BACnet Commercial Thermostat
RDY2000BN


- BTL listed MS/TP ensures compatibility with any BACnet system.
- Built-in flexible control programs for conventional and heat pump applications.
- Controls conventional systems with up to 3 stages heating and 3 stages cooling.
- Controls heat pumps with 1 or 2 compressors and up to 2-stage auxiliary heat.
- On-board temperature and humidity sensor.
- Multiple configurable inputs and outputs enable advanced control strategies.
- Set-up Wizard enables rapid system configuration.
- No special tools required for installation or commissioning.
- Seven-day (2- or 4-event) occupancy scheduling.
- Sleek design with backlit 5-inch LCD touchscreen.
Features

Hardware
- Standard 24 Vac HVAC interface:
  - Y1, Y2, G, W1, W2 and O/B
- Three selectable relay outputs
- Four configurable inputs:*  
  - Digital input
  - Resistive temperature input
  - 0 to 10V input
*Requires purchase of external sensor(s).

Control
- BTL-listed BACnet MS/TP.
- Fully-programmable 7-day, 2-, 4-, or 6-event occupancy scheduling function.
- Real-time clock retains time and date for up to 48 hours upon loss of input power.
- System configuration data is stored indefinitely upon loss of input power.
- Interlocks and timers specifically designed for equipment protection.
- Password protected installer set-up menu deters unauthorized changes.
- Programmable fan enables fresh air circulation when not in heating/cooling mode.
- Selectable lockout levels to minimize tampering with setpoints and schedule.
- Programmable service reminders for humidifier pad, UV lamp, and air filter.

General
- Separable back plate with wiring terminals and mounting holes configured to match most conduit box configurations (screws and anchors included for drywall mounting).
- Thermostat secures to mounting base with screws to deter theft and vandalism.
- Designed for horizontal layout.

Applications
- Designed for light commercial HVAC systems with 24 Vac control circuitry.
- Compatible with forced air, hydronic and steam systems fired by gas, oil or electricity.
- Controls conventional systems with up to 3 stages heating and 3 stages cooling.
- Controls heat pumps with 1 or 2 compressors and up to 2-stage auxiliary heat.
- Built-in temperature and humidity sensor in addition to configurable inputs enables advanced room controls based on humidity, CO₂, occupancy, remote or averaging temperature.
- Selectable relays enable control strategies for humidity/dehumidification control, ventilation, economizer enable and occupancy notification.

Type summary

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<th>Part Number</th>
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Accessories

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<tr>
<td>QAA2230.EWNN</td>
<td>Remote Wall Mounted Sensor - Temperature Only</td>
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<td>QFA3255.EWNN</td>
<td>Remote Wall Mounted Temperature and Humidity Sensor</td>
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<tr>
<td>QAM2030.010</td>
<td>Duct Mounted Temperature Sensor</td>
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<tr>
<td>QFM2160U</td>
<td>Duct Mounted Temperature and Humidity Sensor</td>
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<td>QPA2000</td>
<td>Wall Mounted CO2 Sensor</td>
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<td>QPA2062</td>
<td>Wall Mounted Temperature + Humidity + CO2 Sensor</td>
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<td>QPM2162</td>
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<td>QAC2030</td>
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<td>QAD2030</td>
<td>Surface Mount Pipe Temperature Sensor</td>
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**Product documentation**

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<td>Installation Instructions</td>
<td>RDY2000BN BACnet Enabled Commercial Room Thermostat</td>
<td>125-1009</td>
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<td>Application Note</td>
<td>RDY2000BN BACnet Thermostat Heat Pump Application 14901</td>
<td>140-1230</td>
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<td>Application Note</td>
<td>RDY2000BN BACnet Thermostat Conventional Application 14900</td>
<td>140-1231</td>
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<tr>
<td>WCIS Online Help</td>
<td>User's Guide: Setup &amp; Service Assistant (SSA)</td>
<td>N/A</td>
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**Technical data**

**Power supply**
- Operating voltage: 24 Vac ± 20%, Class 2, 4A maximum
- Frequency: 50/60 Hz.
- Power consumption including connected field devices: Max. 96 VA

24 Vac supply for field devices
- Output relay ratings: Pilot duty, 1A maximum per output, 4A maximum total

**Ambient conditions and protection classification**
- Enclosure: NEMA 1
- Transport: Temperature -13°F through 158°F (-25°C through 70°C), Air humidity up to 95% (non-condensing)
- Operation: Temperature 23°F through 122°F (-5°C through 50°C), Air humidity up to 95% (non-condensing)
- Setpoint range: 45°F through 95°F (7°C through 35°C)

**Standards, directives and approvals**
- UL: UL 916
- cUL: CSA C22.2 No. 205
- CE: EMC Directive
- ICES: Canada
- NOM-NYCE: Mexico
- Regulatory Compliance Mark: Australia
- Federal Communications Commission: Complies with the limits for a Class B digital device, pursuant to Part 15 of the FCC rules.
- BTL: BACnet Testing Laboratory

**Miscellaneous**
- Shipping weight: 14 ounces (0.4 kg)
Dimensions

Dimensions in Inches (mm).

Backplate: Provided unassembled