

WIRING DIAGRAM MANUAL

Split System Air Conditioner

CVA9, HVA9, TVA9

Safety Labeling and Signal Words

DANGER, WARNING, CAUTION, and NOTE

The signal words **DANGER**, **WARNING**, **CAUTION**, and **NOTE** are used to identify levels of hazard seriousness. The signal word **DANGER** is only used on product labels to signify an immediate hazard. The signal words **WARNING**, **CAUTION**, and **NOTE** will be used on product labels and throughout this manual and other manuals that may apply to the product.

DANGER – Immediate hazards which **will** result in severe personal injury or death.

WARNING – Hazards or unsafe practices which **could** result in severe personal injury or death.

CAUTION – Hazards or unsafe practices which **may** result in minor personal injury or product or property damage.

NOTE – Used to highlight suggestions which **will** result in enhanced installation, reliability, or operation.

Signal Words in Manuals

The signal word **WARNING** is used throughout this manual in the following manner:



The signal word **CAUTION** is used throughout this manual in the following manner:



Signal Words on Product Labeling

Signal words are used in combination with colors and/or pictures on product labels.

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MODELS

Wire Diagram	Size
341823-101	24
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WARNING

DEATH, PERSONAL INJURY, AND/OR PROPERTY DAMAGE HAZARD

Failure to carefully read and follow this warning could result in equipment malfunction, property damage, personal injury and/or death.

Installation or repairs made by unqualified persons could result in equipment malfunction, property damage, personal injury and/or death.

The information contained in this manual is intended for use by a qualified service technician familiar with safety procedures and equipped with the proper tools and test instruments.

Installation must conform with local building codes and with the National Electrical Code NFPA70 current edition or Canadian Electrical Code Part 1 CSA C.22.1.

341823-101

UNIT OPERATION

This control board contains a 3.5 minute short cycle protector. A 3.5 minute delay will occur between compressor off/on cycles. To bypass delay, short forced defrost pins for 1 second then release. However, there is an additional 2.5 minutes delay upon expiration of the 3.5 minute short cycle delay to ensure the high and low side pressures are equalized. This is important for long term rotary compressor reliability. It is a delay that cannot and must not be bypassed. The internal crankcase heater is energized during off cycle as needed.

NOTES:

1. To Be Wired In Accordance With National Electric Code (N.E.C.) And Local Codes. Use Copper Conductors Only. Use Conductors Suitable For At Least 75°C (167°F).
2. Two Wire A and B Required For Communication. If Outdoor Unit Improperly Grounded, Connect Indoor Ground To "C" Terminal.
3. If Any Of The Original Wire, As Supplied, Must Be Replaced, Use The Same Or Equivalent Wire.
4. Check All Electrical Connections Inside Control Box For Tightness.
5. Do Not Attempt To Operate Unit Until Service Valves Have Been Opened.
6. **If Communicating, Must Use With Observer User Interface Listed In Pre-sale Literature Only.**
7. For Non-Communicating Thermostats, 24VAC To Be Provided To R Connection.
8. N.E.C. class 2, 24 V circuit, min. 40 VA required, 60 VA on units installed with LLS.

-LEGEND-

—	FACILITY POWER WIRING	MODEL PLUG	MODEL PLUG
- - -	FIELD POWER WIRING	OAT	OUTDOOR AIR THERMISTOR
—	FACILITY CONTROL WIRING	OCT	OUTDOOR COIL THERMISTOR
- - -	FIELD CONTROL WIRING	ODT	OUTDOOR DISCHARGE THERMISTOR
○	COMPONENT CONNECTION	OFM	OUTDOOR FAN MOTOR
○	JUNCTION	OST	OUTDOOR SUCTION THERMISTOR
○	FIELD SPLICE	PEV	PRESSURE EQUALIZER VALVE
—<<	PLUG CONNECTION	SPT	SUCTION PRESSURE TRANSDUCER
COMM	SYSTEM COMMUNICATION	STATUS	SYSTEM FUNCTION LIGHT
COMP	COMPRESSOR	SW2	DEFROST TIME SELECT
LD1	HIGH VOLTAGE INDICATOR LED	TB	TERMINAL BLOCK
HPS	HIGH PRESSURE SWITCH	UTIL	UTILITY CURTALMENT
LVCH	LOW VOLTAGE CHOKE HARNESS	24V	24 VOLTS DC

* MAY BE FACTORY OR FIELD INSTALLED

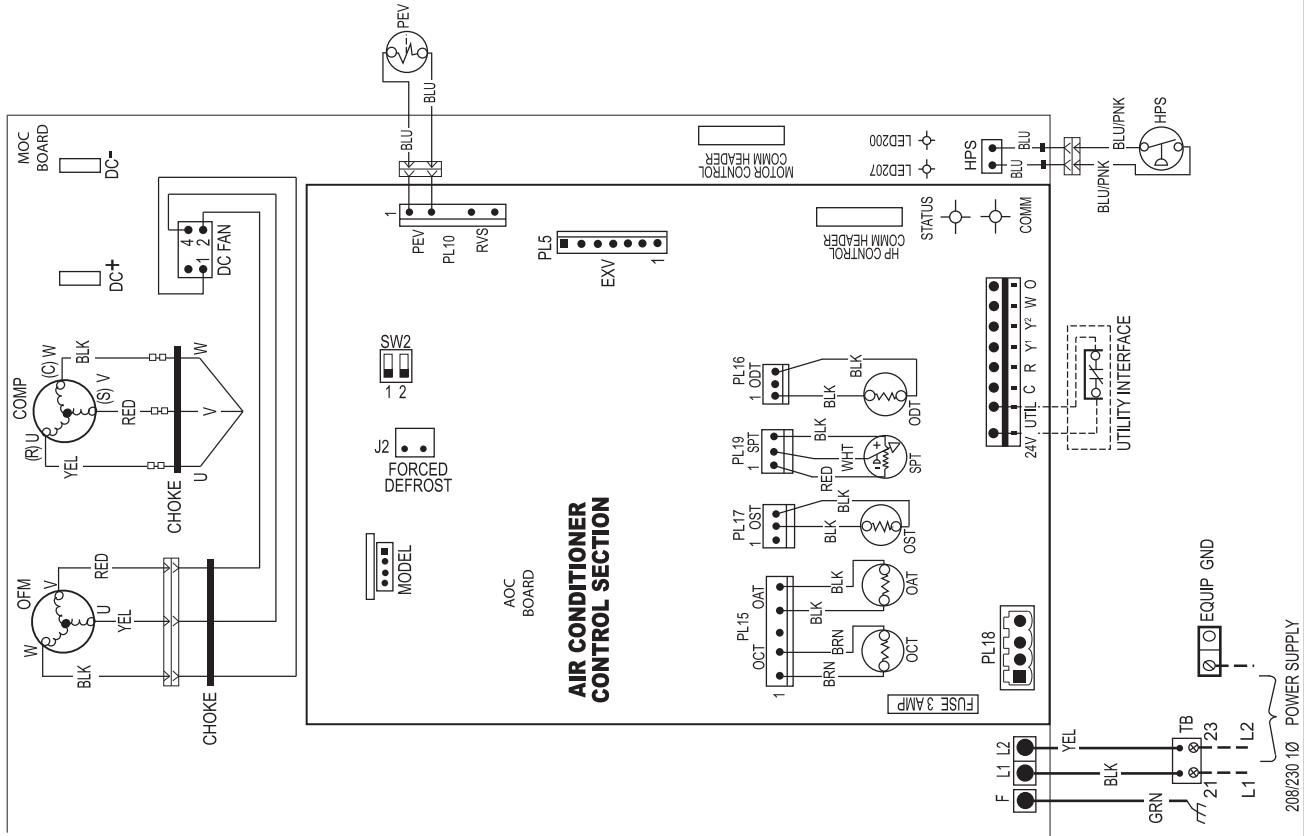


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MODEL PLUG CHART

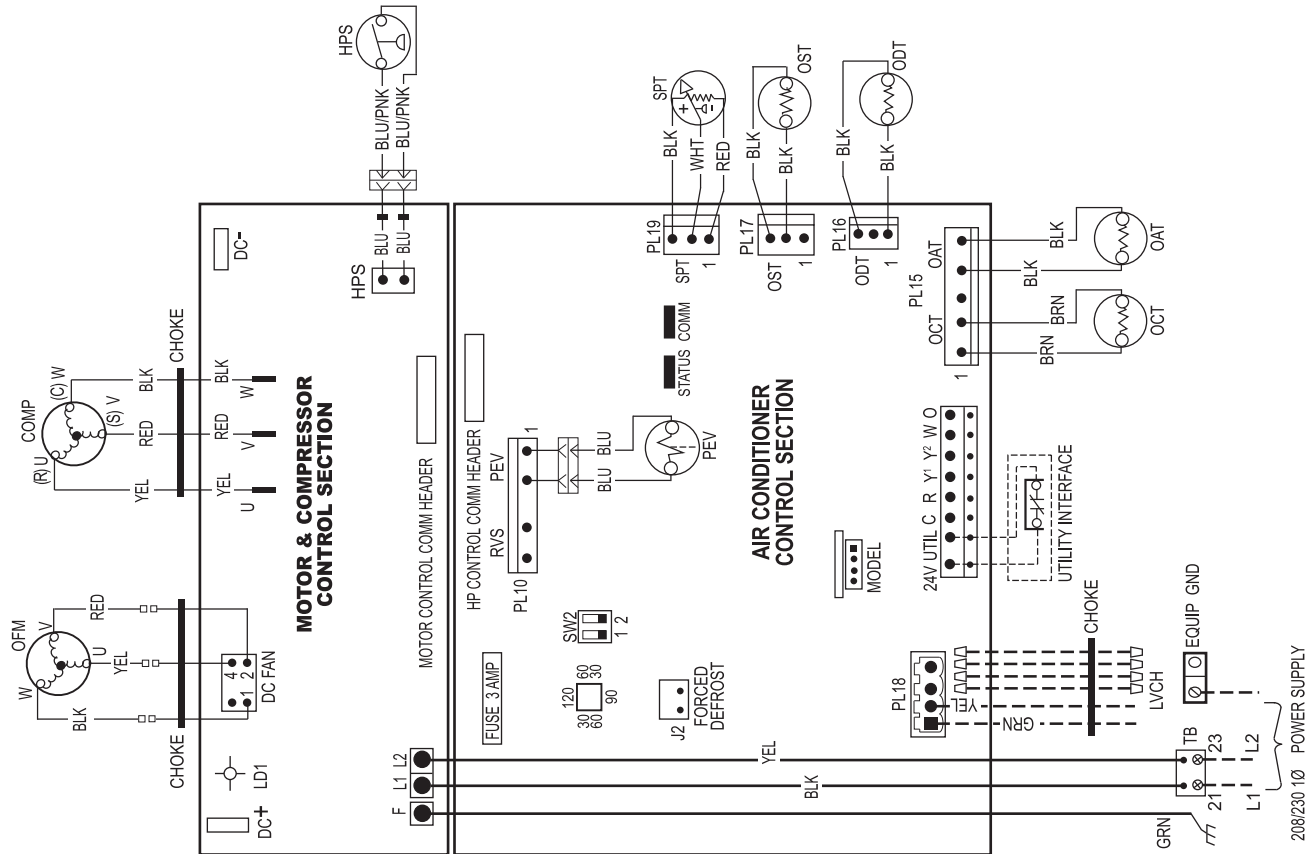
MODEL SIZE	MODEL PLUG SIZE	PIN RESISTANCE (K Ω)
024	041	18K
		91K

CONNECTION DIAGRAM



341824-101

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MODEL PLUG CHART

MODEL SIZE	MODEL PLUG	PIN RESISTANCE (K Ω)
25	HK70EZ	1 - 4 (R1) 2 - 3 (R2)
36	032	18K
37	043	5.1K
48	034	18K
49	045	150K
60	036	18K
	047	18K
		33K
		360K



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