



TYPE BX CONVECTION HEATER

INSTALLATION, OPERATION, MAINTENANCE INSTRUCTIONS & SPARE PARTS



The BX convection heater is a heavy duty baseboard designed for use in industrial environments and is not intended for use in residential and commercial locations. The heater is not thermally protected and air flow obstruction with flammable materials could create a fire hazard. All openings must be clear at all times.

1.0 INITIAL INSPECTION

- 1.1 Upon receipt from the carrier, inspect the heater for possible damage in transit. If necessary, immediately report damage to shipping company.
- 1.2 Verify that the nameplate voltage, phase, and wattage are as ordered and are suitable for use on the electrical power supply available. **DO NOT CONNECT THE BX CONVECTION HEATER TO AN ELECTRICAL SUPPLY VOLTAGE OTHER THAN THAT SHOWN ON THE PRODUCT NAMEPLATE.**
- 1.3 The BX convection heater is CSA approved for operation in non-hazardous areas only. Ensure that no hazardous conditions exist before energizing the heater.

2.0 INSTALLATION

- 2.1 The BX convection heater is symmetrically designed and CSA approved so that the electrical connection box can be located at either end. Before attaching the universal mounting legs, be sure to identify the end to be electrically connected.
- 2.2 The BX is CSA approved as an industrial baseboard heater for floor or wall mounting. A minimum distance of 90 mm (3 1/2") must be maintained between the heater and walls or floors. The universal mounting brackets (supplied) are designed to provide this clearance.

NOTE THE FOLLOWING:

- 2.3 The BX heater weighs 45 lbs (21 kg). The wall supports must be strong enough to carry this weight.
- 2.4 Attach the mounting brackets to the floor or wall. All studs, bolts, nuts and other fasteners shall be secured so that there is no possibility of loosening over prolonged periods. These must be inspected at regular intervals and retightened when necessary.
- 2.5 See Figure 1 - FLOOR MOUNT or Figure 2 - WALL MOUNT for bracket mounting details.
 - 2.5.1 Remove the two screws located on the front panel.
 - 2.5.2 Remove the heater front panel.
 - 2.5.3 Back off the screws on the universal mounting legs enough to allow penetration of the screw heads through the keyhole openings in the back of the heater.
 - 2.5.4 Slide the heater assembly to the side so that the mounting screws engage the keyhole openings.
 - 2.5.5 Tighten the mounting screws to secure the heater to the mounting brackets.
 - 2.5.6 The electrical connection box is exposed upon removal of the heater front panel, allowing for electrical connections to be made at this time. See paragraph 3.0 for electrical suggestions.
- 2.6 Thermostat - If the heater selected is equipped with a built-in thermostat, see Figure 2 for final mounting. The thermostat is connected electrically, but the sensing bulb and capillary tube must be secured into the final mounting position as shown. The simple final assembly will ensure good temperature control. Be certain not to "kink" the capillary tube or crush the sensing bulb during installation.

3.0 ELECTRICAL CONNECTIONS

- 3.1 Verify that the heater nameplate voltage and supply voltage are the same (see paragraph 1.2).

- 3.2 Select the proper electrical conductor size rated at 194°F (90°C) (Canadian Electrical Code). The connection box volume is 5200 cm³.
- 3.3 The control cabinet of the BX convection heater is constructed to EEMAC 1 standards. Combination 1/2" - 3/4" knockouts are provided for easy connection.
- 3.4 The BX convection heater is completely prewired internally. Connect the power conductors and control conductors to the terminations as illustrated on the wiring diagram enclosed.
- 3.5 The schematic wiring diagram shown in Figure 4 illustrates the BX convection heater with various control options. Some of this equipment is optional and may not be included with your BX heater.
- 3.6 Replace the front panel after all wiring is completed and before turning on the electrical disconnect switch.

4.0 TEMPERATURE CONTROL

- 4.1 BUILT-IN Thermostat - Heaters with a factory installed thermostat are prewired and require only power connection. The thermostat sensing bulb must be assembled into its final position. See paragraph 2.6 for final assembly.

The thermostat supplied is a high quality device with a factory calibrated range of 50-104°F (10-40°C). Due to the proximity of the sensing bulb to the heater, the actual thermostat setting will not be the same as the desired room ambient temperature. This is normal with all unit mounted thermostats. It should be a simple matter to find the setpoint to provide the desired comfort level.

- 4.2 REMOTE LINE VOLTAGE THERMOSTAT - A remote thermostat rated to operate on full voltage may be desired. Installation and wiring of the selected thermostat must comply with the manufacturer's instructions. CCI Thermal Technologies Inc. can supply appropriate thermostats.
- 4.3 THREE HEAT SWITCH (208 & 240V, 1φ only) - Units equipped with a three heat switch are prewired and require only a power connection. The output wattage in each position is shown in Figure 5.
- 5.0 MAINTENANCE

The BX convection heater is constructed to operate in tough industrial applications with minimum maintenance. However, some routing maintenance is recommended to extend the life of the heater and its components. **ALWAYS DISCONNECT THE ELECTRICAL SOURCE BEFORE PERFORMING ANY MAINTENANCE.**

- 5.1 TERMINAL ENCLOSURE - The periodic intervals, but not more than once a year, open the terminal enclosure to inspect for cleanliness and dampness. Vacuum any dust and wipe up any moisture. Check all electrical connections and tighten if necessary.
- 5.2 HEATER PAINT FINISH - The BX convection heater is finished with a heavy duty enamel paint to provide maximum resistance to corrosion due to air-borne contaminants. We recommend the cabinet to be wiped down periodically using a mild detergent.



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6.0 REPLACEMENT PARTS

DESCRIPTION	PART NO.
Front Cabinet (26 1/2" Units)	D11131-12
Front Cabinet (40" Units)	D11131-02
Knob - Thermostat	B11037-01
Mounting Legs	D11131-04
Thermostat - SP	B11031-01
Thermostat - DP	B11115-01

7.0 ELEMENTS

CATALOG NO. PREFIX	HEATER VOLTS, PHASE	ELEMENT
BX2021S, BX2023S	208V 1 ϕ & 3 ϕ	IXS11132-13
BX2031S, BX2033S	208V 1 ϕ & 3 ϕ	IXS11132-14
BX2071S	480V 1 ϕ	IXS11132-11
BX2073S	480V 3 ϕ	IXS11132-15
BX2081S	600V 1 ϕ	IXS11132-12
BX2083S	600V 3 ϕ	IXS11132-16
BX2021, BX3021	280V	IXS11132-02
BX2023, BX3023	1 ϕ & 3 ϕ	
BX2031, BX3031	240V	IXS11132-03
BX2033, BX3033	1 ϕ & 3 ϕ	
BX2071, BX3071	480V	IXS11132-07
BX2073, BX3073	1 ϕ & 3 ϕ	
BX2081, BX3081	600V	IXS11132-08
BX2083, BX3083	1 ϕ & 3 ϕ	

Figure 1 - Floor Mounting

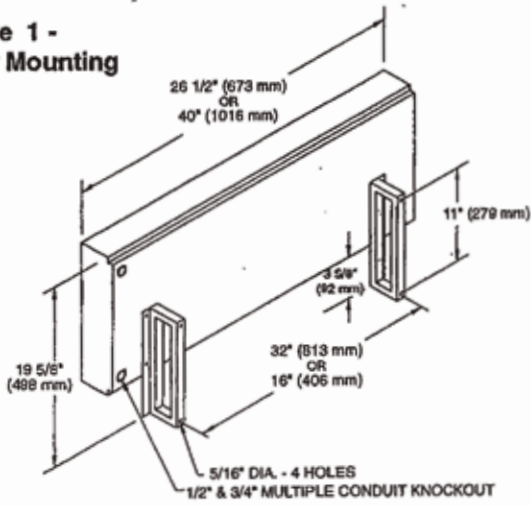


Figure 2 - Wall Mounting

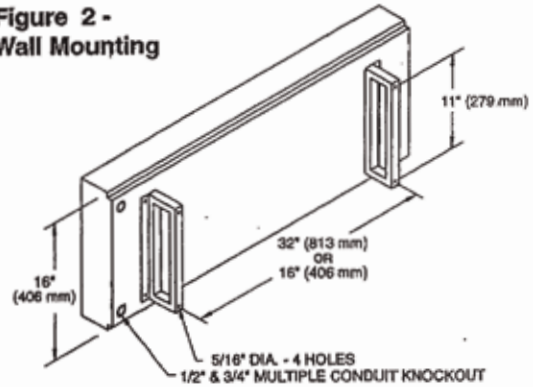


Figure 3 - Locating Thermostat Sensing Bulb

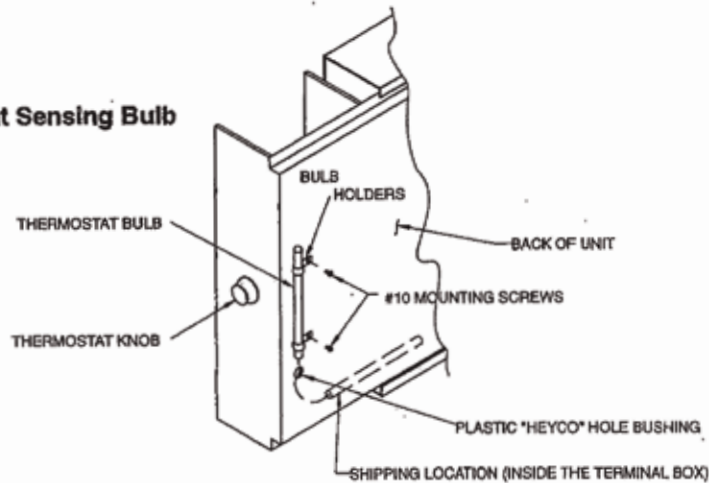
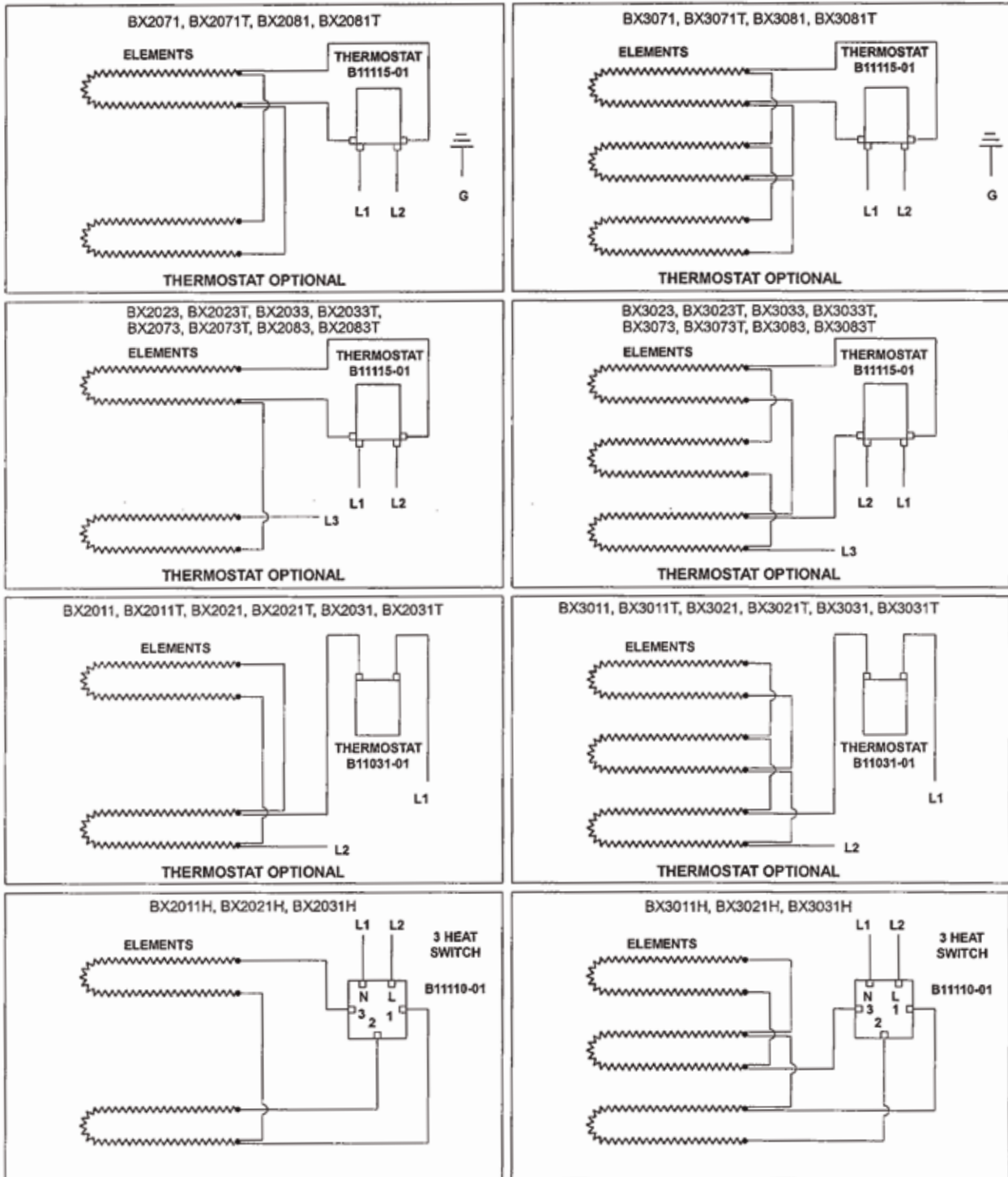


Figure 4





Engineered Electric Heat

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PLEASE ADHERE TO INSTRUCTIONS PUBLISHED IN THIS MANUAL.

Failure to do so may be dangerous and may void certain provisions of your warranty.

For further assistance, please call:

Oakville: 1-800-410-3131

(U.S.A. and Canada)

Please have model and serial numbers available before calling.

WARRANTY: Under normal use the Company warrants to the purchaser that defects in material or workmanship will be repaired or replaced without charge for a period of 18 months from date of shipment, or 12 months from the start date of operation, whichever expires first. Any claim for warranty must be reported to the sales office where the product was purchased for authorized repair or replacement within the terms of this warranty.

Subject to State or Provincial law to the contrary, the Company will not be responsible for any expense for installation, removal from service, transportation, or damages of any type whatsoever, including damages arising from lack of use, business interruptions, or incidental or consequential damages.

The Company cannot anticipate or control the conditions of product usage and therefore accepts no responsibility for the safe application and suitability of its products when used alone or in combination with other products. Tests for the safe application and suitability of the products are the sole responsibility of the user.

This warranty will be void if, in the judgment of the Company, the damage, failure or defect is the result of:

- vibration, radiation, erosion, corrosion, process contamination, abnormal process conditions, temperature and pressures, unusual surges or pulsation, fouling, ordinary wear and tear, lack of maintenance, incorrectly applied utilities such as voltage, air, gas, water, and others or any combination of the aforementioned causes not specifically allowed for in the design conditions or
- any act or omission by the Purchaser, its agents, servants or independent contractors which for greater certainty, but not so as to limit the generality of the foregoing, includes physical, chemical or mechanical abuse, accident, improper installation of the product, improper storage and handling of the product, improper application or the misalignment of parts.

No warranty applies to paint finishes except for manufacturing defects apparent within 30 days from the date of installation.

The Company neither assumes nor authorizes any person to assume for it any other obligation or liability in connection with the product(s).

The Purchaser agrees that all warranty work required after the initial commissioning of the product will be provided only if the Company has been paid by the Purchaser in full accordance with the terms and conditions of the contract.

The Purchaser agrees that the Company makes no warranty or guarantee, express, implied or statutory, **(INCLUDING ANY WARRANTY OF MERCHANTABILITY OR WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE)** written or oral, of the Article or incidental labour, except as is expressed or contained in the agreement herein.

LIABILITY: Technical data contained in the catalog or on the website is subject to change without notice. The Company reserves the right to make dimensional and other design changes as required. The Purchaser acknowledges the Company shall not be obligated to modify those articles manufactured before the formulation of the changes in design or improvements of the products by the Company.

The Company shall not be liable to compensate or indemnify the Purchaser, end user or any other party against any actions, claims, liabilities, injury, loss, loss of use, loss of business, damages, indirect or consequential damages, demands, penalties, fines, expenses (including legal expenses), costs, obligations and causes of action of any kind arising wholly or partly from negligence or omission of the user or the misuse, incorrect application, unsafe application, incorrect storage and handling, incorrect installation, lack of maintenance, improper maintenance or improper operation of products furnished by the Company.

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