

Honeywell
C7400S
Dual
Enthalpy
Sensor
Upgrade
Kit



Honeywell C7400S Dual Enthalpy Sensor Upgrade Kit Instruction Manual

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Honeywell

Honeywell C7400S Dual Enthalpy Sensor Upgrade Kit



Specifications

- **Product Name:** RXRX-BV01 Dual Enthalpy Sensor Upgrade Kit
- **Enthalpy Sensor:** Honeywell PN C7400S
- **Includes:** Enthalpy Sensor, Screws for sensor attachment to economizer

Product Usage Instructions

Installation:

1. Mount the C7400S return air enthalpy sensor on the inside of the economizer behind the relief damper.
2. If installing before the economizer is in place, install from the rear through the return blades. If after installation, reach in through the barometric relief blades.
3. Screw the sensor to the economizer side through prepunched holes, aligning as shown in Figure 1.
4. Orient the sensor with wire connections at the top and airflow sensing slots at the bottom.

Operation:

Differential enthalpy control offers energy savings and increased comfort:

- If outdoor air enthalpy is lower than return enthalpy, outdoor air damper modulates open for cooling.
- If outdoor enthalpy is higher than return enthalpy, outdoor air damper closes to minimum position for ventilation.
- If outdoor and return air enthalpy are equal, outdoor damper modulates open for cooling.

General

For maximum energy savings, this upgrade kit will allow the economizer to compare the outdoor air enthalpy to the return air enthalpy, instead of a user-selected setpoint to determine if “free cooling” is available. This Sylk Bus Sensor is a combination temperature and humidity sensor which is powered by and communicates on the two-wire communication bus of the W7220 economizer logic module. All OA (Outside Air) and RA (Return Air) sensors are the same. Sensor must be set for the type of sensing using the three DIP switches located on the sensor during INSTALLATION.

Dip Switch Setting	C1	C2	C3
Return Air Enthalpy Sensor	ON	OFF	OFF
Outside Air Enthalpy Sensor	OFF	OFF	OFF

Parts Included

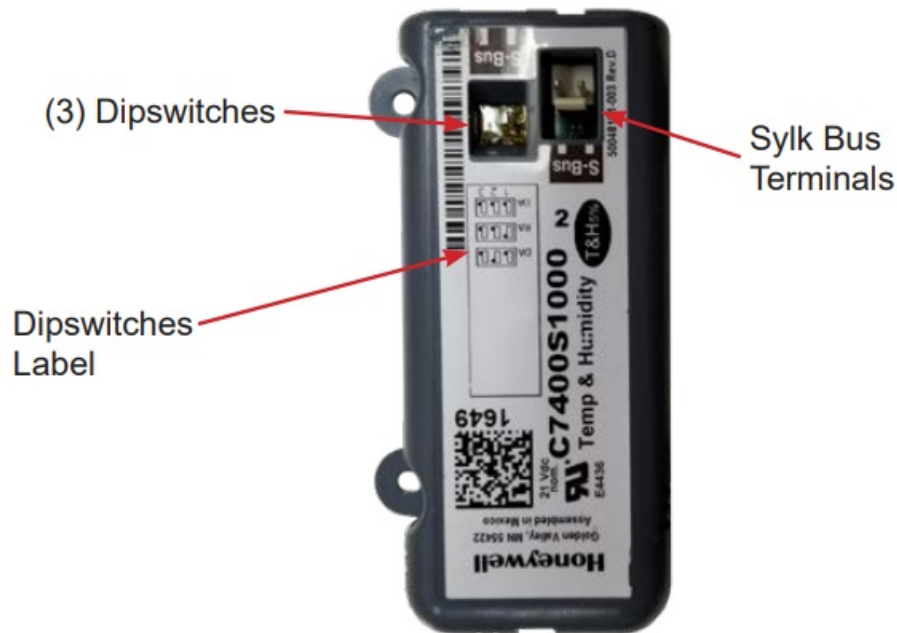
1. Enthalpy Sensor (Honeywell PN C7400S)
2. Screws for sensor attachment to economizer

WARNING: Risk of Electrical Shock

Disconnect the power supply and install a lockout tag before wiring connections are made to avoid possible electrical shock or damage to the equipment.

DUAL ENTHALPY SENSOR

FIGURE 1



The economizer comes standard with a C7400S outdoor enthalpy factory mounted in the outdoor air stream, and is factory wired to the W7220 Logic Module. A second C7400S enthalpy sensor can be added to measure the return air enthalpy and provide a dual enthalpy strategy. The C7400S sensor is shown above in Figure 1.

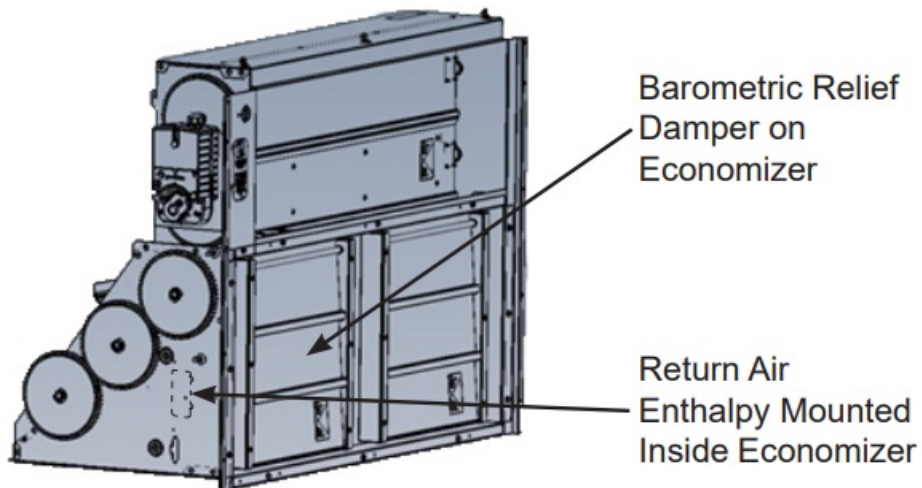
1. The C7400S return air enthalpy mounts on the inside of the economizer, behind the relief damper. If installing the sensor before the economizer is installed, the sensor can be installed from the rear of the economizer through the return blades. If installing the sensor after the economizer has been installed the sensor can be installed by reaching in through the barometric relief blades.
2. Screw the sensor to the economizer side through pre-punched holes as shown in Figure 2 and 3. When installed the sensor should be oriented as shown in Figure 1 with the wire connections at the top and airflow sensing slots at the bottom.
3. The economizer has (2) purple wires with white strips in the harness for the return sensor. See economizer diagram for connections and Figure 4. Connect wires to the sensor. Make sure wires and sensor do not

interfere with blade rotation.

4. When the C7400S sensor is used for return enthalpy, the dip switches on the sensor (see Figure 1) must be set to ON-OFF-OFF.

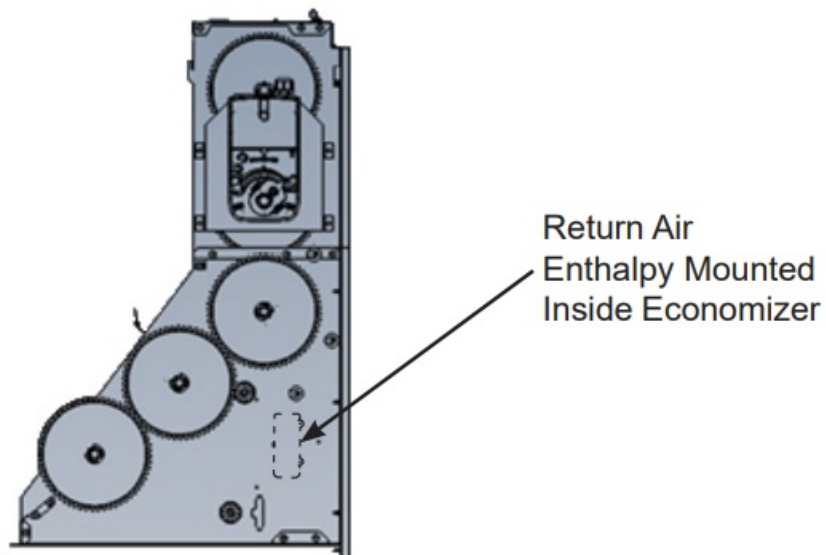
RETURN ENTHALPY LOCATION

FIGURE 2



SIDE VIEW OF SENSOR LOCATION

FIGURE 3



Wires for Return Enthalpy Sensor

FIGURE 4



OPERATION

Differential enthalpy control provides energy savings and increased comfort by using the air (outdoor or return) with the lowest enthalpy for free-cooling.

- If the outdoor air enthalpy is lower than the return enthalpy (free colling available), the outdoor air damper modulates open on a call for cooling.
- If the outdoor enthalpy is higher than the return enthalpy, the outdoor air damper closes to minimum position (ventilation). When the indoor fan is ON and occupancy input of economizer controller is ON.
- If outdoor air enthalpy and return air enthalpy are equal (free colling available), the outdoor damper modulates open on a call for cooling.

FAQ's

Q: How should I set the dip switches on the C7400S sensor for return enthalpy?

A: The dip switches must be set to ON-OFF-OFF for return enthalpy. Refer to Figure 1 for visual guidance.

Q: What precautions should be taken during installation?

A: Disconnect power supply and install a lockout tag before making wiring connections to avoid electrical shock or equipment damage.

Documents / Resources

	<p>Honeywell C7400S Dual Enthalpy Sensor Upgrade Kit [pdf] Instruction Manual C7400S, C7400S Dual Enthalpy Sensor Upgrade Kit, Dual Enthalpy Sensor Upgrade Kit, Enthalpy Sensor Upgrade Kit, Upgrade Kit, Kit</p>
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References

- [User Manual](#)

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