



Quick Start Guide

Universal Field-Mount Refrigeration Controller

JULY 2023
PART NO. 25011701



intelliGen™ Field Mount (iFM) Kit for Unit Coolers

The intelliGen™ Field Mount Kit is designed to install in the field for new unit coolers without factory mounted controls or retrofit of existing unit coolers with mechanical control to electronic control. The intelliGen control can be remote mounted away from the unit cooler at a convenient location for easy access. It is pre-assembled in a IP65 rated housing for both indoor and outdoor applications.

Components Included

The iFM kit comes with the intelliGen controller, 3 temperature sensors, 1 pressure transducer with wire harness, 1 terminal board and mounting accessories. The temperature sensors and pressure transducer harness are 25 feet in length. Other wire lengths are available as optional kit in separate part numbers.

Components Not Included

Individual system dependent components are not included in the kit but required for each installation. These components include the 24VAC control power transformer, the electronic expansion valve (EXV), the field wires for control power, fan motors, defrost heaters and solenoid valve.

Field wire runs between the intelliGen controller and the unit cooler should be in conduits and have to meet local building and electric code requirements. Conduit fittings are needed for the conduit runs. Please conduct a site survey and review your local codes for detail requirements prior to installation.

U.S. CUSTOMER SERVICE

NORMAL BUSINESS HOURS

8:00 AM - 8:00 PM EDT
800.537.7775

heatcraft.com/intelligen/support
SESweb@heatcraftprd.com

AFTER HOURS

After 5:00 PM EDT,
weekends and holidays
877.482.7238

Additional system dependent parts are required for proper iFM installation. Be sure you have compatible version of the following parts for your system.

Electric Expansion Valves (EXV)			
Evaporator Condition			
Part #	Connection Size	Capacity ¹ (BTUH) at 20°F SST ²	Capacity ¹ (BTUH) at -20°F SST ²
29326101	3/8" x 3/8"	12,000	11,000
29326201	3/8" x 3/8"	52,000	48,000
29326401	5/8" x 5/8"	78,000	71,000
29326501	7/8" x 1-3/8"	182,000	167,000
29326601	7/8" x 1-3/8"	269,000	246,000

1. Capacities are based on the specific condition listed for R-448A, for reference only. For other conditions and refrigerants, use the QR code link below for document to select proper valve size.

2. SST - Saturated Suction Temperature

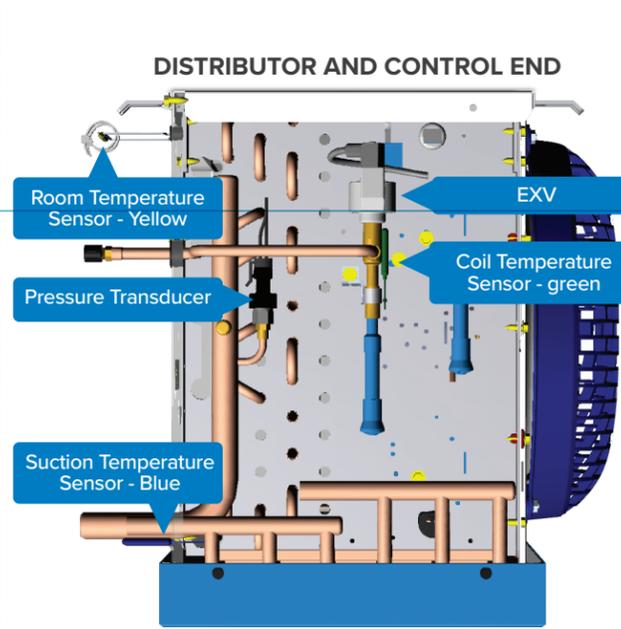
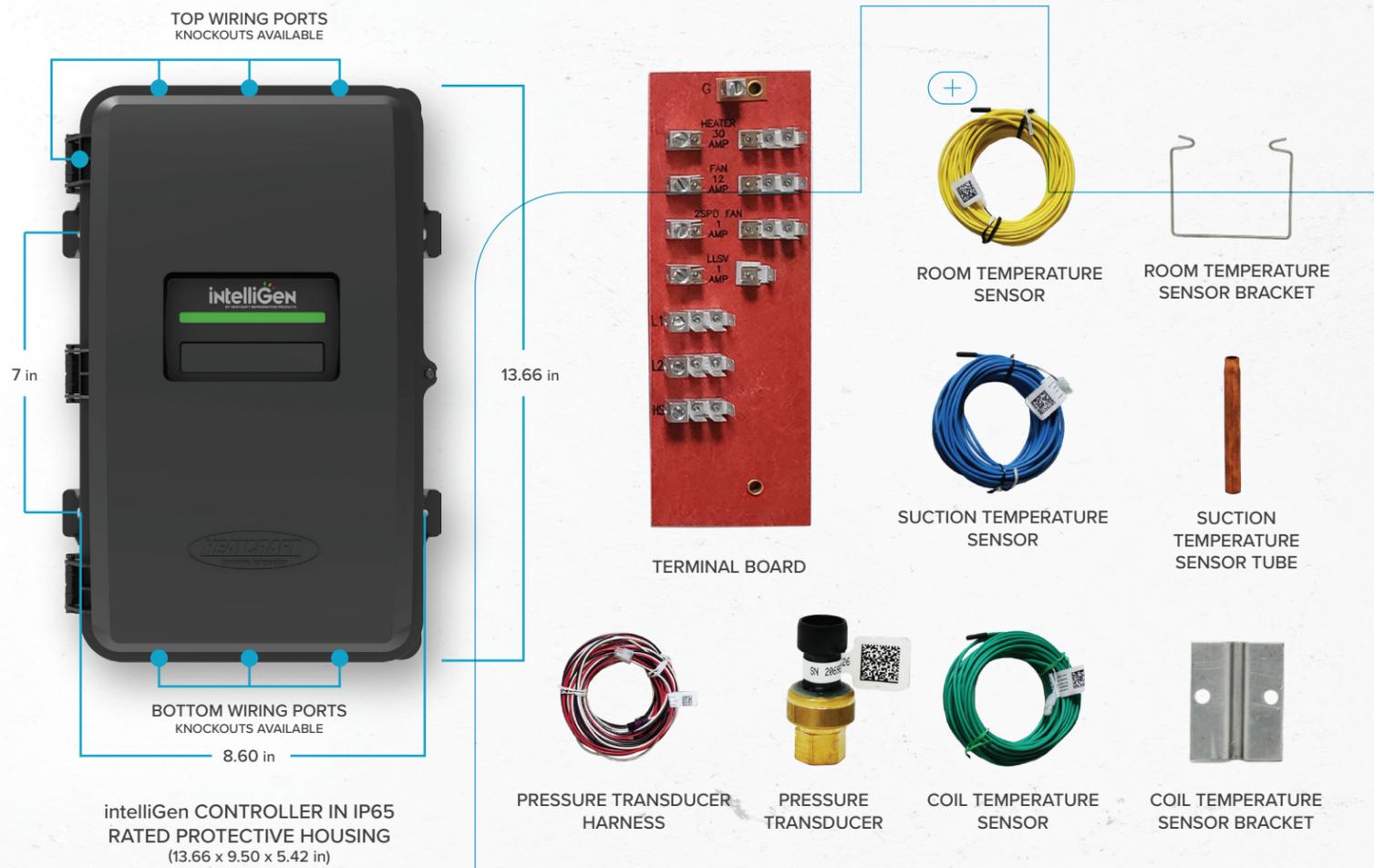
24V AC Transformer	
Part #	Description
22529601	120/24VAC, 40VA
22529602	240/24VAC, 40VA
22529603	460/24VAC, 40VA
22529701	575/24VAC, 40VA

Power Harnesses and Sensor Kits	
Part #	Description
22699901	40ft harness for power, fan, defrost heater
22699902	25ft harness for power, fan, defrost heater
22699903	15ft harness for power, fan, defrost heater
59755302	15ft sensor kit
59755301	40ft sensor kit



Recommended Tools for Installation

- Power drill & drill bits
- Precision slotted screwdriver
- 5/16" nut driver
- Slotted screwdriver
- 7/16" & 5/8" wrenches
- 5/32" Hex (Allen) key
- Phillips screwdriver
- Wire stripper/crimper



Note: Electronic Expansion Valve (EXV) size varies by system capacity. Check system specification for proper valve size. Field installer to provide.

- Suction Temperature Sensor (Blue Wire, Included)**
- 1 Braze the metal Suction Temp Sensor Tube onto the suction line
 - 2 Insert the Temp Sensor into the metal tube
 - 3 Wrap the Temp Sensor and the metal tube with Cork tapes
 - 4 Secure the Temp Sensor with cable ties

- Electronic Expansion Valve (EXV, Not Included)**
- 1 Field installer to provide an EXV matches the system capacity
 - 2 Remove the EXV body from its power head
 - 3 Braze the EXV body to connect between the distributor connection and the liquid line stub
 - 4 Insert the power head back to the valve body and then connect the power head with harness

- Coil Temperature Sensor (Green Wire, Included)**
- 1 Attach the Coil Temp Sensor into the channel of the mounting bracket
 - 2 Screw tight the sensor bracket onto the coil end plate with the self-drilling screws provided

- Room Temperature Sensor (Yellow Wire, Included)**
- 1 Drill two 1/4" holes, 1 1/4" apart at the return air area of the unit cooler
 - 2 Insert the Room Temp Sensor bracket into the drilled holes
 - 3 Secure the Temp Sensor to the bracket with cable ties

- Pressure Transducer (Included)**
- 1 Locate the Schrader valve on the suction line
 - 2 Screw the Pressure Transducer onto the Schrader valve
 - 3 Plug in the pressure transducer harness. Make sure the harness clip is securely latched

Remote Case Installation

Locate Remote iFM Mount Location

- 1 Identify a flat surface to mount the iFM kit
- 2 Prepare the mounting location and mark screw holes

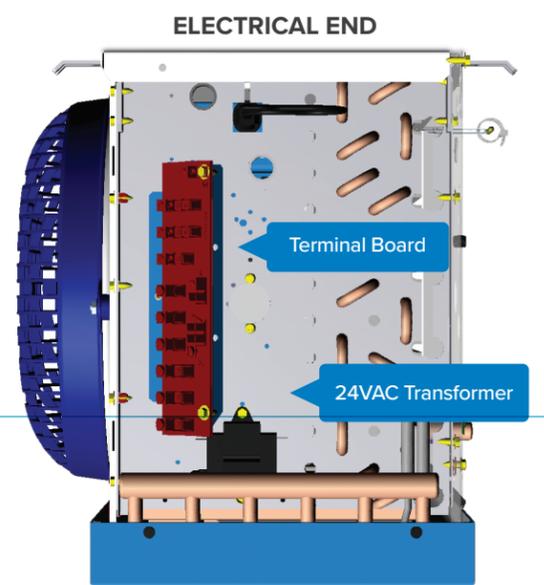
Conduits & Wires Routing to Unit Cooler

- 1 Determine conduit routing based on application need
- 2 Determine the knockouts on the iFM housing for conduit routing
- 3 Determine the conduit fittings for connection to the iFM housing and the unit cooler.
- 4 Run wires through the conduits and fittings.
- 5 Connect fittings to the conduits

Note: Low voltage and sensor wires are required to be in separate conduit from the high voltage wires. Use wire sheathing provided to add additional protection.

Mount iFM Kit

- 1 Mount the iFM housing to the marked screw hole locations using #10 screws (provided)
- 2 Pull the wires through the knockouts on the iFM housing
- 3 Tighten the conduit fittings to the iFM housing



- Terminal Board (Included)**
- 1 Mount the terminal board to the electrical end of the unit cooler
 - 2 Connect power wires (system power, control power, motor fans, defrost heaters and solenoid valve wires as needed)

- Power Transformer (Not Included)**
- 1 Field installer to provide a step down transformer from system voltage to 24VAC for control power
 - 2 Mount the transformer to the electrical end of the unit cooler

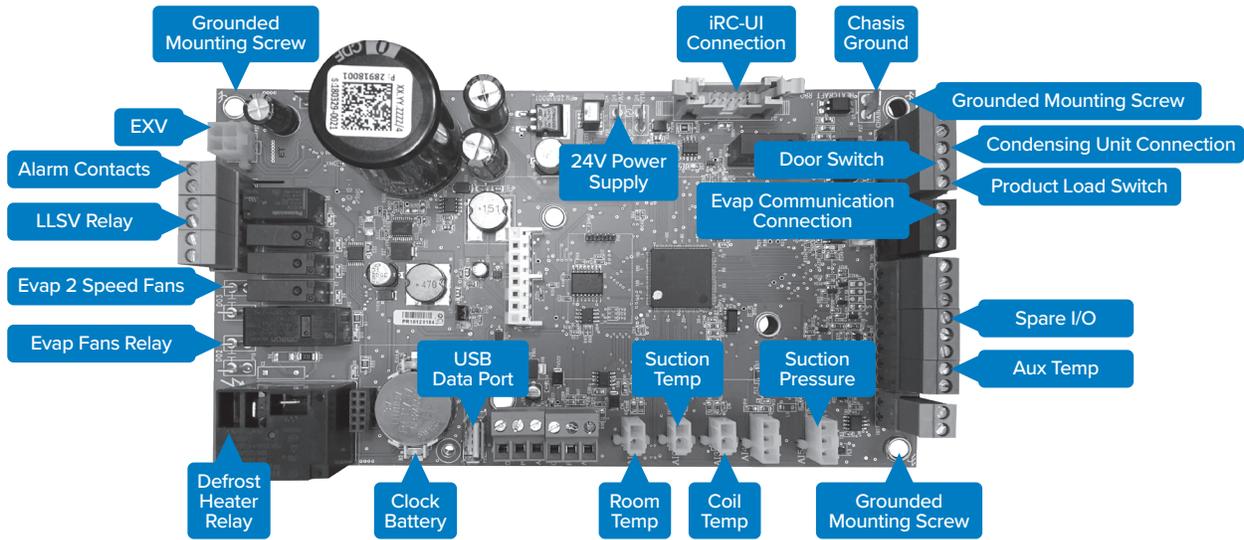
Note: 24VAC transformer varies by system input voltage. Check system specification for proper transformer primary voltage. Field installer to provide.



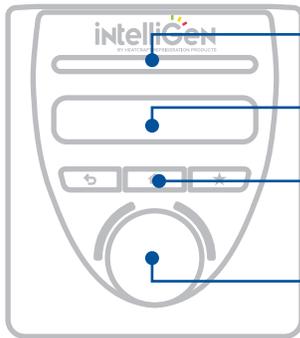
THIS GUIDE INCLUDES YOUR iFM INSTALLATION TEMPLATE.
Hold or tape flattened Quick Start Guide to the wall and use light blue guideline to mark your drill holes prior to installation. Install upper left PILOT screw first when mounting.

intelliGen™ Refrigerator Controller

Connecting Wires to the intelliGen™ Control Board



Get to Know the intelliGen™ Refrigeration Controller



- LED Status Light Bar:**
Indicates the current status of all specific evaporators on the system (see below)
- OLED Screen:**
Displays temperature, parameters and other content.
- Menu Buttons:**
Back button to go back to Previous Menu. Home button to go back to Main Menu. Favorites button to go to your Favorites.
- Knob / Enter Button:**
Rotate the wheel left and right to navigate between Menu Options. Press the wheel to ENTER.

LED Status Bar

- | | | | | |
|---|---|---|--|---|
|  |  |  |  |  |
| Green Static
The System or EV does not have any anomalies/issues. | Red Static
The System or EV has an Alarm. | Yellow Static
The System or EV has an Error. | White Flashing
The EV Unit is being identified. | No LED On
The EV Unit is currently powered off or in service mode. |
| | Red Flashing
The EV Unit where the Alarm originated. | Yellow Flashing
The EV Unit where the Error originated. | | |

intelliGen™ Installation Resources & Operation Manual:

To find all intelliGen resources, including installation & operation manuals, technical bulletins, brochures, maintenance, troubleshooting information and more, simply scan the QR code or use the link below.



www.intelliGencontrols.com/resources