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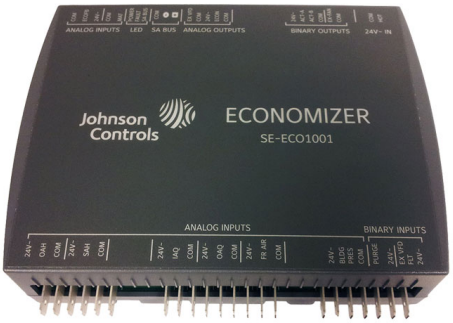
Since 1965

Controller Logic
Product Data Sheet



Foremost HVAC Accessory Manufacturer

MicroMetl

Since 1965

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Honeywell JADE™ Controls

W7220 Economizer Module

For Mixing Boxes and Economizers

GENERAL

IMPORTANT: Read these instructions completely before attempting to install this economizer accessory.

These instructions are intended as a general guide and do not supersede local codes in any way.

All phases of the installation must comply with all NATIONAL, STATE and LOCAL CODES.

IMPORTANT: This document is the property of the end user and is to remain with the equipment.

The JADE™ Economizer System is an expandable economizer control system, which includes a W7220 Economizer Module (controller) with an LCD and keypad. The W7220 can be configured with optional sensors.

The W7220 Economizer Module can be used as a standalone economizer module wired directly to a commercial set back space thermostat and sensors to provide Outdoor Air Dry Bulb Economizer control.

The W7220 Economizer Module can be connected to optional Sylk Bus (S-Bus) sensors for Single or Comparative (Differential/Dual) Enthalpy control. The W7220 Economizer Module provides power and communications on the S-Bus for the Sylk Bus sensors.

The W7220 Economizer Module automatically detects sensors by polling to determine which sensors are present. If a sensor loses communications after it has been detected, the W7220 Economizer Module indicates a device fail error on its LCD.

SAFETY CONSIDERATIONS

⚠ WARNING

Turn off main power to the roof top unit (RTU) or air handling unit (AHU). Lockout and tag disconnect switch before starting installation, performing service, or maintenance operations.

Electrical shock and/or moving parts could cause personal injury, or death.

⚠ CAUTION

When working on air conditioning equipment, observe precautions in literature, tags and labels attached to the unit and other safety precautions that may apply.

Installation and servicing of air conditioning equipment can be hazardous due to high pressures of hazardous gases, moving parts, electrical components, and sharp sheet metal parts. Wear safety glasses and gloves.

Only trained and qualified service personnel should install, service, or repair air conditioning equipment. Untrained personnel can perform basic maintenance functions of cleaning coils, and cleaning and replacing filters, but all other operations should be performed by trained service personnel.

For additional information, you can scan QR Code with your smart device to view Honeywell Document 63-2700

QR Code
Honeywell 63-2700

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RD160324
Form No. CD-HJ-B

PRE INSTALLATION

Please read instructions thoroughly before beginning. Unpack and inspect economizer contents from carton. Contact MicroMetl immediately if any parts are missing or damaged.

1. Check ratings given in instructions and on the product to ensure the product is suitable for your application.

2. After installation is complete, check out product operation as provided in these instructions.

NOTE: The W7220 Economizer Module will be in the "set up" mode for the first 60 minutes after powered. The Mixed Air (MA) sensor is a system "critical" sensor, if the MA sensor is removed during the set up mode, the W7220 will alarm. If a sensor for Outside Air (OA) or S-Bus device (sensor, actuator) is disconnected during the set up mode, the W7220 will not alarm that failure. After 60 minutes the W7220 will change to operation mode and all components removed or failed will alarm in the operation mode.

MOUNTING

Economizer Module Location and Mounting

MicroMetl does not always provide a mounted W7220 control. In some cases the control must be mounted by the installer in the RTU control panel. In others the control may be mounted in an enclosure in the Outdoor Air Hood, or as in the case of Mixing Boxes, will require the installer to mount the control external of the mixing box on a panel, or the duct that is most convenient to access.

The W7220 module may be mounted in any orientation; however, mounting in the orientation that permits proper viewing and use of the LCD display and keypad is best.

IMPORTANT: *Avoid mounting in areas where corrosive vapors can attack the metal parts of the module's circuit board.*

IMPORTANT: *The module must be mounted in a position that allows clearances for wiring, servicing, and removal.*

Sensor Location and Mounting

The JADE™ Economizer System uses digital sensors for control. The C7250 temperature sensor (MAT[a] and OAT[b]) is a 20k-Ohm NTC device (Fig. 1). An MAT sensor is required for all applications and is typically mounted in the blower section of the HVAC unit (Fig. 3). It can either be wired using a 2-pin header or using a Molex Edge Connector.

The OAT sensor (Fig. 1) is the minimum requirement for outdoor air sensing typically installed at the OA damper opening. Field installation in the outdoor air opening of the outdoor air hood is required for Mixing Boxes. Optional OA[c], RA[d] and DA[e] Sylk Bus sensors (Fig. 2) communicate with the W7220 on the two-wire communication bus and can either be wired using a 2-pin header or using a Molex Edge Connector.

MAT[a] = Mixed Air Temperature Sensor (aka Supply Air)

OAT[b] = Outdoor Air Temperature Sensor

OA[c] = Outdoor Air Temperature and Humidity Sensor (default)

RA[d] = Return Air Temperature and Humidity Sensor

DA[e] = Discharge Air Temperature and Humidity Sensor

Enthalpy Control Sensor Configuration

The Enthalpy Control sensor C7400S (Fig. 2) communicates with the W7220 controller on the two-wire communications bus and can either be wired using a two pin header or using a side connector. This sensor is used for all Temperature/Humidity sensing for OA (Outdoor Air), RA (Return Air), and DA (Discharge Air), depending on address configuration of the three position DIP switches. See Table 3 for DIP switch details.

Fig. 1 - 20k Ohm Dry Bulb Sensor

Fig. 2 - Sylk Bus Sensor

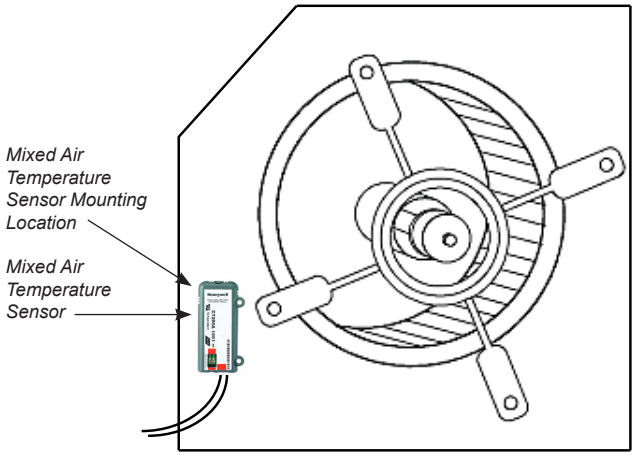

Fig. 3 - Typical

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⚠ WARNING

Turn off main power to the roof top unit (RTU) or air handling unit (AHU). Lockout and tag disconnect switch before starting installation, performing service, or maintenance operations.

Electrical shock and/or moving parts could cause personal injury, or death.

⚠ WARNING

Equipment Damage Hazard - Electrostatic discharge can short equipment circuitry.

Ensure that you are properly grounded before handling the unit

WIRING

All wiring must comply with applicable electrical codes and ordinances, or as specified on installation wiring diagrams. Module wiring at the OEM factory is terminated via the header pin terminals (Fig. 5) located on the left (Table 1) and right (Table 2) sides. The header terminal pins and the terminal blocks have common terminations for the appropriate inputs or outputs.

Sylk Bus (S-Bus) Accessories

Sylk is a two-wire, polarity insensitive bus that provides communications between a Sylk-enabled actuator and/or sensor(s) and a Sylk enabled controller.

The Sylk-enabled actuator and/or sensor(s) may be mounted up to 200 ft. (61m) from the controller; however, twisted pair wire is recommended for wire runs longer than 100 ft. (30.5m). Using Sylk-enabled controls saves I/O on the controller and is faster and cheaper to install since the bus is polarity insensitive.

Depending on the model the S-Bus cable can be either a pair of Brown wires, or a pair of Gray wires.

Important: Do not route High Voltage wire alongside Low Voltage/S-Bus wire. The electrical-magnetic force field induced by the High Voltage Cable will affect the operation of the system.

Actuator Wiring Options

1. The W7220 controller can only have one (1) communicating actuator connected to it.

2. Or, up to four (4) non-communicating and two (2) 2-position actuators (1 each on EXH1 and AUX1 O)

3. Or, one (1) communicating with up to four (4) non-communicating and two (2) 2-position actuators (1 each on EXH1 and AUX1 O)

When using a 2-position actuator on the AUX1-O, the AUX1-O must be programmed for Exh2. The % open programmed for the AUX1-O is the % open the damper will be when the actuator powered open. Connect 24 Vac to AUX1-O and W7220 “C” terminal. EXH1 and AUX1-O are 24Vac outputs.

Important: Multiple actuators may require a larger VA control transformer, or multiple transformers.

Analog Controls

Sensors

The Mixed Air Temperature (MAT - aka Discharge or Supply Air) sensor is a 20k-Ohm Negative Temperature Coefficient (NTC) device. The optional Outdoor Air Temperature (OAT) sensor is also a 20k-Ohm NTC device. These sensors (Fig. 1) must only be connected to the MAT and OAT terminals.

Typically, 18ga. wire is to be used and is good up to 200 ft. The wiring pair supplied by MicroMetl for the analog sensors can be Red and Purple or Pink and Purple; however, some models use the same wires as the OA Enthalpy Sensor (see Sylk Bus Accessories). Just be sure they are connected to the OAT terminals.

CO_2 Sensor

See instructions supplied with the CO_2 sensor supplied for your project.

When using the C7232 Honeywell CO_2 sensors the black and brown common wires are internally connected to each other allowing for one wire to be connected to “IAQ COM” on the W7220. Use the power from the W7220 to power the CO_2 sensor, but if using a separate transformer tie the common from each transformer together. (See Fig. 4 for the C7232 and C7632 wiring examples.)

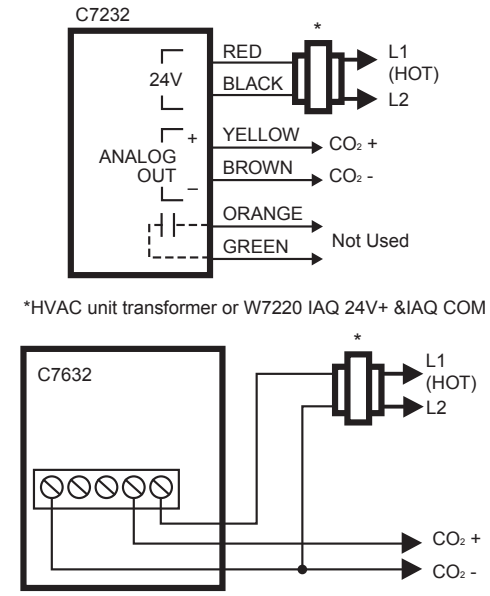

Fig. 4 – Typical CO_2 Sensor wiring

Module Wiring

The left Terminal block of the W7220 economizer module provides two connection options. One is the 6-lug terminal block and the other is pin connectors. MicroMetl only offers the pin connectors (Fig. 5). Table 1 and 2 provide further explanation of the terminals.

Thermostat Connections

See Economizer/Mixing Box instructions for unit specific connections and wiring diagram.

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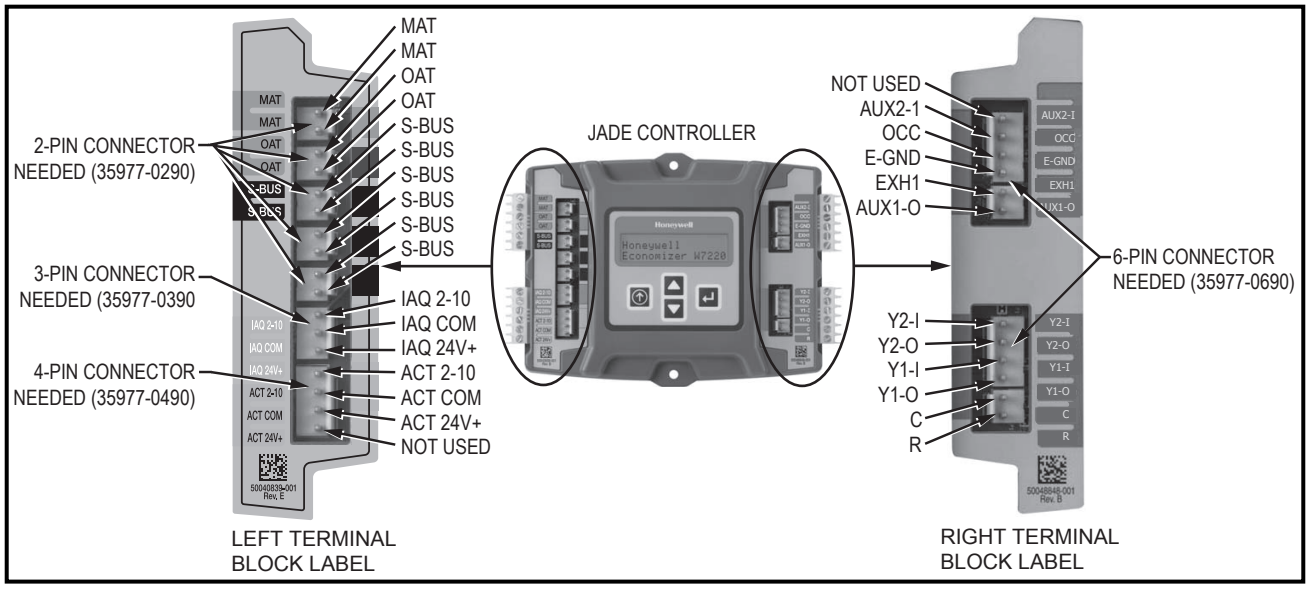

Fig. 5 – JADE W7220 Economizer Module Pin Identification

Label	Type	Description
Top Left Terminal Block		
MAT MAT	20k NTC and COM	Mixed Air Temperature Sensor (polarity insensitive connection)
OAT OAT	20k NTC and COM	Mixed Air Temperature Sensor (polarity insensitive connection)
S-BUS S-BUS	SYLK Bus	Sylk Bus sensor (polarity insensitive connection)
Bottom Left Terminal Block		
IAQ 2-10	2-10 Vdc	Air Quality Sensor Input (e.g. CO_2 sensor)
IAQ COM	COM	Air Quality Sensor Common
IAQ 24V	24 Vac	Air Quality Sensor 24 Vac Source
ACT 2-10	2-10 Vdc	Damper Actuator Output (2-10 Vdc)
ACT COM	COM	Damper Actuator Output Common
ACT 24V	24 Vac	Damper Actuator 24 Vac Source
	n/a	The bottom pin is not used

Table 1 – W7220 Left Side Control Description/Identification

Label	Type	Description
Top Right Terminal Block		
	n/a	The first pin is not used
AUX2-I	24 Vac IN	Shut Down (SD) or Heat (W) Conventional only or Heat Pump Changeover (O/B) in Heat Pump mode
OCC	24 Vac IN	Occupied / Unoccupied Input
E-GND	EGND	Earth Ground – System Required
EXH1	24 Vac OUT	Exhaust Fan 1 Output
AUX1-O	24 Vac OUT	Programmable: Exhaust fan 2 output Or ERV Or System Alarm output
Bottom Right Terminal Block		
Y2-I	24 Vac IN	Y2 In – Cooling Stage 2 Input from space thermostat
Y2-O	24 Vac OUT	Y2 Out – Cooling Stage 2 Output to stage 2 mechanical cooling
Y1-I	24 Vac IN	Y1 In – Cooling Stage 1 Input from space thermostat
Y1-O	24 Vac OUT	Y1 Out – Cooling Stage 1 Output to stage 1 mechanical cooling
C	COM	24 Vac Common
R	24 Vac	24 Vac Power (Hot)

Table 1 – W7220 Right Side Control Description/Identification

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SETUP AND CONFIGURATION

Enthalpy Control Sensor Configuration

The Enthalpy Control sensor C7400S communicates with the W7220 controller on the two-wire communications bus and can either be wired using a two pin header or using a side (edge) connector. This sensor is used for all Temperature/Humidity sensing for OA (Outdoor Air), RA (Return Air), and DA (Discharge Air), depending on address configuration of the three position DIP switches. During installation the sensors are set for the usage desired. (See Table 3 for switch setting details.)

NOTE: The protective film on the dip switch is only necessary during the factory assembly process. Simply push through the film to set the dip switches; this will not harm the device.

Once installed, a sensor can be changed to a different application by simply changing the DIP switch setting and relocating to the appropriate location.

DIP Switch Positions for Switches 1, 2, & 3			
Use	**1**	**2**	**3**
MAT [a]	N/A	N/A	N/A
MAT [b]	N/A	N/A	N/A
OA [c] SylkBus	OFF	OFF	OFF
RA [d] SylkBus	ON	OFF	OFF
DA [e] SylkBus	OFF	ON	OFF

MAT [a] = Mixed Air Temperature Sensor
OAT [b] = Outdoor Air Temperature Sensor
OA [c] = Outdoor Air Temperature and Humidity Sensor (default)
RA [d] = Return Air Temperature and Humidity Sensor
DA [e] = Discharge Air Temperature and Humidity Sensor

Table 3 - Sensor Identification and Dip Switch Setting

Enthalpy Settings

When the OA Temperature, Enthalpy and Dewpoint are below the respective setpoints, the outdoor air can be used for economizing. Fig. 7 shows the new single enthalpy boundaries the JADE™ Economizer System uses. There are 5 boundaries (setpoints ES1 thru ES5), which are defined by Dry Bulb Temperature, Enthalpy and Dewpoint. Refer to Table 6 for ENTH CURVE setpoint values.

To use enthalpy, the W7220 must have a C7400S enthalpy control sensor for OA. The W7220 calculates the Enthalpy and Dewpoint using the OA Temperature and Humidity input from the OA Sensor. When the OA Temperature, OA Humidity and OA Dewpoint are all below the selected boundary, the economizer sets the economizing mode to YES, economizing is available.

When all of the OA conditions are above the selected boundary, the conditions are not good to economize and the mode is set to NO. There is also a High Limit (HL) boundary for Differential (Dual) Enthalpy. Refer to Table 6 for ENTH CURVE and High Limit (HL) setpoint values.

CO_2 Setup

When using any CO_2 sensor be sure the sensor scale and the JADE scale are the same. For example, as shipped, the Honeywell C7232 scale is 500 – 1500 ppm @ 2-10Vdc. The W7220 control is 0-2000 ppm and 2-10Vdc, as shipped. When using the C7232 with the W7220 you will need to set the CO_2 ZERO to 500 ppm and the CO_2 SPAN to 1000 ppm in the ADVANCED SETUP menu; however, if the sensor jumpers have been changed in any way be sure to match the scaling accordingly. See Fig. 6 and Tables 4 & 5 for how the Honeywell C7232 sensor is shipped.

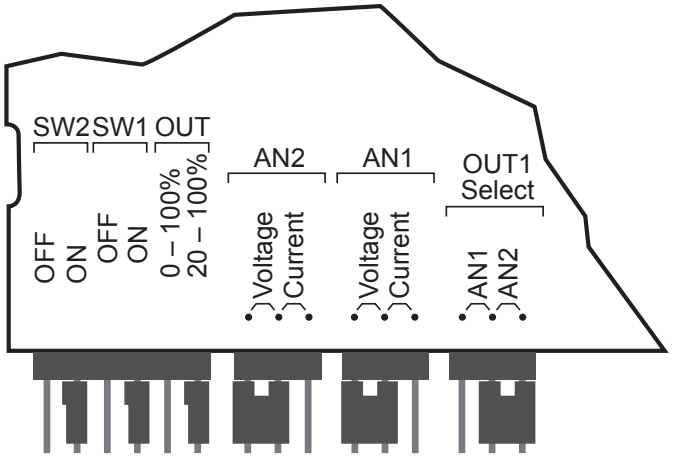

Fig. 6 – Honeywell C7232 Jumper Configuration

SW1	SW2	AN (ppm)	Relay [a] (ppm)
ON	ON	0 to 1000	1000
ON	Off	0 to 2000	1200
Off [b]	On [b]	500 to 1500	800
Off	Off	500 to 2000	1200

[a] Dry Contact close/open (see Fig. 4)
[b] As shipped

Table 4 – Honeywell C7232 Switch ppm Output Configuration

AN	OUT	
	0-100%	**20-100%**
Voltage	0-10Vdc	2-10Vdc
Current	0-20 mA	4-20 mA

Table 5 – Honeywell C7232 Voltage/Current Output Configuration

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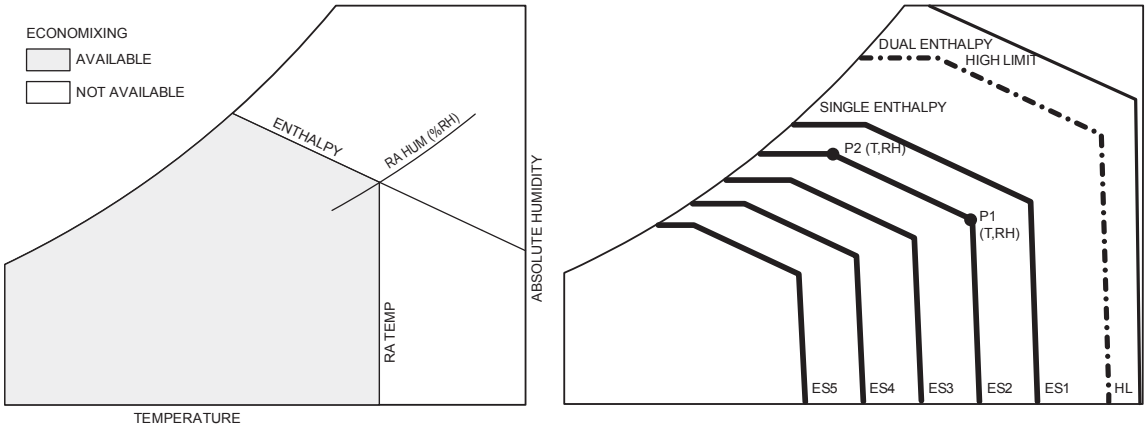

Fig. 7 – Enthalpy Boundaries

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

Table 6 – Enthalpy Cures Setpoints

Two-Speed Fan Operation

The W7220 controller has the capability to work with a system using a 2-speed supply fan. The W7220 does not control the Supply Fan directly. It uses the following input status to determine the speed of the supply fan to control the OA damper to the required position for that fan speed.

State	Fan Speed
OCC	Low
Y1	Low
Y2	High
W	High

Table 7 – Fan Speed

The W (heating mode) is not controlled by the W7220, either, but it requires the status to know where to position the OA damper for minimum position for the fan speed (see Table 7).

The 2 speed fan delay is available when the system is programmed for 2 speed fan (in the System Setup menu item). The 2 speed fan delay is defaulted to 5 minutes and can be changed in the Advanced Setup Menu to between 0 min. to 20 min. When the unit has a call for Y1 (IN) while in the Free Cooling Mode and there is a call for Y2 (IN), the 2-speed fan delay starts while the unit fan goes to High Speed. The OA damper modulates to 100% open.

The sequence is as follows:

• The Y2 (IN) call will be satisfied within the delay time while the damper is 100% open and the fan on high speed, or:

• The delay time will be exceeded and the Y1 compressor will be commanded on.

User Interface and Keypad Overview

The user interface consists of a LCD display and a 4-button keypad on the front of the economizer controller. The four navigation buttons are used to scroll through the menus and menu items, select menu items, and to change parameter and configuration settings (see Fig. 8).

Fig. 8 – W7220 Typical Layout

Using the Keypad with Menus

To use the keypad when working with menus:

• Press the ▲ (Up arrow) button to move to the previous menu.

• Press the ▼ (Down arrow) button to move to the next menu.

• Press the ↵ (Enter) button to display the first item in the currently displayed menu.

• Press the ⓘ (Menu Up/Exit) button to exit a menu's item and return to the list of menus.

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Using Keypad with Settings and Parameters

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

1. Navigate to the desire menu.
2. Press the ↵ (Enter) button to display the first item in the currently displayed menu.
3. Use the ▲ and ▼ buttons to scroll to the desired parameter.
4. Press the ↵ (Enter) button to display the value of the currently displayed item.
5. Press the ▲ button to increase (change) the displayed parameter value.
6. Press the ▼ button to decrease (change) the displayed parameter value.

***NOTE:** When values are displayed, pressing and holding the ▲ or ▼ button causes the display to automatically increment.*

7. Press the ↵ (Enter) button to accept the displayed value and store it in nonvolatile RAM.
8. "CHANGE STORED" displays.
9. Press the ↵ (Enter) button to return to the current menu parameter.
10. Press the ⓘ (MENU UP/EXIT) button to return to the previous menu.

Menu Structure

The Menus in display order are:

- STATUS*
- SETPOINTS
- SYSTEM SETUP
- ADVANCED SETUP
- CHECKOUT
- ALARMS

QR Code
Honeywell 63-2700

** This is a Read Only menu. No values can be changed in this menu.*
Scan QR code for Honeywell Product Data 63-2700 for more information.

Setup Sequence

It is important to establish the operating parameters the system will be operating prior to making changes to any

MENU – i.e. Number of RTU/AHU fan speeds, with/without CO_2 (DCV), etc. and have all sensors installed and operational before attempting the setup sequence.

Single Speed Fan and No DCV (CO_2)

1. After power up scroll down ▼ to SYSTEM SETUP
2. Enter the SYSTEM SETUP MENU and enter the install date.
3. If the RTU/AHU Economize/Mixing Box instructions require the AUX2-I to be connected to W1 at the Low Voltage Terminal Board scroll to AUX2-I to change the Shutdown (SD) function to Heat (W1)
4. Press ⓘ (MENU UP/EXIT)
5. Scroll up ▲ to SETPOINTS and press ENTER
6. Scroll down ▼ to DRY BULB SET, or ENTH CURVE, depending on the OA Changeover Strategy of the equipment. Change value per local codes, Engineers specification, or desired setting.

Note: For the California market, please refer to Table 8 for required changeover setpoints.

7. Scroll down ▼ to MIN POS for minimum position setting.
8. Press ⓘ (MENU UP/EXIT) – Setup is complete.

2-Speed Fan

1. After power up, scroll down ▼ to SYSTEM SETUP
2. Enter the SYSTEM SETUP MENU and enter the install date.
3. Scroll down ▼ to AUX2 IN – Change Shutdown (SD) to Heat (W1)
4. Scroll down ▼ to Fan Speed – Change from 1 Speed to 2 Speed.
5. Press ⓘ (MENU UP/EXIT)
6. Scroll down ▼ to ADVANCED SETUP if DCV option is in play (See DCV (CO_2) below).

If not:

7. Scroll up ▲ to and enter SETPOINTS
8. Scroll down ▼ to DRY BULB SET, or ENTH CURVE, depending on the OA Changeover Strategy of the equipment. Change value per local codes, Engineers specification, or desired setting.

Note: For the California market, please refer to Table 8 for required changeover setpoints.

9. Scroll down ▼ to MIN POS H (high speed) and MIN POS L (low speed) for minimum position settings.
10. Press ⓘ (MENU UP/EXIT) – Setup is complete.

DCV (CO_2)

1. After power up, scroll down ▼ to SYSTEM SETUP for install date. If previously in SYSTEM SETUP for Fan Speed Setup, scroll down ▼ to ADVANCED SETUP.
2. Enter ADVANCED SETUP and scroll down ▼ to CO_2 ZERO. Set the Zero Value (2Vdc) to match the CO_2 Sensor. See CO_2 Setup on Page 5 for example.
3. Scroll down ▼ to CO_2 SPAN. Set the Span to match the CO_2 Senor. See CO_2 Setup for example.
4. Press ⓘ (MENU UP/EXIT)
5. Scroll up ▲to SETPOINTS and press ↵ ENTER
6. Scroll down ▼ to DRY BULB SET, or ENTH CURVE, depending on the OA Changeover Strategy of the equipment. Change value per local codes, Engineers specification, or desired setting.

Note: For the California market, please refer to Table 8 for required changeover setpoints.

7. Scroll down ▼ to DCV SET to set the CO_2 setpoint
8. Scroll down ▼ to VENT MAX H (high speed) and VENT MAX L (low speed), and VENT MIN H (high speed) and VENT MIN L (low speed) for minimum position settings.
9. Press ⓘ (MENU UP/EXIT) – Setup is complete.

CHECKOUT

Inspect all wiring connections at the Economizer module's terminals, and verify compliance with the installation wiring diagrams.
For checkout, review the Status of each configured parameter and perform the Checkout tests.*

Status

Use the Status menu (see Table 8) to check the parameter values for the various devices and sensors configured.

NOTE: See "Interface Overview" on page 6 for information about menu navigation and use of the keypad.

Checkout Tests

Use the Checkout menu (Table 8) to test the damper operation and any configured outputs. Only items that are configured are shown in the Checkout Menu.*

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Device Type [a]	Climate Zones	Required High Limit (Economizer Off When):
		Description
Fixed Dry Bulb	1, 3, 5, 11-16	Outdoor air temperature exceeds 75°F
	2, 4, 10	Outdoor air temperature exceeds 73°F
	6, 8, 9	Outdoor air temperature exceeds 71°F
	7	Outdoor air temperature exceeds 69°F
Differential Dry Bulb	1, 3, 5, 11-16	Outdoor air temperature exceeds return air temperature
	2, 4, 10	Outdoor air temperature exceeds return air temperature minus 2°F
	6, 8, 9	Outdoor air temperature exceeds return air temperature minus 4°F
	7	Outdoor air temperature exceeds return air temperature minus 6°F
Fixed Enthalpy [b] + Fixed Dry Bulb	All	Outdoor air enthalpy exceeds 28 Btu/lb. of dry air [b] or Outdoor air temperature exceeds 75°F

[a] Only the high limit control devices listed are allowed to be used and at the setpoints listed. Others such as Dew Point, Fixed Enthalpy, Electronic Enthalpy, and Differential Enthalpy Controls, may not be used in any climate zone for compliance with Section 104.4(e)1 unless approval for use is provided by the Energy Commission Executive Director.

[b] At altitudes substantially different than sea level, the Fixed Enthalpy limit value shall be set to the enthalpy value at 75°F and 50% relative humidity. As an example, at approximately 6,000 foot elevation, the fixed enthalpy limit is approximately 30.7 Btu/lb.

Table 8 - California Title 24 Required Changeover Setpoints

NOTE: See "Interface Overview" on page 6 for information about menu navigation and use of the keypad.

To perform a Checkout test:

1. Scroll to the desired test in the Checkout menu using the ▲ (UP) and ▼ (DOWN) buttons.
2. Press the ↵ (ENTER) button to select the item.
3. RUN? will appear on the display.
4. Press the ↵ (ENTER) button to start the test.
5. The unit pauses and then displays IN PROGRESS
6. When all parameters have been tested, press the ⓘ (MENU UP/EXIT) to end the test.

The checkout tests can all be performed at the time of installation or any time during the operation of the system as a test that the system is operable.

Checkout in Hot Weather

1a. If you are using temperature only economizing change over, remove the C7250A dry bulb sensor from the OAT terminals.

1b. If you are using enthalpy change over and have a C7400S sensor with a date code prior to 1301, remove the sensor and replace it with one with a date code after 1301.

2. Connect a C7400S S-Bus sensor to the S-Bus terminals (Brown or Gray) on the W7220A Jade using 18 AWG to 22 AWG solid or stranded wires.

3. Check the STATUS screen for actual outdoor air (OA) temperature and OA humidity readings.

4. Change the 3-position DIP switch on the C7400S sensor from 1 OFF, 2 OFF, 3 OFF to 1 ON, 2 ON, 3 ON position and immediately back to 1 OFF, 2 OFF 3 OFF position.

5. The output of the C7400S sensor to the W7220A will be 40ºF and 40 %RH which will allow the economizer to go into free cooling mode (economizing available).

6. Make sure you have 24Vac on terminal Y1 (IN) to simulate a call for cooling.

7. After 15 minutes the C7400S sensor will change back to the actual OA temperature and humidity.

NOTE: If you removed a dry bulb sensor or earlier version of the enthalpy sensor for this test, remove the test C7400S and replace with the original sensor. For OA temperature be sure to reconnect wires to the OAT terminals.

ALARMS

The Economizer module provides alarm messages that display on the 2-line LCD.

NOTE: Upon power up, the module waits 60 minutes befowre checking for alarms. This allows time for all the configured devices (e.g. sensors, actuator) to become operational. The exception is the MA sensor which will alarm immediately.

If one or more alarms are present and there has been no keypad activity for at least 5 minutes, the Alarms Menu displays and cycles through the active alarms. You can also navigate to the Alarms menu at any time.

Clearing Alarms

Once the alarm has been identified and the cause has been removed (e.g. replaced faulty sensor), the alarm can be cleared from the display.

To clear an alarm, perform the following:

1. Navigate to the desired alarm using the ▲ (UP) and ▼ (DOWN) buttons.
2. Press the ↵ (ENTER) button.
3. ERASE? displays.
4. Press the ↵ (ENTER) button.
5. ALARM ERASED displays.
6. Press the button ⓘ (Menu Up/Exit) to complete the action and return to the previous menu.
7. Repeat steps 1 thru 5 for multiple alarms,

NOTE: If the alarm still exists after you clear it, it will redisplay within 5 seconds.

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