



ECONOMIZATION SOLUTION

# Climatrix ECO

## Title 24 Controller

[usa.siemens.com/climatix-eco](http://usa.siemens.com/climatix-eco)

**SIEMENS**

# Implement effective free cooling and **increase energy savings**

## **Switch to fresh air and reduce energy costs**

Siemens Economizer Control Solution allows a cooling system to supply outdoor air to reduce or eliminate mechanical cooling during ideal conditions. A properly functioning economizer reduces energy consumption and increases the lifespan of expensive rooftop unit (RTU) compressors and condensers. It maintains proper functionality of economizer dampers and ensures components are operating at peak performance.

## **A cost-effective bundled solution for rooftop units**

The flexible, easy-to-commission Climatix ECO Title 24 compliant controller combined with reliable sensors, damper actuators and thermostats provide a cost-effective bundle for both retrofit and new rooftop units.

## **Create healthier indoor environments**

Climatix ECO is easily configured with the Climatix mobile app or built-in HMI. The desired control method is managed through connected sensors that monitor temperature, humidity and CO<sub>2</sub> conditions. The economizer controller determines when outdoor air should be allowed to enter the building, and controls the damper actuator accordingly. Indoor air quality can be enhanced via demand control ventilation (DCV) by monitoring CO<sub>2</sub> levels and directing outside air in when CO<sub>2</sub> levels become too high.

## **Commissioning made easy with the Climatix mobile app**

The Climatix mobile app streamlines the commissioning process for economizers, enabling contractors to save both time and money with its Favorites function. Instead of the lengthy task of commissioning each RTU individually with conventional push-button HMIs, the Climatix ECO allows you to save your configuration and job details as a favorite to apply that setup to all other units in one simple step.

This ensures:

- Consistency across Climatix ECO controllers
- Faster commissioning of additional economizers
- Ability to share configurations via text or email
- Intuitive commissioning that allows any technician – no matter how experienced – to take full ownership of the job

- Pre-configured popular selections, with the ability to adjust defaults for specific applications
- No annual fee and free download on Apple and Google Play stores.

This streamlined method can save approximately 10 minutes per economizer compared to traditional systems, leading to substantial labor cost reductions for contractors.

## **Are your building's economizer controls and sensors functioning at optimum efficiency?**

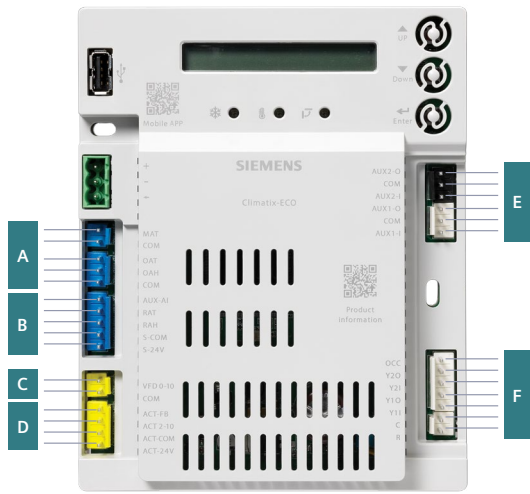
An estimated 70% of installed economizer dampers and systems function improperly and are in need of replacing. An economizer solution is comprised of a controller, damper actuator, thermostat, and sensors. Over the years, technologies advance and components that were once functioning become inoperable. Phasing out of legacy controllers and changing technology has created many hybrid variations of dampers, actuators, linkages, sensors, and controls. Other conditions that affect system performance and increase operating costs can range from incorrect wiring, installation, and commissioning to faulty control settings, and inaccurate sensors.

## **Additional advantages**

- Ideal replacement for improperly functioning economizer solutions
- Designed to directly replace similar products on the market
- Save energy using unconditioned outside air for free cooling
- Improve indoor air quality
- Avoid waste by only conditioning occupied spaces
- Balance comfort and efficiency with a wide range of temperature and BTU settings
- Easily identify maintenance needs with fault detection diagnostics
- Save time by effortlessly commissioning component data points using Climatix mobile app
- Configure shut-off set points automatically by using ASHRAE Climate Table / GPS coordinates from your phone location

# Economizer controller and devices for RTUs

The Siemens Climatix ECO is an easy, cost effective, direct replacement for most RTU economizer brands. Its small footprint makes mounting to panels or a control box quick and easy.



- A) Input for mixed, discharge, outside air temperature, outside air relative humidity and outside air temperature / relative humidity sensor
- B) Inputs for air quality, pressure sensor, return air temperature, return air relative humidity sensors
- C) Variable speed supply fan output
- D) Damper actuator output and feedback
- E) Configurable connections for various applications such as cooling stage 3 output, exhaust fan (1 or 2), VFD On/Off, ERV or system alarm outputs
- F) Occupancy input, mechanical cooling stage 1 & 2 input and output along with common power connections



Damper Actuator



Wall CO<sub>2</sub> Sensor (optional display)



Duct CO<sub>2</sub> Sensor (optional display)



Combo T + RH Sensor



Temperature Sensor



Thermostat



Climatix VFD



Wiring Harness



WLAN Stick



Universal Mounting Kit (35 lb.in only)

## Product Ordering Information

Product	Description	Specification	Part Number
<b>Climatix ECO Controller</b>	POL224.00 Title 24 Economizer Controller	Complies with 2016 Title 24 part 6 Economizer Fault Detection and Diagnostics (FDD)	S55392-C202-A100
	POL224.05 Title 24 Econ Cont, no housing		S55392-C203-A100
<b>Damper Actuators</b>	Spring Return, 0(2) to 10 Vdc Signal, Plenum-rated	35 lb.-in.	GPC161.1P
	Spring Return, 2 to 10 Vdc Signal, Plenum-rated	62 lb.-in.	GMA151.1P
	Spring Return, 2 to 10 Vdc Signal, Plenum-rated	160 lb.-in.	GCA151.1P
	Universal Mounting KIT for 35 lb.-in	For non-shaft mounted damper actuators	ASK80.1
<b>CO<sub>2</sub> Sensors</b>	QPA2000 Wall CO <sub>2</sub> Sensor	0-10 Vdc	QPA2000
	QPA2002D Wall CO <sub>2</sub> Sensor with display	0-10 Vdc	QPA2002D
	QPM2102 Duct CO <sub>2</sub> Sensor	0-10 Vdc	QPM2102
	QPM2102D Duct CO <sub>2</sub> Sensor with display	0-10 Vdc	QPM2102D
<b>Combo T + RH Sensor</b>	QFR9530 T + RH Sensor	0-10 Vdc (RH) and 10k Ohm NTC II (Temp)	S55720-S501
<b>Temperature Sensor</b>	QAR9530 Temp Sensor	10k Ohm, NTC II	S55720-S503
<b>Thermostats</b>	Programmable Thermostat	24V	RDY2000
	Programmable Thermostat with BACnet	24V	RDY2000BN
<b>Climatix VFD</b>	Climatix VFD, Avail. from 100-575V, up to 30HP	Sample Part: 230VAC, 1HP, 3-PH	RT-001X-23N
<b>Wiring Harnesses</b>	ECO Wiring Harness	Complete wiring harness for all connections from controller to device	POL002.24/KIT
<b>WLAN Stick</b>	WLAN interface for controller to smartphone or tablet	USB B interface	S55803-Y130-A100



### Download the Climatix mobile app

Utilizing the Climatix mobile app streamlines the commissioning process, enabling contractors to save time and money. Download Now!



Android



iOS

# Economizer kits for RTUs

Climatix ECO kits simplify ordering with universal kits requiring less stock numbers for easy inventory management. This solution also shortens install time to get you up and running faster.

- **Streamline your inventory** – reduced stock levels for easier inventory management.
- **Grab-and-go** – any level technician can commission and install quickly by using just one kit.
- **Integrated wiring harness** – plug-and-play design minimizes wiring errors and can cut installation time down to as little as 30 minutes.
- **Sustainable solution** – all components shipped in one box, reducing packaging, handling, and waste.

## Climatix ECO kit components



Climatix ECO Controller



Wiring Harness



Combo T + RH Sensor



Temperature Sensor



Damper Actuator



Universal Mounting Kit (35 lb.in only)



WLAN Stick

## Cross reference information

### Siemens Climatix ECO Kits

### Belimo

### Honeywell

Part #	Description	Part #s	Description	Part #s	Description
POL224.15/KIT	POL224.15/KIT 35 lb.-in ECO KIT	ECON-ZIP-SDLF	DCV, Dry Bulb 35 lb.-in	Y7220A7215	Dry Bulb with black motor
		ECON-ZIP-SDTF	DCV, Dry Bulb 22 lb.-in	YL7220A7503	Dry Bulb with non-communicating 27 lb.-in DCA
		ECON-ZIP-SELF	DCV, Enthalpy 35 lb.-in	YL7220AJ3103	Dry Bulb, with communicating 27 lb.-in DCA
		ECON-ZIP-SETF	DCV, Enthalpy 22 lb.-in	Y7220S7215	Enthalpy with black motor
				YL7220S7503	Enthalpy with non-communicating 27 lb.-in DCA.
				YL7220SJ3103	Enthalpy with communicating 27 lb.-in DCA.
POL224.25/KIT	POL224.25/KIT 62 lb.-in ECO KIT			YL7220AJ3105	Dry Bulb, with communicating 44 lb.-in DCA
POL224.35/KIT	POL224.35/KIT 160 lb.-in ECO KIT			YL7220SJ3105	Enthalpy with communicating 44 lb.-in DCA

## Upgrade options with added devices



Combo T + RH Sensor



Wall CO<sub>2</sub> Sensor



Duct CO<sub>2</sub> Sensor

### Siemens

### Belimo

### Honeywell

Part #	Description	Part #s	Description	Part #s	Description
S55720-S501	Combo T + RH Sensor	ECON-ZIP-DDLF	DCV, Dual Dry Bulb 35 lb.-in		
		ECON-ZIP-DDTF	DCV, Dual Dry Bulb 22 lb.-in		
		ECON-ZIP-DELFL	DCV, Dual Enthalpy 35 lb.-in		
		ECON-ZIP-DETF	DCV, Dual Enthalpy 22 lb.-in		
QPA2000	CO <sub>2</sub> Wall Sensor			L7220ACW3103	Dry Bulb with communicating 27 lb.-in DCA and CO <sub>2</sub> wall sensor without a display
				Y7220SCW7215	Enthalpy with black motor and CO <sub>2</sub> wall sensor with a display
				YL7220SCW3103	Enthalpy with communicating 27 lb.-in DCA and CO <sub>2</sub> wall sensor with a display
QPM2102D	CO <sub>2</sub> Duct Sensor			Y7220SCD7215	Enthalpy with black motor and CO <sub>2</sub> duct sensor with a display
				YL7220SCD3103	Enthalpy with communicating 27 lb.-in DCA and CO <sub>2</sub> duct sensor with a display

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