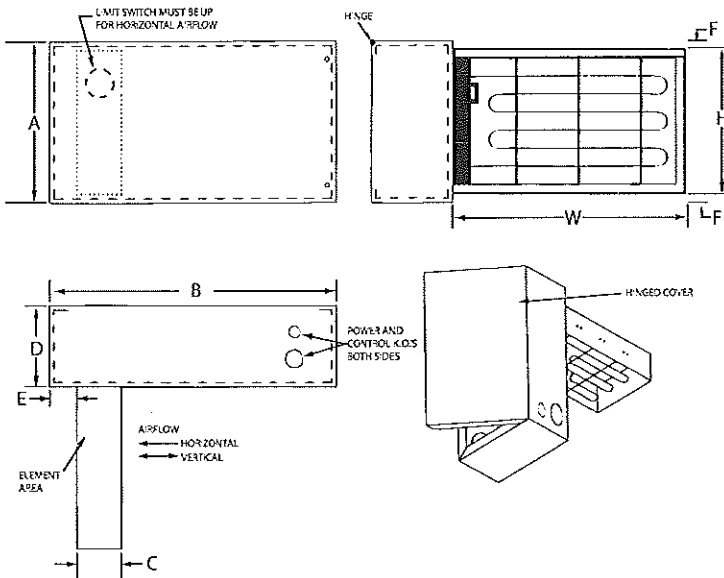
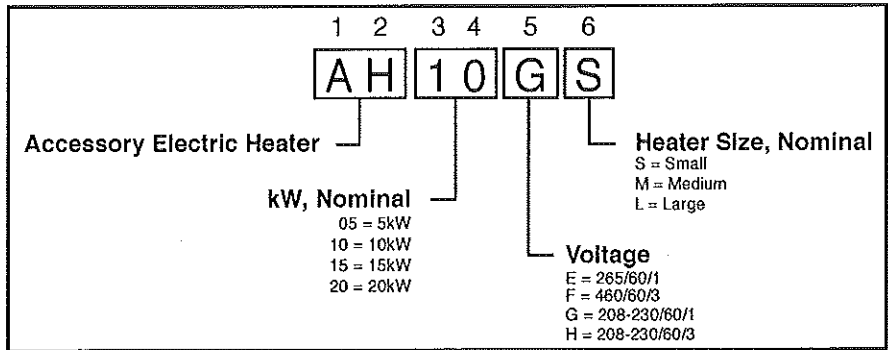


Accessory Electric Heater - AH

Description

- UL and CSA Listed
- Integral control box
- "Stab in" configuration
- Primary and secondary limit protection
- Recessed terminal connection
- Magnetic de-energizing contactors
- Fan relay control
- UL/NEC circuit fusing
- Hinged control box door
- Leaving air temperature should not exceed 135°F (57°C), auto reset limit switch is 145°F (62°C).



Electrical Data

Model	Voltage	H <sub>z</sub>	Phase	*kW	Amps	Steps	Minimum Air Velocity, F/Min.
5	208	60	1	3.6	17.3	1	420
	240	60	1	4.8	20.0		520
	208	60	3	3.8	10.4		480
	240	60	3	5.0	12.0		480
	277	60	1	5.0	18.1		480
	480	60	3	5.0	6.0		530
10	208	60	1	7.2	34.6	2	500
	240	60	1	9.6	40.0	2	680
	208	60	3	7.4	20.7	2	500
	240	60	3	9.9	23.9	2	650
	277	60	1	10.0	36.1	2	640
	480	60	3	10.0	12.0	1	640
15	208	60	1	10.0	51.9	3	600
	240	60	1	14.4	60.0	3	900
	208	60	3	11.2	31.0	2	800
	240	60	3	15.0	36.0	2	900
	277	60	1	15.0	54.2	3	870
	480	60	3	15.0	18.1	1	900
20	208	60	1	14.4	69.2	4	900
	240	60	1	19.2	80.0	4	970
	208	60	3	14.8	41.3	3	900
	240	60	3	19.8	47.7	3	970
	277	60	1	20.0	72.2	4	870
	480	60	3	20.0	24.1	2	910

\*Maximum kW if all steps are wired in.

Heater Dimensions

Model	A	B	C	D	E	F	W	H	Element Area (Sq. Ft)
AH05-S	14	10	3	4	2	1	11.5	12	1.0
AH10-M	16	14	3	4	2	1	12.5	14	1.2
AH10-L	17	10	3	4	2	1	15.5	15	1.6
AH15-M	16	16	6	4	2	1	12.5	14	1.2
AH15-L	17	15	3	4	2	1	15.5	15	1.6
AH20-L	17	15	3	4	2	1	15.5	15	1.6

All Dimensions are ± 1/4"

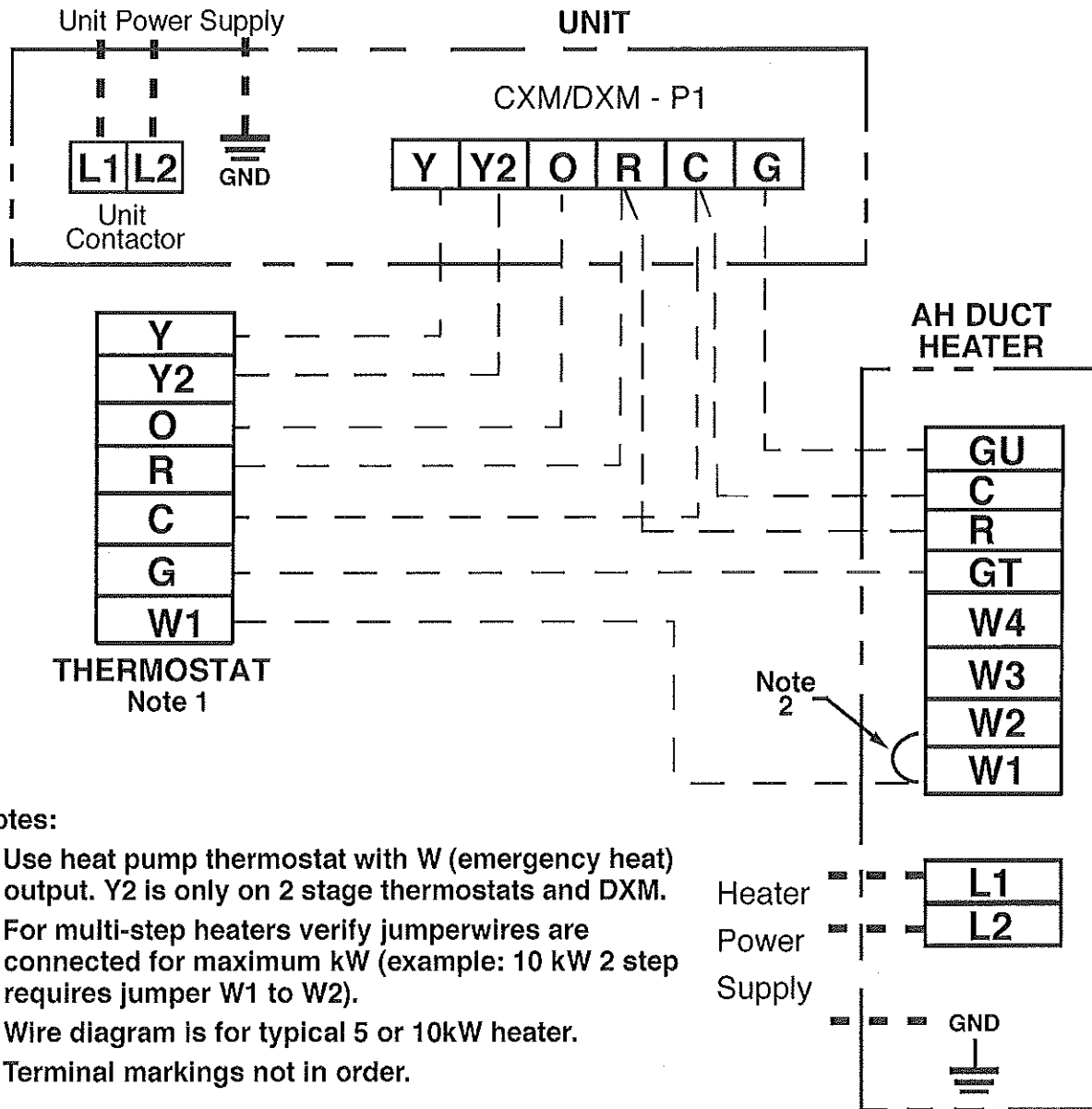
NOTES:

1. For electric heat in boilerless applications, unit must have DXM option or electric heat with MPC; must also order ASKHTR - Relay kit, (see 97B0012N07 IOM for wiring and DIP settings).
2. For 3 and 4 step heaters, use pilot duty relay part number 13B0004N01 (see 97B0012N07 IOM for wiring).

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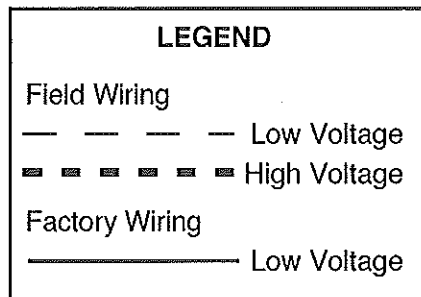
# ACCESSORIES SUBMITTAL DATA ENG/I-P

## Accessory Electric Heater - AH



**Notes:**

1. Use heat pump thermostat with W (emergency heat) output. Y2 is only on 2 stage thermostats and DXM.
2. For multi-step heaters verify jumperwires are connected for maximum kW (example: 10 kW 2 step requires jumper W1 to W2).
3. Wire diagram is for typical 5 or 10kW heater.
4. Terminal markings not in order.



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# Warren Technology

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Website: www.warrenhvac.com E-Mail: warren@warrenhvac.com

## INSTALLATION INSTRUCTIONS

Before installing the heater, inspect thoroughly for shipping damages. Notify carrier immediately if any damage is found. Check all porcelain insulators for breakage and inspect heater element wire to see that none have been deformed.

The minimum air velocity as shown on the heater label is required and must be even across the face of the heater. The temperature of the air entering the heater must not exceed 77° F.

Connect heater as shown on heater schematic wiring diagram. All electrical connections, wire sizes and type and conduit sizes shall meet the National Electric Code.

Main power supply, minimum wire sizes, circuits, fusing, etc. is shown on schematic wiring diagram.

The air duct system should be designed and installed in accordance with the standards of the National Fire Protection Association for the installation of Air-Conditioning and Ventilation Systems. (Pamphlet 90A or 90B)

Heaters should be mounted in the duct far enough away from the blower for any change in the direction of airflow to insure even airflow over the entire face area of the heater. If a heater cannot be mounted at least 48 inches downstream from the blower or a change in direction of airflow baffles must be installed in the duct ahead of the heater to insure even airflow across the face of the heater.

Air filters, humidifiers, or cooling coils must be at least 48 inches from the nearest heating element.

The heater control circuit or relay contacts are interlocked with the air system of either an integral air pressure switch or a blower relay, which must be wired as indicated on the wiring diagram. If a blower relay has been used (see diagram) the fan motor, or motor controller amperage must not exceed that given on the diagram.

All heaters are suitable for zero clearance between duct and combustible material.

Model CB-HOK heaters must be used with a remote panel and must be wired in accordance with the accompanying diagram.

**CBK Insert Heater:** The heating element is enclosed by a sheet metal wrapper. This wrapper is not to be used as part of the duct. To install, cut a hole in the side of the duct, 1/2" larger than the insert portion. Insert the heating element and fasten control panel to the side of the duct by means of sheet metal screws. If the duct is internally lined, then use a recessed element equal to the thickness of the internal insulation.

**CBKF Flange Mount:** The flange portion of the heater is matched to the out-turned flanges of the duct. There is no flange on the control side of the duct. Fasten heater flange to duct flange by means of sheet metal screws or bolts. Fasten control panel to side of duct by means of sheet metal screws.

**BCB Bottom Mount:** a sheet metal wrapper encloses the heating element with the heating element being terminated inside a control panel. This entire portion (element and element termination control panel) is to be inserted into the duct from the bottom. Cut a hole in the bottom of the duct 1/2" larger than the insert portion. Insert the element (and panel) and fasten the control box to the bottom of the duct by means of sheet metal screws.

## CHECKOUT

Before energizing this equipment for operation be sure that all electrical terminal connections, clamps, screws, etc. are tight as these may have become loose in shipment. It is advisable to retighten all electrical connections after the equipment has been in operation and the components have reached operating temperature. In addition to the above, the following tests and procedures should be followed.

- A) Clean all dirt, dust and moisture from equipment.
- B) Check for loose terminal connections.
- C) Check for proper clearances of live parts, between phases and to ground and make sure that all required barriers are in place.
- D) Check for missing insulation in equipment and on conductors.
- E) Check for any modifications, alterations, for the use of unapproved parts.
- F) Check that all fuse and circuit breaker short circuit interrupting ratings are adequate.
- G) The equipment room or area should be dried of all dampness and moisture accumulations.
- H) Check conductors run in multiple to insure that they are properly phased.
- I) Conduct a "megger" test of all equipment and wiring.

For maximum safety on fused feeders of 200 amperes and over, it is recommended that a low amperage test fuse (15 amps or less) be used and the circuit energized without load. This will insure the safe interruption of the circuit if a fault exists.

Any modifications or repairs to the equipment without written permission from the factory will be done at the installer's own risk and expense.

