



## *Multi-Shelf Merchandiser Series*

**SERIES: MDW**

**Operation Manual**



## BKI LIMITED WARRANTY

2812 Grandview Drive • Simpsonville, SC 29680 • USA  
(864) 963-3471 • Toll Free: (800) 927-6887 • Fax: (864) 963-5316

- WHAT IS COVERED** This warranty covers defects in material and workmanship under normal use, and applies only to the original purchaser providing that:
- The equipment has not been accidentally or intentionally damaged, altered or misused;
  - The equipment is properly installed, adjusted, operated and maintained in accordance with national and local codes, and in accordance with the installation and operating instructions provided with this product.
  - The serial number rating plate affixed to the equipment has not been defaced or removed.
- WHO IS COVERED** This warranty is extended to the original purchaser and applies only to equipment purchased for use in the U.S.A.
- COVERAGE PERIOD**
- Warranty claims must be received in writing by BKI within one (1) year from date of installation or within one (1) year and three (3) months from data of shipment from the factory, whichever comes first.
  - COB Models: One (1) Year limited parts and labor.
  - COM Models: Two (2) Year limited parts and labor. COM convection ovens also have a two (2) year door warranty.
  - CO1 Models: Two (2) Year limited parts and labor. Five (5) Year limited door warranty.
  - BevLes Products: Two (2) Year limited parts and labor.
  - Warranty period begins the date of dealer invoice to customer or ninety (90) days after shipment date from BKI, whichever comes first.
- WARRANTY COVERAGE** This warranty covers on-site labor, parts and reasonable travel time and travel expenses of the authorized service representative up to (100) miles round trip and (2) hours travel time and performed during regular, weekday business hours.
- EXCEPTIONS** Any exceptions must be pre-approved in advance and in writing by BKI. The extended door warranty on convection ovens years 3 through 5 is a parts only warranty and does not include labor, travel, mileage or any other charges.
- EXCLUSIONS**
- Negligence or acts of God,
  - Thermostat calibrations after (30) days from equipment installation date,
  - Air and gas adjustments,
  - Light bulbs,
  - Glass doors and door adjustments,
  - Fuses,
  - Adjustments to burner flames and cleaning of pilot burners,
  - Tightening of screws or fasteners,
  - Failures caused by erratic voltages or gas suppliers,
  - Unauthorized repair by anyone other than a BKI Factory Authorized Service Center,
  - Damage in shipment,
  - Alteration, misuse or improper installation,
  - Thermostats and safety valves with broken capillary tubes,
  - Freight - other than normal UPS charges,
  - Ordinary wear and tear,
  - Failure to follow installation and/or operating instructions,
  - Events beyond control of the company.
- INSTALLATION** Leveling, as well as proper installation and check out of all new equipment - per appropriate installation and use materials – is the responsibility of the dealer or installer, not the manufacturer.
- REPLACEMENT PARTS** BKI genuine Factory OEM parts receive a (90) day materials warranty effective from the date of installation by a BKI Factory Authorized Service Center.
- Warranty is in lieu of all other warranties, expressed or implied, and all other obligations or liabilities on the manufacturer's part. BKI shall in no event be liable for any special, indirect or consequential damages, or in any event for damages in excess of the purchase price of the unit. The repair or replacement of proven defective parts shall constitute a fulfillment of all obligations under the terms of this warranty.

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**BKI Worldwide is a wholly owned subsidiary of Standex International Corporation.**

## Introduction

The MDW is a multi-tier, self-serve hot food merchandiser. It consists of heated shelves, individual shelf lighting, and electronics for powering the shelves, lighting the shelves and controlling the temperature of each shelf. This unit is for use with **prepackaged foods only**.

This unit is manufactured by BKI which assures you of the finest in design and engineering -- that it has been built with care and dedication -- using the best materials available. Attention to the operating instructions regarding proper installation, operation, and maintenance will result in long lasting dependability to insure the highest profitable return on your investment.

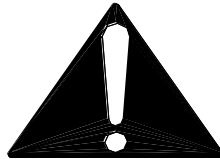
### **NOTICE**

PLEASE READ THIS ENTIRE MANUAL BEFORE OPERATING THE UNIT. If you have any questions, please contact your BKI Distributor. If they are unable to answer your questions, contact the BKI Technical Service Department, toll free: 1-800-927-6887. Outside the U.S., call 1-864-963-3471.

Floor and counter units must be sealed to the mounting surface after installation to conform to NSF requirements. (Dow Corning RTV #732 Multi purpose Sealant.)

## Safety Precautions

Always follow recommended safety precautions listed in this manual. Below is the safety alert symbol. When you see this symbol on your equipment, be alert to the potential for personal injury or property damage.



## Safety Signs and Messages

The following Safety signs and messages are placed in this manual to provide instructions and identify specific areas where potential hazards exist and special precautions should be taken. Know and understand the meaning of these instructions, signs, and messages. Damage to the equipment, death or serious injury to you or other persons may result if these messages are not followed.

### **⚠ DANGER**

This message indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.

### **⚠ WARNING**

This message indicates a potentially hazardous situation, which, if not avoided, could result in death or serious injury.

### **⚠ CAUTION**

This message indicates a potentially hazardous situation, which, if not avoided, may result in minor or moderate injury. It may also be used to alert against unsafe practices.

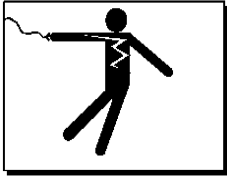
### **NOTICE**

This message is used when special information, instructions or identification are required relating to procedures, equipment, tools, capacities and other special data.

## Safe Work Practices

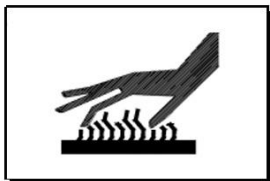


**California Residents Only.** This product can expose you to chemicals including chromium, and lead which are known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).



### Beware of High Voltage

This equipment uses high voltage. Serious injury can occur if you or any untrained or unauthorized person installs, services, or repairs this equipment. Always Use an Authorized Service agent to Service Your Equipment



### Beware of Hot Surfaces. Do Not Touch.

The shelves in this unit reach temperatures that can cause burns. Use caution when placing product on and removing product from the shelves. Do not touch any of the shelves when they are energized. A CAUTION HOT message is embossed on the front of each shelf to alert you of a potential hazard.



### Keep this manual with the Equipment

This manual is an important part of your equipment. Always keep it near for easy access. If you need to replace this manual, contact:

#### **BKI**

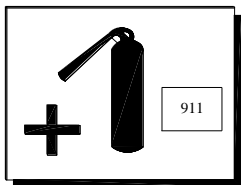
Technical Services Department  
2812 Grandview Drive  
Simpsonville, S.C. 29680  
Or call toll free: 1-800-927-6887  
Outside the U.S., call 864-963-3471



### Protect Children

Keep children away from this equipment. Children may not understand that this equipment is dangerous for them and others.

NEVER allow children to play near or operate your equipment.

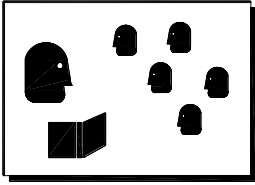


### Be Prepared for Emergencies

Be prepared for fires, injuries, or other emergencies.

Keep a first aid kit and a fire extinguisher near the equipment. You must use a 40-pound Type BC fire extinguisher and keep it within 25 feet of your equipment.

Keep emergency numbers for doctors, ambulance services, hospitals, and the fire department near your telephone.

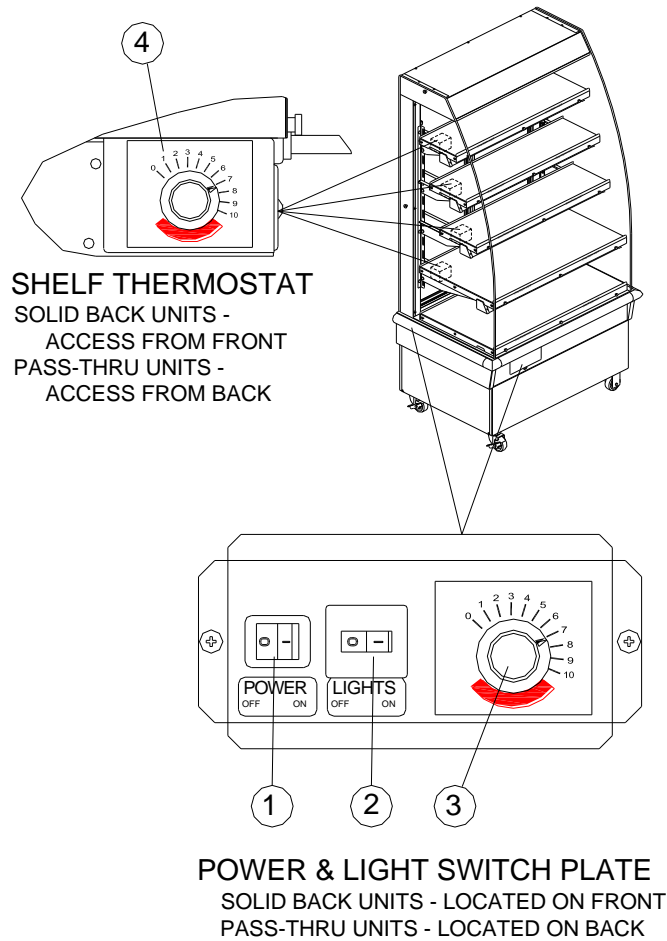


**Know your responsibilities as an Employer**

- Make certain your employees know how to operate the equipment.
- Make certain your employees are aware of the safety precautions on the equipment and in this manual.
- Make certain that you have thoroughly trained your employees about operating the equipment safely.
- Make certain the equipment is in proper working condition. If you make unauthorized modifications to the equipment, you will reduce the function and safety of the equipment as well as void the warranty.

## Operation

### Controls and Indicators



**Figure 1**

### Hardware Controls

Item #	Description	Function
1	Main Power Switch	Turns power On or Off to the entire unit. When placed in the On position, the shelf heaters are powered and the lights illuminate. When placed in the Off position, power is removed from the entire unit.
2	Lights Circuit Breaker	Provides circuit protection for the Lights. When placed in the On position (with the Power Switch in the On position) the lights illuminate. When placed in the Off position (with the Power Switch in the On position) power is removed from lights. If an overload occurs in the light circuit, the Circuit Breaker will trip causing the actuator to move to the Off position.
3	Thermostat for Base Warmer (Bottom Shelf)	Controls the surface temperature of the Base Warmer (Bottom Shelf). Set the Thermostat dial to a larger number setting to increase the temperature or a lower number setting to decrease the temperature.
4	Thermostat for Individual Shelf	Controls the surface temperature of the individual Shelf. Set the Thermostat dial to a larger number setting to increase the temperature or a lower number setting to decrease the temperature.

## **Shelf Temperature**

The temperature of the shelves is controlled by thermostats on each shelf and on the base of the unit (see Figure 1). Set each shelf thermostat on “7” for the initial start up of the unit.

## **Power Up and Preheating**

1. Ensure that the power supply cord is connected to an appropriate power receptacle.
2. Place the POWER ON/OFF switch in the ON position.
3. Place the LIGHTS ON/OFF circuit breaker in the ON position.
4. Allow the unit to preheat for a minimum of 30 minutes before loading it with product.

Check Federal and State Health and Sanitation Regulations for internal temperature required for holding cooked foods for sale. Maintaining these temperatures often tends to allow continued cooking of certain products. Therefore, smaller amounts of bulk foods should be displayed at non-peak periods and the unit refilled as needed.

***This equipment is not designed to heat-up or cook food. All meat and vegetable products should be preheated to a minimum of 160°F (70°C) before being placed in the unit.***

## **Temperature Adjustment**

After placing the product onto the shelves, it may be necessary to adjust the individual thermostats in order to maintain the proper internal temperature for the product on display. A thermometer should be used to read the internal temperature of each product. The thermostats should be adjusted to the lowest possible setting that will maintain the proper product temperature.

## **Operational Guidelines**

***Only use product packaging suitable for the application.***

Keep portable meat thermometers on hand. Check the food temperatures hourly. Rotate the food products. Foods loaded in first should be served first as much as is practical.

Foods held for long periods of time are more difficult to maintain at proper temperature. Also, freshness and product quality diminish if foods are held too long. Most areas of the country have sanitation regulations governing how long foods can be held. Make certain to check with your local authorities.

## **Unit Shutdown**

1. Remove product from the unit.
2. Place the POWER ON/OFF circuit breaker in the OFF position.
3. Place the LIGHTS ON/OFF circuit breaker in the OFF position.
4. After the unit has cooled down, remove any residue from the shelves and clean the unit thoroughly.

## Installation

### ***Unpacking and Handling***

**YOU** are responsible for filling all freight claims with the delivering truck line. Inspect all cartons and crates for damage as soon as they arrive. If damage to cartons or crates is found, or if a shortage is found, note this on the bill of lading (all copies) prior to signing.

If damage is found when the equipment is opened, immediately call the delivering truck line and follow up the call with a written report indicating concealed damage to your shipment. Ask for an immediate inspection of your concealed damage item. Packaging material **MUST** be retained to show the inspector from the truck line.

**⚠ WARNING** Do not place heavy objects on top of the unit or damage could occur. The units are not structurally designed to support excessive external loading.

Move the unit as close as possible to its permanent location before moving it off of the shipping pallet. Make certain there are no separately packed accessories before discarding packaging.

### ***Floor Model***

Follow the procedure below to level the unit and mount the kick plates. See **Error! Reference source not found.**

1. Slide kick plates, ends first, between the base frame and outer panels. Secure in raised position with tape. Make sure that the end kick plates fit behind the front and rear kick plates.
2. Using a carpenter's level on the lowest shelf, level the unit by adjusting the leg levelers at the corners of the unit.
3. Raise the low end of the unit to level it, do not lower the high end.
4. Check for level side-to-side and front-to-back.
5. Remove the tape holding the kick plates in raised position.
6. Make certain that the kick plates are flush to the floor.
7. Drill 9/64" diameter holes in the base frame to match the pre-drilled holes in the kick plates.
8. Attach the kick plates to the base frame with the #8x1/2" black sheet metal screws provided (SCR355).
9. Seal kick plates to floor using a silicone-type sealant (Dow Corning RTV #732 or equivalent).

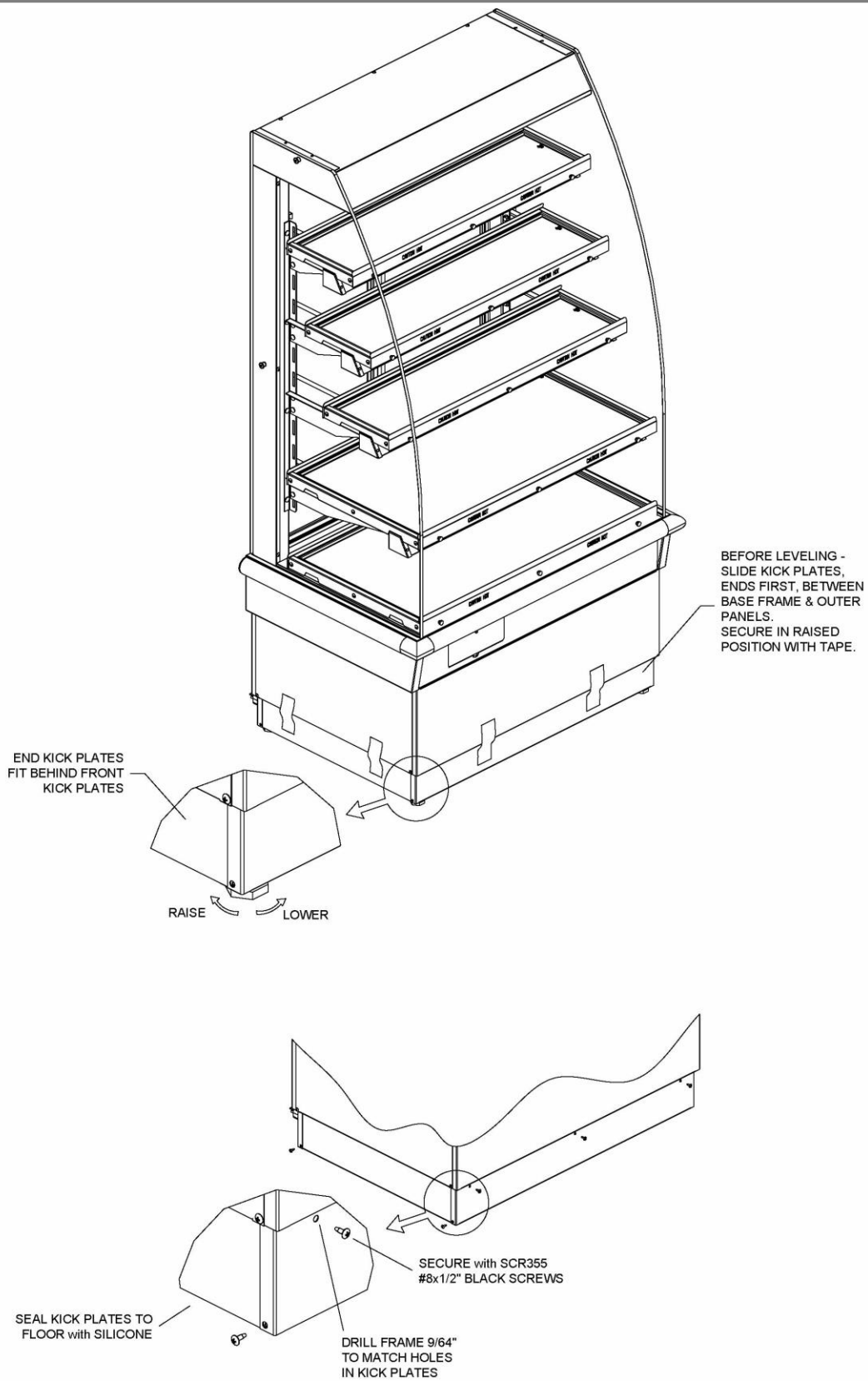


Figure 2

## Counter Model

Counter mounted units must be mounted on a level surface that can support the weight of the unit and its contents. Use a carpenter’s level to level the unit.

These units are to be sealed to the counter if required by local health codes. Seal the perimeter of the units to the counter using a silicone-type sealant (Dow Corning RTV #732 or equivalent).

## Caster Model

Caster mounted units must be moved to a permanent location and the two swivel casters locked before using.

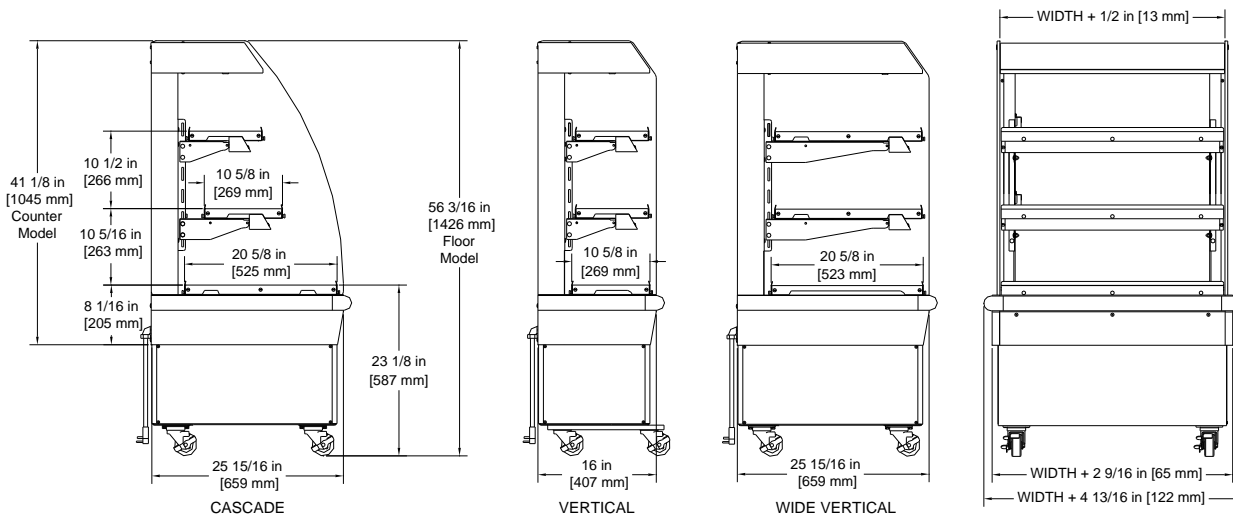
## Wiring

A wiring diagram for your specific model is included in this manual. The wiring diagram provides electrical specifications, an electrical schematic and a parts list. Refer to this wiring diagram and the unit rating plate for electrical information.

All electrical connections should be in compliance with the NEC and all applicable local codes by a licensed electrician. Refer to the wiring diagram furnished with your unit for the electrical specifications.

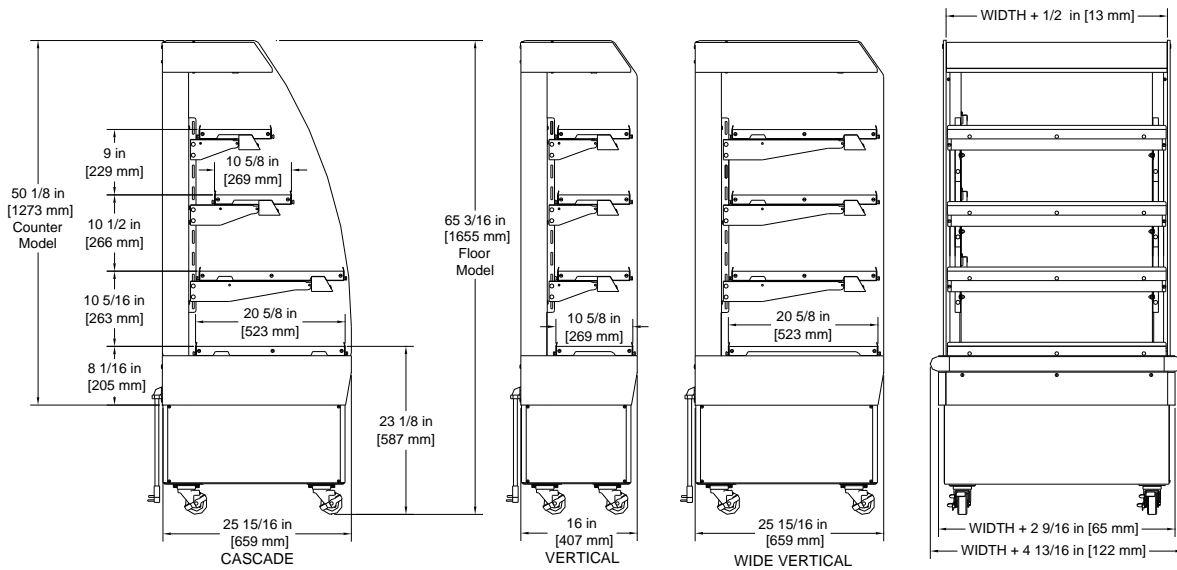
## Dimensions & Weights

Electrical Specifications – refer Wiring Diagram listed for each model.



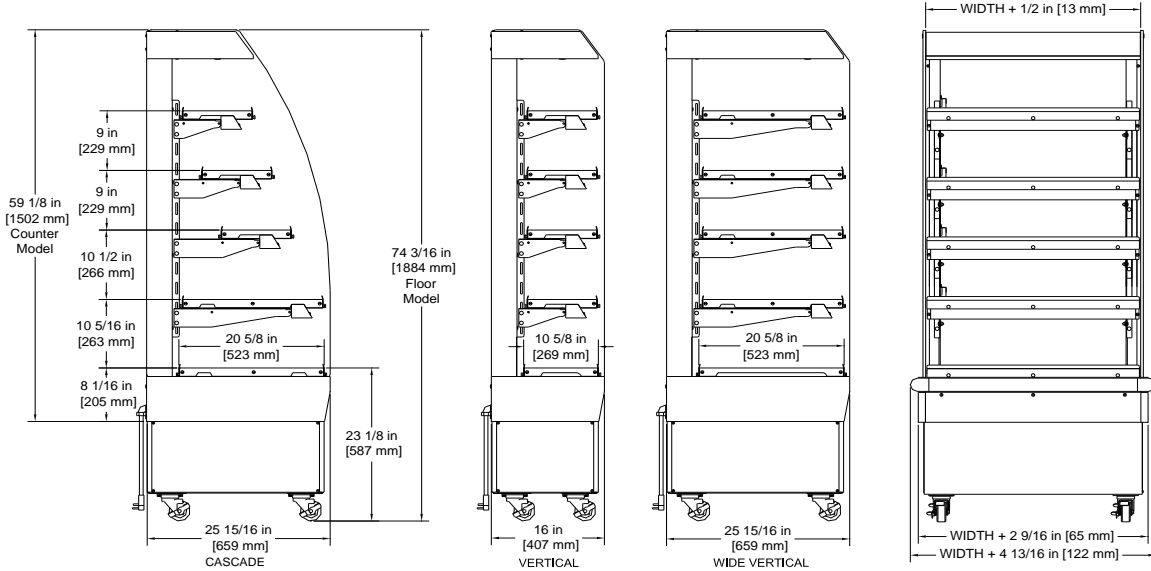
**Figure 3**  
3 Shelf Merchandisers

Model	Diagram	Width	Wiring Diagram	Shipping Wt.	
				Counter	Floor
MDW36-3C	CASCADE	36 in [914 mm]	EB68694600	300 lb [136 kg]	360 lb [163 kg]
MDW36-3V	VERTICAL	36 in [914 mm]	EB68694700	200 lb [91 kg]	240 lb [163 kg]
MDW36-3WV	WIDE VERTICAL	36 in [914 mm]	EB68694800	330 lb [150 kg]	390 lb [177 kg]
MDW48-3C	CASCADE	48 in [1219 mm]	EB68693600	380 lb [172 kg]	440 lb [200 kg]
MDW48-3V	VERTICAL	48 in [1219 mm]	EB68693700	280 lb [127 kg]	320 lb [145 kg]
MDW48-3WV	WIDE VERTICAL	48 in [1219 mm]	EB68693800	420 lb [190 kg]	480 lb [218 kg]



**Figure 4**  
4 Shelf Merchandisers

Model	Diagram	Width	Wiring Diagram	Shipping Wt.	
				Counter	Floor
MDW36-4C	CASCADE	36 in [914 mm]	EB68694300	480 lb [218 kg]	540 lb [245 kg]
MDW36-4V	VERTICAL	36 in [914 mm]	EB68694400	380 lb [172 kg]	420 lb [191 kg]
MDW36-4WV	WIDE VERTICAL	36 in [914 mm]	EB68694500	510 lb [231 kg]	570 lb [258 kg]
MDW48-4C	CASCADE	48 in [1219 mm]	EB68693300	560 lb [245 kg]	620 lb [281 kg]
MDW48-4V	VERTICAL	48 in [1219 mm]	EB68693400	460 lb [208 kg]	500 lb [227 kg]
MDW48-4WV	WIDE VERTICAL	48 in [1219 mm]	EB68693500	600 lb [272 kg]	660 lb [299 kg]



**Figure 5**  
5 Shelf Merchandisers

Model	Diagram	Width	Wiring Diagram	Shipping Wt.	
				Counter	Floor
MDW36-5C	CASCADE	36 in [914 mm]	EB68694000	480 lb [218 kg]	540 lb [245 kg]
MDW36-5V	VERTICAL	36 in [914 mm]	EB68694100	380 lb [172 kg]	420 lb [191 kg]
MDW36-5WV	WIDE VERTICAL	36 in [914 mm]	EB68694200	510 lb [231 kg]	570 lb [258 kg]
MDW48-5C	CASCADE	48 in [1219 mm]	EB68693000	560 lb [245 kg]	620 lb [281 kg]
MDW48-5V	VERTICAL	48 in [1219 mm]	EB68693100	460 lb [208 kg]	500 lb [227 kg]
MDW48-5WV	WIDE VERTICAL	48 in [1219 mm]	EB68693200	600 lb [272 kg]	660 lb [299 kg]

## Maintenance

**CAUTION** Failure to comply with the maintenance below could result in a serious accident.

**WARNING** Electrocutation, equipment failure or property damage could result if an unlicensed electrician performs electrical repair. Ensure that a licensed electrician performs electrical repair.

### Scheduled Maintenance

Use the following table to help manage scheduled maintenance activities.

Frequency	Performed By	Part	Activity
Daily	User	Unit	Clean the entire Unit. Refer to the cleaning procedure below.
Monthly	User	Shelf Power ON/OFF Circuit Breaker	Press push-to-test button to test overload, short circuit and ground fault protection capability.

### Cleaning

This unit should be cleaned at the end of each day. Use the following procedure:

**DANGER** Failure to remove power from this unit may cause severe electrical shock. This unit may have more than one disconnect switch.

1. Place the POWER ON/OFF circuit breaker in the OFF position.
2. Place the LIGHTS ON/OFF circuit breaker in the OFF position.
3. Allow unit to cool down.
4. Disconnect power from the unit by unplugging it from the power receptacle.
5. Remove product from the shelves.

**CAUTION** Always wear appropriate personal protection equipment during the cleaning process to guard against possible injury.  
Using abrasive cleaners may damage the cabinet finish. Use mild soap and water only. DO NOT USE OVEN CLEANER on this machine. Caustic cleaners will damage the equipment.  
Never get excess water on the unit as this can cause damage to the unit.  
This equipment is not intended to be cleaned with a water jet.

6. Use a mild soap and water solution to clean the unit.
7. Sponge the inside and outside with a mild soap and water solution.
8. Wipe the unit dry with a soft, clean cloth.

## Troubleshooting

Refer to the table below for troubleshooting information.

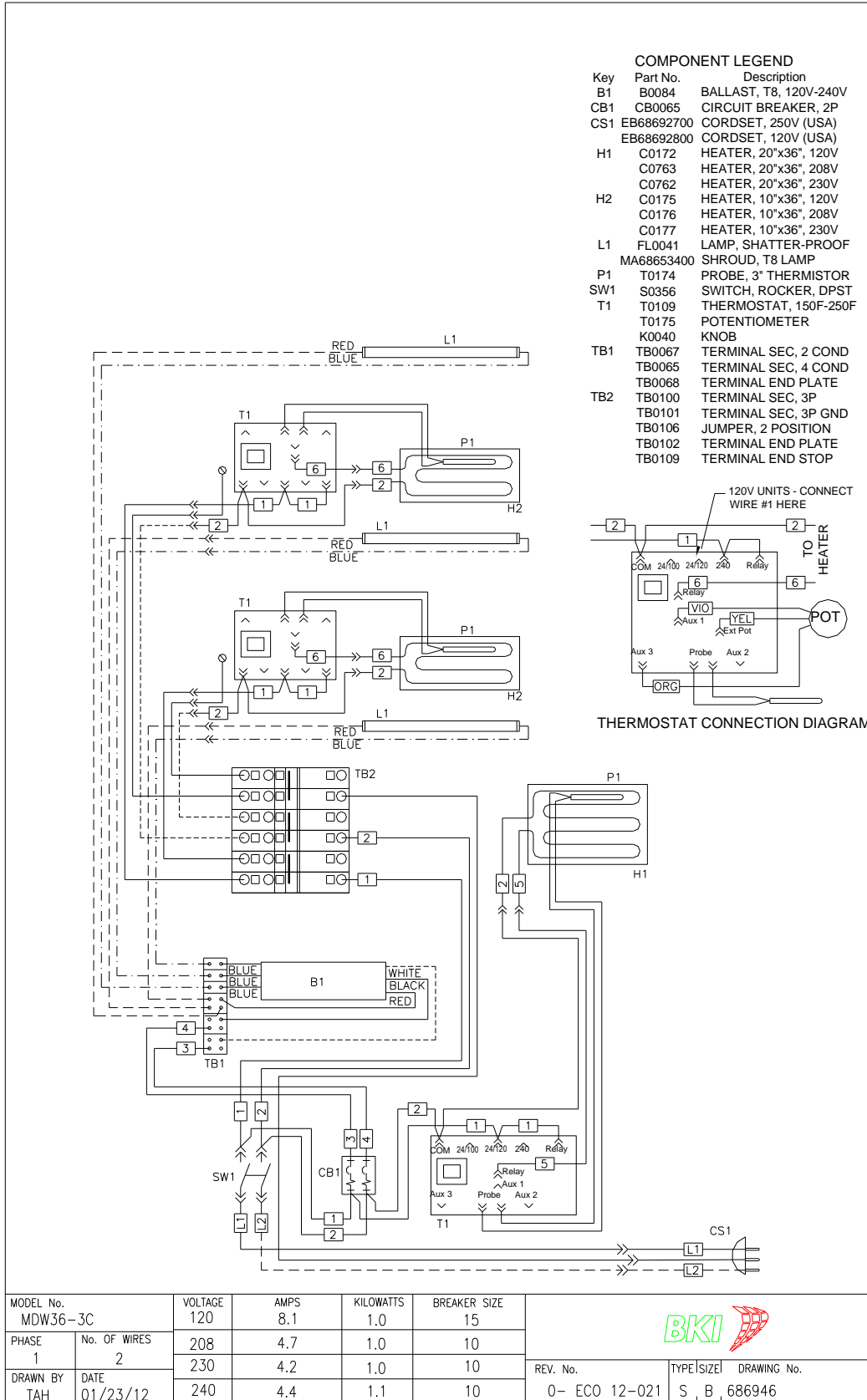
Problem	Cause	Possible Solution
<b>Shelves Not Heating and Lights Not On</b>	Unit not plugged into power receptacle.	Ensure unit power cord is connected to appropriate power receptacle.
	No Power to the unit.	Check circuit breaker or fuses at building power panel. If problem persists, contact an authorized BKI service agent for corrective action.
	Power switch is OFF and Lights circuit breaker is OFF.	Place the Power circuit breaker ON and the Lights circuit breaker ON.
<b>No Heat to Single Shelf</b>	Failed shelf component.	Contact an authorized BKI service agent for corrective action.
<b>Individual Light is not On</b>	Failed Fluorescent Lamp.	Replace lamp only with BKI shatter-proof lamp.
	Fail Lamp Ballast	Contact an authorized BKI service agent for corrective action.
<b>Holding Temperature Not Adequate</b>	Unit has not been preheated.	Refer to the preheating section on page 6. If problem persists, contact an authorized BKI service agent for corrective action.
	Product is below 160° F when loaded.	Check product temperature before loading the unit.
	Shelf temperature control not set properly.	Adjust the shelf temperature control. Refer to the section entitled Temperature Adjustment on page 6.
	Failed shelf component.	Contact an authorized BKI service agent for corrective action.

## Wiring Diagrams

Refer to the table below to find the wiring diagram associated with your unit.

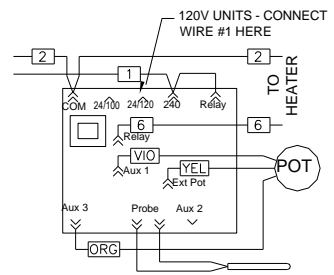
<b>Model</b>	<b>Drawing #</b>	<b>Page #</b>
MDW36-3C	SB68694600	16
MDW36-3V	SB68694700	17
MDW36-3VW	SB68694800	18
MDW36-4C	SB68694300	19
MDW36-4V	SB68694400	20
MDW36-4VW	SB68694500	21
MDW36-5C	SB68694000	22
MDW36-5V	SB68694100	23
MDW36-5VW	SB68694200	24
MDW48-3C	SB68693600	25
MDW48-3V	SB68693700	26
MDW48-3VW	SB68693800	27
MDW48-4C	SB68693300	28
MDW48-4V	SB68693400	29
MDW48-4VW	SB68693500	30
MDW48-5C	SB68693000	31
MDW48-5V	SB68693100	32
MDW48-5VW	SB68693200	33

MDW36-3C



COMPONENT LEGEND

Key	Part No.	Description
B1	B0084	BALLAST, T8, 120V-240V
CB1	CB0065	CIRCUIT BREAKER, 2P
CS1	EB68692700	CORDSET, 250V (USA)
	EB68692800	CORDSET, 120V (USA)
H1	C0172	HEATER, 20"x36", 120V
	C0763	HEATER, 20"x36", 208V
	C0762	HEATER, 20"x36", 230V
	C0175	HEATER, 10"x36", 120V
	C0176	HEATER, 10"x36", 208V
	C0177	HEATER, 10"x36", 230V
L1	FL0041	LAMP, SHATTER-PROOF
	MA68653400	SHROUD, T8 LAMP
P1	T0174	PROBE, 3' THERMISTOR
SW1	S0356	SWITCH, ROCKER, DPST
T1	T0109	THERMOSTAT, 150F-250F
	T0175	POTENTIOMETER
	K0040	KNOB
TB1	TB0067	TERMINAL SEC, 2 COND
	TB0065	TERMINAL SEC, 4 COND
TB2	TB0068	TERMINAL END PLATE
	TB0100	TERMINAL SEC, 3P
	TB0101	TERMINAL SEC, 3P GND
	TB0106	JUMPER, 2 POSITION
	TB0102	TERMINAL END PLATE
	TB0109	TERMINAL END STOP



THERMOSTAT CONNECTION DIAGRAM

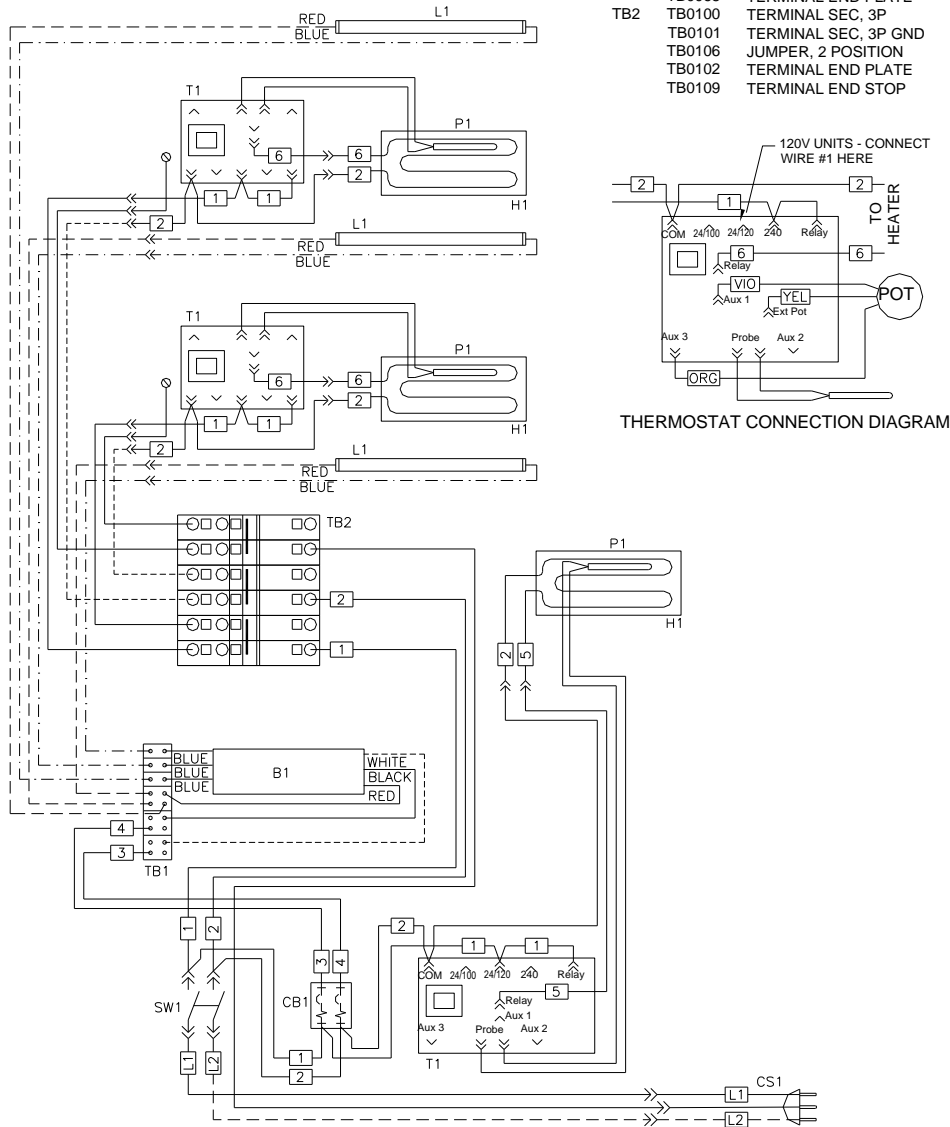
MODEL No.		VOLTAGE	AMPS	KILOWATTS	BREAKER SIZE	REV. No.	TYPE/SIZE	DRAWING No.
MDW36-3C		120	8.1	1.0	15			
PHASE	No. OF WIRES	208	4.7	1.0	10			
1	2	230	4.2	1.0	10			
DRAWN BY	DATE	240	4.4	1.1	10			
TAH	01/23/12							



MDW36-3V

**COMPONENT LEGEND**

Key	Part No.	Description
B1	B0084	BALLAST, T8, 120V-240V
CB1	CB0065	CIRCUIT BREAKER, 2P
CS1	EB68692700	CORDSET, 250V (USA)
	EB68692800	CORDSET, 120V (USA)
H1	C0175	HEATER, 10"x36", 120V
	C0176	HEATER, 10"x36", 208V
	C0177	HEATER, 10"x36", 230V
L1	FL0041	LAMP, SHATTER-PROOF
	MA68653400	SHROUD, T8 LAMP
P1	T0174	PROBE, 3" THERMISTOR
SW1	S0356	SWITCH, ROCKER, DPST
T1	T0109	THERMOSTAT, 150F-250F
	T0175	POTENTIOMETER
	K0040	KNOB
	TB1	TB0067
TB2	TB0065	TERMINAL SEC. 4 COND
	TB0068	TERMINAL END PLATE
TB2	TB0100	TERMINAL SEC. 3P
	TB0101	TERMINAL SEC. 3P GND
	TB0106	JUMPER, 2 POSITION
	TB0102	TERMINAL END PLATE
	TB0109	TERMINAL END STOP

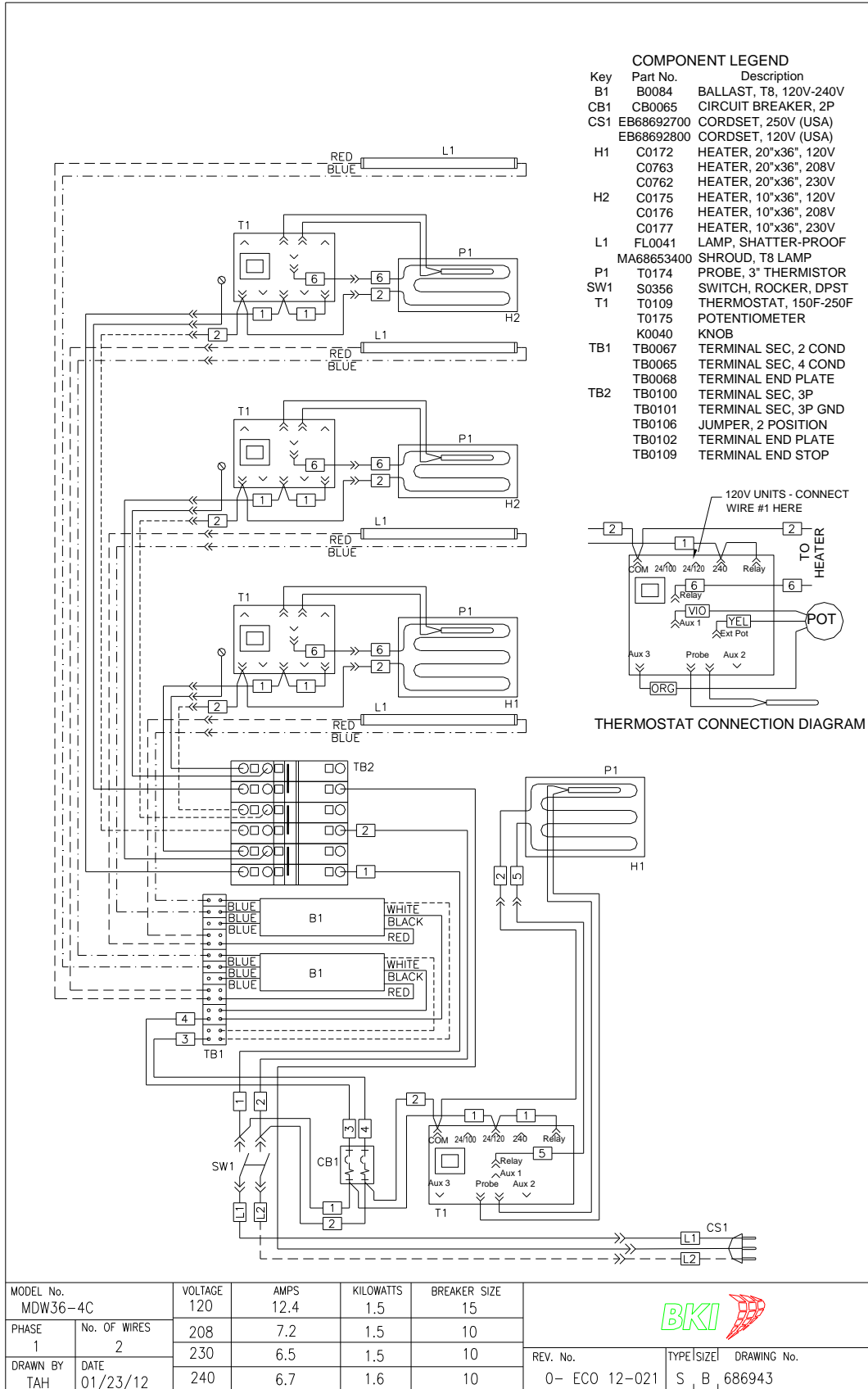


MODEL No.		VOLTAGE	AMPS	KILOWATTS	BREAKER SIZE	REV. No.	TYPE/SIZE	DRAWING No.
MDW36-3V		120	6.2	0.7	10			
PHASE	No. OF WIRES	208	3.6	0.7	10			
1	2	230	3.2	0.7	10			
DRAWN BY	DATE	240	3.4	0.8	10			
TAH	01/23/12							



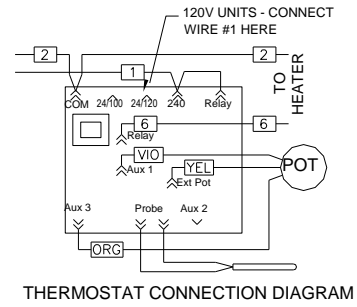


MDW36-4C



**COMPONENT LEGEND**

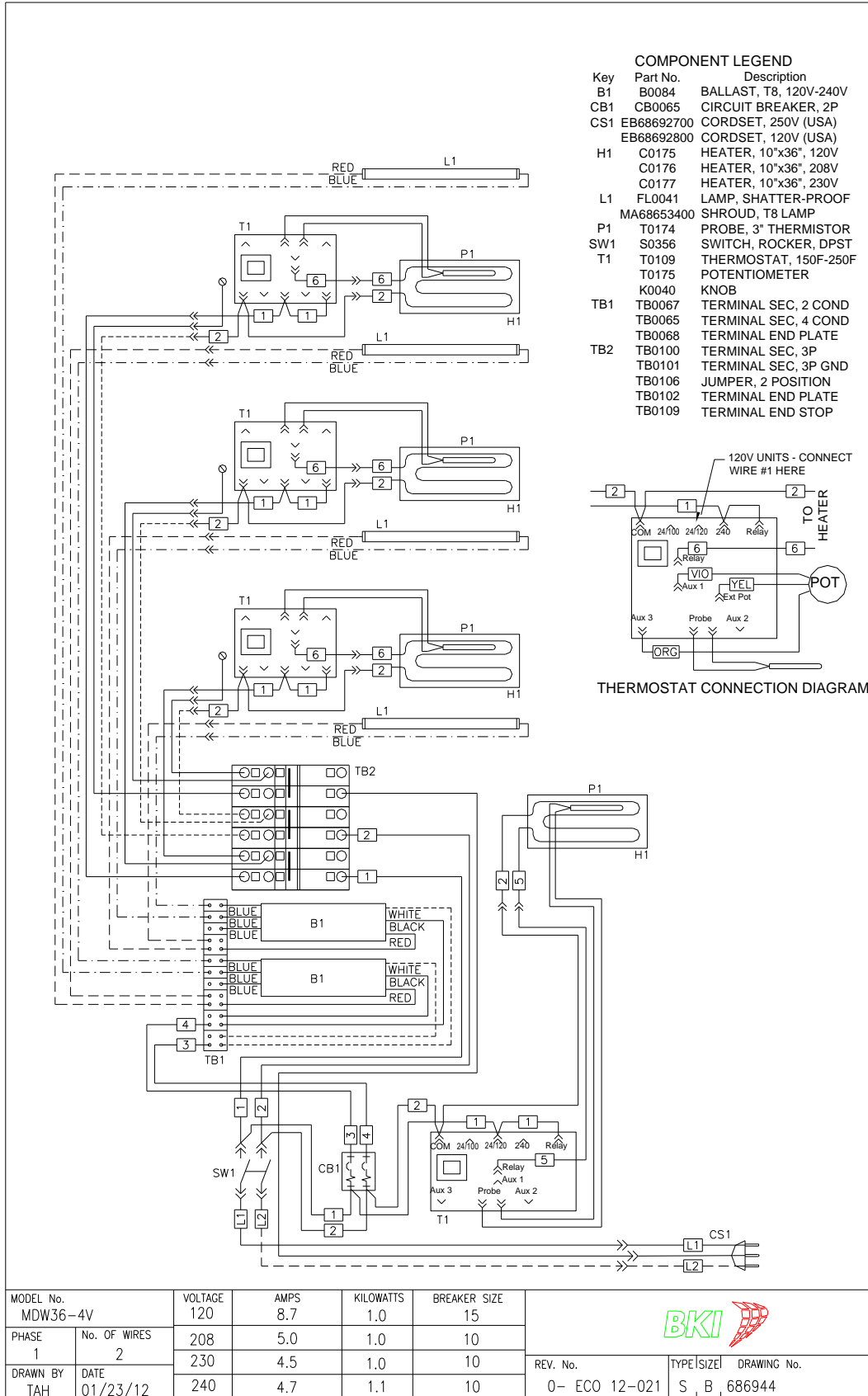
Key	Part No.	Description
B1	B0084	BALLAST, T8, 120V-240V
CB1	CB0065	CIRCUIT BREAKER, 2P
CS1	EB68692700	CORDSET, 250V (USA)
	EB68692800	CORDSET, 120V (USA)
H1	C0172	HEATER, 20"x36", 120V
	C0763	HEATER, 20"x36", 208V
H2	C0762	HEATER, 20"x36", 230V
	C0175	HEATER, 10"x36", 120V
H1	C0176	HEATER, 10"x36", 208V
	C0177	HEATER, 10"x36", 230V
L1	FL0041	LAMP, SHATTER-PROOF
	MA68653400	SHROUD, T8 LAMP
P1	T0174	PROBE, 3" THERMISTOR
SW1	S0356	SWITCH, ROCKER, DPST
T1	T0109	THERMOSTAT, 150F-250F
	T0175	POTENTIOMETER
	K0040	KNOB
TB1	TB0067	TERMINAL SEC, 2 COND
	TB0065	TERMINAL SEC, 4 COND
TB2	TB0068	TERMINAL END PLATE
	TB0100	TERMINAL SEC, 3P
	TB0101	TERMINAL SEC, 3P GND
	TB0106	JUMPER, 2 POSITION
	TB0102	TERMINAL END PLATE
	TB0109	TERMINAL END STOP



MODEL No.		VOLTAGE	AMPS	KILOWATTS	BREAKER SIZE	REV. No.	TYPE/SIZE	DRAWING No.
MDW36-4C		120	12.4	1.5	15			
PHASE	No. OF WIRES	208	7.2	1.5	10			
1	2	230	6.5	1.5	10			
DRAWN BY	DATE	240	6.7	1.6	10			
TAH	01/23/12							

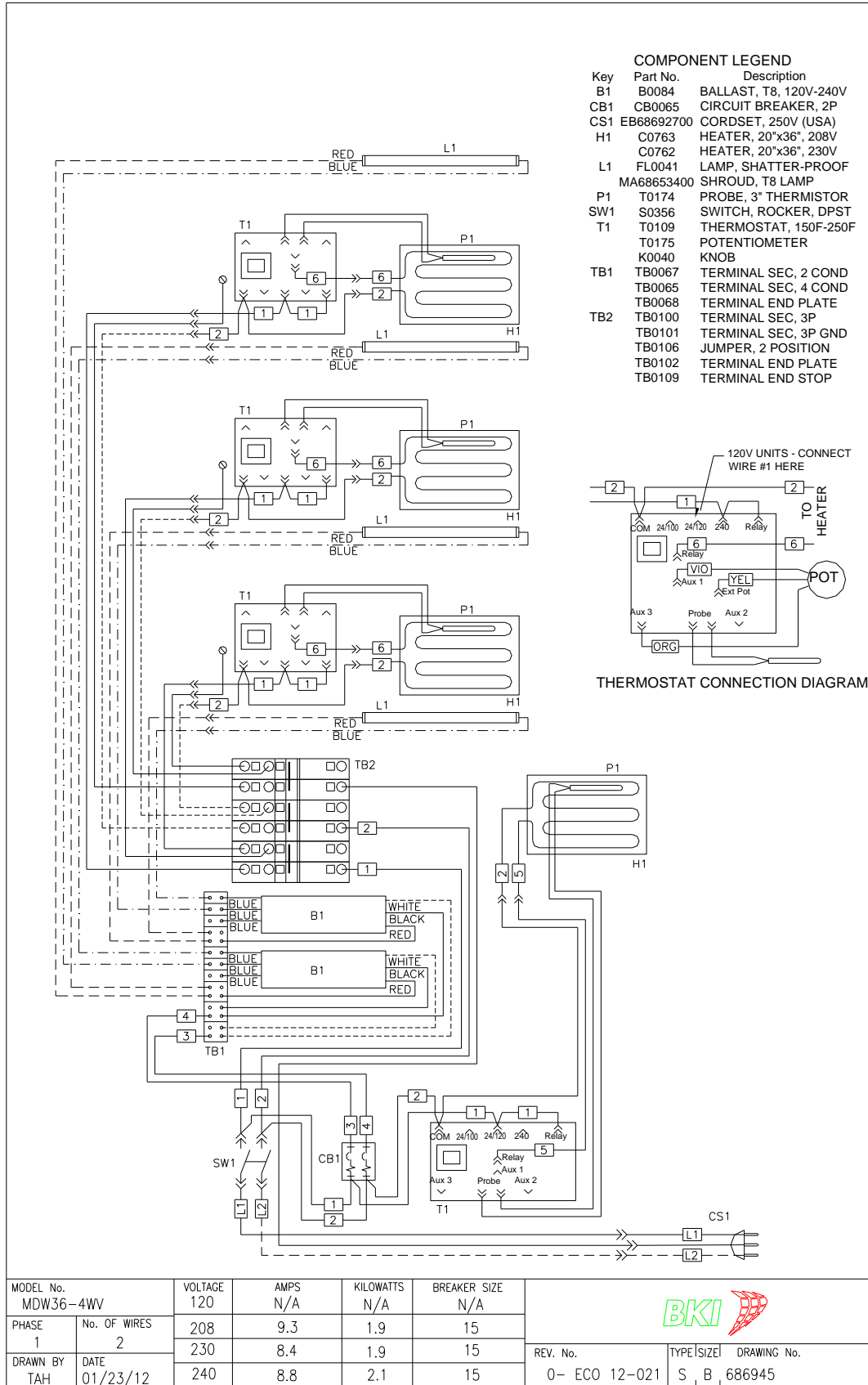


MDW36-4V



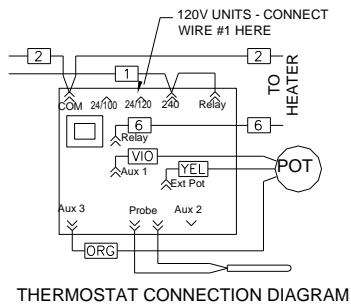
MODEL No.		VOLTAGE	AMPS	KILOWATTS	BREAKER SIZE	REV. No.	TYPE SIZE	DRAWING No.
MDW36-4V		120	8.7	1.0	15			
PHASE	No. OF WIRES	208	5.0	1.0	10			
1	2	230	4.5	1.0	10			
DRAWN BY	DATE	240	4.7	1.1	10			
TAH	01/23/12							

MDW36-4WV



**COMPONENT LEGEND**

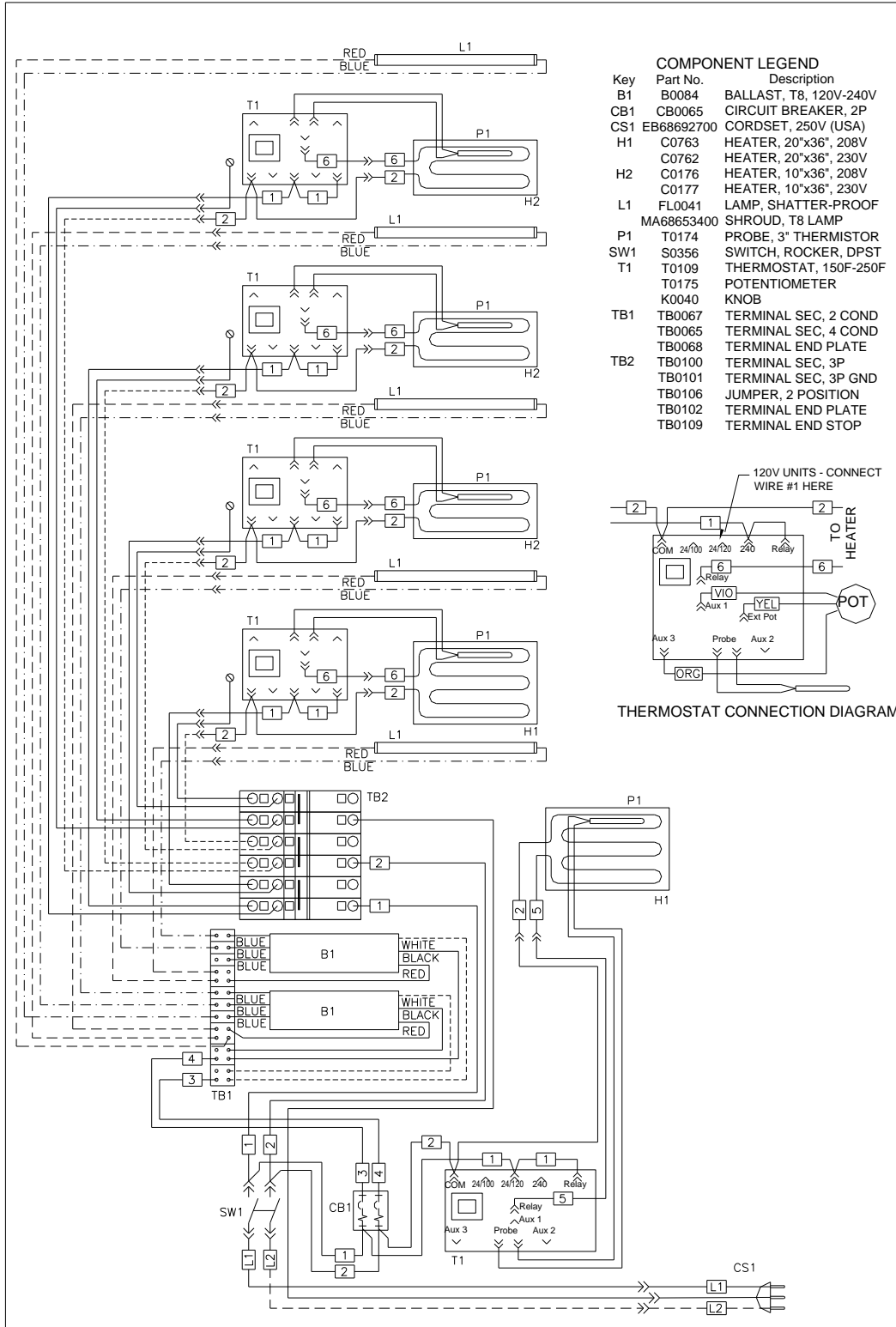
Key	Part No.	Description
B1	B0084	BALLAST, T8, 120V-240V
CB1	CB0065	CIRCUIT BREAKER, 2P
CS1	EB68692700	CORDSET, 250V (USA)
H1	C0763	HEATER, 20"x36", 208V
	C0762	HEATER, 20"x36", 230V
L1	FL0041	LAMP, SHATTER-PROOF
	MA68653400	SHROUD, T8 LAMP
P1	T0174	PROBE, 3" THERMISTOR
SW1	S0356	SWITCH, ROCKER, DPST
T1	T0109	THERMOSTAT, 150F-250F
	T0175	POTENTIOMETER
	K0040	KNOB
TB1	TB0067	TERMINAL SEC, 2 COND
	TB0065	TERMINAL SEC, 4 COND
	TB0068	TERMINAL END PLATE
TB2	TB0100	TERMINAL SEC, 3P
	TB0101	TERMINAL SEC, 3P GND
	TB0106	JUMPER, 2 POSITION
	TB0102	TERMINAL END PLATE
	TB0109	TERMINAL END STOP



MODEL No.		VOLTAGE	AMPS	KILOWATTS	BREAKER SIZE	REV. No.	TYPE SIZE	DRAWING No.
MDW36-4WV		120	N/A	N/A	N/A			
PHASE	No. OF WIRES	208	9.3	1.9	15			
1	2	230	8.4	1.9	15			
DRAWN BY	DATE	240	8.8	2.1	15			
TAH	01/23/12							

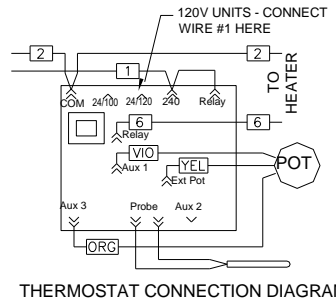


MDW36-5C



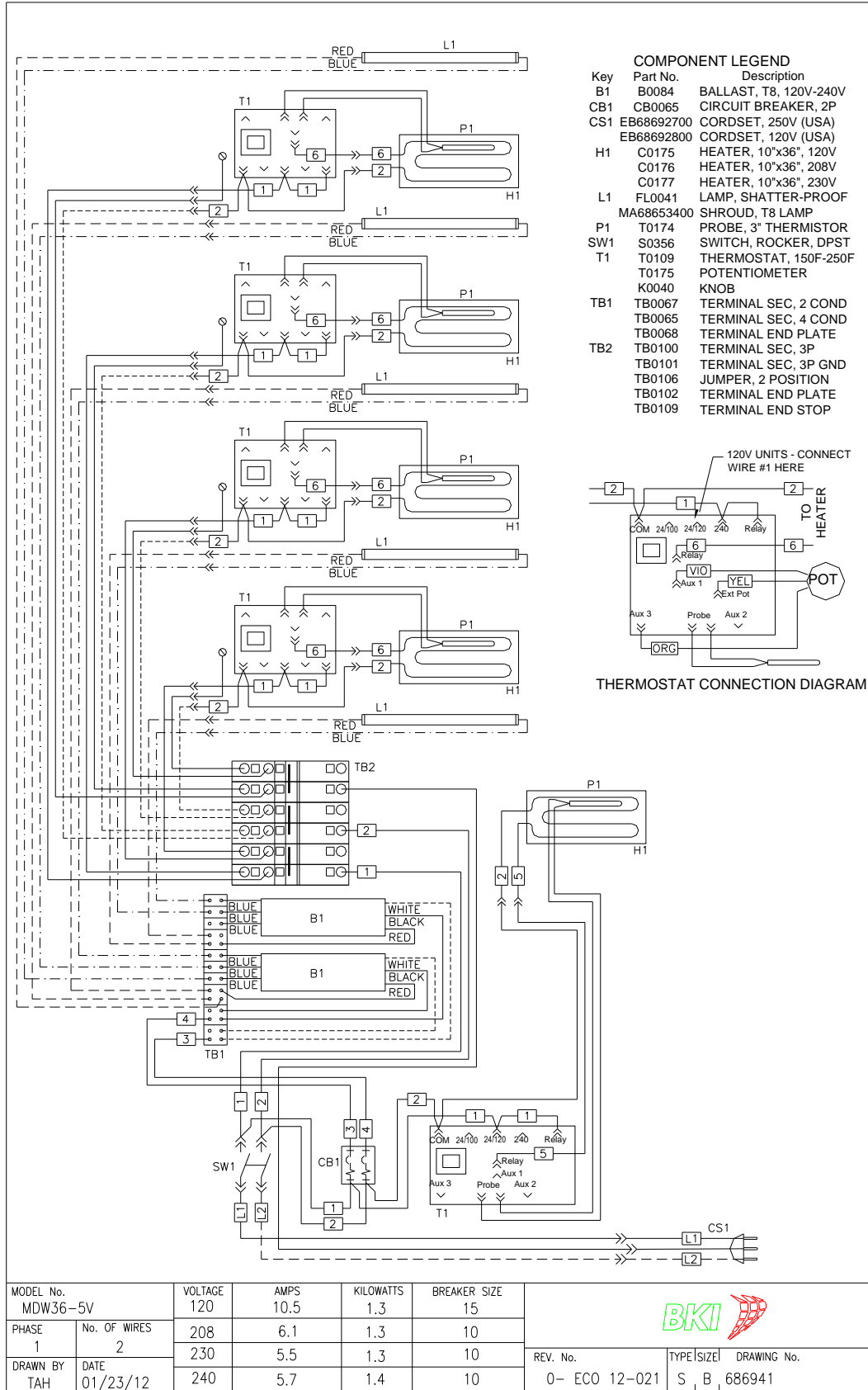
**COMPONENT LEGEND**

Key	Part No.	Description
B1	B0084	BALLAST, T8, 120V-240V
CB1	CB0065	CIRCUIT BREAKER, 2P
CS1	EB68692700	CORDSET, 250V (USA)
H1	C0763	HEATER, 20"x36", 208V
	C0762	HEATER, 20"x36", 230V
H2	C0176	HEATER, 10"x36", 208V
	C0177	HEATER, 10"x36", 230V
L1	FL0041	LAMP, SHATTER-PROOF
	MA68653400	SHROUD, T8 LAMP
P1	T0174	PROBE, 3" THERMISTOR
SW1	S0356	SWITCH, ROCKER, DPST
T1	T0109	THERMOSTAT, 150F-250F
	T0175	POTENTIOMETER
	K0040	KNOB
TB1	TB0067	TERMINAL SEC, 2 COND
	TB0065	TERMINAL SEC, 4 COND
	TB0068	TERMINAL END PLATE
TB2	TB0100	TERMINAL SEC, 3P
	TB0101	TERMINAL SEC, 3P GND
	TB0106	JUMPER, 2 POSITION
	TB0102	TERMINAL END PLATE
	TB0109	TERMINAL END STOP



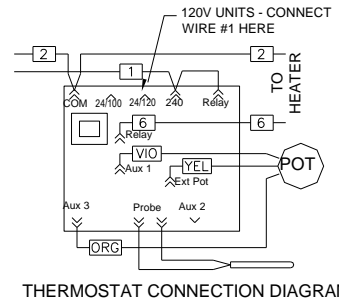
MODEL No. MDW36-5C		VOLTAGE 120	AMPS N/A	KILOWATTS N/A	BREAKER SIZE N/A	
PHASE 1	No. OF WIRES 2	208	8.2	1.7	15	
DRAWN BY TAH		DATE 01/23/12	230	7.5	1.7	10
		240	7.7	1.9	10	REV. No. 0- ECO 12-021
						TYPE SIZE  DRAWING No. S, B 686940

MDW36-5V



**COMPONENT LEGEND**

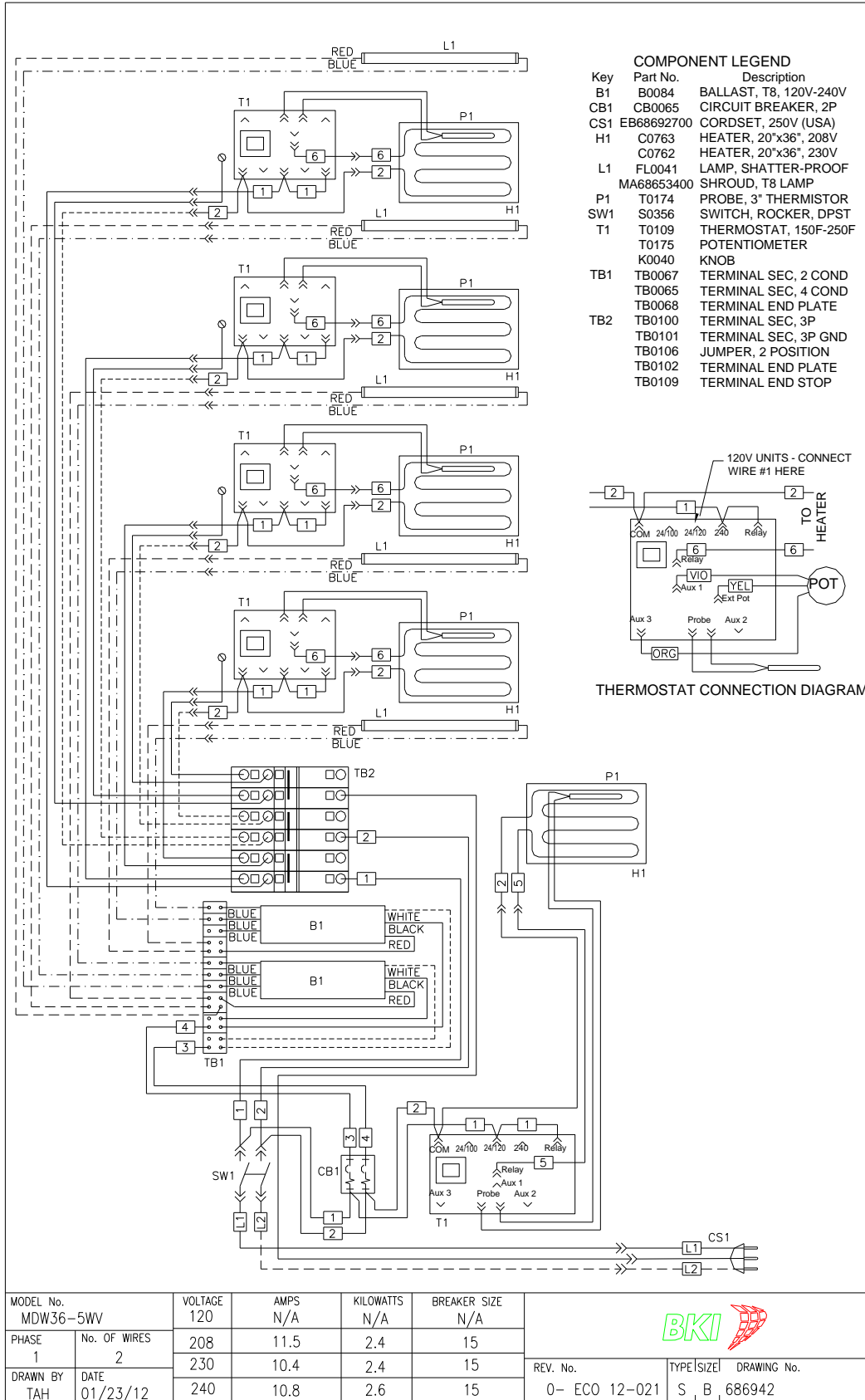
Key	Part No.	Description
B1	B0084	BALLAST, T8, 120V-240V
CB1	CB0065	CIRCUIT BREAKER, 2P
CS1	EB68692700	CORDSET, 250V (USA)
	EB68692800	CORDSET, 120V (USA)
H1	C0175	HEATER, 10"x36", 120V
	C0176	HEATER, 10"x36", 208V
	C0177	HEATER, 10"x36", 230V
L1	FL0041	LAMP, SHATTER-PROOF
	MA68653400	SHROUD, T8 LAMP
P1	T0174	PROBE, 3" THERMISTOR
SW1	S0356	SWITCH, ROCKER, DPST
T1	T0109	THERMOSTAT, 150F-250F
	T0175	POTENTIOMETER
	K0040	KNOB
TB1	TB0067	TERMINAL SEC. 2 COND
	TB0065	TERMINAL SEC. 4 COND
	TB0068	TERMINAL END PLATE
TB2	TB0100	TERMINAL SEC. 3P
	TB0101	TERMINAL SEC. 3P GND
	TB0106	JUMPER, 2 POSITION
	TB0102	TERMINAL END PLATE
	TB0109	TERMINAL END STOP



MODEL No.		VOLTAGE	AMPS	KILOWATTS	BREAKER SIZE	REV. No.	TYPE/SIZE	DRAWING No.
MDW36-5V		120	10.5	1.3	15			
PHASE	No. OF WIRES	208	6.1	1.3	10			
1	2	230	5.5	1.3	10			
DRAWN BY	DATE	240	5.7	1.4	10			
TAH	01/23/12							

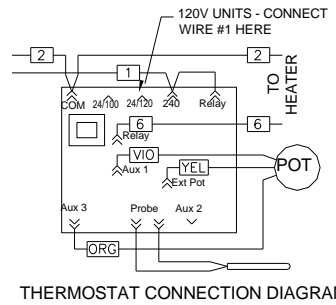


MDW36-5WV



**COMPONENT LEGEND**

Key	Part No.	Description
B1	B0084	BALLAST, T8, 120V-240V
CB1	CB0065	CIRCUIT BREAKER, 2P
CS1	EB68692700	CORDSET, 250V (USA)
H1	C0763	HEATER, 20"x36", 208V
	C0762	HEATER, 20"x36", 230V
L1	FL0041	LAMP, SHATTER-PROOF
	MA68653400	SHROUD, T8 LAMP
P1	T0174	PROBE, 3" THERMISTOR
SW1	S0356	SWITCH, ROCKER, DPST
T1	T0109	THERMOSTAT, 150F-250F
	T0175	POTENTIOMETER
	K0040	KNOB
TB1	TB0067	TERMINAL SEC, 2 COND
	TB0065	TERMINAL SEC, 4 COND
	TB0068	TERMINAL END PLATE
TB2	TB0100	TERMINAL SEC, 3P
	TB0101	TERMINAL SEC, 3P GND
	TB0106	JUMPER, 2 POSITION
	TB0102	TERMINAL END PLATE
	TB0109	TERMINAL END STOP

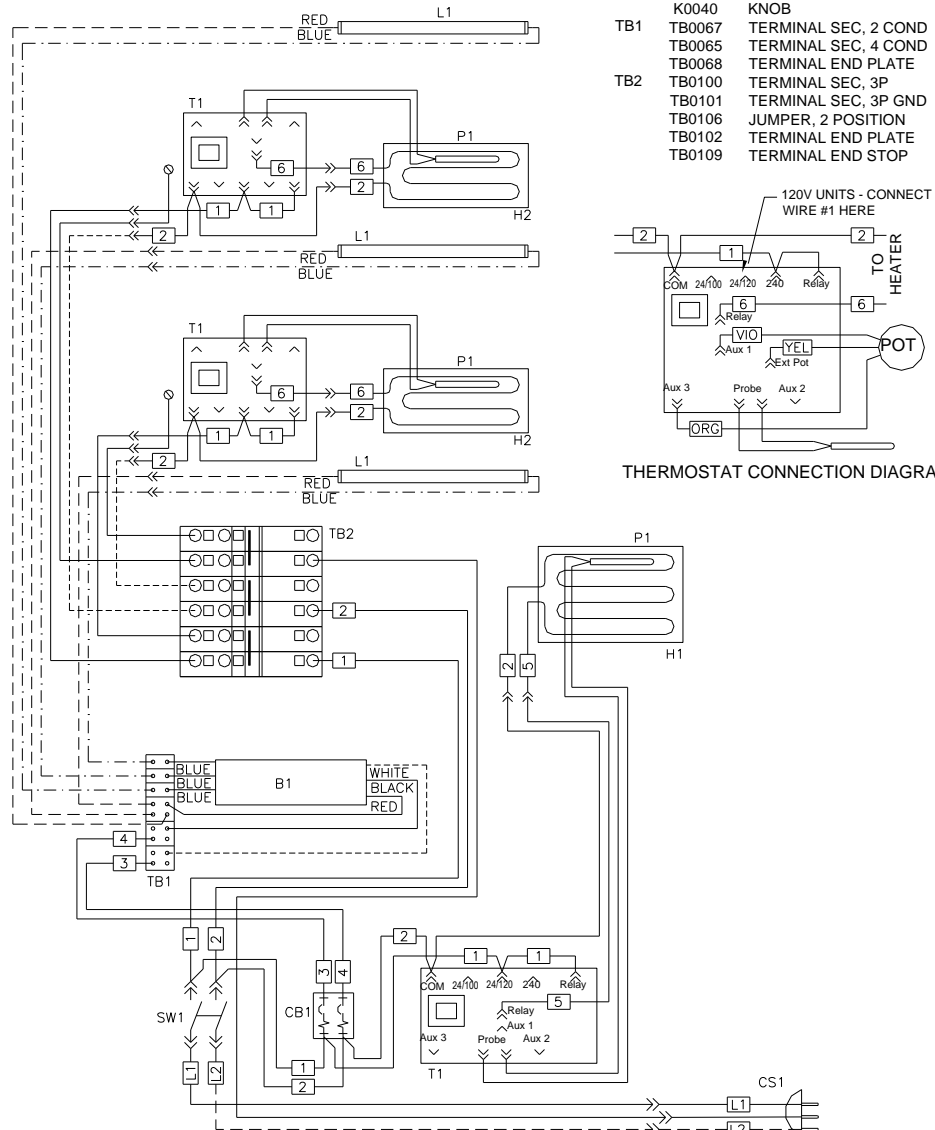


MODEL No. MDW36-5WV		VOLTAGE 120	AMPS N/A	KILOWATTS N/A	BREAKER SIZE N/A	
PHASE 1	No. OF WIRES 2	208	11.5	2.4	15	
DRAWN BY TAH		DATE 01/23/12	230	10.4	2.4	15
		240	10.8	2.6	15	REV. No. 0- ECO 12-021
						TYPE   SIZE   DRAWING No. S   B   686942

MDW48-3C

**COMPONENT LEGEND**

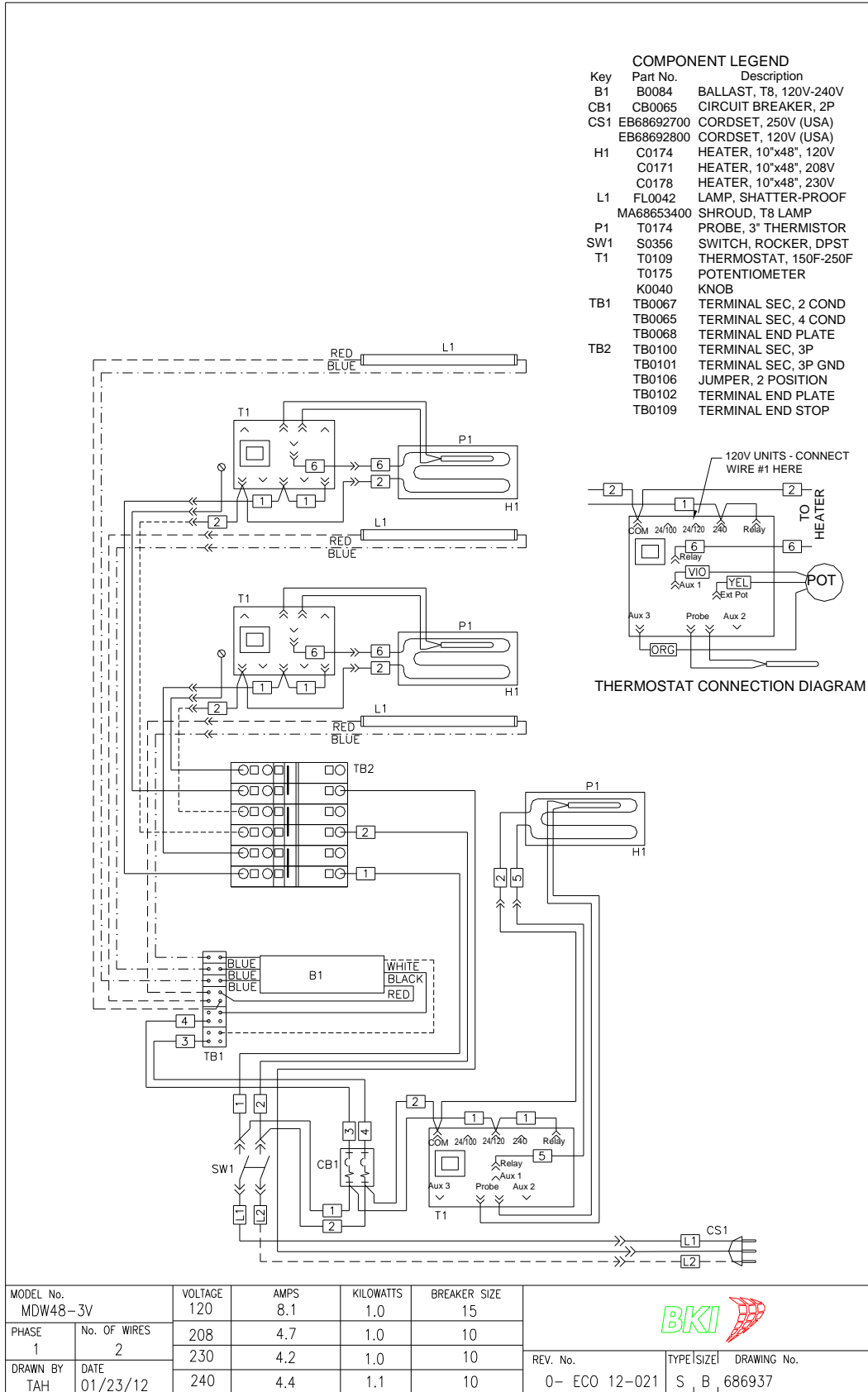
Key	Part No.	Description
B1	B0084	BALLAST, T8, 120V-240V
CB1	CB0065	CIRCUIT BREAKER, 2P
CS1	EB68692700	CORDSET, 250V (USA)
	EB68692800	CORDSET, 120V (USA)
H1	C0173	HEATER, 20"x48", 120V
	C0764	HEATER, 20"x48", 208V
	C0765	HEATER, 20"x48", 230V
H2	C0174	HEATER, 10"x48", 120V
	C0171	HEATER, 10"x48", 208V
	C0178	HEATER, 10"x48", 230V
L1	FL0042	LAMP, SHATTER-PROOF
	MA68653400	SHROUD, T8 LAMP
P1	T0174	PROBE, 3" THERMISTOR
SW1	S0356	SWITCH, ROCKER, DPST
T1	T0109	THERMOSTAT, 150F-250F
	T0175	POTENTIOMETER
	K0040	KNOB
TB1	TB0067	TERMINAL SEC, 2 COND
	TB0065	TERMINAL SEC, 4 COND
	TB0068	TERMINAL END PLATE
TB2	TB0100	TERMINAL SEC, 3P
	TB0101	TERMINAL SEC, 3P GND
	TB0106	JUMPER, 2 POSITION
	TB0102	TERMINAL END PLATE
	TB0109	TERMINAL END STOP



MODEL No.		VOLTAGE	AMPS	KILOWATTS	BREAKER SIZE	REV. No.	TYPE   SIZE	DRAWING No.
MDW48-3C		120	10.6	1.3	15			
PHASE	No. OF WIRES	208	6.1	1.3	10			
1	2	230	5.5	1.3	10			
DRAWN BY	DATE	240	5.7	1.4	10			
TAH	01/23/12							



MDW48-3V



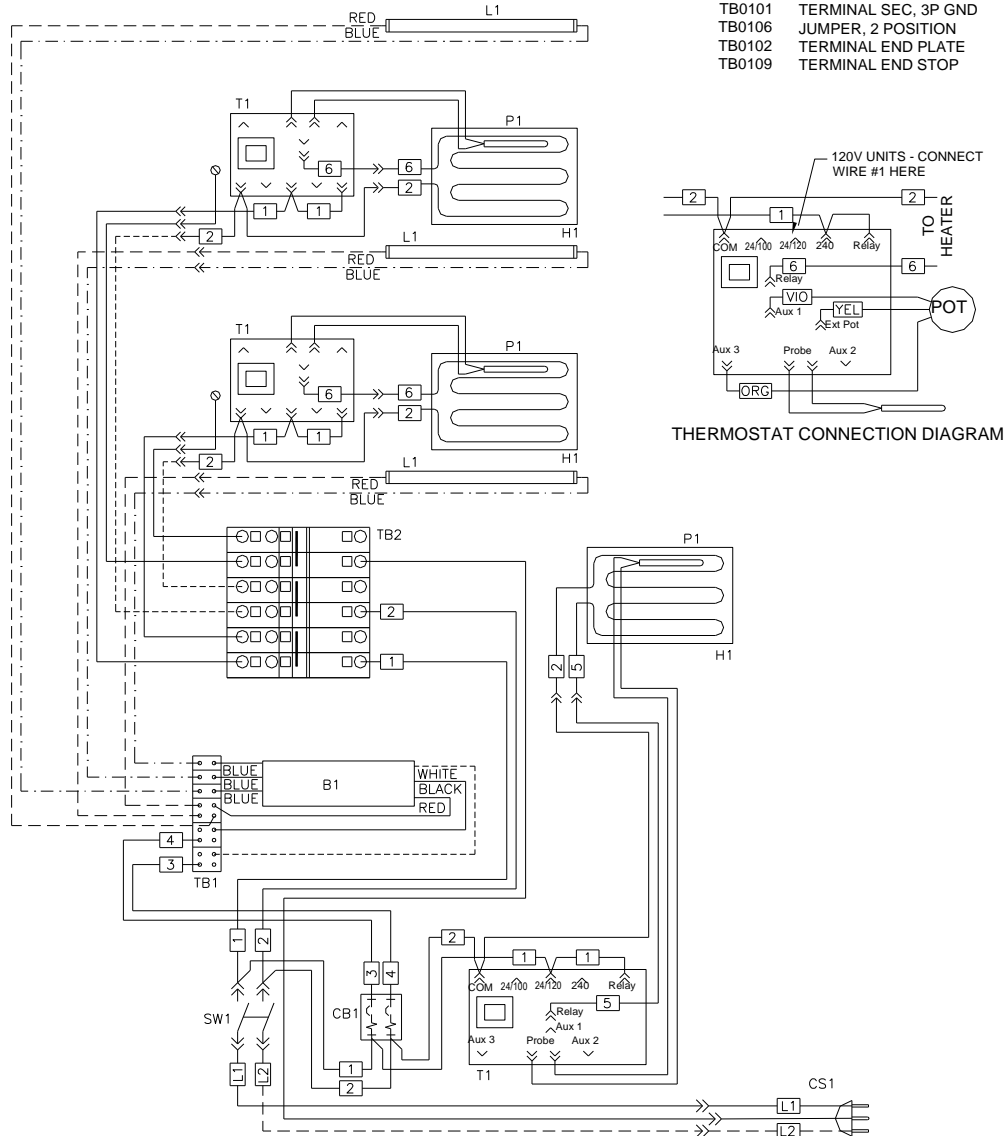
MODEL No.		VOLTAGE	AMPS	KILOWATTS	BREAKER SIZE	REV. No.	TYPE SIZE	DRAWING No.
MDW48-3V		120	8.1	1.0	15			
PHASE	No. OF WIRES	208	4.7	1.0	10			
1	2	230	4.2	1.0	10			
DRAWN BY	DATE	240	4.4	1.1	10			
TAH	01/23/12							



MDW48-3WV

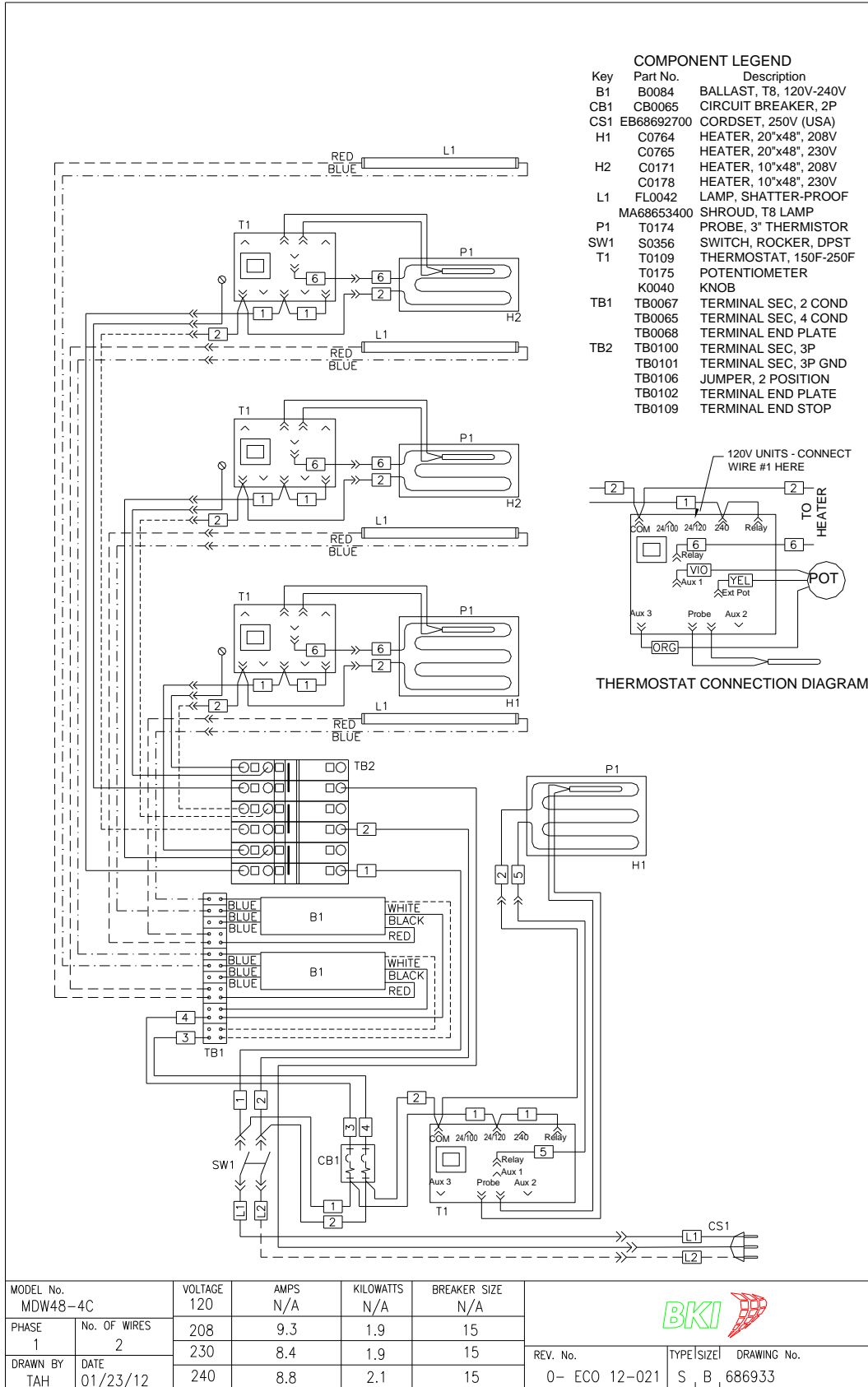
**COMPONENT LEGEND**

Key	Part No.	Description
B1	B0084	BALLAST, T8, 120V-240V
CB1	CB0065	CIRCUIT BREAKER, 2P
CS1	EB68692700	CORDSET, 250V (USA)
H1	C0764	HEATER, 20"x48", 208V
	C0765	HEATER, 20"x48", 230V
L1	FL0042	LAMP, SHATTER-PROOF
	MA68653400	SHROUD, T8 LAMP
P1	T0174	PROBE, 3" THERMISTOR
SW1	S0356	SWITCH, ROCKER, DPST
T1	T0109	THERMOSTAT, 150F-250F
	T0175	POTENTIOMETER
	K0040	KNOB
TB1	TB0067	TERMINAL SEC, 2 COND
	TB0065	TERMINAL SEC, 4 COND
	TB0068	TERMINAL END PLATE
TB2	TB0100	TERMINAL SEC, 3P
	TB0101	TERMINAL SEC, 3P GND
	TB0106	JUMPER, 2 POSITION
	TB0102	TERMINAL END PLATE
	TB0109	TERMINAL END STOP



MODEL No.		VOLTAGE	AMPS	KILOWATTS	BREAKER SIZE		
MDW48-3WV		120	N/A	N/A	N/A		
PHASE	No. OF WIRES	208	9.0	1.9	15		
1	2	230	8.1	1.9	15		
DRAWN BY	DATE	240	8.5	2.0	15	REV. No.	DRAWING No.
TAH	01/23/12					0- ECO 12-021	S, B, 686938

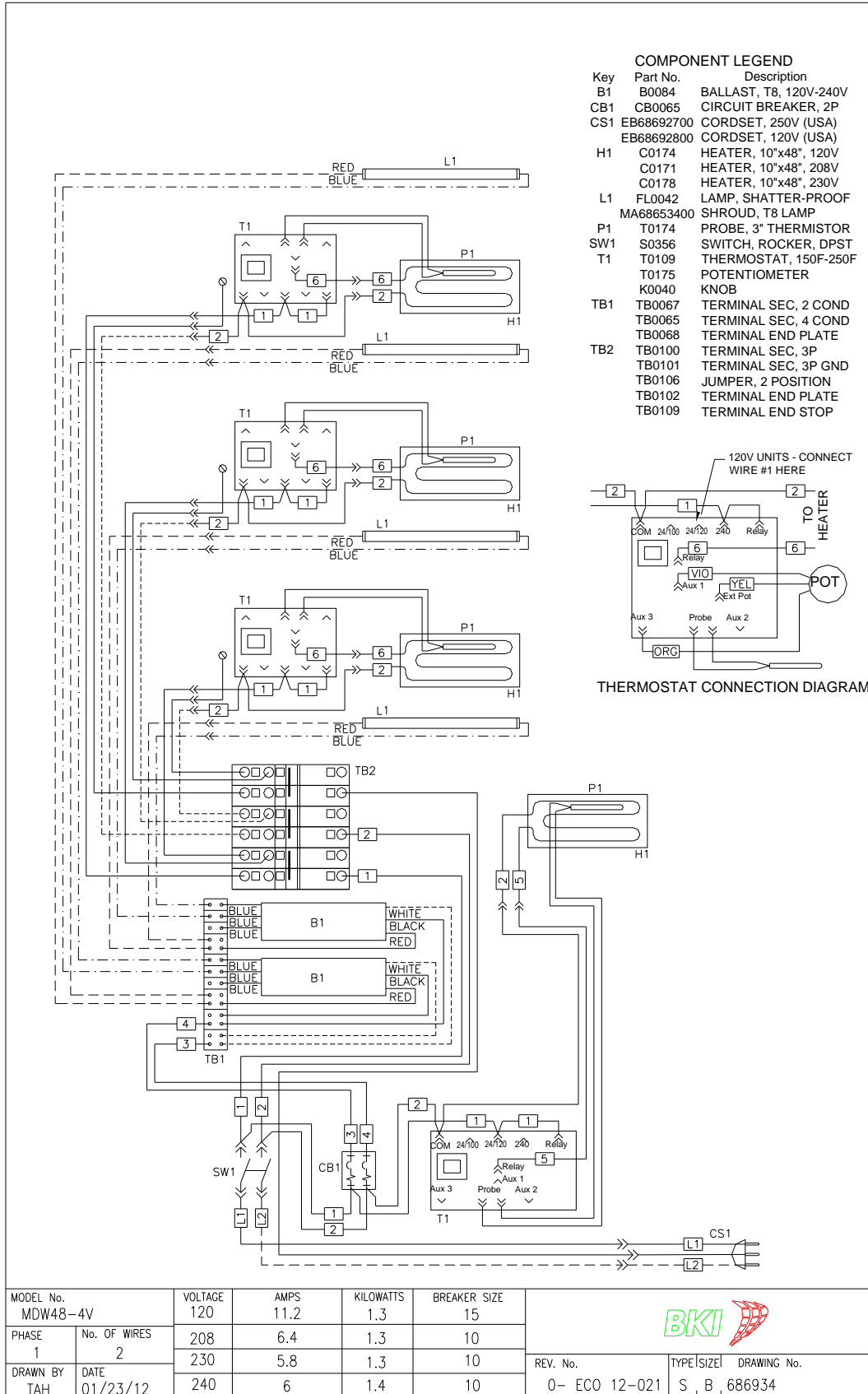
MDW48-4C



MODEL No.		VOLTAGE	AMPS	KILOWATTS	BREAKER SIZE	REV. No.	TYPE/SIZE	DRAWING No.
MDW48-4C		120	N/A	N/A	N/A			
PHASE	No. OF WIRES	208	9.3	1.9	15			
1	2	230	8.4	1.9	15			
DRAWN BY	DATE	240	8.8	2.1	15			
TAH	01/23/12							

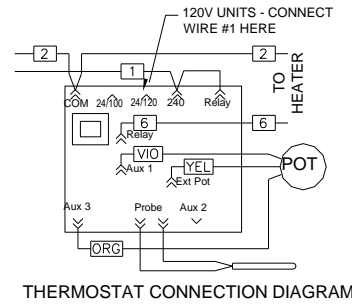


MDW48-4V



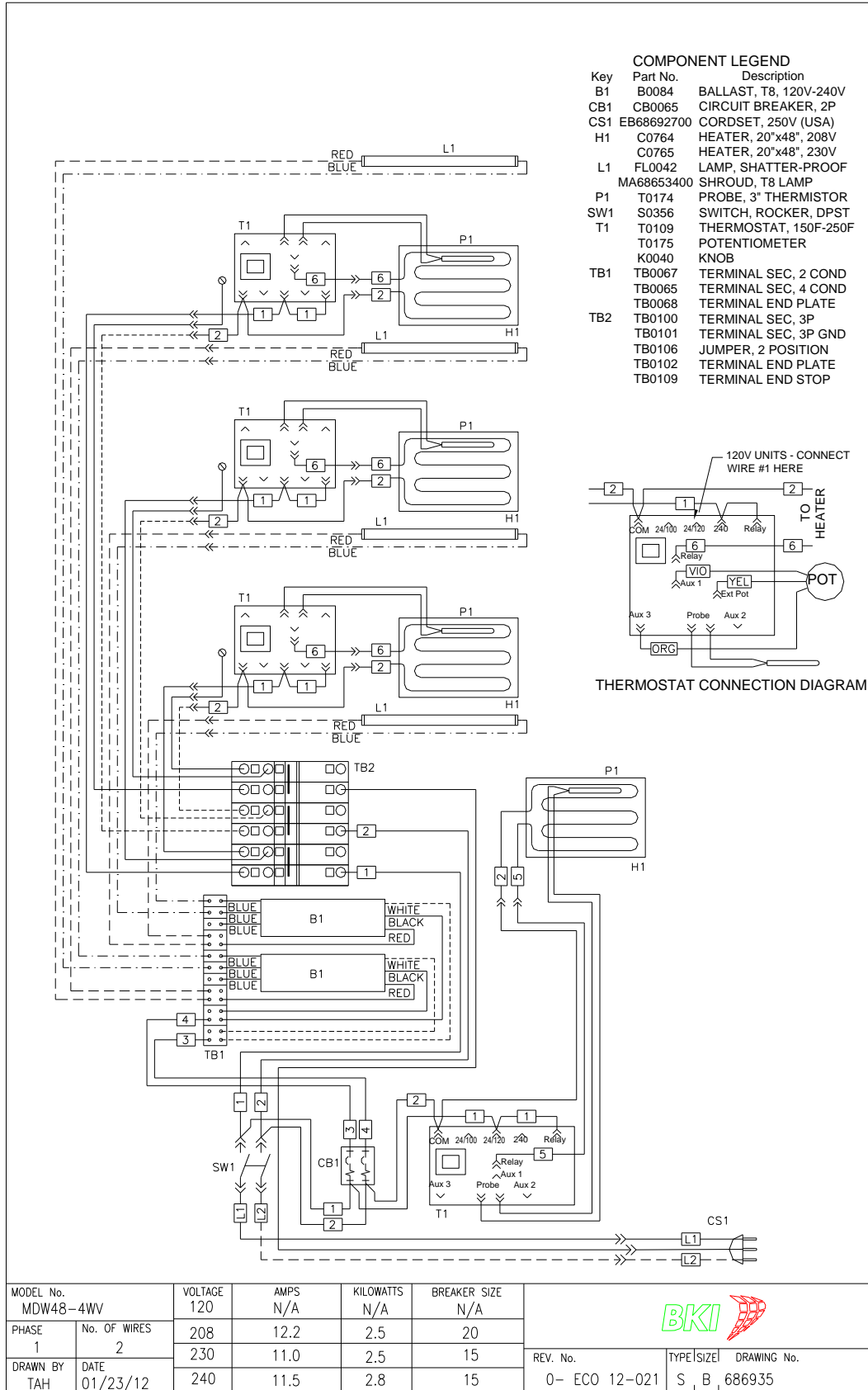
**COMPONENT LEGEND**

Key	Part No.	Description
B1	B0084	BALLAST, T8, 120V-240V
CB1	CB0065	CIRCUIT BREAKER, 2P
CS1	EB68692700	CORDSET, 250V (USA)
	EB68692800	CORDSET, 120V (USA)
H1	C0174	HEATER, 10"x48", 120V
	C0171	HEATER, 10"x48", 208V
	C0178	HEATER, 10"x48", 230V
L1	FL0042	LAMP, SHATTER-PROOF
	MA68653400	SHROUD, T8 LAMP
P1	T0174	PROBE, 3" THERMISTOR
SW1	S0356	SWITCH, ROCKER, DPST
T1	T0109	THERMOSTAT, 150F-250F
	T0175	POTENTIOMETER
	K0040	KNOB
	TB1	TB0067
TB2	TB0065	TERMINAL SEC, 4 COND
	TB0068	TERMINAL END PLATE
	TB0100	TERMINAL SEC, 3P
TB2	TB0101	TERMINAL SEC, 3P GND
	TB0106	JUMPER, 2 POSITION
	TB0102	TERMINAL END PLATE
	TB0109	TERMINAL END STOP



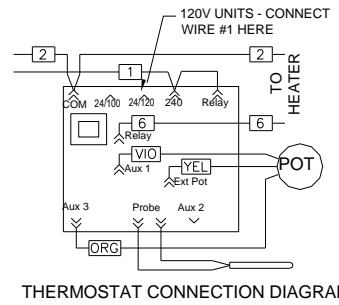
MODEL No. MDW48-4V		VOLTAGE 120	AMPS 11.2	KILOWATTS 1.3	BREAKER SIZE 15	
PHASE 1	No. OF WIRES 2	208	6.4	1.3	10	
DRAWN BY TAH	DATE 01/23/12	230	5.8	1.3	10	
		240	6	1.4	10	REV. No. 0- ECO 12-021
						TYPE   SIZE   DRAWING No. S, B, 686934


MDW48-4WV



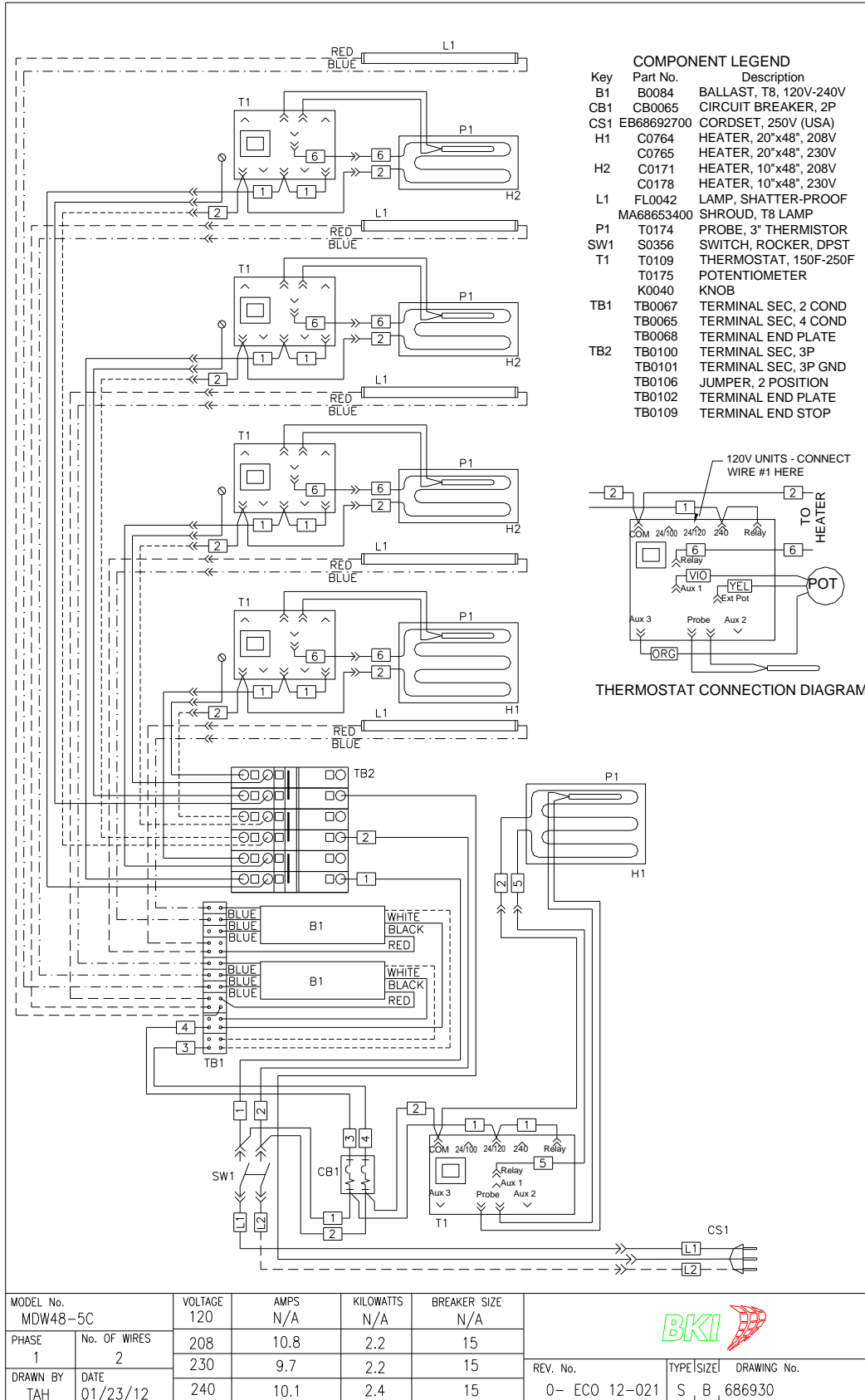
**COMPONENT LEGEND**

Key	Part No.	Description
B1	B0084	BALLAST, T8, 120V-240V
CB1	CB0065	CIRCUIT BREAKER, 2P
CS1	EB68692700	CORDSET, 250V (USA)
H1	C0764	HEATER, 20"x48", 208V
	C0765	HEATER, 20"x48", 230V
L1	FL0042	LAMP, SHATTER-PROOF
	MA68653400	SHROUD, T8 LAMP
P1	T0174	PROBE, 3" THERMISTOR
SW1	S0356	SWITCH, ROCKER, DPST
T1	T0109	THERMOSTAT, 150F-250F
	T0175	POTENTIOMETER
	K0040	KNOB
TB1	TB0067	TERMINAL SEC, 2 COND
	TB0065	TERMINAL SEC, 4 COND
	TB0068	TERMINAL END PLATE
TB2	TB0100	TERMINAL SEC, 3P
	TB0101	TERMINAL SEC, 3P GND
	TB0106	JUMPER, 2 POSITION
	TB0102	TERMINAL END PLATE
	TB0109	TERMINAL END STOP



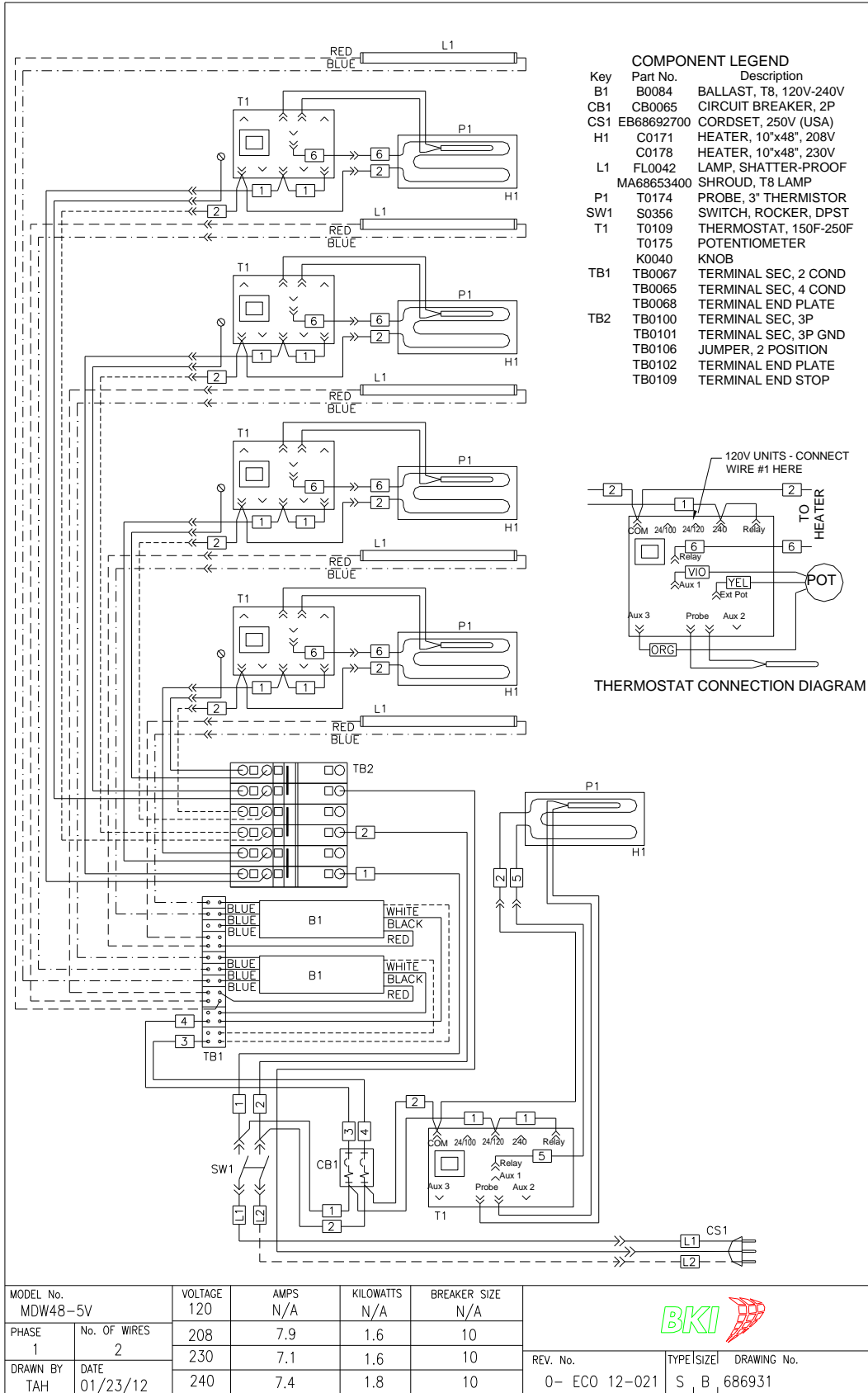
MODEL No.		VOLTAGE	AMPS	KILOWATTS	BREAKER SIZE		
MDW48-4WV		120	N/A	N/A	N/A		
PHASE	No. OF WIRES	208	12.2	2.5	20	0- ECO 12-021	S, B, 686935
1	2	230	11.0	2.5	15		
DRAWN BY	DATE	240	11.5	2.8	15		
TAH	01/23/12						

MDW48-5C



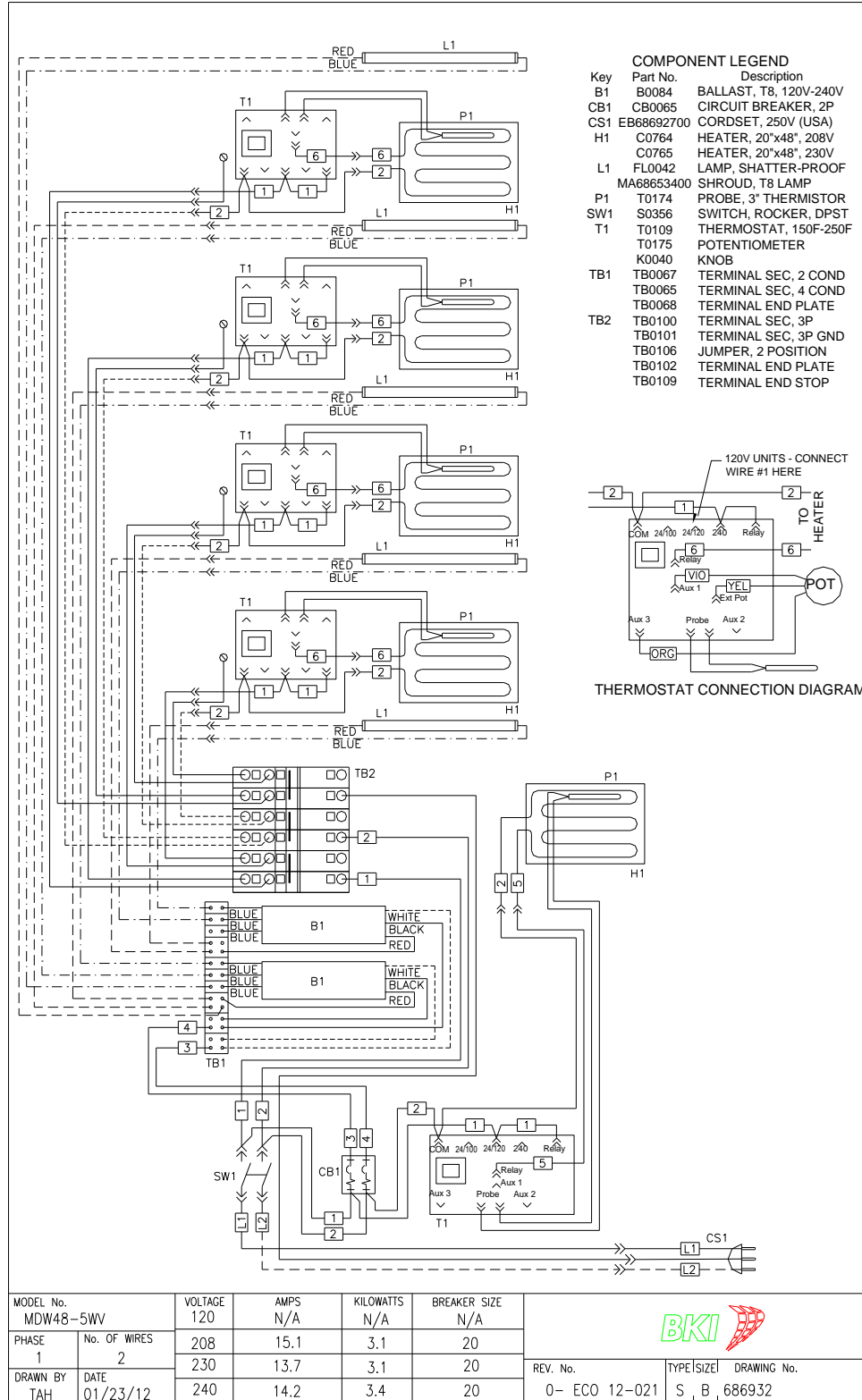
MODEL No. MDW48-5C		VOLTAGE 120	AMPS N/A	KILOWATTS N/A	BREAKER SIZE N/A	
PHASE 1	No. OF WIRES 2	208	10.8	2.2	15	
DRAWN BY TAH		DATE 01/23/12	230	9.7	2.2	15
		240	10.1	2.4	15	REV. No. 0- ECO 12-021
						TYPE SIZE DRAWING No. S   B   686930

MDW48-5V



MODEL No.		VOLTAGE	AMPS	KILOWATTS	BREAKER SIZE	REV. No.	TYPE	SIZE	DRAWING No.
MDW48-5V		120	N/A	N/A	N/A				
PHASE	No. OF WIRES	208	7.9	1.6	10				
1	2	230	7.1	1.6	10				
DRAWN BY	DATE	240	7.4	1.8	10				
TAH	01/23/12								

MDW48-5WV



MODEL No.		VOLTAGE	AMPS	KILOWATTS	BREAKER SIZE	REV. No.	TYPE/SIZE	DRAWING No.
MDW48-5WV		120	N/A	N/A	N/A			
PHASE	No. OF WIRES	208	15.1	3.1	20			
1	2	230	13.7	3.1	20			
DRAWN BY	DATE	240	14.2	3.4	20			
TAH	01/23/12							



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