

XEC1 Protektor SERIES SUBMITTAL

Explosion-proof Convection Air Heater

For Hazardous Locations

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Three Phase – T3A (180°C / 356°F) Division System / T3 (200°C / 392°F) Zone System

KW	Volts	Ph	Cabinet Length In. (mm)	Base Model Code before Options ? = Select an Electrical Enclosure A or B or C based on availability +	Total Amps (A)	"Electrical Enclosure Code"? See below for wall mount BTX or XET thermostat or your own control device			☐
						Wall Mount BTX Thermostat	Wall Mount XET Thermostat	Your Own Control Device	
1.13	380	3	31.3 (795)	XEC1-0113-3803-?-T3A-31-A	1.7	B	B	B or C	☐
1.20	208	3	31.3 (795)	XEC1-0120-2083-?-T3A-31-A	3.3	A or B	B	A or B or C	☐
1.20	240	3	31.3 (795)	XEC1-0120-2403-?-T3A-31-A	2.9	A or B	B	A or B or C	☐
1.20	277	3	31.3 (795)	XEC1-0120-2773-?-T3A-31-A	2.5	A or B	B	A or B or C	☐
1.25	400	3	31.3 (795)	XEC1-0125-4003-?-T3A-31-A	1.8	B	B	B or C	☐
1.35	415	3	31.3 (795)	XEC1-0135-4153-?-T3A-31-A	1.9	B	B	B or C	☐
1.51	440	3	31.3 (795)	XEC1-0151-4403-?-T3A-31-A	2.0	B	B	B or C	☐
1.80	208	3	31.3 (795)	XEC1-0180-2083-?-T3A-31-A	5.0	A or B	B	A or B or C	☐
1.80	240	3	31.3 (795)	XEC1-0180-2403-?-T3A-31-A	4.3	A or B	B	A or B or C	☐
1.80	277	3	31.3 (795)	XEC1-0180-2773-?-T3A-31-A	3.8	A or B	B	A or B or C	☐
1.80	480	3	31.3 (795)	XEC1-0180-4803-?-T3A-31-A	2.2	A or B	B	A or B or C	☐
2.26	380	3	49.5 (1257)	XEC1-0226-3803-?-T3A-49-A	3.4	B	B	B or C	☐
2.50	400	3	49.5 (1257)	XEC1-0250-4003-?-T3A-49-A	3.6	B	B	B or C	☐
2.69	415	3	49.5 (1257)	XEC1-0269-4153-?-T3A-49-A	3.7	B	B	B or C	☐
3.01	380	3	49.5 (1257)	XEC1-0301-3803-?-T3A-49-A	4.6	B	B	B or C	☐
3.03	400	3	49.5 (1257)	XEC1-0303-4403-?-T3A-49-A	4.0	B	B	B or C	☐
3.13	380	3	71.8 (1824)	XEC1-0313-3803-?-T3A-71-A	4.8	B	B	B or C	☐
3.33	400	3	49.5 (1257)	XEC1-0333-4003-?-T3A-49-A	4.8	B	B	B or C	☐
3.47	400	3	71.8 (1824)	XEC1-0347-4003-?-T3A-71-A	5.0	B	B	B or C	☐
3.59	415	3	49.5 (1257)	XEC1-0359-4153-?-T3A-49-A	5.0	B	B	B or C	☐
3.60	208	3	49.5 (1257)	XEC1-0360-2083-?-T3A-49-A	10.0	A or B	B	A or B or C	☐
3.60	240	3	49.5 (1257)	XEC1-0360-2403-?-T3A-49-A	8.7	A or B	B	A or B or C	☐
3.60	277	3	49.5 (1257)	XEC1-0360-2773-?-T3A-49-A	7.5	A or B	B	A or B or C	☐
3.60	380	3	49.5 (1257)	XEC1-0360-3803-?-T3A-49-A	5.5	B	B	B or C	☐
3.60	400	3	49.5 (1257)	XEC1-0360-4003-?-T3A-49-A	5.2	B	B	B or C	☐
3.60	480	3	49.5 (1257)	XEC1-0360-4803-?-T3A-49-A	4.3	A or B	B	A or B or C	☐
3.60	600	3	49.5 (1257)	XEC1-0360-6003-?-T3A-49-A	3.5	A or B	B	A or B or C	☐
3.74	415	3	71.8 (1824)	XEC1-0374-4153-?-T3A-71-A	5.2	B	B	B or C	☐
4.20	440	3	71.8 (1824)	XEC1-0420-4403-?-T3A-71-A	5.5	B	B	B or C	☐

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Continued (Three Phase – T3A (180°C / 356°F) Division System / T3 (200°C / 392°F) Zone System)

KW	Volts	Ph	Cabinet Length In. (mm)	Base Model Code before Options ? = Select an Electrical Enclosure A or B or C based on availability	Total Amps (A)	"Electrical Enclosure Code"? See below for wall mount BTX or XET thermostat or your own control device			☒
						Wall Mount BTX Thermostat	Wall Mount XET Thermostat	Your Own Control Device	
5.00	208	3	71.8 (1824)	XEC1-0500-2083-?-T3A-71-A	13.9	A or B	B	A or B or C	☐
5.00	240	3	71.8 (1824)	XEC1-0500-2403-?-T3A-71-A	12.0	A or B	B	A or B or C	☐
5.00	277	3	71.8 (1824)	XEC1-0500-2773-?-T3A-71-A	10.4	A or B	B	A or B or C	☐
5.00	380	3	71.8 (1824)	XEC1-0500-3803-?-T3A-71-A	7.6	B	B	B or C	☐
5.00	400	3	71.8 (1824)	XEC1-0500-4003-?-T3A-71-A	7.2	B	B	B or C	☐
5.00	415	3	71.8 (1824)	XEC1-0500-4153-?-T3A-71-A	7.0	B	B	B or C	☐
5.00	480	3	71.8 (1824)	XEC1-0500-4803-?-T3A-71-A	6.0	A or B	B	A or B or C	☐
5.00	600	3	71.8 (1824)	XEC1-0500-6003-?-T3A-71-A	4.8	A or B	B	A or B or C	☐

(†) Refer to Page 4 of XEC1 brochure for XEC1 Model and Option Code Reference Chart.

(?) A = 120VAC Controls in Large Electrical Enclosure; B = 24VAC Controls in Large Electrical Enclosure; C = Line Voltage Electrical Enclosure (small Y junction box). Large Electrical Enclosure A & B include a contactor, transformer, and printed circuit board with fuses.

(Δ) AS = Assembly stock (approximately 1 to 2 weeks); NS = Non-stock (contact factory for lead time).

Supply voltage must be within +/- 10% of rated heater voltage. Actual Output (kW) = $[\text{Line voltage}]^2 \div (\text{Rated Voltage})^2 \times \text{Rated Unit Wattage (kW)}$

Note: BTX1 and XET1 thermostats are not designed to switch three-phase heaters directly. A factory built-in Electrical Enclosure (A or B), or customer supplied, remote mount, "Control Circuit" is required.

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Hazardous location rating for heater:

Division System

Class I, Division 1 & 2, Groups B, C & D, T3A

Zone System

Class I, Zone 1 & 2, Ex db, Groups IIA, IIB+H², Gb

Class I, Zone 1 & 2, AEx db, Groups IIA, IIB+H², Gb

Ta = -50°C to +40°C, IP66, Type 4, T3

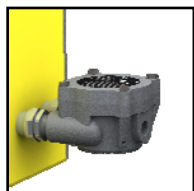
Factory Built-in Options

Code	Description	☒
LC	Left Side Electrical Enclosure (standard location is on the right side)	☐

Electrical Enclosure (must select at least one)

Code	Description	☒
A*	120VAC, Large Electrical Enclosure	☐
B*	24VAC, Large Electrical Enclosure (safer) (Required with XET1 wall thermostat)	☐
C	Line Voltage, Small Electrical Enclosure (Y Junction Box). Not suitable for wall mount XET1 electronic thermostats.	☐

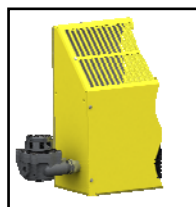
* Our wall mount thermostats require Electrical Enclosure A or B on all 600V models, all 3-phase models, or 1-phase heater models with a line current exceeding 22 Amps.



Electrical Enclosure
"C" using line voltage



Electrical Enclosure
"A" (120VAC) or
"B" (24VAC)



Left Side
Electrical Enclosure
Option Code "LC"

Wall Mount Accessories

Catalog	Description	☒
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Number		
BTX1-N-B *	Wall mount SPDT <u>bi-metal</u> hazardous location thermostat. Requires XEC1 heater electrical enclosure A or B or C depending on heater model selected. Temperature adjustment range: 40°F to 80°F (5°C to 25°C); 3/4" - NPT conduit opening on top and bottom; Ship wt - 3.5 lbs (1.6 kg) 22 Amps Resistive Load, 480 VAC Max; 1/2 HP@125 VAC; 1 HP@ 250 VAC (suitable for 24 volt or 120 volt control circuit) Class I, Division 1 & 2, Groups B, C & D Class I, Zone 1 & 2, Ex db, Groups IIA, IIB+H², T6, Gb Class II, Division 1, Groups E, F & G Class I, Zone 1 & 2, AEx db, Groups IIA, IIB+H², T6, Gb Class II, Division 2, Groups F & G; Class III; T6 Class II, Zone 21 & 22, Ex tb, Groups IIIA, IIIB & IIIC, T85°C, Db -50°C ≤ T amb ≤ +40°C, IP66, Type 4 Class II, Zone 21 & 22, AEx tb, Groups IIIA, IIIB & IIIC, T85°C, Db	☐
XET1-1-W-N-A*	Wall mount <u>electronic</u> hazardous location thermostat. Requires XEC1 heater electrical enclosure B. Temperature adjustment range: 40°F to 80°F (5°C to 25°C); 3/4" – NPT conduit opening on top and bottom; Ship wt – 3.4 lbs (1.5 kg) 20 to 36 VAC 50/60Hz; 1 Amp max continuous (suitable for 24 volt control circuit only) Class I, Division 1 & 2, Groups B, C & D Class I, Zone 1 & 2, Ex db, Groups IIA, IIB+H², T6, Gb Class II, Division 1, Groups E, F & G Class I, Zone 1 & 2, AEx db, Groups IIA, IIB+H², T6, Gb Class II, Division 2, Groups F & G; Class III; T6 Class II, Zone 21 & 22, Ex tb, Groups IIIA, IIIB & IIIC, T85°C, Db -50°C ≤ T amb ≤ +40°C, IP66, Type 4 Class II, Zone 21 & 22, AEx tb, Groups IIIA, IIIB & IIIC, T85°C, Db	☐
XDC-01	Wall mount hazardous location disconnect switch. <u>Not</u> suitable for Hydrogen gas atmosphere 600V, 50A max; 15 HP@208/240V, 3 phase; 30 HP@480/600V, 3 phase; 2 HP@120V, 1 phase; 7.5 HP@240V, 1 phase Class I, Division 1 & 2, Groups C & D; Class II, Division 1, Groups E, F & G; Class II, Division 2, Groups F & G; Class III Class I, Zone 1 & 2, Grp IIA & IIB, T5	☐

* Our wall mount thermostats require Electrical Enclosure A or B on all 600V models, all 3-phase models, or 1-phase heater models with a line current exceeding 22 Amps.

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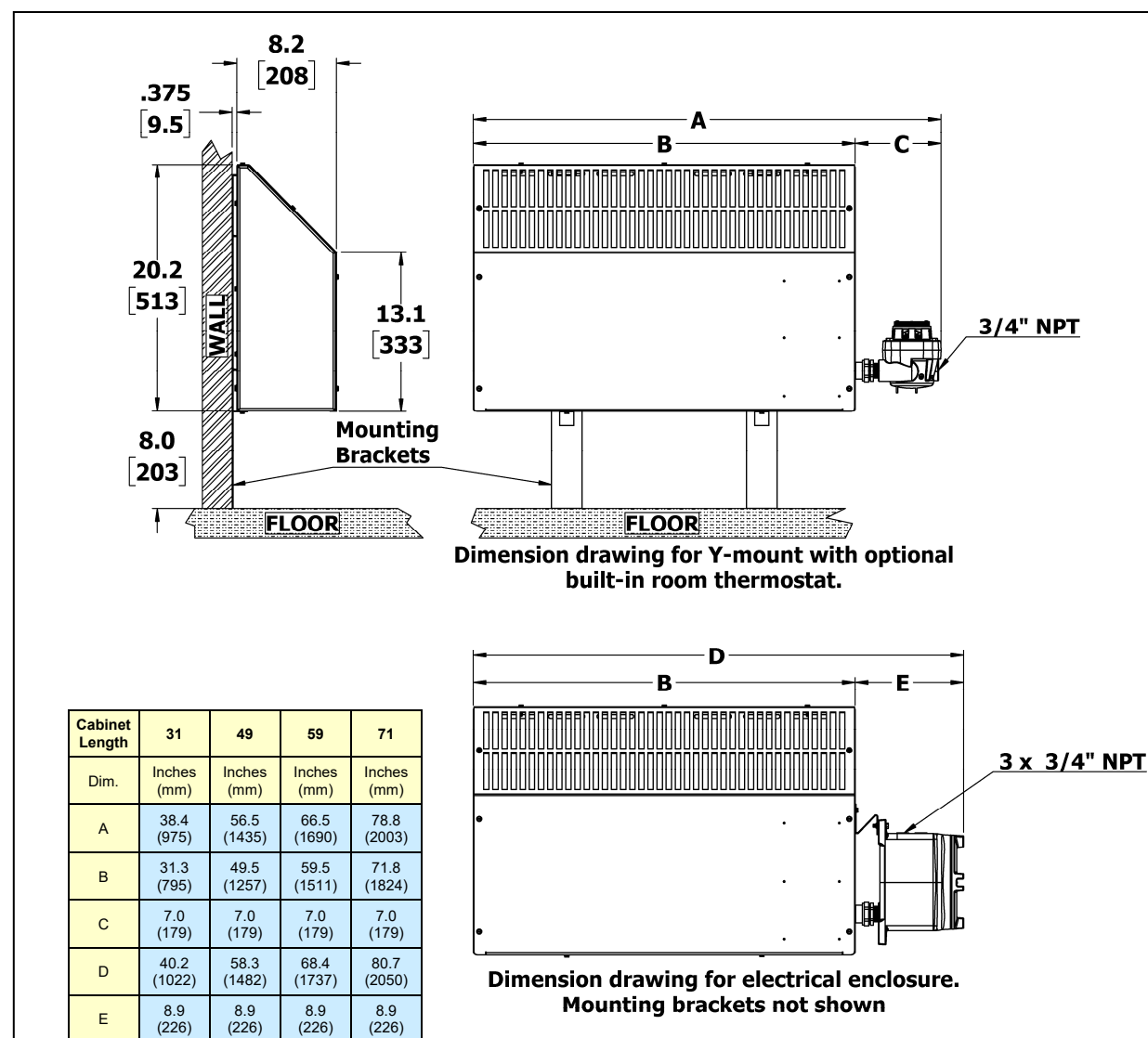
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XEC1 Weights by Model Size

XEC1 Cabinet Length in. (mm)		31.3 (795)	49.5 (1257)	59.5 (1511)	71.8 (1824)
Approximate Net Weight Lbs (kg)	Heater with Electrical Enclosure "C"	54 (24.5)	81 (36.7)	93 (42.2)	110 (49.9)
	Heater with Electrical Enclosure "A or B"	70 (31.7)	97 (44.0)	109 (49.4)	126 (57.1)
Approximate Shipping Weight* Lbs (kg)	Heater with Electrical Enclosure "C"	72 (32.5)	104 (47.2)	118 (53.7)	140 (63.4)
	Heater with Electrical Enclosure "A or B"	88 (39.7)	120 (54.5)	134 (60.9)	156 (70.6)

* All heaters are individually packed in cardboard packaging and then strapped to a wooden pallet.

XEC1 Physical Dimensions



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XEC1 Model Coding

Model and Option Code Reference Chart

