RenewAire®
Energy Recovery Ventilation

INTEGRATED PROGRAMMABLE

CONTROLS

RENEWAIRE EVERYWHERE

EVERY GEOGRAPHY, EVERY CLIMATE, EVERY HOME,
EVERY BUILDING AND EVERY APPLICATION

INTEGRATED PROGRAMMABLE CONTROLS

RenewAire's Integrated Programmable Controls optimize the usability and performance of our commercial energy recovery ventilators (ERVs) by **IMPROVING FUNCTIONALITY**, enabling intelligent controls, **STREAMLINING OPERATIONS** and boosting efficiencies. This is accomplished via sophisticated factory-installed microprocessor controls and sensors that provide stand-alone ERVs with direct digital control (DDC) and/or Building Management System (BMS) control interface.

KEY BENEFITS

OPTIMIZE USABILITY

- Maximize ERV functionality and intelligent control via remote ethernet accessibility and BMS connectivity without third-party interface.
- Streamline operations by easily managing and changing ERV control parameters via an advanced user interface.
- Increase uptime reliability through constant system monitoring.
- Achieve cleaner and healthier indoor air via indoor air quality (IAQ)-based ERV control.

IMPROVE PERFORMANCE

- Support effective and efficient ERV performance with real-time data trending and logging capabilities.
- Enhance ERV control via access to real-time airflow rates, airstream temperature and airstream humidity.
- Facilitate fast and easy ERV upkeep and maintenance with real-time fan, filter and bypass status.

INCREASE CAPABILITIES:

- Expand ERV connectivity via access to a wide range of open standard protocols, including BACnet and Modbus.
- Broaden ERV interoperability by connecting to third-party equipment and receiving third-party signals for unit control.
- Expand ERV-application scope by meeting new code requirements and the needs of institutional customers requiring DDC controls in mechanical equipment.

SIMPLIFY OPERATIONS:

- Achieve easier ERV setup, commissioning and balancing via simple-to-install controls.
- Improve operational efficiencies by easily communicating ERV status, airflows, temperatures and humidity.
- Allow for more flexible installations by enabling ERVs to be interconnected with a BMS, operated independently or run in concert with other ERVs.

APPLICATIONS

The controller is available as an option for all commercial ERVs and dedicated outdoor air systems (DOAS) units, and can be applied to all RenewAire applications.

MODELS

ENHANCED CONTROLS

Carel [c.pCOMini] with or without BACnet

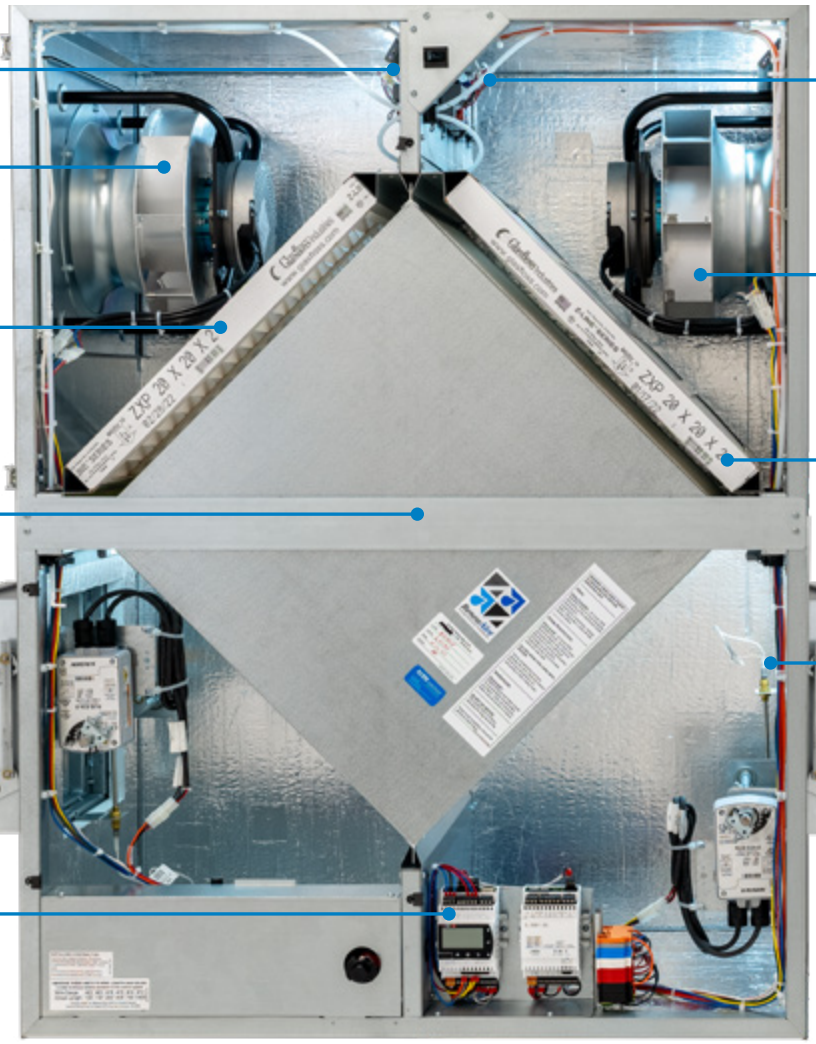
Enhanced controls offer automated control, including temperature and humidity control with data trending via microprocessor controls and sensors that enable BMS connectivity.

PREMIUM CONTROLS

Carel [c.pCOMini] with expansion module with or without BACnet

Premium controls include all functionality of enhanced-controls capabilities, as well as airflow and IAQ monitoring, demand control, electric or gas heating options and cooling and heating control.

ERV WITH INTEGRATED PROGRAMMABLE CONTROLS



CONTROL CAPABILITIES

- HEATING/COOLING COIL CONTROL (PREMIUM CONTROLS ONLY)
- REMOTE DISPLAY
- ISOLATION DAMPER CONTROLS
- ECONOMIZER BYPASS CONTROLS
- CO_2 SENSORS
- IAQ SENSORS
- OCCUPANCY SENSORS
- SMOKE DETECTOR

HEATING/COOLING COIL CONTROL

In conjunction with unit monitoring and controls, heating and cooling functions can now also be monitored and controlled via our onboard premium control package.

FEATURE COMPARISON

	ENHANCED CONTROLS	PREMIUM CONTROLS
Ability to automatically enable and disable unit	◆	◆
Filter alarm for both sets of filters	◆	◆
Bypass controls	◆1	◆1
Control isolation dampers	◆	◆
Supply fan only modulation for VFD/ECM units	◆	◆
Exhaust fan only modulation for VFD/ECM units	◆	◆
Internal time clock	◆	◆
Frost controls-Canada only	◆	◆
Smoke detector input required	◆	◆
Demand control ventilation using CO2-sensor required		◆
Occupancy-based ventilation-sensor required	◆	◆
IAQ control ventilation using VOC-sensor required		◆
Microprocessor controller	◆	◆
Provide supply and exhaust air temperatures	◆	◆
Provide outside and return air temperature and humidity	◆	◆
Fan status on both fans	◆	◆
Enable the supply fan only	◆	◆
Enable the exhaust fan only	◆	◆
Micro USB port	◆	◆
BACnet MS/TP or BACnet TCP/IP-activation required	◆	◆
Modbus	◆	◆
Data trending	◆	◆
Outside airflow rate		◆
Exhaust airflow rate		◆
Space pressure control-sensor required		◆
Duct pressure control-sensor required		◆
Conditioned air temperature-sensor required		◆
Heating enable		◆
Cooling enable		◆
Heating modulation-staged or modulating		◆
Cooling modulation-staged or modulating		◆

NOTE: 1. Option on HE Series (IN) and standard on RD Series.

BMS COMPATIBLE

- ☑ COMMUNICATION INTERFACE VIA BMS
- ☑ MODBUS TCP/IP, BACnet MSTP/IP
- ☑ DIN-RAIL MOUNTED CONTROLLER WITH DISPLAY
- ☑ INTEGRATED ETHERNET INTERFACE
- ☑ BATTERY-POWERED INTERNAL PROGRAMMABLE TIME CLOCK
- ☑ TEMPERATURE, HUMIDITY AND AIRFLOWS
- ☑ MONITORING AND LOGGING CAPABILITIES FOR ALARM CONDITIONS
- ☑ HANDHELD/REMOTE USER TERMINAL
- ☑ EASY TO USE
- ☑ FACTORY PREPROGRAMMED SEQUENCES OF OPERATION
- ☑ DATA-TRENDING CAPABILITIES
- ☑ IAQ-BASED ERV CONTROL

ACCESSORIES

	ENHANCED CONTROLS	PREMIUM CONTROLS
CO2 sensor (WALL OR DUCT MOUNT)		◆
IAQ sensor (WALL OR DUCT MOUNT)		◆
Occupancy sensor (CEILING OR WALL MOUNT)	◆	◆
Room pressure sensor (WITH OR WITHOUT DISPLAY)		◆
Duct static pressure sensor (WITH OR WITHOUT DISPLAY)		◆
Conditioned Air temperature sensor		◆
Smoke detector (DUCT MOUNT)	◆	◆
BACnet factory activation (MS/TP OR TCP/IP)	◆	◆
Remote display (HANDHELD OR WALL MOUNT)	◆	◆

CO2 SENSORS

Wall Mount

Duct Mount

IAQ SENSORS

Wall Mount

Duct Mount

OCCUPANCY SENSORS

Ceiling Mount

Wall Mount

PRESSURE SENSORS (ROOM PRESSURE/DUCT STATIC PRESSURE)

Wall/Duct Mount without Display

Wall/Duct Mount with Display

SMOKE DETECTOR

Duct Mount

CONDITIONED AIR TEMPERATURE SENSOR

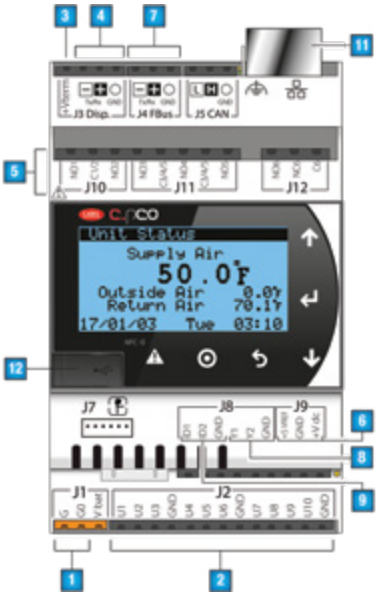
Duct Mount (for nonintegrated heating or cooling)

REMOTE DISPLAY

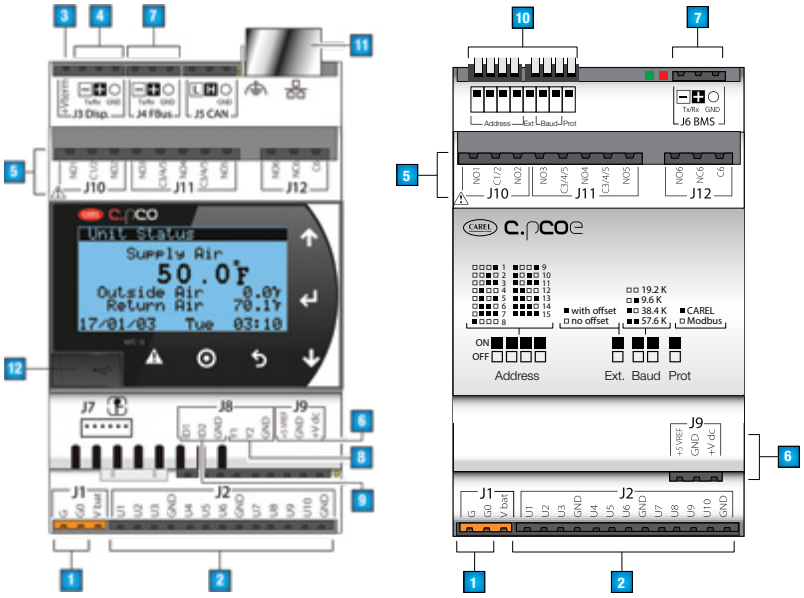
Handheld or Wall Mount

CONTROL CONNECTIONS

ENHANCED CONTROLS



PREMIUM CONTROLS-INCLUDES EXPANSION MODULE



KEY

1. Power connector
2. Universal inputs/outputs
3. +Vterm: terminal power supply
4. Terminal connector/serial connection
5. Relay digital outputs
6. +5VREF: power supply for ratiometric probes
   +VDC: power supply for active probes
7. Serial port
8. Analog outputs
9. Digital inputs
10. DIP switches
11. Ethernet port
12. Micro USB port

To learn more about our controls, visit: renewaire.com

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