

ICM325HN, 326HN, 327HN HEAD PRESSURE CONTROLS



with Optional Heat Pump Bypass

Helps prevent evaporator freeze-ups, liquid-slugged compressors, low pressure cutouts and overshoots seen with on/off & pressure switch controls.

ICM325HN



Typical Application

Line Voltage (120/208/240/480 VAC)
Control Voltage (24 VAC)
Air Conditioning and Heat Pumps

ICM326HN



Typical Application

Line Voltage (120/208/240 VAC)
Air Conditioning and Refrigeration

ICM327HN



Typical Application

Line Voltage (480 VAC)
Air Conditioning and Refrigeration

Features

- **Integral Heat Pump Bypass Circuitry**
 - Allows you to electronically bypass the speed control during heat pump operation
- **Solid state 10 amp load carrying capability**
- **Single unit controls up to 3 refrigerant circuits**
- **Multiple Voltage Ranges**
 - (See specifications for details)
- **Hard Start**
 - Adjustable from .1-5 seconds; provides full torque to the motor during startup to help ensure proper fan rotation and lubrication of bearings
- **Low Speed Cutoff**
 - Field-adjustable; user may set the minimum RPM level at which the condenser fan should operate
- **High Temperature Bypass**
 - Applies full voltage to the condenser fan under normal conditions
- **Integral Transformer** *(ICM326HN/327HN models)
 - Simplifies installation, reduces cost; direct setup from the line voltage
- **RoHS Compliant/Lead Free Design**
 - For global use

Applications

- **Ideal for “Low Ambient” Conditions Found in:**
 - Supermarkets, frozen food storage
 - Computer rooms, cooling tower fans
 - Temperature/humidity-sensitive environments

Mode of Operation

ICM Head Pressure Controls operate as temperature-sensitive motor fan speed controls. Head pressure is regulated during low ambient conditions by varying the amount of airflow through the condenser. This helps ensure sufficient pressure across the expansion valve, preventing costly downtime and/or loss of valuable perishable goods.

Specifications

Input/Output Voltage

- **ICM325HN:** (Input: 18-30 VAC) (Input/Output: 120-480 VAC)
- **ICM326HN:** (Input/Output: 120/208/240 VAC)
- **ICM327HN:** (Input/Output: 480 VAC)
- **Frequency:** 50/60 Hz
- **Power Consumption:** 4VA @ 24 VAC

Output

- **Type:** Solid State
- **Form:** Triac
- **Output Current:** (maximum: 10 amps) (minimum: 100 mA)
- **Frequency:** 50/60 Hz
- **Voltage Drop:** 3.0 volts maximum
- **Leakage Current:** 5 mA maximum

Protection

- **Dielectric Breakdown:** 2,500 volts maximum
- **Insulation Resistance:** 100 M

Control Operating Temperature

- **Operating Temperature:** -40°C to +75°C (-40°F to +176°F)
- **Storage Temperature:** -40°C to +85°C (-40°F to +185°F)

Dimensions

- **ICM325HN:** 4³/₄"L X 3³/₁₆"W X 1¹/₈"H
- **ICM326HN and ICM327HN:** 4³/₄"L X 3³/₁₆"W X 1³/₄"H

Ordering Information

- **Standard Model ICM325HN:** 120-480 VAC
- **Models with Integral Transformers:**
 - **ICM326HN:** 120/208/240 VAC
 - **ICM327HN:** 480 VAC

ICM325HN Typical Wiring Diagram for Systems without a Contactor

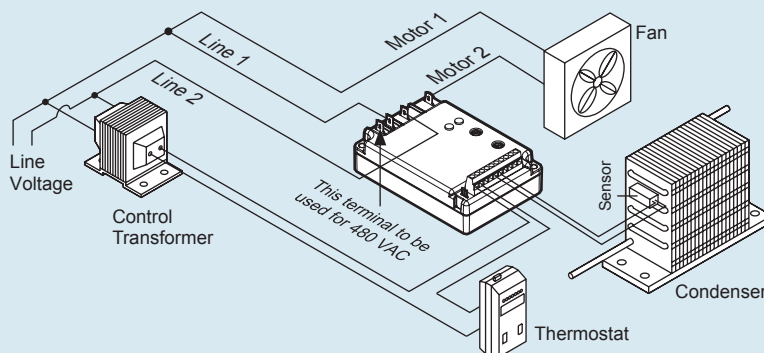
ICM Sensor Probe Mounting Recommendations

High Efficiency Systems:

- The sensor probe should be mounted up several bends into the condenser (upper 1/3 as shown at right), to more closely monitor the condensing temperature

Low Efficiency Systems:

- The sensor may be placed directly on the liquid line



ICM325HN Typical Wiring Diagram for Systems with a Contactor

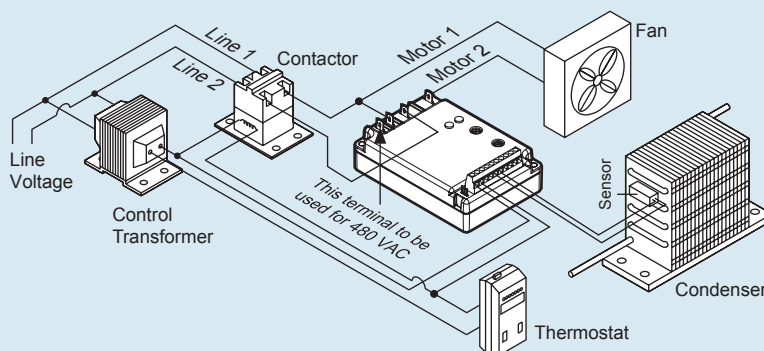
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ICM326HN Typical Wiring Diagram

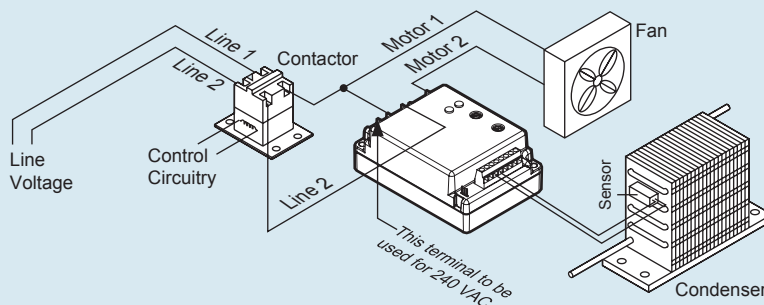
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ICM327HN Typical Wiring Diagram

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