



MULTI-POSITION, VARIABLE-SPEED, ECM-BASED AIR HANDLER WITH INTERNAL EEV, COMMUNICATING FOR S-SERIES MATCHUPS 1½ TO 5 TONS

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R32



Product Features

- Electronic Expansion Valve (EEV) for cooling and heat pump applications.
- 7mm evaporator coil tube size
- Variable-speed ECM blower motor
- Compatible with Goodman brand smart thermostat
- Provides constant CFM over a wide range of static pressure conditions independent of duct system
- CFM indicator
- Thermostat provides adjustable low-CFM for efficient fan-only operation
- All-aluminum evaporator coil
- Fault recall of six most recent faults
- Improved humidity and comfort control
- AHRI certified; ETL listed
- Coil mounting track for quick repositioning
- UL 60335 2-40 Compliant
- Factory installed R-32 sensor designed for the lifespan of the coil
- Optimized for use with R-32 refrigerant
- Rigid SmartFrame™ cabinet

Cabinet Features

- Cabinet air leakage less than 2.0% at 1.0 inch H₂O when tested in accordance with ASHRAE standard 193
- Cabinet air leakage less than 1.4% at 0.5 inch H₂O when tested in accordance with ASHRAE standard 193
- Field Installed 3kW- 25kW electric heater kit available
- Horizontal or vertical configuration capabilities
- 21" depth for easier attic access
- DecaBDE-free thermoplastic drain pan with secondary drain connections
- Screw-less sides and back helps to reduce condensation when installed in humid locations
- Foil-faced insulation covers the internal casing to reduce cabinet condensation
- Galvanized, leather grain-embossed finish
- Glue-less cabinet insulation retention
- Tool-less filter access

10 YEAR PARTS LIMITED WARRANTY*



COMPANY WITH
QUALITY SYSTEM
CERTIFIED BY DNV GL
= ISO 9001 =

COMPANY WITH
ENVIRONMENTAL SYSTEM
CERTIFIED BY DNV GL
= ISO 14001 =



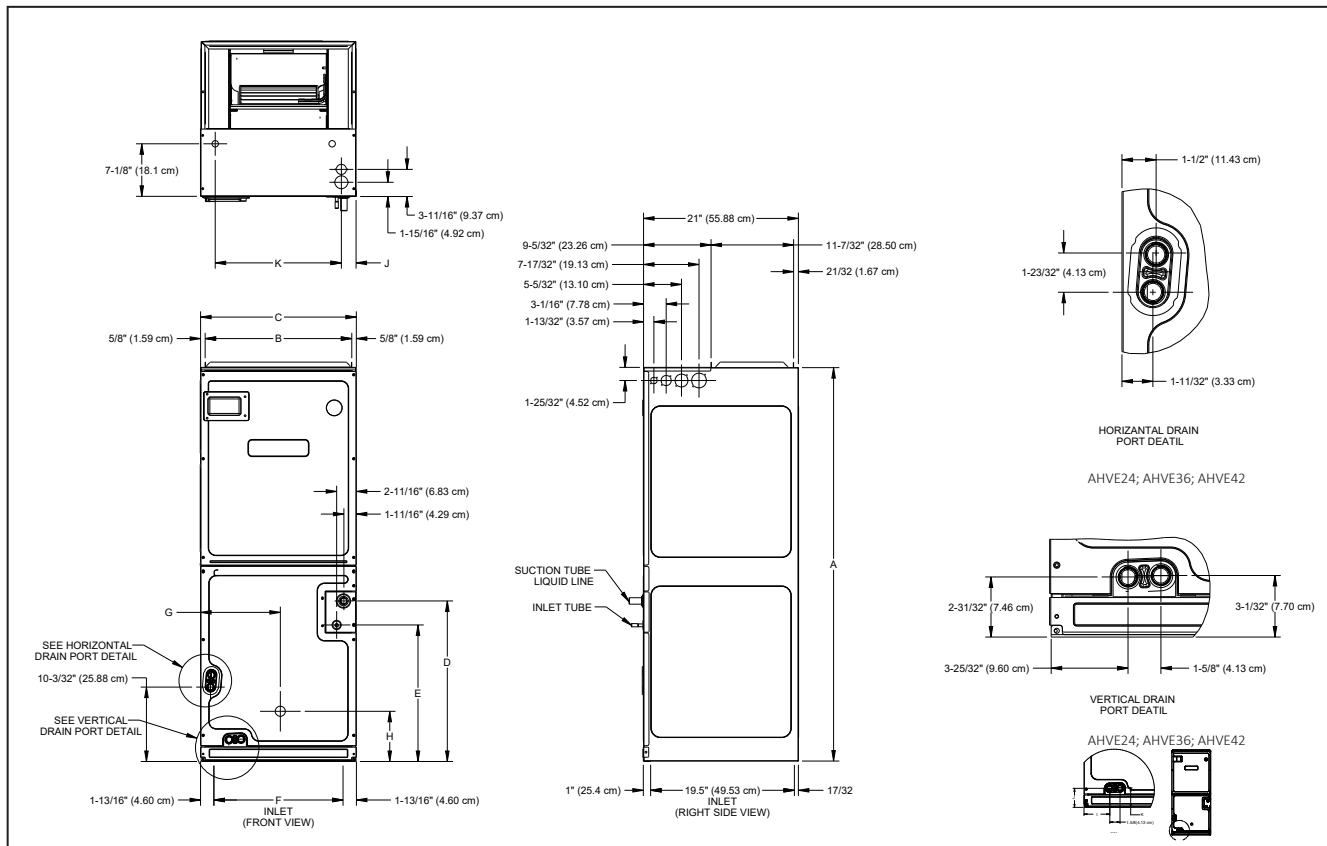
* Complete warranty details available from your local dealer or at www.goodmanmfg.com. To receive the 10-Year Parts Limited Warranty, online registration must be completed within 60 days of installation. Online registration and some of the additional requirements are not required in Florida, California, or Québec. The duration of warranty coverage in Texas and Florida differs in some cases. Other limitations and exclusions apply; refer to complete warranty details for a full list of limitations and exclusions.

	A	H	V	E	60	D	P	1	3	00	B	A	
	1	2	3	4	5,6	7	8	9	10	11,12	13	14	
BRAND													MINOR REVISION
A - CORPORATE AIR HANDLER													MAJOR REVISION
APPLICATION													FACTORY INSTALLED ELECTRIC HEAT KW
C - CEILING MOUNTED													00 - NO ELECTRIC HEAT
M - MULTI-POSITIONAL													
W - WALL MOUNTED													
F - FIT COMPATIBLE MULTI-POSITIONAL													
H - HORIZONTAL DISCHARGE COMPATIBLE													REFRIGERANT
MULTI-POSITIONAL													3 - R32
MOTOR													
S - MS-ECM													
V - VS-ECM COMMUNICATING													
EXPANSION DEVICE													ELECTRICAL
E - ELECTRONIC EXPANSION VALVE													0 - 115V, 1 PHASE, 60 HZ
F - FLOWRATOR													1 208/230 V, 1 PHASE, 60 HZ
T - THERMAL EXPANSION VALVE													
NOMINAL CAPACITY													CABINET
12 - 1.0 TON													N - UNCASED
18 - 1.5 TONS													P - PAINTED
24 - 2.0 TONS													U - UNPAINTED
30 - 2.5 TONS													CABINET WIDTH
													AC* Series
													M - 43.25"
													L - 49.25"
													AM* Series
													B - 17.5"
													C - 21.0"
													D - 24.5"
													AW* Series
													S - 20.2"
													L - 36.05"

[illegible]

*Refer S&R Plate

	AHVE24 BP1300	AHVE36 CP1300	AHVE42 CP1300	AHVE48 CP1300	AHVE48 DP1300	AHVE60 DP1300
NOMINAL TONS	2.0Ton	3.0Ton	3.5Ton	4.0Ton	4.0Ton	5.0Ton
Blower						
Diameter	9½"	10⅝"	10⅝"	12"	12"	12"
Width	6"	10⅝"	10⅝"	10⅝"	10⅝"	10⅝"
TUBING CONNECTION						
Liquid - Refrigerant	⅜"	⅜"	⅜"	⅜"	⅜"	⅜"
Suction - Refrigerant	¾"	⅞"	⅞"	⅞"	⅞"	⅞"
Coil Drain Connection (NPT)	¾"	¾"	¾"	¾"	¾"	¾"
ELECTRICAL DATA						
Voltage - Phase	208/230-1	208/230-1	208/230-1	208/230-1	208/230-1	208/230-1
Min Circuit Ampacity	4.9/4.9	6.5/6.5	6.5/6.5	6.5/6.5	6.5/6.5	6.8/6.5
Max. Overcurrent Device (amps)	15/15	15/15	15/15	15/15	15/15	15/15
Minimum VAC	197	197	197	197	197	197
Maximum VAC	253	253	253	253	253	253
BLOWER MOTOR						
FLA	3.9	5.2	5.2	5.2	5.2	6.9
HP	½	¾	¾	¾	¾	1
SHIP WEIGHT (LBS)	115	140	140	148	150	167



MODEL	A	B	C	D	E	F	G	H	I	J	K
AHVE24BP1300	45	16 ³ / ₈	17 ¹ / ₂	15 ⁵ / ₈	12	14 ⁷ / ₈	9	12 ³ / ₄	3 ¹³ / ₁₆	2 ⁷ / ₈	2 ¹⁵ / ₁₆
AHVE36CP1300	53 ⁷ / ₁₆	19 ⁷ / ₈	21	21 ¹³ / ₁₆	18 ⁵ / ₈	17 ¹¹ / ₁₆	10 ¹³ / ₁₆	6 ¹³ / ₁₆	3 ¹³ / ₁₆	2 ⁷ / ₈	2 ¹⁵ / ₁₆
AHVE42CP1300	53 ⁷ / ₁₆	19 ⁷ / ₈	21	21 ¹³ / ₁₆	18 ⁵ / ₈	17 ¹¹ / ₁₆	10 ¹³ / ₁₆	6 ¹³ / ₁₆	3 ¹³ / ₁₆	2 ⁷ / ₈	2 ¹⁵ / ₁₆
AHVE48CP1300	58	19 ¹³ / ₁₆	21	26 ³ / ₁₆	22 ¹⁵ / ₁₆	14 ¹⁰ / ₁₆	10 ¹³ / ₁₆	6 ¹³ / ₁₆	3 ¹³ / ₁₆	2	17 ⁷ / ₈
AHVE48DP1300	53 ⁷ / ₁₆	23 ⁵ / ₁₆	24 ¹ / ₂	21 ¹ / ₂	18 ⁵ / ₁₆	21 ³ / ₁₆	12 ⁵ / ₈	6 ⁷ / ₈	4	3	3 ³ / ₃₂
AHVE60DP1300	58	23 ⁵ / ₁₆	24 ¹ / ₂	26 ⁷ / ₈	22 ⁷ / ₈	21 ³ / ₁₆	12 ⁵ / ₁₆	13 ³ / ₄	4	3	3 ³ / ₃₂

RATED INDOOR AIRFLOW RATE [SCFM]

ID UNIT	OD UNIT	STATIC PRESSURE [WC]								
		0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9
AHVE24BP1300	AXV6SS1810A*/GXV6SS1810A* AXV6SA1810A*/GXV6SA1810A* AZV6SA1810A*/GZV6SA1810A*	610	610	610	610	610	610	610	610	610
	AXV6SS2410A*/GXV6SS2410A* AXV6SA2410A*/GXV6SA2410A* AZV6SA2410A*/GZV6SA2410A*	800	800	800	800	800	800	800	800	800
AHVE36CP1300	AXV6SS2410A*/GXV6SS2410A* AXV9SA2410A*/GXV9SA2410A* AXV6SA2410A*/GXV6SA2410A* AZV7SA2410A*/GZV7SA2410A*	800	800	800	800	800	800	800	800	800
	AXV6SS3010A*/GXV6SS3010A* AXV6SA3010A*/GXV6SA3010A* AZV6SA3010A*/GZV6SA3010A*	1010	1010	1010	1010	1010	1010	1010	1010	1010
	AXV6SS3610A*/GXV6SS3610A* AZV6SA3610A*/GZV6SA3610A*	1260	1260	1260	1260	1260	1260	1260	1260	1260
AHVE42CP1300	AXV6SS3610A*/GXV6SS3610A* AXV9SA3610A*/GXV9SA3610A* AXV6SA3610A*/GXV6SA3610A* AZV6SA3610A*/GZV6SA3610A* AZV7SA3610A*/GZV7SA3610A*	1260	1260	1260	1260	1260	1260	1260	1260	1260
	AXV6SS4210A*/GXV6SS4210A* AZV6SA4210A*/GZV6SA4210A*	1320	1320	1320	1320	1320	1320	1320	1320	1320
AHVE48CP1300	AZV9SA2410A*/GZV9SA2410A*	800	800	800	800	800	800	800	800	800
	AXV9SA3610A*/GXV9SA3610A* AZV7SA3610A*/GZV7SA3610A* AZV9SA3610A*/GZV9SA3610A*	1260	1260	1260	1260	1260	1260	1260	1260	1260
	AXV6SS4210A*/GXV6SS4210A* AZV6SA4210A*/GZV6SA4210A*	1320	1320	1320	1320	1320	1320	1320	1320	1320
	AXV6SS4810A*/GXV6SS4810A* AZV6SA4810A*/GZV6SA4810A*	1380	1380	1380	1380	1380	1380	1380	1380	1380
AHVE48DP1300	AXV9SA3610A*/GXV9SA3610A* AZV7SA3610A*/GZV7SA3610A* AZV9SA3610A*/GZV9SA3610A*	1260	1260	1260	1260	1260	1260	1260	1260	1260
	AXV6SS4210A*/GXV6SS4210A* AZV6SA4210A*/GZV6SA4210A*	1320	1320	1320	1320	1320	1320	1320	1320	1320
	AXV6SS4810A*/GXV6SS4810A* AZV6SA4810A*/GZV6SA4810A*	1380	1380	1380	1380	1380	1380	1380	1380	1380
AHVE60DP1300	AXV9SA3610A*/GXV9SA3610A* AZV7SA3610A*/GZV7SA3610A* AZV9SA3610A*/GZV9SA3610A*	1260	1260	1260	1260	1260	1260	1260	1260	1260
	AXV6SS4210A*/GXV6SS4210A* AZV6SA4210A*/GZV6SA4210A* AZV7SA4210A*/GZV7SA4210A*	1320	1320	1320	1320	1320	1320	1320	1320	1320
	AXV6SS4810A*/GXV6SS4810A* AXV9SA4810A*/GXV9SA4810A* AZV6SA4810A*/GZV6SA4810A* AZV7SA4810A*/GZV7SA4810A* AZV9SA4810A*/GZV9SA4810A*	1380	1380	1380	1380	1380	1380	1380	1380	1380
	AXV6SS6010A*/GXV6SS6010A* AZV6SA6010A*/GZV6SA6010A* AZV7SA6010A*/GZV7SA6010A* AZV9SA6010A*/GZV9SA6010A*	1640	1640	1640	1640	1640	1640	1640	1640	1640

* The chart is for information only. For satisfactory operation, external static pressure must not exceed 0.9 wc. CFM values are based on 0% trim, refer to outdoor spec sheet for higher/lower trim values.

* Unit may provide different SCFM during electrical heater operation. See IO manual for the airflow rate.

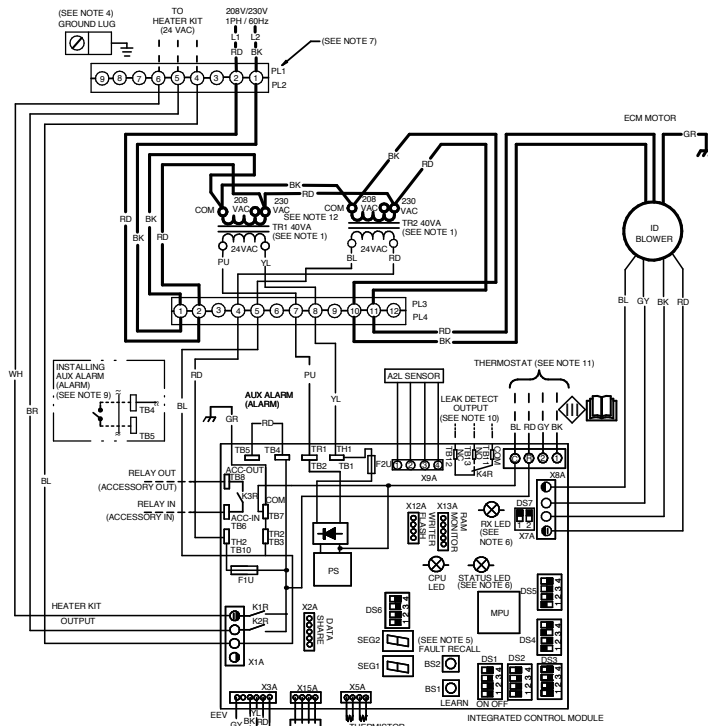
MODELS	CIRCUIT 1 (208V/240V)			CIRCUIT 2 (208V/240V)			SINGLE-POINT KIT (208V/240V)	
	HEATER AMPS	MCA ¹	MOP ²	HEATER AMPS	MCA ¹	MOP ²	MCA ¹	MOP ²
AHVE24BP1300AA	0.0/0.0	4.9/4.9	15/15	---	---	---	---	---
HKTSN03X1	10.8/12.5	18.4/20.5	20/25	---	---	---	---	---
HKTS*05X1	17.3/20.0	26.5/29.9	30/30	---	---	---	---	---
HKTSN06X1	21.7/25	32/36.1	35/40	---	---	---	---	---
HKTS*08X1	28.9/33.3	41/46.5	45/50	---	---	---	---	---
HKTS*10X1	34.7/40.0	48.5/54.9	50/60	---	---	---	---	---
AHVE36CP1300AA	0.0/0.0	6.5/6.5	15/15	---	---	---	---	---
HKTS*05X1	17.3/20.0	28.1/31.5	30/35	---	---	---	---	---
HKTSN06X1	21.7/25.0	33.6/37.8	35/40	---	---	---	---	---
HKTS*08X1	28.9/33.3	42.6/48.1	45/50	---	---	---	---	---
HKTS*10X1	34.7/40.0	49.9/56.5	50/60	---	---	---	---	---
HKTS*15X3 ^	0/0	6.5/6.5	15/15	30.0/34.6	37.5/43.3	40/45	---	---
HKTSN15XA/B	34.7/40	49.9/56.5	50/60	17.3/20.0	21.6/25.0	25/25	71.5/81.5	80/90
HKTSN19CA/B	34.7/40	49.9/56.5	50/60	34.7/40.0	43.4/50.0	45/50	93.2/106	100/110
AHVE42CP1300AA	0.0/0.0	6.5/6.5	15/15	---	---	---	---	---
HKTS*05X1	17.3/20.0	28.1/31.5	30/35	---	---	---	---	---
HKTSN06X1	21.7/25.0	33.6/37.8	35/40	---	---	---	---	---
HKTS*08X1	28.9/33.3	42.6/48.1	45/50	---	---	---	---	---
HKTS*10X1	34.7/40.0	49.9/56.5	50/60	---	---	---	---	---
HKTS*15X3 ^	0/0	6.5/6.5	15/15	30/34.6	37.5/43.3	40/45	---	---
HKTSN15XA/B	34.7/40	49.9/56.5	50/60	17.3/20	21.6/25.0	25/25	71.5/81.5	80/90
HKTSN19CA/B	34.7/40	49.9/56.5	50/60	34.7/40	43.4/50.0	45/50	93.2/106	100/110
AHVE48CP1300AA	0.0/0.0	6.5/6.5	15/15	---	---	---	---	---
HKTS*05X1	17.3/20.0	28.1/31.5	30/35	---	---	---	---	---
HKTSN06X1	21.7/25.0	33.6/37.8	35/40	---	---	---	---	---
HKTS*08X1	28.9/33.3	42.6/48.1	45/50	---	---	---	---	---
HKTS*10X1	34.7/40.0	49.9/56.5	50/60	---	---	---	---	---
HKTS*15X3 ^	0/0	6.5/6.5	15/15	30/34.6	37.5/43.3	40/45	---	---
HKTSN15XA/B	34.7/40	49.9/56.5	50/60	17.3/20	21.6/25.0	25/25	71.5/81.5	80/90
HKTS*20X3 ^	0/0	6.5/6.5	15/15	37.5/43.3	46.9/54.1	50/60	---	---
AHVE48DP1300AA	0.0/0.0	6.5/6.5	15/15	---	---	---	---	---
HKTS*05X1	17.3/20.0	28.1/31.5	30/35	---	---	---	---	---
HKTSN06X1	21.7/25.0	33.6/37.8	35/40	---	---	---	---	---
HKTS*08X1	28.9/33.3	42.6/48.1	45/50	---	---	---	---	---
HKTS*10X1	34.7/40.0	49.9/56.5	50/60	---	---	---	---	---
HKTS*15X3 ^	0/0	6.5/6.5	15/15	30/34.6	37.5/43.3	40/45	---	---
HKTSN15XA/B	34.7/40	49.9/56.5	50/60	17.3/20	21.6/25	25/25	71.5/81.5	80/90
HKTS*20X3 ^	0/0	6.5/6.5	15/15	37.5/43.3	46.9/54.1	50/60	---	---
HKTSN20DA/B	34.7/40	49.9/56.5	50/60	34.7/40	43.4/50.0	45/50	93.2/106	100/110
AHVE60DP1300AA	0.0/0.0	8.6/8.6	15/15	---	---	---	---	---
HKTS*05X1	17.3/20.0	30.2/33.6	35/35	---	---	---	---	---
HKTSN06X1	21.7/25.0	35.8/39.9	40/40	---	---	---	---	---
HKTS*08X1	28.9/33.3	44.8/50.2	45/60	---	---	---	---	---
HKTS*10X1	34.7/40.0	52.0/58.6	60/60	---	---	---	---	---
HKTSN15XA/B	34.7/40	52.0/58.6	60/60	17.3/20	21.6/25	25/25	73.6/83.6	80/90
HKTSN20DA/B	34.7/40	52.0/58.6	60/60	34.7/40	43.3/50	45/50	95.3/109	100/110
HKTSN25DA/B	34.7/40	52.0/58.6	60/60	52.0/60.0	65/75	70/80	117/134	125/150
HKTSN25D1	34.7/40	52.0/58.6	60/60	52.0/60.0	65/75	70/80	117/134	125/150

¹ Minimum Circuit Ampacity (Heater Amps + Motor Amps) X 1.25² Maximum Overcurrent Protection = 2.25 X Motor Amps + Heater Amps

^ Three-phase Heater Kits (Circuit 1: Single-phase for Air Handlers Circuit 2: Three-phase for Heater Kits)

* D - Service disconnect, N - No service disconnect

--- indicates Not Required



- NOTES:
1. PLACE RED WIRES ON 208 V TERMINAL OF 2-TRANSFORMER (TR1/TR2) FOR 208 VAC OPERATION.
 2. MANUFACTURER'S SPECIFIED REPLACEMENT PARTS MUST BE USED WHEN SERVICING.
 3. IF ANY OF THE ORIGINAL WIRES AS SUPPLIED WITH THIS UNIT MUST BE REPLACED, IT MUST BE REPLACED WITH WIRING MATERIAL HAVING A TEMPERATURE RATING OF AT LEAST 105°C. USE COPPER CONDUCTORS ONLY.
 4. UNIT MUST BE PERMANENTLY GROUNDDED AND CONFORM TO N.E.C. AND LOCAL CODES.
 5. TO RECALL THE LAST 6 FAULTS, MOST RECENT TO LEAST RECENT, DEPRESS FAULT RECALL BUTTON FOR MORE THAN 2 SECONDS WHILE IN STANDBY (NO THERMOSTAT INPUTS)
 6. RED STATUS LED PROVIDES NETWORK STATUS. GREEN RX LED INDICATES NETWORK TRAFFIC. USE LEARN BUTTON TO RESET NETWORK.
 7. DISCARD CONNECTOR PL1 WHEN INSTALLING OPTIONAL HEAT KIT.
 8. THE POSITION OF SELECTOR SWITCHES (DS1 - DS7) INDICATE FACTORY SETTING.
 9. REMOVE SHORT RED CIRCUITING WIRE AND PUT AUX ALARM SWITCH WHEN INSTALLING AUX ALARM SWITCH, CONDENSATE SWITCH, ETC.
 10. THIS OUTPUT OPERATES WHEN A REFRIGERANT LEAK IS DETECTED. (DRY CONTACT) USE THIS CONTACT WHEN INTERLOCKING UV LIGHT, DAMPER, ETC.
 11. USE N.E.C CLASS 2 WIRE.
 12. LOW VOLTAGE TRANSFORMER RATED 24VAC OUTPUT 40VA @ 1.67 AMP

COMPONENT LEGEND:

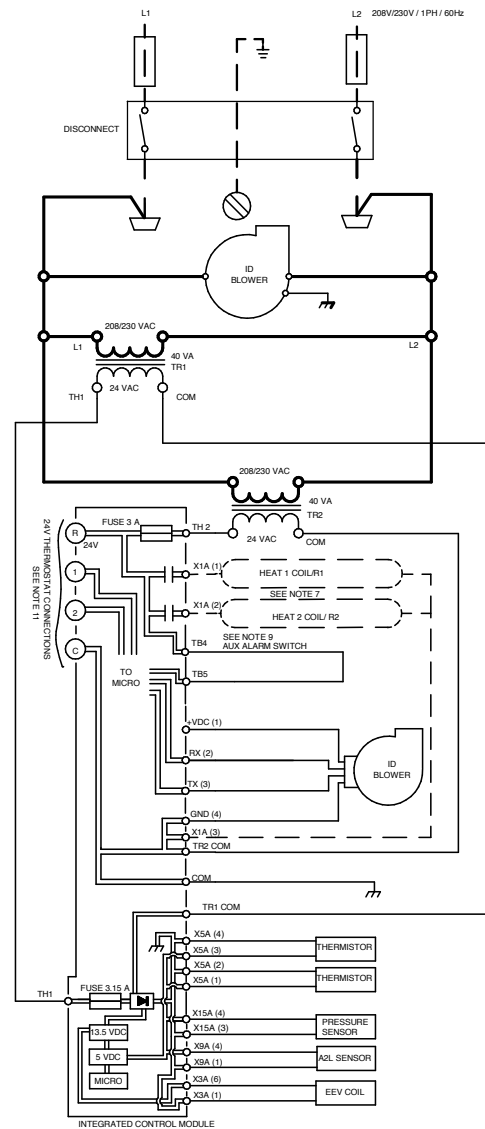
LOW VOLTAGE	—
LOW VOLTAGE FIELD	—
HIGH VOLTAGE	—
HIGH VOLTAGE FIELD	—
JUNCTION	⬤
TERMINAL	⊙
INTERNAL CONNECTIONS	—
RESISTOR	⊞
FUSE (F1U, F2U)	⊞
PLUG CONNECTION	⊞
EQUIPMENT GROUND	⊞
FIELD GROUND	⊞
DIP SWITCH(OFF)	ON OFF
READ THE INSTRUCTIONS	⊞
FIELD SPLICE	⊞
CLASS III	⊞

COMPONENT CODES:

PL1, PL2	— POWER/HEATER CONNECTOR
DS1 - DS7	— SELECTOR SWITCH
TR	— TRANSFORMER
PL3, PL4	— TRANSFORMER CONNECTOR
ID	— INDOOR
AUX	— AUXILIARY
COM	— 24V COMMON

COLOR CODES:

BL	— BLUE
RD	— RED
YL	— YELLOW
OR	— ORANGE
BK	— BLACK
GY	— GREY
BR	— BROWN
GR	— GREEN
PU	— PURPLE
WH	— WHITE



0140A01622-A

Wiring is subject to change. Always refer to the wiring diagram on the unit for the most up-to-date wiring.



WARNING

High Voltage: Disconnect all power before servicing or installing this unit. Multiple power sources may be present. Failure to do so may cause property damage, personal injury, or death.



DOWNFLOW KITS

DFKE-02
AHVE24BP1300
AHVE36CP1300
AHVE42CP1300
AHVE48CP1300
AHVE48DP1300
AHVE60DP1300

CONDENSATE MANAGEMENT KITS*

CMK0015	CMK0016	CMK0017
AHVE24BP1300	AHVE36CP1300	AHVE48DP1300
	AHVE42CP1300	AHVE60DP1300
	AHVE48CP1300	

*For Horizontal application only.

HIGH HUMIDITY KITS

HHK0001	HHK0002	HHK0003	HHK0011
AHVE24BP1300	AHVE36CP1300	AHVE48DP1300	AHVE48CP1300
	AHVE42CP1300	AHVE60DP1300	

MERV 15 AIR CLEANERS

CHASSIS	DAIKIN PREMIUM AIR CLEANER	FILTER SIZE	REPLACEMENT FILTER PART #
B	DV15-2117-AB	21"x17"	0160M00013
C	DV15-2121-AC	21"x21"	0160M00014
D	DV15-2124-AD	21"x24"	0160M00015

PERMANENT 1" FILTERS

CHASSIS	PART#	SIZE
B	ALFH16201E	16.0" x 20.0"
C	ALFH1912201E	19.5" x 20.0"
D	ALFH20231E	23.0" x 20.0"

SINGLE POINT WIRING KITS (SPW-01)

HEATER KIT MODEL	SPWK-B	SPWK-C	SPWK-D
HKTSD15XA		AHVE36CP1300**	AHVE48DP1300**
HKTSD15XB		AHVE42CP1300**	AHVE60DP1300**
		AHVE48CP1300**	
HKTSD19CA		AHVE36CP1300**	
HKTSD19CB		AHVE42CP1300**	
HKTSD20DA			AHVE48DP1300**
HKTSD20DB			AHVE60DP1300**
HKTSD25DA			AHVE60DP1300**
HKTSD25DB			

15" SINGLE LAMP UV COIL PURIFIER

MODEL	LAMP	POWER MOD	REM CORD
UC18S15-24	UCP-16013	UCP-16015	UCP-16016
UC18S15-24B	UCP-16012	UCP-16014	UCP-16016