The RTU Open controller continuously monitors and regulates constant volume rooftop operation with reliability and precision. This advanced controller features a sophisticated, factory-engineered control algorithm that provides optimum performance and energy efficiency. The RTU Open controller also features plug-and-play connectivity to the Carrier i-Vu Open Control System. The Carrier i-Vu Open Control System combines state-of-the-art Carrier equipment, plug-and-play controllers, and the powerful, web-based i-Vu user interface to form a cohesive, intuitive, and fully-integrated BACnet® Building Automation System.

For added flexibility, the RTU Open controller is capable of stand-alone operation. Or, it can be integrated with any Building Automation System utilizing the BACnet, Modbus, LonWorks®, or N2 protocols.

**Application Features**

- Controls 2 stages of DX cooling to maintain space temperature setpoint
- Controls up to 2 stages of gas heat or combination of mechanical and electric heat to maintain space temperature setpoint (controls up to 4 stages of heat in heat pump mode)
- Integrated economizer and power exhaust control provide optimized mechanical cooling
- Built-in advanced control routines for zone level humidity control or zone level demand control ventilation (ASHRAE 62)

**System Benefits**

- Integrated Carrier airside linkage algorithm for plug-and-play integration with the Carrier VVT System
- Fully plug-and-play with the Carrier i-Vu Open Control System
- Supports demand limiting for maximum energy savings
- Compatible with i-Vu Tenant Billing for tracking tenants’ after-hours energy usage

**Hardware Features**

- Can be factory-installed on Carrier WeatherMaster® and WeatherMaker® Puron® packaged rooftop units
- Can be field-installed on constant volume rooftop units; wiring harness (part# OPN-RTUHRN), provides quick field installation
- Integrates easily into any BAS using BACnet, Modbus, LonWorks®, or N2 protocols
- On-board hardware clock, remote occupancy input, and support for SPT/thermistor sensors provide stand-alone operation
- Easy startup and commissioning using Carrier’s BACview Handheld Service Tool

*Requires LON Option Card (LON-OC)
**Specifications**

Part Number: OPN-RTUM

**BACnet Support**
Conforms to the Advanced Application Controller (B-AAC) Standard Device Profile as defined in BACnet 135-2001 Annex L

**Communication Ports**
Network Comm port: EIA-485 port for BACnet MS/TP, Modbus RTU, or N2 communications (protocol and baud rate are DIP switch selectable); Comm Option Port: For connecting a LON Option Card; Local Access port: For system start-up and troubleshooting using a PC or BACview (115.2 kbps); Rnet port: For connecting SPT room sensors. The Rnet port supports up to four SPT Standard sensors and one SPT Plus or SPT Pro sensor for averaging or high/low select control.

**Inputs**
Six analog inputs: Four analog inputs dedicated to Space Temperature, Setpoint Adjust, Supply Air Temperature, and Outside Air Temperature. Two others configurable for the following functions: Indoor Air Quality, Outdoor Air Quality, or Relative Humidity. All analog inputs have 10 bit A/D resolution.

Five binary inputs: One dedicated to Safety Chain Feedback, four others configurable for the following functions: Compressor Safety, Fire Shutdown, Enthalpy Switch, Humidistat, Supply Fan Status, Filter Status, Remote Occupancy, and Door Contact.

**Outputs**
One analog output: Economizer Position. Analog output has 10 bit D/A resolution. Seven binary outputs: Supply Fan, Cool Stage 1, Cool Stage 2, Heat Stage 1, Heat Stage 2, Power Exhaust/Reversing Valve, and Dehumidification. Relay contacts rated at 3A max @ 24VAC, configured normally open

**Real Time Clock**
Battery-backed real time clock keeps track of time in event of power failure

**Battery**
10-year Lithium CR2032 battery provides a minimum of 10,000 hours of trend data & time retention during power outages

**Protection**
Incoming power and network connections are protected by non-replaceable internal solid-state polyswitches that reset themselves when the condition that causes a fault returns to normal. The power, network, input, and output connections are also protected against voltage transient and surge events.

**Status Indicators**
LED status indicators for network communications, run status, error, power, and all digital outputs

**Controller Addressing**
Rotary dip switches set BACnet MS/TP, Modbus, or N2 address of controller

**Listed by**
UL-873, FCC Part 15-Subpart B-Class A, CE EN50082-1997

**Operating Range**
-40ºF to 158ºF (-40ºC to 70ºC); 10 to 95% relative humidity, non-condensing

**Power Requirements**
24VAC ± 10%, 50 to 60Hz, 20 VA power consumption, single Class 2 source only, 100 VA or less

**Dimensions**
Overall:
A: 6-1/2" (16.5 cm)
B: 6-1/2" (16.5 cm)
Depth: 2-1/2" (6.35 cm) min. panel depth
Weight: .74 lbs (.34 kg)

**Mounting**
(●)7 mounting holes in various positions provided

Manufacturer reserves the right to discontinue, or change at any time, specifications or designs, without notice or without incurring obligations.

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