

# AWUF

## WALL-MOUNT AIR HANDLER

### 1½ TO 3 TONS

#### Standard Features

- Suitable for use with refrigerants R-410A and R-22
- Equipped with a Check Flowrater for cooling-only and heat pump operation
- Direct-drive, multi-speed motor allows air volume variation for heating/cooling
- Sequence-controlled, rust-resistant nickel chromium heating elements of 3, 5, 8, and 10 kW
- Factory-installed pull-type disconnect
- Aluminum tubing coils on all models
- AHRI Certified
- ETL Listed

#### Cabinet Features

- Thermoplastic drain pan with bottom primary and secondary drain connections
- Built-in filter rack (filter included)
- Large chassis (2½- and 3-ton units) – front return only
- Small chassis (1½- and 2-ton units) – front or bottom return
- Wall-hanging bracket provided

#### Accessories

- Wall access doors:
  - WAD-1 fits AWUF18 and AWUF24
  - WAD-2 fits AWUF30 through AWUF37



\* Complete warranty details available from your local dealer or at [www.amana-hac.com](http://www.amana-hac.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 Québec.

# NOMENCLATURE

	A	W	U	F	3610	1	6	AA	
	1	2	3	4	5,6,7,8	9	10	11,12	
<b>Brand</b>	A Single-piece Air Handler								<b>Engineering *</b> Major/ Minor Revisions * Not used for inventory management
<b>Unit Application</b>	C Ceiling Mount PSC Motor D Downflow PSC Motor E Multi-Position Variable-Speed Motor R Multi-Position PSC Motor S Multi-Position EEM Motor W Wall Mount PSC Motor								<b>Refrigerant Compatibility</b> No Digit = R-22 only 6 = R-410A or R-22
<b>Cabinet Finish</b>	U Unpainted P Painted N Uncased								<b>Electrical</b> 1 208/240 V, 1 Phase, 60 Hz
<b>Expansion Device</b>	F Flowrater T Expansion Valve								<b>Nominal Capacity Range @ 13 SEER</b>
									<b>Multi-Position &amp; Downflow Applications</b> 1729 1½ to 2½ Tons (for Export Systems) 1830 1½-3½ Tons 3642 3-3½ Tons  <b>Ceiling-Mount &amp; Wall-Mount Applications</b> (Nominal Cooling Capacity/ Electric Heat kW) 1805 1½ Tons Cooling/ 5 kW Electric Heat 2405 2 Tons Cooling/ 5 kW Electric Heat 3610 3 Tons Cooling/ 10 kW Electric Heat

**SPECIFICATIONS**

	AWUF 180316B	AWUF 18051/16A	AWUF 18051/16B	AWUF 18081/16A	AWUF 18081/16B	AWUF 240316B	AWUF 24051/16A	AWUF 24051/16B	AWUF 24081/16A
<b>NOMINAL RATINGS</b>									
Cooling (BTU/h)	18,000	18,000	18,000	18,000	18,000	24,000	24,000	24,000	24,000
Electric Heat (kW)	3, 5	5	5	8	8	3, 5	5	5	8
<b>BLOWER</b>									
Diameter	9	9	9	9	9	10	10	10	10
Width	6	6	6	6	6	6	6	6	6
Coil Drain Connection FPT	¾"	¾"	¾"	¾"	¾"	¾"	¾"	¾"	¾"
<b>SERVICE VALVE</b>									
Liquid	¾"	¾"	¾"	¾"	¾"	¾"	¾"	¾"	¾"
Suction	¾"	¾"	¾"	¾"	¾"	¾"	¾"	¾"	¾"
<b>ELECTRICAL DATA</b>									
Voltage	240/208	240/208	240/208	240/208	240/208	240/208	240/208	240/208	240/208
Min Circuit Ampacity (240V)	15.1	26.7	26.6	39.7	39.6	15.1	26.7	26.6	39.7
Min Circuit Ampacity (208V)	17.3	23.3	23.3	34.6	34.6	17.3	23.3	23.3	34.2
Max. Overcurrent Protection (240V)	20	30	30	40	40	20	30	30	40
Max. Overcurrent Protection (208V)	20	30	25	40	35	20	30	25	40
Minimum VAC	197	197	197	197	197	197	197	197	197
Maximum VAC	253	253	253	253	253	253	253	253	253
<b>BLOWER MOTOR</b>									
FLA	1.30	1.35	1.3	1.35	1.3	1.30	1.35	1.3	1.35
HP	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/5
SHIP WEIGHT (LBS)	84	84	84	84	84	84	84	84	84

SPECIFICATIONS (CONT.)

	AWUF 24081/16B	AWUF 24101/16A	AWUF 24101/16B	AWUF 300316B	AWUF 30051/16B	AWUF 30081/16B	AWUF 30101/16B	AWUF 310516A*
<b>NOMINAL RATINGS</b>								
Cooling (BTU/h)	24,000	24,000	24,000	30,000	30,000	30,000	30,000	18,000-30,000
Electric Heat (kW)	8	10	10	3, 5	5	8	10	5
<b>BLOWER</b>								
Diameter	10	10	10	9	9	9	9	10
Width	6	6	6	8	8	8	8	8
Coil Drain Connection FPT	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"
<b>SERVICE VALVE</b>								
Liquid	3/8"	3/8"	3/8"	3/8"	3/8"	3/8"	3/8"	3/8"
Suction	3/8"	3/8"	3/8"	3/4"	3/4"	3/4"	3/4"	3/4"
<b>ELECTRICAL DATA</b>								
Voltage	240/208	240/208	240/208	240/208	240/208	240/208	240/208	240/208
Min Circuit Ampacity (240V)	39.6	52.7	52.7	15.5	27	40	53	30.1
Min Circuit Ampacity (208V)	34.6	45.6	45.9	17.6	23.6	34.9	46.2	26.8
Max. Overcurrent Protection (240V)	40	60	60	20	30	40	60	35
Max. Overcurrent Protection (208V)	35	50	50	20	25	35	50	30
Minimum VAC	197	197	197	197	197	197	197	197
Maximum VAC	253	253	253	253	253	253	253	253
<b>BLOWER MOTOR</b>								
FLA	1.3	1.35	1.3	1.58	1.58	1.58	1.58	4.1
HP	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/2
<b>SHIP WEIGHT (LBS)</b>	84	84	84	93	93	93	93	96

**SPECIFICATIONS (CONT.)**

	AWUF 310816A*	AWUF 321016A*	AWUF 36051/16B	AWUF 36081/16B	AWUF 36101/16B	AWUF 370516B	AWUF 370816B	AWUF 371016B
<b>NOMINAL RATINGS</b>								
Cooling (BTU/h)	18,000-30,000	18,000-30,000	36,000	36,000	36,000	36,000	36,000	36,000
Electric Heat (kW)	8	10	5	8	10	5	8	10
<b>BLOWER</b>								
Diameter	10	10	9	9	9	10	10	10
Width	8	8	8	8	8	8	8	8
Coil Drain Connection FPT	¾"	¾"	¾"	¾"	¾"	¾"	¾"	¾"
<b>SERVICE VALVE</b>								
Liquid	¾"	¾"	¾"	¾"	¾"	¾"	¾"	¾"
Suction	¾"	¾"	¾"	¾"	¾"	¾"	¾"	¾"
<b>ELECTRICAL DATA</b>								
Voltage	240/208	240/208	240/208	240/208	240/208	240/208	240/208	240/208
Min Circuit Ampacity (240V)	43.1	56.2	27	40	53	30.1	43.1	56.2
Min Circuit Ampacity (208V)	38.1	49.4	23.6	34.9	46.2	26.8	38.1	49.4
Max. Overcurrent Protection (240V)	45	60	30	40	60	35	45	60
Max. Overcurrent Protection (208V)	40	50	25	35	50	30	40	50
Minimum VAC	197	197	197	197	197	197	197	197
Maximum VAC	253	253	253	253	253	253	253	253
<b>BLOWER MOTOR</b>								
FLA	4.1	4.1	1.58	1.58	1.58	4.1	4.1	4.1
HP	1/2	1/2	¼	¼	¼	1/2	1/2	1/2
<b>SHIP WEIGHT (LBS)</b>	96	96	96	96	96	96	96	96

## AIRFLOW DATA

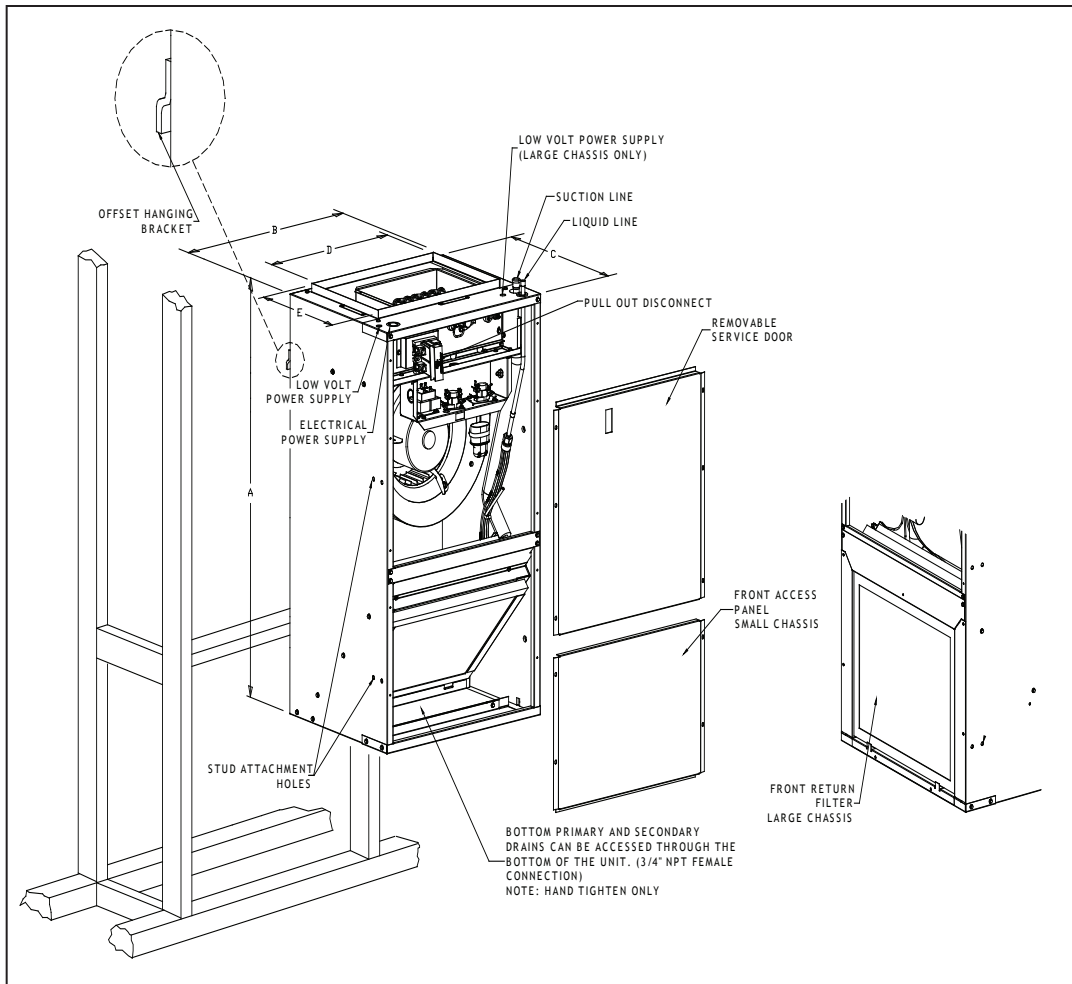
MODEL	MOTOR SPEED	CFM DELIVERED AGAINST EXTERNAL STATIC PRESSURE				
		0.1"	0.2"	0.3"	0.4"	0.5"
AWUF18XX1/16A*	High	750	730	690	650	595
	Low	710	700	690	635	585
AWUF18XX16B*	High	755	715	670	615	545
	Low	740	700	655	595	535
AWUF24XX1/16A*	High	880	845	810	770	735
	Low	845	815	780	745	705
AWUF24XX16B*	High	900	870	835	795	760
	Low	865	835	800	765	725
AWUF30XX1/16A*	High	1250	1195	1135	1085	1010
	Low	1110	1055	1020	955	905
AWUF30XX16B*	High	1255	1120	1100	1020	950
	Low	1115	1010	990	900	820
AWUF310516XX	T5	875	865	830	805	765
	T4	1005	975	945	920	890
	T3	840	795	785	745	700
	T2	645	615	550	500	445
	T1	645	615	550	500	445
AWUF310816XX AWUF321016XX	T5	1090	1065	1040	1015	985
	T4	1005	975	945	920	890
	T3	840	795	785	745	700
	T2	645	615	550	500	445
	T1	645	615	550	500	445
AWUF36XX1/16A*	High	1280	1190	1110	1010	930
	Low	1170	1100	1030	950	890
AWUF36XX16B*	High	1215	1145	1070	985	890
	Low	1120	1065	1000	915	820
AWUF37XX16A*	High	1325	1285	1230	1180	1115
	Low	1085	1060	1030	995	950
AWUF37XX16B*	T5	1385	1205	1130	1045	950
	T4	1235	1180	1115	1040	955
	T3	1165	1120	1075	1025	945
	T2	1050	1010	970	930	860
	T1	1050	1010	970	930	860

## HEATING CAPACITY CORRECTION FACTOR\*

SUPPLY VOLTAGE	240	230	220	210	208
CORRECTION FACTOR	1.00	.92	.84	.76	.74

\* Multiply 240-volt capacity by correction factor

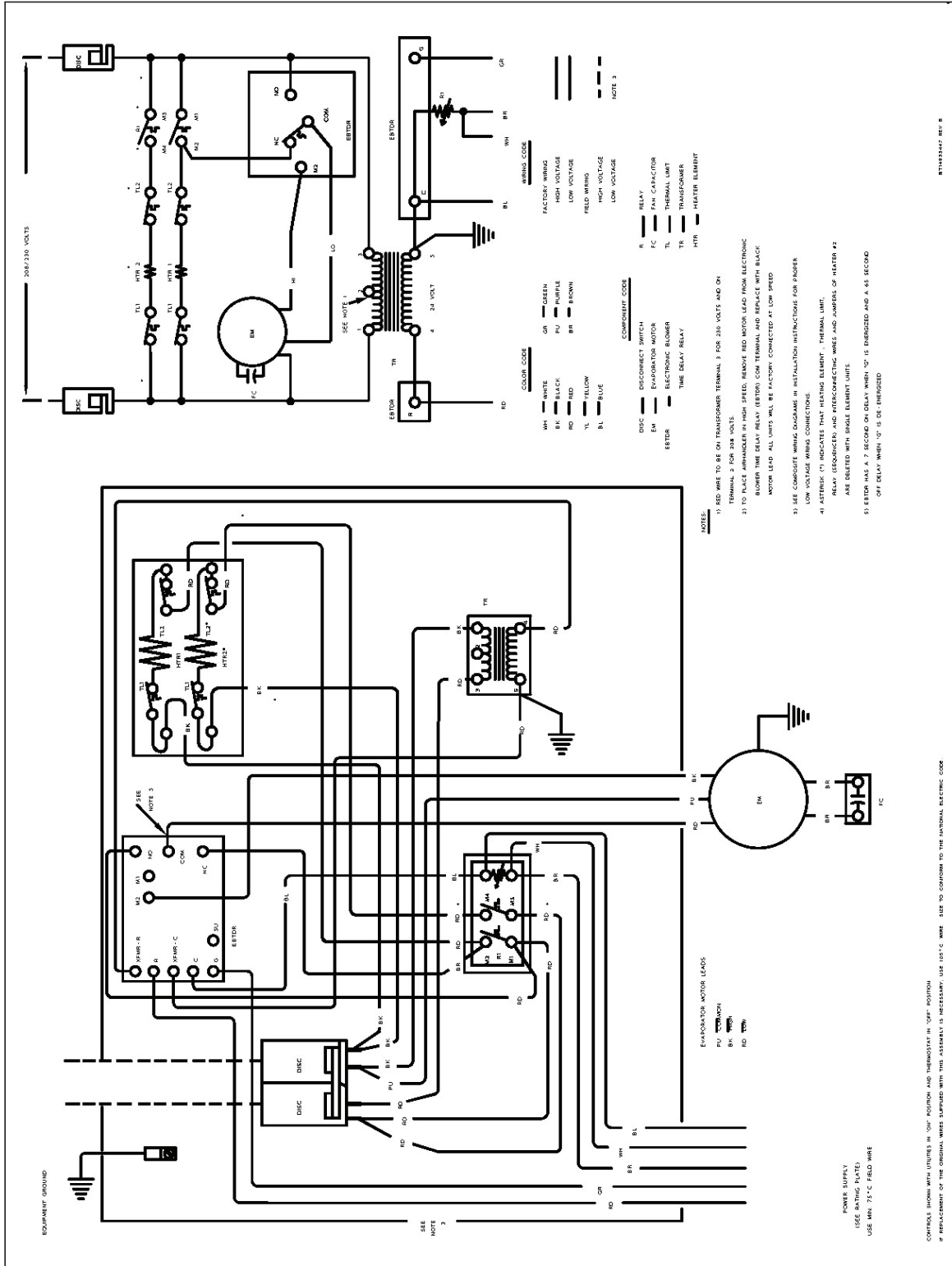
# DIMENSIONS



SMALL CHASSIS (AWUF18/24)	
A	36"
B	20 <sup>3</sup> / <sub>16</sub> "
C	16 <sup>1</sup> / <sub>8</sub> "
D	16"
E	11"
Filter	14" x 18" x 1"

LARGE CHASSIS (AWUF30-37)	
A	36"
B	24"
C	21"
D	19 <sup>1</sup> / <sub>8</sub> "
E	15 <sup>1</sup> / <sub>8</sub> "
Filter (30/36)	16" x 20" x 1"
Filter (31/32/37)	18" x 20" x 1"

# AWUF18/24/30/36 WIRING DIAGRAM



⚡

**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.

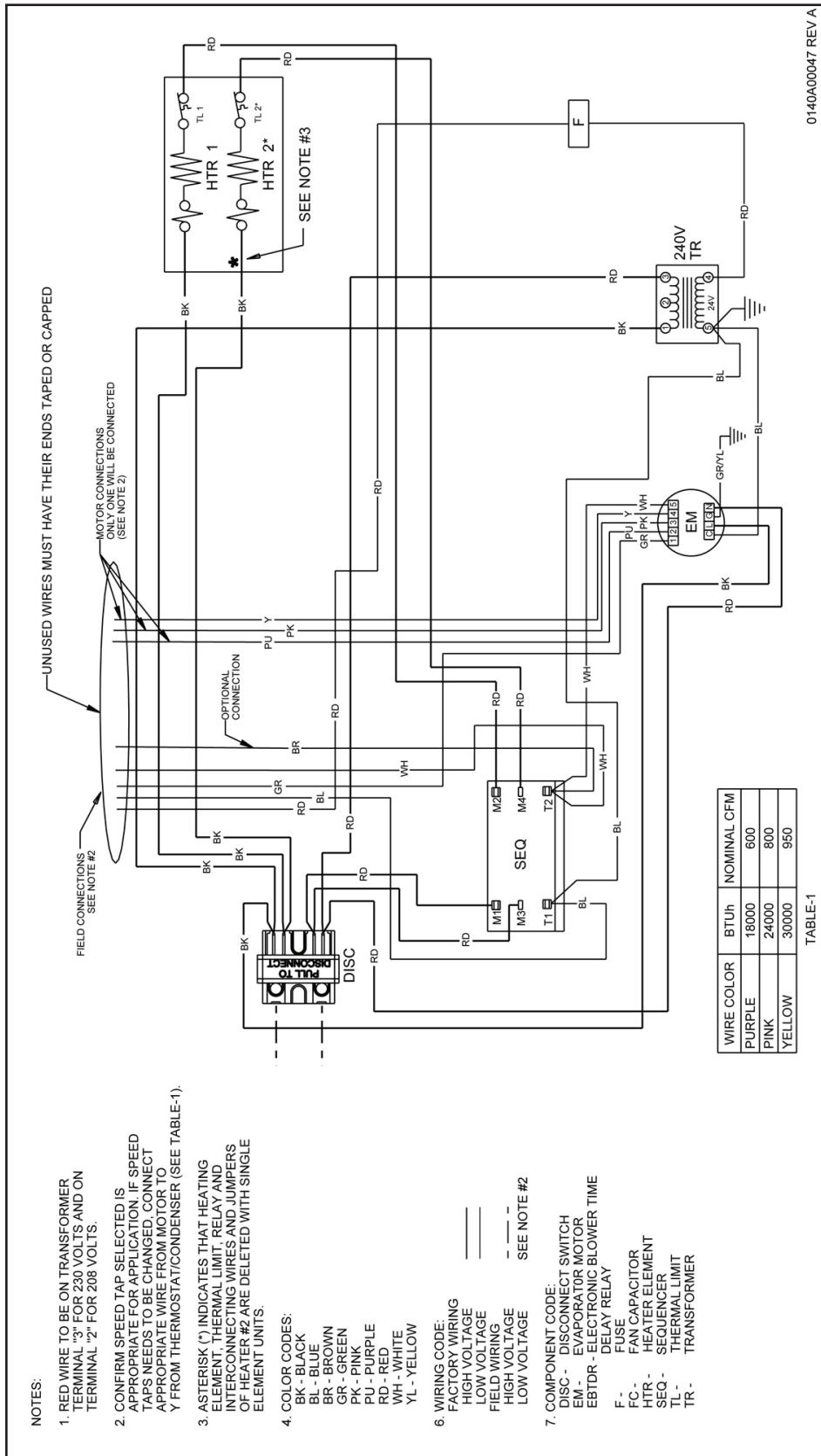
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**WARNING**

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



# AWUF31/32 WIRING DIAGRAM



0140A00047 REV A

FIELD CONNECTIONS SEE NOTE #2

UNUSED WIRES MUST HAVE THEIR ENDS TAPED OR CAPPED

MOTOR CONNECTIONS ONLY ONE WILL BE CONNECTED (SEE NOTE 2)

OPTIONAL CONNECTION

DISCONNECT FULL TO

DISC

SEQ

TR

F

FC

HTR

TL

TL

HTR

HTR

SEE NOTE #3

RD

BK

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- NOTES:
- RED WIRE TO BE ON TRANSFORMER TERMINAL "3" FOR 230 VOLTS AND ON TERMINAL "2" FOR 208 VOLTS.
  - CONFIRM SPEED TAP SELECTED IS APPROPRIATE FOR APPLICATION. IF SPEED TAPS NEEDS TO BE CHANGED, CONNECT APPROPRIATE WIRE FROM MOTOR TO Y FROM THERMOSTAT/CONDENSER (SEE TABLE-1).
  - ASTERISK (\*) INDICATES THAT HEATING ELEMENT, THERMAL LIMIT, RELAY AND INTERCONNECTING WIRES AND JUMPERS OF HEATER #2 ARE DELETED WITH SINGLE ELEMENT UNITS.
  - COLOR CODES:  
BK - BLACK  
BL - BLUE  
BR - BROWN  
GR - GREEN  
PK - PINK  
PU - PURPLE  
RD - RED  
WH - WHITE  
YL - YELLOW
  - WIRING CODE:  
FACTORY WIRING  
HIGH VOLTAGE  
LOW VOLTAGE  
FIELD WIRING  
HIGH VOLTAGE  
LOW VOLTAGE  
SEE NOTE #2
  - COMPONENT CODE:  
DISC - DISCONNECT SWITCH  
EM - EVAPORATOR MOTOR  
EBTDR - ELECTRONIC BLOWER TIME DELAY RELAY  
F - FUSE  
FC - FAN CAPACITOR  
HTR - HEATER ELEMENT  
SEQ - SEQUENCER  
TL - THERMAL LIMIT  
TR - TRANSFORMER

TABLE-1

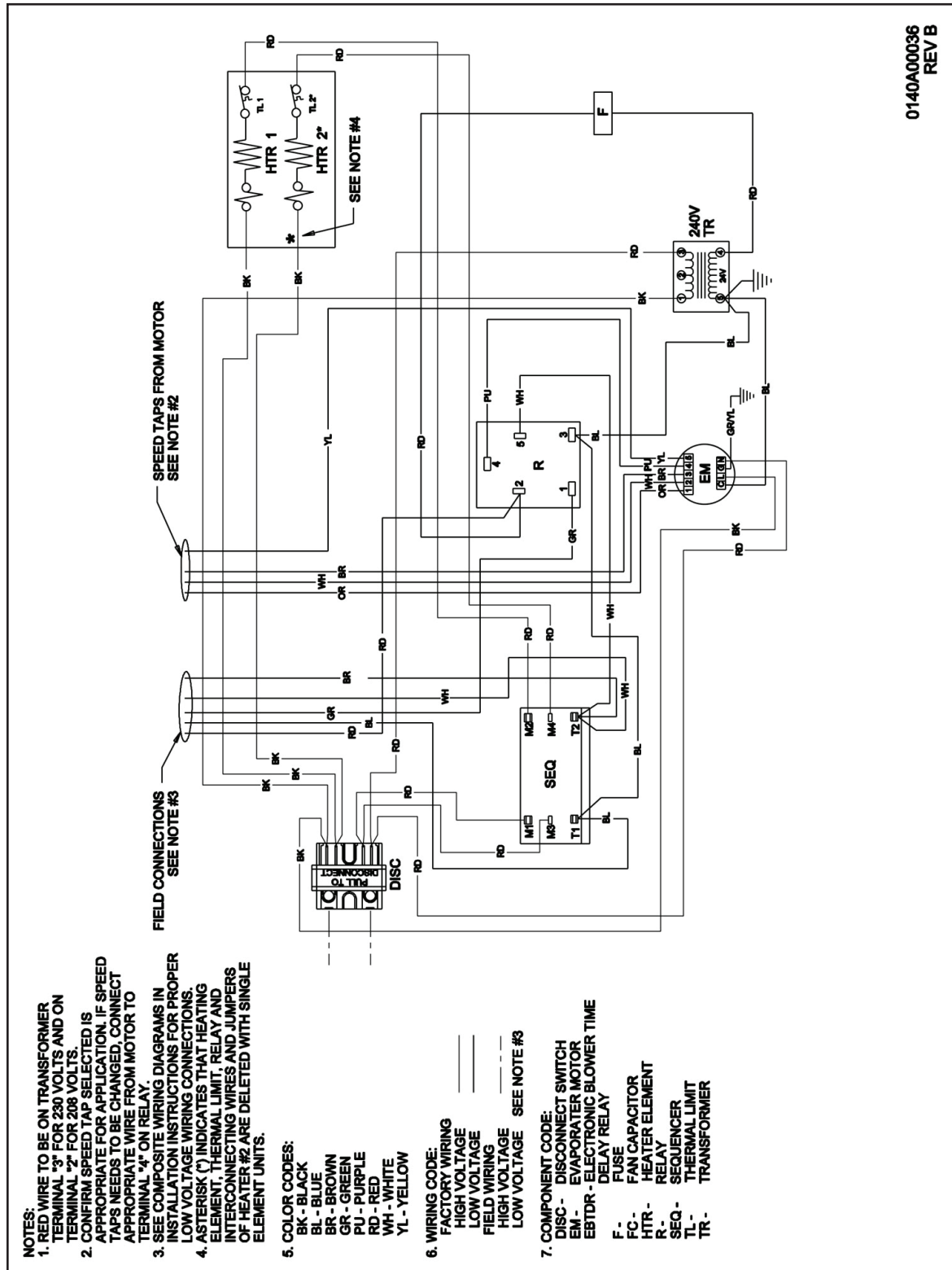
WIRE COLOR	BTU/h	NOMINAL CFM
PURPLE	18000	600
PINK	24000	800
YELLOW	30000	950

⚠ **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 or the unit for the most up-to-date wiring.

# AWUF37 WIRING DIAGRAM



Wiring is subject to change. Always refer to the wiring diagram or 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.

# NOTES

# NOTES

