

# YCCS Universal Rooftop Unit (RTU) Controller

YK-PEC1001-0, YK-PEC1002-0

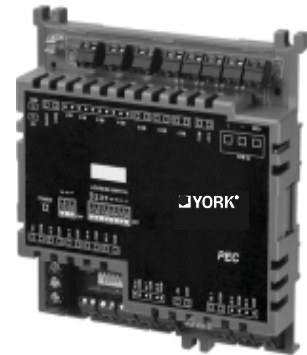
## Description

The Universal Rooftop Unit (RTU) controller is an application specific digital controller that communicates via BACnet® Master-Slave/Token-Passing (MS/TP) Protocol to a York Commercial Comfort System (YCCS) System Manager. The controller features preconfigured applications for constant volume single zone and constant volume change-over bypass roof top units manufactured by other Heating, Ventilating, and Air Conditioning (HVAC) suppliers. Refer to the *York Commercial Comfort System (YCCS) Technical Guide (428515)* for additional product information.

- Automatic discovery feature allows for easy controller integration by YCCS System Manager
- Continuous loop tuning provided by Pattern Recognition Adaptive Control (PRAC) technologies

## Repair Information

If the RTU Controller fails to operate within its specifications, contact your local Source 1 representative for a replacement unit.



Universal RTU Controller

## Features

- Integrates third party manufactured RTU within a new YCCS network
- Configuration for constant volume single zone or changeover/bypass operation
- Up to two stages of heating and cooling are available, as well as supply fan command enable for manufacturers using standard thermostat connections

## Selection Charts

### Universal Rooftop Unit (RTU) Controller

| Product Code Number | Description  |
|---------------------|--|
| YK-PEC1001-0        | Universal RTU Controller Field Mount, 2 Cooling and 2 Heating Stages, Constant Volume Single Zone        |
| YK-PEC1002-0        | Universal RTU Controller Field Mount, 2 Cooling and 2 Heating Stages, Constant Volume, Changeover/Bypass |

### Point Type Counts per RTU Model

| Point Types        | Signals Accepted                    | YK-PEC1001-0   | YK-PEC1002-0   |
|--------------------|-------------------------------------|--|--|
| Analog Input (AI)  | Resistive 1 k Ohm, Voltage 0-10 VDC | AI-1 Zone Temperature/Temporary Occupancy<br>AI-2 Zone Setpoint<br>AI-3 Generic Temp (Optional)<br>AI-4 Zone RH (Optional)<br>AI-5 Zone CO <sub>2</sub> (Optional)<br>AI-6 Discharge Temperature (Optional)<br>AI-7 Return Temperature (Optional)<br>AI-8 Outdoor Temperature (Optional) | AI-1 unavailable<br>AI-2 unavailable<br>AI-3 Generic Temp (Optional)<br>AI-4 RH (Optional)<br>AI-5 CO <sub>2</sub> (Optional)<br>AI-6 Discharge Temperature<br>AI-7 Return Temperature (Optional)<br>AI-8 Outdoor Temperature (Optional) |
| Analog Output (AO) | unavailable                         | AO-1 unavailable   | AO-1 unavailable   |
| Binary Input (BI)  | Dry Contact                         | BI-1 Occupied/Unoccupied Input<br>BI-2 Fan Status<br>BI-3 Filter Status  | BI-1 Occupied/Unoccupied Input<br>BI-2 Fan Status<br>BI-3 Filter Status  |
| Binary Output      | 24 VAC Triac                        | BO-1 Supply Fan<br>BO-2 Cooling 1<br>BO-3 Cooling 2<br>BO-4 Heating 1<br>BO-5 Heating 2<br>BO-6 unavailable<br>BO-7 unavailable  | BO-1 Supply Fan<br>BO-2 Cooling 1<br>BO-3 Cooling 2<br>BO-4 Heating 1<br>BO-5 Heating 2<br>BO-6 unavailable<br>BO-7 unavailable  |

## YCCS Universal Rooftop Unit (RTU) Controller (Continued)

### Accessories

| Product Code Number | Description   |
|---------------------|---|
| TE-68NT-0NN0S       | Wall Temperature Sensor, 1 k ohm, Nickel with Temperature Occupancy Button  |
| TE-68NT-1NN0S       | Wall Temperature Sensor, 1 k ohm, Nickel with Warmer/Cooler Temperature Adjust and Temperature Occupancy Push Button  |
| Y65T42-0            | Transformer 120/208 24 VAC hub mount 40 VA  |
| P32AC-2C            | Differential Pressure Switch for sensing pressure and airflow in ducts. Refer to the <i>P32 Series Differential Pressure Switch Catalog Page (LIT-1927195)</i> and Installation Instruction (LIT-125435) for additional information |
| GSD-CA1G0-1         | Split Core Current Switch, LED, Adjustable  |

### Differential Technical Specifications

| Rooftop Unit (RTU) Controller       |   |
|-------------------------------------|---|
| Product Code Number                 | York Commercial Comfort System (YCCS):<br>Universal Rooftop Unit Controller:<br>YK-PEC1001-0 (single zone application)<br>YK-PEC1002-0 (changeover/bypass application)  |
| Power Supply Requirement            | 20 - 30 VAC @ 50 to 60 Hz, Class 2 power supply or Safety Extra Low Voltage (SELV) at 50/60 Hz (20 VAC minimum)   |
| Power Consumption                   | 3 VA maximum (not including external loads)   |
| Ambient Conditions                  | Ambient Operating Temperature: -40 to 70°C (-40 to 158°F); 10 to 90% RH noncondensing<br>Ambient Storage Temperature: -40 to 85°C (-40 to 185°F); 10 to 90% RH  |
| Processor                           | 20 MHz Renesas H8S2398 processor  |
| Memory                              | 1 MB Flash nonvolatile memory for operating system, configuration data, and operations data storage and backup<br>512 k Synchronous Random Access Memory (SRAM) for operations data dynamic memory  |
| Housing                             | Plastic housing material: ABS + polycarbonate UL94-5VB<br>Protection: IP20 (IEC 60529)  |
| Mounting                            | On flat surface with screws   |
| Dimensions (Height x Width x Depth) | 250 x 190 x 60 mm (9.8 x 7.5 x 2.4 in.)   |
| Shipping Weight                     | approximately 0.70 lb   |
| Compliance                          | <p><b>United States</b><br/>UL Listed, File E107041, CCN PAZX, UL 916<br/>FCC Compliant to CFR47, Part 15, Subpart B, Class A</p> <p><b>Canada</b><br/>UL Listed, File E107041, CCN PAZX7, CAN/CSA C22.2 No. 205, Signal Equipment<br/>Industry Canada Compliant, ICES-003</p> <p><b>European Union</b><br/>CE Mark, EMC Directive 89/336/EEC, in accordance with EN 61000-6-4 (2001) Generic Emission Standard for Heavy Industrial and EN 61000-6-2 (2001) Generic Immunity Standard for Heavy Industrial Environment</p> <p><b>Australia and New Zealand</b><br/>C-Tick Mark, Australia/NZ Emissions Compliant</p> |

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Johnson Controls Unitary Products  
5005 York Drive  
Norman, OK 73069