Electrical Data Supplement

NOTE: Read the entire instruction manual before starting the installation

This supplement only applies to 50TCQ size 14 units when the 10th digit of the Model Number is a “3”, as shown in the Model Number Nomenclature diagram below. Check the Unit Nameplate (see Figs. 1 & 2). If the digit in the 10th position is not a “3” discard this document.

MODEL NUMBER NOMENCLATURE

<table>
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<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
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<th>8</th>
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<th>11</th>
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<th>13</th>
<th>14</th>
<th>15</th>
<th>16</th>
<th>17</th>
<th>18</th>
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<tr>
<td>5</td>
<td>0</td>
<td>T</td>
<td>C</td>
<td>Q</td>
<td>D</td>
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<td>3</td>
<td>A</td>
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Unit Heat Type
50TC = Packaged Rooftop
Standard Efficiency

Heat Size
Q = Heat Pump

Refrig. Systems Options
A = Single stage cooling models
D = Two stage cooling models

Indoor Fan Options
1 = Standard Static Option – Belt Drive
2 = Medium Static Option – Belt Drive
3 = High Static Option – Belt Drive

Sensor Options
A = None
B = RA Smoke Detector
C = SA Smoke Detector
D = RA + SA Smoke Detector
E = CO2
F = RA Smoke Detector and CO2
G = SA Smoke Detector and CO2
H = RA + SA Smoke Detector and CO2

Cooling Tons
14 = 12.5 ton
SAFETY CONSIDERATIONS

Improper installation, adjustment, alteration, service, maintenance, or use can cause explosion, fire, electrical shock or other conditions which may cause personal injury or property damage. Consult a qualified installer, service agency, or your distributor or branch for information or assistance. The qualified installer or agency must use factory-authorized kits or accessories when modifying this product. Refer to the individual instructions packaged with the kits or accessories when installing.

Follow all safety codes. Wear safety glasses and work gloves. Use quenching cloths for brazing operations and have a fire extinguisher available. Read these instructions thoroughly and follow all warnings or cautions attached to the unit. Consult local building codes and appropriate national electrical codes (in USA, ANSI/NFPA70, National Electrical Code (NEC); in Canada, CSA C22.1) for special requirements.

It is important to recognize safety information. This is the safety-alert symbol △. When you see this symbol on the unit and in instructions or manuals, be alert to the potential for personal injury.

Understand the signal words DANGER, WARNING, CAUTION, and NOTE. These words are used with the safety-alert symbol. DANGER identifies the most serious hazards which will result in severe personal injury or death. WARNING signifies hazards which could result in personal injury or death. CAUTION is used to identify unsafe practices, which may result in minor personal injury or product and property damage. NOTE is used to highlight suggestions which will result in enhanced installation, reliability, or operation.

ELECTRICAL HAZARD

Failure to follow this caution may result in personal injury or product and property damage.

The electrical data contained in this document is only for use with 50TCQ size 14 units which display a “3” in the 10th position of the 18 digit model number as displayed on the unit’s nameplate.

See Fig. 1 for location of the unit’s nameplate.
See Fig. 2 for details of the 18 digit model number.

ELECTRICAL SHOCK HAZARD

Failure to follow this warning could cause personal injury or death.

Before performing service or maintenance operations on unit, always turn off main power switch to unit and install lockout tag. Unit may have more than one power switch.

Nameplate Location

Fig. 1 - Location of Unit Nameplate
Model Number: 50TCQD14A3A5-0A0A0

Position of Digit

Fig. 2 - Unit Nameplate with Model Number Detail
<table>
<thead>
<tr>
<th>UNIT</th>
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<th>NO PE.</th>
<th>NO C.O. or UNPWR C.O.</th>
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<td>FLA</td>
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Table 1 – Unit Wire/Fuse or HACR Breaker Sizing Data

NOTE: See page 6 for table legend and notes.
### Table 1 — Unit Wire/Fuse or HACR Breaker Sizing Data (cont)

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<th>PE</th>
<th>FLA</th>
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<th>LRA</th>
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</table>

#### NOTE: See page 6 for table legend and notes.
Legend and Notes for Table 1

**Legend:**
- BRKR – Circuit breaker
- CO – Convenience outlet
- DISC – Disconnect
- FLA – Full load amps
- IFM – Indoor fan motor
- LRA – Locked rotor amps
- MCA – Minimum circuit amps
- PE – Power exhaust
- PWRD CO – Powered convenient outlet
- UNPWR CO – Unpowered convenient outlet

**NOTES:**

1. In compliance with NEC requirements for multimotor and combination load equipment (refer to NEC Articles 430 and 440), the overcurrent protective device for the unit shall be fuse or HACR breaker. Canadian units may be fuse or circuit breaker.

2. **Unbalanced 3-Phase Supply Voltage**
   Never operate a motor where a phase imbalance in supply voltage is greater than 2%. Use the following formula to determine the percentage of voltage imbalance.

\[
\text{% Voltage Imbalance} = 100 \times \frac{\text{max voltage deviation from average voltage}}{\text{average voltage}}
\]

Example: Supply voltage is 230-3-60

\[
\begin{align*}
AB &= 224 \text{ v} \\
BC &= 231 \text{ v} \\
AC &= 226 \text{ v}
\end{align*}
\]

Average Voltage \[= \frac{(224 + 231 + 226)}{3} = \frac{681}{3} = 227 \text{ v}\]

Determine maximum deviation from average voltage.

\[
\begin{align*}
(AB) &= 227 - 224 = 3 \text{ v} \\
(BC) &= 231 - 227 = 4 \text{ v} \\
(AC) &= 227 - 226 = 1 \text{ v}
\end{align*}
\]

Maximum deviation is 4 v.

Determine percent of voltage imbalance.

\[
\begin{align*}
\text{% Voltage Imbalance} &= 100 \times \frac{4}{227} \\
&= 1.76\%
\end{align*}
\]

This amount of phase imbalance is satisfactory as it is below the maximum allowable 2%.

**IMPORTANT:** If the supply voltage phase imbalance is more than 2%, contact your local electric utility company immediately.