

Portion of parts removed for clarity.

Coils, fans and TXVs are modular with one per 3 or 4 foot section.

12 foot merchandiser shown.

NSF Certification

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

| | | | |
|--------------------------------|--------|---|---------|
| Performance Data | Page 2 | Estimated Shipping Weights | Page 6 |
| Product Data (AHRI Statistics) | Page 2 | Shelf Options | Page 6 |
| Cross Section | Page 3 | Wiring Diagrams | Page 7 |
| Plan View | Page 4 | QR Code for Parts and Product Information | Page 11 |
| Electrical Loads | Page 5 | Revision History | Page 11 |

Data sheet-Excel MF5X

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.

Excel MF5X

Meat & Deli

Refrigeration Data ¹

| MF5X | | Optimal Shelf Life |
|---------------|---|--------------------|
| Application | | Meat & Deli |
| Unlit Shelves | Discharge Air °F (°C) | 32 (0) |
| | Average Evaporator °F (°C) ² | 28 (-2.22) |
| | Unit Sizing °F (°C) | 26 (-3.3) |
| | Parallel Btu/hr/ft (Watts/m) | 1324 (1273) |
| | Conventional Btu/hr/ft (Watts/m) | 1444 (1388) |
| Lit Shelves | Discharge Air °F (°C) | 30 (-1.11) |
| | Average Evaporator °F (°C) ² | 26 (-3.3) |
| | Unit Sizing °F (°C) | 24 (-4.44) |
| | Parallel Btu/hr/ft (Watts/m) | 1326 (1312) |
| | Conventional Btu/hr/ft (Watts/m) | 1484 (1427) |

Notes:

1. All data based on store temperature and humidity that does not exceed NSF Type 1 ambient conditions of 75°F and 55% relative humidity except where noted.
2. Average evaporator temperature shown. Use dew point for high glide refrigerants for unit sizing. Care should be taken to use the dew point in PT tables for measuring and adjusting superheat. Adjust evaporator pressure as needed to maintain discharge air temperature shown.

Defrost Data

| | |
|---|--------------------------------|
| Frequency (hours between defrost) | 6 |
| Defrost Water ³ | 10.5 lb/ft/day (15.62 kg/m) |
| ³ (± 15% based on case configuration and product loading). | |
| OFFTIME | |
| Time (minutes) | 30 |
| ELECTRIC OR GAS | Not Available |

Conventional Controls

| | |
|---------------------|-------------------------------|
| Low Pressure Backup | |
| Control CI/CO | 17°F /7°F -8.3°C / -13.9°C |

Total Working Refrigerant Charge ⁴

Air-Cooled

With Recommended Condensing Unit Installed

| | | | |
|-------|--------------|---|---------|
| 4 ft | 4 lbs, 8 oz | / | 2.02 kg |
| 6 ft | 5 lbs, 14 oz | / | 2.68 kg |
| 8 ft | 9 lbs, 10 oz | / | 4.35 kg |
| 12 ft | 11 lbs | / | 4.99 kg |

Water-Cooled

With Recommended HMDSLMT Condensing Unit Installed

| | | | |
|-------|--------------|---|---------|
| 4 ft | 3 lbs, 10 oz | / | 1.63 kg |
| 6 ft | 3 lbs, 13 oz | / | 1.72 kg |
| 8 ft | 4 lbs, 6 oz | / | 2.00 kg |
| 12 ft | 5 lbs, 13 oz | / | 2.63 kg |

⁴ The Total Refrigerant Charge includes the case and condensing unit. Both ship pre-charged with a portion of the total refrigerant.

Product Data

| | |
|---|---|
| Recommended Usable Cube ⁶ (Cu Ft/Ft) | 6.97 ft ³ /ft (2.12 m ³ /m) |
| AHRI Total Display Area ⁵ (Sq Ft/Ft) | 3.96 ft ² /ft (1.21 m ² /m) |
| Shelf Area ⁶ (Sq Ft/Ft) | 8.38 ft ² /ft (2.55 m ² /m) |

⁵ Computed using AHRI 1200 standard methodology: Total Display Area, ft² [m²]/Unit of Length, ft [m]

⁶ Shelf Surface Area and Recommended Usable Cube is composed of bottom deck plus standard shelf complement for this model: (2) rows of 16-in. shelves and (2) rows of 18-in. shelves, evenly distributed vertically.

Excel Freedom Multi-deck Merchandiser,
5 Display Levels

Excel MF5X
Meat & Deli

DOE 2017
Energy Efficiency
Compliant

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

Dimensions shown as in. and (mm).

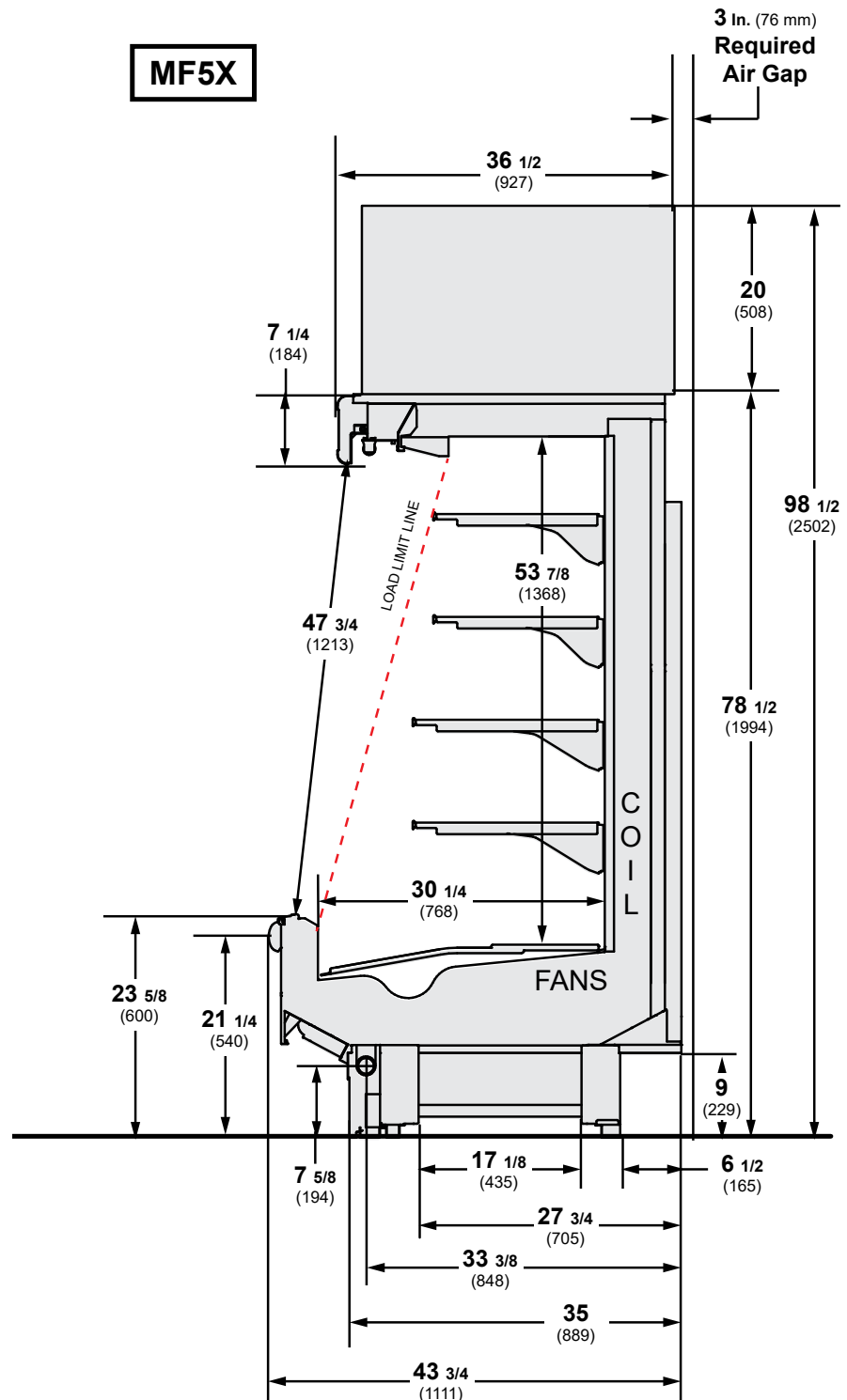
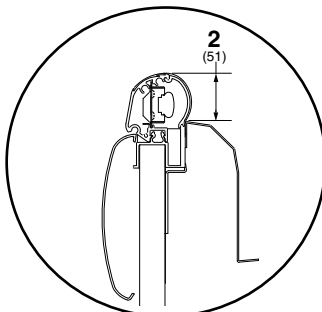
Other optional kits (top piping and vent fans) add to the overall case height.

3-in. between back to back cases.

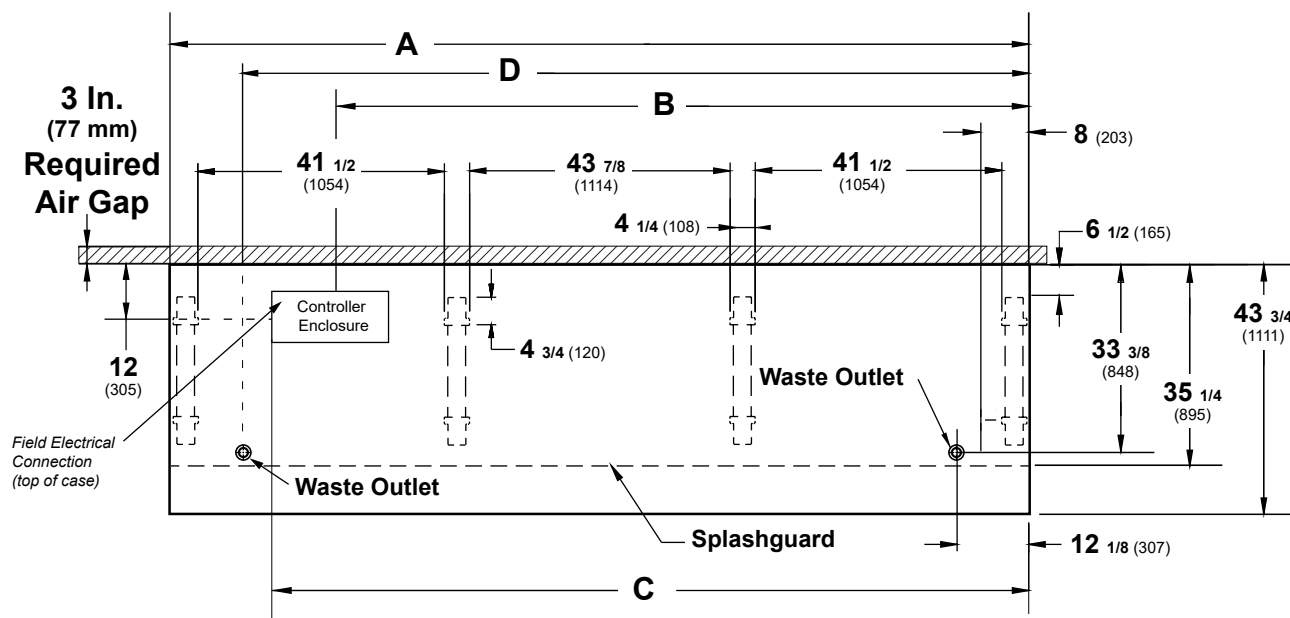
Shelf complement shown as tested:

2 rows of 16-in. shelves and 2 rows of 18-in. shelves spaced equally between bottom display pan and interior top panel.

OPTIONAL RAIL LIGHT



Dimensions shown as inches and (mm).



FRONT

| | 4 ft | 6 ft | 8 ft | 12 ft |
|---|---------------------------------------|---------------------------------------|---------------------------------------|--|
| General | | | | |
| (A) Case Length (without ends or partitions) | 48 ³ / ₈ (1229) | 72 ³ / ₈ (1838) | 96 ³ / ₈ (2448) | 144 ³ / ₈ (3670) |
| <i>(Each end and insulated partition adds 1 1/2 in. (38 mm) to case line up.)</i> | | | | |
| Maximum O/S dimension of case back to front <i>(includes bumper)</i> | 43 ³ / ₄ (1111) | 43 ³ / ₄ (1111) | 43 ³ / ₄ (1111) | 43 ³ / ₄ (1111) |
| Back of case to front of splashguard | 35 (889) | 35 (889) | 35 (889) | 35 (889) |
| Back of case to O/S edge of front leg | 32 (813) | 32 (813) | 32 (813) | 32 (813) |
| Distance between edges of external legs and center legs | NA | 29 1/2 (750) | 41 1/2 (1054) | 41 1/2 (1054) |
| Distance between edges of center legs | NA | NA | NA | 43 7/8 (1114) |
| Distance between front legs and splashguard | 2 3/4 (70) | 2 3/4 (70) | 2 3/4 (70) | 2 3/4 (70) |
| Electrical Service (Electrical Field Wiring connection point) | | | | |
| (B) RH End of case to center of top electrical enclosure | 24 (610) | 48 (1219) | 72 (1829) | 120 1/8 (3051) |
| Back of case to center of top electrical enclosure | 12 (305) | 12 (305) | 12 (305) | 12 (305) |
| Length of top electrical enclosure | 24 1/8 (613) | 24 1/8 (613) | 24 1/8 (613) | 24 1/8 (613) |
| (C) RH End of case to LH end of top electrical enclosure | 36 (914) | 60 (1524) | 84 (2134) | 132 1/8 (3356) |
| Waste Outlets (One each end) | | | | |
| (D) RH End of case to the center of LH waste outlet | 36 1/4 (921) | 60 1/4 (1530) | 84 1/4 (2140) | 132 3/8 (3363) |
| RH End of case to the center of RH waste outlet | 12 1/8 (307) | 12 1/8 (307) | 12 1/8 (307) | 12 1/8 (307) |
| Back O/S of case to center of waste outlets | 33 3/8 (848) | 33 3/8 (848) | 33 3/8 (848) | 33 3/8 (848) |
| Schedule 40 PVC drip pipe | 1 1/4 (32) | 1 1/4 (32) | 1 1/4 (32) | 1 1/4 (32) |

Electrical Data

Excel MF5X
Meat & Deli

| Number of Fans | 4 ft | 6ft | 8 ft | 12 ft |
|----------------|------|-----|------|-------|
| 10 in. (25W) | 1 | - | 2 | 3 |
| 8 in. (7W) | - | 4 | - | - |

| Evaporator Fan | Amperes | | | | Watts | | | |
|-------------------------------|---------|------|------|-------|-------|-----|------|-------|
| | 4 ft | 6 ft | 8 ft | 12 ft | 4 ft | 6ft | 8 ft | 12 ft |
| 120V 50/60Hz Energy Efficient | 0.60 | 0.76 | 1.20 | 1.80 | 36 | 56 | 72 | 108 |

| Minimum Circuit Ampacity | 4 ft | 6 ft | 8 ft | 12 ft |
|-------------------------------|------|------|------|-------|
| 120V 50/60Hz Energy Efficient | 0.80 | 0.96 | 1.40 | 2.00 |

| Maximum Over Current Protection | 4 ft | 6 ft | 8 ft | 12 ft |
|---------------------------------|------|------|------|-------|
| 120V | 20 | 20 | 20 | 20 |

Lighting

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.

| | Amperes | | | | Watts | | | |
|--------------------------|---------|------|------|-------|-------|------|------|-------|
| | 4 ft | 6 ft | 8 ft | 12 ft | 4 ft | 6 ft | 8 ft | 12 ft |
| STANDARD LIGHTING | | | | | | | | |
| Ultra Canopy | | | | | | | | |
| 1 Row | 0.16 | 0.26 | 0.32 | 0.48 | 19 | 31 | 43 | 64 |
| Canopy | | | | | | | | |
| 1 Row | 0.16 | 0.26 | 0.32 | 0.48 | 19 | 32 | 39 | 58 |
| 1 Row HO | 0.22 | 0.33 | 0.44 | 0.66 | 27 | 40 | 53 | 79 |
| Shelf | | | | | | | | |
| 1 Row of Shelves | 0.08 | 0.12 | 0.16 | 0.25 | 10 | 14 | 20 | 30 |
| 2 Rows of Shelves | 0.16 | 0.23 | 0.33 | 0.49 | 20 | 28 | 40 | 59 |
| 3 Rows of Shelves | 0.25 | 0.35 | 0.49 | 0.74 | 30 | 42 | 59 | 89 |
| 4 Rows of Shelves | 0.33 | 0.47 | 0.66 | 0.99 | 40 | 56 | 79 | 119 |
| 5 Rows of Shelves | 0.41 | 0.59 | 0.82 | 1.24 | 49 | 71 | 99 | 148 |
| Rail Light | | | | | | | | |
| 1 Row | 0.08 | 0.12 | 0.16 | 0.25 | 10 | 14 | 20 | 30 |

120V Lighting Circuit Total = Standard Lighting + Total Optional Lighting + Optional Shelf Lighting

The condensing unit amps must be used to calculate the total electrical load, refer to the condensing unit data sheet.

Electrical service: 208V 4 wire service when used with optional field-installed condensing unit, 120V 3 wire service for case with no condensing unit.

ENDS or PARTITIONS

Each standard end and each insulated partition adds 1 1/2 in. (38 mm) to case line up. Optional view end with end bumper adds 3 3/4 in. (95 mm).

PHYSICAL DATA

| | |
|---------------------------------|-------|
| Merchandiser Drip Pipe (in.) | 1 1/4 |
| Schedule 40 PVC | |
| Merchandiser Liquid Line (in.) | 3/8 |
| Merchandiser Suction Line (in.) | 7/8 |

ESTIMATED SHIPPING WEIGHT †

| Case | 4 ft | 6 ft | 8 ft | 12 ft | Solid End (each) |
|---------|-----------|------------|------------|------------|---------------------|
| lb (kg) | 800 (363) | 1000 (454) | 1100 (499) | 1500 (680) | 100 (45) |

† Actual weights will vary according to optional kits included.

Shelf Options

Approved shelf sizes for standard (horizontal, 2-3 position brackets) displays:

12-inch
14-inch
16-inch
18-inch

Contact engineering for non-standard (4 position brackets or other) display recommendations.

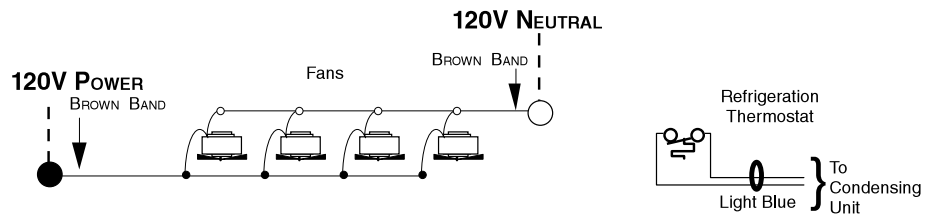
Standard shelf complement for test purposes: (2) rows of 16-in. shelves and (2) rows of 18-in. shelves, evenly distributed vertically

Fan Wiring Offtime Defrost

Excel MF5X
Meat & Deli

1, 2, 3 & 4 Fans

4 ft — 1 Fan
6 ft — 4 Fans
8 ft — 2 Fans
12 ft — 3 Fans



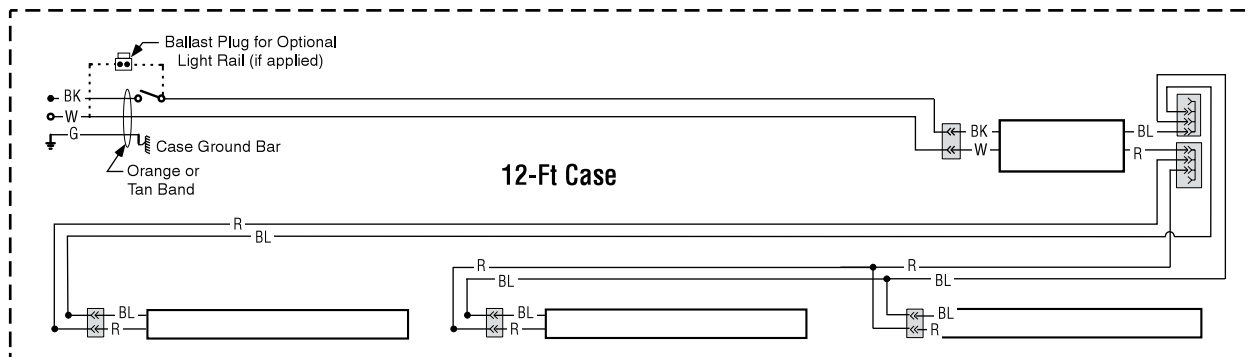
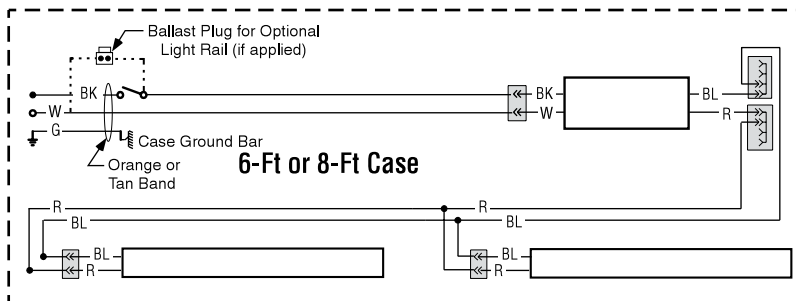
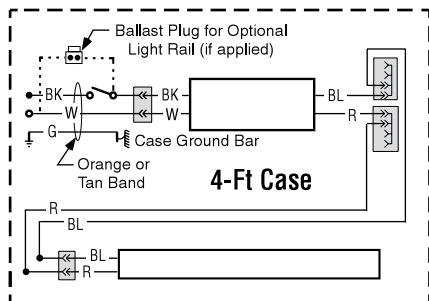
WARNING

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

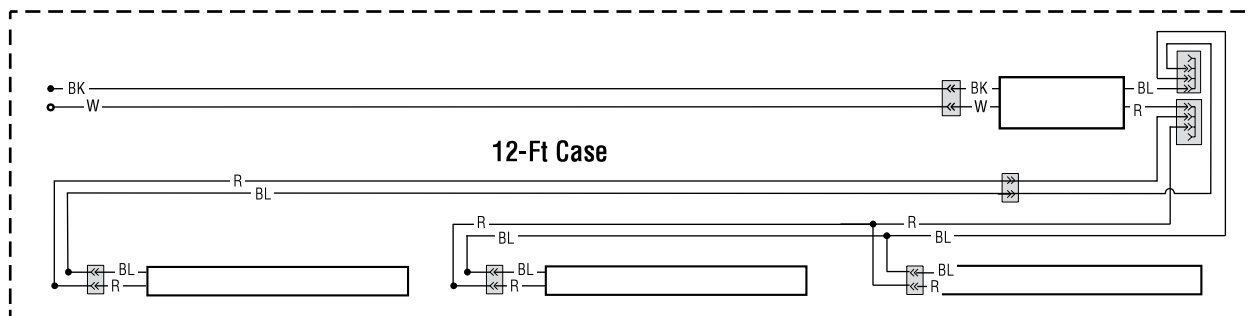
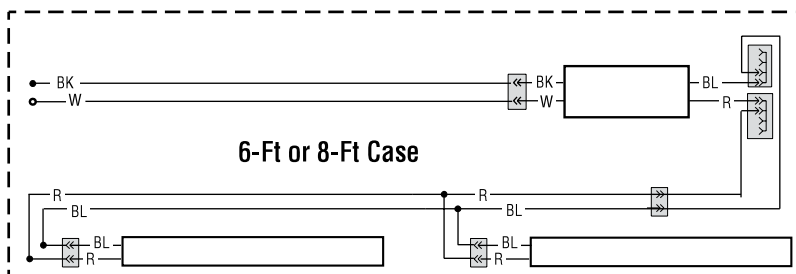
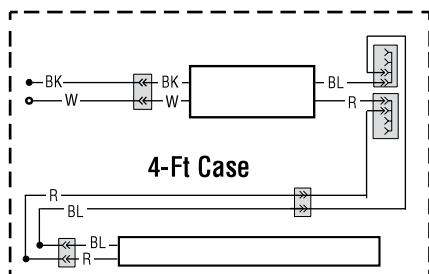
R = Red Y = Yellow G = Green BL = Blue BK = Black W = White

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

LED Canopy Lighting — 1 Row



LED Rail Lighting — 1 Row



WARNING

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

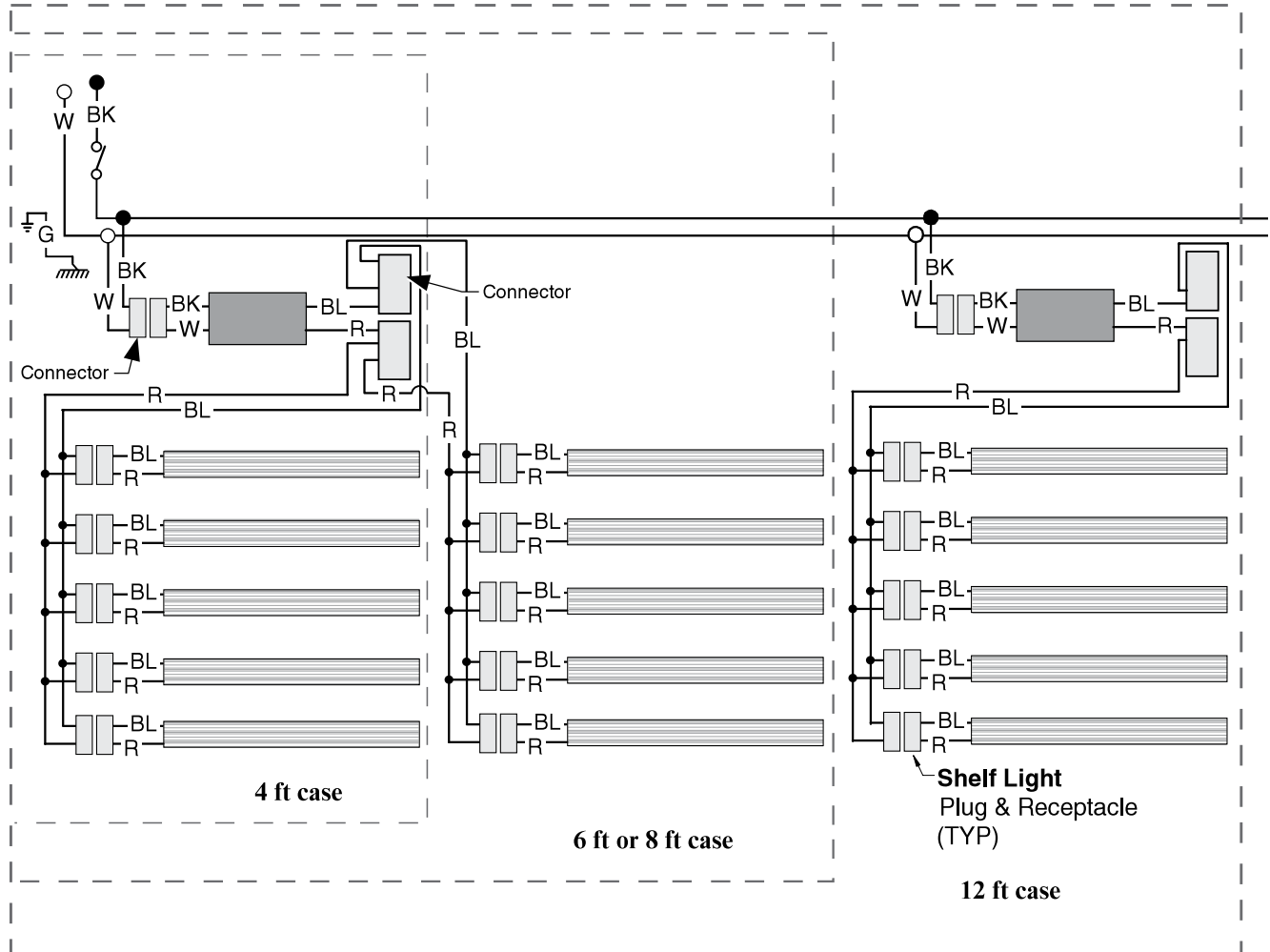
R = Red Y = Yellow G = Green BL = Blue BK = Black W = White

● = 120V POWER ○ = 120V NEUTRAL ⚡ = FIELD GROUND ⏏ = CASE GROUND

Optional Shelf Lighting LED Fixtures

Excel **MF5X**
Meat & Deli

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

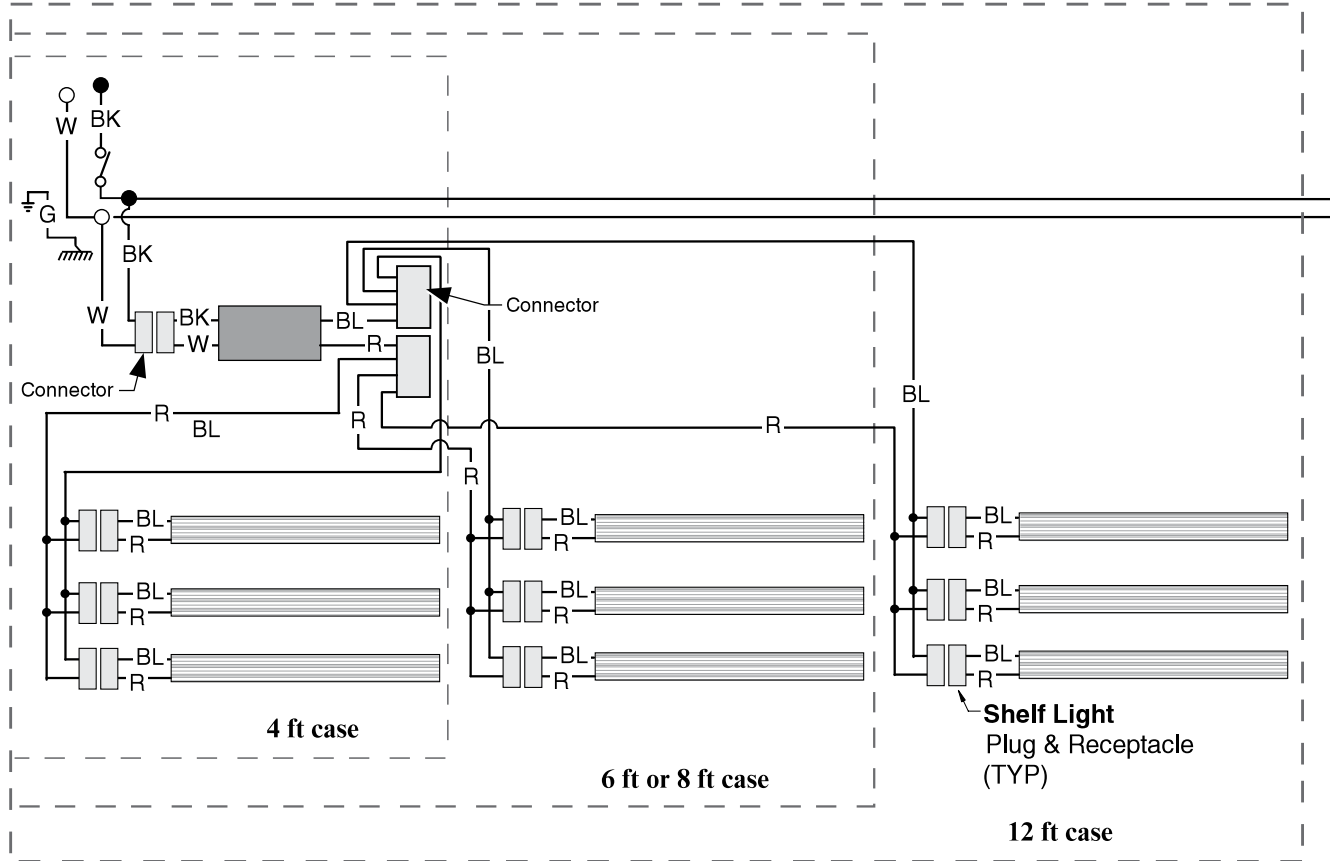


WARNING

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

R = Red G = Green BL = Blue BK = Black W = White
 ● = 70V POWER ○ = 70V NEUTRAL ⏏ = FIELD GROUND ⏏ = CASE GROUND

Optional Shelf Harness and LED Light Circuits for 2 or 3 Rows of Shelves



WARNING

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

R = Red G = Green BL = Blue BK = Black W = White
 ● = 120V POWER ○ = 120V NEUTRAL ⚡ = FIELD GROUND *mm* = CASE GROUND

Estimating Refrigeration and Electrical Load (for comparison purposes only)

Case Btu

To determine Btu for a case, refer to the performance data chart on page 2. Select lit or unlit shelves, then select the type of remote refrigeration system (parallel or conventional), which will give Btu/hr/ft. Multiply this number by the length of the case to determine Btu per hour.

Case Electrical

Refer to store legend to determine number of circuits. Lighting should be specified in store legend.

Fan electrical load for a case is computed by selecting the case length and fan voltage on page 5. For example, a 12 ft case uses 3 fans. The store legend specifies fans on a 230V circuit. In this instance, fans use 0.50 Amps and the MCA is 0.70. When applied, ambient fans, anti-sweat heaters, controllers, etc. must be included in the MCA. Include lights in the MCA if lights are on same circuit.

Lights may be on a separate circuit. To estimate lighting load: select case length (12 ft), canopy lighting [standard or optional] (here 0.70 for standard), and shelf or rail lighting [maximum for which case is wired] (1.48 for six shelves); then add together [$0.48 + 1.48 = 1.96$ amps for 120V] (for 230V, multiply $1.96 * 0.52 = 1.02$).

Line Sizing — Refer to store legend.

Hussmann Line Sizing Charts are engineered for use with Hussmann refrigeration equipment.



Scan the QR code with your mobile device to access additional product information or order parts.

Parts may also be ordered at:

parts.hussmann.com

Call toll free: 1.855.487.7778

Revision History

Revision A: April 2020: Original Issue.