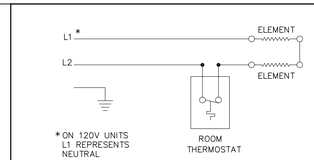
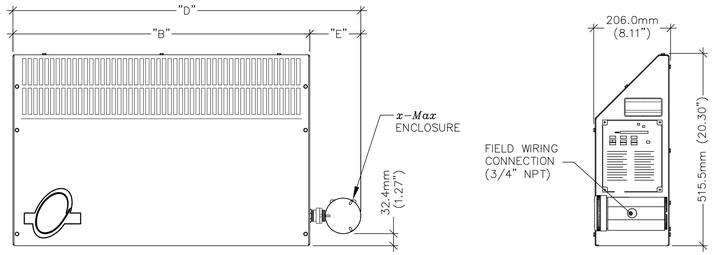
– FOR ALTERNATE ENCLOSURES AND HAZARDOUS LOCATION APPROVALS SEE NOTE#5

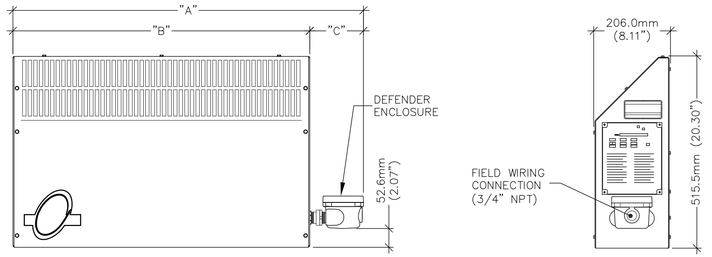


WIRING SCHEMATIC FOR BOTH REMOTE MOUNT AND BUILT–IN ROOM THERMOSTATS

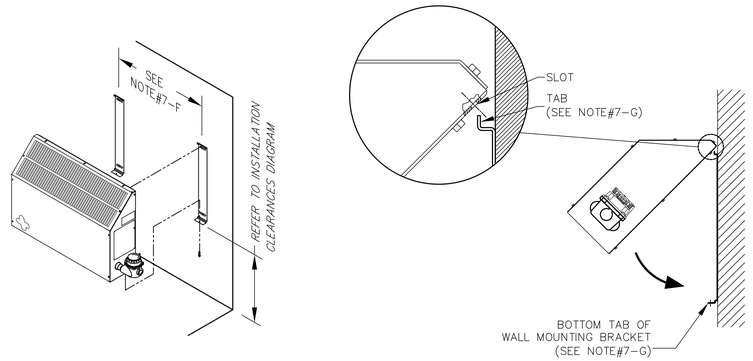
FIELD WIRING



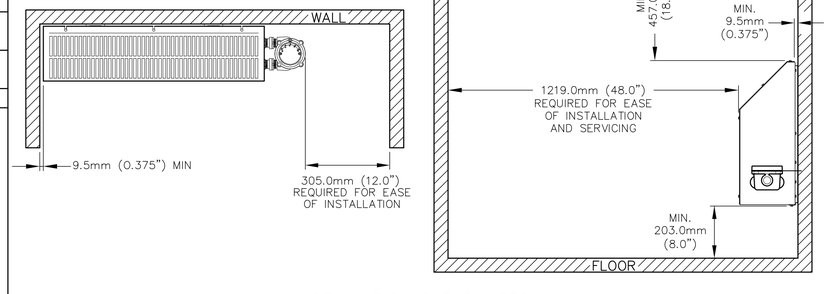
HEATER KW RATING	"D" DIMENSION		"B" DIMENSION	"E" DIMENSION	
	W/O EXTENSION	WITH EXTENSION		W/O EXTENSION	WITH EXTENSION
0.75 – 2.69 & 3.6 (T2A)	954mm (37.6")	1007mm (39.6")	796.0mm (31.34")	158mm (6.2")	211mm (8.3")
3.01 – 3.59, 3.6 (T3) & 4.8	1414mm (55.7")	1467mm (57.8")	1256.0mm (49.45")	158mm (6.2")	211mm (8.3")
4.76, 5.28 – 7.6	1669mm (65.7")	1722mm (67.8")	1511.0mm (59.49")	158mm (6.2")	211mm (8.3")



HEATER KW RATING	"A" DIMENSION		"B" DIMENSION	"C" DIMENSION	
	W/O EXTENSION	WITH EXTENSION		W/O EXTENSION	WITH EXTENSION
0.75 – 2.69 & 3.6 (T2A)	938mm (36.9")	991mm (39.0")	796.0mm (31.34")	142mm (5.6")	195mm (7.7")
3.01 – 3.59, 3.6 (T3) & 4.8	1398mm (55.0")	1451mm (57.1")	1256.0mm (49.45")	142mm (5.6")	195mm (7.7")
4.76, 5.28 – 7.6	1653mm (65.1")	1706mm (67.2")	1511.0mm (59.49")	142mm (5.6")	195mm (7.7")

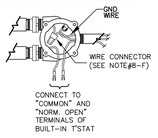


CONVECTOR MOUNTING DIAGRAMS

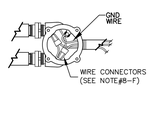


INSTALLATION CLEARANCES

UNIT COMPLETE WITH BUILT–IN THERMOSTAT

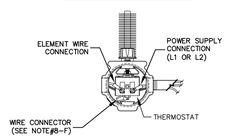


UNIT WITH NO BUILT–IN THERMOSTAT

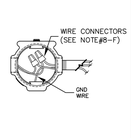


CONVECTOR WIRING DIAGRAMS DEFENDER ENCLOSURE

UNIT COMPLETE WITH BUILT–IN THERMOSTAT



UNIT WITH NO BUILT–IN THERMOSTAT



CONVECTOR WIRING DIAGRAMS x–Max ENCLOSURE

MODEL NUMBER	kW (BTU/Hr)	UNIT VOLTAGE (VOLTS)	BASIC UNIT	GAS GROUP IIB + H_2 W/O T'STAT	GAS GROUP IIB W/ T'STAT	GAS GROUP IIC W/O T'STAT	GAS GROUP IIC W/ T'STAT	SUPPLY WIRE SIZE (AWG)***	UNIT CURRENT (AMPS)	MAXIMUM CIRCUIT FUSE (AMPS)*	CABINET LENGTH in (mm)	TEMP CODE (°C)
CX1-120160-012-T3	1.2 (4095)	120	☐	☐	☐	☐	☐	12	10.0	15	31.3 (796)	T3 (200)
CX1-120160-018-T3	1.8 (6142)	120	☐	☐	☐	☐	☐	12	15.0	20	31.3 (796)	T3 (200)
CX1-208160-012-T3	1.2 (4095)	208	☐	☐	☐	☐	☐	12	5.8	15	31.3 (796)	T3 (200)
CX1-208160-018-T3	1.8 (6142)	208	☐	☐	☐	☐	☐	12	8.7	15	31.3 (796)	T3 (200)
CX1-208160-036-T3**	3.6 (12284)	208	☐	☐	☐	☐	☐	12	17.3	20	49.5 (1256)	T3 (200)
CX1-208160-048-T2A	4.8 (16378)	208	☐	☐	N/A	☐	☐	8	23.1	25	49.5 (1256)	T2A (280)
CX1-208160-076-T2A	7.6 (25932)	208	☐	☐	N/A	☐	N/A	8	36.5	40	59.5 (1511)	T2A (280)
CX1-240160-012-T3	1.2 (4095)	240	☐	☐	☐	☐	☐	12	5.0	15	31.3 (796)	T3 (200)
CX1-240160-018-T3	1.8 (6142)	240	☐	☐	☐	☐	☐	12	7.5	15	31.3 (796)	T3 (200)
CX1-240160-036-T3**	3.6 (12284)	240	☐	☐	☐	☐	☐	12	15.0	20	49.5 (1256)	T3 (200)
CX1-240160-048-T2A	4.8 (16378)	240	☐	☐	☐	☐	☐	10	20.0	25	49.5 (1256)	T2A (280)
CX1-240160-076-T2A	7.6 (25932)	240	☐	☐	N/A	☐	N/A	8	31.7	35	59.5 (1511)	T2A (280)
CX1-277160-012-T3	1.2 (4095)	277	☐	☐	☐	☐	☐	12	4.3	15	31.3 (796)	T3 (200)
CX1-277160-018-T3	1.8 (6142)	277	☐	☐	☐	☐	☐	12	6.5	15	31.3 (796)	T3 (200)
CX1-277160-036-T3**	3.6 (12284)	277	☐	☐	☐	☐	☐	12	13.0	15	49.5 (1256)	T3 (200)
CX1-277160-048-T2A	4.8 (16378)	277	☐	☐	☐	☐	☐	12	17.3	20	49.5 (1256)	T2A (280)
CX1-277160-076-T2A	7.6 (25932)	277	☐	☐	N/A	☐	N/A	8	27.4	30	59.5 (1511)	T2A (280)
CX1-380160-0075-T3	0.75 (2560)	380	☐	☐	☐	N/A	N/A	12	2.0	15	31.3 (796)	T3 (200)
CX1-380160-0113-T3	1.13 (3856)	380	☐	☐	☐	N/A	N/A	12	3.0	15	31.3 (796)	T3 (200)
CX1-380160-012-T3	1.2 (4095)	380	☐	☐	☐	☐	☐	12	3.2	15	31.3 (796)	T3 (200)
CX1-380160-018-T3	1.8 (6142)	380	☐	☐	☐	☐	☐	12	4.7	15	31.3 (796)	T3 (200)
CX1-380160-0226-T2A	2.26 (7711)	380	☐	☐	☐	N/A	N/A	12	5.9	15	31.3 (796)	T2A (280)
CX1-380160-0301-T3	3.01 (10271)	380	☐	☐	☐	N/A	N/A	12	7.9	15	49.5 (1256)	T3 (200)
CX1-380160-036-T3**	3.6 (12284)	380	☐	☐	☐	☐	☐	12	9.5	15	49.5 (1256)	T3 (200)
CX1-380160-0476-T2A	4.76 (16241)	380	☐	☐	☐	N/A	N/A	10	12.5	15	59.5 (1511)	T2A (280)
CX1-380160-048-T2A	4.8 (16378)	380	☐	☐	☐	☐	☐	12	12.6	15	49.5 (1256)	T2A (280)
CX1-380160-076-T2A	7.6 (25932)	380	☐	☐	☐	☐	N/A	10	20.0	25	59.5 (1511)	T2A (280)
CX1-400160-0083-T3	0.83 (2832)	400	☐	☐	☐	N/A	N/A	12	2.1	15	31.3 (796)	T3 (200)
CX1-400160-012-T3	1.2 (4095)	400	☐	☐	☐	☐	☐	12	3.0	15	31.3 (796)	T3 (200)
CX1-400160-0125-T3	1.25 (4565)	400	☐	☐	☐	N/A	N/A	12	3.1	15	31.3 (796)	T3 (200)
CX1-400160-018-T3	1.8 (6142)	400	☐	☐	☐	☐	☐	12	4.5	15	31.3 (796)	T3 (200)
CX1-400160-025-T2A	2.5 (8530)	400	☐	☐	☐	N/A	N/A	12	6.3	15	31.3 (796)	T2A (280)
CX1-400160-0333-T3	3.33 (11362)	400	☐	☐	☐	N/A	N/A	12	8.3	15	49.5 (1256)	T3 (200)
CX1-400160-036-T3**	3.6 (12284)	400	☐	☐	☐	☐	☐	12	9.0	15	49.5 (1256)	T3 (200)
CX1-400160-048-T2A	4.8 (16378)	400	☐	☐	☐	☐	☐	12	12.0	15	49.5 (1256)	T2A (280)
CX1-400160-0528-T2A	5.28 (18016)	400	☐	☐	☐	N/A	N/A	10	13.2	15	59.5 (1511)	T2A (280)
CX1-400160-076-T2A	7.6 (25932)	400	☐	☐	☐	☐	N/A	10	19.0	20	59.5 (1511)	T2A (280)
CX1-415160-009-T3	0.9 (3071)	415	☐	☐	☐	N/A	N/A	12	2.2	15	31.3 (796)	T3 (200)
CX1-415160-012-T3	1.2 (4095)	415	☐	☐	☐	☐	☐	12	2.9	15	31.3 (796)	T3 (200)
CX1-415160-0135-T3	1.35 (4606)	415	☐	☐	☐	N/A	N/A	12	3.3	15	31.3 (796)	T3 (200)
CX1-415160-018-T3	1.8 (6142)	415	☐	☐	☐	☐	☐	12	4.3	15	31.3 (796)	T3 (200)
CX1-415160-0269-T2A	2.69 (9179)	415	☐	☐	☐	N/A	N/A	12	6.5	15	31.3 (796)	T2A (280)
CX1-415160-0359-T3	3.59 (12250)	415	☐	☐	☐	N/A	N/A	12	8.7	15	49.5 (1256)	T3 (200)
CX1-415160-036-T3**	3.6 (12284)	415	☐	☐	☐	☐	☐	12	8.7	15	49.5 (1256)	T3 (200)
CX1-415160-048-T2A	4.8 (16378)	415	☐	☐	☐	☐	☐	12	11.6	15	49.5 (1256)	T2A (280)
CX1-415160-0568-T2A	5.68 (19381)	415	☐	☐	☐	N/A	N/A	10	13.7	15	59.5 (1511)	T2A (280)
CX1-415160-076-T2A	7.6 (25932)	415	☐	☐	☐	☐	N/A	10	18.3	20	59.5 (1511)	T2A (280)
CX1-480160-012-T3	1.2 (4095)	480	☐	☐	☐	☐	☐	12	2.5	15	31.3 (796)	T3 (200)
CX1-480160-018-T3	1.8 (6142)	480	☐	☐	☐	☐	☐	12	3.8	15	31.3 (796)	T3 (200)
CX1-480160-036-T3**	3.6 (12284)	480	☐	☐	☐	☐	☐	12	7.5	15	49.5 (1256)	T3 (200)
CX1-480160-048-T2A	4.8 (16378)	480	☐	☐	☐	☐	☐	12	10.0	15	49.5 (1256)	T2A (280)
CX1-480160-076-T2A	7.6 (25932)	480	☐	☐	☐	☐	N/A	10	15.8	20	59.5 (1511)	T2A (280)
CX1-600160-012-T3	1.2 (4095)	600	☐	☐	N/A	☐	☐	12	2.0	15	31.3 (796)	T3 (200)
CX1-600160-018-T3	1.8 (6142)	600	☐	☐	N/A	☐	☐	12	3.0	15	31.3 (796)	T3 (200)
CX1-600160-036-T3**	3.6 (12284)	600	☐	☐	N/A	☐	☐	12	6.0	15	49.5 (1256)	T3 (200)
CX1-600160-048-T2A	4.8 (16378)	600	☐	☐	N/A	☐	☐	12	8.0	15	49.5 (1256)	T2A (280)
CX1-600160-076-T2A	7.6 (25932)	600	☐	☐	N/A	☐	☐	12	12.7	15	59.5 (1511)	T2A (280)

CONVECTOR TECHNICAL DATA

– ALL UNITS ARE SINGLE PHASE.
– OPERATION AT LOWER VOLTAGES THAN RATED WILL RESULT IN REDUCED OUTPUT AND AMP DRAW.
– ACTUAL OUTPUT (kW) = [(SUPPLY VOLTAGE)^2 / (RATED VOLTAGE)^2] X RATED UNIT WATTAGE (kW).
* OR EQUIVALENT BREAKER AS PER LOCAL ELECTRICAL INSPECTION AUTHORITY REQUIREMENTS.
** FOR 3.6 kW HEATERS RATED T3 CABINET LENGTH IS 49.5" (1256mm). 3.6 kW HEATERS RATED T2A CABINET LENGTH IS 31.3" (796mm)
*** ENSURE SUPPLY WIRE SIZE ADHERES TO APPLICABLE LOCAL AND NATIONAL ELECTRICAL CODES

NOTES:

1. TOLERANCES ON ALL DIMENSIONS ARE ±2.0mm [±0.08"] UNLESS OTHERWISE SPECIFIED.

2. WEIGHT:

		CABINET SIZE 31.34"	49.45"	59.49"
NET	[KG]	25.1	36.6	42.1
	[LBS]	55.3	80.7	92.8
SHIPPING	[KG]	30.0	44.0	48.0
	[LBS]	65.0	95.0	105.0

3. AMBIENT TEMPERATURE LIMITATIONS:

OPERATIONAL: –45°C TO 40°C (–49°F TO 104°F)
STORAGE: –45°C TO 80°C (–49°F TO 176°F)

4. UL LISTING NO.:

#E87128

5. CONVECTOR ENCLOSURES HAZARDOUS LOCATION APPROVALS:

DEFENDER ENCLOSURE

WITHOUT BUILT–IN T'STAT ENCLOSURE	CLASS I, DIV. 1 & 2, GROUPS B, C & D CLASS I, ZONES 1 & 2, GROUPS IIA & IIB + H_2
BUILT–IN T'STAT ENCLOSURE	CLASS I, DIV. 1 & 2, GROUPS C & D CLASS I, ZONES 1 & 2, GROUPS IIA & IIB

x–Max ENCLOSURE

WITHOUT BUILT–IN T'STAT ENCLOSURE	CLASS I, DIV. 1 & 2, GROUPS A, B, C, & D CLASS I, ZONES 1 & 2, GROUPS IIA, IIB, & IIC
BUILT–IN T'STAT ENCLOSURE	CLASS I, DIV. 1 & 2, GROUPS A, B, C, & D CLASS I, ZONES 1 & 2, GROUPS IIA, IIB, & IIC

6. CABINET PAINT SPEC.:

DESCRIPTION –	EPOXY SEMI GLOSS
COLOR –	RUFFNECK GREEN
SPECIFIC GRAVITY:	1.48
GLOSS (60°) –	11°
FILM THICKNESS –	2.5 MIL
PENCIL HARDNESS –	2H
CROSS HATCH –	5b NO LIFTING OF SQUARES
MANDREL BEND –	PASS 1/8" BEND, NO CRACKING OR LOSS OF ADHESION

7. HEATER PLACEMENT:

HEATER SHOULD BE INSTALLED AS FOLLOWS:

A) HEATER MUST BE MOUNTED LEVEL ON A VERTICAL SURFACE USING FACTORY SUPPLIED MOUNTING BRACKETS SUCH THAT THERE ARE NO OBSTRUCTIONS TO IMPEDE AIR INLET OR DISCHARGE. [REFER TO INSTALLATION CLEARANCES DIAGRAM]

B) AIR DISCHARGE IS NOT DIRECTED AT A THERMOSTAT.

C) AIR DISCHARGE IS ACROSS AREAS OF HEAT LOSS (SUCH AS WINDOWS).

D) FOR EQUIPMENT FREEZE PROTECTION, LOCATE HEATER AS CLOSE TO EQUIPMENT AS POSSIBLE.

E) MOUNTING SURFACE MUST BE STRONG ENOUGH TO:
i) SUPPORT THE HEATER'S WEIGHT,
ii) WITHSTAND ABUSIVE SITUATIONS SUCH AS TRANSPORTABLE INSTALLATIONS.

F) SECURE MOUNTING BRACKETS TO VERTICAL SURFACE WITH BRACKETS SPACED TO BOTH SUPPORT THE UNITS WEIGHT AND TO MATCH SPACING OF SLOTS IN REAR PANEL. THE MOUNTING BRACKETS TOP MOUNTING SLOT IS APPROXIMATELY 38.0mm (1.5") BELOW HEATER'S TOP SURFACE.

G) ALIGN SLOTS ON BACK PANEL OF HEATER WITH TABS AT TOP OF WALL MOUNTING BRACKETS. WITH HEATER TILTED, INSERT TABS INTO SLOTS AND ROTATE UNIT UNTIL IT RESTS AGAINST THE BOTTOM TAB OF WALL MOUNT BRACKET. SECURE HEATER TO BOTTOM OF TABS USING SCREWS SUPPLIED. [REFER TO CONVECTOR MOUNTING DIAGRAMS]

8. FIELD WIRING:

A) CONDUIT SEALS ARE REQUIRED WITHIN 152.4mm (6") OF FIELD ENTRIES.

B) USE ONLY COPPER CONDUCTORS RATED FOR 90°C (194°F) AND APPROVED EXPLOSION PROOF WIRING METHODS. [REFER TO TECHNICAL DATA CHART FOR APPROPRIATE CONDUCTOR SIZES]

C) SUPPLY VOLTAGE MUST BE WITHIN 10% OF DATA PLATE RATINGS.

D) EXTERNAL OVER–CURRENT PROTECTION IS REQUIRED AND MUST MEET DATA PLATE RATINGS FOR VOLTAGE, AMPERAGE, AND FREQUENCY.

E) FIELD CONNECTION: 3/4" – 14 NPT

F) WIRE CONNECTORS: 90°C (194°F) MIN. RATING (REMOTE T'STAT) & CONTROL DEVICES:

G) ONLY USE HEATER IN LOCATION MATCHING HEATER'S HAZARDOUS CLASSIFICATION RATING. REMOTE T'STAT MUST MEET HAZARDOUS CLASSIFICATION FOR LOCATION AND NOT ALLOW ROOM TEMPERATURE TO EXCEED AMBIENT TEMPERATURE LIMITATION OF HEATER (SEE NOTE#3). VOLTAGE AND AMPERAGE RATINGS MUST MATCH HEATER'S ELECTRICAL RATING. IF NOT, A CONTACTOR MAY BE REQUIRED.

9. BEFORE APPLYING ELECTRICAL POWER:

A) CHECK THAT ALL CONNECTIONS ARE SECURE, COMPLY WITH APPLICABLE CODES REQUIREMENTS, AND WITH WIRING DIAGRAM. [REFER TO FIELD WIRING]

B) CONFIRM SUPPLY VOLTAGE IS COMPATIBLE WITH THE DATA PLATE SPECIFICATIONS.

C) REMOVE ANY FOREIGN OBJECTS FROM HEATER.

D) ENSURE EXTERNAL FITTINGS AND ENCLOSURE COVERS ARE SECURED.

MODEL CODING

CX1 – 120160 – 012 – T2A – IIB – T

- MODEL SERIES
- HEATER VOLTAGE: 120V 400V / 208V 415V / 240V 480V / 277V 600V / 380V
- PHASE: 1 PH
- HEATER FREQUENCY: 50 HERTZ / 60 HERTZ
- HEATER KILOWATTS: WATTAGE ÷ 100
- HAZARDOUS LOCATION: ADD IIB OR IIC
- T–CODE: T2A – 280° C / T3 – 200° C
- BUILT–IN T'STAT: ADD 'T' FOR T'STAT

DATE	REVISION		BY	CHK
14 JAN 2013	UPDATED MODEL LISTINGS	1	LB	CF

UNLESS OTHERWISE NOTED TOLERANCES ARE TO BE: ±1mm ±1/2°ANGLES 3.2 µm OR 125 µin

CCI Thermal Technologies INC.
EDMONTON, ALBERTA

DRAWN BY: NJS	TITLE: CX1 APPROVAL DRAWING
CHECKED BY: RW	
SCALE: NTS	
DATE: 2007–09–27	DRAWING NO.: 51041–D