (SEE SETPOINTS)	VELOCITY (FT/MIN)	DEFROST WATER (LBS/DAY/FT)
8I	SS DELI	1840	28~32	100~150	N/A
10I					N/A
12I					N/A

***FRONT DISCHARGE AIR MEASURED INSIDE AIR CURTAIN HONEYCOMB**

****REFRIGERATION NOTES:**

1) CAPACITY FOR REFERENCE ONLY.
2) USE DEW POINT FOR HIGH GLIDE REFRIGERANTS. CARE SHOULD BE TAKEN TO USE THE DEW POINT IN P/T TABLES FOR MEASURING AND ADJUSTING SUPERHEAT. ADJUST EVAPORATOR PRESSURE AS NEEDED TO MAINTAIN THE DISCHARGE AIR TEMPERATURE SHOWN.
3) RATING CONDITION IS NSF TYPE I, 75°F/55% RH

REFRIGERATION DATA CONTINUED:

CONTROLLER / AIR SENSOR SETTINGS			DEFROST TYPE	FAILSAFE TIME (MIN)	DEFROST FRE-QUENCY (#/DAY)	TERM. TEMP (°F) AIR	DRIP TIME (MIN)
USAGE	SET POINT (°F)	DIFFER-ENTIAL (°F)					
DELI	26	10	OFF TIME	50	6	52	NA

4) DEFROST IS BASED ON TERMINATION TEMP, WHICH UNDER NORMAL CIRCUMSTANCES, IS SHORTER THAN FAILSAFE TIME.

END PANEL WIDTH KEY		
# OF END PNLS	END PNL WIDTH (IN.)	TOTAL ADDED LENGTH (IN.)
1	1.125	1.125
2	1.125	2.25

ELECTRICAL DATA:

STANDARD FANS, HEATERS, LED LIGHTS (115 VOLT)

CASE LENGTH	EVAPORATOR FANS					CANOPY LIGHTS LED		OPTIONAL LED SHELF LIGHTS		MAX. LED LOAD (W/ ALL OPTIONS)		ANTI-SWEAT HEATERS		CONVENIENCE OUTLETS (OPTIONAL)			LIGHT MATRIX
	# OF EVAP FANS	BLADE DIA. (IN.)	BLADE PITCH (°)	AMPS	WATTS	AMPS	WATTS	AMPS	WATTS	AMPS	WATTS	AMPS	WATTS	# OUTLETS	VOLTS	AMPS	FT OF LEDS
8I	6	8	20	1.8	48	0.12	14	0.33	37	0.45	52	0.43	50	1	115	15	22
10I	8	8	15	2.4	64	0.22	25	0.51	59	0.73	84	0.61	70	1	115	15	36
12I	10	8	15	3.0	80	0.30	35	0.68	79	0.99	113	0.78	90	1	115	15	46

CONDENSING UNIT AND EVAPORATIVE PANS

CASE LENGTH	CONDENSING UNIT					EVAPORATIVE PAN			EST. REFG. CHRG. (LBS)
	NOM. HP	REFRIG.	Hz/Ph	VOLTS	RLA	VOLTS	AMPS	WATTS	
8I	2 1/4	R-404A	60 / 1	240	15.7	208	7.2	1500	1.1
10I	3		60 / 1	240	20.7	208	7.2	1500	1.3
12I	3 1/2		60 / 1	240	23.6	208	7.2	1500	1.8
8I	3	R-448A	60 / 1	240	18.0	208	7.2	1500	1.1
10I	3 1/4		60 / 1	240	23.3	208	7.2	1500	1.3
12I	3 1/2		60 / 1	240	23.6	208	7.2	1500	1.8

OPTIONAL HIGH OUTPUT LED LIGHTS (115 VOLT)

CASE LENGTH	CANOPY LIGHTS H.O. LED		OPTIONAL SHELF		MAX. H.O. LED LOAD	
	AMPS	WATTS	AMPS	WATTS	AMPS	WATTS
8I	N/A	N/A	N/A	N/A	N/A	N/A
10I	N/A	N/A	N/A	N/A	N/A	N/A
12I	N/A	N/A	N/A	N/A	N/A	N/A

Installation

Store Conditions

- Case is designed to operate at temperatures at either 75°F at at 55% relative humidity or 80°F at 55% relative humidity. Case must be kept in that environment to ensure case performance and product safety.
- Do not position the case near an HVAC vent.
- Do not position the case near an entrance door. Outside ambient conditions may have an adverse affect on the refrigeration performance, a minimum of 15' clearance is required from doors.
- Do not position the case tight against a ceiling or soffit. A minimum clearance 10" above the unit is required for proper compressor discharge air flow.
- Do not block case front panel vent (supplies critical intake air flow to the compressor)

DANGER

DO NOT place Self Contained versions of this case, having the electric evaporator pan, underneath or adjacent to any flammable structure or structure housing flammable merchandise!

Uncrating the Stand

Place the fixture as close to its permanent position as possible. Remove the top of the crate. Detach the walls from each other and remove from the skid. Unbolt the case from the skid. The fixture can now be lifted off the crate skid. **Lift only at base of stand!**

Do Not Install the Vented Panels of the self-contained model against a wall or other storage fixture.

Located in the lower front and rear of the self-contained models are vented panels. These panels allow air circulation to the condensing unit. Blocking or restricting air circulation through these panels can cause poor performance and damage the refrigeration system.

Exterior Loading

These models have not been structurally designed to support excessive external loading. **Do not walk on their tops;** This could cause serious personal injury and damage to the fixture.

ATTENTION INSTALLER

It is the contractor's responsibility to install case(s) according to local construction and health codes.

Leveling

A LEVEL CASE IS NECESSARY TO INSURE PROPER OPERATION AND WATER DRAINAGE.

Note: To avoid removing concrete flooring, begin lineup leveling from the highest point of the store floor.

Condensate Pan Setup and Maintaintence

Setup:
There are two condensate evaporator pans on this unit. The drain pipes from the case feed into the "Primary Condensate Pan". This condensate pan will turn on when the float switch level is triggered. If the volume of water is above the capac- ity of this pan, excess water will flow into the "Secondary Condensate Pan". Both the Primary and Secondary condensate pans are placed into a metal receiver. The metal receiver is there to collect excess water that may overspill in case of (a) failure of the condensate pans or (b) store conditions being above design specification causing more condensate water to be formed than expected.

Maintaintence:
Care must be taken to ensure that the condensate pans operate properly at the store. These units are designed to operate at either 75°F ambient and 55% RH or 80°F ambient and 55% RH. If stores are operating above this condition, case performance will be severely affected. If such a condition is noted, the metal receiver under the condensate pans must be checked periodically to see if excess water is being collected. If water has accumulated, water must be siphoned out of the receiver. Care must be taken while performing this step. Unit power should be shut off for electrical safety. Once water has been removed and metal receiver is dried out, unit power can be turned back on.

See pg 7. Figure 1 / Figure 2

Figure1

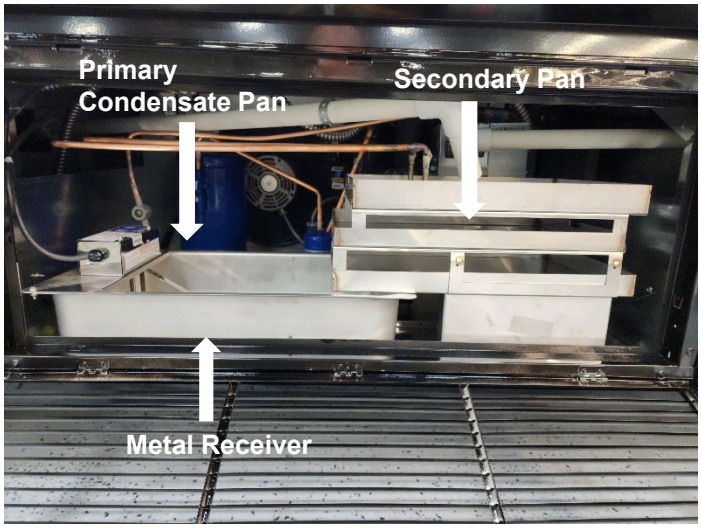
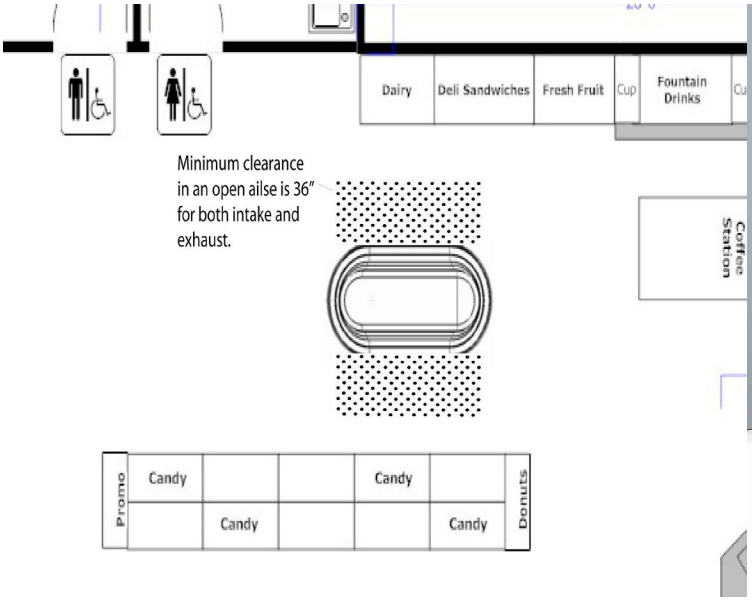


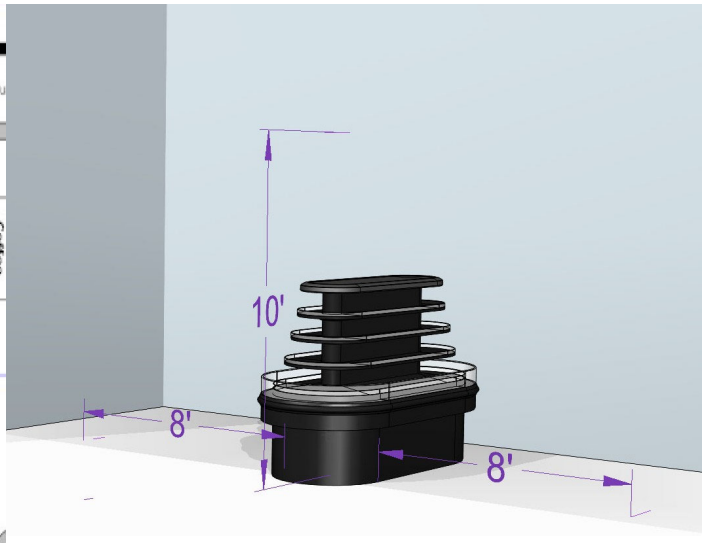
Figure2

Clearances

Minimum Clearances for Self-Contained cases are to be followed as instructed for proper placement inside store locations.

- Intake and exhaust clearances are to be a minimum of 8’ when placed next to a solid wall.
- Height clearance measured from floor follows as a minimum of 10’ vertically.
- Minimum of 36” clearance if near an open aisle is required for proper cycle ventilation.
  (Assumed 8’ clearance from solid wall)





Close-off Removal

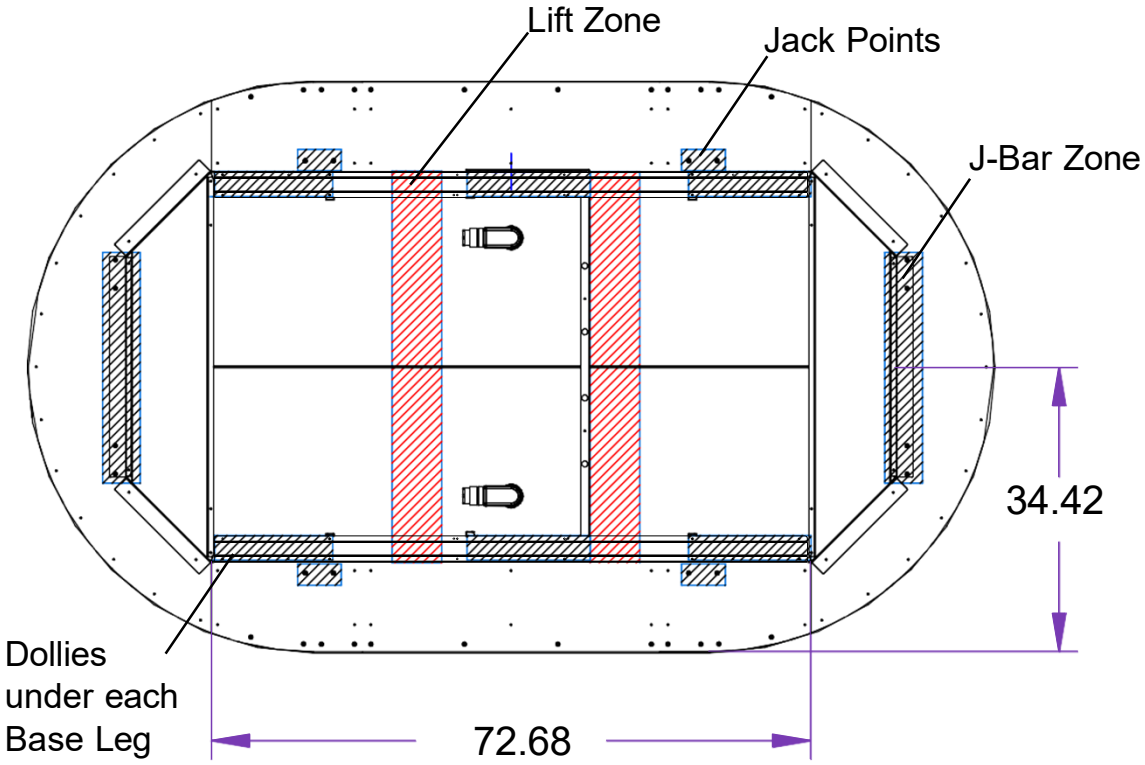
Step 1
Slide bottom of close-off in upward motion to remove from tabs.

Step 2
Pull Close-off in outward then downward motion to completely remove side panel close-off

Step 3
Once side panel close-off has been removed from case four screws will be visible which fasten the round close-off to the case. Remove the four screws 2 on each end to remove the end close-off.

Lifting Instructions

Entyce Lifting and Transport Instructions

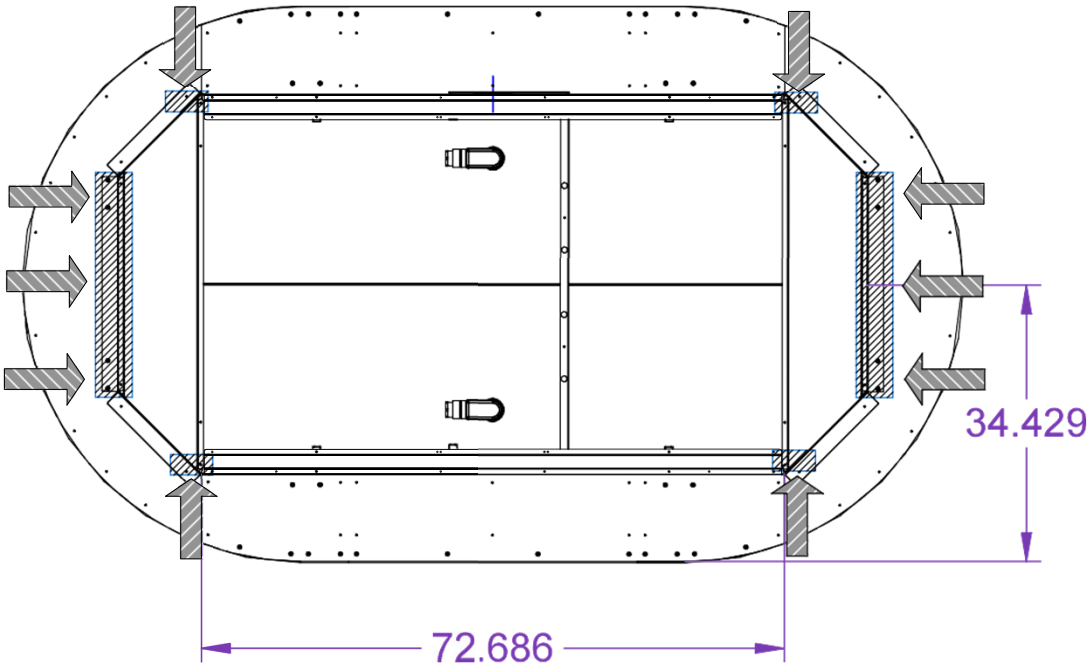


1. The Entyce can be lifted by a forklift only at the specified location in the diagram

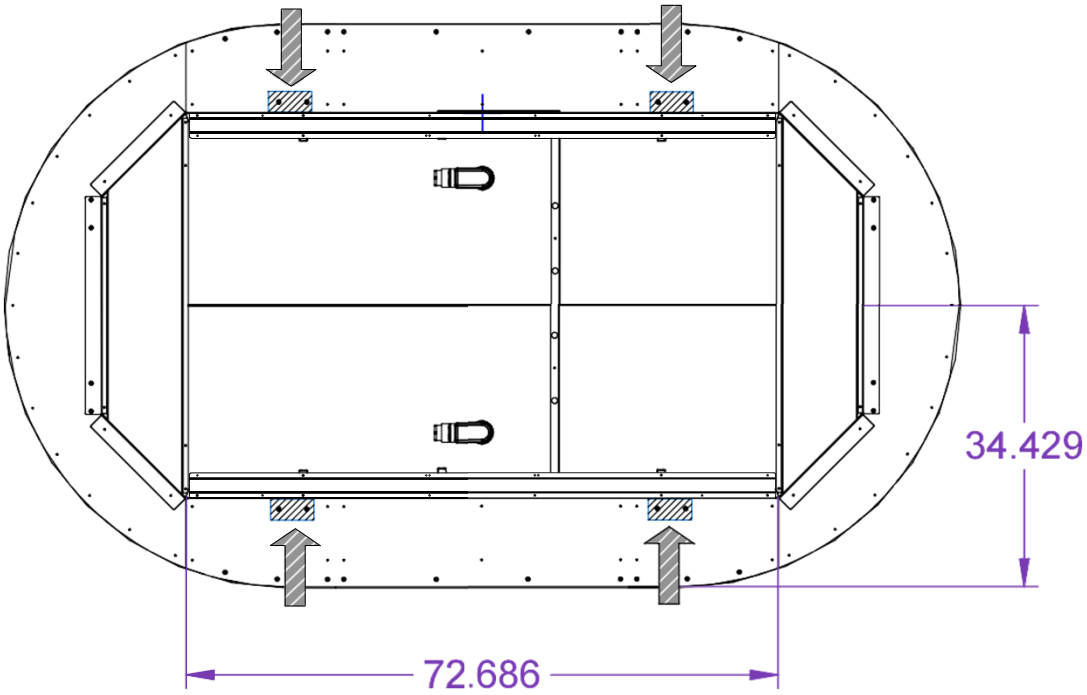
WARNING

Improper placement of forks may damage drainage piping. Use a spotter when placing forks. Make sure that piping will not be damaged. Use J-Bars or Jacks if Forks cannot be used safely

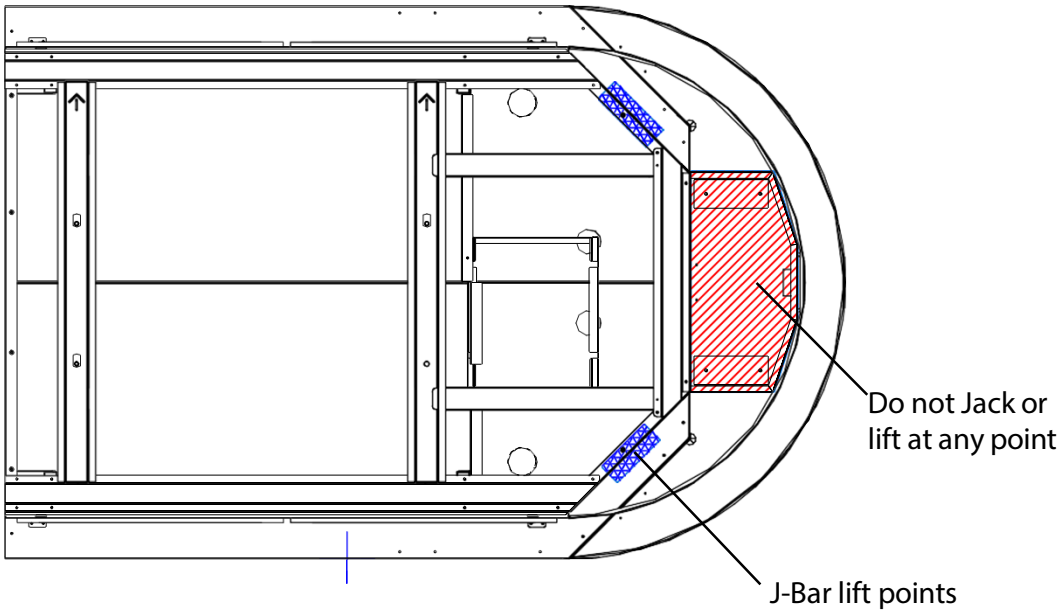
2. Remove close-offs and lower body panels before lifting with a fork. Serious damage will occur if the body panels are not removed.
   - Remove the end case lower and bottom panels first
   - Then remove the side case lower and bottom panels
   - A Phillips head screwdriver/drill is needed for lower and bottom panel removal
3. Make sure that fork spacing and width will not damage drain, piping, or electrical lines
4. Be sure that the forks are long enough to support beyond the center of the case. Check for proper balance before moving. A minimum fork length of 36” is recommended for 68” wide cases
5. The Entyce can be raised at one end with a forklift to allow the placement of rollers or dollies. See figure on page 13 for J-bar and jacking instructions
6. Never drag or push the Entyce by ANY COMPONENT including ANY GLASS COMPONENT. This will result in damage to the base, and possibly damage to other components
7. Evenly support the entire base structure on rollers or dollies before attempting to move. Each Base Leg must have its own dollie to properly support the case.



8. If using J-Bars, use the specified jacking points to raise the case
   - Raise one side of the case first.
   - Use as many J-Bars as possible to lift from the base channels
   - A minimum of 2 J-Bars is required
   - Place Dollies and chock wheels before lifting the other side. Be sure that the dollies are evenly spaced to carry to weight of the case



9. If using Floor-jacks or Bottle-jacks, use the recommended lifting points located at the underside of the case
   - These points will be visible channels
   - Lift simultaneously to place dollies or rollers



8. If using J-Bars, use the specified jacking points to raise the case
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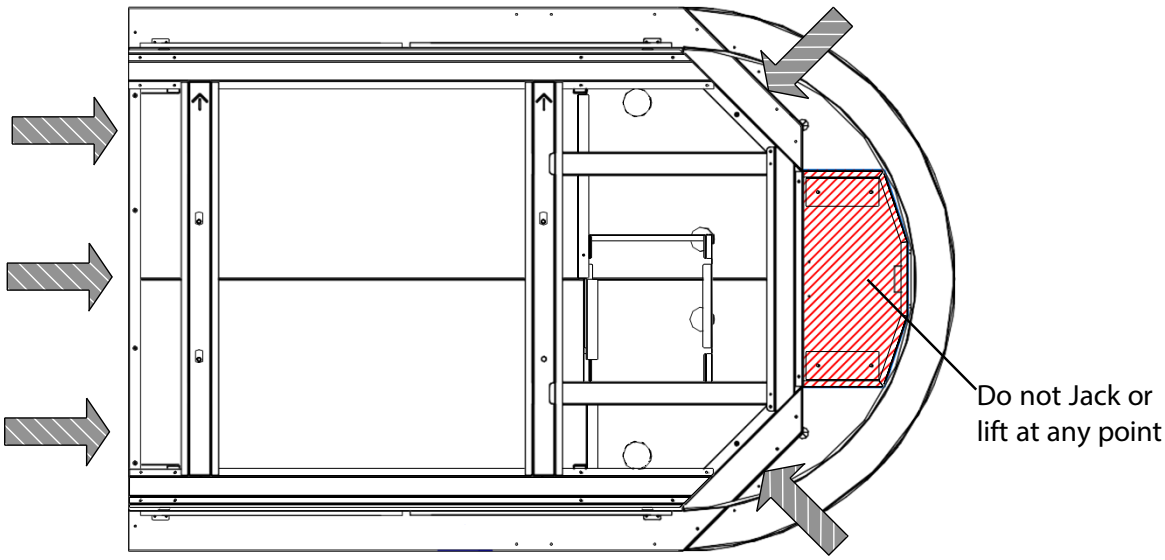
   - Use as many J-Bars as possible to lift from the base channels
   - A minimum of 2 J-Bars is required
   - Place Dollies and chock wheels before lifting the other side. Be sure that the dollies are evenly spaced to carry to weight of the case



9. For Dollies use recommended lift points, each Base Leg will need a Dollie for proper support.
RECOMMENDED NO FORKLIFT UNDER TUB.

-Using a forklift may damage condensing unit, Refrigeration Piping , Electrical Conduit, or Drainage Components

Electrical

Standard Case Wire Color Code

Color Decsription	Color
Ground	Green
Anti-Sweat	Purple
Lights	Orange
Receptacles	Yellow
T-Stat/Solenoid 230VAC	Red/Black
T-Stat/Solenoid 115VAC	White/Black
T-Stat/Solenoid 24VAC	Red/White
Fan Motors	Brown
Blue Condensing Unit	

Use Copper Conductors Only
430-01-0338 R101003

CASE MUST BE GROUNDED

NOTE: Refer to label affixed to case to determine the actual configuration as checked in the "TYPE INSTALLED" boxes.

Standard lighting for all refrigerated models will be full length LED Lights located within the case at the top.

Field Wiring and Serial Plate Amperage

Field Wiring must be sized for component amperes printed on the serial plate. Actual ampere draw may be less than specified. Field wiring from the refrigeration control panel to the merchandisers is required for refrigeration thermostats. Case amperes are listed on the wiring diagram, but always check the serial plate.

DANGER

BEFORE SERVICING ALWAYS DISCONNECT ELECTRICAL POWER AT THE MAIN DISCONNECT WHEN SERVICING OR REPLACING ANY ELECTRICAL COMPONENT.

This includes (but not limited to) Fans, Heaters Thermostats, and Lights.

DAN FOSS	TY3-4X6I-S	6'	3043378
	TY3-ECSQ-4X6I-S	6'	3040191
	TY3-4X8I-S	8'	3043379
	TY3-4X10I-S	10'	3043380
	TY3-5X7I-S	7'	3043381
	TY3ECRC-5X7I-S 10" & 12" SHELVES	7'	3113662
	TY3-6X8I-S	8'	3043382
	TY3-6X10I-S	10'	3043383
	TY3-6X12I-S	12'	3043384

TY4-PRESSURE CONTROL	TY4-4X6I-S R-404A/448A	6'	3129625
	TY4-4X8I-S R-448A	8'	3129627
	TY4-4X10I-S R-404A/448A	10'	3129629
DAN FOSS	TY4-4X6I-S	6'	3042641
	TY4-4X8I-S	8'	3046094
	TY4-4X10I-S	10'	3042644

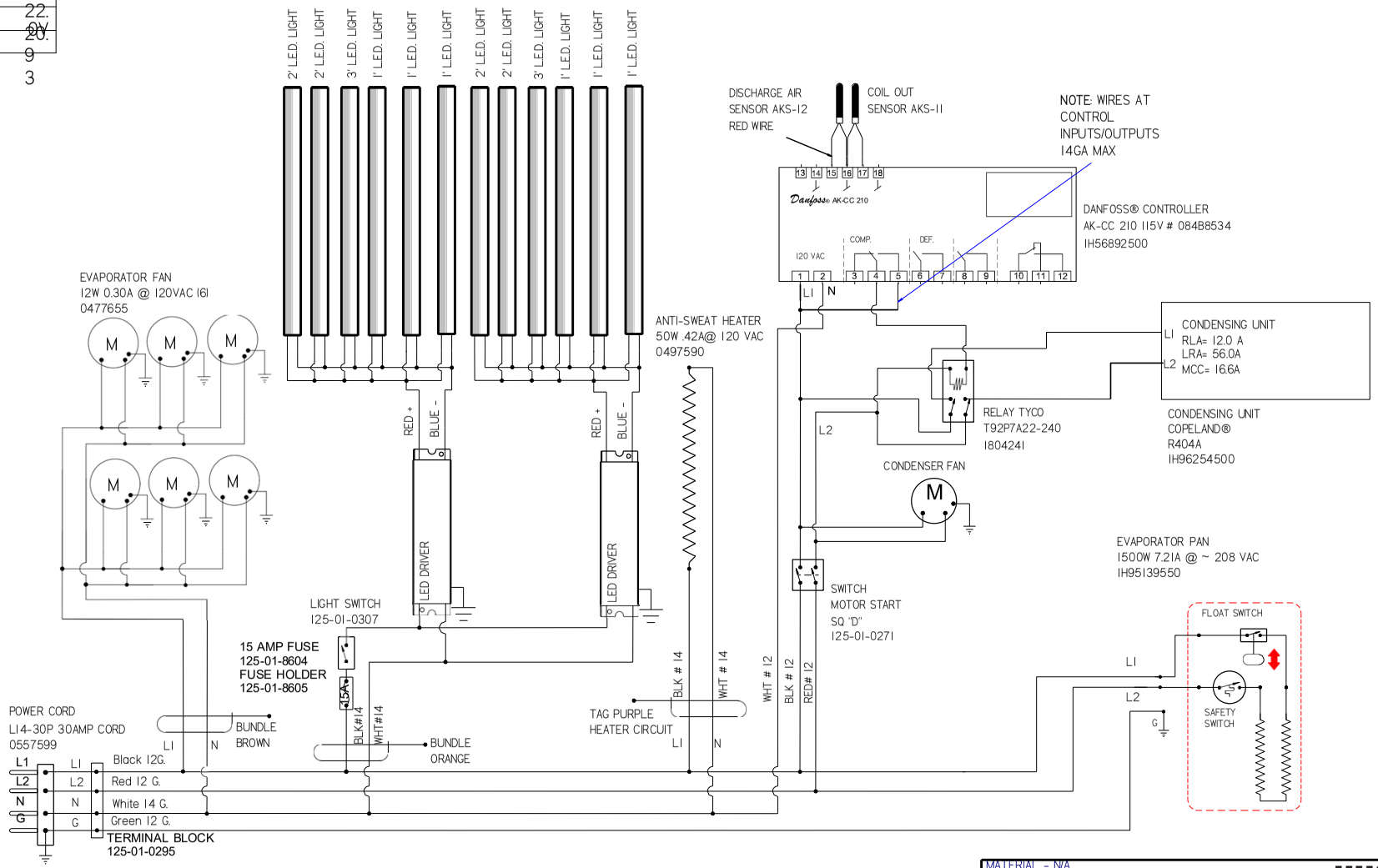
DIXELL CTRL	TY3-3X4.5-S W/XR75 CTLR	4.5'	3157238
	TY3-3X5.5-S W/XR75 CTLR	5.5'	3157241
	TY3ECSQ-4X6I-S W/XR75 CTLR	6'	3156421
	TY3-4X6I-S W/XR75 CTLR	6'	3158087
	TY3-4X8I-S W/XR75 CTLR	8'	3157246
	TY3-5X7I-S W/XR75 CTLR	7'	3158086
	TY3ECSQ-6X8I-S W/XR75 CTLR	8'	3157148
	TY3-6X12I-S W/XR75 CTLR	12'	3157249
	TY4-4X6I-S W/XR75 CTLR	6'	3156815
	TY4-4X8I-S W/XR75 CTLR	8'	3157268
	TY4-4X10I-S W/XR75 CTLR	10'	3157261

CIRCUIT #1

	LOADING	
	208	24
LI	20.	22.
L2	V17.6	0V
	2	9
		3

LIGHT CIRCUIT
.35A 38W @ 120V

REVISION HISTORY						
REV	ECN	DATE	REVISION DESCRIPTION	REV BY	CHKD BY	APPR BY
A	ECN-CAP-0008239	2017/09/08	RELEASED TO PRODUCTION	CB	CB	CB
B	ECN-CAP-0012696	2018/05/23	CHANGED EVAPORATOR PAN PART NUMBER	CB	CB	CB
C	ECN-CAP-0014934	2018/10/09	REMOVED C.U. MODEL NUMBER	CB	CB	CB
D	ECN-CAP-0017659	2019/04/23	CHANGED POWER CORD	CB	CB	CB



NOTES:
CASE MUST BE GROUNDED
WHEN PASSING WIRES THROUGH METAL HOLES A GROMMET MUST BE USED

MATERIAL - N/A
DATE DRAWN - 9-8-17
DRAWN BY -CRAIG BOOREY
REVIEWED BY -CRAIG BOOREY
APPROVED BY - CRAIG BOOREY
ECN-CAP-0008239
REF -
SHEET 1 OF 1
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES.
TOLERANCES ARE:
DECIMALS .XX ±.03, .XXX ±.010
ANGLES ± 2°
THIRD ANGLE PROJECTION

HUSSMANN®
DIAGRAM-TY3-4X6I-S
3043378 D

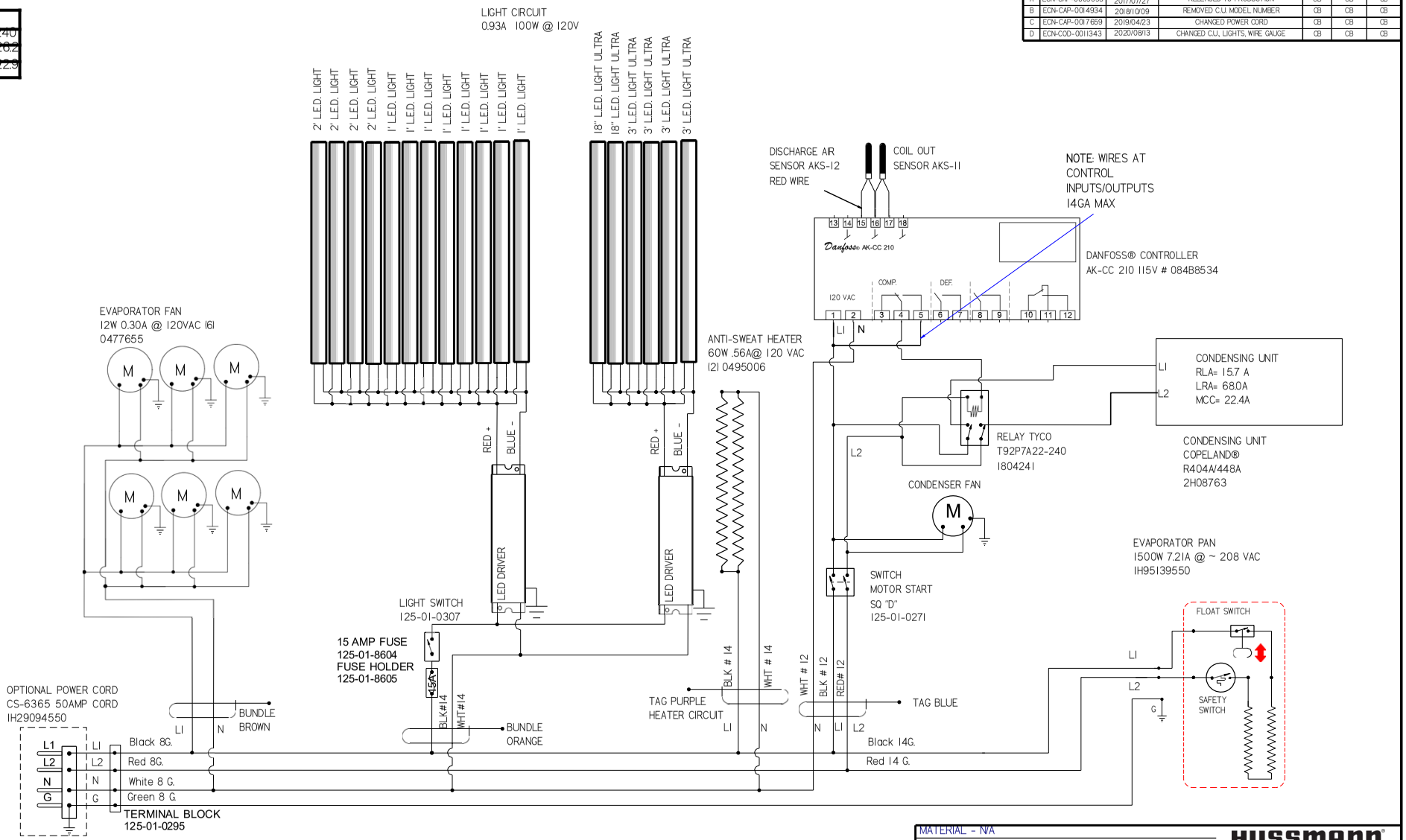
HUSSMANN_CDF_LI SHEET SIZE D

CIRCUIT #1
LOADING

	208V	240
L1	22.7	26.2
L	19.8	22.9

2

REVISION HISTORY						
REV	ECN	DATE	REVISION DESCRIPTION	REV BY	CHKD BY	APPR BY
A	ECN-CAP-0009093	2017/07/27	RELEASED TO PRODUCTION	CB	CB	CB
B	ECN-CAP-0014934	2018/10/09	REMOVED C.U. MODEL NUMBER	CB	CB	CB
C	ECN-CAP-0017659	2019/04/23	CHANGED POWER CORD	CB	CB	CB
D	ECN-COD-0011343	2020/08/13	CHANGED C.U., LIGHTS, WIRE GAUGE	CB	CB	CB



NOTES:
CASE MUST BE GROUNDED
WHEN PASSING WIRES THROUGH METAL HOLES A GROMMET MUST BE USED

MATERIAL - N/A	
DATE DRAWN - 7-27-17	
DRAWN BY -CRAIG BOOREY	ECN-CAP-0009093
REVIEWED BY -CRAIG BOOREY	REF -
APPROVED BY - CRAIG BOOREY	SHEET 1 OF 1

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES.
TOLERANCES ARE:
DECIMALS .XX ±.03, .XXX ±.010
ANGLES ± 2°
THIRD ANGLE PROJECTION

HUSSMANN®
TY3-ECSQ-4X6I-S

3040191 D

HUSSMANN_CDF_11 SHEET SIZE D

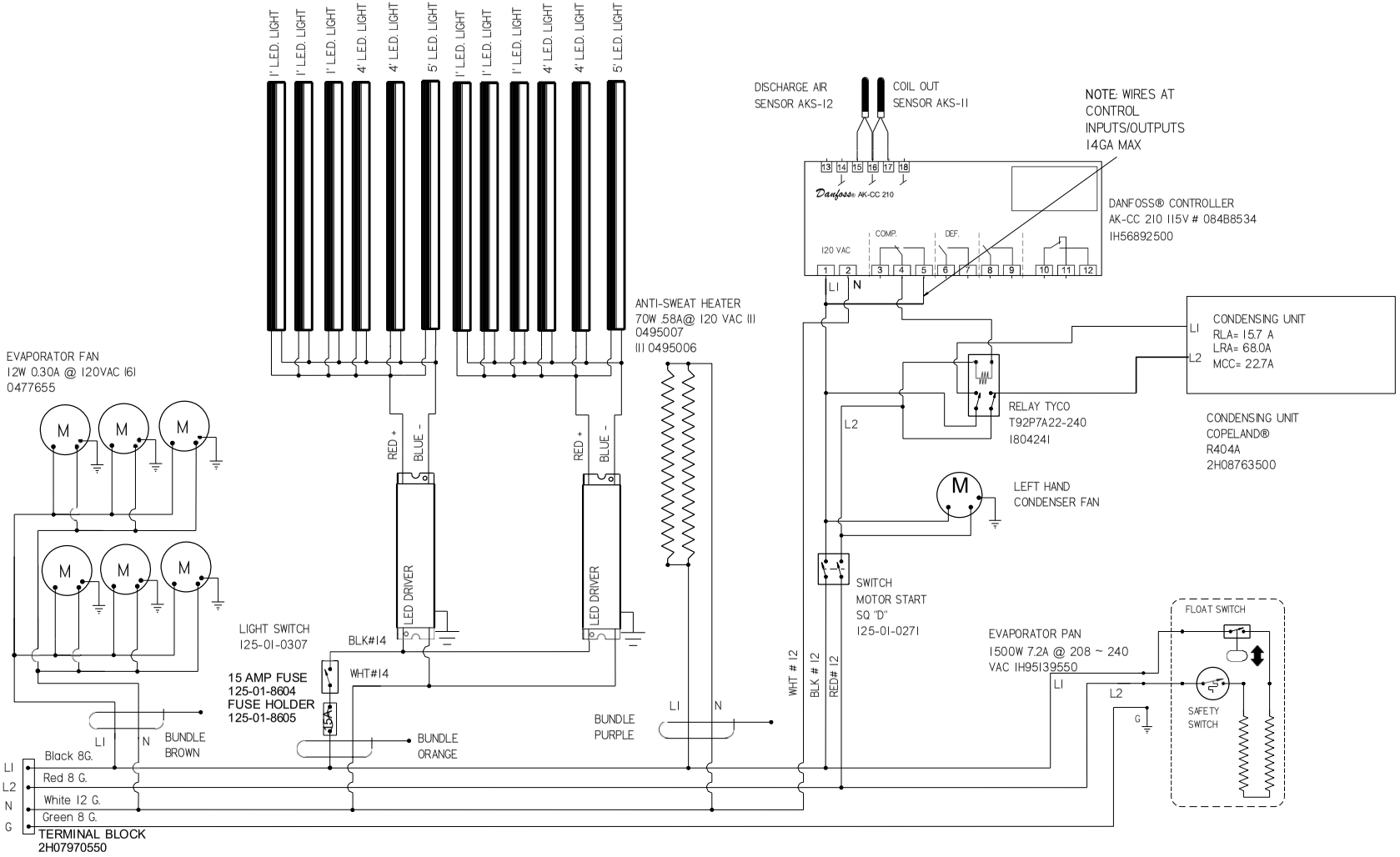
CIRCUIT #1

	LOADING	
	208	24
L1	22.	26.1
L2	V19.3	0V 22.
	6	

3

LIGHT CIRCUIT
.69A 74W @ 120V

REVISION HISTORY						
REV.	ECN	DATE	REVISION DESCRIPTION	REV BY	CHKD BY	APPR BY
A	ECN-CAP-0008239	2017/09/08	RELEASED TO PRODUCTION	CB	CB	CB
B	ECN-CAP-0014934	2018/10/09	REMOVED C.U. MODEL NUMBER	CB	CB	CB



NOTES:
CASE MUST BE GROUNDED
WHEN PASSING WIRES THROUGH METAL HOLES A GROMMET MUST BE USED

MATERIAL - N/A		HUSSMANN®
DATE DRAWN - 9-8-17		DIAGRAM-TY3-4X8I- S
DRAWN BY -CRAIG BOOREY	ECN-CAP-0008239	
REVIEWED BY -CRAIG BOOREY	REF -	
APPROVED BY - CRAIG BOOREY	SHEET 1 OF 1	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES. TOLERANCES ARE: DECIMALS .XX ±.03, .XXX ±.010 ANGLES ± 2°	THIRD ANGLE PROJECTION	3043379 | B

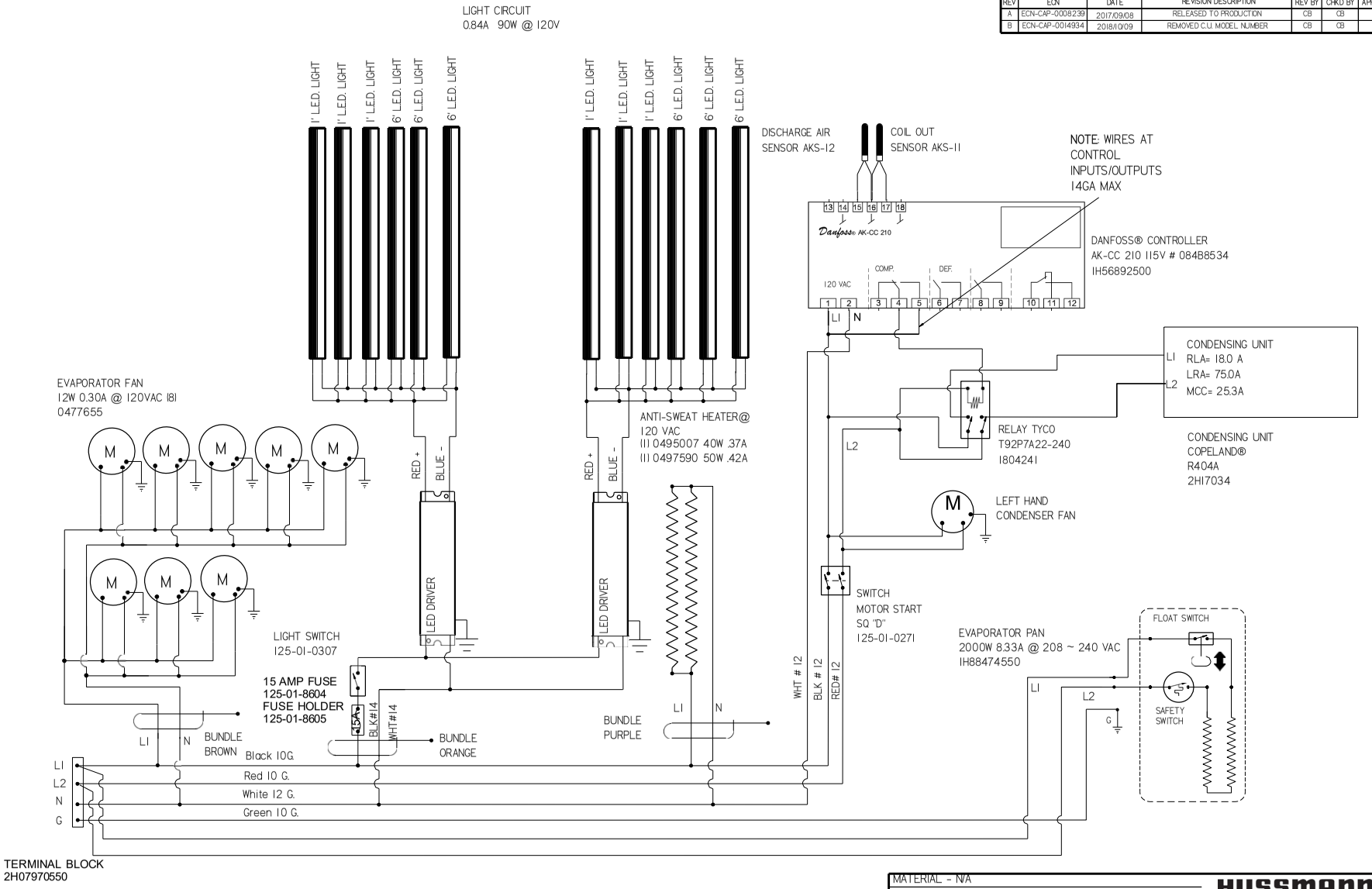
HUSSMANN_CDF_1.1 SHEET SIZE D

CIRCUIT #1
LOADING

	208V	240
LH	26.5	30.6
L	23.8	26.3

2

REVISION HISTORY						
REV	ECN	DATE	REVISION DESCRIPTION	REV BY	CHKD BY	APPR BY
A	ECN-CAP-0008239	2017/09/08	RELEASED TO PRODUCTION	CB	CB	CB
B	ECN-CAP-0014934	2018/10/09	REMOVED C.U. MODEL NUMBER	CB	CB	CB



NOTES:
CASE MUST BE GROUNDED
WHEN PASSING WIRES THROUGH METAL HOLES A GROMMET MUST BE USED

MATERIAL - N/A	
DATE DRAWN - 9-8-17	
DRAWN BY -CRAIG BOOREY	ECN-CAP-0008239
REVIEWED BY -CRAIG BOOREY	REF -
APPROVED BY - CRAIG BOOREY	SHEET 1 OF 1
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES. TOLERANCES ARE: DECIMALS .XX ±.03, .XXX ±.010 ANGLES ± 2°	THIRD ANGLE PROJECTION

HUSSMANN®
DIAGRAM-TY3-4X101-S

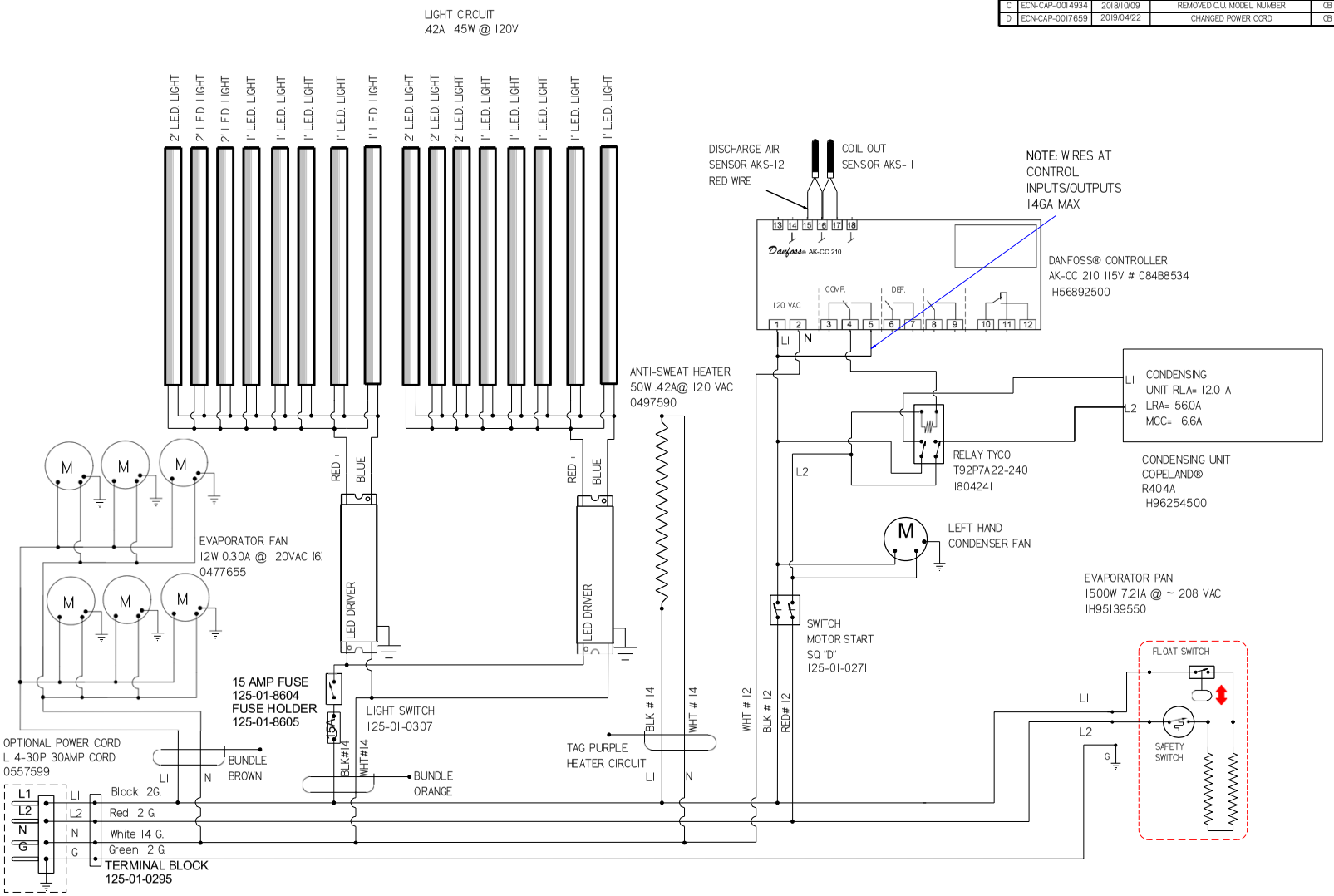
3043380 | B

HUSSMANN_CDF_L1 SHEET SIZE D

CIRCUIT #1

	LOADING	
	208	24
LI	19.9	23.
L2	V17.6	20.
		0
		3

REVISION HISTORY						
REV	ECN	DATE	REVISION DESCRIPTION	REV BY	CHKD BY	APPR BY
A	ECN-CAP-0008239	2017/09/08	RELEASED TO PRODUCTION	CB	CB	CB
B	ECN-CAP-0010811	2018/01/09	CHANGED EVAPORATOR PAN	CB	CB	CB
C	ECN-CAP-0014934	2018/10/09	REMOVED C.U. MODEL NUMBER	CB	CB	CB
D	ECN-CAP-0017659	2019/04/22	CHANGED POWER CORD	CB	CB	CB



NOTES:
CASE MUST BE GROUNDED
WHEN PASSING WIRES THROUGH METAL HOLES A GROMMET MUST BE USED

MATERIAL - N/A
DATE DRAWN - 9-8-17
DRAWN BY -CRAIG BOOREY
REVIEWED BY -CRAIG BOOREY
APPROVED BY - CRAIG BOOREY
ECN-CAP-0008239
REF -
SHEET 1 OF 1
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES.
TOLERANCES ARE:
DECIMALS .XX ±.03, .XXX ±.010
ANGLES ± 2°
THIRD ANGL E PROJECTION

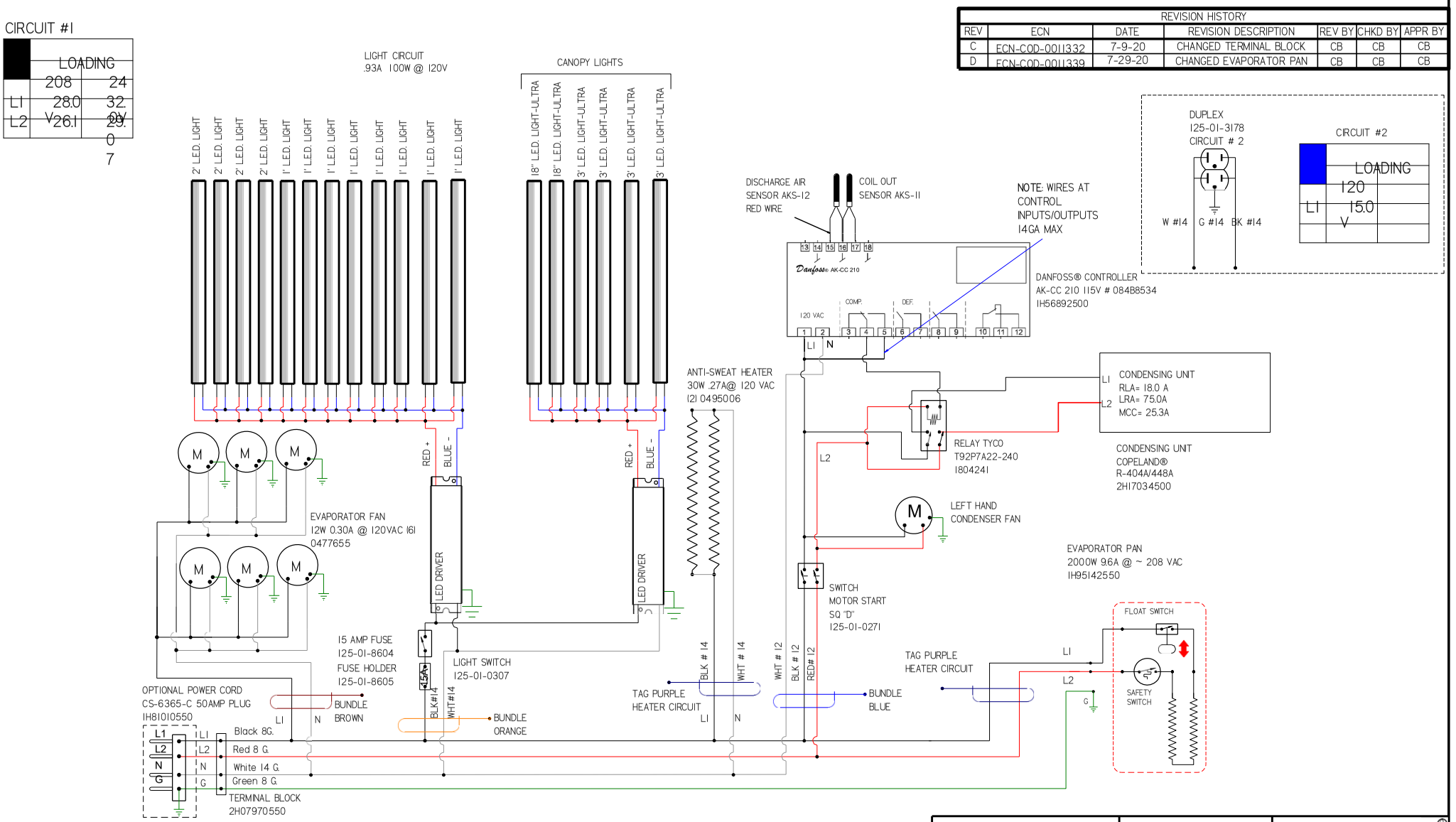
HUSSMANN®
DIAGRAM-1Y3-5X7I-S
3043381 D

HUSSMANN_CDF_LI SHEET SIZE D

CIRCUIT #1

	LOADING	
	208	24
L1	28.0	32.
L2	V26.1	0V 29.
		0
		7

REVISION HISTORY						
REV	ECN	DATE	REVISION DESCRIPTION	REV BY	CHKD BY	APPR BY
C	ECN-COD-0011332	7-9-20	CHANGED TERMINAL BLOCK	CB	CB	CB
D	ECN-COD-0011339	7-29-20	CHANGED EVAPORATOR PAN	CB	CB	CB



NOTES:
1. PRINTED DOCUMENT REQUIRED SETTING: ALL COLORS BLACK & WHITE
2. CASE & ANY REMOVABLE PANEL WITH ELECTRICAL PARTS MUST BE GROUNDED.
3. WHEN PASSING WIRES THROUGH METAL HOLES A GROMMET MUST BE USED

UL COLOR CODES / ABBREVIATIONS

- RED = RD
- BLACK = BK
- BLUE = BL
- YELLOW =
- YL GRAY = GY
- WHITE = WT
- GREEN = GN
- BROWN = BN
- ORANGE =
- OR VIOLET = VT

FACTORY 14GA WIRE
FACTORY 10GA WIRE
FIELD WIRE

DO NOT SCALE DRAWING
SHEET 1 OF 1

HUSSMANN®

DIAGRAM-
TY3ECRC- 5X7I-S

P/N 3113662 REV D

CND_10 WIRE DIAGRAM SIZE C

CIRCUIT #1

	LOADING	
	208	24
L1	23.1	26.0V
L2	V20.9	24.17

REVISION HISTORY						
REV	ECN	DATE	REVISION DESCRIPTION	REV BY	CHKD BY	APPR BY
A	ECN-CAP-0008239	2017/09/08	RELEASED TO PRODUCTION	CB	CB	CB
B	ECN-CAP-0010811	2018/01/09	CHANGED EVAPORATOR PAN	CB	CB	CB
C	ECN-CAP-0014934	2018/10/09	REMOVED C.U. MODEL NUMBER	CB	CB	CB

LIGHT CIRCUIT
.42A 45W @ 120V

2' LED. LIGHT
2' LED. LIGHT
2' LED. LIGHT
1' LED. LIGHT
1' LED. LIGHT
1' LED. LIGHT
1' LED. LIGHT
2' LED. LIGHT
2' LED. LIGHT
2' LED. LIGHT
1' LED. LIGHT
1' LED. LIGHT
1' LED. LIGHT
1' LED. LIGHT

DISCHARGE AIR SENSOR AKS-12

COIL OUT SENSOR AKS-11

NOTE: WIRES AT CONTROL INPUTS/OUTPUTS 14GA MAX

Danfoss® AK-CC 210

DANFOSS® CONTROLLER
AK-CC 210 115V # 084B8534
1H56892500

ANTI-SWEAT HEATER
50W .42A@ 120 VAC
0497590

RED +
BLUE -
RED +
BLUE -

LED DRIVER
LED DRIVER

EVAPORATOR FAN
12W 0.30A @ 120VAC 161
0477655

CONDENSING UNIT
RLA= 15.7 A
LRA= 68.0A
MCC= 22.4A

RELAY TYCO
T92P7A22-240
1804241

CONDENSING UNIT
COPELAND®
R404A
2H08763500

LEFT HAND
CONDENSER FAN

EVAPORATOR PAN
1500W 7.21A @ ~ 208 VAC
1H95139550

SWITCH
MOTOR START
SQ "D"
125-01-0271

15 AMP FUSE
125-01-8604
FUSE HOLDER
125-01-8605

LIGHT SWITCH
125-01-0307

BLK#14
WHT#14

BLK # 14
WHT # 14

WHT # 12
BLK # 12
RED# 12

TAG PURPLE
HEATER CIRCUIT

FLOAT SWITCH

SAFETY SWITCH

OPTIONAL POWER CORD
CS-6365-C 50AMP CORD
1H29094550

BUNDLE
BROWN

BUNDLE
ORANGE

Black 12G.
Red 12 G.
White 14 G.
Green 12 G.

TERMINAL BLOCK
125-01-0295

NOTES:
CASE MUST BE GROUNDED
WHEN PASSING WIRES THROUGH METAL HOLES A GROMMET MUST BE USED

MATERIAL - N/A	
DATE DRAWN - 9-8-17	
DRAWN BY -CRAIG BOOREY	ECN-CAP-0008239
REVIEWED BY -CRAIG BOOREY	REF -
APPROVED BY - CRAIG BOOREY	SHEET 1 OF 1
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES. TOLERANCES ARE: DECIMALS .XX ±.03, .XXX ±.010 ANGLES ± 2°	THIRD ANGLE PROJECTION

HUSSMANN®
DIAGRAM-TY3-6X8I-S

3043382 | C

HUSSMANN_CDF_L1 SHEET SIZE D

CIRCUIT #1
LOADING

	208V	240
L1	27.6	31.8
L2	24.2	27.9

2

REVISION HISTORY						
REV	ECN	DATE	REVISION DESCRIPTION	REV BY	CHKD BY	APPR BY
A	ECN-CAP-0008239	2017/09/08	RELEASED TO PRODUCTION	CB	CB	CB
B	ECN-CAP-0010811	2018/01/09	CHANGED COND. UNIT	CB	CB	CB
C	ECN-CAP-0014934	2018/10/09	REMOVED C.U. MODEL NUMBER	CB	CB	CB

LIGHT CIRCUIT
.63A 68W @ 120V

1' L.E.D. LIGHT
1' L.E.D. LIGHT
1' L.E.D. LIGHT
1' L.E.D. LIGHT
1' L.E.D. LIGHT
4' L.E.D. LIGHT
4' L.E.D. LIGHT
4' L.E.D. LIGHT
1' L.E.D. LIGHT
1' L.E.D. LIGHT
1' L.E.D. LIGHT
1' L.E.D. LIGHT
1' L.E.D. LIGHT
4' L.E.D. LIGHT
4' L.E.D. LIGHT
4' L.E.D. LIGHT

DISCHARGE AIR
SENSOR AKS-12

COIL OUT
SENSOR AKS-11

NOTE: WIRES AT
CONTROL
INPUTS/OUTPUTS
14GA MAX

Danfoss® AK-CC 210
13 14 15 16 17 18
120 VAC
COMP.
DEF.
1 2 3 4 5 6 7 8 9 10 11 12

DANFOSS® CONTROLLER
AK-CC 210 115V # 084B8534
1H56892500

LI
N

CONDENSING UNIT
RLA= 20.7A
LRA= 100.0A
MCC= 28.7A

LI
L2

CONDENSING UNIT
COPELAND®
R404A
0524326

EVAPORATOR FAN
12W 0.30A @ 120VAC 18I
18I 0477655

M M M M
M M M M

RED +
BLUE -
RED +
BLUE -

ANTI-SWEAT HEATER
40W .37A@ 120 VAC
0495007
30W .28A @ 120 VAC
0495006

LED DRIVER
LED DRIVER

RELAY TYCO
T92P7A22-240
180424I

L2

M

LEFT HAND
CONDENSER FAN

SWITCH
MOTOR START
SQ "D"
125-01-0271

LIGHT SWITCH
125-01-0307

15 AMP FUSE
125-01-8604
FUSE HOLDER
125-01-8605

15A
BLK#14
WHT#14

WHT # 12
BLK # 12
RED# 12

EVAPORATOR PAN
1500W 7.2A @ 208 ~ 240
VAC 1H95139550

FLOAT SWITCH

LI
L2
G

SAFETY
SWITCH

TERMINAL BLOCK
2H07970550

LI
N

BUNDLE
BROWN

BUNDLE
ORANGE

BUNDLE
PURPLE

LI
N

LI
L
2
N
G

BLK 10 G.
RED 10 G.
WHT 12 G.
GRN 10 G.
BLK 14 G.
RED 14 G.
GRN 14 G.

NOTES:
CASE MUST BE GROUNDED
WHEN PASSING WIRES THROUGH METAL HOLES A GROMMET MUST BE USED

MATERIAL - N/A	
DATE DRAWN - 9-8-17	
DRAWN BY -CRAIG BOOREY	ECN-CAP-0008239
REVIEWED BY -CRAIG BOOREY	REF -
APPROVED BY - CRAIG BOOREY	SHEET 1 OF 1
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES. TOLERANCES ARE: DECIMALS .XX ±.03, .XXX ±.010 ANGLES ± 2°	THIRD ANGLE PROJECTION

HUSSMANN

DIAGRAM-TY3-6X10I-S

3043383 | C

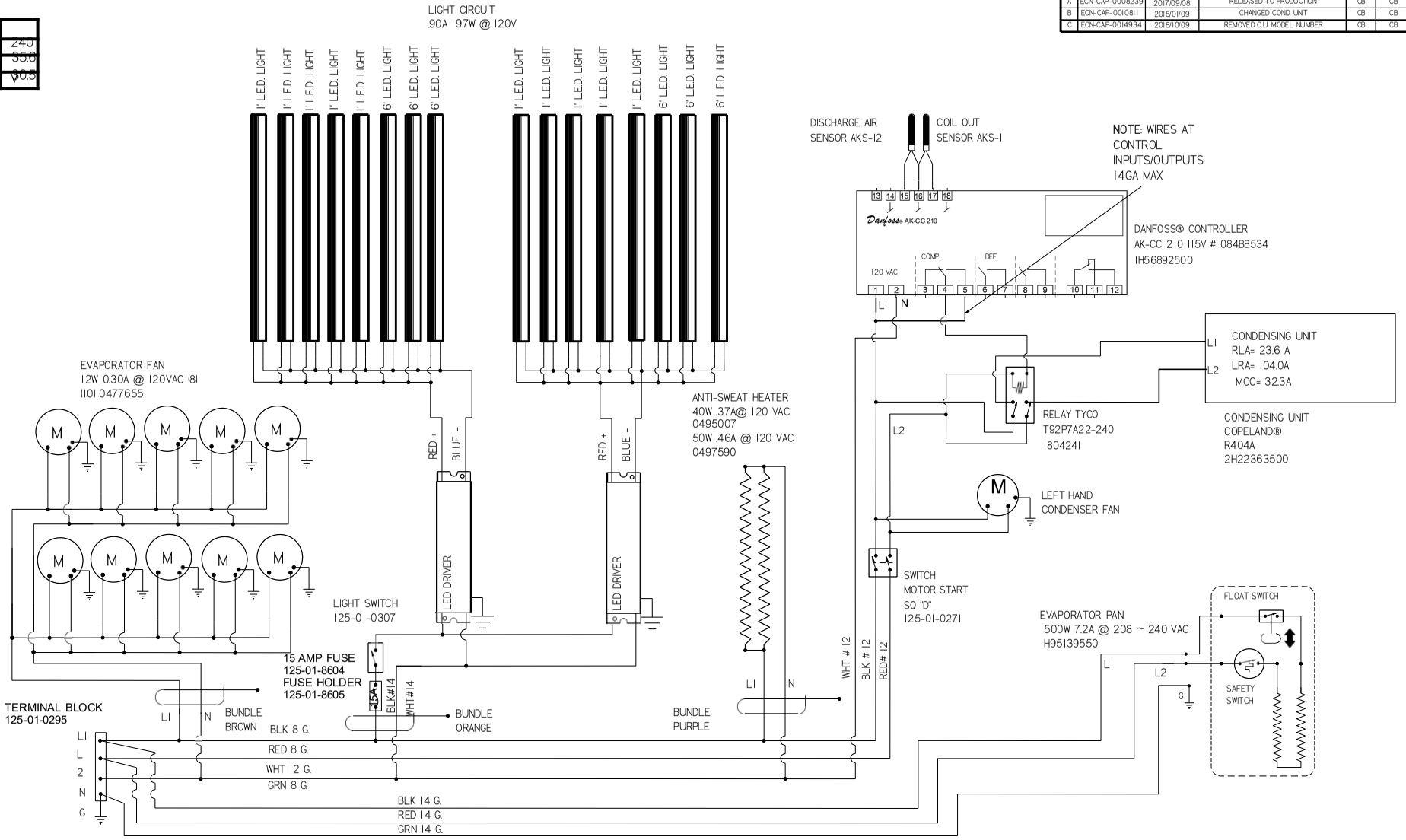
HUSSMANN_CDF_L1 SHEET SIZE D

CIRCUIT #1
LOADING

	208V	240
LI	30.8	35.6
L	26.4	30.5

2

REVISION HISTORY						
REV	ECN	DATE	REVISION DESCRIPTION	REV BY	CHKD BY	APPR BY
A	ECN-CAP-0008239	2017/09/08	RELEASED TO PRODUCTION	CB	CB	CB
B	ECN-CAP-0011811	2018/01/09	CHANGED COND. UNIT	CB	CB	CB
C	ECN-CAP-0014934	2018/10/09	REMOVED C.U. MODEL NUMBER	CB	CB	CB



NOTES:
CASE MUST BE GROUNDED
WHEN PASSING WIRES THROUGH METAL HOLES A GROMMET MUST BE USED

MATERIAL - N/A	
DATE DRAWN - 9-8-17	
DRAWN BY -CRAIG BOOREY	ECN-CAP-0008239
REVIEWED BY -CRAIG BOOREY	REF -
APPROVED BY - CRAIG BOOREY	SHEET 1 OF 1

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES.
TOLERANCES ARE:
DECIMALS .XX ±.03, .XXX ±.010
ANGLES ± 2°
THIRD ANGLE PROJECTION

HUSSMANN®
DIAGRAM-TY3-6X12I-S

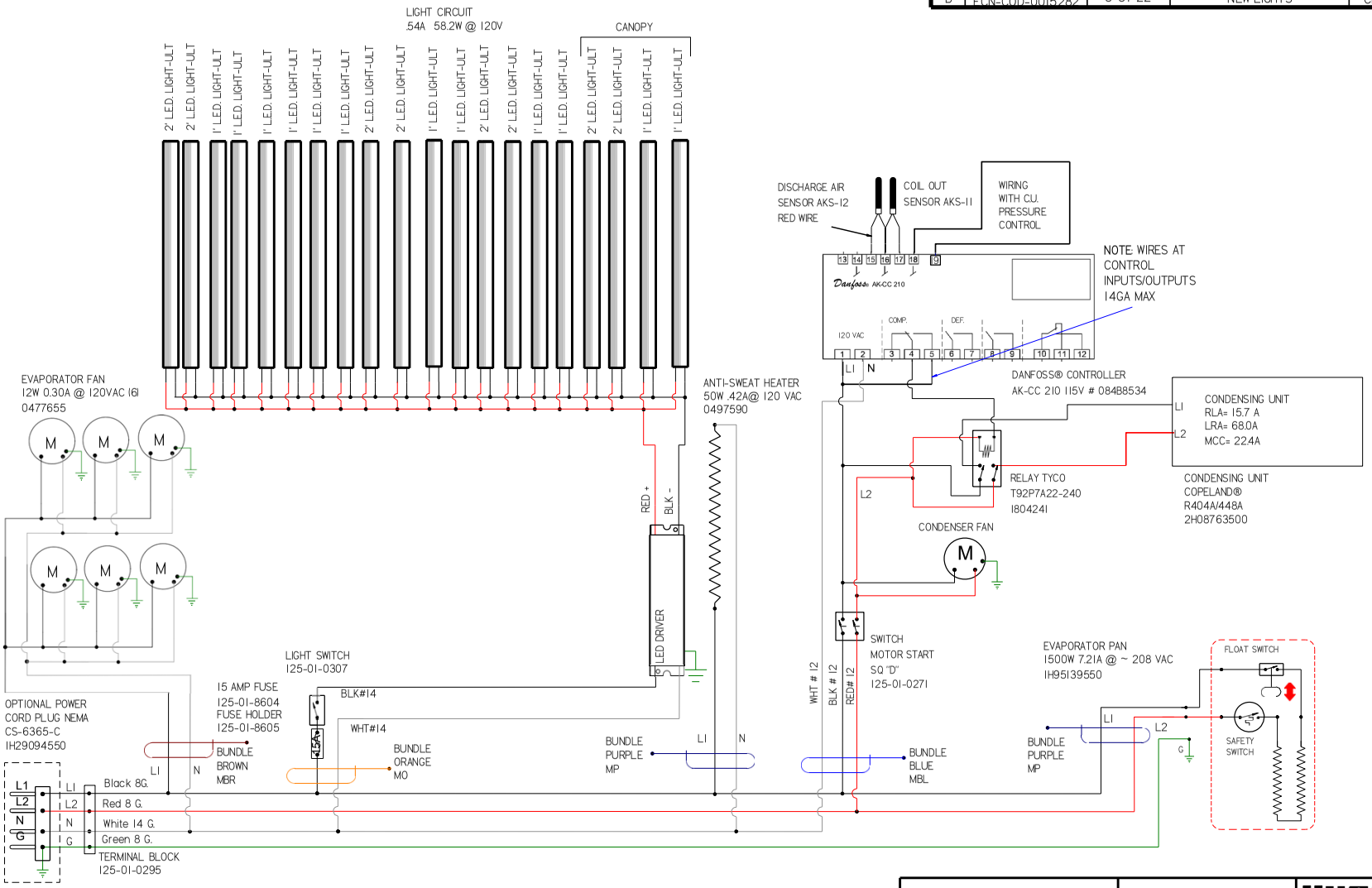
3043384 | C

HUSSMANN_CDF_11 SHEET SIZE D

CIRCUIT #1

	LOADING	
	208	24
L1	22.2	25.
L2	V19.9	0V 22.9 6

REVISION HISTORY						
REV	ECN	DATE	REVISION DESCRIPTION	REV BY	CHKD BY	APPR BY
A	ECN-COD-0011339	7-28-20	RELEASED TO PRODUCTION	CB	CB	CB
B	ECN-COD-0015282	3-31-22	NEW LIGHTS	CB	CB	CB



NOTES:
1. PRINTED DOCUMENT REQUIRED SETTING: ALL COLORS BLACK & WHITE
2. CASE & ANY REMOVABLE PANEL WITH ELECTRICAL PARTS MUST BE GROUNDED.
3. WHEN PASSING WIRES THROUGH METAL HOLES A GROMMET MUST BE USED

UL COLOR CODES / ABBREVIATIONS

- RED = RD
- BLACK = BK
- BLUE = BL
- YELLOW =
- YL GRAY = GY
- WHITE = WT
- GREEN = GN
- BROWN = BN
- ORANGE =
- OR VIOLET = VT

FACTORY 14GA WIRE
FACTORY 10GA WIRE
FIELD WIRE

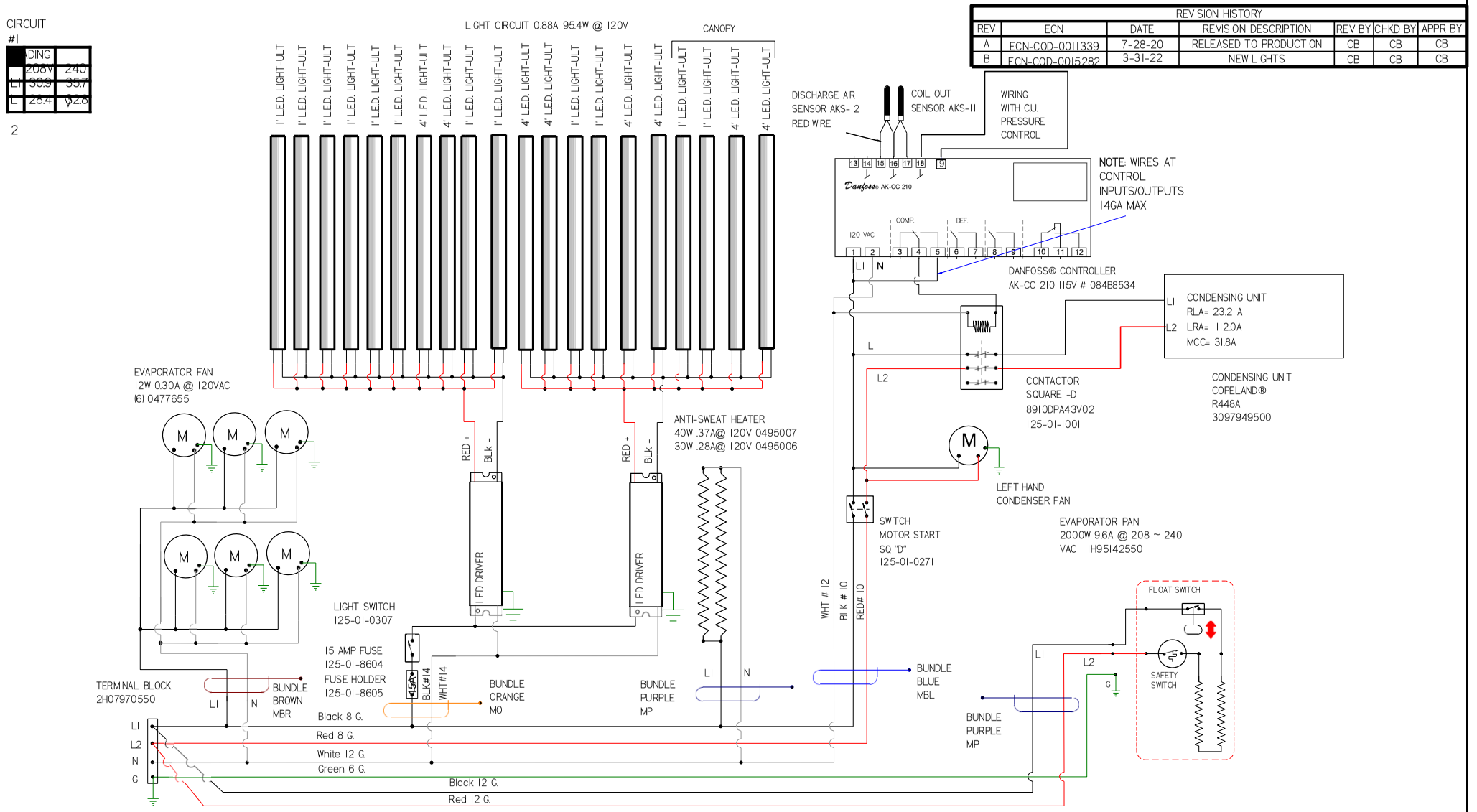
DO NOT SCALE DRAWING
SHEET 1 OF 1

HUSSMANN®

DIAGRAM-TY4-4X6I- S

P/N 3129625 REV B

CND_10 WIRE DIAGRAM SIZE C



REVISION HISTORY						
REV	ECN	DATE	REVISION DESCRIPTION	REV BY	CHKD BY	APPR BY
A	ECN-COD-0011339	7-28-20	RELEASED TO PRODUCTION	CB	CB	CB
B	ECN-COD-0015282	3-31-22	NEW LIGHTS	CB	CB	CB

NOTES:
1. PRINTED DOCUMENT REQUIRED SETTING: ALL COLORS BLACK & WHITE
2. CASE & ANY REMOVABLE PANEL WITH ELECTRICAL PARTS MUST BE GROUNDED.
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- YELLOW =
- YL GRAY = GY
- WHITE = WT
- GREEN = GN
- BROWN = BN
- ORANGE =
- OR VIOLET = VT

FACTORY 14GA WIRE
FACTORY 10GA WIRE
FIELD WIRE

DO NOT SCALE DRAWING
SHEET 1 OF 1

HUSSMANN®

DIAGRAM-TY4-4X8I- S

P/N 3129627 REV B

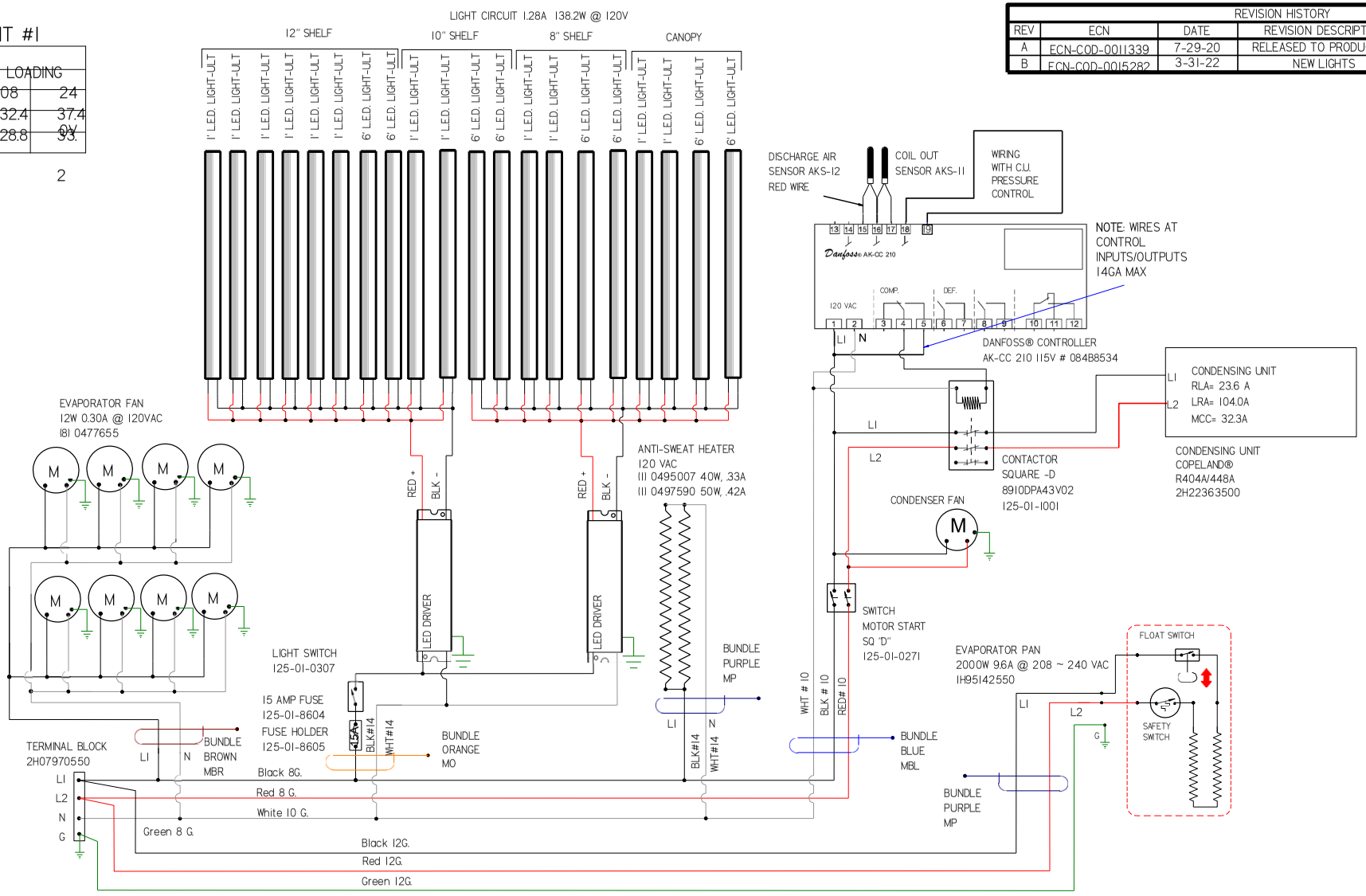
CND_10 WIRE DIAGRAM SIZE C

CIRCUIT #1

	LOADING	
	208	24
L1	32.4	37.4
L2	28.8	33.

2

REVISION HISTORY						
REV	ECN	DATE	REVISION DESCRIPTION	REV BY	CHKD BY	APPR BY
A	ECN-COD-0011339	7-29-20	RELEASED TO PRODUCTION	CB	CB	CB
B	ECN-COD-0015282	3-31-22	NEW LIGHTS	CB	CB	CB



NOTES:
1. PRINTED DOCUMENT REQUIRED SETTING: ALL COLORS BLACK & WHITE
2. CASE & ANY REMOVABLE PANEL WITH ELECTRICAL PARTS MUST BE GROUNDED.
3. WHEN PASSING WIRES THROUGH METAL HOLES A GROMMET MUST BE USED

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- BLACK = BK
- BLUE = BL
- YELLOW =
- YL GRAY = GY
- WHITE = WT
- GREEN = GN
- BROWN = BN
- ORANGE =
- OR VIOLET = VT

FACTORY 14GA WIRE
FACTORY 10GA WIRE
FIELD WIRE

DO NOT SCALE DRAWING
SHEET 1 OF 1

HUSSMANN®

DIAGRAM-TY4-4X101- S

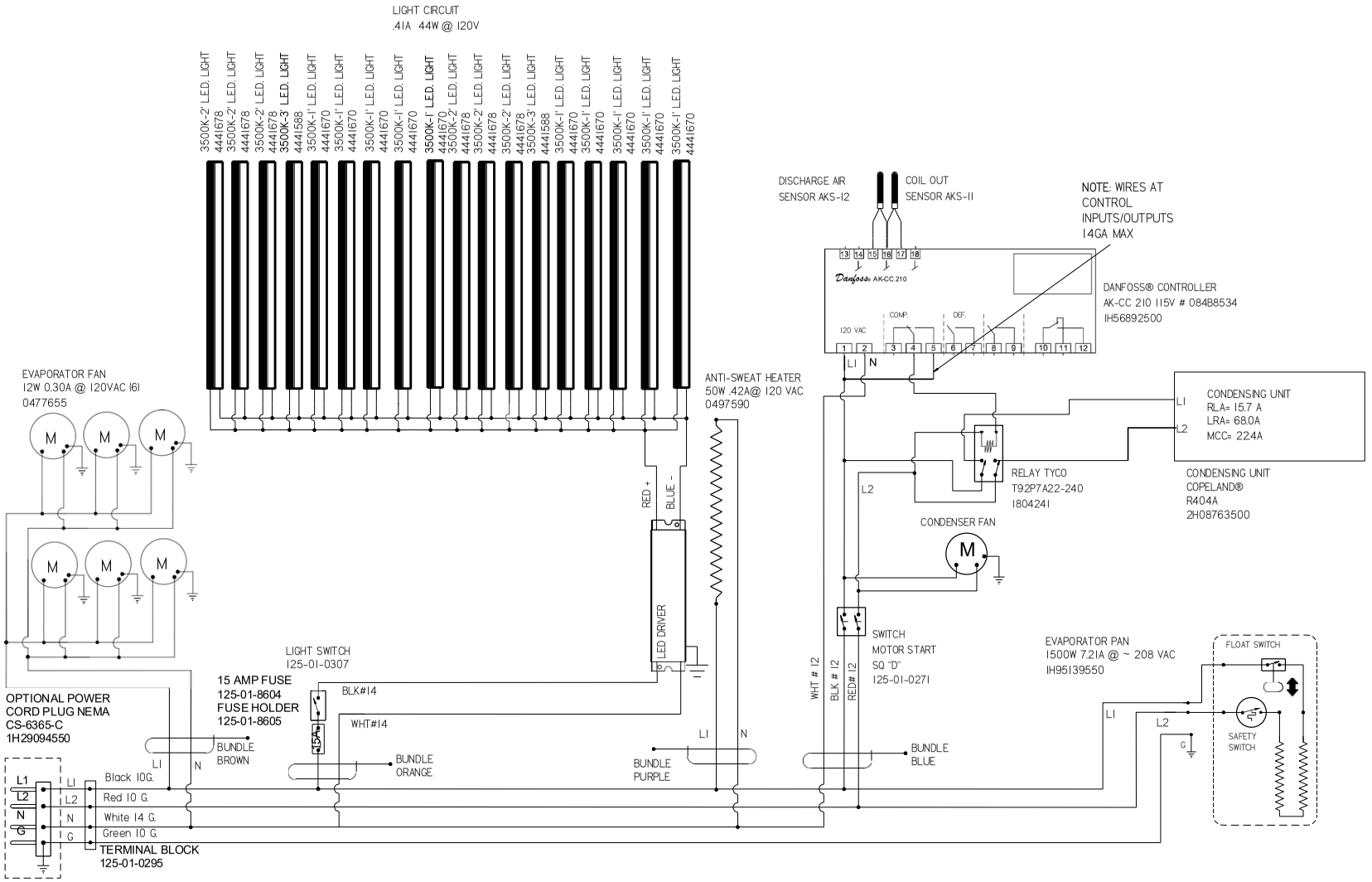
P/N 3129629 REV B

CND_10 WIRE DIAGRAM SIZE C

CIRCUIT #1

	LOADING	
	208	24
LI	21.3	24.
L2	19.1	22.
		6
		0

REVISION HISTORY						
REV	ECN	DATE	REVISION DESCRIPTION	REV BY	CHKD BY	APPR BY
A	ECN-CAP-0008241	2017/08/22	RELEASED TO PRODUCTION	CB	CB	CB
B	ECN-CAP-0012696	2018/05/23	CHANGED EVAPORATOR PAN PART NUMBER	CB	CB	CB
C	ECN-CAP-0014934	2018/10/03	REMOVED CU. MODEL NUMBER	CB	CB	CB



NOTES:
CASE MUST BE GROUNDED
WHEN PASSING WIRES THROUGH METAL HOLES A GROMMET MUST BE USED

MATERIAL - N/A
DATE DRAWN - 8-22-17
DRAWN BY -CRAIG BOOREY
REVIEWED BY -CRAIG BOOREY
APPROVED BY - CRAIG BOOREY
ECN-CAP-0008241
REF -
SHEET 1 OF 1
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES.
TOLERANCES ARE:
DECIMALS .XX ±.03, .XXX ±.010
ANGLES ± 2°
THIRD ANGLE PROJECTION

HUSSMANN®
DIAGRAM-1Y4-4X61-S

3042641 C

HUSSMANN_CDF_LI SHEET SIZE D

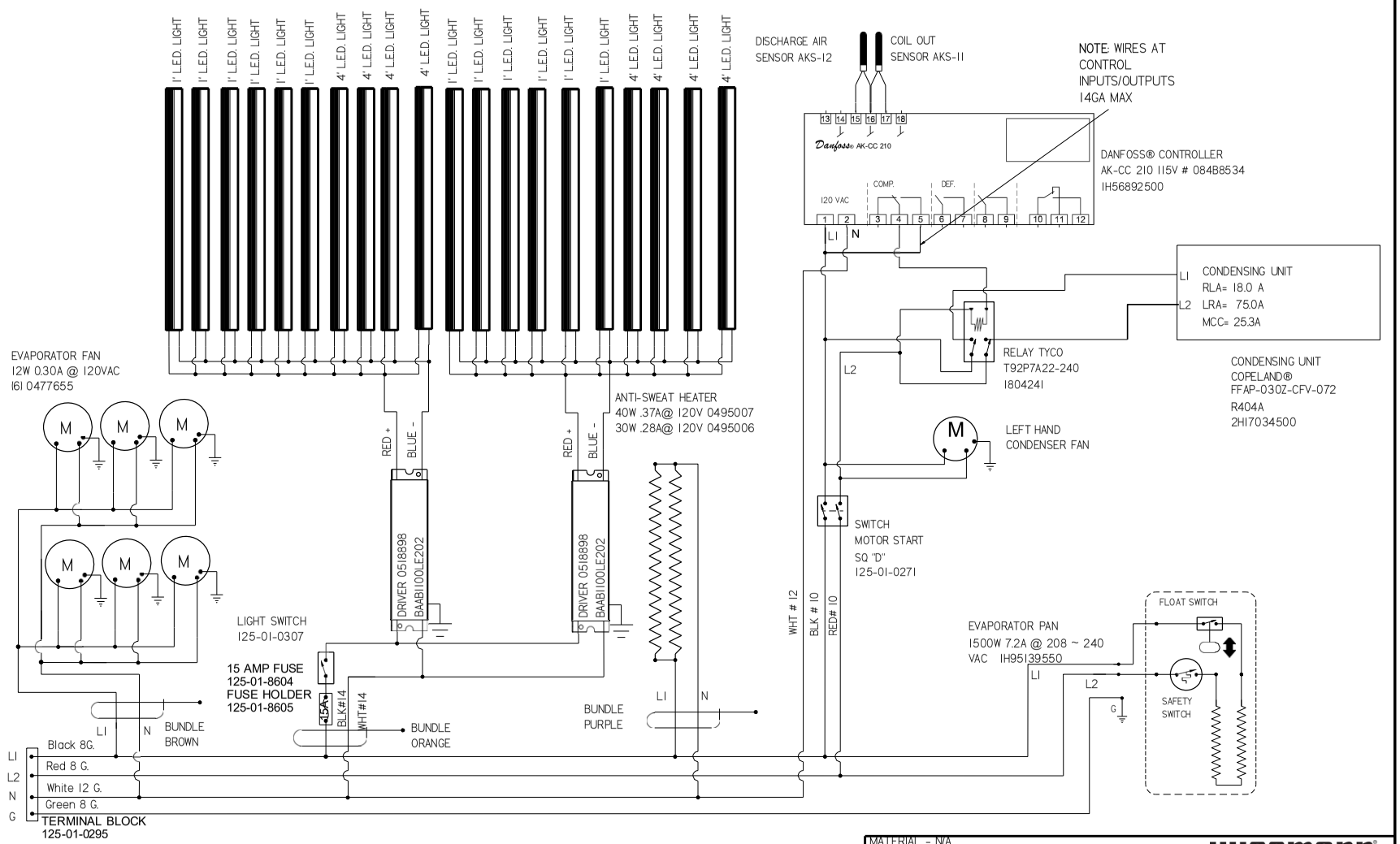
REVISION HISTORY						
REV.	ECN	DATE	REVISION DESCRIPTION	REV BY	CHKD BY	APPR BY
A	ECN-CAP-0009954	2017/10/02	RELEASED TO PRODUCTION	CB	CB	CB
B	ECN-CAP-0010801	2017/11/17	REVISED COMPRESSOR	CB	CB	CB

CIRCUIT #1

LOADING		
	208V	240
L1	24.7	28.5
L2	21.8	25.2

2

LIGHT CIRCUIT
0.86A 93W @ 120V



NOTES:
CASE MUST BE GROUNDED
WHEN PASSING WIRES THROUGH METAL HOLES A GROMMET MUST BE USED

MATERIAL - N/A	
DATE DRAWN - 10-2-17	
DRAWN BY -CRAIG BOOREY	ECN-CAP-0009954
REVIEWED BY -CRAIG BOOREY	REF -
APPROVED BY - CRAIG BOOREY	SHEET 1 OF 1
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES. TOLERANCES ARE: DECIMALS .XX ±.03, .XXX ±.010 ANGLES ± 2°	THIRD ANGLE PROJECTION

HUSSMANN®
DIAGRAM-1Y4-4X8I-S

3046094 | B

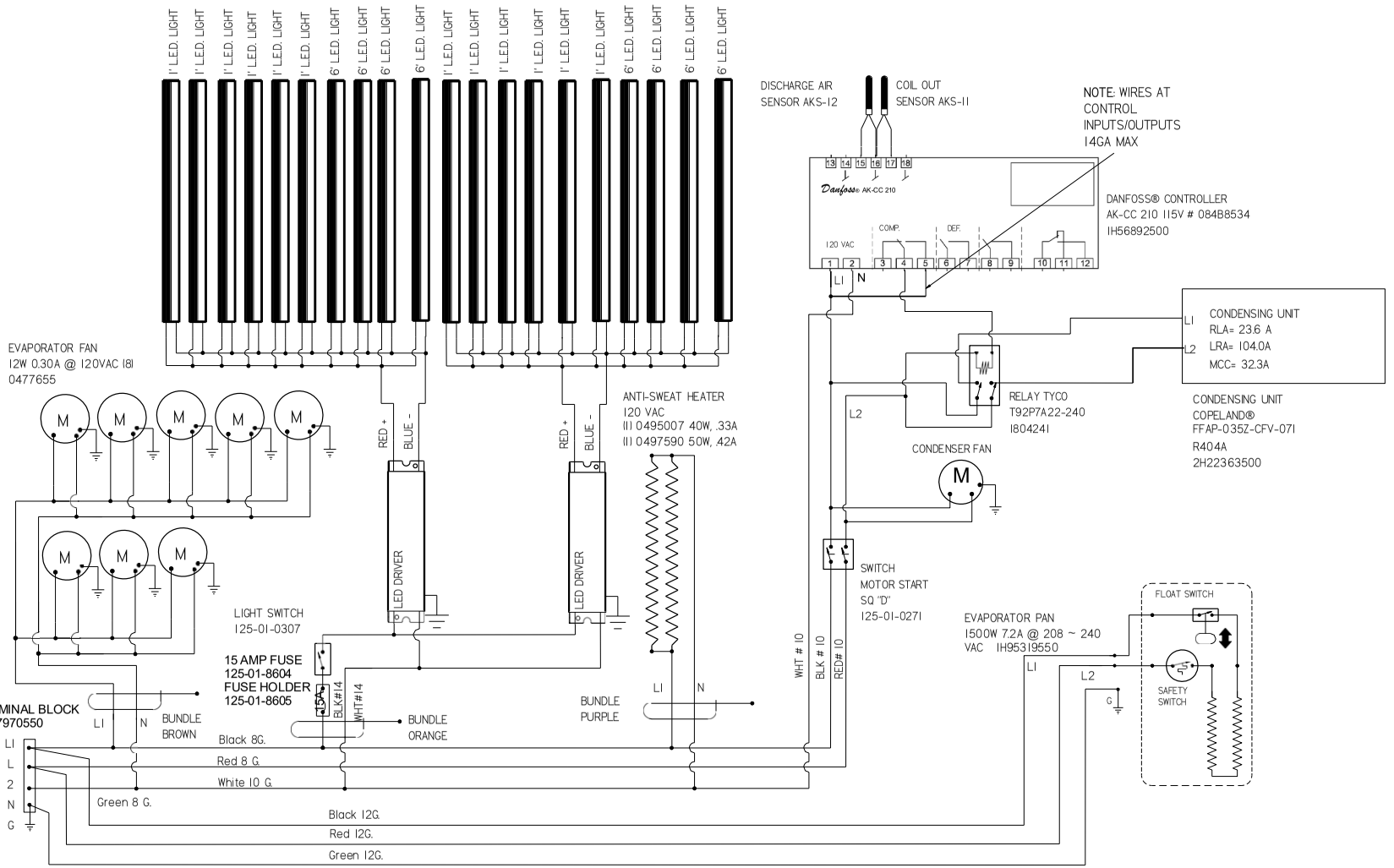
HUSSMANN_CDF_L1 SHEET SIZE D

CIRCUIT #1

	LOADING	
	208	24
L1	31.4	36.
L2	V27.6	0V 31.8
		2

LIGHT CIRCUIT
1.18A 127W @ 120V

REVISION HISTORY						
REV	ECN	DATE	REVISION DESCRIPTION	REV BY	CHKD BY	APPR BY
A	ECN-CAP-0008241	2017/08/23	RELEASED TO PRODUCTION	CB	CB	CB
B	ECN-CAP-0010811	2018/01/11	CHANGED COND. UNIT	CB	CB	CB



NOTES:
CASE MUST BE GROUNDED
WHEN PASSING WIRES THROUGH METAL HOLES A GROMMET MUST BE USED

MATERIAL - N/A	
DATE DRAWN - 8-23-17	
DRAWN BY -CRAIG BOOREY	ECN-CAP-0008241
REVIEWED BY -CRAIG BOOREY	REF -
APPROVED BY - CRAIG BOOREY	SHEET 1 OF 1
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES. TOLERANCES ARE: DECIMALS .XX ±.03, .XXX ±.010 ANGLES ± 2°	THIRD ANGLE PROJECTION

HUSSMANN®
DIAGRAM-1Y4-4X10I-S

3042644 | B

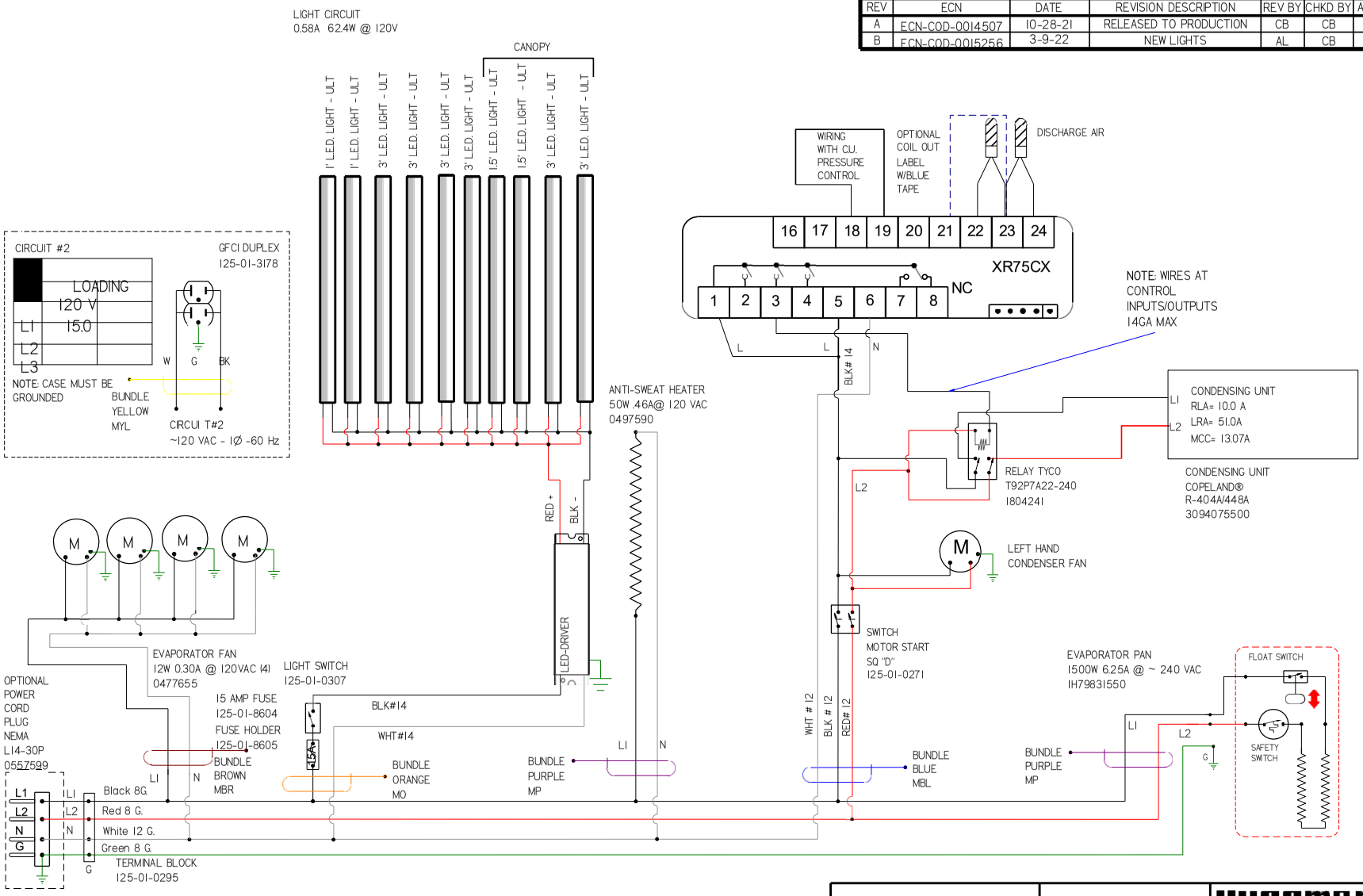
HUSSMANN_CDF_L1 SHEET SIZE D

CIRCUIT #1

	LOADING 208V	240V
L1	16.0	16.5
L2	14.1	16.3

2

REVISION HISTORY						
REV	ECN	DATE	REVISION DESCRIPTION	REV BY	CHKD BY	APPR BY
A	ECN-COD-0014507	10-28-21	RELEASED TO PRODUCTION	CB	CB	CB
B	ECN-COD-0015256	3-9-22	NEW LIGHTS	AL	CB	CB



NOTES:
1. PRINTED DOCUMENT REQUIRED SETTING: ALL COLORS BLACK & WHITE
2. CASE & ANY REMOVABLE PANEL WITH ELECTRICAL PARTS MUST BE GROUNDED.
3. WHEN PASSING WIRES THROUGH METAL HOLES A GROMMET MUST BE USED

WIRE MARKER COLORS/ABBREVIATIONS	
BLACK = MBK	MAROON = MMR ORANGE = MO PINK = MPI
BLUE = MBL	PURPLE = MP
BROWN = MBR	RED = MR
DARK BLUE = MDB GREEN = MG	YELLOW = MYL
LIGHT BLUE = MLB	

UL COLOR CODES / ABBREVIATIONS	
RED = RD	WHITE = WT
BLACK = BK	GREEN = GN
BLUE = BL	BROWN = BN
YELLOW = YL	ORANGE =
GRAY = GY	OR VIOLET = VT

FACTORY 14GA WIRE
FACTORY 10GA WIRE
FIELD WIRE
DO NOT SCALE DRAWING
SHEET 1 OF 1

HUSSMANN®
DIAGRAM-TY3-3X4.5 E-S W/XR75 CTLR
P/N 3157238 REV B

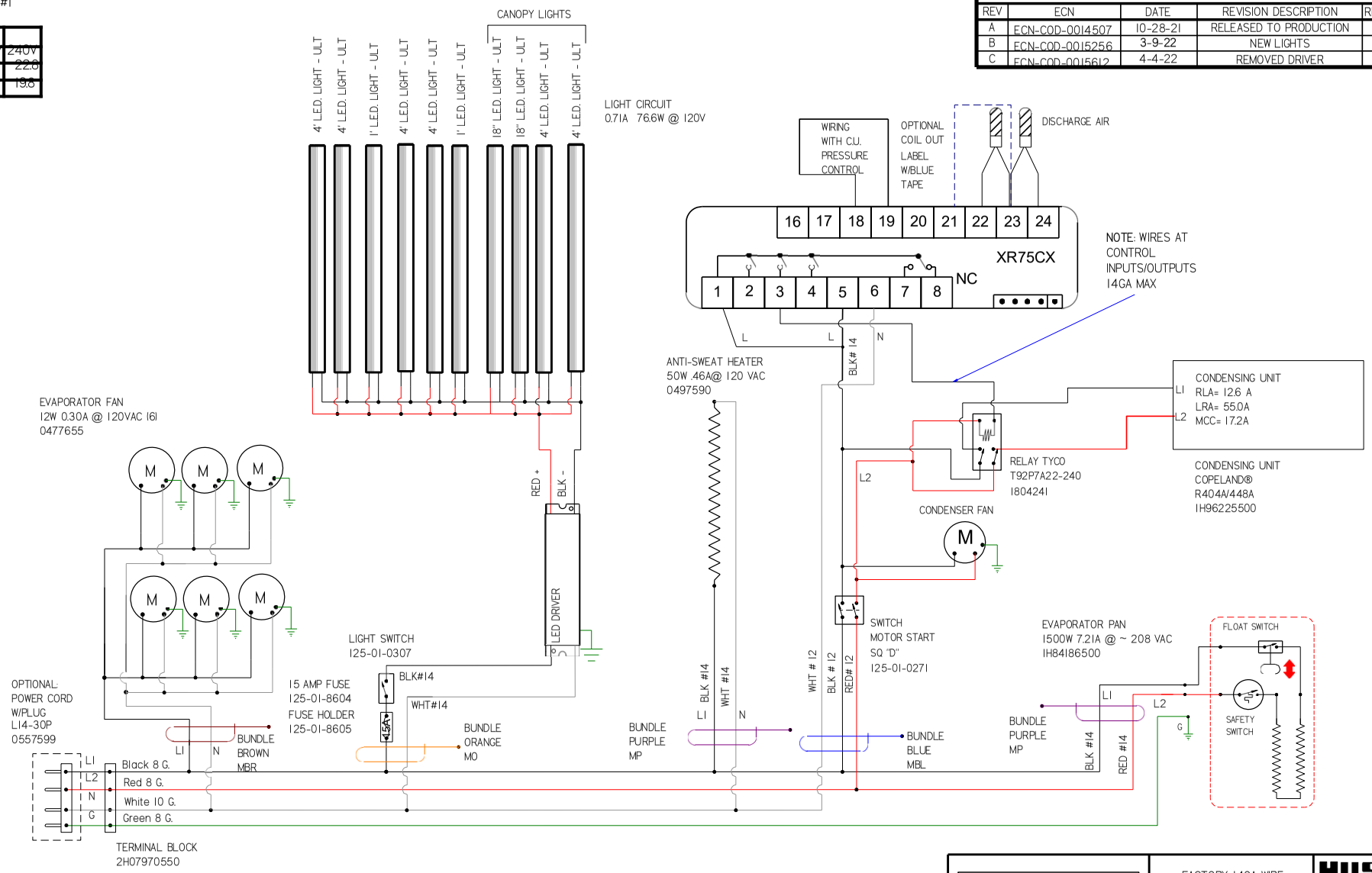
CNO-10 WIRE DIAGRAM SIZE C

CIRCUIT #1
LOADING

	208V	240V
LI	19.7	22.8
L	17.2	19.8

2

REVISION HISTORY						
REV	ECN	DATE	REVISION DESCRIPTION	REV BY	CHKD BY	APPR BY
A	ECN-COD-0014507	10-28-21	RELEASED TO PRODUCTION	CB	CB	CB
B	ECN-COD-0015256	3-9-22	NEW LIGHTS	AL	CB	CB
C	ECN-COD-0015612	4-4-22	REMOVED DRIVER	AL	CB	CB



NOTES:
1. PRINTED DOCUMENT REQUIRED SETTING: ALL COLORS BLACK & WHITE
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BROWN = MBR	PINK = MPI
DARK BLUE = MDB	PURPLE = MP
GREEN = MG	RED = MR
LIGHT BLUE = MLB	YELLOW = MYL

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RED = RD	WHITE = WT
BLACK = BK	GREEN = GN
BLUE = BL	BROWN = BN
YELLOW = YL	ORANGE = GY
GRAY = GY	OR VIOLET = VT

FACTORY 14GA WIRE
FACTORY 10GA WIRE
FIELD WIRE
DO NOT SCALE DRAWING
SHEET 1 OF 1

HUSSMANN®
DIAGRAM-TY3-3X5.5 E-S W/XR75 CTLR
P/N 3157241 REV C

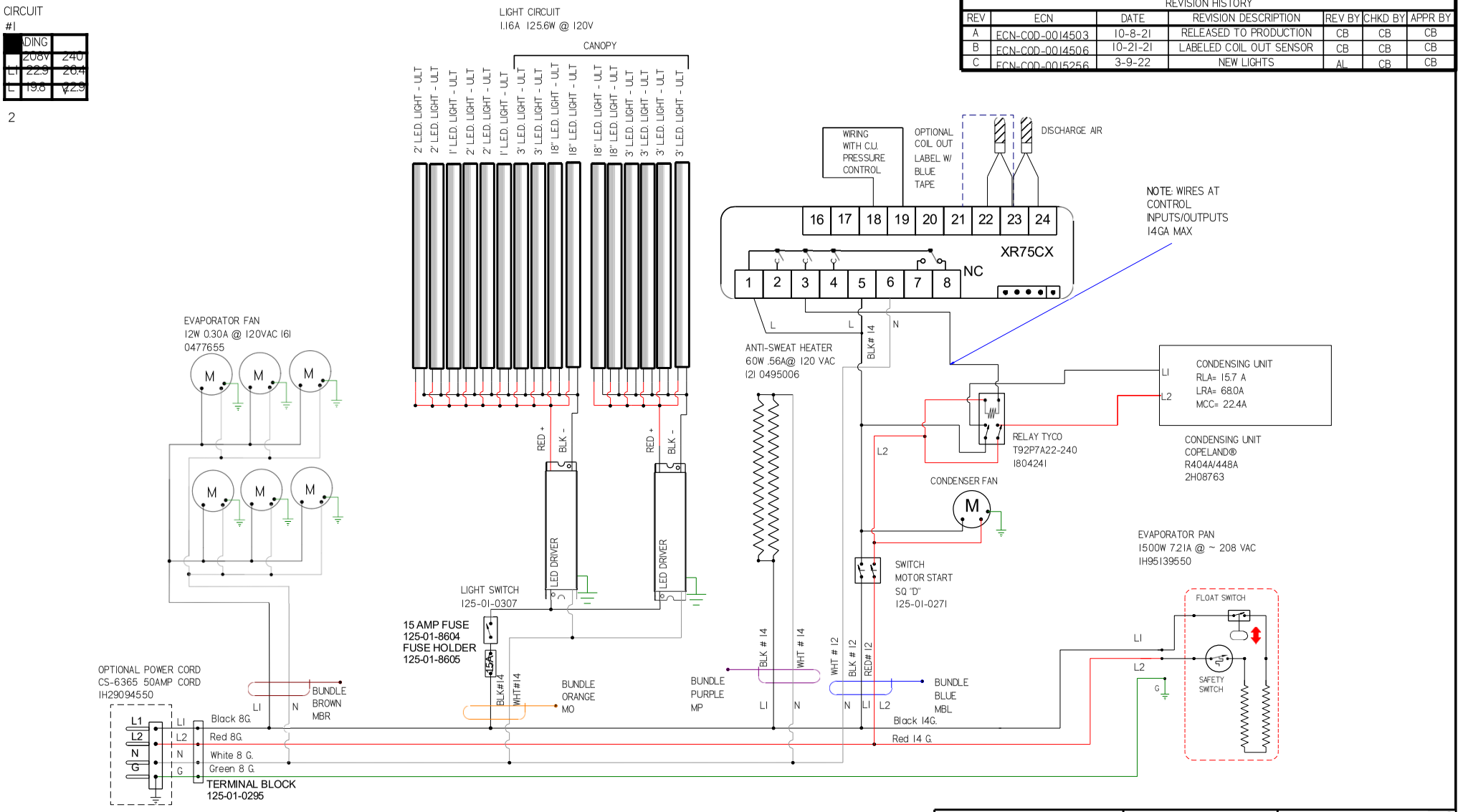
CND_10 WIRE DIAGRAM SIZE C

CIRCUIT
#1

	LOADING	
	208V	240
L1	22.9	26.4
L2	19.8	22.9

2

REVISION HISTORY						
REV	ECN	DATE	REVISION DESCRIPTION	REV BY	CHKD BY	APPR BY
A	ECN-COD-0014503	10-8-21	RELEASED TO PRODUCTION	CB	CB	CB
B	ECN-COD-0014506	10-21-21	LABELED COIL OUT SENSOR	CB	CB	CB
C	ECN-COD-0015256	3-9-22	NEW LIGHTS	AL	CB	CB



NOTES:
1. PRINTED DOCUMENT REQUIRED SETTING: ALL COLORS BLACK & WHITE
2. CASE & ANY REMOVABLE PANEL WITH ELECTRICAL PARTS MUST BE GROUNDED.
3. WHEN PASSING WIRES THROUGH METAL HOLES A GROMMET MUST BE USED

WIRE MARKER COLORS/ABBREVIATIONS	
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BLUE = MBL	ORANGE = MO
BROWN = MBR	PINK = MPI
DARK BLUE = MDB	PURPLE = MP
GREEN = MG	RED = MR
LIGHT BLUE = MLB	YELLOW = MYL

UL COLOR CODES / ABBREVIATIONS	
RED = RD	WHITE = WT
BLACK = BK	GREEN = GN
BLUE = BL	BROWN = BN
YELLOW = YL	ORANGE = GY
GRAY = GY	VIOLET = VT

FACTORY 14GA WIRE
FACTORY 10GA WIRE
FIELD WIRE
DO NOT SCALE DRAWING
SHEET 1 OF 1

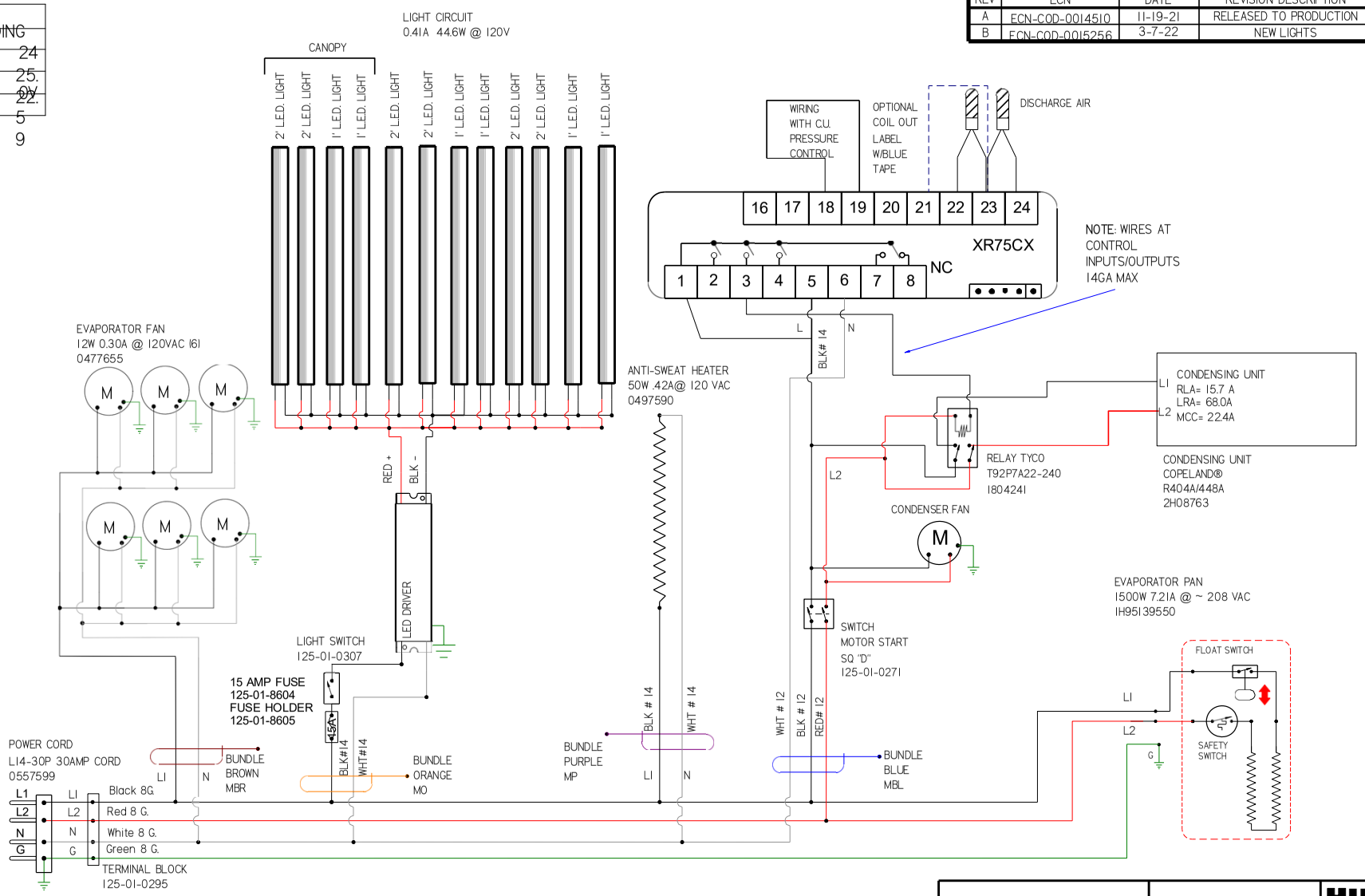
HUSSMANN®
DIAGRAM-TY3ECSQ-4X61-S W/XR75 CTLR
P/N 3156421 REV C

CND_10 WIRE DIAGRAM SIZE C

CIRCUIT #1

	LOADING	
	208	24
L1	22.1	25.0
L2	19.8	22.5
	V	V

REVISION HISTORY						
REV	ECN	DATE	REVISION DESCRIPTION	REV BY	CHKD BY	APPR BY
A	ECN-COD-0014510	11-19-21	RELEASED TO PRODUCTION	CB	CB	CB
B	ECN-COD-0015256	3-7-22	NEW LIGHTS	AL	CB	CB



WIRE MARKER COLORS/ABBREVIATIONS	
BLACK = MBK	MAROON = MMR ORANGE = MO PINK = MPI
BLUE = MBL	PURPLE = MP
BROWN = MBR	RED = MR
DARK BLUE = MDB GREEN = MG	YELLOW = MYL
LIGHT BLUE = MLB	

UL COLOR CODES / ABBREVIATIONS	
RED = RD	WHITE = WT
BLACK = BK	GREEN = GN
BLUE = BL	BROWN = BN
YELLOW =	ORANGE =
YL GRAY = GY	OR VIOLET = VT

FACTORY 14GA WIRE
FACTORY 10GA WIRE
FIELD WIRE
DO NOT SCALE DRAWING
SHEET 1 OF 1

HUSSMANN®
DIAGRAM-TY3-4X6I- S W/XR75 CTLR
P/N 3158087 REV B

NOTES:
1. PRINTED DOCUMENT REQUIRED SETTING: ALL COLORS BLACK & WHITE
2. CASE & ANY REMOVABLE PANEL WITH ELECTRICAL PARTS MUST BE GROUNDED.
3. WHEN PASSING WIRES THROUGH METAL HOLES A GROMMET MUST BE USED

CNO_10 WIRE DIAGRAM SIZE C

CIRCUIT #1

	LOADING	
	208	24
LI	24.	28.
L2	V 21.8	0V 25.
	5	3
		2

LIGHT CIRCUIT
0.70A 75.2W @ 120V

CANOPY

1' LED. LIGHT - ULT
1' LED. LIGHT - ULT
4' LED. LIGHT - ULT
4' LED. LIGHT - ULT
1' LED. LIGHT - ULT
1' LED. LIGHT - ULT
4' LED. LIGHT - ULT
4' LED. LIGHT - ULT
1' LED. LIGHT - ULT
1' LED. LIGHT - ULT
4' LED. LIGHT - ULT
4' LED. LIGHT - ULT

WIRING WITH CU. PRESSURE CONTROL

OPTIONAL COIL OUT LABEL W/BLUE TAPE

DISCHARGE AIR

16 17 18 19 20 21 22 23 24

XR75CX

1 2 3 4 5 6 7 8

NC

NOTE: WIRES AT CONTROL INPUTS/OUTPUTS 14GA MAX

L L N

BLK# 14

ANTI-SWEAT HEATER
70W .58A@ 120 VAC (1)
0495007
(1) 0495006

LI
L2
CONDENSING UNIT
RLA= 18.0 A
LRA= 76.0A
MCC= 25.3A

CONDENSING UNIT
COPELAND®
R404A448A
2HI7034500

RELAY TYCO
T92P7A22-240
180424

L2

M
LEFT HAND
CONDENSER FAN

EVAPORATOR FAN
12W 0.30A @ 120VAC (6)
0477655

M M M
M M M

RED +
BLK -

LED DRIVER

SWITCH
MOTOR START
SQ "D"
125-01-0271

LIGHT SWITCH
125-01-0307

BLK#14

WHT#14

15 AMP FUSE
125-01-8604
FUSE HOLDER
125-01-8605

15A

BUNDLE
ORANGE
MO

BUNDLE
PURPLE
MP

LI N

WHT # 12
BLK # 12
RED# 12

BUNDLE
BLUE
MBL

EVAPORATOR PAN
1500W 7.2A @ 208 ~ 240
VAC 1H95139550

FLOAT SWITCH

LI
L2

SAFETY SWITCH

G

LI N

BUNDLE
BROWN
MBR

LI
L2
N
G

Black 8G.
Red 8 G.
White 12 G.
Green 8 G.

TERMINAL BLOCK
2H07970550

REVISION HISTORY						
REV	ECN	DATE	REVISION DESCRIPTION	REV BY	CHKD BY	APPR BY
A	ECN-COD-0014507	10-28-21	RELEASED TO PRODUCTION	CB	CB	CB
B	ECN-COD-0015256	3-7-22	NEW LIGHTS	AL	CB	CB

NOTES:
1. PRINTED DOCUMENT REQUIRED SETTING: ALL COLORS BLACK & WHITE
2. CASE & ANY REMOVABLE PANEL WITH ELECTRICAL PARTS MUST BE GROUNDED.
3. WHEN PASSING WIRES THROUGH METAL HOLES A GROMMET MUST BE USED

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LIGHT BLUE = MLB	

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RED = RD	WHITE = WT
BLACK = BK	GREEN = GN
BLUE = BL	BROWN = BN
YELLOW = YL GRAY = GY	ORANGE = OR VIOLET = VT

FACTORY 14GA WIRE
FACTORY 10GA WIRE
FIELD WIRE

DO NOT SCALE DRAWING
SHEET 1 OF 1

HUSSMANN®

DIAGRAM-TY3-4X8I- S W/XR75 CTLR

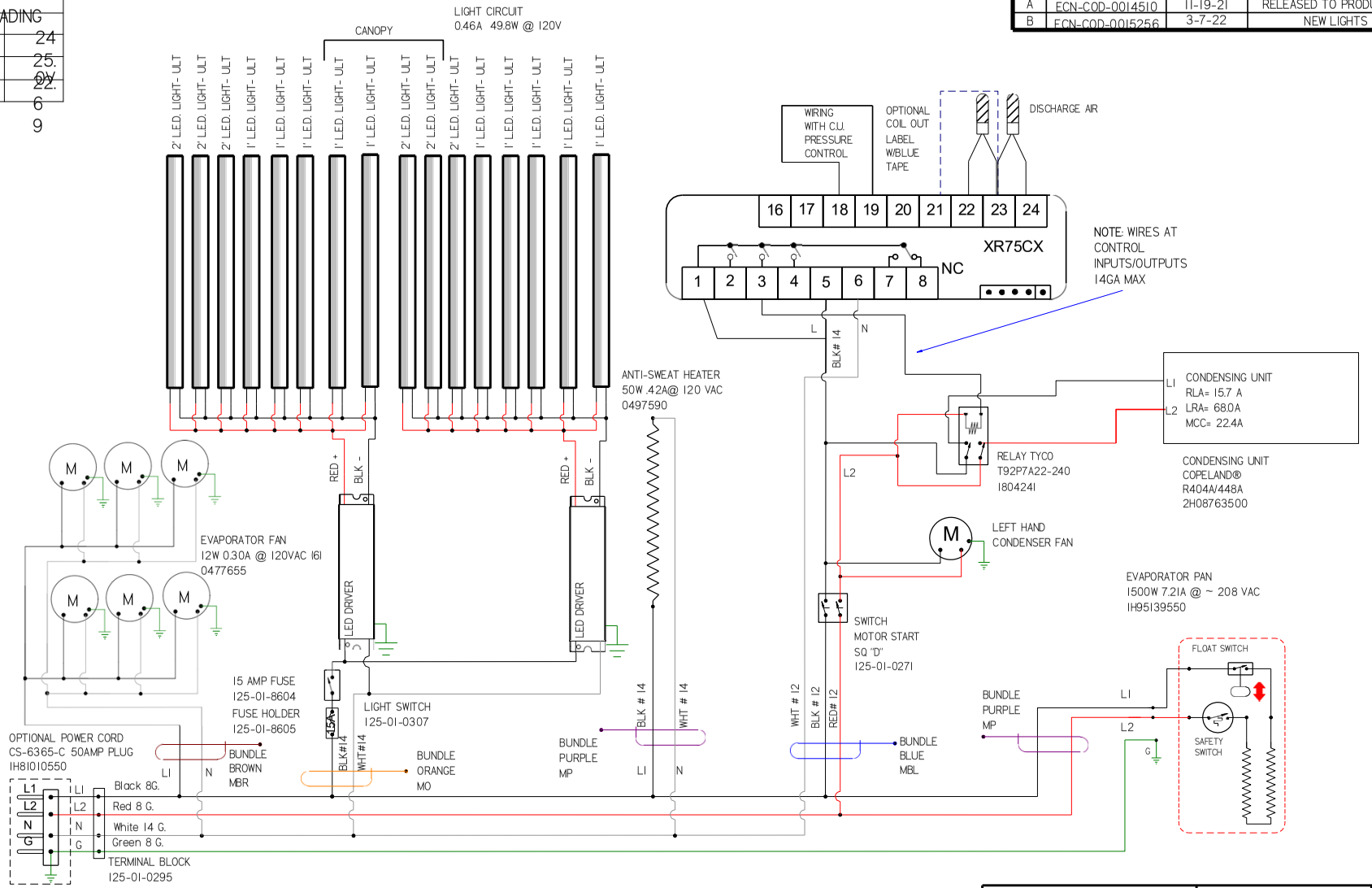
P/N 3157246 REV B

CND_10 WIRE DIAGRAM SIZE C

CIRCUIT #1

	LOADING	
	208	24
L1	22.	25.
L2	V19.8	0V 22.
	2	6
		9

REVISION HISTORY						
REV	ECN	DATE	REVISION DESCRIPTION	REV BY	CHKD BY	APPR BY
A	ECN-COD-0014510	11-19-21	RELEASED TO PRODUCTION	CB	CB	CB
B	ECN-COD-0015256	3-7-22	NEW LIGHTS	AL	CB	CB



NOTES:
1. PRINTED DOCUMENT REQUIRED SETTING: ALL COLORS BLACK & WHITE
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3. WHEN PASSING WIRES THROUGH METAL HOLES A GROMMET MUST BE USED

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BROWN = MBR	PINK = MPI
DARK BLUE = MDB	PURPLE = MP
GREEN = MG	RED = MR
LIGHT BLUE = MLB	YELLOW = MYL

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RED = RD	WHITE = WT
BLACK = BK	GREEN = GN
BLUE = BL	BROWN = BN
YELLOW = YL	ORANGE = GY
GRAY = GY	VIOLET = VT

FACTORY 14GA WIRE
FACTORY 10GA WIRE
FIELD WIRE
DO NOT SCALE DRAWING
SHEET 1 OF 1

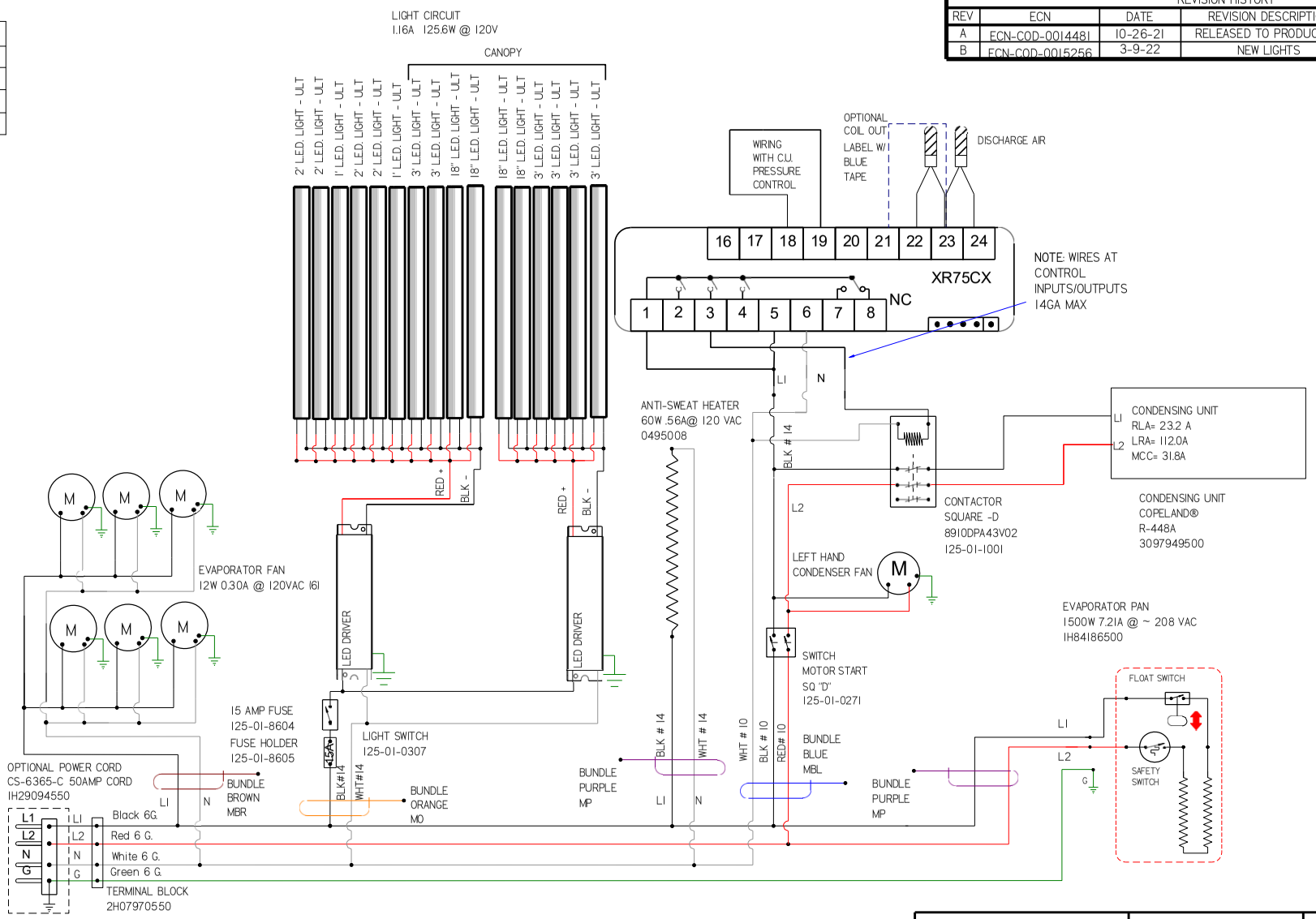
HUSSMANN®
DIAGRAM-TY3-5X7I- S W/XR75 CTLR
P/N 3158086 REV B

CND_10 WIRE DIAGRAM SIZE C

CIRCUIT #1

	LOADING	
	208	24
L1	29.4	33.
L2	26.	30.
	3	4

REVISION HISTORY						
REV	ECN	DATE	REVISION DESCRIPTION	REV BY	CHKD BY	APPR BY
A	ECN-COD-0014481	10-26-21	RELEASED TO PRODUCTION	AL	CB	CB
B	ECN-COD-0015256	3-9-22	NEW LIGHTS	AL	CB	CB



NOTES:
1. PRINTED DOCUMENT REQUIRED SETTING: ALL COLORS BLACK & WHITE
2. CASE & ANY REMOVABLE PANEL WITH ELECTRICAL PARTS MUST BE GROUNDED.
3. WHEN PASSING WIRES THROUGH METAL HOLES A GROMMET MUST BE USED

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BROWN = MBR	PINK = MPI
DARK BLUE = MDB	PURPLE = MP
GREEN = MG	RED = MR
LIGHT BLUE = MLB	YELLOW = MYL

UL COLOR CODES / ABBREVIATIONS	
RED = RD	WHITE = WT
BLACK = BK	GREEN = GN
BLUE = BL	BROWN = BN
YELLOW = YL	ORANGE = GY
GRAY = GY	OR VIOLET = VT

FACTORY 14GA WIRE
FACTORY 10GA WIRE
FIELD WIRE
DO NOT SCALE DRAWING
SHEET 1 OF 1

HUSSMANN®
DIAGRAM- TY3ECSQ- 6X8I-S
P/N 3157148 REV B

CND_10 WIRE DIAGRAM SIZE C

REVISION HISTORY						
REV	ECN	DATE	REVISION DESCRIPTION	REV BY	CHKD BY	APPR BY
A	ECN-COD-0014507	10-28-21	RELEASED TO PRODUCTION	CB	CB	CB
B	ECN-COD-0015256	3-7-22	NEW LIGHTS	AL	CB	CB

CIRCUIT #1

LOADING	208V	240
L1	30.4	35.1
L2	26.7	30.8

2

LIGHT CIRCUIT
1.09A 117.6W @ 120V

1' LED. LIGHT - ULT
6' LED. LIGHT - ULT

WIRING WITH C.U. PRESSURE CONTROL

OPTIONAL COIL OUT LABEL W/BLUE TAPE

DISCHARGE AIR

16 17 18 19 20 21 22 23 24

XR75CX

1 2 3 4 5 6 7 8 NC

NOTE: WIRES AT CONTROL INPUTS/OUTPUTS 14GA MAX

L L N

BLK# 14

CONDENSING UNIT
RLA= 23.6 A
LRA= 104.0A
MCC= 32.3A

L1
L2

CONDENSING UNIT
COPELAND®
R404A/448A
2H22363500

CONTACTOR
SQUARE -D
8910DPA43V02
125-01-1001

L2

M

LEFT HAND CONDENSER FAN

SWITCH
MOTOR START
SQ "D"
125-01-0271

EVAPORATOR FAN
12W 0.30A @ 120VAC (8)
1101 0477655

M

RED +
BLK -

LED DRIVER

ANTI-SWEAT HEATER
40W .37A@ 120 VAC
0495007
50W .46A @ 120 VAC
0497590

LIGHT SWITCH
125-01-0307

15 AMP FUSE
125-01-8604
FUSE HOLDER
125-01-8605

15A

BLK#14
WHT#14

WHT # 12
BLK # 12
RED# 12

EVAPORATOR PAN
1500W 7.2A @ 208 ~ 240 VAC
1H95139550

FLOAT SWITCH

SAFETY SWITCH

BUNDLE PURPLE MP

BUNDLE BLUE MBL

BUNDLE BROWN MBR

BUNDLE ORANGE MO

TERMINAL BLOCK
125-01-0295

L1
L2
N
G

BLK 8 G.
RED 8 G.
WHT 12 G.
GRN 8 G.
BLK 14 G.
RED 14 G.
GRN 14 G.

NOTES:
1. PRINTED DOCUMENT REQUIRED SETTING: ALL COLORS BLACK & WHITE
2. CASE & ANY REMOVABLE PANEL WITH ELECTRICAL PARTS MUST BE GROUNDED.
3. WHEN PASSING WIRES THROUGH METAL HOLES A GROMMET MUST BE USED

WIRE MARKER COLORS/ABBREVIATIONS	
BLACK = MBK	MAROON = MMR ORANGE =
BLUE = MBL	MO PINK = MPI
BROWN = MBR	PURPLE = MP
DARK BLUE = MDB GREEN = MG	RED = MR
LIGHT BLUE = MLB	YELLOW = MYL

UL COLOR CODES / ABBREVIATIONS	
RED = RD	WHITE = WT
BLACK = BK	GREEN = GN
BLUE = BL	BROWN = BN
YELLOW =	ORANGE =
YL GRAY = GY	OR VIOLET = VT

FACTORY 14GA WIRE
FACTORY 10GA WIRE
FIELD WIRE

DO NOT SCALE DRAWING
SHEET 1 OF 1

HUSSMANN®

DIAGRAM-TY3-6X12I- S W/XR75 CTLR

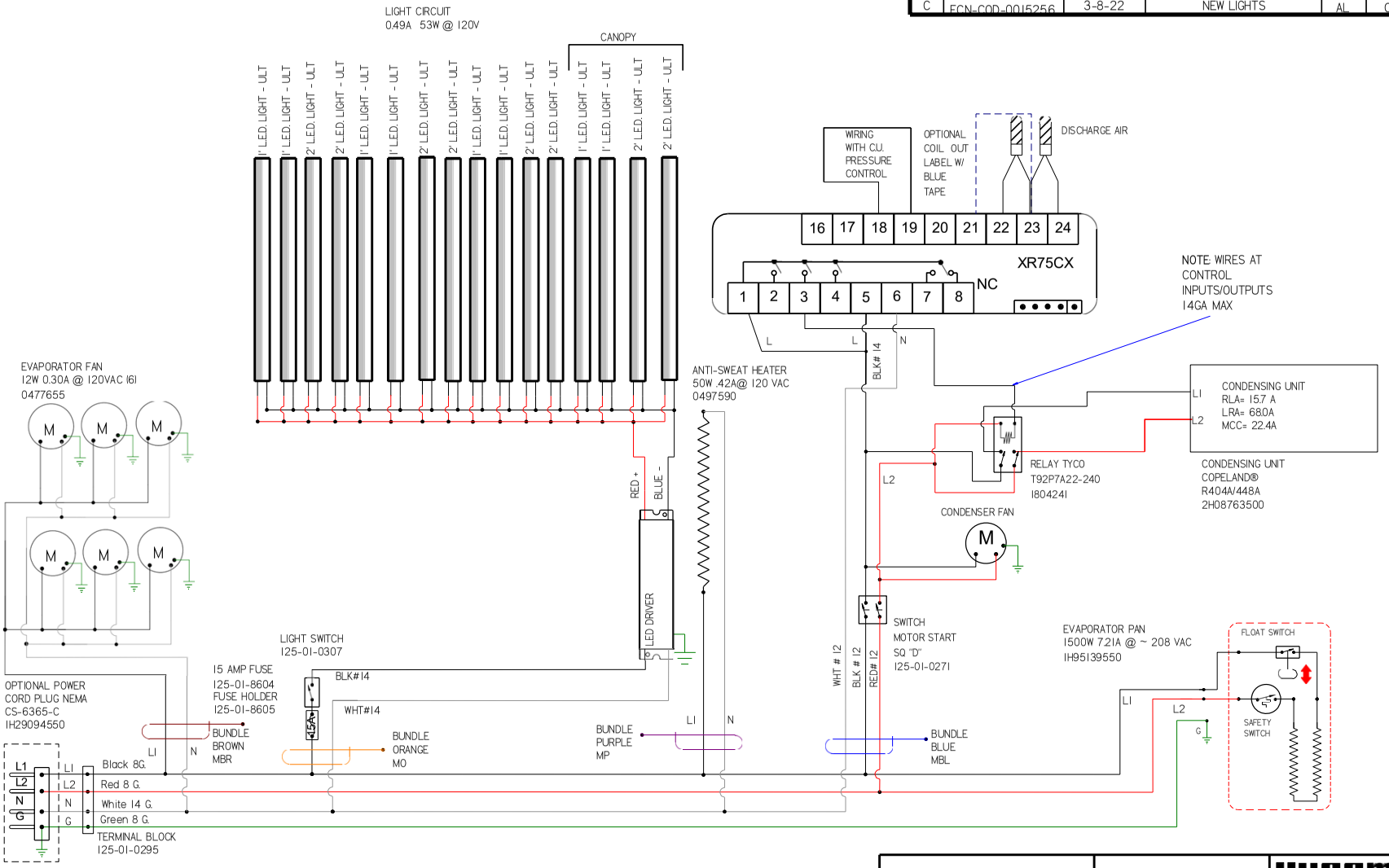
P/N 3157249 REV B

CND_10 WIRE DIAGRAM SIZE C

CIRCUIT #1

	LOADING	
	208	24
L1	22.2	25.
L2	V19.9	0V9 22.9 6

REVISION HISTORY						
REV	ECN	DATE	REVISION DESCRIPTION	REV BY	CHKD BY	APPR BY
A	ECN-COD-0014505	10-19-21	RELEASED TO PRODUCTION	CB	CB	CB
B	ECN-COD-0014506	10-21-21	LABELED COIL OUT SENSOR	CB	CB	CB
C	ECN-COD-0015256	3-8-22	NEW LIGHTS	AL	CB	CB



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FACTORY 14GA WIRE
FACTORY 10GA WIRE
FIELD WIRE
DO NOT SCALE DRAWING
SHEET 1 OF 1

HUSSMANN®
DIAGRAM-TY4-4X6I- S W/XR75 CTLR
P/N 3156815 REV C

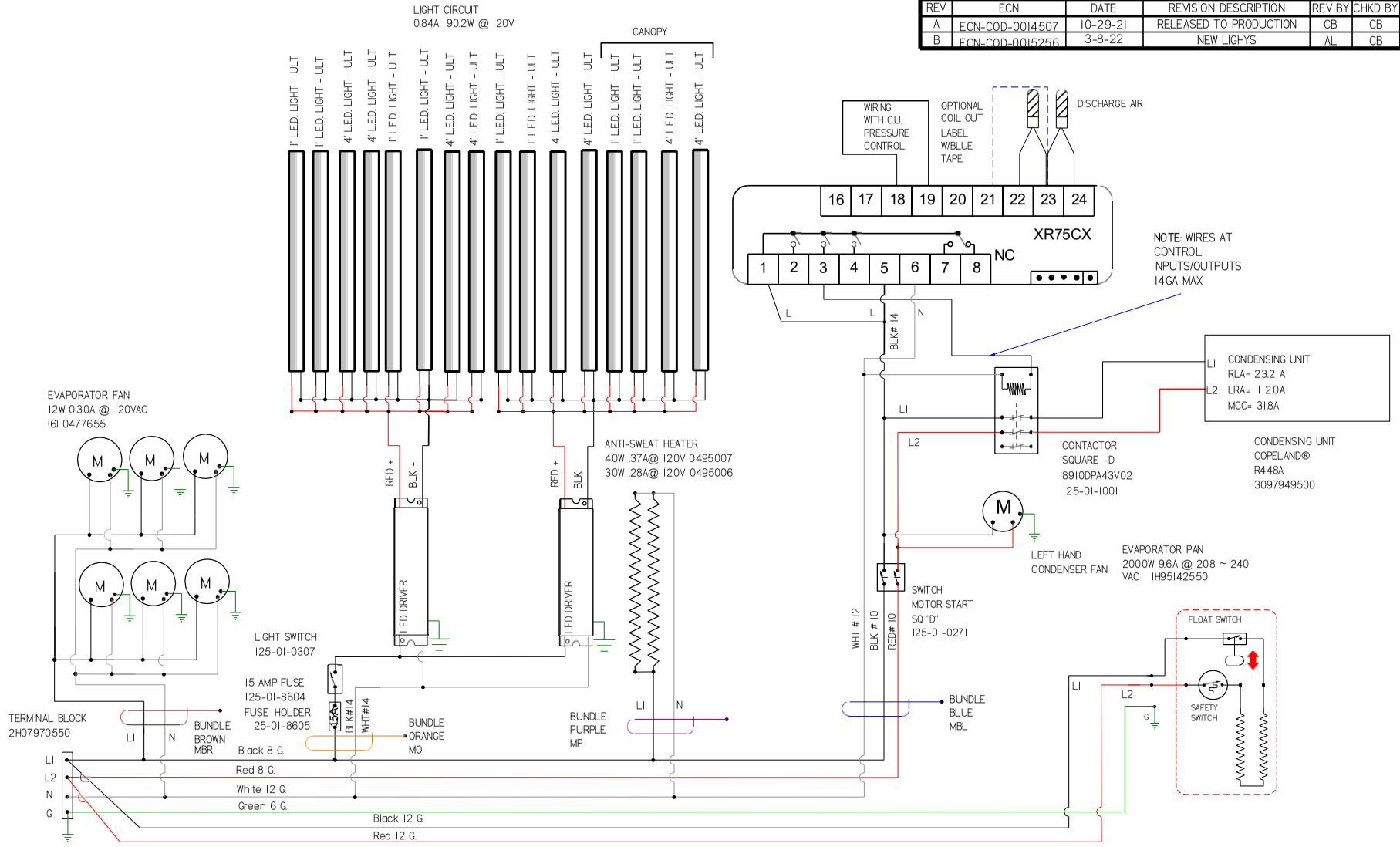
CN0_10 WIRE DIAGRAM SIZE C

CIRCUIT #1
LOADING

	208V	240
L1	31.3	36.1
L2	28.4	32.8

2

REVISION HISTORY						
REV	ECN	DATE	REVISION DESCRIPTION	REV BY	CHKD BY	APPR BY
A	ECN-COD-0014507	10-29-21	RELEASED TO PRODUCTION	CB	CB	CB
B	ECN-COD-0015256	3-8-22	NEW LIGHYS	AL	CB	CB



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BLUE = MBL	PURPLE = MP
BROWN = MBR	RED = MR
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LIGHT BLUE = MLB	

UL COLOR CODES / ABBREVIATIONS	
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BLACK = BK	GREEN = GN
BLUE = BL	BROWN = BN
YELLOW =	ORANGE =
YL GRAY = GY	OR VIOLET = VT

FACTORY 14GA WIRE
FACTORY 10GA WIRE
FIELD WIRE
DO NOT SCALE DRAWING
SHEET 1 OF 1

HUSSMANN®
DIAGRAM-TY4-4X8I- S W/XR75 CTLR
P/N 3157268 REV B

CND_10 WIRE DIAGRAM SIZE C

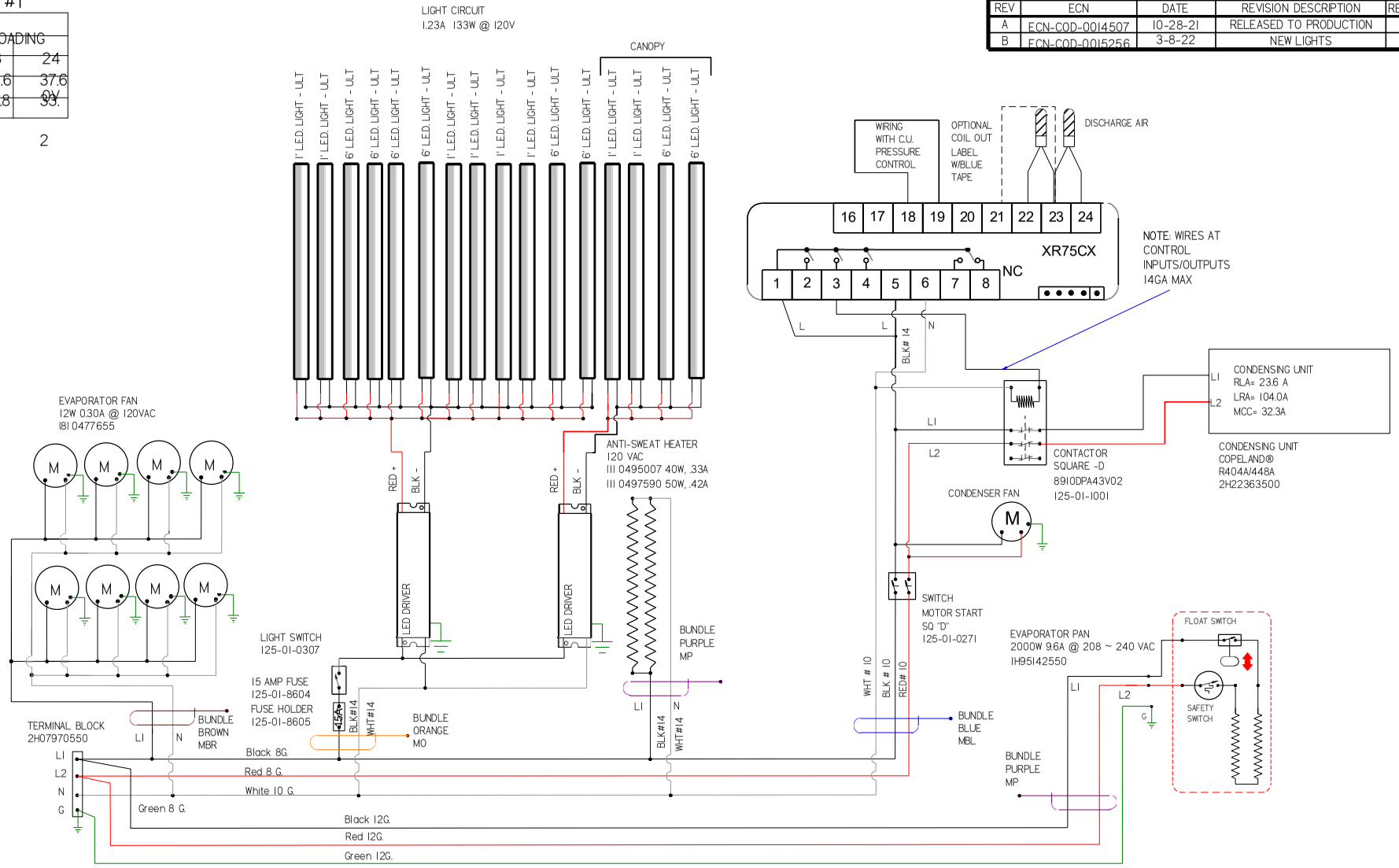
NOTES:
1. PRINTED DOCUMENT REQUIRED SETTING: ALL COLORS BLACK & WHITE
2. CASE & ANY REMOVABLE PANEL WITH ELECTRICAL PARTS MUST BE GROUNDED.
3. WHEN PASSING WIRES THROUGH METAL HOLES A GROMMET MUST BE USED

CIRCUIT #1

	LOADING	
	208	24
L1	32.6	37.6
L2	28.8	33.

2

REVISION HISTORY						
REV	ECN	DATE	REVISION DESCRIPTION	REV BY	CHKD BY	APPR BY
A	ECN-COD-0014507	10-28-21	RELEASED TO PRODUCTION	CB	CB	CB
B	ECN-COD-0015256	3-8-22	NEW LIGHTS	AL	CB	CB



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FACTORY 14GA WIRE
FACTORY 10GA WIRE
FIELD WIRE
DO NOT SCALE DRAWING
SHEET 1 OF 1

HUSSMANN®
DIAGRAM-TY4-4X101- S W/XR75 CTLR
P/N 3157261 REV B

CN0_10 WIRE DIAGRAM SIZE C

Parameter Programmed Report

TY					PGM0010A01		PGM0010A02	
					TANDARD CASE REV B 9/6/1		Sheetz REV B 9/21/17	
Parameter	**Code**	**Min**	**Max**	**Default**	**Actual (°C)**	**Actual (°F)**	**Actual (°C)**	**Actual (°F)**
Temperature (set point)								
Deli (Type I)	---	-50.0°C	50.0°C	2.0°C	-3.3	26	-5.0	23
Deli (Deli Type II)	---	-50.0°C	50.0°C	2.0°C	-5.0	23		
Thermostat								
Differential	r01	0.1 K	20.0K	2.0 K	5.6	10	4.5	8
Max. limitation of setpoint setting	r02	-49.0°C	50°C	50.0°C	5.6	42	3.9	39
Min. limitation of setpoint setting	r03	-50.0°C	49.0°C	-50.0°C	-7.8	18	-5.0	23
Adjustment of temperature indication	r04	-20.0 K	20.0 K	0.0 K	0.0 K		0.0 K	
Temperature unit (°C=0/°F=1)	r05	0	1	0	1		1	
Correction of the signal from S4	r09	-10.0 K	+10.0 K	0.0 K	0.0 K		0.0 K	
Correction of the signal from S3	r10	-10.0 K	+10.0 K	0.0 K	0.0 K		0.0 K	
Manual service, stop regulation, start regulation (-1, 0, 1)	r12	-1	1	0	1		1	
Displacement of reference during night operation	r13	-10.0 K	10.0 K	0.0 K	0.0 K		0.0 K	
Definition and weighting, if applicable, of thermostat sensors - S4% (100%=S4, 0%=S3)	r15	0%	100%	100%	100%		100%	
The heating function is started a number of degrees below the thermostats cutout temperature	r36	-15.0 K	-3.0 K	-15.0 K	-15.0 K		-15.0 K	
Activation of reference displacement r40	r39	OFF	ON	OFF	OFF		OFF	
Value of reference displacement (activate via r39 or DI)	r40	-50.0 K	50.0 K	0.0 K	0.0 K		0.0 K	
Alarm								
Delay for temperature alarm	A03	0 min	240 min	30 min	30 min		30 min	
Delay for door alarm	A04	0 min	240 min	60 min	60 min		60 min	
Delay for temperature alarm after defrost	A12	0 min	240 min	90 min	60		60	
High alarm limit	A13	-50.0°C	50.0°C	8.0°C	5.0	41	5.0	41
Low alarm limit	A14	-50.0°C	50.0°C	-30.0°C	-9.4	15	-9.4	15
Alarm delay DI1	A27	0 min	240 min	30 min	30 min		30 min	
Alarm delay DI2	A28	0 min	240 min	30 min	30 min		30 min	
Signal for alarm thermostat. S4% (100%=S4, 0%=S3)	A36	0%	100%	100%	100%		100%	
Compressor								
Min. ON-time	c01	0 min	30 min	0 min	1		1	
Min. OFF-time	c02	0 min	30 min	0 min	2		2	
Time delay for cutin of comp.2	c05	0 sec	999 sec	0 sec	0 sec		0 sec	
Compressor relay 1 must cutin and out inversely (NC-function)	c30	0 OFF	1 ON	0 OFF	0 OFF		0 OFF	
Defrost								
Defrost method (none/EL/GAS/BRINE)	d01	no	bri	EL	EL		EL	
Defrost stop temperature	d02	0.0°C	25.0°C	6.0°C	11.1	52	11.1	52
Interval between defrost starts	d03	0 hours	240 hours	8 hours	4		4	
Max. defrost duration	d04	0 min	180 min	45 min	50		50	
Displacement of time on cutin of defrost at start-up	d05	0 min	240 min	0 min	0 min		0 min	
Drip off time	d06	0 min	60 min	0 min	0 min		0 min	
Delay for fan start after defrost	d07	0 min	60 min	0 min	0 min		0 min	
Fan start temperature	d08	-15.0°C	0.0°C	-5.0°C	-5.0°C		-5.0°C	
Fan cutin during defrost 0: Stopped 1: Running 2: Running during pump down and defrost	d09	0	2	1	1		1	
Defrost Sensor (0=time, 1=S5. 2=S4)	d10	0	2	0	1		1	
Pump down delay	d16	0 min	60 min	0 min	0 min		0 min	
Drain delay	d17	0 min	60 min	0 min	0 min		0 min	
Max. aggregate refrigeration time between two defrosts	d18	0 hours	48 hours	0 hours	4		4	
Defrost on demand - S5 temperature's permitted variation during frost build-up. On central plant choose 20 K (=off)	d19	0.0 K	20.0 k	20.0 K	1.7	3	1.7	3
Delay of hot gas defrost	d23	0 min	60 min	0 min	0 min		0 min	
Fan								
Fan stop at cutout compressor	F01	no	yes	no	no		no	
Delay of fan stop	F02	0 min	30 min	0 min	0 min		0 min	
Fan stop temperature (S5)	F04	-50.0°C	50.0°C	50.0°C	50.0°C		50.0°C	
HACCP								
Actual temperature measurement for the HACCP	h01							
Last registered peak temperature	h10							
Selection of function and sensor for the HACCP HACCP function. 1 = S4 used (maybe also S3). 2 = S5	h11	0	2	0	0		0	
Alarm limit for the HACCP function	h12	-50.0°C	50.0°C	8.0°C	8.0°C		8.0°C	
Time delay for the HACCP alarm	h13	0 min.	240 min.	30 min.	30 min.		30 min.	
Select signal for the HACCP function. S4% (100% = S4,	h14	0%	100%	100%	100%		100%	

Parameter Programmed Report

Real time clock								
Six start times for defrost. Setting of hours. 0=OFF	t01-t06	0 hours	23 hours	0 hours	0 hours		0 hours	
Six start times for defrost. Setting of minutes. 0=OFF	t11-t16	0 min	59 min	0 min	0 min		0 min	
Clock - Setting of hours	t07	0 hours	23 hours	0 hours	0 hours		0 hours	
Clock - Setting of minute	t08	0 min	59 min	0 min	0 min		0 min	
Clock - Setting of date	t45	1	31	1	1		1	
Clock - Setting of month	t46	1	12	1	1		1	
Clock - Setting of year	t47	0	99	0	0		0	
Miscellaneous								
Delay of output signals after start-up	o01	0 s	600 s	5 s	5 s		5 s	
Input signal on DI1. Function:	o02	1	11	0	0		0	
Network address	o03	0	240	0	0		0	
On/Off switch (Service Pin message)	o04	OFF	ON	OFF	OFF		OFF	
Access code 1 (all settings)	o05	0	100	0	0		0	
Used sensor type (Pt /PTC/NTC)	o06	Pt	ntc	Pt	Pt		Pt	
Display step = 0.5 (normal 0.1 at Pt sensor)	o15	no	yes	no	no		no	
Max hold time after coordinated defrost	o16	0 min	60 min	20	20		20	
Select signal for display view. S4% (100%=S4, 0%=S3)	o17	0%	100%	100%	100%		100%	
Input signal on DI2. Function:	o37	0	12	0	0		0	
Configuration of light function (relay 4)	o38	1	3	1	1		1	
Activation of light relay (only if o38=2)	o39	OFF	ON	OFF	OFF		OFF	
Rail heat On time during day operations	o41	0%	100%	100	100		100	
Rail heat On time during night operations	o42	0%	100%	100	100		100	
Rail heat period time (On time + Off time)	o43	6 min	60 min	10 min	10 min		10 min	
Case cleaning. 0=no case cleaning. 1=Fans only. 2=All	o46	0	2	0	0		0	
Selection of EL diagram. See overview page 6	o61	1	10	1	1		1	
Download a set of predetermined settings. See	o62	0	6	0	0		0	
Access code 2 (partly access)	o64	0	100	0	0		0	
Save the controllers present settings to the	o65	0	25	0	0		0	
Load a set of settings from the programming key	o66	0	25	0	0		0	
Replace the controllers factory settings with the	o67	OFF	On	OFF	OFF		OFF	
Service								
Status codes are shown on page 17	S0-S33							
Temperature measured with S5 sensor	u09							
Status on DI1 input. on/1=closed	u10							
Temperature measured with S3 sensor	u12							
Status on night operation (on or off) 1=closed	u13							
Temperature measured with S4 sensor	u16							
Thermostat temperature	u17							
Read the present regulation reference	u28							
Status on DI2 output. on/1=closed	u37							
Temperature shown on display	u56							
Measured temperature for alarm thermostat	u57							
Status on relay for cooling	u58							
Status on relay for fan	u59							
Status on relay for defrost	u60							
Status on relay for railheat	u61							
Status on relay for alarm	u62							
Status on relay for light	u63							
Status on relay for valve in suction line	u64							
Status on relay for compressor 2	u67							

This warning does not mean that Hussmann products will cause cancer or reproductive harm, or is in violation of any product-safety standards or requirements. As clarified by the California State government, Proposition 65 can be considered more of a ‘right to know’ law than a pure product safety law. When used as designed, Hussmann believes that our products are not harmful. We provide the Proposition 65 warning to stay in compliance with California State law. It is your responsibility to provide accurate Proposition 65 warning labels to your customers when necessary. For more information on Proposition 65, please visit the California State government website.

Danfoss Controller

ENGINEERING TOMORROW

User Guide

Controller for temperature control
AK-CC 210

ADAP-KOOL® Refrigeration control systems

① Open Camera

② IPhone User
Hold the camera up to the QR code

Android User
Open QR Code Reader app if necessary.
Hold the camera up to the QR code

③ Tap the notification to be taken to the destination of the QR code

Dixell Controller

026-1210 Rev 3 03-FEB-2015

XR75CX Digital Controller for Medium-Low Temperature Refrigeration Applications Installation and Operation Manual

① Open Camera

② IPhone User
Hold the camera up to the QR code

Android User
Open QR Code Reader app if necessary.
Hold the camera up to the QR code

③ Tap the notification to be taken to the destination of the QR code

Maintenance

Case Cleaning

To insure long life, proper sanitation and minimum maintenance costs, the refrigerator should be thoroughly cleaned frequently. SHUT OFF FAN BEFORE CLEANING: It can be unplugged within the case, or shut off entire case at the source. The interior bottom may be wiped with any domestic soap or detergent based cleaners. Sanitizing solutions will not harm the interior bottom,

WARNING! DO NOT USE WATER HOSES! A self contained case empties into an evaporator pan that WILL OVERFLOW IF TOO MUCH WATER IS INTRODUCED during cleaning

- USE WATER AND A MILD DETERGENT FOR THE EXTERIOR ONLY
- Wipe interior with damp non abrasive cloth. Soap and hot water are not enough to kill bacteria; a sanitizing solution must be included with each cleaning process to eliminate bacteria.
- Clean any visible debris surrounding or on top of the drain location. The drain is located under the deck pans.
- DO NOT USE A CHLORINATED CLEANER ON ANY SURFACE.
- DO NOT USE ABRASIVES OR STEEL WOOL SCOURING PADS (these will mar the finish)
- DO NOT USE A CLEANING OR SANITIZING SOLUTION THAT HAS AN OIL BASE (these will dissolve the butyl sealants) or an AMMONIA BASE (this will corrode the copper components of the case)

Service

- Replace Filter every 6 months or as needed to maintain efficient operation.(if applicable)
- To maintain good refrigeration performance, a refrigeration service person should be called periodically (at least twice a year) to clean the discharge honeycomb and remove any accumulated dirt from the condenser coil and condensate evaporator pan on self-contained models. POOR CIRCULATION OF AIR THROUGH THE CONDENSER COIL WILL RESULT IN POOR REFRIGERATION PERFORMANCE.
- Dirt accumulation inside the condensate evaporator pan will reduce the pan's capacity and affect the efficiency of the heater causing a burned out heater and an overflow of defrost water onto the store floor.

Tips and Troubleshooting

Before calling for service:

- Check power. Ensure reliable electrical power supply to the equipment
- Check shelf loading. Overstocking will adversely affect case performance.
- If frost is collecting on fixture or product, verify that store Humidity Control is working properly, and that no outside doors/windows allow moisture into store.

Service Tips

WARNING
ALWAYS DISCONNECT THE ELECTRICAL POWER AT THE MAIN DISCONNECT WHEN SERVICING OR REPLACING ANY ELECTRICAL COMPONENT OF THIS REFRIGERATOR. THIS INCLUDES, BUT IS NOT LIMITED TO SUCH ITEMS AS FANS AND THERMOSTATS.

Fan Blade Replacement

The evaporator fan is located directly under the deck pan. Should the fan blade ever need servicing. ALWAYS REPLACE THE FAN BLADE WITH THE RAISED EMBOSSING SIDE OF THE BLADE INSTALLED TOWARD THE MOTOR.

Honeycomb Removal & Cleaning

CAUTION: DO NOT TEAR THE HONEYCOMB

1) Remove the honeycomb assembly as follows:

Insert a small Phillips screwdriver behind the rear edge of the honeycomb on the right hand end and gently pull down. The bottom of the honeycomb will drop down. Continue down the length of the case, lifting the honeycomb out.

2) To clean honeycomb:

Mix powdered detergent, in warm water. (5 to 7 Tablespoons per gallon)

Immerse or spot clean the honeycomb. Use care not to damage the cell structure of the honeycomb.

Rinse thoroughly in clean water. Shake excess water from the honeycomb and dry. (if heat is used, do not exceed 140 F dry heat)

3) **Install honeycomb** by inserting the notched side up against the deflector and press upwards inserting the bottom of the honeycomb into the back ledge. Slide along the honeycomb, pressing the front edge upward into the ledge. Be careful no to damage the cells or cut yourself on the edges of the honeycomb.

Ballast Replacement

The power supply for the LED fixtures is located under the case in a dedicated electrical box.

For access to the ballast:

- Remove Close-off panels (See Close-off Removal for reference)
- Remove screws to grille to expose electrical conduit?
- Replace or service the ballast as required and replace the canopy in reverse order of removal.

User Information

Stocking

Improper temperature and lighting will cause serious product loss. Discoloration, dehydration and spoilage can be controlled with proper use of the equipment and handling of product. Product temperature should always be maintained at a constant and proper temperature. This means that from the time the product is received, through storage, preparation and display, the temperature of the product must be controlled to maximize life of the product. Hussmann cases were not designed to “heat up” or “cool down” product - but rather to maintain an item’s proper temperature for maximum shelf life. To achieve the protection required always:

1. Minimize processing time to avoid damaging temperature rise to the product. Product should be at proper temperature.
2. Keep the air in and around the case area free of foreign gasses and fumes or food will rapidly deteriorate.
3. Maintain the display merchandisers temperature controls as outlined in the refrigerator section of this manual.
4. Do not place any product into these refrigerators until all controls have been adjusted and they are operating at the proper temperature. Allow merchandiser to operate a minimum of three (3) hours before stocking with any product.
5. When stocking, never allow the product to extend beyond the recommended load limit. Air discharge and return air flue must be unobstructed at all times to provide proper refrigeration.
6. Avoid the use of supplemental fl ood or spot lighting. Display light intensity has been designed for maximum visibility and product life at the factory.

Case Cleaning

Long life and satisfactory performance of any equipment are dependent upon the care given to it. To insure long life, proper sanitation and minimum maintenance costs, the refrigerator should be thoroughly cleaned frequently. SHUT OFF FAN DURING CLEANING PROCESS. It can be unplugged within the case, or shut off entire case at the source. The interior bottom may be cleaned with any domestic soap or detergent based cleaners. Sanitizing solutions will not harm the interior bottom, however, these solutions should always be used according to the Hussmann’s directions. It is essential to establish and regulate cleaning procedures. This will minimize bacteria causing discoloration which leads to degraded product appearance and significantly shortening product shelf life.

Soap and hot water are not enough to kill this bacteria. A sanitizing solution must be included with each cleaning process to eliminate this bacteria.

1. Scrub thoroughly, cleaning all surfaces, with soap and hot water.
2. Rinse with hot water, but do not flood.
3. Apply the sanitizing solution according to Hussmann’s directions.
4. Rinse thoroughly.
5. Dry completely before resuming operation.

Plexiglass and Acrylic Care

Improper cleaning not only accelerates the cleaning cycle but also degrades the quality of this surface. Normal daily buffing motions can generated static cling attracting dust to the surface. Incorrect cleaning agents or cleaning cloths can cause micro scratching of the surface, causing the plastic to haze over time.

Cleaning

Hussmann recommends using a clean damp chamois, or a paper towel marked as “dust and abrasive free” with 210® Plastic Cleaner and Polish available by calling Sumner Labs at 1-800-542-8656. Hard, rough cloths or paper towels will scratch the acrylic and should not be used.

Service Record

Last service date: **By:**

HUSSMANN®/Chino

Additional copies of this publication may be obtained by contacting:

Hussmann® Chino
13770 Ramona Avenue • Chino, California 91710
(909) 628-8942 FAX
(909) 590-4910
(800) 395-9229

www.hussmann.com

The *MODEL NAME* and *SERIAL NUMBER* is required in order to provide you with the correct parts and information for your particular unit.

They can be found on a small metal plate on the unit.
Please note them below for future reference.

MODEL:

SERIAL NUMBER: