# MAIN CONTROL BOX

WIRES FROM CONDENSER FAN MOTORS OR CONDENSER FAN V.F.D. ENCLOSURE

1U50 (HEAT)

1U54 BNCM (TC I)

OR

1U104 (BC I)

FOR MODULE DETAILS SEE SHEET 2

1U54 BNCM (LC I)

1U49 (MCM)

1U107 (MDM)

1U48 (RTM)

1U55 (IPCB)

1U52 (ECEM)

FOR MODULE DETAILS SEE SHEET 2

1U53 (VOM)

FOR MODULE DETAILS SEE SHEET 2

1U51 (GBAS)

1U105 (MPM)

1TB10

| | | | |
|---|---|---|---|
| B | 427 | 12 | C |
| B | 426 | 11 | C |
| W6 | 213 | 10 | B |
| A | 573 | 9 | B |
| A.D.G.J.F | 572 | 8 | K |
| 19 G.J | 736 | 7 | E.H.R |
| K.M | 736 | 6 | A.L.P |
| A | 399 | 5 | B |
| A | 212 | 4 | B |
| A | 211 | 3 | B |
| A | 210 | 2 | B |
| A | 209 | 1 | B |

1TB6

| | | | |
|---|---|---|---|
| BL. BK. | 36 | 12 | A |
| U.W | 36 | 11 | P.S |
| BY.BZ | 36 | 10 | AM |
| A.C | 91 | 9 | B.D.E |
| A | 89 | 8 | B |
| A | 88 | 7 | B |
| C.D | 87 | 6 | A.B.E |
| B | 85 | 5 | A |
| B | 84 | 4 | A |
| AA.AK | 37 | 3 | P |
| G | 37 | 2 | J |
| AB.F | 37 | 1 | A .R |

1TB9

| | | | |
|---|---|---|---|
| | A.E | | |
| F. G. J | 407 | C | K.L.M |
| B. C | | | D.P |
| F. G. J | 406 | B | K.L |
| B. C | 406 | A | D.P.M |
| | A.E | | |

375A 375B — H1, H2 — LINE — 376A

1 — 200V OR 575V/60HZ 1T1 — 115V — X2, X1 — 36B — 34A, 36A

1K7: 19A 20A 21A / 78A 36S 36T / 16A 17A 18A

1K8: 79A 36T / 22A 23A 24A / W31 W32 W33 / 16B 17B 18B

1K9: 28A 29A 30A / 82A 36W 36X / 25A 26A 27A

1K10: 83A 36X / 31A 32A 33A / W34 W35 W36 / 25B 26B 27B

1F1: 16A 16B — 1E 1AF
1F2: 17A 17B — 2E 2AF
1F3: 18A 18B — 3E 3AF
1F4: 25A 25B — 1F
1F5: 26A 26B — 2F
1F6: 27A 27B — 3F

1U65 (HI)

NOTE: CONNECTIONS SHOWN FROM VIEWING BACK OF 1U65

J2: 1 2 3 — 403D 436D 436V
J1: 1 2 3 — 406K 407K

1F72: 1AF — 374B.374D
1F73: 2AF — 375A.375D
1F74: 3AF — 376A

1U79 — CBL3U74-6
1U77 — CBL3U72-6

18

1F63 1F64 1F65: 1H 2H 3H — 312A 312B — 313A 313B — 314A 314B

17

RACEWAY INTERCONNECT TO LOW SIDE OF UNIT

1CB8 1CB9 1CB10 1CB11

| | 1N | 1P | 1R | 1S |
|---|---|---|---|---|
| | 2N | 2P | 2R | 2S |
| | 3N | 3P | 3R | 3S |
| | 85B | 86A | 89B | 90A |
| N O | 1CB8 | 1CB9 | 1CB10 | 1CB11 |
| C | 86A | 87A | 90A | 91A |
| | 56A 57A 58A | 59A 60A 61A | 62A 63A 64A | 65A 66A 67A |

1TB7

| | | | |
|---|---|---|---|
| A | 35 | 12 | B |
| A | 398 | 11 | B |
| A | 442 | 10 | B |
| A | 441 | 9 | B |
| A | 433 | 8 | B |
| C | 431 | 7 | B |
| D | 436 | 6 | A.B.R |
| F | 436 | 5 | G.J.K |
| E.M | 636 | 4 | C.P.Z.Y |
| A.B | 404 | 3 | C.E.M.L |
| J.K | 403 | 2 | F.G |
| A.B | 403 | 1 | D.E |

7

16 — 1F57 306A 306B — 1Y
1F58 307A 307B — 2Y
1F59 308A 308B — 3Y

230V/575V/60HZ 380V/415V/50HZ — 736S

374B.374C 375B.375C — 1T2 — 436A 400A
374D 375D — 1T4 — 736A 402A
374C 375C — 1T3 — 636E 401A

8

1S1 — 35B 37A

1F7: RED SPLICE 35A / BLK SPLICE 34A

400A 402A 401A — 1S70 — 403A 404A 572A

1F44: 37G 209A
1F45: 37J 210A

11 — 1S72 — 335A 333A 334A
11 — 1S73 — 341A 339A 340A

1F55: 324A 326A
1F56: 325A 327A

324A 325A — 1S74 — 2AA 1AA — 10

CUST GND

1F63 1F64 1F65: E F / H N P R S / Y W1 W2 W3 — 1TB1 OR 1S14 — 1 2 3 — 1AA 2AA

LINE VOLTAGE

1U79 — CBL3U74-6
1U77 — CBL3U72-6

INSET "1D"

5

1TB8

| | | | |
|---|---|---|---|
| | | 12 | |
| AL. W5 | 36 | 11 | AM .W7 |
| W11 | 115 | 10 | A .W16 |
| W10 | 114 | 9 | A .W15 |
| W9 | 113 | 8 | A .W14 |
| W13 | 112 | 7 | A.W42 |
| | 111 | 6 | A.C |
| W8 | 110 | 5 | A .W12 |
| M | 37 | 4 | P.E .AD .AJ |
| | | 3 | |
| | | 2 | |
| | | 1 | |

2

1K3 1K5 1K4 1K6: C AUX 1 NC — AUX 2 C NO

| | 76C 36P 36R | 77C 36R | 80C 36U 36V | 81C 36V | 468B |
|---|---|---|---|---|---|
| | 56A 56B 57A 57B 58A | 59A 59B 60A 60B 61A | 62A 62B 63A 63B 64A | 65A 65B 66A 66B 67A | 470B |
| | 56B | 59B | 62B | 65B | |
| | 900A 4A 5A 6A | 901A 7B 8B 9B | 902A 10A 11A 12A | 903A 13B 14B 15B | 467B 469B |

57B 57C — 900A 900B
60B 60C — 901A 901B
63B 63C — 902A 902B
66B 66C — 903A 903B

1TB4 1TB5 1TB16 1TB17 — 6

| | 1TB4 | 1TB5 | 1TB16 | 1TB17 |
|---|---|---|---|---|
| A | 1 408 418 12 A | 1 489 475 12 A | 1 507 445 12 A | 1 485 496 12 A |
| A | 2 409 424 13 A | 2 490 476 13 A | 2 508 446 13 A | 2 486 497 13 A |
| A | 3 410 403 14 E | 3 523 528 14 A | 3 509 447 14 A | 3 487 498 14 A |
| A | 4 412 435 15 A | 4 524 529 15 A | 4 541 448 15 A | 4 488 499 15 A |
| A | 5 411 431 16 C | 5 525 530 16 A | 5 542 449 16 A | A,B 5 535 500 16 A |
| A | 6 417 434 17 A | 6 526 531 17 A | 6 543 450 17 A | B 6 535 501 17 A |
| A | 7 413 438 18 A | 7 527 532 18 A | E.A 7 544 614 18 A | A 7 491 502 18 A |
| A | 8 414 437 19 A | 8 549 533 19 A.B | E.A 8 545 615 19 A | A 8 492 503 19 A |
| A | 9 415 537 20 A | 9 550 534 20 A.B | E.A 9 546 616 20 A | A 9 493 504 20 A |
| A | 10 416 538 21 A | 9 A.B 10 427 443 21 A | A 10 612 21 | A 10 494 505 21 A |
| A | 11 425 436 22 R | A.B 11 426 444 22 A | A 11 613 22 | A 11 495 506 22 A |

DETAIL "1A"

DETAIL "1B"

230V/60HZ 250VA 376A — 375A 375B — H1 H2 H3 H4 — LINE — 230V/60HZ 500VA/750VA/1000VA 1T1

460V/60HZ 250VA 376A — 375A 375B — H1 H2 H3 H4 — LINE — 460V/60HZ 500VA/750VA/1000VA 1T1

230V OR 460V/60HZ 250VA 376A — 375A 375B — H1 H2 H3 H4 — LINE — 230V OR 460V/60HZ 250VA 1T1

380V/50HZ 376A — 415V/50HZ 376A — 375A 375B — H1 H2 H3 — LINE — 380V OR 415V/50HZ 1T1

DETAIL "1C"

200V/460V/60HZ

WIRES FROM COMPR WINDING T-STATS. SATURATED COND TEMP SENSORS. HIGH & LOW PRESSURE CUTOUTS AND COMPR PROTECTION

WIRES FROM COMPR "1A"

WIRES FROM COMPR "1B"

WIRES FROM COMPR "2A"

WIRES FROM COMPR "2B"

CUSTOMER CONTROL WIRE ENTRY

CUSTOMER POWER WIRE ENTRY

## NOTES:

1. 200V/60HZ OR 575V/60HZ TRANSFORMER SHOWN. SEE DETAIL "1B" FOR OTHER VOLTAGE CONNECTIONS.
2. JUMPER (1TB8-5 & 1TB8-6) REQUIRED ONLY ON UNITS WITH 2-STAGE NATURAL GAS HEAT OR ELECTRIC HEAT OPTION.
5. 1TB8 AND ASSOCIATED WIRING REQUIRED WITH ALL HEATING OPTIONS.
6. 1TB17 AND ASSOCIATED WIRING REQUIRED WITH OPTIONAL GBAS (1U51).
7. WHEN HIGH DUCT TEMP T-STAT (3S16-3S17) IS ORDERED JUMPER BETWEEN 1TB7-7 AND 1TB7-8 IS REMOVED.
8. 230V/60HZ. 380V/50HZ. 415V/50HZ OR 575V/60HZ TRANSFORMERS SHOWN. SEE DETAIL "1C" FOR 200V/60HZ OR 460V/60HZ CONNECTIONS.
9. JUMPER INSTALLED ONLY ON UNITS WITHOUT ECONOMIZER OPTION.
10. 1F55. 1F56 .1S74 AND ASSOCIATED WIRING USED ON CONVENIENCE OUTLET OPTION ONLY.
11. MANUAL BYPASS SWITCH AND ASSOCIATED WIRING OPTIONAL
16. ON 1F57-1F59 FUSES USE WIRES 306B. 307B & 308B ON SUPPLY VFD UNITS W/O BYPASS W/ LINE REACTOR OPTION ONLY. USE WIRES 306A.307A & 308A ON ALL OTHER SUPPLY VFD UNITS.
17. ON 1F63-1F65 FUSES USE WIRES 312B. 313B & 314B ON EXHAUST VFD UNITS W/O BYPASS W/ LINE REACTOR OPTION ONLY. USE WIRES 312A.313A & 314A ON ALL OTHER EXHAUST VFD UNITS.
18. REFER TO INSET "1D" FOR ALTERNATE KEYPAD CONNECTION LAYOUT (1U79 & 1U77)
19. WIRES 736J. 736G & 572F USED WITH RETURN FAN OPTION ONLY.

**IMPORTANT!**
DO NOT ENERGIZE UNIT UNTIL CHECK-OUT AND START-UP PROCEDURE HAS BEEN COMPLETED.

**⚠ WARNING**
HAZARDOUS VOLTAGE!
DISCONNECT ALL ELECTRIC POWER. INCLUDING REMOTE DISCONNECTS. BEFORE SERVICING.

FAILURE TO DISCONNECT POWER BEFORE SERVICING CAN CAUSE SEVERE PERSONAL INJURY OR DEATH.

**⚠ AVERTISSEMENT**
VOLTAGE HASARDEUX!
DECONNECTEZ TOUTES LES SOURCES ELECTRIQUES INCLUANT LES DISJONCTEURS SITUES A DISTANCE AVANT D'EFFECTUER L'ENTRETIEN.

FAUTE DE DECONNECTEZ LA SOURCE ELECTRIQUE AVANT D'EFFECTUER L'ENTRETIEN PEUT ENTRAINER DES BLESSURES CORPORELLES SEVERES OU LA MORT.

**⚠ CAUTION**
USE COPPER CONDUCTORS ONLY!

UNIT TERMINALS ARE NOT DESIGNED TO ACCEPT OTHER TYPES OF CONDUCTORS.

FAILURE TO DO SO MAY CAUSE DAMAGE TO THE EQUIPMENT.

10 X 15 METAL PLATE

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DRAWN BY: T. DEPRIEST
REPLACES:
CAD SYSTEM USED: Pro/DETAIL
TRANE® DATE: 08/10/00
REVISION DATE: 22-OCT-08
SIMILAR TO: 2307-3969

TRANE

FILE NUMBER: 2307-3990
DRAWING NUMBER: 2307-4615
SHEET: 1 OF 3
REV: C

ROOFTOP PACKAGED AIR CONDITIONER
CONNECTION WIRING DIAGRAM
CONTROL BOX AREA 1
40 & 60 TON S_HF
W/ SUPPLY & EXH/RTN FAN VARIABLE FREQUENCY DRIVES