ICM284

Fixed Speed Furnace Control Replacement Module

Replaces York modules: 03101280000, 100-825-04, 031-00661-701, 031-01280-000, HS 8201, 100-00825-04

Safety Considerations

Only trained personnel should install or service heating equipment. When working with heating equipment, be sure to read and understand all precautions in the documentation, on labels, and on tags that accompany the equipment. Failure to follow all safety guidelines may result in damage to equipment, severe personal injury or death.

Introduction

The **ICM284** fixed speed furnace control replaces the following York modules:

03101280000, 100-825-04, 031-00661-701, 031-01280-000, HS 8201, 100-00825-04

Specifications

Electrical

- **Voltage Range:** Line (208 to 240 VAC) @ 60Hz
- **Ignitor:** 5A @ 30 VAC
- **Cool Blower:** 30A, 2HP, 240 VAC
- **Heat:** 5A, 1/2 HP, 240 VAC
- **Inducer Motor:** 4A, FLA-8.0 LRA @ 120 VAC
- **Gas Valve:** 1.5A @ 30 VAC

Electrostatic Discharge (ESD) Precautions

CAUTION!

Use caution when installing and servicing the furnace to avoid and control electrostatic discharge; ESD can impact electronic components. These precautions must be followed to prevent electrostatic discharge from hand tools and personnel. Following the precautions will protect the control from ESD by discharging static electricity buildup to ground.

1. Disconnect all power to the furnace. Do not touch the control or the wiring prior to discharging your body's electrostatic charge to ground.
2. To ground yourself, touch your hand and tools to a clean, metal (unpainted) furnace surface near the control board.
3. Service the furnace after touching the chassis. Your body will recharge with static electricity as you shuffle your feet or move around, and you must reground yourself.
4. Reground yourself if you touch ungrounded items.
5. Before handling a new control, reground yourself; this will protect the control. Store used and new controls in separate containers before touching ungrounded objects.
6. ESD damage can also be prevented by using an ESD service kit.

Step 1: Remove Existing Control

CAUTION!

To service control, and prior to disconnection, label all wires. Failure to do so may result in wiring errors which can cause dangerous operation.

1. Turn thermostat to OFF position or set it to the lowest possible setting.
2. Turn OFF electrical supply to furnace.
3. Turn OFF gas supply to furnace.
4. Remove furnace blower and control access doors.

CAUTION!

Failure to turn off gas and electric supplies can result in explosion, fire, death, or personal injury.

6. Disconnect thermostat wires and humidifier wires (if equipped with a humidifier).
7. Disconnect line voltage, blower, electronic air cleaner wires (if equipped), and transformer wires.
8. Remove screws or any other fasteners and old circuit board.
9. Examine control and control box to check for water stains.
10. Make repairs if any sources of water leakage are found. Be sure to check humidifiers, evaporator coils, and vent systems in the area of the control.

Step 2: Install the New Control

1. Ground yourself. When handling circuit board, hold it by the edges.
2. Fasten circuit board with retaining screws.
3. Connect all line voltage, low voltage, and accessory wires.
4. Connect a 9-pin Molex connector to circuit board.

System Tests

Step 1: Flame Sensor Operation

Connect a DC microammeter in series with flame sensor. Initiate a heat call. After burners ignite and stabilize, measure flame current. Nominal flame current is between 4.0 and 6.0 microamps DC. If flame current reading is less than 4.0 microamps DC, either replace or remove and clean flame sensor with a fine grade steel wool. When the flame current falls to 0.5 microamps DC, the furnace control will lock out.

Step 2: System Operation

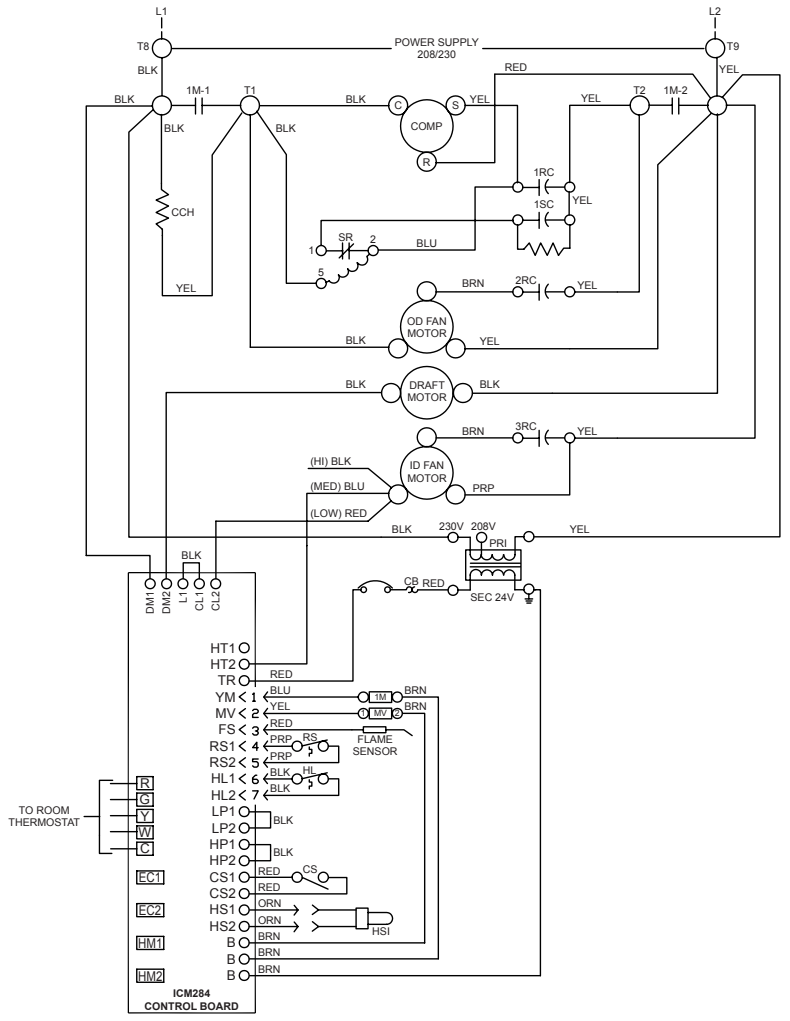
1. Perform necessary safety checks. Consider flame safety, limit switch, and vent system.
2. Operate unit through a complete call for heat cycle.

Status LEDs

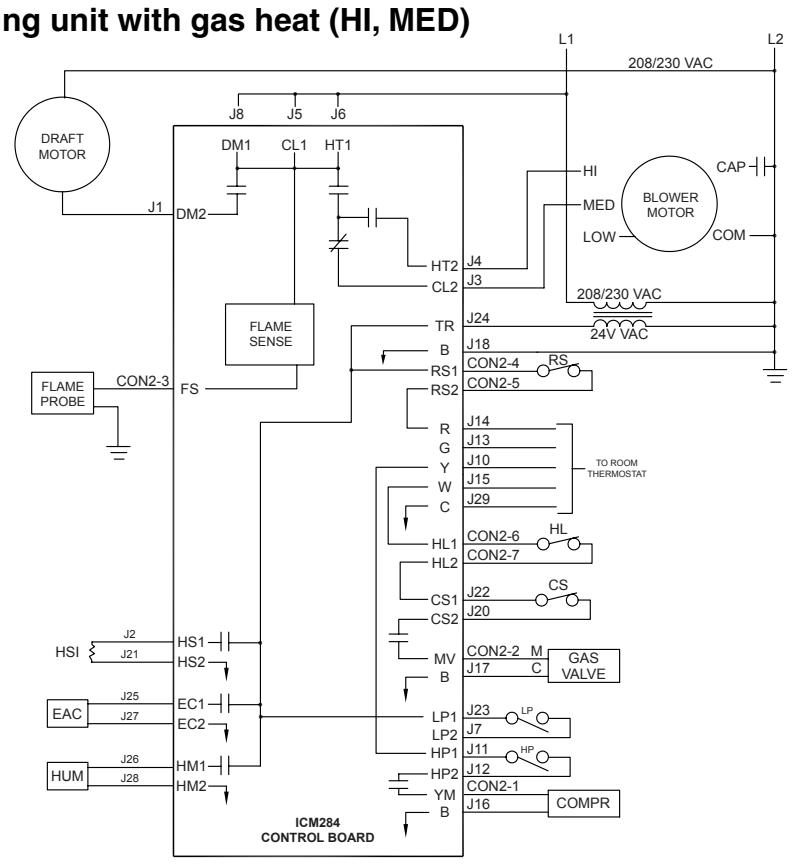
Flashes	Fault condition
LED OFF	**No Fault**
1	Ignition Failure
2	Compressor low pressure open
3	Compressor high pressure open
4	Pressure switch (CS) open or close
5	Flame Rollout switches open (RS)
6	Heat limit switches open (HL)
7	(Optional) Heat mode 1 hour waiting period for auto reset from flame failure lockout
8	Fault flame
9	Brownout voltage

Wiring Diagrams

Cooling unit with gas heat (MED, LOW)



Cooling unit with gas heat (HI, MED)



Wiring Diagram Legend

B	24vac Common	HL1	High Temperature Limit	MV	Gas Valve
CAP	Capacitor	HL2	High Temperature Limit	RC	Run Capacitor
CCH	Crank Case Heater	HUM	Humidifier	RS1	Roll Out Switch
CL1	L1 Input	HM1	Humidifier Output 24vac hot	RS2	Roll Out Switch
CL2	Blower Motor output	HM2	Humidifier 24vac Common	SC	Start Capacitor
COMP	Compressor Motor	HP1	High Pressure Switch	SR	Start Relay
CS1	Centrifugal Input Switch	HP2	High Pressure Switch	TR	24vac Hot
CS2	Centrifugal Output Switch	HS1	Hot Surface Igniter 24vac Hot	YM	Compressor Output
DM1	Draft Motor L1 Input	HS2	Hot Surface Igniter 24vac Common	R	24vac Hot to Thermostat
DM2	Draft Motor L1 Output	HT1	Draft Motor L1 Input	C	24vac Common to Thermostat
EAC	Electric Air Cleaner	HT2	Draft Motor L1 Output	Y	Cool Call from Thermostat
EC1	Electric Air Cleaner Output 24vac Hot	L1	L1 Input	W	Heat Call from Thermostat
EC2	Electric Air Cleaner 24vac Common	LP1	Low Pressure Switch	G	Fan Call from Thermostat
FS	Flame Sense Rod	LP2	Low Pressure Switch		

ONE-YEAR LIMITED WARRANTY

The Seller warrants its products against defects in material or workmanship for a period of one (1) year from the date of manufacture. The liability of the Seller is limited, at its option, to repair, replace or issue a non-case credit for the purchase prices of the goods which are provided to be defective. The warranty and remedies set forth herein do not apply to any goods or parts thereof which have been subjected to misuse including any use or application in violation of the Seller's instructions, neglect, tampering, improper storage, incorrect installation or servicing not performed by the Seller. In order to permit the Seller to properly administer the warranty, the Buyer shall: 1) Notify the Seller promptly of any claim, submitting date code information or any other pertinent data as requested by the Seller. 2) Permit the Seller to inspect and test the product claimed to be defective. Items claimed to be defective and are determined by Seller to be non-defective are subject to a $30.00 per hour inspection fee. This warranty constitutes the Seller's sole liability hereunder and is in lieu of any other warranty expressed, implied or statutory. Unless otherwise stated in writing, Seller makes no warranty that the goods depicted or described herein are fit for any particular purpose.

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