# FAN COILS
## ACCESSORY ELECTRIC HEATERS
### WIRING DIAGRAMS

#### FIGURE FIELD–INSTALLED HEATER MODEL FA4C FY4A FC4D FX4C FH4C FK4D FV4B FE4A FE5A
3 KFCEH3001F15 024–060 024–060 024–060 024–060 024–060 024–060 024–060 001, 002
3 KFCEH3101C15* 024–060 024–060 024–060 024–060 024–060 024–060 024–060 001, 002
6 KFCEH2001318 042–060 042–060 042–060 042–060 042–060 042–060 042–060 003, 004
7, 8 KFCEH3401F24* 048, 060 048, 060 048, 060 048, 060 048, 060 048, 060 048, 060 003, 004,
7, 8 KFCEH3501F30* 048, 060 048, 060 048, 060 048, 060 048, 060 048, 060 048, 060 003, 004,

*Intelligent Heat Staging Capable

#### FIGURE FACTORY INSTALLED HEATER MODEL FA4C, FY4A
9 MKFCEH0501N05 018, 024
9 MKFCEH0801N08 018, 030
9 MKFCEH0901N10 024–060
10 MKFCEH1501F15 036–060

#### FIGURE FACTORY INSTALLED HEATER MODEL FC4D FX4C
11 MKFCEH0501N05 018, 024 018, 024
11 MKFCEH0801N08 030, 036 030
11 MKFCEH0901N10 036–060 036–060
12 MKFCEH1501F15 042–060 042–060

#### FAN COIL WITH COOLING ONLY CONTROL

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<th>MODEL</th>
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</thead>
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<tr>
<td>15</td>
<td>FV4B / FK4D 001–006</td>
</tr>
<tr>
<td>16</td>
<td>FC4D / FX4C 018–060</td>
</tr>
<tr>
<td>17</td>
<td>FA4C / FY4A 018–060</td>
</tr>
</tbody>
</table>

#### FIGURE HEATER MODEL FF1E

<table>
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<tr>
<th>FIGURE</th>
<th>HEATER MODEL FF1E</th>
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<tr>
<td>13</td>
<td>KFDEH0801D05 018–036</td>
</tr>
<tr>
<td>13</td>
<td>KFDEH0901D75 018–036</td>
</tr>
<tr>
<td>13</td>
<td>KFDEH0801D05 018–036</td>
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<tr>
<td>13</td>
<td>KFDEH0901D75 018–036</td>
</tr>
<tr>
<td>13</td>
<td>KFDEH1001D11 018–036</td>
</tr>
<tr>
<td>18</td>
<td>KFEEH0101D05 019, 025, 031, 037</td>
</tr>
<tr>
<td>18</td>
<td>KFEEH0201D07 019, 025, 031, 037</td>
</tr>
<tr>
<td>18</td>
<td>KFEEH0301D11 019, 025, 031, 037</td>
</tr>
</tbody>
</table>
NOTES:
1. Use Copper Wire (75ºc Min) Only Between Disconnect Switch And Unit.
2. To Be Wired In Accordance With Nec And Local Codes.
3. If Any Of The Original Wire, As Supplied, Must Be Replaced, Use The Same Or Equivalent Type Wire.
4. Use 60 Amp class K Fuses Only, For Replacement.

Fig. 1 - 328613-101

NOTES:
1. Use Copper Wire (75ºc Min) Only Between Disconnect Switch And Unit.
2. To Be Wired In Accordance With Nec And Local Codes.
3. If Any Of The Original Wire, As Supplied, Must Be Replaced, Use The Same Or Equivalent Type Wire.
4. Use 60 Amp class K Fuses Only, For Replacement.

Fig. 2 - 328606-101
NOTES:
1. Use Copper Wire (75°C Min) Only Between Disconnect Switch And Unit.
2. To Be Wired In Accordance With NEC And Local Codes.
3. If Any Of The Original Wire, As Supplied, Must Be Replaced, Use The Same Or Equivalent Type Wire.
4. Use 60 Amp Class K Fuses Only, For Replacement.

LEGEND
- CB: Circuit Breaker
- FU: Line Fuse
- GND: Equipment Ground
- HVTB: High Voltage Terminal Block
- IDR: Identifier Resistor
- REC: Rectifier
- TDR: Time Delay Rectifier
- HTR: Heater
- MARKED TERMINAL: Plug And Receptacle

Fig. 3 - 328605-101

NOTES:
1. Use Copper Wire (75°C Min) Only Between Disconnect Switch And Unit.
2. To Be Wired In Accordance With NEC And Local Codes.
3. If Any Of The Original Wire, As Supplied, Must Be Replaced, Use The Same Or Equivalent Type Wire.
4. Use 60 Amp Class K Fuses Only, For Replacement.

LEGEND
- CB: Circuit Breaker
- FU: Line Fuse
- GND: Equipment Ground
- HVTB: High Voltage Terminal Block
- IDR: Identifier Resistor
- REC: Rectifier
- TDR: Time Delay Rectifier
- HTR: Heater
- MARKED TERMINAL: Plug And Receptacle

Fig. 4 - 328604-101
NOTES:
1. Use Copper Wire (75°C Min) Only Between Disconnect Switch And Unit.
2. To Be Wired In Accordance With NEC And Local Codes.
3. If Any Of The Original Wire, As Supplied, Must Be Replaced, Use The Same Or Equivalent Type Wire.
4. Use 60 Amp class K Fuses Only, For Replacement.

Fig. 5 - 328614-101

NOTES:
1. Use Copper Wire (75°C Min) Only Between Disconnect Switch And Unit.
2. To Be Wired In Accordance With NEC And Local Codes.
3. If Any Of The Original Wire, As Supplied, Must Be Replaced, Use The Same Or Equivalent Type Wire.
4. Use 60 Amp class K Fuses Only, For Replacement.

Fig. 6 - 328615-101
NOTES:
1. Use Copper Wire (75°c Min) Only Between Disconnect Switch And Unit.
2. To Be Wired In Accordance With NEC And Local Codes.
3. If Any Of The Original Wire, As Supplied, Must Be Replaced, Use The Same Or Equivalent Type Wire.
4. 1 Phase Heaters Are Shown Wired For Single Supply Circuit.
5. Use 60 Amp Class K Fuses Only, For Replacement.
NOT SUITABLE FOR USE ON SYSTEMS EXCEEDING 150V TO GROUND
NE CONVIENT PAS AUX INSTALLATIONS DE PLUS DE 150 V A LA TERRE

NOTES:
1. Use copper wire (75°C min.) only between disconnect switch and unit.
2. To be wired in accordance with N.E.C. and local codes.
3. If any of the original wire, as supplied, must be replaced, use the same or equivalent type wire.
4. Replace low voltage fuse with no greater than 5 amp fuse.
5. (3) speed motor shown. Optional (2) speed motor uses HI (BLK) and LOW (BLU or RED).
6. Smaller heaters will have fewer components.
7. Connect R to R, G to G, etc., see outdoor instruction for details.

CAUTION:
ATTENTION:

RECOMMENDATION:

Fig. 9 - 328205-101

AS SHOWN
NOTES:
1. Use copper wire (75°C min) only between disconnect switch and unit.
2. To be wired in accordance with N.E.C. and local codes.
3. If any of the original wire, as supplied, must be replaced, use the same or equivalent type wire.
4. Replace low voltage fuse with no greater than 5 amp fuse.
5. Use 60 amp class K fuses only, for replacement.
6. Optional (2) speed motor uses LO (BLK) and LOW (BLU or RED).
7. See outdoor instruction for details.
8. If wire crimp is removed an emergency heat relay is required. (See outdoor-thermostat instructions).

LEGEND
- CB: CIRCUIT BREAKER
- CAP: CAPACITOR
- COM: COMMON LOW VOLTAGE
- CM: COMMON LOW
- F: FUSE
- FM: FAN MOTOR
- FR: FAN RELAY
- PU: FIELD POWER WIRING
- PC: PCB FAN RELAY BOARD
- E: EQUIPMENT
- GND: GROUND
- NS: FAN SPEED TAP LOCATION
- TDR: TIME DELAY RECTIFIER
- REC: RECTIFIER
- TRANSFORMER
- terminals marked
- terminals unmarked
- terminals with no marking

MINIMUM MOTOR SPEED SELECTION

<table>
<thead>
<tr>
<th>FAN COIL SIZE</th>
<th>LO</th>
<th>LO</th>
<th>LO</th>
<th>40</th>
<th>80</th>
<th>80</th>
<th>80</th>
<th>120</th>
</tr>
</thead>
<tbody>
<tr>
<td>MOTOR SPEED AT 15 KW</td>
<td>LO</td>
<td>LO</td>
<td>LO</td>
<td>LO</td>
<td>LO</td>
<td>LO</td>
<td>LO</td>
<td>LO</td>
</tr>
</tbody>
</table>

Fig. 10 - 328206-101 REV. A
Motor speed selection for 018 and 024 sizes with 11 kW heater and heat pump is High. All other heater combinations is Low.

Fig. 13 - 324494-101

NOTES:
1. Use copper wire (75°C min) only between disconnect switch and unit.
2. To be wired in accordance with nec and local codes.
3. If any of the original wire, as supplied, must be replaced, use the same or equivalent type wire.
4. Replace low voltage fuse with no greater than 5 AMP fuse.
5. (2) Speed Motor uses #1 (BLK) and #2 (RED).
6. Smaller heaters will have fewer components.
7. Connect R to R, G to G, etc., see outdoor instructions for details.
8. Controls wiring not used with electric heaters.
9. Motor speed selection for 018 and 024 sizes with 11 kW heater and heat pump is High. All other heater combinations is Low.
This compartment must be closed except for servicing.

Caution: Not suitable for use on systems exceeding 150V to ground.

Attention: Ne convient pas aux installations de plus de 150 V à la terre.

**Legend**

- Field power wiring
- Marked terminal
- Plug and receptacle
- Com
- Common
- Ground
- Equipment ground
- Ecm
- Fan motor
- Oat
- Outdoor air thermistor
- Pcb
- Printed circuit board
- Recp
- Receptacle
- Tran
- Transformer

**Troubleshooting information:**

**Motor LED**

<table>
<thead>
<tr>
<th>Status</th>
<th>Motor</th>
<th>Fault/Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>Off</td>
<td>Not running</td>
<td>None - check status LED</td>
</tr>
<tr>
<td>Off</td>
<td>Running</td>
<td>Motor</td>
</tr>
<tr>
<td>On (Flashing)</td>
<td>Not running</td>
<td>Motor / harness</td>
</tr>
<tr>
<td>On (Flashing)</td>
<td>Running</td>
<td>None</td>
</tr>
</tbody>
</table>

**Status LED**

<table>
<thead>
<tr>
<th>Status</th>
<th>Fault / Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>On</td>
<td>None - standby mode</td>
</tr>
<tr>
<td>Off</td>
<td>No low voltage or control - check power and fuse</td>
</tr>
<tr>
<td>15</td>
<td>No system communications - check wiring</td>
</tr>
<tr>
<td>Other</td>
<td>Refer to service screens on user interface or the fan coil troubleshooting guide</td>
</tr>
</tbody>
</table>

**Component arrangement**

**System transformer:** 40.0 VA

**Fan coil:** 4.0 VA

**Remaining VA available:** 36.0 VA

**Notes:**

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2. To Be Wired In Accordance With NEC And Local Codes.
3. If Any Of The Original Wire, As Supplied, Must Be Replaced, Use The Same Or Equivalent Type Wire.
4. Replace Low Voltage Fuse With No Greater Than 5 Amp Fuse.
5. For Use With Communicating Thermostat Only. Connect A to A, B to B, etc.
6. Communicating Outdoor Units - Connect A to A, B to B, etc.
7. Non-Communicating Outdoor Units - Connect R to R, Y to Y, etc.

**Figure 14 - 328126-101**
Fig. 15 - 326014-101
NOTES
1. Use Copper Wire (75°C Min) Only Between Disconnect Switch And Unit.
2. To Be Wired In Accordance With NEC And Local Codes.
3. If Any Of The Original Wire, As Supplied, Must Be Replaced, Use The Same Or Equivalent Type Wire.
4. Replace Low Voltage Fuse With No Greater Than 5 Amp Fuse.
5. Connect R To R, G To G, Etc, See Outdoor Instruction For Details.
6. To change speed tap, move blue wire to desired terminal.

LEGEND
C  COMMON
F  LOW VOLTAGE FUSE
FM  FAN MOTOR
GND  EQUIPMENT GROUND
PCB  PRINTED CIRCUIT BOARD
RECP  RECEPTACLE
SPT  FAN SPEED TAP LOCATION
TRAN  TRANSFORMER
○  UNMARKED TERMINAL
→  FIELD POWER WIRING
⊙  MARKED TERMINAL
→  PLUG AND RECEPTACLE

Fig. 16 - 330645-101
1. Use Copper Wire (75ºC Min) Only Between Disconnect Switch And Unit.
2. To Be Wired In Accordance With NEC And Local Codes.
3. If Any Of The Original Wire, As Supplied, Must Be Replaced, Use The Same Or Equivalent Type Wire.
4. Replace Low Voltage Fuse With No Greater Than 5 Amp Fuse.
5. (3) Speed Motor Shown Optional (2) Speed Motor Uses HI (BLK) And LOW (BLUE or RED).
6. Connect R To R, G To G, Etc. See Outdoor Instruction For Details.

### Minimum Motor Speed Tap Selection For Electric Heater

<table>
<thead>
<tr>
<th>Module</th>
<th>5</th>
<th>4</th>
<th>3</th>
<th>2</th>
<th>1</th>
<th>0</th>
<th>40</th>
<th>80</th>
</tr>
</thead>
<tbody>
<tr>
<td>16 MED</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
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<tr>
<td>24 MED</td>
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<tr>
<td>32 MED</td>
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<td>-</td>
<td>-</td>
</tr>
<tr>
<td>40 MED</td>
<td>-</td>
<td>-</td>
<td>-</td>
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<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>70 MED</td>
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<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

* MED speed on 3 speed motors.
* HI speed on 2 speed motors.

**NOTES**
1. Use Copper Wire (75ºC Min) Only Between Disconnect Switch And Unit.
2. To Be Wired In Accordance With NEC And Local Codes.
3. If Any Of The Original Wire, As Supplied, Must Be Replaced, Use The Same Or Equivalent Type Wire.
4. Replace Low Voltage Fuse With No Greater Than 5 Amp Fuse.
5. (3) Speed Motor Shown Optional (2) Speed Motor Uses HI (BLK) And LOW (BLUE or RED).
6. Connect R To R, G To G, Etc. See Outdoor Instruction For Details.
1. Use copper wire (75°C min) only between disconnect switch and unit.
2. To be wired in accordance with N.E.C. and local codes.
3. If any of the original wire, as supplied, must be replaced, use the same or equivalent type wire.
4. Replace low voltage fuse with no greater than 3 AMP fuse.
5. Smaller heaters will have fewer components.
6. Connect R to R, G to G, etc., see outdoor instructions for details.
7. Cooling speed selection can be tap 1, 2, 3, or 5.
8. Heating speed selection must be tap 4 only.

This compartment must be closed except when servicing.

Fig. 18 - 335826-101 REV. A