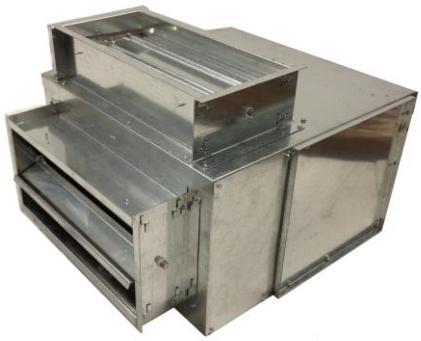
INSTALLATION MANUAL

FXMQ_PB/FBQ Economizer



MODELS

ECONMQ12P-8-1K
ECONMQ12P-13-1K
ECONMQ30P-8-1K
ECONMQ30P-13-1K
ECONMQ48P-8-1K
ECONMQ48P-13-1K

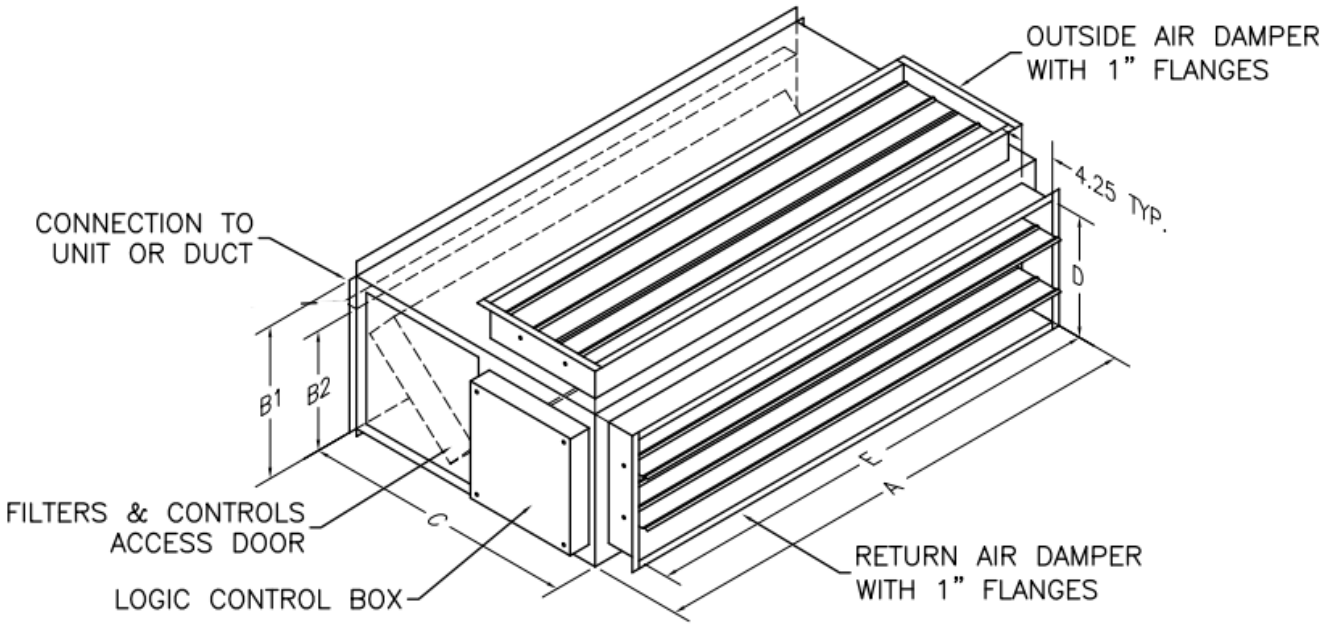
1. Ducted Indoor Unit Economizer Summary

The Daikin economizer option allows the FXMQ_PBVJU indoor units to utilize outside air to reduce the mechanical cooling when the condition of the outside air permits. Automatic, sensor-controlled dampers provide a constant, programmable leaving air temperature from the economizer whenever the indoor unit receives a call for cooling and the outside air conditions satisfy enthalpy requirements. This allows the indoor unit expansion valve, and in turn the compressor, to operate at part load conditions to maximize energy efficiency.

Table 1. Economizer Model Numbers

Model Number	Description	Applicable Indoor Units	Field Supplied Power
ECONMQ12P-8-1K	Fully modulating economizer (1) 12” x 20” x 2” MERV 8 filter	FXMQ07PBVJU FXMQ09PBVJU	24VAC
ECONMQ12P-13-1K	Fully modulating economizer (1) 12” x 20” x 4” MERV 13 filter	FXMQ07PBVJU FXMQ09PBVJU	24VAC
ECONMQ30P-8-1K	Fully modulating economizer (1) 12” x 20” x 2” MERV 8 filter	FXMQ15PBVJU FXMQ18PBVJU FXMQ24PBVJU FBQ18PVJU FBQ24PVJU FBQ30PVJU	24VAC
ECONMQ30P-13-1K	Fully modulating economizer (1) 12” x 20” x 4” MERV 13 filter	FXMQ15PBVJU FXMQ18PBVJU FXMQ24PBVJU FBQ18PVJU FBQ24PVJU FBQ30PVJU	24VAC
ECONMQ48P-8-1K	Fully modulating economizer (2) 12” x 24” x 2” MERV 8 filter	FXMQ30PBVJU FXMQ36PBVJU FXMQ48PBVJU FXMQ54PBVJU FBQ36PVJU FBQ48PVJU	24VAC
ECONMQ48P-13-1K	Fully modulating economizer (2) 12” x 24” x 4” MERV 13 filter	FXMQ30PBVJU FXMQ36PBVJU FXMQ48PBVJU FXMQ54PBVJU FBQ36PVJU FBQ48PVJU	24VAC

2. Dimensions



Kit Model	A	B1	B2	C	D	E
ECONMQ12P-8-1K	21.625	13.00	9.75	24.25	7.50	17.00
ECONMQ12P-13-1K						
ECONMQ30P-8-1K	36.4375	13.00	9.75	24.25	7.50	32.00
ECONMQ30P-13-1K						
ECONMQ48P-8-1K	52.1875	13.00	9.75	24.25	7.50	48.00
ECONMQ48P-13-1K						

3. Shipping and Packing List

Economizer package contains:
1 ea. – Economizer Assembly
1 ea. – Install Instructions Including Wiring Diagram
3 ea. – Wire Ties
1 ea. – Honeywell JADE Operation Manual

4. Installation

Before starting the installation work, carefully read the following safety precautions.

a) Disconnect all power to the indoor unit
b) Remove the factory duct flange from the return inlet of the indoor unit.
c) Attach the economizer over the return opening with sheet metal screws.
d) Remove the control access panel on the economizer and indoor unit.
e) Route wires from the indoor unit control box to the terminal strip located in the economizer control panel. Route a field-supplied 24VAC power supply to the economizer terminal strip and the KRP1C74. Refer to wiring diagram, Figure 3.
f) Replace the control access panels on the economizer and indoor unit.
g) Place the return air duct and fresh air duct over the economizer return and fresh air dampers.

Note: Economizer section may be rotated 180° for bottom fresh air connection.

5. Operation Mode

A. Cooling Mode

1. While in cooling thermo-on, with the ambient temperature and humidity above the enthalpy control set point, the fresh air damper will open to the minimum vent position and the cooling demand is satisfied by the compressor. The minimum vent position is site-configurable.

2. While in cooling thermo-on, with the ambient temperature and humidity below the enthalpy control set point, the fresh air damper will modulate to ensure the mixed air supplied to the indoor unit is no lower than the set point temperature. This will reduce the mechanical cooling of the indoor unit and VRV System . The mixed air set point should be configured in accordance with the operating conditions of the fan coil.

Figure 1. JADE Economizer Module

B. Heating Mode

1. While in heating thermo-on, the damper will open to the minimum position. The minimum position is site-configurable.

C. Fan Mode

1. While in fan only operation, cooling thermo-off, and heating thermo-off, the damper will open to the minimum vent position. The minimum vent position is site-configurable.

D. Enthalpy Control

1. The enthalpy economizer control senses both temperature and humidity of the outside air. When the heat content of the outside air is below the control set point, the control permits the outside air dampers to operate as described in section 5.A.2. above. When the heat content rises above the control set point, the control closes the outdoor air dampers to the minimum vent position. This setpoint can be adjusted as needed.

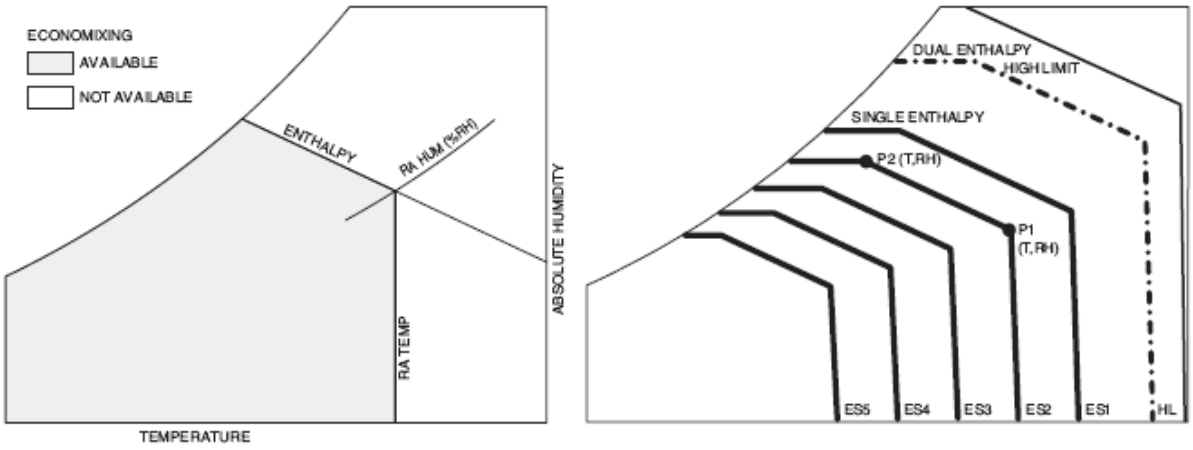


Figure 2. Single Enthalpy Curve and Boundaries

Table 3. Single Enthalpy and Dual Enthalpy High Limit Curves

Enthalpy Curve	Temp. Dry-Bulb (°F)	Temp. Dewpoint (°F)	Enthalpy (btu/lb/da)	Point P1		Point P2	
				Temp. °F	Humidity %RH	Temp. °F	Humidity %RH
ES1	80.0	60.0	28.0	80.0	36.8	66.3	80.1
ES2	75.0	57.0	26.0	75.0	39.6	63.3	80.0
ES3	70.0	54.0	24.0	70.0	42.3	59.7	81.4
ES4	65.0	51.0	22.0	65.0	44.8	55.7	84.2
ES5	60.0	48.0	20.0	60.0	46.9	51.3	88.5
HL	86.0	66.0	32.4	86.0	38.9	72.4	80.3

E. Settings

1. The mixed air temperature set point must be no lower than 65 °FDB for continuous operation. This may be configured down to 60 °FDB, however thermo off may be carried out due to freeze protection.
2. The economizer is recommended for standard comfort cooling applications only. This must not be used for high heat density, year round cooling applications.
3. The enthalpy curve setting must not be programmed to ES4 or ES5.

6. Wiring Diagram

Provide field supplied 24VAC power supply and 18 gauge, stranded wire as indicated in Figure 3. All wiring and electrical work should conform to applicable national, state, and local codes.

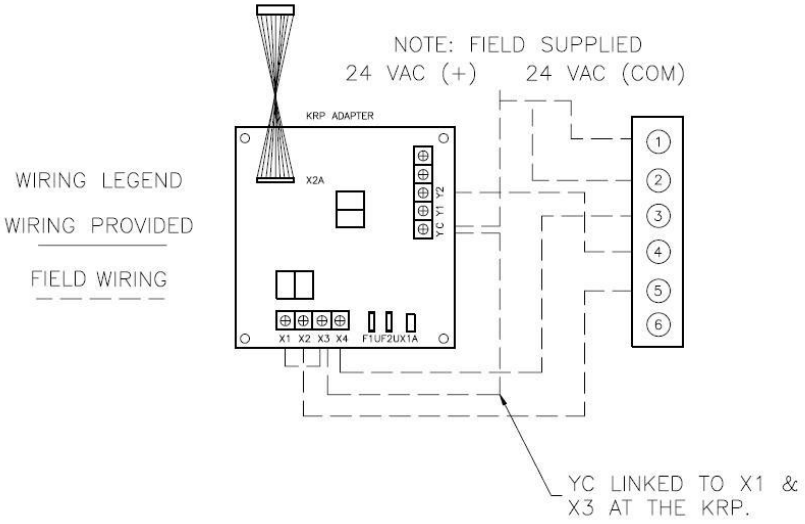


Fig. 3. Field Wiring Diagram

7. System Setup

To use the keypad when working with Setpoints, System, and Advanced Settings, Checkout tests, and Alarms:

- Navigate to the desired menu
- Press the button (Enter) to display the first item in the currently displayed menu.
- Use the and buttons to scroll to the desired parameter
- Press the button (Enter) to display the value of the currently displayed item.
- Press the button to increase (change) the displayed parameter value.
- Press the button to decrease (change) the displayed parameter value.
- Press the button to accept the displayed value and store it in non-volatile RAM.
- CHANGE STORED displays.
- Press the button (Enter) to return to the current parameter.
- Press the button (MenuUp/Exit) to return to the previous menu.

Note: Refer to the Honeywell JADE 7220 product data sheet for specific information on settings and parameters available for use.
http://customer.honeywell.com/techlit/pdf/63-0000s/63-2700.pdf