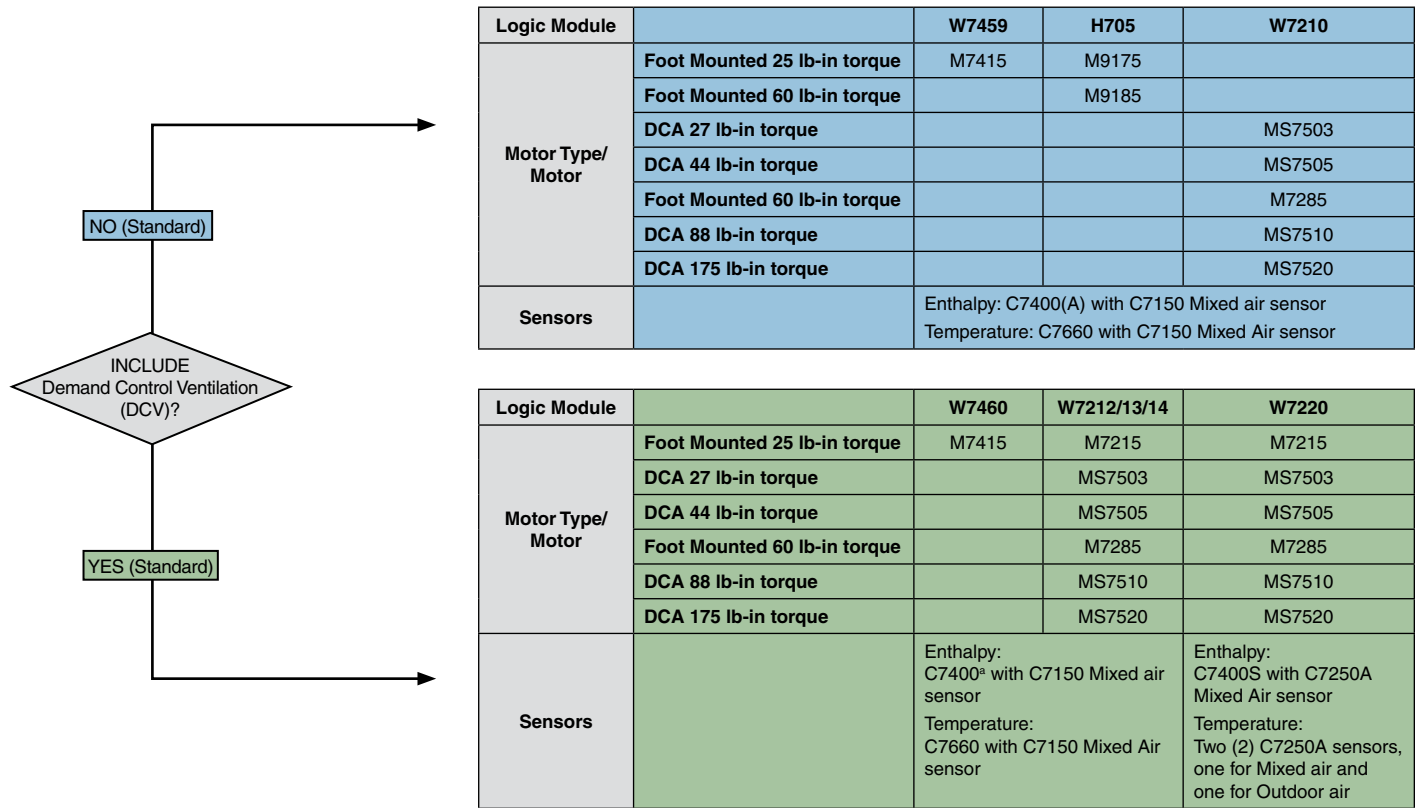# Economizers

Honeywell

QUICK SELECTION GUIDE

Your Guide To Energy Efficiency, Cost Savings And Extended Equipment Life

ECONOMIZER SYSTEM

Easy-to-install Honeywell economizer controls save energy and help ensure that the latest ventilation codes are met. There are models for both standard rooftop units as well as heat pump applications. They're built to last — averaging 15 years of reliable performance. Add it all up, and you'll see that Honeywell economizers are a great choice for you and your customers.

NO (Standard)

INCLUDE
Demand Control Ventilation
(DCV)?

YES (Standard)

Logic Module		W7459	H705	W7210
Motor Type/ Motor	Foot Mounted 25 lb-in torque	M7415	M9175	
	Foot Mounted 60 lb-in torque		M9185	
	DCA 27 lb-in torque			MS7503
	DCA 44 lb-in torque			MS7505
	Foot Mounted 60 lb-in torque			M7285
	DCA 88 lb-in torque			MS7510
	DCA 175 lb-in torque			MS7520
Sensors		Enthalpy: C7400(A) with C7150 Mixed air sensor Temperature: C7660 with C7150 Mixed Air sensor		

Logic Module		W7460	W7212/13/14	W7220
Motor Type/ Motor	Foot Mounted 25 lb-in torque	M7415	M7215	M7215
	DCA 27 lb-in torque		MS7503	MS7503
	DCA 44 lb-in torque		MS7505	MS7505
	Foot Mounted 60 lb-in torque		M7285	M7285
	DCA 88 lb-in torque		MS7510	MS7510
	DCA 175 lb-in torque		MS7520	MS7520
Sensors			Enthalpy: C7400[a] with C7150 Mixed air sensor Temperature: C7660 with C7150 Mixed Air sensor	Enthalpy: C7400S with C7250A Mixed Air sensor Temperature: Two (2) C7250A sensors, one for Mixed air and one for Outdoor air

[a] Enthalpy sensor. Use two for differential enthalpy and one for single enthalpy. For Dry Bulb only, use C7660. For W7220, enthalpy sensors are C7400S and temperature sensors are C7250A.
[b] To operate a Series 90 motor, the W7210, W7212, W7213, W7214, W7215 and W7220 require a Q7230 interface module or the proper resistor combination (included in the 4074EJM resistor kit); see form 63-2544 for details.
NOTE: Series 90 Modutrol™ Motors can be retrofitted using W7210, W7212, W7215 or W7220 Economizer Logic Modules and a Q7230 or the proper resistor combination. Refer to form 63-2544 for details on using Economizer Logic Modules with Series 90 Motors.

LOGIC MODULE

Honeywell Logic Modules are used to proportion outdoor and return air dampers for control of free cooling in commercial buildings. They can be used with Demand Control Ventilation Sensors, Enthalpy Sensors or Dry Bulb Temperature Sensors.

W7220   W7212/W7213/W7214   W7215/W7460   W7459

	Model	Indoor Sensor Input (ISI	Outdoor CO₂ Sensor Input (OSI)	Enthalpy High Limit	Exhaust Fan Setpoint	Shutdown and Air Change	Purge	Motors Controlled	Model Number
Standard	H705[a]	No	No	No	None	No	No	Series 90	H705A1003
	W7459	No	No	No	None	No	No	M7415	W7459A1001
				Yes					W7459D1005
	W7210	No	No	No	None	No	No	Series 72	W7210A1001
				Yes					W7210D1005
Advanced	W7212	Yes	No	No	Adjustable	No	No	Series 72	W7212A1009
	W7213/14[b]	Yes	No	No	Adjustable	No	No	Series 72	W7213A1008[b]
									W7214A1007[b]
	W7215	Yes	No	No	Adjustable	Yes	Yes	Series 72	W7215A1006
			Yes		Fixed		No		W7215B1004
	W7220	Yes	No	Yes	Adjustable	Shutdown	No	Series 72	W7220A1000

[a] The H705 includes a SPDT logic module and C7400 sensor (both affixed to the mounting plate).
[b] Terminals B-B1 (W7213) for heat pump applications, terminals 0-01 (W7214) for heat pump applications.

SENSOR

From the mounting option to the application type you need, Honeywell has you covered with a complete line of sensors. Temperature, CO_2, enthalpy — Honeywell has sensors for every situation to help ensure a perfect balance of energy efficiency and comfort. They're easy to install, and because Honeywell builds them, you know they're dependable.
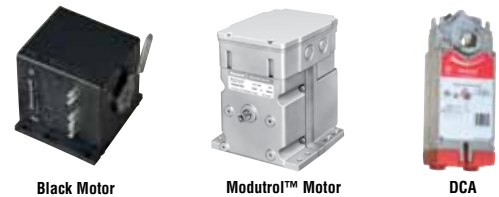
C7400S   C7250A   C7232A   C7232B   C7400   C7046   C7660

Model	Sensor Type	Application	Comments	Model Number	
				No Display	With Display
C7046	Temperature	Discharge or Mixed Air	Probe with flange	C7046A1004	-
C7150			Thermistor on board	C7150B1004	-
C7250	Temperature (20k)	Mixed or Outdoor Air	Thermistor on board with duct mount kit available for use as a probe	C7250A1001	-
C7400A	Enthalpy	Changeover	-	C7400A1004	-
C7400S	Enthalpy		Two wire Sylkbus communication to the W7220 economizer controller	C7400S1000	-
C7660*	Dry Bulb Temperature		Selectable temperature changeover	C7660A1000	-
C7232	CO_2	Wall Mount	Outputs: one relay, one 0/2-10 Vdc analog or 4-20mA	C7232A1016	C7232A1008
		Duct Mount		C7232B1014	C7232B1006
C7632	CO_2	Wall Mount	Outputs: one fixed 0-10 Vdc analog (fixed 0-2000 ppm)	C7632A1004	-
		Duct Mount		C7632B1002	-

*Do not use in differential temperature applications.
Duct mount kit for C7250A and C7400S part number 50053060-001.

SPRING RETURN ACTUATOR

Honeywell offers a complete line of foot-mounted and direct-coupled spring return actuators designed to work with economizer modules, so you won't have any concerns about compatibility or wiring issues. Ranging in torque from 25 to 175 in-lbs, these motors fill your requirements for all applications.

Black Motor   Modutrol™ Motor   DCA

Model	Torque (in-lb.)	Type	Comments	Model Number
M7215	25	Foot Mounted Black Motor	Counterclockwise modulating control: 2-10 Vdc, spring return clockwise.	M7215A1008
M7415	25		Counterclockwise modulating control based on mixed/discharge air sensor, spring return clockwise. Require Q769 for 6-9 Vdc or 4-20 mA.	M7415A1006
	25		Clockwise modulating control based on mixed/discharge air sensor, spring return counterclockwise. Require Q769 for 6-9 Vdc or 4-20 mA.	M7415B1004
M7285	60		Normally closed. 2-10 Vdc or 4-20mA.	M7285A1003
MS7505	44	Direct Coupled Actuator	Floating, modulating (2-10 Vdc or 4-20 mA), or two-position control, selectable failure position.	MS7505A2008
MS7510	88			MS7510A2008
MS7520	175			MS7520A2007
MS7503	27		Floating, modulating (0/2-10 Vdc or 4-20 mA), or two-position control, selectable failure position.	MS7503A2030
MS7403	27		Floating, modulating (2-10 Vdc or 4-20 mA), or three-position control or 3K ohm for economizer control.	MS7403A2030
MS7405	44			MS7405A2030

Honeywell economizers have 2-10 Vdc output to control the motors.

Economizer Tools

Economizer Savings Estimator

The Economizer Savings Estimator provides the estimated energy savings for using various control products for rooftop units. It's current with the latest ASHRAE energy and buildings standards, and you'll find a wide range of building types and ventilation solutions to ensure accuracy.

- Tool uses global information, so you can adjust it for your region.
- Wide range of variables — occupancy, setpoints, utility rates and much more — lets you fine-tune the tool for your building type.
- Calculates the building's HVAC carbon site footprint for a greater understanding of the environmental impact.

Use the Economizer Savings Estimator to prove your recommendations with detailed numbers. When customers see the clear benefits backed with solid support, you'll see your sales increase. Using actual utility rates shows the true impact of the energy savings.

- Calculates compressor run time vs. economizer run time, so your customers will see how much longer the compressor will last if they use economizer and demand control ventilation processes.
- There's no need for new software or to take anything more than your laptop on a sales call, because it's always available online.

Free, up to date and easy to use — three features of the Honeywell Economizer Savings Estimator.

The Economizer Savings Estimator is part of Honeywell's commitment to providing energy-saving products and sales support. Try it out now at **customer.honeywell.com/economizertools.**

Simulators and flash demos

For simple demonstration of the function of the W7212 economizer or the W7220 economizer controller, there are simulators and flash demos available for easy download at **http://customer.honeywell.com/economizertools.**

Learn More

For more information about Honeywell Sensors, Logic Modules, Actuators and the entire Honeywell portfolio of cost-efficient building solutions, call **1-800-466-3993** or visit **customer.honeywell.com**.

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