

**MULTI-POSITION, VARIABLE-SPEED
ECM-BASED, MODULAR BLOWER
COMFORTBRIDGE™ COMPATIBLE**



Contents

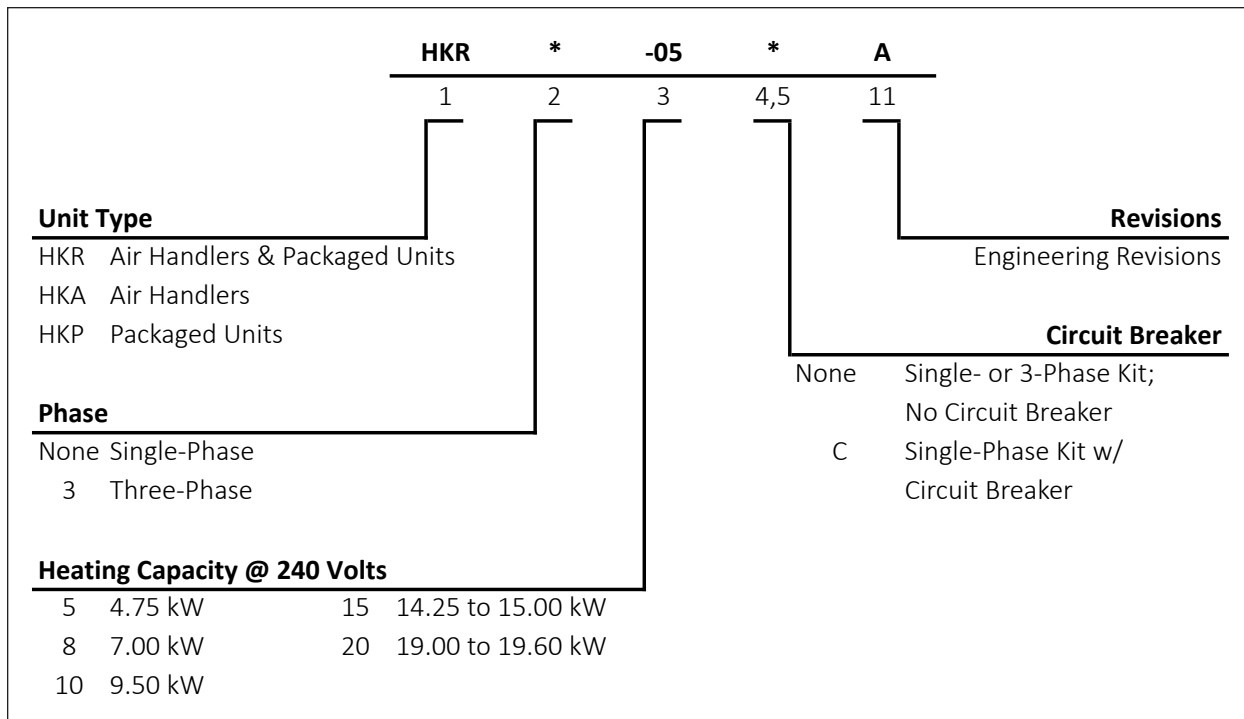
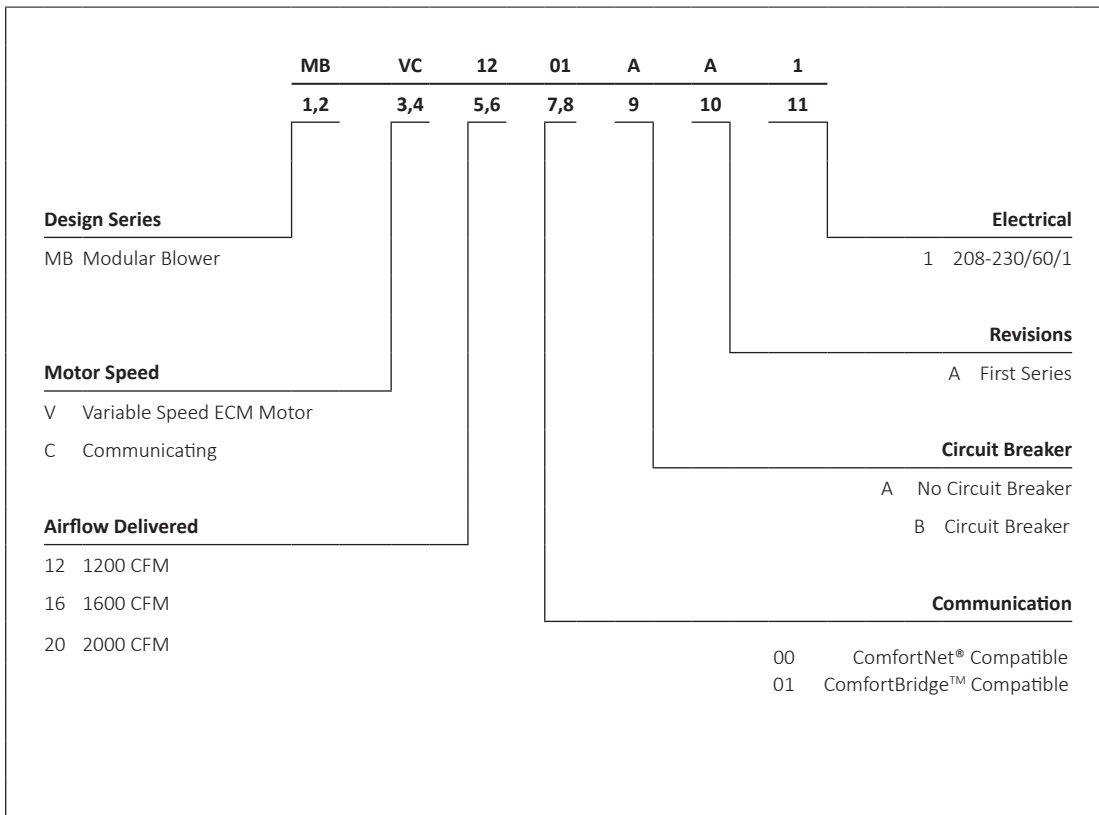
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Product Features

- Variable-speed ECM blower motor
- Integrated communicating ComfortBridge™ Technology
- Commissioning and diagnostics via on board Bluetooth with the CoolCloud phone and tablet application
- Advanced configuration of the airflow and tonnage in communicating mode
- Provides constant CFM over a wide range of static pressure conditions independent of duct system
- CFM indicator
- Fault recall of six most recent faults
- Provides adjustable low CFM for efficient fan-only operation
- Improved humidity and comfort control
- Built-in compatibility with multi-stage heat pump and cooling applications
- Blower section usable as electric heater
- AHRI certified; ETL listed
- Horizontal or vertical configuration capabilities
- 21" depth for easier attic access
- Foil-faced insulation covers the internal casing to reduce cabinet condensation
- Galvanized, leather grain-embossed finish
- Cabinet air leakage less than 2% at 1.0 inch H₂O when tested in accordance with ASHRE standard 193
- Cabinet air leakage less than 1.4% at 0.5 inch H₂O when tested in accordance with ASHRE standard 193
- Field Installed 3 kW – 25 kW electric heater kits available



* 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 is not required in California or Quebec.



MODEL	MBVC1201AA-1	MBVC1601AA-1	MBVC2001AA-1
BLOWER			
Diameter	10"	10"	11"
Width	8"	8"	10"
ELECTRICAL DATA			
Voltage	208 / 230	208 / 230	208 / 230
Min Circuit Ampacity	4.9	6.5	6.5
Max. Overcurrent Device (Amps)	15	15	15
Blower Motor			
Horsepower (HP)	½	¾	¾
SHIP WEIGHT (LBS.)	67	80	86

- Minimum Circuit Ampacity (MCA) and Maximum Overcurrent Protection (MOP) for blower without supplemental heat installed. Refer to unit nameplate for these specifications with approved accessory heaters installed.
- Condensate management kits are available for units installed in high temperature and high humidity areas. Kit number MBK0002 has been developed to resolve condensate issues in the field for MBVCs and is available from the Service Parts Department. Refer to IO-849 for installation instructions.

MODEL	SPEED TAP	SPEED	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9
MBVC1201A*	A	Low	420	415	400	400	395	390	390	390	380
	B	Low	550	545	540	540	535	530	530	525	520
	C	Low	680	675	670	665	660	655	655	650	640
	D	Low	810	805	800	800	800	795	790	785	785
	A	High	615	605	600	600	595	590	590	585	580
	B	High	805	805	800	800	800	795	790	785	780
	C	High	1010	1005	1000	1000	995	995	990	985	975
	D	High	1210	1205	1200	1200	1200	1195	1195	1190	1180
MBVC1601A*	A	Low	690	680	670	665	660	655	625	595	575
	B	Low	850	830	800	795	790	785	775	750	725
	C	Low	980	970	940	935	930	910	890	865	860
	D	Low	1110	1085	1070	1055	1045	1025	1000	990	975
	A	High	1045	1015	1000	990	975	950	935	920	900
	B	High	1245	1215	1200	1180	1175	1165	1150	1130	1115
	C	High	1415	1410	1400	1365	1360	1350	1340	1330	1320
	D	High	1605	1600	1600	1540	1530	1520	1510	1500	1490
MBVC2001A*	A	Low	835	815	800	800	795	795	790	775	750
	B	Low	1075	1070	1070	1065	1050	1045	1045	1040	1035
	C	Low	1210	1205	1200	1200	1195	1190	1190	1185	1175
	D	Low	1345	1340	1340	1320	1320	1315	1315	1305	1305
	A	High	1210	1205	1200	1195	1150	1150	1145	1135	1115
	B	High	1610	1605	1600	1540	1535	1535	1530	1520	1510
	C	High	1830	1805	1800	1785	1760	1760	1755	1750	1715
	D	High	2020	2010	2000	1995	1995	1970	1970	1965	1955

COOLING AND HEAT PUMP AIRFLOW

S1	S2	SPEED TAP	MBVC1201 AIRFLOW (SCFM)	MBVC1601 AIRFLOW (SCFM)	MBVC2001 AIRFLOW (SCFM)
off	off	A	600	1000	1200
on	off	B	800	1200	1600
off	on	C	1000	1400	1800
on	on	D	1200	1600	2000

HEAT KIT AIRFLOW

COOLING / HP / AUX TRIM			COOLING PROFILE		
S3	S4	Trim Value	S5	S6	
off	off	0	off	off	A
on	off	10%	on	off	B
off	on	-10%	off	on	C
on	on	0	on	on	D

NOTES

- The chart is for information only. For satisfactory operation, external static pressure must not exceed value shown on rating plate.
- Use the CFM adjustment factors of .98 for horizontal left, .95 for horizontal right & .96 for downflow orientations.

MODELS	CIRCUIT 1			CIRCUIT 2			SINGLE-POINT KIT	
	HEATER AMPS	MCA ¹	MOP ²	HEATER AMPS	MCA ¹	MOP ²	MCA ¹	MOP ²
MBVC1201AA-1A*	0 / 0	4.9 / 4.9	15 / 15	---	---	---	---	---
HKR-03*	10.8 / 12.5	18 / 20.5	20 / 25	---	---	---	---	---
HKR-05* / 05C*	17.2 / 19.8	26 / 29.6	30 / 30	---	---	---	---	---
HKR-06*	21.7 / 25.0	32 / 36.1	35 / 40	---	---	---	---	---
HKR-08* / -08C*	25.3 / 29.2	36.5 / 41	40 / 45	---	---	---	---	---
HKR-10* / -10C*	34.3 / 39.6	47.8 / 54	50 / 60	---	---	---	---	---
HKA-15C*	34.3 / 39.6	47.8 / 54	50 / 60	17.2 / 19.8	21.4 / 24.7	25 / 25	69/79	70 / 80
MBVC1601AA-1A*	0 / 0	6.5 / 6.5	15 / 15	---	---	---	---	---
HKR-03*	10.8 / 12.5	20.1 / 22	25 / 25	---	---	---	---	---
HKR-05* / 05C*	17.2 / 19.8	27.9 / 31	30 / 35	---	---	---	---	---
HKR-06*	21.7 / 25.0	34 / 37.8	35 / 40	---	---	---	---	---
HKR-08* / -08C*	25.3 / 29.2	38.1 / 43	40 / 45	---	---	---	---	---
HKR-10* / -10C*	34.3 / 39.6	49.4 / 56	50 / 60	---	---	---	---	---
HKA-15C*	34.3 / 39.6	49.4 / 56	50 / 60	17.2 / 19.8	21.4 / 24.7	25 / 25	71/81	80 / 90
MBVC2001AA-1A*	0 / 0	6.5 / 6.5	15 / 15	---	---	---	---	---
HKR-03*	10.8 / 12.5	20.1 / 22	25 / 25	---	---	---	---	---
HKR-05* / 05C*	17.2 / 19.8	27.9 / 31	30 / 35	---	---	---	---	---
HKR-06*	21.7 / 25.0	34 / 37.8	35 / 40	---	---	---	---	---
HKR-08* / -08C*	25.3 / 29.2	38.1 / 43	40 / 45	---	---	---	---	---
HKR-10* / -10C*	34.3 / 39.6	49.4 / 56	50 / 60	---	---	---	---	---
HKA-15C*	34.3 / 39.6	49.4 / 56	50 / 60	17.2 / 19.8	21.4 / 24.7	25 / 25	70/80	70 / 80
HKA-20C*	34.3 / 39.6	49.4 / 56	50 / 60	34.3 / 39.6	42.9 / 49.5	45 / 50	92/105	100 / 110

All ampacities noted above include air handler motor amps

Circuit 1: Single-phase for Air Handlers / Circuit 2: Three-phase for HKR3 Heater Kits

¹ Minimum Circuit Ampacity (Heater Amps + Motor Amps) X 1.25

² Maximum Overcurrent Protection = 2.25 X Motor Amps + Heater Amps

* Revision level that may or may not be designated

C = Circuit Breaker Option

--- indicates Not Required

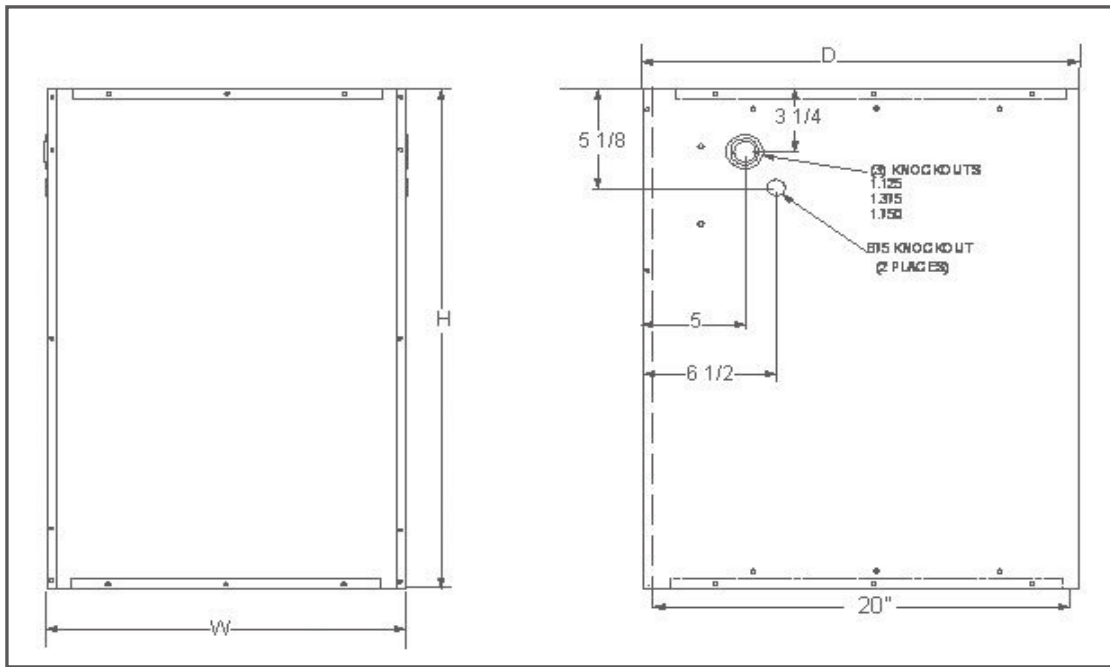
- Only applicable when HKA kits are included in table
HKA meets the new UL1995 requirements for 15 and 20KW heaters
- MBVC and MBR models

HEATING KW CORRECTION FACTOR

SUPPLY VOLTAGE	240	230	220	210	208
CORRECTION FACTOR	1.00	0.92	0.84	0.77	0.75

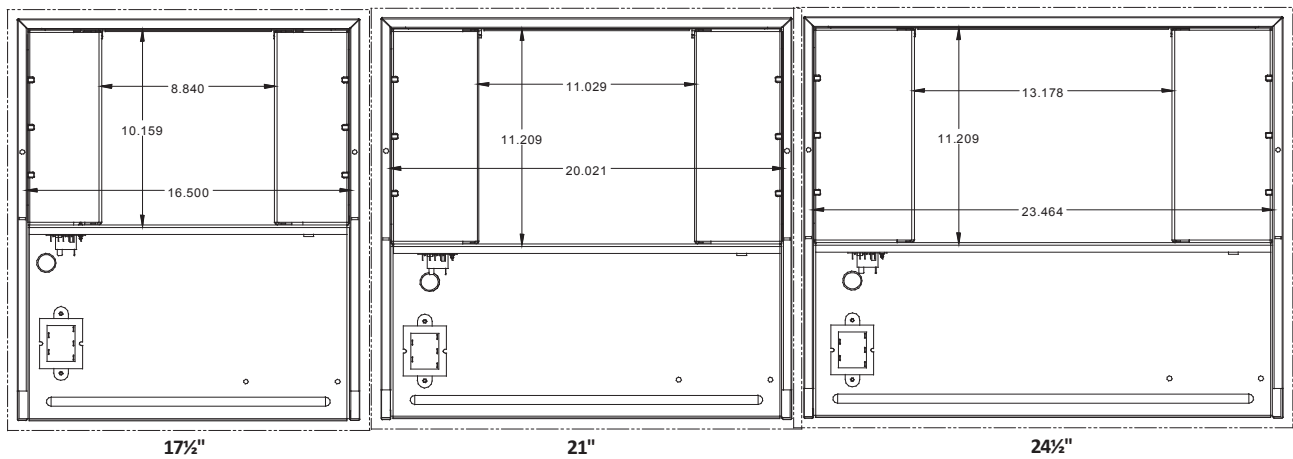
Multiply the 240-volt heating capacity by correction factors.

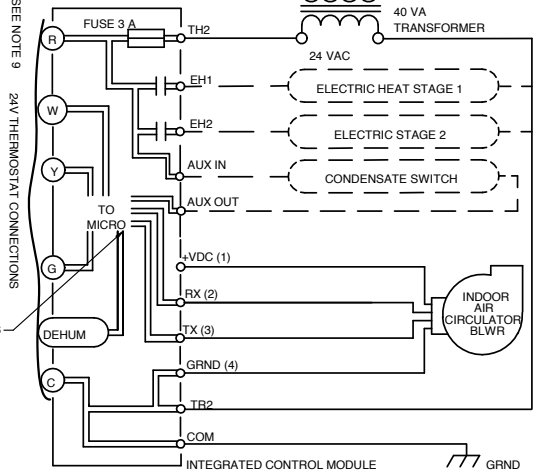
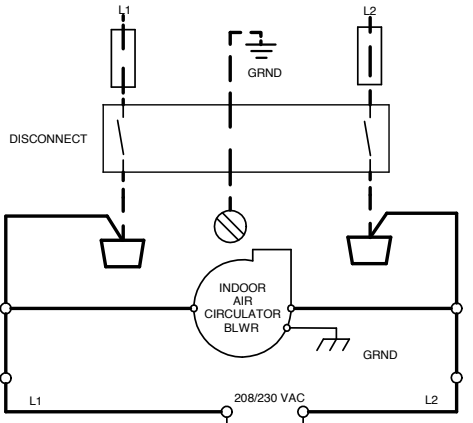
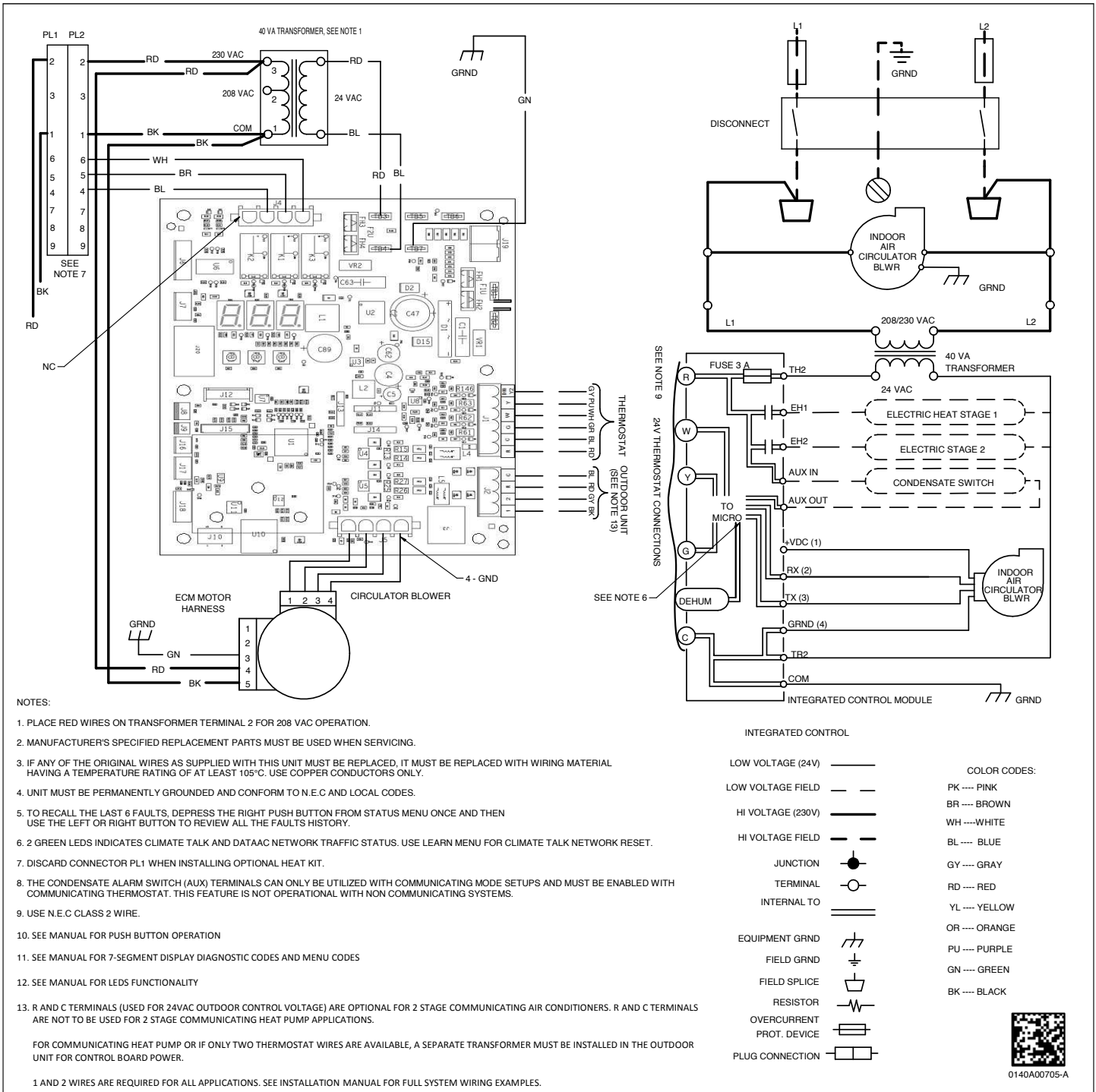
SIDE AND FRONT VIEWS



MODEL	DIMENSIONS		
	WIDTH	DEPTH	HEIGHT
MBVC1201AA-1	17½"	21"	26"
MBVC1601AA-1	21"	21"	30"
MBVC2001AA-1	24½"	21"	30"

TOP VIEW





NOTES:

- PLACE RED WIRES ON TRANSFORMER TERMINAL 2 FOR 208 VAC OPERATION.
- MANUFACTURER'S SPECIFIED REPLACEMENT PARTS MUST BE USED WHEN SERVICING.
- 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.
- UNIT MUST BE PERMANENTLY GROUNDED AND CONFORM TO N.E.C AND LOCAL CODES.
- TO RECALL THE LAST 6 FAULTS, DEPRESS THE RIGHT PUSH BUTTON FROM STATUS MENU ONCE AND THEN USE THE LEFT OR RIGHT BUTTON TO REVIEW ALL THE FAULTS HISTORY.
- 2 GREEN LEDS INDICATES CLIMATE TALK AND DATAAC NETWORK TRAFFIC STATUS. USE LEARN MENU FOR CLIMATE TALK NETWORK RESET.
- DISCARD CONNECTOR PL1 WHEN INSTALLING OPTIONAL HEAT KIT.
- THE CONDENSATE ALARM SWITCH (AUX) TERMINALS CAN ONLY BE UTILIZED WITH COMMUNICATING MODE SETUPS AND MUST BE ENABLED WITH COMMUNICATING THERMOSTAT. THIS FEATURE IS NOT OPERATIONAL WITH NON COMMUNICATING SYSTEMS.
- USE N.E.C CLASS 2 WIRE.
- SEE MANUAL FOR PUSH BUTTON OPERATION
- SEE MANUAL FOR 7-SEGMENT DISPLAY DIAGNOSTIC CODES AND MENU CODES
- SEE MANUAL FOR LEDS FUNCTIONALITY
- R AND C TERMINALS (USED FOR 24VAC OUTDOOR CONTROL VOLTAGE) ARE OPTIONAL FOR 2 STAGE COMMUNICATING AIR CONDITIONERS. R AND C TERMINALS ARE NOT TO BE USED FOR 2 STAGE COMMUNICATING HEAT PUMP APPLICATIONS.

FOR COMMUNICATING HEAT PUMP OR IF ONLY TWO THERMOSTAT WIRES ARE AVAILABLE, A SEPARATE TRANSFORMER MUST BE INSTALLED IN THE OUTDOOR UNIT FOR CONTROL BOARD POWER.

1 AND 2 WIRES ARE REQUIRED FOR ALL APPLICATIONS. SEE INSTALLATION MANUAL FOR FULL SYSTEM WIRING EXAMPLES.

INTEGRATED CONTROL

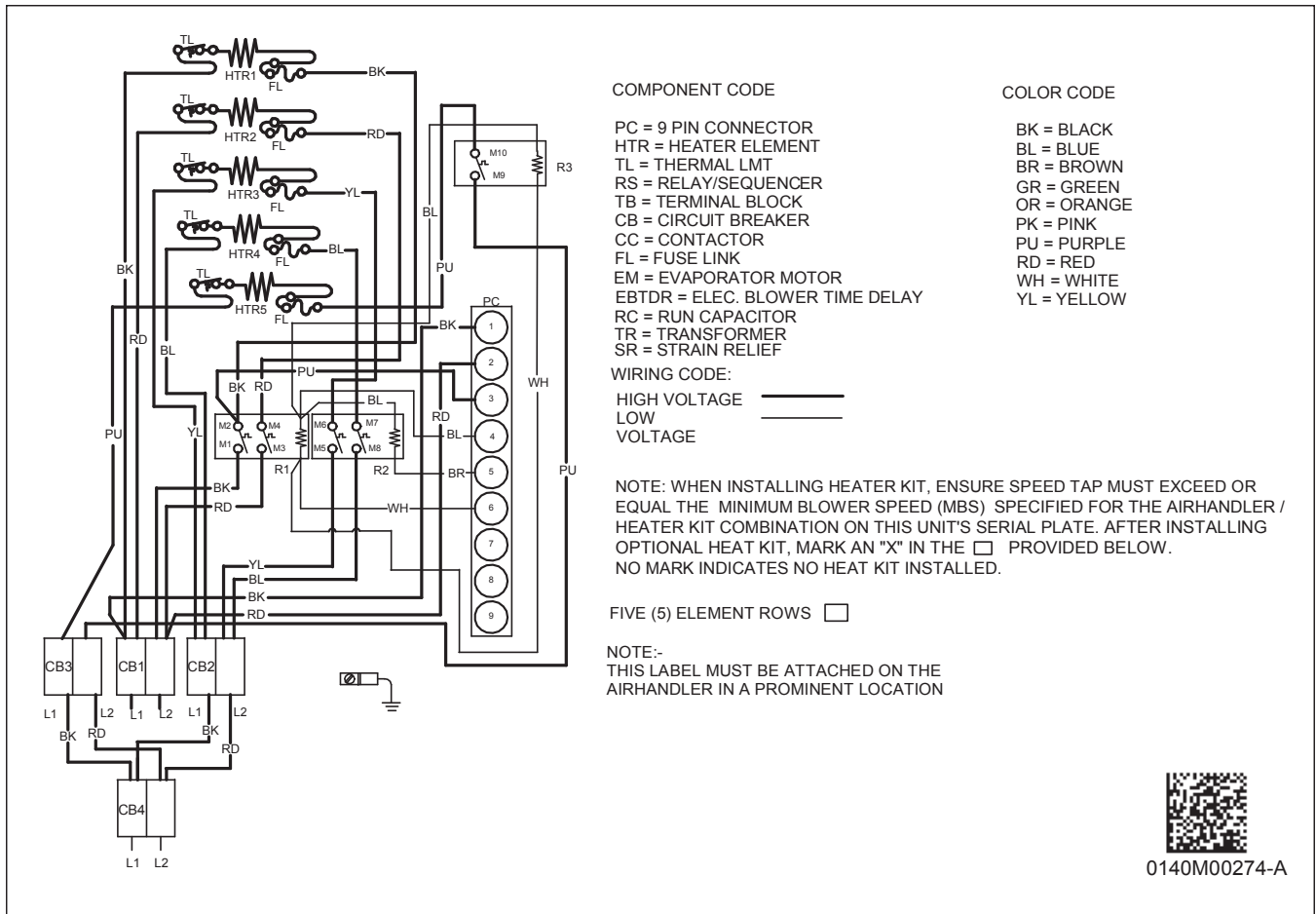
LOW VOLTAGE (24V)	—————	COLOR CODES:	
LOW VOLTAGE FIELD	— — — —	PK	PINK
HI VOLTAGE (230V)	—————	BR	BROWN
HI VOLTAGE FIELD	— — — —	WH	WHITE
JUNCTION	●	BL	BLUE
TERMINAL	○	GY	GRAY
INTERNAL TO	=====	RD	RED
EQUIPMENT GRND	⏏	YL	YELLOW
FIELD GRND	⏏	OR	ORANGE
FIELD SPLICE	⏏	PU	PURPLE
RESISTOR	⏏	GN	GREEN
OVERCURRENT PROT. DEVICE	⏏	BK	BLACK
PLUG CONNECTION	⏏		



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.

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

WIRING DIAGRAM – FIVE-ELEMENT HEATER KIT



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.

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