

ICM2804 FURNACE CONTROL BOARD

Replaces: Carrier CES0110074-01

SPECIFICATIONS

ENVIRONMENT

- Ambient Temperature
- Operating: -40°F to 176°F
- Storage: -40°F to 185°F
- Humidity: 5% to 95% R.H. (non-condensing) @ +55°F
- Vibration: 13.8Hz @ 0.2 Gs for one hour in each orthogonal axis

ELECTRICAL

- Voltage Range: Line (98-132 VAC) @ 60Hz
- Cool Blower: 20A, 2 HP, 240 VAC
- Heat: 10A, 240 VAC
- Inducer Motor: 4A FLA, 8A LRA @ 120 VAC
- TIMING
- Inducer Pre-Purge Time: 1 second
- Heat Blower On Delay: 45 seconds
- Heat Blower Off Delays: 120 or 180 sec.
- Cool Blower On Delay: 1 seconds
- Cool Blower Off Delay: 1 seconds

ALS = Auxilary limit switch (over temp), SPST

DSS = Draft safeguard switch, SPST (N.C.),

EAC-1 = Electronic air cleaner connection (115 VAC)

EAC-2 = Electronic air cleaner connection (common) FU1 = Fuse, 3 AMP. automotive blade type

ILK = Blower door interlock switch, SPST (N.O.)

LS = Limit switch (over temp), SPST (N.C.), auto

(N.C.), manual reset

manual reset

FU2 = Fuse, field installed

IDM = Inducer draft motor

GV = Gas valve (redundant)

PL1 = 9-circuit connector (PCB1)

PL2 = 2-circuit connector (L1, L2)

PL4 = 5-circuit plug connector (BLWM)

TRAN = Transformer (115V AC/24V AC)

Unmarked terminal

Marked terminal

Field ground

Field splice

Equipment ground

Terminal factory connector

Factory wiring (120 VAC)

Factory wiring (24 VAC)

Field wiring (120 VAC)

Field wiring screw terminal

PL3 = 2-circuit connector (IDM)

PRS = Pressure switch SPDT

Junction

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FL = Fusible link

JB = Junction box

reset

FAULT CODES

LED 1	FAULT CONDITION
On solid	No fault
1 blink	Gas valve stuck open
2 blinks	Pressure switch open
3 blinks	Limit switch open
4 blinks	Gas valve shorted

CES0110074-00 and CES0110074-01 Differences:

This board functions identically as the CES0110074-00 and the CES0110074-01. It is a form, fit and functional replacement of the CES0110074-01. When replacing the CES0110074-00 some quick connectors have to be changed or added. EAC-1 and EAC-2 must have 1/4" connectors. COM, SEC-1 and SEC-2 must have 3/16" connectors.

LEGEND:

BLWM = Blower motor CAP = Capacitor

WIRING DIAGRAM



NOTES:

- 1. Internally connected to equipment ground through mounting screw.
- 2. If any of the original equipment wire is replaced, use wire rated for 105°C.
- 3. Blower motor (BLWM) & inducer motor (IDM) contain auto-reset thermal overload switch.
- Blower motor factory speed selections (PL4) are for average conditions. See installation instructions for details on optimum speed selections.
- 5. Use only copper wire between the disconnect switch and the furnace junction box (JB).
- 6. Symbols are electrical representations only
- 7. Auxiliary limit switch (ALS) used on down flow models only.
- The transformer 24 VAC winding is protected by a 3 AMP automotive blade-type fuse on the control board. A 24 VAC short to ground during installation checkout, operation, service or maintenance could cause the fuse to open. Do not replace the 3 AMP fuse with any other size fuse.
- 9. Blower motor (BLWM) adjustable off-relay. Factory set, 120 seconds, cut resistor, 180 seconds.