Series

OPXA Explosion-Proof Sloped Top Convector Heater

**Features**

Color - Standard: red.

Voltage - 120V, 208V, 240V, 277V, 347V, 480V, 600V, 1 or 3-phase.

Construction - Sloped top. 14-gauge galvanized steel back panel.

 14-gauge carbon steel front and side panels with

 epoxy/polyester powder-coating.

 - Low temperature convection.

* Sealed junction box.
* Electrical enclosure on the right side, left side option

 available (LC).

Heating element - Incoloy® 800 tubular heating element in copper-free aluminum tubes with radial-embossed aluminum fins.

Watt density - Varies according to temperature code.

Standards - CSA C22.2 No.30, No. 60079-0, No.60079-1, No.46, No. 60529, No. 94.2.

 - ANSI/UL 823, 60079-0, 60079-1.

 - ANSI/IEC 60529.

* UL 50E.

Classification - North American Hazardous Location:

 - Class I, Division 1 and 2, Groups B, C and D (T2B or T3A).

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

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

 Ta = -50 °C to +40 °C, IP66, Type 4, (T2 or T3).

Temperature code - Division System – T2B 260 °C (500 °F) or T3A 180 °C (356 °F).

* Zone System – T2 300 °C (572 °F) or T3 200 °C (392 °F).

Ingress protection- IP66 and Type 4.

Control - Built-in or wall mount thermostat available.

Installation - Built-in wall bracket.

 - Minimum mounting distances of 8 in. (20 cm) above the ﬂoor and 18 in. (45 cm) from the ceiling.

Warranty - 1-year warranty against defects.

Application - Paint room, chemical storage, petrochemical plant, oil

 Refinery, dry cleaning plant.

 *Consult the Electrical Code in your area before installing this unit.*



|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Cabinet Length** | **31** | **49** | **59** | **71** |
| Dimension | in.(mm) | in.(mm) | in.(mm) | in.(mm) |
| A | 38.4(975) | 56,5(1435) | 66,5(1690) | 78,8(2003) |
| B | 31.3(795) | 49.5(1257) | 59.5(1511) | 71.8(1824) |
| C | 7(179) | 7(179) | 7(179) | 7(179) |
| D | 40.2(1022) | 58.3(1482) | 68.4(1737) | 80.7(2050) |
| E | 8.9(226) | 8.9(226) | 8.9(226) | 8.9(226) |

**Codification**

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**Electrical Enclosure**

Electrical Enclosure

"A" (120VAC) or

“B” (24VAC)

Electrical Enclosure “C” Line voltage with optional built-in thermostat “T1”

Left side Electrical Enclosure

Option Code “LC”

Electrical Enclosure “C” Line voltage

**Accessories**

**Explosion-Proof ExCaliberTM Series Thermostats**

OUE-BTX1-N-B (SPDT) heating or cooling:

This is the bi-metal thermostat used on OPXA heaters with built-in option code (T1) and electrical enclosure "C" selected. Wall mount versio n requires electrical enclosure “A” or “B” or “C” depending on model.

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

Temperature adjustment range: 40°F to 80°F (5°C to 25°C); 3/4" - NPT conduit opening on top and bottom.

22A resistive load, 480VAC Max; 1/2 HP@125 VAC; 1 HP@ 250VAC (suitable for 24V or 120V control circuit).

Note: If ExCaliber™ series wall mount thermostats are being used with 600V OPXA heaters, heaters with a current draw greater than 22A, or on any 3-phase heaters, then order the heaters with electrical enclosure “A” or “B”. If using your own temperature control device, a remote contactor may be required. Ensure control devices comply to local electrical code and meets the heater’s electrical ratings and is suitable for the area’s hazardous atmosphere classification.

OUE-XET1-1-W-N-A (electronic) heating only:

Wall mount version requires heater electrical enclosure “B”. If a wall mount thermostat is ordered without heater electrical enclosure “B”, then an external 24VAC power supply and control circuit is required (supplied and installed by others).

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

Temperature adjustment range: 40°F to 80°F (5°C to 25°C); 3/4" - NPT conduit opening on top and bottom.

20 to 36VAC 50/60 Hz; 1A max. continuous (suitable for 24V control circuit only).

**Field Installation & Retrofit Kits**

Built-in thermostat field installation kits for OPXA series:

These two field installed built-in thermostat kits are for adding a

OUE-BTX1-N-B or OUE-XET1-1-W-N-A thermostat to an OPXA heater with electrical enclosure "A" (120VAC) or "B" (24VAC) and includes the electrical wires, 3/4" conduit seal, conduit nipples, sealing compound (water/cement plastic pouch) and sealing fiber. The conduit seal is certified for use in Class I, Division 1, Groups A, B, C and D; Class II, Division 1, Groups E, F and G; Class III. Installation must be inspected on site as per the local electrical code.

BTX1-FIK:

This kit is suitable for installation of a OUE-BTX1-N-B thermostat on an OPXA heater with electrical enclosure

"A" (120VAC) or "B" (24VAC). Thermostat not included.

XET1-FIK:

This kit is suitable for installation of an OUE-XET1-1-W-N-A thermostat on an OPXA heater with electrical enclosure

 "B" (24VAC) only. Thermostat not included.

OUE-BLK1-W-N-A field retrofit kit: The heater thermostat conversion kit allows simple interchangeability from a built-in thermostat to a wall mount configuration.

**Explosion-Proof Disconnect Switch, Remote Mount**

OUE-XDC-01: Disconnect switch - Not suitable for Group B or Group IIB+H2 (Hydrogen) gas atmosphere

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 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

|  |
| --- |
| **Models** |
| **kW** | **Volts (ph)** |  | **Product #1****To order, replace the ‘’-X-‘’** **with the electrical enclosure** **code A or B or C** | **Qty** | **Electrical Enclosure Code: A (120VAC), B (24VAC), C (Line voltage)****according to thermostat option** | **Cabinet length****in.** |
| **Amp.** | **A** | **B** | **C** | **Built-in bi-metal****thermostat****T1** | **Wall mount bi-metal****thermostat****OUE-BTX1-N-B** | **Wall mount electronic thermostat****OUE-XET1-1-W- N-A** | **Your own** **control** **device** |
| **T2B (260 °C / 500 °F) Division System Temperature Classification Rating****T2 (300 °C / 572 °F) Zone System Temperature Classification Rating** |
| 3.6 | 208 (1) | 17.3 | OPXA03600-2081-X-T2B-31 |  |  |  | C | A or B or C | B | A or B or C | 31 |
| 3.6 | 208 (3) | 10.0 | OPXA03600-2083-X-T2B-31 |  |  |  | Not available | A or B | B | A or B or C | 31 |
| 3.6 | 240 (1) | 15.0 | OPXA03600-2401-X-T2B-31 |  |  |  | C | A or B or C | B | A or B or C | 31 |
| 3.6 | 240 (3) | 8.7 | OPXA03600-2403-X-T2B-31 |  |  |  | Not available | A or B | B | A or B or C | 31 |
| 3.6 | 600 (1) | 6.0 | OPXA03600-6001-X-T2B-31 |  |  |  | Not available | A or B | B | A or B or C | 31 |
| 3.6 | 600 (3) | 3.5 | OPXA03600-6003-X-T2B-31 |  |  |  | Not available | A or B | B | A or B or C | 31 |
| 4.8 | 208 (1) | 23.1 | OPXA04800-2081-X-T2B-49 |  |  |  | Not available | A or B | B | A or B or C | 49 |
| 4.8 | 208 (3) | 13.3 | OPXA04800-2083-X-T2B-49 |  |  |  | Not available | A or B | B | A or B or C | 49 |
| 4.8 | 240 (1) | 20.0 | OPXA04800-2401-X-T2B-49 |  |  |  | C | A or B or C | B | A or B or C | 49 |
| 4.8 | 240 (3) | 11.5 | OPXA04800-2403-X-T2B-49 |  |  |  | Not available | A or B | B | A or B or C | 49 |
| 4.8 | 600 (1) | 8.0 | OPXA04800-6001-X-T2B-49 |  |  |  | Not available | A or B | B | A or B or C | 49 |
| 4.8 | 600 (3) | 4.6 | OPXA04800-6003-X-T2B-49 |  |  |  | Not available | A or B | B | A or B or C | 49 |
| 7.6 | 208 (1) | 36.5 | OPXA07600-2081-X-T2B-59 |  |  |  | Not available | A or B | B | A or B or C | 59 |
| 7.6 | 208 (3) | 21.1 | OPXA07600-2083-X-T2B-59 |  |  |  | Not available | A or B | B | A or B or C | 59 |
| 7.6 | 240 (1) | 31.7 | OPXA07600-2401-X-T2B-59 |  |  |  | Not available | A or B | B | A or B or C | 59 |
| 7.6 | 240 (3) | 18.3 | OPXA07600-2403-X-T2B-59 |  |  |  | Not available | A or B | B | A or B or C | 59 |
| 7.6 | 600 (1) | 12.7 | OPXA07600-600-X-T2B-59 |  |  |  | Not available | A or B | B | A or B or C | 59 |
| 7.6 | 600 (3) | 7.3 | OPXA07600-6003-X-T2B-59 |  |  |  | Not available | A or B | B | A or B or C | 59 |
| 10 | 208 (3) | 27.8 | OPXA10000-2083-X-T2B-71*2* |  |  |  | Not available | Not available | Not available | C | 71 |
| 10 | 240 (3) | 24.1 | OPXA10000-2403-X-T2B-71*2* |  |  |  | Not available | Not available | Not available | C | 71 |
| 10 | 600 (1) | 16.7 | OPXA10000-6001-X-T2B-712 |  |  |  | Not available | Not available | Not available | C | 71 |
| 10 | 600 (3) | 9.6 | OPXA10000-6003-X-T2B-71*2* |  |  |  | Not available | Not available | Not available | C | 71 |
| **T3A (180 °C / 356 °F) Division System Temperature Classification Rating****T3 (200 °C / 392 °F) Zone System Temperature Classification Rating** |
| 0.6 | 347 (1) | 1.7 | OPXA00600-3471-X-T3A-31 |  |  |  | C | A or B or C | B | A or B or C | 31 |
| 1.2 | 120 (1) | 10.0 | OPXA01200-1201-X-T3A-31 |  |  |  | C | C | Not available | C | 31 |
| 1.2 | 208 (1) | 5.8 | OPXA01200-2081-X-T3A-31 |  |  |  | C | A or B or C | B | A or B or C | 31 |
| 1.2 | 208 (3) | 3.3 | OPXA01200-2083-X-T3A-31 |  |  |  | Not available | A or B | B | A or B or C | 31 |
| 1.2 | 240 (1) | 5.0 | OPXA01200-2401-X-T3A-31 |  |  |  | C | A or B or C | B | A or B or C | 31 |
| 1.2 | 240 (3) | 2.9 | OPXA01200-2403-X-T3A-31 |  |  |  | Not available | A or B | B | A or B or C | 31 |
| 1.2 | 347 (1) | 3.5 | OPXA01200-3471-X-T3A-31 |  |  |  | C | A or B or C | B | A or B or C | 31 |
| 1.2 | 600 (1) | 2.0 | OPXA01200-6001-X-T3A-31 |  |  |  | Not available | A or B | B | A or B or C | 31 |
| 1.6 | 347 (1) | 4.6 | OPXA01610-3471-X-T3A-49 |  |  |  | C | A or B or C | B | A or B or C | 49 |
| 1.8 | 120 (1) | 15.0 | OPXA01800-1201-X-T3A-31 |  |  |  | C | C | Not available | C | 31 |
| 1.8 | 208 (1) | 8.7 | OPXA01800-2081-X-T3A-31 |  |  |  | C | A or B or C | B | A or B or C | 31 |
| 1.8 | 208 (3) | 5.0 | OPXA01800-2083-X-T3A-31 |  |  |  | Not available | A or B | B | A or B or C | 31 |
| 1.8 | 240 (1) | 7.5 | OPXA01800-2401-X-T3A-31 |  |  |  | C | A or B or C | B | A or B or C | 31 |
| 1.8 | 240 (3) | 4.3 | OPXA01800-2403-X-T3A-31 |  |  |  | Not available | A or B | B | A or B or C | 31 |
| 1.8 | 600 (1) | 3.0 | OPXA01800-6001-X-T3A-31 |  |  |  | Not available | A or B | B | A or B or C | 31 |
| 2.54 | 347 (1) | 7.3 | OPXA02540-3471-X-T3A-59 |  |  |  | C | A or B or C | B | A or B or C | 59 |
| 3.34 | 347 (1) | 9.6 | OPXA03340-3471-X-T3A-71 |  |  |  | C | A or B or C | B | A or B or C | 71 |
| 3.6 | 208 (1) | 17.3 | OPXA03600-2081-X-T3A-49 |  |  |  | C | A or B or C | B | A or B or C | 49 |
| 3.6 | 208 (3) | 10.0 | OPXA03600-2083-X-T3A-49 |  |  |  | Not available | A or B | B | A or B or C | 49 |
| 3.6 | 240 (1) | 15.0 | OPXA03600-2401-X-T3A-49 |  |  |  | C | A or B or C | B | A or B or C | 49 |
| 3.6 | 240 (3) | 8.7 | OPXA03600-2403-X-T3A-49 |  |  |  | Not available | A or B | B | A or B or C | 49 |
| 3.6 | 600 (1)  | 6.0 | OPXA03600-6001-X-T3A-49 |  |  |  | Not available | A or B | B | A or B or C | 49 |
| 3.6 | 600 (3) | 3.5 | OPXA03600-6003-X-T3A-49 |  |  |  | Not available | A or B | B | A or B or C | 49 |
| 5 | 208 (1)  | 24.0 | OPXA05000-2081-X-T3A-71 |  |  |  | Not available | A or B | B | A or B or C | 71 |
| 5 | 208 (3) | 13.9 | OPXA05000-2083-X-T3A-71 |  |  |  | Not available | A or B | B | A or B or C | 71 |
| 5 | 240 (1) | 20.8 | OPXA05000-2401-X-T3A-71 |  |  |  | C | A or B or C | B | A or B or C | 71 |
| 5 | 240 (3) | 12.0 | OPXA05000-2403-X-T3A-71 |  |  |  | Not available | A or B | B | A or B or C | 71 |
| 5 | 600 (1)  | 8.3 | OPXA05000-6001-X-T3A-71 |  |  |  | Not available | A or B | B | A or B or C | 71 |
| 5 | 600 (3) | 4.8 | OPXA05000-6003-X-T3A-71 |  |  |  | Not available | A or B | B | A or B or C | 71 |

1 X = A (120VAC, large electrical enclosure), B (24VAC, large electrical enclosure), C (Line voltage, small electrical enclosure [Y junction box]).

Large electrical enclosure A and Binclude a contactor, transformer, and printed circuit board with fuses.

 If using your own temperature control device, a remote contactor may be required. Customers can also supply their own remote mount control circuit/enclosure.

 Ensure control devices comply to local electrical code and meets the heater’s electrical ratings and is suitable for the area’s hazardous atmosphere classification.

*2* All 10 kW heaters include a 1/4" (6.35 mm) diameter 304 stainless steel safety guard pre-installed over the outlet grills.

Supply voltage must be within +/- 10% of rated heater voltage. Actual output (kW) = [(Line voltage)² ÷ (Rated voltage)²] x Rated unit wattage (kW).

For best heat distribution and comfort, a wall mount thermostat is recommended.

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.

Standard color is red.

277V and 480V are available upon request.

## **Options**

|  |  |  |  |
| --- | --- | --- | --- |
| **Product #** **Kit** | **Product #****Factory installed** | **Description** | **Qty** |
| **-** | **T1** | Built-in thermostat, bi-metal (not available with 600V models, any 3-phase models, or 1- phase models that have a line current exceeding 22A) |  |
| **-** | **LC** | Left side electrical enclosure (standard location is on the right side) |  |
| **-** | **ZZ** | Special build (factory use only) |  |
| **OUE-BTX1-N-B** | **-** | Wall mount bi-metal hazardous location thermostat. Note: Requires one heater electrical enclosures A or B or C, depending on heater model selected. |  |
| **OUE-XET1-1-W- N-A** | **-** | Wall mount electronic hazardous location thermostat.Note: Requires heater electrical enclosure B. |  |
| **OUE-XDC-01** | **-** | Wall mount hazardous location disconnect switch. Note: Not suitable for Group B or Group IIB+H2 (Hydrogen) gas atmosphere. |  |
| **BTX1-FIK** | **-** | This field installation kit is suitable for installation of a OUE-BTX1-N-B thermostat directly to the heater with Electrical Enclosure "A" (120VAC) or "B" (24VAC). Thermostat not included. |  |
| **XET1-FIK** | **-** | This field installation kit is suitable for installation of an OUE-XET1-1-W-N-A thermostat directly to the Heater with Electrical Enclosure "B" (24VAC) only. Thermostat not included. |  |
| **OUE-BLK1-W-N-A** | **-** | Heater thermostat conversion kit allows interchangeability from a built-in thermostat, with enclosure “C” to a wall mount configuration. |  |

## **Others**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Type** | **Quantity** | **Model and description****Complementary informations** | **Volts** | **Phase** | **Watts** | **Length****mm/in.** | **Informations****Color/installation** |
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**Specifications may change without prior notice**

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| --- | --- |
| Project: | ApprovalInformation |
| Consultant Engineer: |
| Electrician Contractor: |
| Distributor: |
| Date: |
| Contact in Ouellet: |
| Comments: |