CRC
CRITICAL ROOM CONTROL

# Health Care Solutions– Model: CRC-RPC1 Room Monitor/Controller

## FEATURES & BENEFITS

- **Full color energy efficient ultra thin LCD touch screen interface**
- **Direct pressure measurement with dead ended silicon diaphragm**
- **Capable of monitoring and controlling one (1) pressure relationships**
- **Supports Positive, Negative and Neutral Environments**
- **Indicates appropriate precautions to be taken when entering room**
- **Display resolution to 0.0001" WC**
- **Supports multiple pressure ranges**
- **Audible and Visual Alarms**
- **Four fully configurable modes**
- **Full automation of room changeover**
- **Monitors, alarms and allows local set point control of up to eight (8) parameters**
- **password protected access**
- **Visual I/O Diagnostics of points**
- **Water spray and dust resistant ultra thin surface mount enclosure**
- **Resistive touch control – Use bare finger, gloved finger, or stylus for interaction**
- **All parameters / settings saved in non-volatile memory**
- **Field configurable, easy, and intuitive menus**
- **Ability to "Zero" calibrate the pressure transducer with a touch of a finger**
- **Supports multiple BMS protocols**

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## OVERVIEW

The Critical Room Control's **Room Pressure Monitor / Controller** model CRC-RPC1 accurately monitors and/or controls one differential pressure relationship where proper pressurization is vital. The CRC-RPC1 can meet the stringent critical environment of; isolation rooms, operating rooms, Pharmacies, research facilities and animal rooms. The CRC-RPC1 utilizes direct pressure measurement with industrial quality differential pressure transducer technology capable of displaying pressure to 0.0001"WC. Each monitor/controller incorporates an easy to navigate microprocessor based controller with full color touch screen interface. All settings and programming is made via simple touch screen or network.

The CRC-RPC1 is designed to be a monitor only or complete system controller. Controller analog inputs/outputs and/or communications allow the CRC-RPC1 seamlessly integrate with the CRC-CLV air valve, Critical Room Control system or building automation systems. The CRC-RPC1 has the ability to maintain reliable, accurate, integrated pressurization and space environmental control.

The CRC-RPC1 easily integrates to building management systems via hardwire analog inputs, outputs and relays or direct via BACnet and supports Modbus, N2 and LON with optional card.


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## DISPLAY

| | |
|---|---|
| Description: | Full color LED TFT 16 bit (65,535) color depth, Sunlight viewable, 300cdm brightness, touch screen interface. Screen is Capable of wipe down cleaning and water spray and dust resistant meeting (IP-54) |
| Listing: | CSA©, RU(us), UL 60950, UL 94 V-0 (Enclosure) |
| Screens: | Five (5) user defined modes, field configurable verbiage, configurable screen color, patented clearing timing features |
| Main Screen: | Background color field configurable for Green (default), Red or Blue |
| Modes: | Total of five (5) user configurable modes including fully automated room changeover |
| More Info: | Supports up to eight user defined network values allowing local display of points descriptor, value, set point change, visual and audible alarming |
| I/O Diagnostic: | Graphical display of controller analog inputs/outputs and digital inputs/outputs |
| Mounting: | Low profile surface or recessed |

## POWER REQUIREMENT

| | |
|---|---|
| Input Power: | 22 to 26VAC; 50/60Hz, internally isolated |
| Primary: | 24VAC Input |

## ENVIRONMENTAL CHARACTERISITICS

| | |
|---|---|
| Temperature Limits: | |
| Storage: | -40 to 180 |
| Operating: | +0 to 160 |
| Compensated Range | +35 to 130 |
| Temperature Coefficients: | |
| Zero | ±0.03%F.S./ F |
| Span | ±0.03%F.S./ F |
| Listing: | UL-94-5VA |
| EMC: | Œ Compliant to EN61326: 1997+A1: 1998+A2: 2001 Annex A (Heavy Industrial) |

## PERFORMANCE CHARACTERISITICS

| | |
|---|---|
| Accuracy Class (F.S.): | ±0.4% & ±0.8% (includes the effects of Non-Linearity, Hysteresis and Non-repeatability) |
| Stability-Max. Change: | ≤0.25% (Full Scale/year) |
| Unidirectional Range: | 0/0.1, 0/0.25, 0/0.5, 0/0.75, 0/1.0, 0/2.0, 0/2.5, 0/3.0, 0/5.0, 0/10.0, 025.0 |
| Compound Range: | ±0.1, ±0.25, ±0.5, ±1.0, ±2.0, ±5.0, ±10.0 |
| Response Time: | 250msec |

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## FUNCTIONAL CHARACTERISITICS

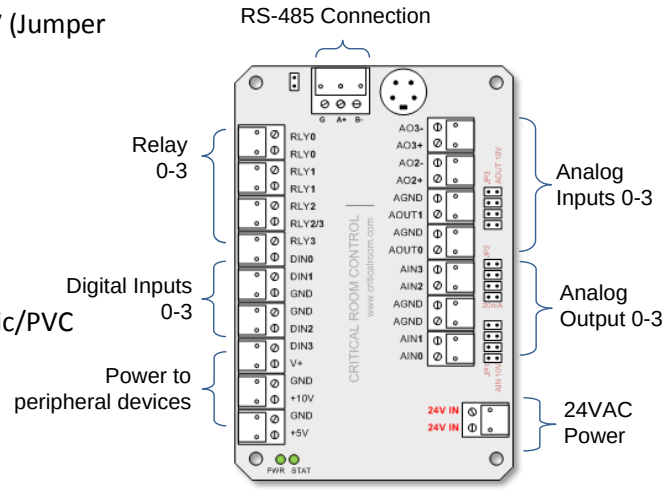
| | |
|---|---|
| Over Pressure limits: | |
| Proof Pressure: | 15psi |
| Burst Pressure: | 25psi |
| Max. static line press. | 25psi |

## PRESSURE ALARMS

| | |
|---|---|
| Audible: | (2) Pressure Alarm & Remote Alarm |
| Visual: | Green (Normal) (optional Red or Blue)<br>Amber (Loss of Pressure)<br>Red (Alarm) |

## CONTROLLER

| | |
|---|---|
| Analog Inputs: | (4) four 4-20mA, 0-10V & 0-5V (Jumper selectable) |
| Analog Outputs: | (4) Four 0-10V or 0-5V |
| Digital Inputs: | (4) Four Digital inputs |
| Digital Contacts: | (4) Four Digital outputs (relay) |
| Power Indication: | LED Indicator (green) |
| Terminals: | Removable screw terminals |
| Enclosure: | Fire Retardant, extruded acrylic/PVC Alloy UL94V-) |
| Communication: | RS-485 |
| Onboard power: | 10vdc, 5vdc and onboard loop power circuit |




## COMMUNICATION

| | |
|---|---|
| Connection: | RS-485 |
| Supported Protocol: | BACnet MS/TP: Modbus, Johnson Controls Incorporated N2 & LON with optional card |
| Network Debug: | Network communication graphic verifying that CRC-RPC1 is communicating on the network with supporting diagnostic values |
| Network setup: | parameters including Baud Rate, MAC address and Instance ID configured via touch screen |

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## Ordering Nomenclature

CRC – RPC1 - 01 - B - 0101 - WP- 08 - 01

**MANUFACTURER**

**MODEL**

**ENCLOSURE**
**O1** = ABS

**NETWORK**
**B** = BACNET
**0** = NONE

**DPT 1 PRESSURE RANGE**
**0101** = 0.10 TO -0.10" WC
**2525** = 0.25 TO -0.25" WC
**0505** = 0.50 TO -0.50" WC
**1010** = 1.00 TO -1.00" WC
**2020** = 2.00 TO -2.00" WC
**5050** = 5.00 TO -5.00" WC
**0000** = NONE

**PRESSURE PICK UP PLATES**
**SS** = STAINLESS STEEL
**WP** = WHITE PLASTIC
**00** = NONE

**AIR VALVE 1**
**06** = 6" GALVANIZED
**08** = 8" GALVANIZED
**10** = 10" GALVANIZED
**12** = 12" GALVANIZED
**14** = 14" GALVANIZED
**16** = 16" GALVANIZED
**00** = NONE
NOTE: ALUMINUM, STAINLESS AND COATED VALVES AVAILABLE

**ACTUATOR 1**
**01** = STANDARD ACTING FAIL SAFE
**02** = FAST ACTING FAILSAFE
**00** = NONE

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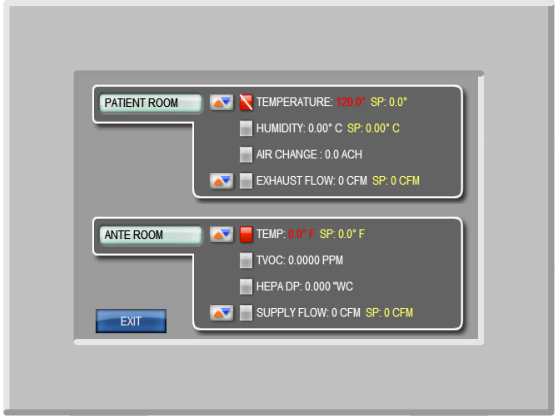
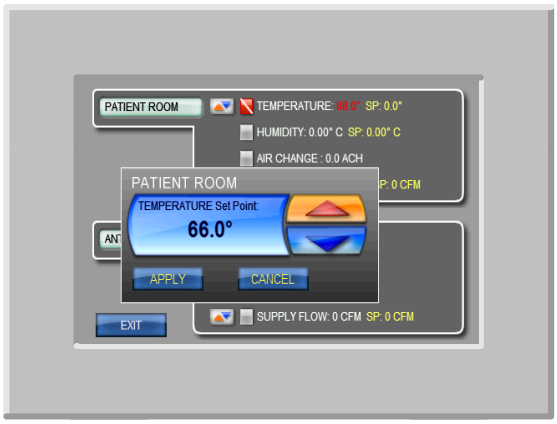
## Main Screen Options




## Red and Blue Main Screen (Optional)



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