**WIRING DIAGRAM MANUAL**

**Split System Air Conditioner**

**R4A3, WCA3**

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**MODELS**

- R4A318A*KA WCA3184GKA
- R4A324A*KA WCA3244GKA
- R4A330A*KA WCA3304GKA
- R4A336A*KC WCA3364GKC
- R4A342A*KA WCA3424GKA
- R4A348A*KC WCA3484GKC
- R4A360A*KC WCA3604GKC

* = A for standard inlet grille, 
G for inlet grille with 3/8" (10mm) tight-wire spacing

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### 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.

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### Signal Words in Manuals

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

⚠️ **WARNING**

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

⚠️ **CAUTION**

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### Signal Words on Product Labeling

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

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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.
USED ON MODELS: R4A318, R4A324, R4A30, R4A342, WCA318, WCA324, WCA330, WCA342

CONNECTION DIAGRAM

SCHMATIC DIAGRAM (LADDER FORM)

LEGEND

- FACTORY POWER WIRING
- FACTORY CONTROL WIRING
- FIELD CONTROL WIRING
- FIELD POWER WIRING
- COMPONENT CONNECTION
- FIELD SPICE
- JUNCTION
- CONT CONTACTOR
- CAP CAPACITOR (DUAL RUN)
- CH CRANKCASE HEATER
- CHS CRANKCASE HEATER SWITCH

NOTES:
1. Symbols are electrical representation only.
2. Compressor and fan motor furnished with inherent thermal protection.
3. To be wired in accordance with National Electric N.E.C. and local codes.
4. N.E.C. class 2, 24 V circuit, min. 40 VA required, 60 VA on units installed with LLS.
5. Use copper conductors only. Use conductors suitable for at least 75°C (167°F).
6. Connection for typical cooling only thermostat. For other arrangements see installation instructions.
7. If indoor section has a transformer with a grounded secondary, connect the grounded side to the BRNDVIE10 lead.
8. When start relay and start capacitor are installed, start thermostat is not used.
9. If any of the original wire, as supplied must be replaced, use the same or equivalent wire.
10. Check all electrical connections inside control box for tightness.
11. Do not attempt to operate until until service valves have been opened.
12. Do not rapid cycle compressor. Compressor must be off 3 minutes to allow pressures to equalize between high and low side before starting.

CONDENSING UNIT CHARGING INSTRUCTIONS

For use with units using R-410A refrigerant

<table>
<thead>
<tr>
<th>REQUIRED LIQUID LINE TEMPERATURE</th>
<th>REQUIRED SUBCOOLING TEMPERATURE (°F)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Liquid Pressure at Service valve (psig)</td>
<td>6</td>
</tr>
<tr>
<td>250</td>
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<tr>
<td>325</td>
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</tbody>
</table>

COOLING ONLY CHARGING PROCEDURE
1. Only use subcooling charging method when CO ambient is greater than 70°F and less than 100°F. Use subcooling temperature which is lower than the outdoor coil temperature.
2. Use subcooling temperature which is lower than the outdoor coil temperature.
3. Measure liquid service valve pressure by attaching an accurate gauge to the service port.
4. Measure the liquid line temperature by attaching an accurate thermometer to the liquid line near the outdoor coil.
5. Refer to unit rating plate for required subcooling temperature.
6. Find the point where the required subcooling temperature is less than the measured liquid service valve pressure.
7. To obtain the required subcooling temperature at specific liquid line pressure, adjust refrigerant. If liquid line temperature is less than indicated. When adding refrigerant, change in liquid line pressure in a flow restricting device is at the refrigerant port. Recover refrigerant temperature is lower. A tolerance of +/− 3°F.

A CAUTION
1. Compressor damage may occur if system is over charged.
2. This unit is factory charged with R-41OA in accordance with the amount shown on the rating plate. The charge is adequate for most systems using matched coils and tubing not over 15 feet long. Check refrigerant charge for maximum efficiency. See Product Data Literature for required Indoor air flow Rates and for use of line lengths over 15 feet.
3. Relieve pressure and recover all refrigerant before system repair or final disposal. Use all service ports and open all flowcontrol devices, including solenoid valves.
4. Never vent refrigerant to atmosphere. Use approved recovery equipment.

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USED ON MODELS: R4A336, R4A348, R4A60, WCA336, WCA348, WCA360

CONNECTION DIAGRAM

SCHEMATIC DIAGRAM (LADDER FORM)

CONDENSING UNIT CHARGING INSTRUCTIONS
For use with units using R-410A refrigerant

<table>
<thead>
<tr>
<th>Liquid Pressure at Service Valve (psi)</th>
<th>Required Subcooling Temperature (°F)</th>
<th>Cooling Only Charging Procedure</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
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NOTES:
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8. When start relay and start capacitor are installed, start thermostat is not used.
9. If any of the original wire, as supplied must be replaced, use the same or equivalent wire.
10. Check all electrical connections inside control box for tightness.
11. Do not attempt to operate unit until service valves have been opened.
12. Do not rapid cycle compressor. Compressor must be off 5 minutes to allow pressures to equilibrate between high and low side before starting.

CAUTION:
1. Compressor damage may occur if system is over charged.
2. This unit is factory charged with R-410A in accordance with the amount shown on the rating plate. The charge is adequate for most systems using matched coils and tubing not over 15 feet long. Check refrigerant charge for maximum efficiency. See Product Data Literature for required indoor air flow rates and for use of line lengths over 15 feet.
3. Relieve pressure and recover all refrigerant before system repair or final disassembly. Use all service ports and open all flow-control devices, including solenoid valves.
4. Never vent refrigerant to atmosphere. Use approved recovery equipment.

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