



Descriptive Report

MASTER CONTRACT: 301101

REPORT: 80036945

PROJECT: 80173351

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Att1 Photos added: 39-43

Att2 Illustrations added: 168-191

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PRODUCTS

CLASS 2811 03 - HEATERS-Air - Stationary Type

CLASS 2811 83 - HEATERS-Air - Stationary Type - Certified to US Standards

Electric Air-Heater, household use, stationary type, grounded, cord-connected, rated 120 V, 60 Hz, 1500 W, models: ZHS-23-A, ZHX-23-006, ZHS-28-A, ZHX-28-007, ZHS-35-A, ZHX-35-008, ZHS-35-B, ZHX-35-009; ZHS-23-XX, ZHX-23-YY (XX= C, D; YY=010, 011); ZHS-28-XX, ZHX-28-YY (XX=B, C, YY=012, 013); ZHS-32-XX, ZHX-32-YY (XX= A, B, C, YY=014, 015, 016); ZHS-32-XX, ZHX-32-YY (XX= D, E, YY=017, 018); ZHS-30-XX, ZHX-30-YY (XX= C, D, YY=019, 020); ZHS-XX-YY, ZHX-XX-yy (XX= 23, 26, 28, 30, 32, YY= E, F, G, H, yy=100-119); ZHX-28-055, ZHS-28-1, ZHS-28H-1; ZHS-26-XX, ZHX-26-YY (XX= A, B, C, YY=021, 022, 023); ZHS-23-XX, ZHX-23-YY (XX= B, H, I, YY=024, 025, 026); ZHS-36-XX, ZHX-36-YY (XX= A, B, C, YY=027, 028, 029); ZHS-42-XX, ZHX-42-YY (XX= A, B, C, YY=030, 031, 032); ZHS-42-XX, ZHX-42-YY (XX= D, E, F, YY=033, 034, 035); ZHS-23-xx, ZHX-23-yy (xx=G,K, yy=036, 037); ZHS-18-XX, ZHX-18-YY (XX= A, B, C, YY=038, 039, 120); ZHS-23-XX, ZHX-23-YY (XX= L,M, N, YY=040, 041, 042); ZHX-26-XX, ZHX-30-YY (XX=070, 071, YY=072, 073); ZHX-36-058, ZHX-XX-YY ("XX" denotes 30, 36, 42, 50, 60, 72. "YY" denotes 056 ~ 067.); ZHX-36-081, ZHX-XX-YY ("XX" denotes 36, 42, 50, 60, 72. "YY"denotes 081~091.); ZHX-50-092, ZHX-XX-YY ("XX" denotes 50, 60, 72. "YY" denotes 092~097.) ZHX-18-133, ZHX-18-134, ZHX-18-135, ZHX-23-103, ZHX-23-104, ZHX-23-105, ZHX-26-022, ZHX-26-023, ZHX-26-122, ZHX-36-029, ZHX-36-030, ZHX-42-082S, ZHX-42-083S, ZHX-50-085S, ZHX-50-086S, ZHX-60-087S, ZHX-60-088S, ZHX-72-090S, ZHX-72-091S.

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General table for detailed listed model numbers

PART	Type	Model No.	Alternate model No.	Description
A	Wall-insert	ZHS-23-A	ZHX-23-006	Resistance wire
B	Wall-insert	ZHS-28-A	ZHX-28-007	Resistance wire
C	Wall-mounted or Movable	ZHS-35-A	ZHX-35-008	Resistance wire
D	Wall-mounted or Movable	ZHS-35-B	ZHX-35-009	Resistance wire
E	Wall-insert	ZHS-23-XX	ZHX-23-YY	"XX" denotes C, D "YY" denotes 010, 011 (Resistance wire)
F	Wall-insert	ZHS-28-XX	ZHX-28-YY	"XX" denotes B, C "YY" denotes 012, 013 (Resistance wire)
G	Wall-insert	ZHS-32-XX	ZHX-32-YY	"XX" denotes A, B, C (IR tube) "YY" denotes 014, 015, 016 (IR tube)
G1	Wall-insert	ZHS-32-XX	ZHX-32-YY	"XX" denotes D, E (IR tube) "YY" denotes 017, 018 Same as part G except for WIFI module
G2	Wall-insert	ZHS-30-XX	ZHX-30-YY	"XX" denotes C, D "YY" denotes 019, 020
G3	Wall-insert	ZHS-XX-YY	ZHX-XX-yy	"XX" denotes 23, 26, 28, 30, 32 "YY" denotes E,F, G, H "yy" denotes different numbers for commercial codes, 100-119.
G4	Wall-insert	ZHX-28-055	ZHS-28-1, ZHS-28H-1	(IR tube)
H	Wall-insert	ZHS-26-XX	ZHX-26-YY	"XX" denotes A, B, C; "YY" denotes 021, 022, 023 (IR tube)
I	Wall-insert	ZHS-23-XX	ZHX-23-YY	"XX" denotes B, H, I; "YY" denotes 024, 025, 026 (Resistance wire)
J	Wall-mounted or Movable	ZHS-36-XX	ZHX-36-YY	"XX" denotes A, B, C; "YY" denotes 027, 028, 029 (Resistance wire)
J1	Wall-mounted or Movable	ZHS-42-XX	ZHX-42-YY	"XX" denotes A, B, C "YY" denotes 030, 031, 032 (Resistance wire) Same as part J except for loudspeakers
J2	Wall-mounted or Movable	ZHS-42-XX	ZHX-42-YY	"XX" denotes D, E, F "YY" denotes 033, 034, 035 (Resistance wire) Same as part J except for WIFI module
K	Wall-insert	ZHS-23-xx	ZHX-23-yy	"xx" denotes G, K; "yy" denotes 036, 037 (IR tube)
L	Wall-insert	ZHS-18-XX	ZHX-18-YY	"XX" denotes A, B, C; "YY" denotes 038, 039, 120 (Resistance wire)
L1	Wall-insert	ZHS-23-XX	ZHX-23-YY	"XX" denotes L,M, N "YY" denotes 040, 041, 042
	Wall-insert	ZHX-26-XX ZHX-30-YY	-	"XX" denotes 070, 071 "YY" denotes 072, 073
	Wall-mounted	ZHX-36-058	ZHX-XX-YY	"XX" denotes 30, 36, 42, 50, 60, 72. "YY" denotes 056 ~ 067.
	Wall-mounted	ZHX-36-081	ZHX-XX-YY	"XX" denotes 36, 42, 50, 60, 72. "YY" denotes 081~091.
	Wall-mounted	ZHX-50-092	ZHX-XX-YY	"XX" denotes 50, 60, 72. "YY" denotes 092~097.

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M	Wall-insert	ZHX- 18-133, ZHX- 18-134, ZHX- 18- 135, ZHX-23- 103, ZHX-23- 104, ZHX-23- 105, ZHX-26-022, ZHX- 26-023, ZHX-26- 122, ZHX-36-029, ZHX-36-030.	--
	Wall-mounted	ZHX-42-082S, ZHX-42-083S, ZHX- 50-085S, ZHX-50-086S, ZHX-60- 087S, ZHX-60-088S, ZHX-72-090S, ZHX-72-091S.	--

APPLICABLE REQUIREMENTS

C22.2 No. 46- 13	-	Electric Air-Heaters
UL 2021 (4 th Ed., Feb. 2,2021)	-	Fixed and Location-Dedicated Electric Room Heaters
UL 1278 (4 th Ed., Feb 21,2022)	-	Movable and Wall- or Ceiling-Hung Electric Room Heaters

MARKINGS

The manufacturer is required to apply the following markings:

- Products shall be marked with the markings specified by the particular product standard.
- Products certified for Canada shall have all Caution and Warning markings in both English and French.

Additional bilingual markings not covered by the product standard(s) maybe required by the Authorities Having Jurisdiction. It is the responsibility of the manufacturer to provide and apply these additional markings, where applicable, in accordance with the requirements of those authorities.

The products listed are eligible to bear the CSA Mark shown with adjacent indicators 'C' and 'US' for Canada and US (indicating that products have been manufactured to the requirements of both Canadian and U.S. Standards) or with adjacent indicator 'US' for US only or without either indicator for Canada only.

All markings shall be in accordance with the requirements of the local regulatory authorities and related standards.

The following markings must appear in a visible and permanent manner, but do not cover the openings and the screws so that your products will be easily identified and recognized in the field as being CSA Certified. And markings shall appear on CSA Accepted adhesive typenameplate(s) affixed to the enclosure:

- a. Submitter's name and/or CSA Master Contract Number "301101"
- b. CSA, CSAus or cCSAus Mark
- c. Model designation
- d. Rated voltage, frequency, rated input in amperes
- e. Date code or serial number (denoting, at least, month and year of manufacture)
- f. The blower motor and synchronous motor is marked "Impedance Protected" or "Z.P."
- g*. CAUTION: High temperature, keep electrical cords, drapery, and other furnishings at least 3 feet (0.9 m) from the front of the heater and away from the side and rear.
ATTENTION - Haute température, risque d'incendie, tenez les câbles électriques, les rideaux et les autres objets mobiliers à au moins 3 pieds (0.9m) d'avant de l'appareil et loin des côtés et du derrière.
- h*. CAUTION: A heater shall bear the cautionary marking shown as below:



- i. A tag, permanently affixed to the power supply cord (no more than 152 mm from the attachment plug), including the following or equivalent instructions at least:
**WARNING – TO REDUCE THE RISK OF FIRE
 - 1) Always plug heaters directly into a wall outlet/receptacle. Never use with an extension cord or relocatable power tap (outlet or power strip)
 - 2) Check your heater cord and plug connections. A loose fitting outlet can cause the plug to overheat and a or cause a fire. Be sure plug fits tight in the outlet. Check frequently during use to make sure plug and outlet are not hot. If so, discontinue using heater and have outlet replaced by a qualified electrician.

Note: Heaters draw more current than small appliances, overheating of the outlet may occur even if it has not occurred with the other appliances.

- 3) Always unplug the heater when not in use
- 4) Do not operate heater with a damaged cord or plug or after the heater malfunctions, has been dropped or damaged in any manner. Discard heater or return to an authorized service facility for examination and/or repair.
- 5) Do not run cord under carpeting. Do not cover cord with throw rugs, runners, or similar coverings. Do not route cord under furniture or appliances. Arrange cord away from traffic area and where it will not be tripped over.

****DO NOT REMOVE THIS TAG!**

-*: The Warnings and Cautions shall be visible from a point 5 feet (1.5 m) above the floor and between 1 and 4 feet (0.3 and 1.2m) away from the front surface of the heater when the heater is placed in the intended use location.

The height of the symbols shall be at least 1 inch (25.4 mm) in height; The marking shall be in letters not less than 1/8 inch (3.2 mm) in height and shall be of a permanent type and in a color that contrasts with that of the enclosure or background.

-**: The statements shall be in capital letters at least 4.8 mm in high and shall be of permanent type and in a color that contrasts with that of the enclosure or background. The remaining text shall be in letters of at least 1/16 inch (1.6 mm) in height.

Note: this cord tag marking applied only for movable type models.

Installation: Clear and complete instructions for the installation of the heater shall be provided. The instructions shall include the following items:

- a) Wiring procedures and connections shall be in accordance with the national and local codes having jurisdiction.
- b) A complete electrical diagram of the heater, showing the connections of the power supply and the interconnection of individual components.
- c) Illustrations of essential features, showing the relation of components.
- d) The method of mounting heaters individually or in groups. In the absence of any specific restrictions, it is to be presumed that heater frames may be mounted in contact with combustible materials and heaters may be mounted in close proximity to one another.
- e) A caution similar to "High temperature, keep electrical cords, drapery, and other furnishings at least 3 feet (0.9 m) from the front of the heater and away from the side and rear."
- f) The following warning, or equivalent statement: "To reduce the risk of fire, do not store or use gasoline or other flammable vapors and liquids in the vicinity of the heater."

Important Safety Instructions: The following information appear in an instruction sheet, manual, booklet, or the like, provided with an appliance and are separated in format from other instructions, and shall appear before the operating instructions. The uppercase letters in the instructions relating to the risk of fire, electric shock, and injury to persons shall be not less than 1/12 inch (2.1 mm) high and the lowercase letters shall not be less than 1/16 inch (1.6 mm) high. The words "IMPORTANT INSTRUCTION" and "SAVE THESE INSTRUCTIONS" shall be in upper case letters not less than 3/16 inch (4.8 mm) high.

IMPORTANT INSTRUCTION

When using electrical appliance, basic precautions should always be followed to reduce the risk of fire, electric shock, and injury to persons, including the following:

- 1) Read all instructions before using this heater.
- 2) This heater is hot when in use. To avoid burns, do not let bare skin touch hot surface. If provided, use handles when moving this heater. Keep combustible materials, such as furniture, pillows, bedding,

- papers, clothes, and curtains at least 3 feet (0.9 m) from the front of the heater and keep them away from the sides and rear.
- 3) Extreme caution is necessary when any heater is used by or near children or invalids and whenever the heater is left operating and unattended.
 - 4) Do not operate any heater after it malfunctions. Disconnect power at service panel and have heater inspected by a reputable electrician before reusing.
 - 5) Do not use outdoors.
 - 6) To disconnect heater, turn controls to off, and turn off power to heater circuit at main disconnect panel (or operate internal disconnect switch if provided).
 - 7) Do not insert or allow foreign objects to enter any ventilation or exhaust opening as this may cause an electric shock or fire, or damage the heater.
 - 8) To prevent a possible fire, do not block air intakes or exhaust in any manner. Do not use on soft surfaces, like abed, where openings may become blocked.
 - 9) A heater has hot and arcing or sparking parts inside. Do not use it in areas where gasoline, paint, or flammable liquids are used or stored.
 - 10) Use this heater only as described in this manual. Any other use not recommended by the manufacturer may cause fire, electric shock, or injury to persons.
 - 11) If heater may include an audible or visual alarm to warn that parts of the heater are getting excessively hot. If the alarm sounds (or illuminates), immediately turn the heater off and inspect for any objects on or adjacent to the heater that may have blocked the airflow or otherwise caused high temperatures to have occurred. **DO NOT OPERATE THE HEATER WITH THE ALRMA SOUNDING (OR ILLUMINATING).**
 - 12) **“SAVE THESE INSTRUCTIONS”**

Operation: the instruction manual shall also include the following in separate section or sections:

- a) Instructions and cautionary statements for cleaning, user-maintenance, operations recommended by the manufacturer, such as lubrication or nonlubrication, and a warning to the user that any other servicing should be performed by an authorized service representative.
- b) Any heater employing a manually reset control shall be provided with instructions to the user regarding its operation.
- c) Specific instructions for the proper method of cord storage, total heater storage, and the like when the heater is not in use.

Remarks: The operating instructions shall contain all appropriate information needed to operate a heater properly, and shall be preceded by the heading “OPERATING INSTRUCTIONS ,” or the equivalent.

The operating instructions shall:

- a) Warn that the heater must be properly installed before it is used.
- b) Explain and describe the location, function, and operation of each control of the heater, including all user-operated devices intended to reduce the risk of fire, electric shock, or injury to persons; and warn against tampering with such devices.

MAINTENANCE INSTRUCTIONS:

- a) The user maintenance instructions shall indicate when the heater shall be cleaned.
- b) The user maintenance instructions, shall state before cleaning, make sure the power has been turned off at the circuit breaker panel and that the heating element of the heater is cool.
- c) The user maintenance instructions shall not include operations that would require disassembly of the heater to accomplish.

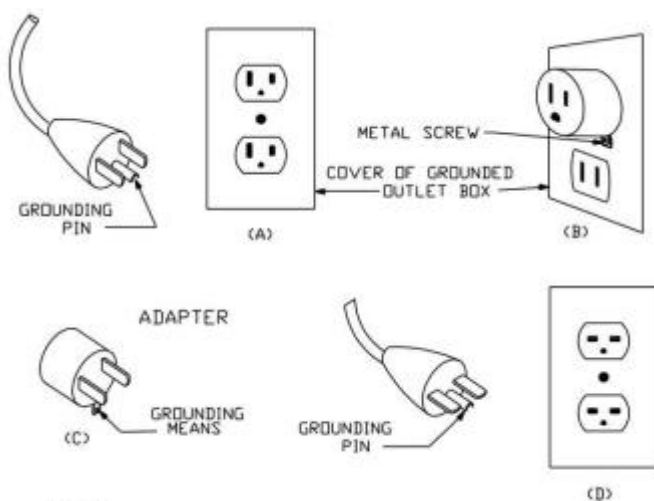
d) The user maintenance instructions, shall state what cleaning instrument should be used to clean the heater.

Grounding Instructions:

This heater is for use on 120 volts. The cord has a plug as shown at (A) in figure below.

An adaptor as shown at (C) is available for connecting three-blade grounding-type plugs to two-slot receptacles. The green grounding lug extending from the adaptor must be connected to a permanent ground such as a properly grounded outlet box.

The adaptor should not be used if a three-slot grounded receptacle is available.



NOTE: Adaptors are NOT for use in Canada

Heater Carton Information: The following information pertaining to the heater features and its use conditions shall be included on the external surface of the packaging of a heater. All information shall be grouped together and appear on one side, except the bottom, of the packaging.

- 120 V, 60 Hz, 1500 W.
- Wall-insert or Wall-mounted or Floor only
- Information pertaining to the use of an extension cord (Avoid the use an extension cord because the extension cord may overheat and cause a risk of fire. However, if you have to use an extension cord, the cord shall be 3-wire cord with grounding type plug, No. 14 AWG minimum size and rated not less than 1875 watts)
- This heater is hot when in use. To avoid burns, do not let bare skin touch hot surface. If provided, use handles when moving this heater. Keep combustible materials, such as furniture, pillows, bedding, papers, clothes, and curtains at least 3 feet (0.9 m) from the front of the heater and keep them away from the sides and rear.
- Do not use this heater wet or moist locations.

The products listed are eligible to bear the CSA Mark shown with adjacent indicators 'C' and 'US' for Canada and US; or with adjacent indicator 'US' for US only; or without either indicator for Canada only.

Note: Bilingual Markings for products with CSA Mark or cCSAus Mark.

Jurisdictions in Canada may require these markings to be also in French. It is the responsibility of the manufacturer to provide bilingual marking, where applicable, in accordance with the requirements of the Provincial Regulatory Authorities. It is the responsibility of the manufacturer to determine this requirement and have bilingual wording added to the products.

ALTERATIONS

- a. Marking as noted above.

FACTORY TESTS

- a. Dielectric Voltage-Withstand Test:

The equipment at the conclusion of manufacture, before shipment, shall withstand for one min, without breakdown, the application of 1000 V ac between live parts and exposed non-current-carrying metal parts. The factory test maybe made at existing room temp. As an alternative a potential 20% higher maybe applied for one second.

WARNING: The factory test specified may present a hazard of injury to personnel and/or property and should only be performed by persons knowledgeable of such hazards and under conditions designed to minimize the possibility of injury.

- b. Production Line Grounding Continuity Tests:

The manufacturer shall test, at the conclusion of manufacture and before shipment, each heater provided with a power supply cord incorporating a ground conductor to determine that electrical continuity exists between an exposed dead metal part of the heater and the grounding blade of the attachment plug. An indicating device, such as an ohmmeter, low voltage battery and buzzer combination, or the like, maybe employed, in the test.

SPECIAL INSTRUCTIONS FOR FIELD SERVICES

1. Component descriptions marked with either the "(INT)" or "(INT*)" identifiers maybe substituted with other components providing the requirements specified under the notes in the "Description" are complied with.

COMPONENT SPECIAL PICKUP

1. Component descriptions marked with the identifier "(CT)" are subject to annual pickup and Conformity Testing.

DESCRIPTION

Notes:

1. Component Substitution
 - a) Critical components (those identified by mfr name, cat no), which are NOT identified with either "INT" or "INT*" are not eligible for substitution without evaluation and report updating
 - b) The term "INT" means a "Certified" and/or "Listed" (or a "Recognized" and/or "Accepted") component maybe replaced by one "Certified" and/or "Listed" by another certification organization accredited by the appropriate accreditation body or scheme requirements to the correct standard, for the same application; providing the applicable country identifiers are included and requirements in item "d" below are complied with.
 - c) The Term "(INT*)" means a "Recognized" and/or "Accepted" component maybe replaced by a component that is CSA Certified. The applicable country identifiers shall be included, the

requirements in item "d" below as well as any "conditions of suitability" for the component (as recorded in this descriptive report) shall be complied with;

- d) Components which have been substituted, must be of an equivalent rating, configuration (size, orientation, mounting) and the applicable minimum creepage and clearance distances are to be maintained from live parts to bonded metal parts and secondary parts.
- e) Substitution of a "Certified" and/or "Listed" component with a component that is "Recognized" or "Accepted" is not permitted without evaluation and report updating.
- f) Substitution of a "Recognized" and/or "Accepted" component by one that is not CSA Certified is not permitted without a proper evaluation as well as a report update because the Conditions of Acceptance of the original component maybe different than the Conditions of Acceptance of the substitute component.
- g) Component description marked with "UR Recognized" or "cUR Recognized" or "cURus Recognized" indicates that a component is UL Recognized and accepted for use in the end product described in this report based on UL Conditions of Acceptability. Conditions of Acceptability of UR Recognized components are based mainly on flammability ratings, electrical ratings, temperature, and number of cycles.

PART M: Wall-insert type, model ZHX-18-133, ZHX-18-134, ZHX-18-135, ZHX-23-103, ZHX-23-104, ZHX-23-105, ZHX-26-022, ZHX-26-023, ZHX-26-122, ZHX-36-029, ZHX-36-030.

General: The subject models are similar in construction to each other, model numbers difference due to commercial reasons. General: Models construction details as described below and also reference to Att1 Photos, Att2 Illustrations.

1. Enclosure:

a. Bottom, Sides, Top and Back: Formed of painted sheet steel min 0.7 mm thick. Secured together with screws. See Att2 ILL-168 ~ ILL-174 for dimensions.

Applicable models: ZHX-18-133, ZHX-18-134, ZHX-18-135, ZHX-23-103, ZHX-23-104, ZHX-23-105, ZHX-26-022, ZHX-26-023, ZHX-26-122, ZHX-36-029, ZHX-36-030.

Critical Openings for different models as below:

Location	Numbers	Dimensions	Purpose
Front	62	38 mm by 3.0 mm	Heater exhaust opening.
Top	38~44	38 mm by 4.0 mm	Heater air intake
Back	44	38 mm by 4.0 mm	Heater air intake

b. Front : Formed of painted molded sheet steel min 0.74 mm thick. Welded together and secured to enclosure sides with screws. One piece of Tempered glass provided, 3~5 mm thick, secured to Front Frame with tabs.

The following table for critical components					
Item No.	Component Description	Manufacturer / Trade mark	Cat. No. or Material	Rating, Dimensions, Securement & Comment	ApprAgcy
2	Power Supply Cord Applicable models: ZHX-18-133, ZHX-18-134, ZHX-18-135, ZHX-23-103, ZHX-23-104, ZHX-23-105, ZHX-26-022, ZHX-26-023, ZHX-26-122, ZHX-36-029, ZHX-36-030.				
	Plugcap	DONG GUAN YONG SHENG CABLES CO LTD (E318166) INT	YS-03/YS-03D	Type 5-15P, 125 V, 13 A.	cULus Listed.
	Alternate	NEW SQUARE CO LTD.(E138787)	NS-3P	Type 5-15P, rated 125 V, 13 A.	cULus Listed.
	Flexible cord	INT	SJT	16/3 AWG, 300 V, 105 C. Length: >1.8 m and <2.4 m	cULus Listed.
3	Strain Relief Bushing Applicable models: ZHX-18-133, ZHX-18-134, ZHX-18-135, ZHX-23-103, ZHX-23-104, ZHX-23-105, ZHX-26-022, ZHX-26-023, ZHX-26-122, ZHX-36-029, ZHX-36-030.				
	Strain Relief Bushing	HUA WEI INDUSTRIAL CO LTD (E84074)	6B3-2	Secured to the back enclosure through a suitably sized double "D" shaped hole.	cURus Recognized
		HEAVYPOWER CO., LTD (E107293)	6N3-4	Secured to the back enclosure through a suitably sized double "D" shaped hole.	cURus Recognized

4	Bonding Applicable models: All The green conductor from the power supply cord is terminated to certified, closed loop connector is secured to enclosure by a M4 screw, flat washer, star washer and nut. The screw serves no other purpose than to provide a grounding point for the appliance.				
5	Wire Connector Applicable models: All				
	Wire Connector	INT	-	Type: Insulated, closed-end pressure crimp-on type. Rating: 105 C, suitable for 16 AWG-24 AWG.	cURus Recognized
6	Quick Connect Applicable models: All				
	Quick Connect	INT	-	Type: Crimp type, uninsulated. Rating: Suitable for 16/18 AWG.	cURus Recognized
7	Heat Shrinkable Tube Applicable models: All				
	Heat Shrinkable Tube	INT	-	Rating: VW-1, 125°C, 600 Volts	cURus Recognized
8	Internal Wiring Applicable models: All				
a.	Low Voltage Control Panel lead	INT	-	AWM I A/ 2468, 26 AWG, 300 V, 80 °C	cURus Recognized
b.	Heating Element lead	INT	-	AWM I A 3122 FT2 / AWM 3122 VW-1, 16 or 18 AWG, 300 V, 200 °C	cURus Recognized
c.	Self-hold Thermostat lead	INT	-	AWM I A 3122 FT2 / AWM 3122 VW-1, 16 or 18 AWG, 300 V, 200 °C	cURus Recognized
d.	Blower Motor lead	INT	-	AWM I A 1015/1332/3122 FT1 / AWM 1 015/1332/3122 VW-1, 20 or 22 AWG, 200 °C	cURus Recognized
e.	Synchronous Motor lead	INT	-	AWM I A 1015/AWM 1015 VW-1, 22 or 24 AWG, 600 V, 105 °C	cURus Recognized
f.	LED lead	INT	-	AWM I A 2468/1007,AWM 2468/1007 VW-1, 26 AWG, 300 V, 80°C.	cURus Recognized
9	Blank.				
10	Control System: Mainly consists of Control panel and main PWB as following:				
10.1	PWB Control Panel - Push buttons: (INT) cURus Recognized Applicable models: ZHX-18-133, ZHX-18-134, ZHX-18-135, ZHX-23-103, ZHX-23-104, ZHX-23-105, ZHX-26-022, ZHX-26-023, ZHX-26-122, ZHX-36-029, ZHX-36-030. Material: Glass Fiber Phenolic. Flame Rating: UL 94 V-1@ 1.5 mm, 130 C. Dimension: 1.5 mm thick, overall dimension mm by mm. Mounting: Secured to molded plastic cover with screws.				

	a. Push Button (K1~K4)	-	-	Rated 12 V dc, 100 mA.	Accepted by applicant
	b. LED Digit Display:	-	-	Rated 5 V, 10 mA	Accepted by applicant
10.2	<p><u>Main PCB:</u> (INT) cURus Recognized. refer to Att1 Photo-40.</p> <p>Applicable models: ZHX-18-133, ZHX-18-134, ZHX-18-135, ZHX-23-103, ZHX-23-104, ZHX-23-105, ZHX-26-022, ZHX-26-023, ZHX-26-122, ZHX-36-029, ZHX-36-030.</p> <p>Material: Glass Fabric Epoxy.</p> <p>Flame Rating: UL 94 V-0 @1.4 mm, RTI=130 C.</p> <p>Dimension: Measured 1.6 mm thick, overall dimension 125 mm by 72 mm.</p> <p>Mounting: Secured to Supporting panel with 4 screws, molded plastic spacers provided 7.6 mm min spacing to Supporting panel.</p> <p>Consist of the following main critical components soldered on it:</p>				
	a. X Capacitor (CX1)	Guangdong Fengming Electronic Tech.Co., Ltd (E345487)	MKP-X2	Rated 0.1 uF, 275 V.	cURus Recognized
	Alternate	Shantou High-New Zone Songtian Enterprise CO., LTD (E208107)	MPX	Rated 0.1 uF, 275 V.	cURus Recognized
	Alternate	Winday Electronic (Dong Guan) Co Ltd (E302125)	MPX	Rated 0.1 uF, 275 V.	cURus Recognized
	Alternate	Dongguan weiqing electronic co., ltd. (E466405)	MPX	Rated 0.1 uF, 275 V.	cURus Recognized
	b. Fuse	XC Electronics (Shen Zhen) Corp. Ltd. (E249609)	5TE	Rated 250 V, T2.5 A.	cURus Recognized
	Alternate	Dongguan Better Electronics Technology Co., Ltd. (E300003)	932	Rated 250 V, T2.5 A.	cURus Recognized
	Alternate	Dongguan Hongda Electronic Technology Co., Ltd (E318938)	2009	Rated 250 V, T2.5 A.	cURus Recognized
	Alternate	Shenzhen lanson electronics co ltd. (E221465)	SMT	Rated 250 V, T2.5 A.	cURus Recognized
	c. Relay (RLY1~3)	Shenzhen yuanze electric co ltd. (E341498)	Y3F-SS-112DM.	Contact 250 V ac, 10 A, 100,000 operations, Coil 12 V dc	cURus Recognized
	Alternate	Dongguan Sanyou Electrical Appliances Co., Ltd (E190598)	SFK-112DM	Contact 250 V ac, 10 A, 100,000 operations, Coil 12 V dc	cURus Recognized
	Alternate	ZHEJIANG MEISHUO ELECTRIC TECHNOLOGY CO LTD (E358149)	MPY-S-112-A-P	Contact 250 V ac, 10 A, 100,000 operations, Coil 12 V dc	cURus Recognized

	Alternate	Xiamen Hongfa Electroacoustic Co., Ltd (E134517)	JQC-3FF-12VDC-1HS.	Contact 250 Vac,10 A, 100,000 operations, Coil 12 V dc	cURus Recognized
	d. Varistor (ZNR)	CERGLASS MFG INC (E317616)	VDR-10D471K	AC 470V, T85 C	cURus Recognized
	Alternate	Xiangtai electronic (shenzhen) coltd. (E472470)	MYD-10K471	AC 470V, T85 C	cURus Recognized
	Alternate	Guangdong fenghua advanced technology holding coltd. Xianhua new sensitive components branch (E325462)	FNR10K271	AC 470V, T85 C	cURus Recognized
	Alternate	THINKING ELECTRONIC INDUSTRIAL CO LTD (E314979)	TVR10D271	AC 470V, T85 C	cURus Recognized
	e.High Frequency Transformer: used on models: ZHX-36-series.	GuangDong City Haoer Electronics Co., Ltd.	HS-EE16/06	Input: 120 V, 60 Hz, 2.3MH±10% Refer to Att2 ILL- 180.	Accepted by test.
	Insulation Class	INT	-	130 C	Accepted by test
	Core	Various	-	Homocentric squares ferrite core.	Accepted by test
	Bobbin	INT	-	Single concentric bobbing, material Fabricated plastic. (Material Flame Rating: UL 94 V-0, RTI=150 C)	Accepted by test
	Winding (Magnet Wire)	Shenzhen chengwei industry coltd (E227475)		130 °C. N1, 0.23 mm dia,100 turns; N2, 0.50 mm dia,12 turns; N3, 0.23 mm dia, 15 turns.	Accepted by test
11	Faux Fire Assembly: Consists of critical parts as following:				
11.1	Flame LEDs: Total 12 V, 2.5W~25W. Ember LEDs: Total 12 V, 6W~20W. Applicable models: ZHX-18-133, ZHX-18-134, ZHX-18-135, ZHX-23-103, ZHX-23-104, ZHX-23-105, ZHX-26-022, ZHX-26-023, ZHX-26-122, ZHX-36-029, ZHX-36-030.				
11.2	Synchronous Motor: Applicable models:ZHX-18-133, ZHX-18-134, ZHX-18-135, ZHX-23-103, ZHX-23-104, ZHX-23-105, ZHX-26-022, ZHX-26-023, ZHX-26-122, ZHX-36-029, ZHX-36-030.				
	Supplier #1	ZHONGSHAN ZHUOSHENG MOTOR CO., LTD.	35BYJ46	12VDC, 3W, 1/31, CCW.	Accepted by applicant.
	Supplier #2	GUANGDONG HUILIPU	35BYJ46.	12VDC, 3W, 1/31, CCW.	Accepted by applicant.

		INTELLIGENT TECHNOLOGY CO., LTD.			
11.3	Decorative parts (Ember bed): Made of PP, measured 1.5 mm thick, flame rating HB @ 0.8 mm, RTI=105 C. Refer to Att2 for details. Applicable models: ZHX-18-133, ZHX-18-134, ZHX-18-135, ZHX-23-103, ZHX-23-104, ZHX-23-105, ZHX-26-022, ZHX-26-023, ZHX-26-122, ZHX-36-029, ZHX-36-030.				
	Projection Screen: Made of Tempered glass or Made of PP, Tempered glass 5 mm thick, PP of 1.5 mm thick. Decorative Faux Log: Made of Plastic or Resin. Applicable models: ZHX-18-133, ZHX-18-134, ZHX-18-135, ZHX-23-103, ZHX-23-104, ZHX-23-105, ZHX-26-022, ZHX-26-023, ZHX-26-122, ZHX-36-029, ZHX-36-030.				
12	Heater Element Assembly (Resistance heater): Refer to Att1 Photo-38 and Att2 ILL-176. Applicable models: ZHX-18-133, ZHX-18-134, ZHX-18-135, ZHX-23-103, ZHX-23-104, ZHX-23-105, ZHX-26-022, ZHX-26-023, ZHX-26-122, ZHX-36-029, ZHX-36-030. Consists of the main following				
	a. Heating Element (Resistance wire):	Foshan lepuda motor co ltd.	Made of Fe-Cr wire	Made of Fe-Cr wire, rated 120V, 1350~1440 W. Two elements are connected in parallel, each element is made of 0.70 mm dia wire, 3.4~3.6 ohm at 25 C.	Accepted by applicant
		Zhongshan SANY Electrical Appliance Co., Ltd			
	b. Self-hold Thermostat	DONGGUAN SHUNHE ELECTRONIC CO LTD (E309745)	H20 or H20X or H20X.	125 Vac, 15 A, 10,000 operations, 105 C.	cURus Recognized
13	Fan Assembly: Applicable models: ZHX-18-133, ZHX-18-134, ZHX-18-135, ZHX-23-103, ZHX-23-104, ZHX-23-105, ZHX-26-022, ZHX-26-023, ZHX-26-122, ZHX-36-029, ZHX-36-030. Consists of the following:				
	13.1 Blower Motor	Guangdong Zhaoli Motor Group Co., Ltd. (E327392)	YJ48/200	120 Vac, 60 Hz, 14.5 W, 2300 rpm. Class B, Impedance protection, ZP marked on the motor. Secured to blower motor housing with mechanical ways.	cURus Recognized
	Alternate	FOSHAN CITY SHUNDE DISTRICT LEPUDA MOTOR CO LTD (E343126)	PLD48-120.	120 Vac, 60 Hz, 14.5 W, 2300 rpm. Class B, Impedance protection, ZP marked on the motor. Secured to blower motor housing with mechanical ways.	cURus Recognized
	13.2 Blower Wheels	Various	Sheet aluminum	0.5 mm thick min, overall 35 mm OD, 20 mm ID, 295 mm deep.	NA
14	Remote control: Refer to Photo-xxx. Applicable models:				

Edition: 4 (Project 80173351)

Update Report 80036945 to include recessed and insert models ZHX-xx-YY (18~60) with new PCB and other editorial corrections per request. The models listed in the report are similar in construction, so the tests were conducted on models ZHX-23-103 and ZHX-42-082S as representatives. The following tests were conducted on representative models ZHX-23-103 and ZHX-42-082S in accordance with CSA C22.2 No. 46-13 and UL 2021 (4th Edition), with satisfactory results.

Testing performed at CSA Group Guangzhou lab.

Model under test: ZHX-23-103				Ratings: 120 V, 60 Hz, 1500 W
Test Requirements	C22.2 No. 46 Cl.	UL 2021 Par.	T: Test W: Waived N: Not Applicable	Comments
Rating	7.2	34	T	P
Temperature (Normal)	7.4	36 & 38	T	P
Dielectric Strength	7.5	46	T	P
Two layers of Cheesecloth Drape Test	7.6.4.1	-	T	P
Drape Test	7.6.5.3	-	T	P
Continuous Operation Test:	-	38	T	P
Terry Cloth Drape Test	-	41.7	T	P

Construction Review:

Construction review performed with satisfactory results.

This Edition supersedes all previous editions.

---End of Report---

MASTER CONTRACT: 301101
REPORT: 80036945
PROJECT: 80173351

Att1 Photos

Photo-39



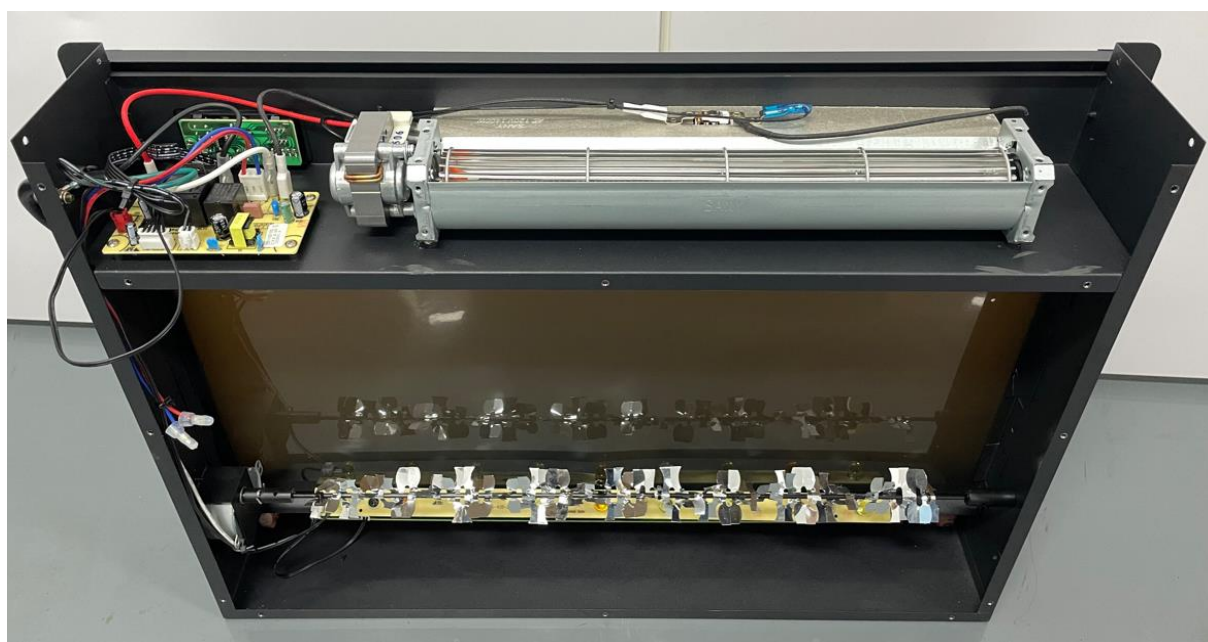
Model ZHX-23-103, Front View



Model ZHX-23-103, Back View

for models ZHX-18-133, ZHX-18-134, ZHX-18-135, ZHX-23-103, ZHX-23-104, ZHX-23-105,
ZHX-26-022, ZHX-26-023, ZHX-26-122, ZHX-36-029, ZHX-36-030.

MASTER CONTRACT: 301101 REPORT: 80036945 PROJECT: 80173351	Att1 Photos	Photo-40
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Model ZHX-23-103, Internal View

**for models ZHX-18-133, ZHX-18-134, ZHX-18-135, ZHX-23-103, ZHX-23-104, ZHX-23-105,
ZHX-26-022, ZHX-26-023, ZHX-26-122, ZHX-36-029, ZHX-36-030.**