

THERMOSTATS & CONTROLLERS

PROPORTIONAL ROOM THERMOSTAT

RTC-2P



DESCRIPTION

The **Kele Model RTC-2P** Room Thermostat Proportional Controller features two proportional outputs (heating and cooling). The proportional plus Integral (PI) control is suitable for pressure dependent VAV box control, as well as fan coil, baseboard, or air handler applications. The occupant controls include a digital display and buttons for setpoint adjustment and night setback/setup override. The **Model RTC-2P** comes with a remote setback input for use with BAS systems and a changeover input for one-pipe system applications. Field setup is through push buttons with adjustments for setback temperatures, deadband, and °F or °C display.

Kele



RTC-2P



FEATURES

- **Digital display for °F or °C**
- **Set point adjustment buttons**
- **Night setback manual button or clock input**
- **Remote sensor input**
- **Changeover input**
- **Two proportional outputs heating and cooling**
- **PI control algorithm**
- **0-10V or 2-10V outputs**

APPLICATION

The stand-alone **Model RTC-2P** is ideal for use when a central temperature control system may not be possible. Applications include any pressure-dependent VAV box control. The H/C output can also be used for modulating control of room-based discharge air, fan coil valves, or baseboard heat.

SPECIFICATIONS

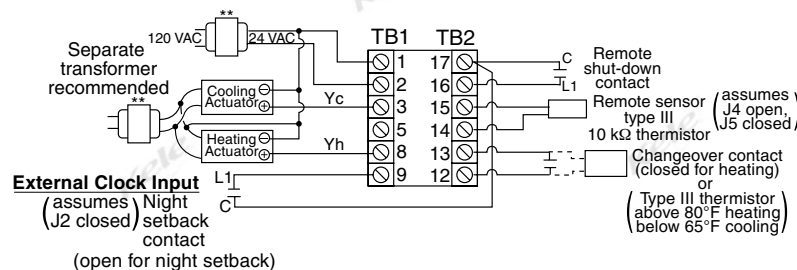
| | | | |
|-----------------------|--|----------------------------|---|
| Supply Voltage | 24 VAC ±20%, 50/60 Hz | Display | 0.35" (0.89 cm), two-digit LCD |
| Supply VA | 3 VA | Proportional Band | |
| Outputs | Proportional, 2-10V standard, 0-10V configurable (install 42K resistor in R14/R15) | Cooling | 1.8°F (1.0°C) |
| Control Inputs | PI algorithm | Heating | 2.7°F (1.5°C) |
| Remote sensor | 10K Type III thermistor | Reset Integral Time | 15 minutes |
| Changeover | Contact or thermistor, Type III | Changeover | Contact or 80°F (26.6°C) with a Type III thermistor |
| Setback | Isolated 24V contact | Deadband | -1.8° to 9.0°F (-1.0° to 5.0°C) |
| Shutdown | Isolated 24V contact | Dimensions | 4.0"H x 4.9"W x 1.2"D (12.45 x 10.16 x 3.05 cm) |
| Controls | Setpoint buttons up/down, Setback-enable button or 30 minute override | Weight | 0.45 lb (0.2 Kg) |
| Range | 40° to 90°F (4° to 32°C) | RoHS Statement | Yes |
| | | Warranty | 1 year |

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WIRING



- * 0-10 VDC or 2-10 VDC selectable. Install 42 kΩ resistor across R14/R15 for 0-10 VDC output.
- ** If one common transformer is used, the actuators must use 1/2 wave rectified power, and polarity must be observed.

TERMINALS

| | |
|--|---|
| TB1-1 = Common TB1-2 = Hot 24 VAC** TB1-3 = Cooling 0-10V* TB1-5 = N/C TB1-8 = Heating 0-10V* TB1-9 = Setback, remote | TB2-17 = Common TB2-16 = Remote shut off TB2-15 = Remote space sensor TB2-14 = Remote space sensor TB2-13 = Heat/Cool changeover TB2-12 = Heat/Cool changeover |
|--|---|

(TB1-1 and TB2-17 are connected internally)
(2 - 42 kΩ Resistor provided, but not installed, Part #1950-0091-00)

OPERATION

Adjustable Parameters

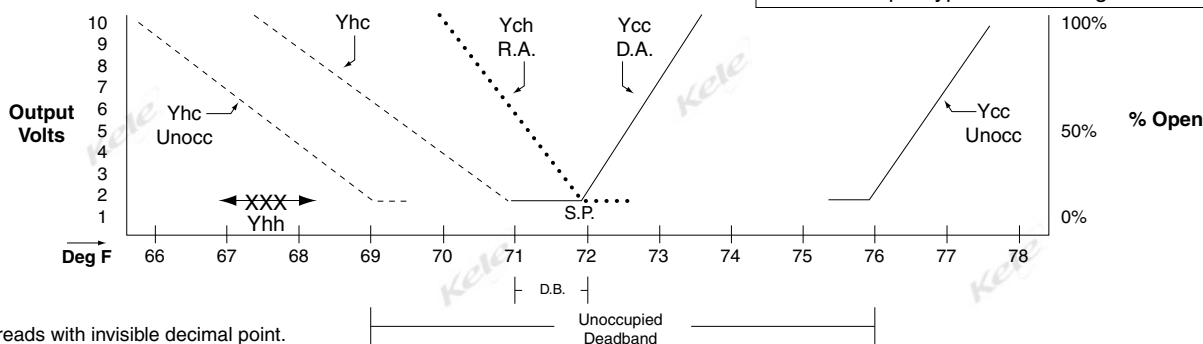
S.P. = Setpoint = 40° to 90°F (4° to 35°C)
 Deadband* (D.B.) = -1.8° to 9°F (-1° to 5°C)
 Unoccupied = Heating = 50° to 90°F (10° to 30°C)
 Cooling = 50° to 90°F (10° to 30°C)
 Outputs = 0-10V or 2-10V
 Display = °F or °C

Example (factory default)

S.P. = 72°F
 Deadband* (D.B.) = 1°F
 Unoccupied = Heating = 69°F
 Cooling = 76°F
 Outputs = 2-10V
 Display = °F

| Output* | Signal | Changeover Mode | Action |
|---------|-----------|------------------|--------|
| Ycc | _____ | Cooling mode (c) | D.A. |
| Yhc | ----- | Cooling mode (c) | R.A. |
| Ych | | Heating mode (h) | R.A. |
| Yhh | ---XXX--- | Heating mode (h) | N/A |

*Output type changeover mode



* Display reads with invisible decimal point.

Example: 3.0 D.B. displays as 30

ORDERING INFORMATION

MODEL
RTC-2P

DESCRIPTION
Room temperature controller, two-output H/C proportional thermostat

RELATED PRODUCTS
ST-R3S
ST-S3E
ST-U3

Pipe strap-on sensor 10KΩ Type III thermistor
 Room sensor 10KΩ Type III thermistor
 Universal duct and immersion sensor 10KΩ Type III thermistor

ACCESSORIES

1950-0091-00

Twin pack of 42.2 KΩ resistors