



RAA10C Fan Coil Thermostat with concealed set point knob.



RAA20U Room Thermostat with exposed set point knob.



RAA30U Room Thermostat with On/Off selector switch.



RAA40 Room Temperature Thermostat with Heat/Cool/Off selector switch.

Description

Designed for simple heating or cooling or heating/cooling applications, the RAA... Electric Room Thermostats are an attractive and economical solution that is based on two-wire, gas membrane technology.

The RAA... Electric Room Thermostats are available in single scale Fahrenheit or Celsius models, except the RAA10, with models for dry wall or electrical wall box mounting. Models are designed for wall box mounting includes wall box plate adapter and screws.

- Two-point control algorithm for on/off control
- 24...120, 277 Vac line
- Two mounting styles: electrical wall box or drywall
- Dual Fahrenheit/Celsius scale

Options

- Tamperproof cover (concealed set point knob)

Applications

The RAA... Electric Room Thermostats are typically used in public buildings, storage rooms, entrance hallways and maintenance rooms where two-position (On/Off) control is required.

Descriptions of models are as follows:

RAA10... model is a heating or cooling only thermostat that has a concealed set point knob for use in areas where set point adjustment is limited to authorized personnel. Typical applications are frost and overheat protection and temporary heat for buildings under construction.

RAA20... model is a heating or cooling only thermostat that has an external set point knob for occupant adjustment.

RAA30... is a heating or cooling only thermostat that has an external set point adjustment knob with an On/Off switch.

RAA40... is a heating and cooling thermostat with an external set point knob and a selector switch for Heat/Cool/Off.

Note:

ARG 70 wall plate is required in order to be UL compliant for switching line voltage.

The RAA... Room Thermostats are designed for either simple heating or cooling or for 2-pipe heating and cooling systems where fan control is not required.

features

Specifications/Product Ordering

Operating Voltage24...120, 277 Vac
Frequency50 or 60 Hz
Set Point Adjustment Range 50 to 85°F (10 to 29°C)
Switching Differential ≤ 1.8°F (1°C)
Switch Rating 6A RES, 2A FLA, 12A LRA
Time Constant 14 min.
Switch Action Output SPDT Two-position (On/Off)
Operation—Conditions
 Operating Temperature 32 to 122°F (0 to 50°C)
 Relative Humidity <95% RH
Transportation/Storage Conditions
 Temperature -4 to +122°F (-20 to +50°C)
 Relative Humidity <95% RH

Housing
 MaterialPlastic
 Color White
 Bellows Environmentally-friendly gas
Wiring Screw terminals for wires of
 2 x 16 AWG or 1 x 14 AWG, 20 AWG max.
Agency Listings Conforms to CE requirements
 UL listed to 873
 cUL listed to Canadian standard C22.2 No. 24-93
Shipping Weight 0.31 lb. (0.14 kg)

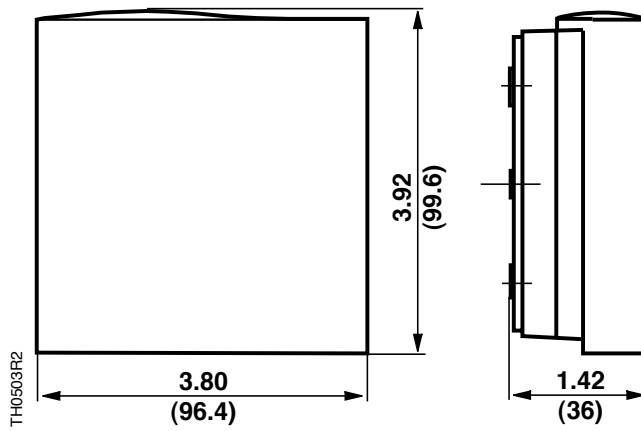
	Description	Part Nos.	
		Electric Wall Box ¹	Dry Wall
RAA...	Thermostat for heating or cooling only with concealed set point knob	RAA10CW	RAA10C
	Thermostat for heating or cooling only with exposed set set point knob	RAA20UW	RAA20U
	Thermostat for heating or cooling only with exposed set point knob and On/Off switch	RAA30UW	RAA30U
	Thermostat for heating/cooling with exposed set point knob and Heat/Cool/Off selector switch	RAA40UW	RAA40U

Table Note

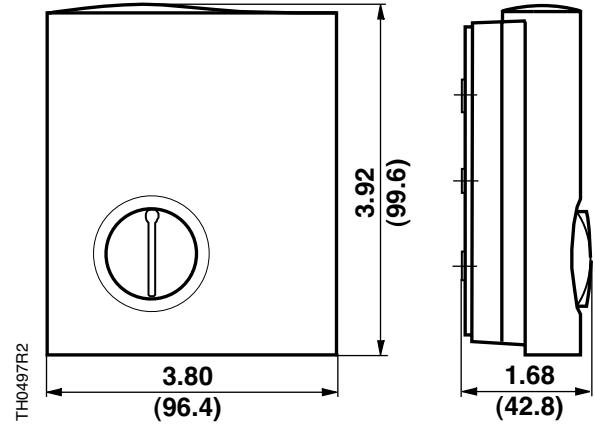
1. Includes wall plate, **ARG70**, to be UL compliant for switching line voltage.



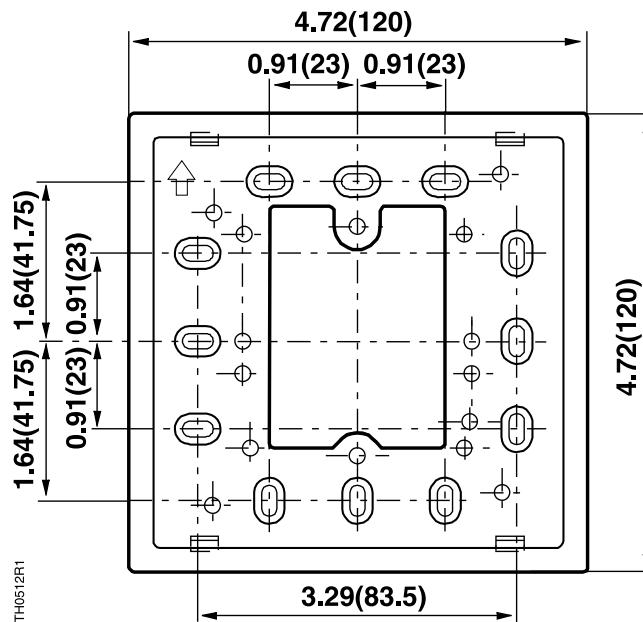
RAA10... Thermostat



RAA20... Thermostat



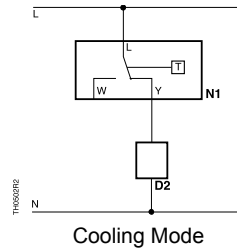
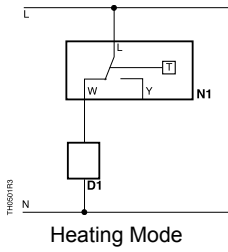
Wall Plate for Mounting



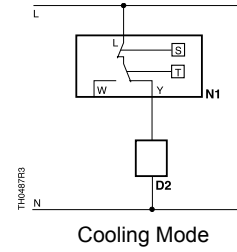
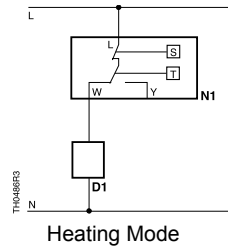
Dimensions shown in inches (mm).

Engineering Drawings

Wiring Diagrams



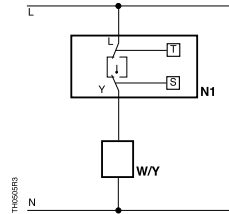
RAA10.../RAA20...



RAA30...

Key

- D1 Heating device
- D2 Cooling device
- L Operating voltage
- N Neutral
- N1 Room thermostat
- S On/Off switch
- T Thermostat
- W Heating control output
- Y Cooling control output

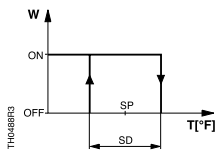


RAA40...

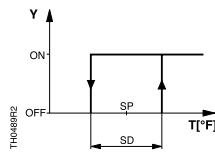
Key

- L Operating voltage
- N Neutral
- N1 Room thermostat
- S Heat/Off/Cool switch
- T Thermal switch
- W/Y Heating/Cooling device

Operating Diagrams



Heating Mode

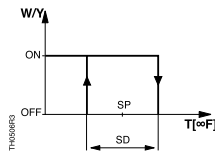


Cooling Mode

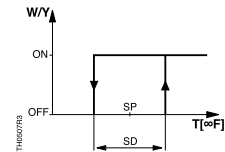
RAA10..., RAA20...
and RAA30

Key

- T Room temperature
- SD Switching differential
- SP Room temperature set point
- W Heating output signal
- Y Cooling output signal



Heating Mode



Cooling Mode

RAA40...

Key

- T Room temperature
- SD Switching differential
- SP Room temperature set point
- W/Y Heating or cooling output signal



RAB10.1U Thermostat with manual changeover.



RAB20U Thermostat with exposed set point knob and external changeover.



RAB30U Thermostat with exposed set point knob and 3-speed fan control.



RAB90.1U 3-speed fan switch.

Description

Designed to control 2- or 4-pipe fan coil or unit ventilators, the RAB... Electric Fan Coil Thermostats are an attractive and economical solution that is based on two-wire, gas membrane technology.

Providing On/Off control, the RAB... Electric Fan Coil Thermostats are available with dual scale Fahrenheit/Celsius models with manual or external changeover.

The RAB20U requires an aqua sensor to initiate changeover.

Applications

The RAB... Electric Fan Coil Thermostats are recommended for applications in commercial or light industrial building in conjunction with zone valves, thermal valves, fans or thermostats.

Note:

ARG70, wall plate, is required for UL compliance in switching line voltage.

features

- Fan Speed Switch (RAB90.1U) for remote switching location (24...277 Vac)
- Two-point control algorithm for on/off control
- Line voltage
- 2-pipe or 4-pipe fan coil applications
- 3-speed fan control
- Fan on only models for ventilation
- Manual or external changeover
- Two mounting styles: electrical wall box or drywall
- Adjustable upper/lower limit stops
- Dual Fahrenheit/Celsius scale

Specifications/Product Ordering

Operating Voltage 24...120, 277 Vac
Frequency 50 or 60 Hz
Set Point Setting Range 50 to 85°F (8 to 30 °C)
Switching Differential (SD) ≤1.8°F (1°C)
Switch Rating 0.2 to 6 (2) A
Time Constant 14 min.
Operating Conditions
 Temperature 14 to 122°F (-10 to +50 °C)
 Relative Humidity <95% RH
Transportation Conditions
 Temperature -4 to +122°F (-20 to +50 °C)
 Relative Humidity <95% RH
Safety UL 873

Wiring Screw Terminals for Wires of
 2 x 16 or 1 x 14 AWG, 20 AWG max.
Cover Color White
Shipping Weight 0.08 lb. (0.18 kg)

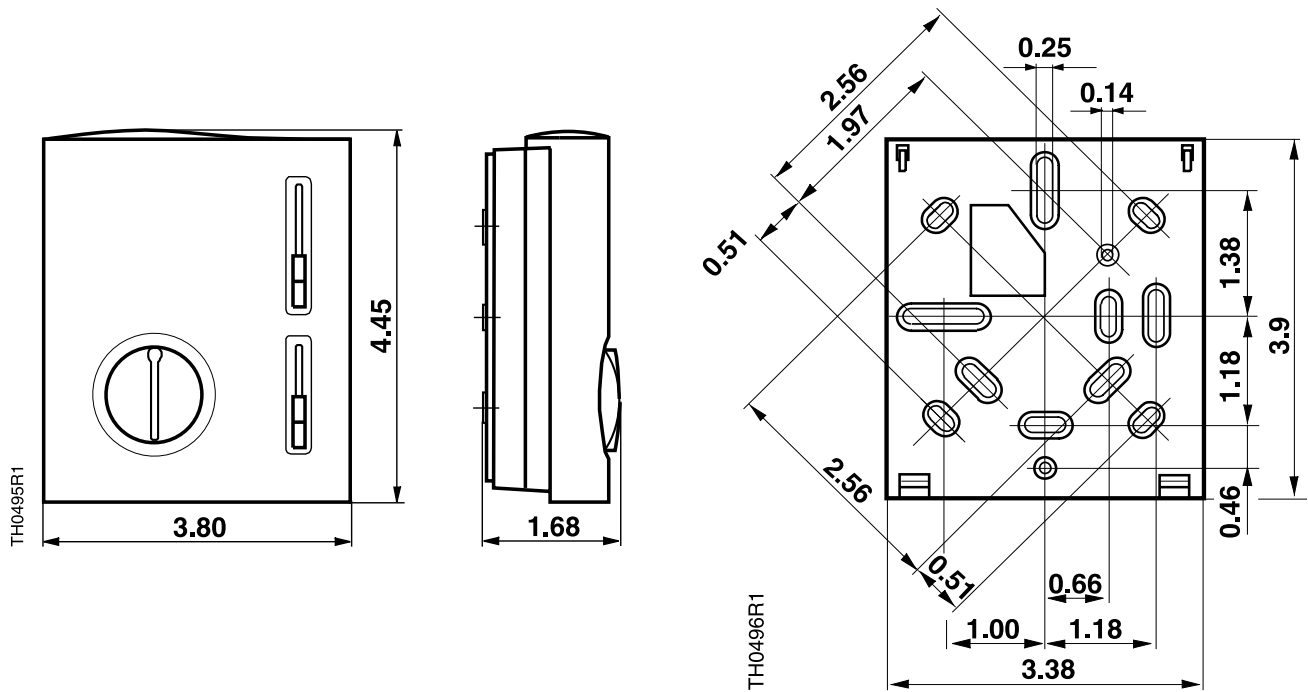


		Description					Part Nos.	
		Application	Change-over	Ventilation	3-speed Fan Control	Switch	Electric Wall Box ¹	Dry Wall
RAB...	2-pipe	Heating/Cooling	Manual	No	Yes	Heat/Cool	RAB10UW	RAB10U
	2-pipe	Heating/Cooling/Ventilation	Manual	Yes	Yes	Heat/Cool/Vent	RAB10.1UW	RAB10.1U
	2-pipe	Heating/Cooling	Auto	No	Yes	—	RAB20UW	RAB20U
	2-pipe	Heating/Cooling/Ventilation	Auto	Yes	Yes	Heat/Cool/Vent	RAB20.1UW	RAB20.1U
	4-pipe	Heating/Cooling	Manual	No	Yes	Heat/Cool	RAB30UW	RAB30U
	4-pipe	Heating/Cooling/Ventilation	Manual	Yes	Yes	Heat/Cool/Vent	RAB30.1UW	RAB30.1U
	—	3-speed Fan Switch	—	—	Yes	—	—	RAB90.1U

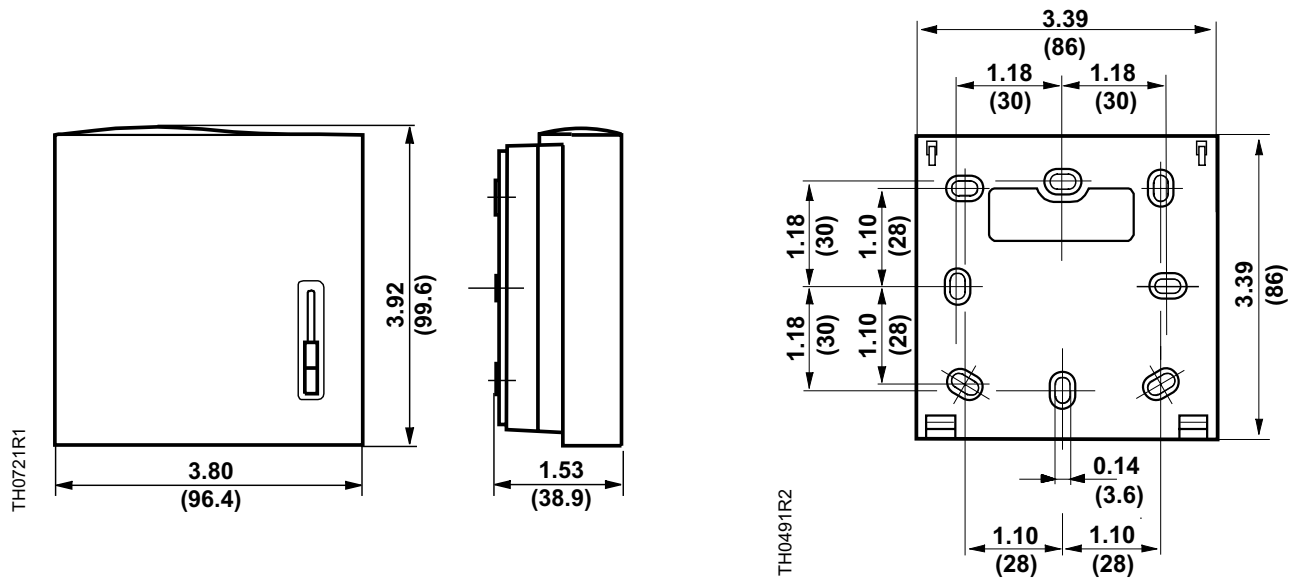
Ordering Note

- Includes wallplate, **ARG70**, to be UL compliant for switching line voltage.

RAB... Room Thermostat and Wall Plate for Mounting



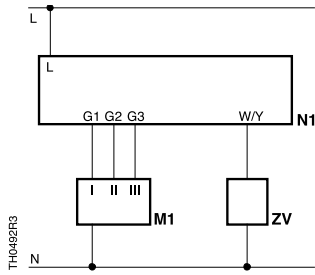
RAB90.1 and Wall Plate for Mounting



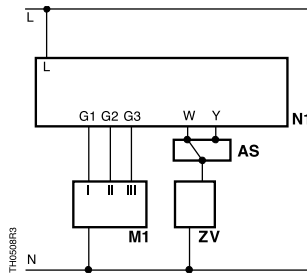
Dimensions shown in inches.

Engineering Drawings

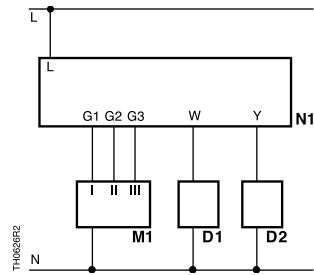
Wiring Diagrams



RAB10...



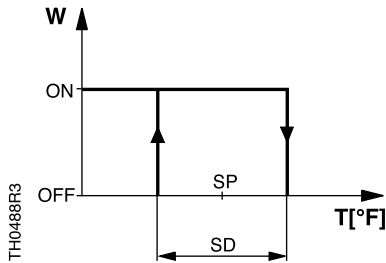
RAB20...



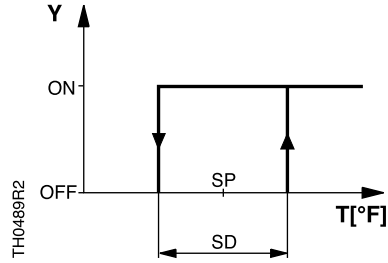
RAB30...

Key					
L	Operating Voltage	G1	Control Output Fan Speed I	ZV	Zone or Thermal Valve
M1	3-speed Fan	G2	Control Output Fan Speed II	W/Y	Control Output Actuator
N	Neutral	G3	Control Output Fan Speed III	AS	Aqua Sensor
N1	Room Thermostat				

Operating Diagrams



Heating Mode



Cooling Mode

Key			
T	Room Temperature	W	Valve Output Signal Heating
SD	Switching Differential	Y	Valve Output Signal Cooling
SP	Room Temperature Set Point		

Room Temperature Controllers for Two-pipe Fan Coil Units



RCC10U Room Temperature Controller.



RCC20U Room Temperature Controller.



RCC50.1U Room Temperature Controller.

Description

The RCC... Room Temperature Controllers are room temperature controllers for two-pipe fan coil units.

Applications

The RCC... Series of Room Temperature Controllers are typically used for:

- Controlling Normally Open (NO) 120 Vac, two-position valves. (RCC10U/20U)
- Controlling room temperature in individual rooms that are heated or cooled with two-pipe fan coil units.
- Opening or closing a 0 to 10V Normally Closed valve. (RCC50.1U)
- Switching an electrical heater (RCC20U).
- Operating a 3-speed fan.

The RCC... Series is suitable for systems with:

- Automatic Heating/Cooling changeover.
- Heating only/Cooling only or Heating and Cooling applications.

features

RCC10U

- Output for on/off valve actuator
- Output for three-speed fan
- Dual set point temperature scale
- Control depending on the room or return air temperature
- Automatic Heating/Cooling changeover
- Operating modes: Normal, Energy Saving, Frost Protection and Off
- Operating mode changeover input for remote control
- Selectable control parameters

RCC20U

- Outputs for on/off valve actuator and electrical heater.
- Output for three-speed fan.
- Dual set point temperature scale.

- Control depending on the room or return air temperature (remote sensing).
- Automatic Heating/Cooling changeover.
- Operating modes: Normal, Energy Saving, Frost Protection and Off.
- Operating mode changeover input for remote control.
- Selectable control parameters.

RCC50.1

- Modulating P+I control
- Output for 0 to 10 Vdc valve actuator
- Outputs for three-speed fan
- Dual set point temperature scale
- Automatic heating/cooling changeover
- Operating modes: Normal, Energy Saving and Off
- Operating mode changeover input for remote control
- Moisture damage protection function

Specifications/Product Ordering

Operating Voltage
 RCC10U/20U 120 Vac
 RCC50.1U 24 Vac ±20%

Frequency 50/60 Hz

Power Consumption Maximum 4 VA

Control Outputs (Fan) 11, 10, 9 .. 120 Vac max./3A res./3.5 FLA/7.0 LRA

Control Output 3 0 to 10 Vdc
 Resolution 39 mV
 Current ±1 mA

Signal Input 2 for Changeover Sensor QAH11.1, Class 2,
 NTC resistor 3K Ω at 77°F (25°C)

Permissible Number of thermostats Ten in Parallel, Signal Input 3

Status Input D1 and GND
 Contact Sensing 6 to 15 Vdc/3 to 6 mA
 Insulation against live voltage 4 kV

Operating Action Normally Open (NO)

**Permissible Cable Length with Copper
 Cable 16 AWG for Connection to Signal Input 2,
 D1, and GND** 262 feet (80m)

Set Point Setting Range 50 to 85°F (10 to 30°C)

RCC50.1U
 Control Algorithm P + I
 Proportional Band Heat (PBh) 7°F (4°C)
 Proportional Band Cool (PBc) 3.5°F (2°C)
 Integration Time 5 minutes

Set Point (Energy Saving Mode), Heating 61°F (16°C)

Set Point (Energy Saving Mode), Cooling 82°F (28°C)

Operation
 Temperature 32 to 122°F (0 to 50°C)
 Humidity <95% RH

Shipping and Storage
 Temperature -13 to +158°F (-25 to +70°C)
 Humidity <95% RH

Agency Approvals UL 873
 cUL
 Certification C22.2 No. 24-93
 Conforms to CE Requirements

Connection Terminals Solid Wires or Prepared Standard Wires
 2 X16 AWG or 1 X14 AWG
 Minimum 20 AWG

Housing Color
 Cover White and gray
 Base Gray

Degree of Housing Protection NEMA 1

Shipping Weight 0.5 lb. (0.23 kg)

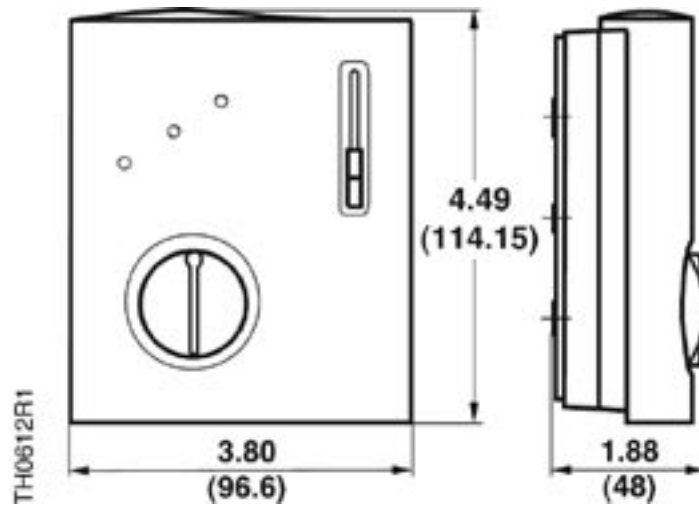
RCC...	Description	Part No.
	Room Temp. Controller with Input for Return Air Temperature Sensor	RCC10U
	Room Temp. Controller	RCC20U
	Room Temp. Controller	RCC50.1U

Ordering Note

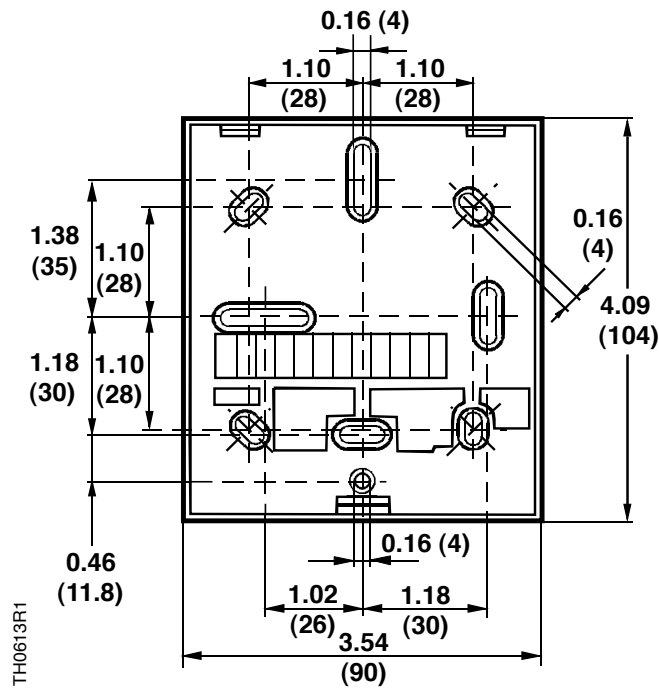
To order without a Siemens logo, change the suffix to "/U/NL".
Example: RCC10/U/NL.



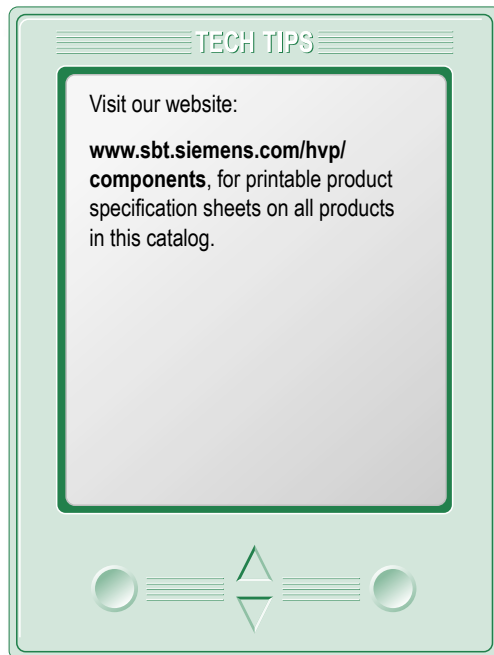
RCC... Controller



Baseplate



Dimensions are shown in inches (mm).



RCC...

New!

Free Energy Band™ Room Temperature Controller for Four-pipe Fan Coil Units



RCC30U Room Temperature Controller.

Description

The RCC... Free Energy Band Room Temperature Controller are room temperature controls for four-pipe fan coil units.

Applications

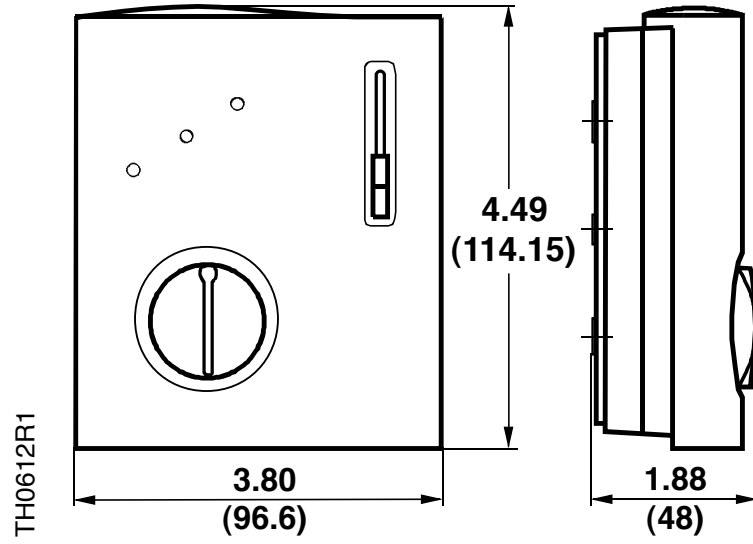
The RCC... Series is typically used for the following applications:

- Controlling room temperature in individual rooms that are heated or cooled with four-pipe fan coil units.
- Opening or closing a Normally Closed (NC) Heating and a Normally Open (NO) Cooling, 120 Vac, two-position valve.
- Switching a three-speed fan.

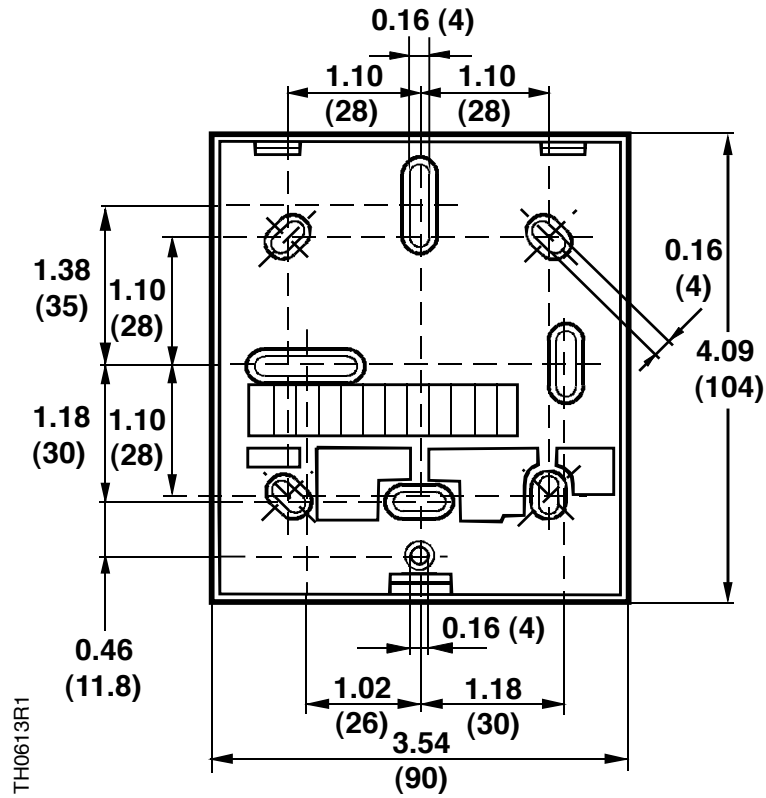
features

- Outputs for on/off valve actuators
- Outputs for three-speed fan
- Dual set point temperature scale
- Control depending on the room or return air temperature (remote sensing)
- Automatic Heating/Cooling changeover
- Operating modes: Normal, Energy Saving, Frost Protection and Off
- Operating mode changeover input for remote control
- Selectable control parameters
- Free Energy Band between Heating and Cooling for energy conservation

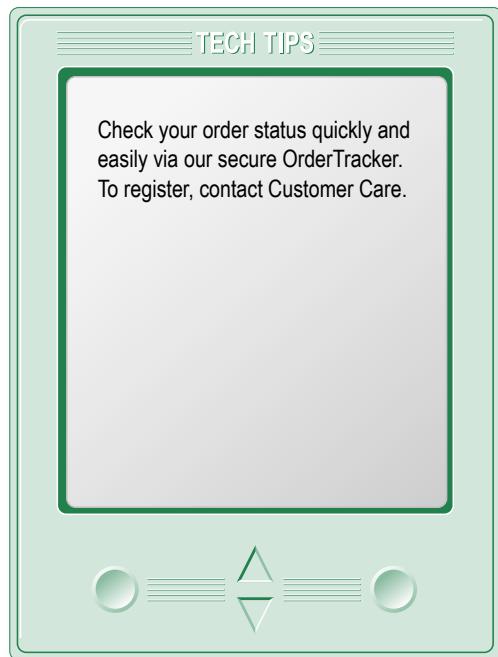
RCC... FEB Controller



Baseplate



Dimensions shown in inches (mm).



RCU50...

Room Temperature Controllers for CAV and VAV Systems



RCU50U Room Temperature Controller.



RCU50.2U Room Temperature Sensor with manual heating/cooling changeover switch.

Description

The RCU50... Room Temperature Controllers are designed specifically for Constant Air Volume and Variable Air Volume Systems.

Applications

Controlling individual room temperature in HVAC installations that are heated or cooled, the RCU50... are especially designed for use with VAV systems with VAV compact controllers, valve actuators, and air damper actuators.

features

- Modulating P-control
- 0 to 10 Vdc output for heating or cooling
- Operating voltage 24 Vac
- Ergonomic design
- Dual Fahrenheit/Celsius scale

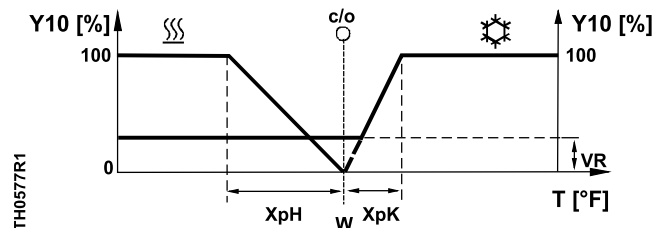
Model RCU50U

- Automatic heating/cooling changeover
- Active 0 to 10 Vdc input for set point shifting
- Operating mode changeover input for remote control
- Adjustable minimum limitation for cooling output

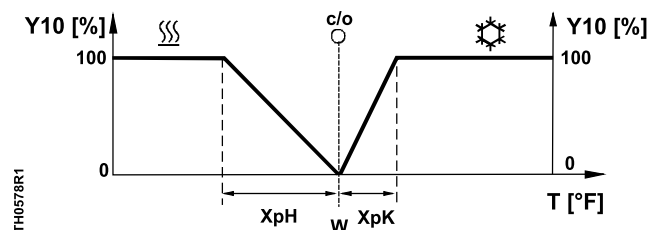
Model RCU50.2U

- Manual heating/cooling changeover
- Operating Modes: normal operation and OFF
- Output signal can be reversed 0-10 Vdc/10-0Vdc via a dip switch

Application Drawing



RCU50U Function Diagram.



RCU50.2U Function Diagram.

Key	
T	Room Temperature
Y10	Output Percentage
W	Room temperature set point
XpH	Proportional band heating
XpK	Proportional band cooling
VR	0 to 100% minimum limitation of cooling output
c/o	Changeover

Specifications/Product Ordering

Power Supply	
Operating Voltage	24 Vac \pm 20%
Frequency	50/60 Hz
Set Point Setting Range	46 to 86°F (8 to 30°C)
P-band in Heating Mode	
RCU50U	2 or 7°F (1 or 4°C)
RCU50.2U	7 F (4°C)
P-band in Cooling Mode	
RCU50U	1 or 3.5°F (0.5 or 2°C)
RCU50.2U	3.5°F (2°C)
Set Point (Energy Saving Mode), Heating	61°F (16°C)
Set Point (Energy Saving Mode), Cooling	82°F (28°C)
Set Point Frost Protection (RCU50U)	46°F (8°C)
Set Point Shift Temperature @ 72°F (22°C)	\pm 22.5°F (\pm 6.6°C)
Control Outputs Y10	
Voltage	0 to 10 Vdc
Current24 Vac
Current	\pm 1 mA
Status Input D1 (RCU50U)	
Contact Sensing	6 to 15 Vdc /3 to 6 mA
Insulation Against Live Voltage	4 kV
Maximum Number of Contacts per Panel	50

Status Input B1 (RCU50U)	
Set Point Shift of \pm 22.5°F@ 72°F(22°C)	0 to 10 Vdc
Neutral Position (No set point shift)	5 Vdc
Signal Input B2 for Changeover Sensor	QAH11.1 Safety Class 2
Maximum Copper Cable Length 16 AWG	
For Input Signal B1/B2 (RCU50U)	262 ft. (80 m)
For Input Signal D1 (RCU50U)	262 ft. (80 m)
Operation	
Temperature	32 to 122°F (0 to 50°C)
Humidity	<95% RH
Shipping and Storage	
Temperature	-13 to +158°F (-25 to +70°C)
Humidity	<95% RH
Agency Listings	UL Listed 195N; Conforms to CE Requirements
Connection Terminals	Use Solid Wires or Prepared Stranded Wires 2 x 16 AWG or 1 x 14 AWG, 20 AWG max.
Housing Color	
Cover	White
Base	Gray
Shipping Weight	
RCU50U	0.5 lb. (0.02 kg)
RCU50.2U	0.5 lb. (0.02 kg)

RCU50U	Description	Part No.
	Room Temperature Controller without Operating Mode Selector	RCU50U
	Room Temperature Controller with Manual Heating/Cooling Changeover Switch	RCU50.2U



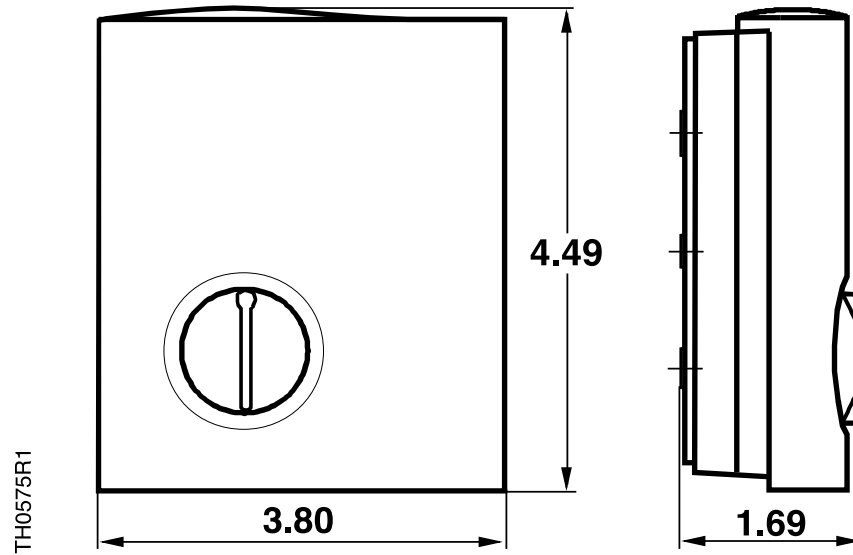
Device Combinations

Control Valves

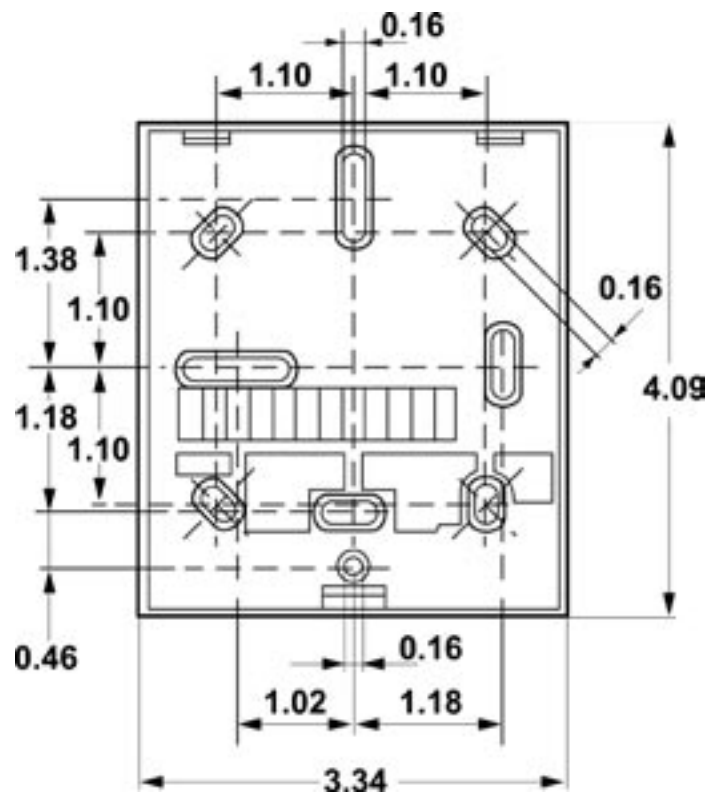
Description	Type Reference	
Temperature Sensor	QAH11.1	155-329P25
Valve Actuator	SSB61U	155-192P25
Valve Actuator	SQS65/65.5U	155-190P25
Damper Actuator	GDE16x.xx GLB16x.xxE GCA161.1E GGB161.1E	155-187/173/176P25

Application	RCU50U	RCU50.2U	RCU61U
Single Duct Cooling Only	•	•	
Single Duct Heat or Cool	•	•	
Single Duct with Elec. Heat			•
Single Duct with Hot Water Coil			•
Single Duct with Fan that Cycles on Call for Heating	•	•	
Refer to page:	A-55	A-59	

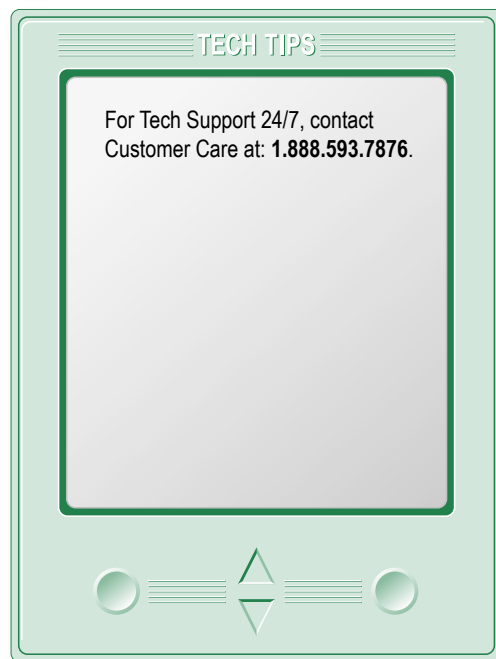
RCU50... Controller



RCU50... Baseplate



Dimensions shown in inches.



RCU61U

Room Temperature Controllers for CAV and VAV Systems



RCU61U Room Temperature Controller.

Description

The RCU61U Room Temperature Controllers are designed specifically for Constant Air Volume and Variable Air Volume Systems.

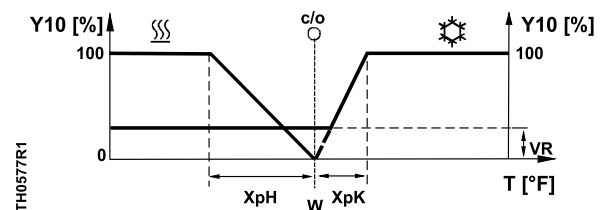
Applications

Controlling individual room temperature in HVAC installations that are heated or cooled, the RCU61 Temperature Controllers are suited for use with VAV systems with auxiliary heating with VAV compact controllers, valve actuators, and air damper actuators.

features

- Modulating P-control
- 0 to 10 Vdc output for cooling
- Three-position output 24 Vac for heating
- Operating modes: normal, energy saving and standby
- Active 0 to 10 Vdc input for remote set point shifting
- Operating mode changeover input for remote control
- Adjustable minimum limitation for cooling output
- Operating voltage 24 Vac
- Ergonomic design
- Dual Fahrenheit/Celsius scale

Application Drawing



RCU61 Function Diagram.

Key	
T	Room Temperature
Y2, Y10	Output Percentage
W	Room Temperature Set Point
XpH	Proportional Band Heating
XpK	Proportional Band Cooling
VR	0 to 100% Minimum Limitation of Cooling Output

Specifications/Product Ordering

Power Supply
 Operating Voltage 24 Vac ±10%
 Frequency 50/60 Hz

Set Point Setting Range 46 to 86°F (8 to 30°C)

Maximum Control Deviation at 68°F (20°C) ±0.7 K

Switching Differential Heating SDH or P-band XpH (Selectable) 2 or 7°F (1 or 4°C)

Switching Differential Cooling SDC or P-band XpC (Selectable) 1 or 3.5°F (0.5 or 2°C)

Set Point Shift Temperature @ 72°F (22°C) ±22.5°F (±°C)

Control Outputs (Cooling) 4 & 5 0 to 10 Vdc
 Voltage 24 Vac
 Current ±1 mA

Control Outputs (Heating) 8, 9 & 10 24 Vac ±20%

Motor Timing for Heat Output 150 sec. @ 60 Hz

Status Input D1
 Contact Sensing 6 to 15 Vdc / 3 to 6 mA
 Insulation Against Live Voltage 4 kV
 Maximum Number of Contacts per Panel 50

Status Input B1
 Set Point Shift of 36°F (12.5 C) 0 to 10 Vdc
 Neutral Position (No Set Point Shift) 5 Vdc

Signal Input B2 for Changeover Sensor QAH11.1 Safety Class 2

Maximum Copper Cable Length 16 AWG
 For Input Signal B1/B2 (RCU61U) 262 ft. (80 m)
 For Input Signal D1 (RCU61U) 262 ft. (80 m)

Operation
 Temperature 32 to 122°F (0 to 50°C)
 Humidity <95% RH

Agency Listings UL Listed 197N; Conforms to CE Requirements

Connection Terminals Use Solid Wires or Prepared Stranded Wires
 2x13 AWG or 1x16 AWG

Housing Color
 Cover White
 Base Gray

Shipping Weight 0.5 lb. (0.02 kg)

RCU61U	Description	Part No.
	Room Temperature Controller	RCU61U



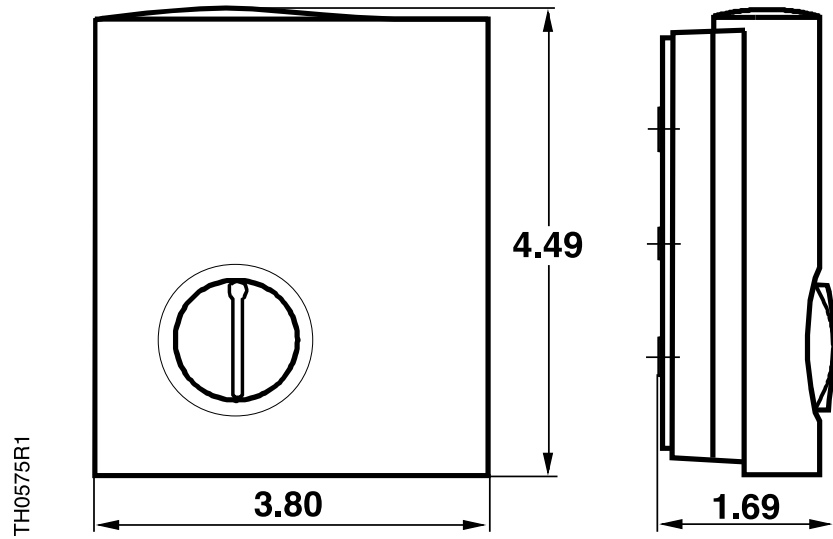
Device Combinations

Control Valves

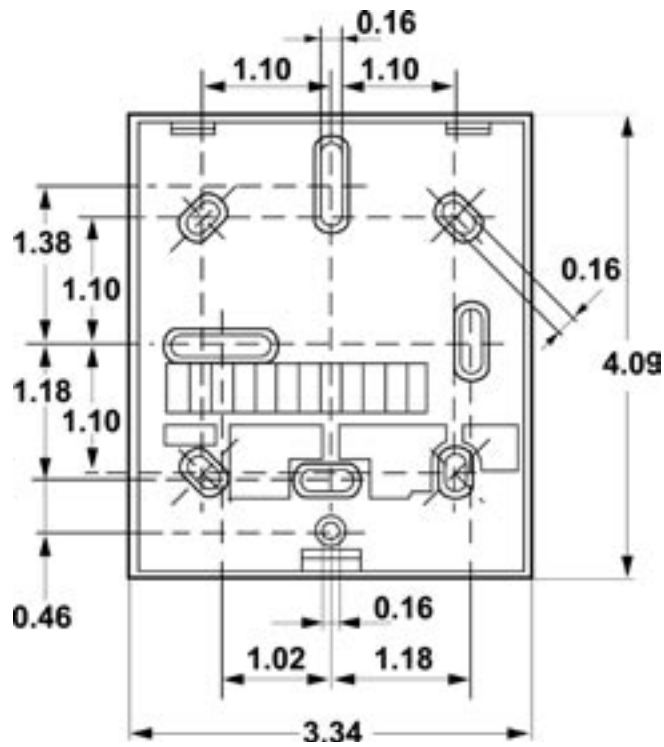
Description	Type Reference	
Valve Actuator	SSB61U SSC61U SQS65U	155-192P25 155-313/314P25 155-190P25
Damper Actuator	GLB16x GCA16x GBB16x GDE16x	155-187/173/176P25

Application	RCU50U	RCU50.2U	RCU61U
Single Duct Cooling Only	•	•	
Single Duct Heat or Cool	•	•	
Single Duct with Elec. Heat			•
Single Duct with Hot Water Coil			•
Single Duct with Fan that Cycles on Call for Heating	•	•	
Single Duct with Fan and Electric Heat			•
Single Duct with Fan and Hot Water Coil			•
Dual Duct	•	•	
Refer to page:	A-55	A-59	

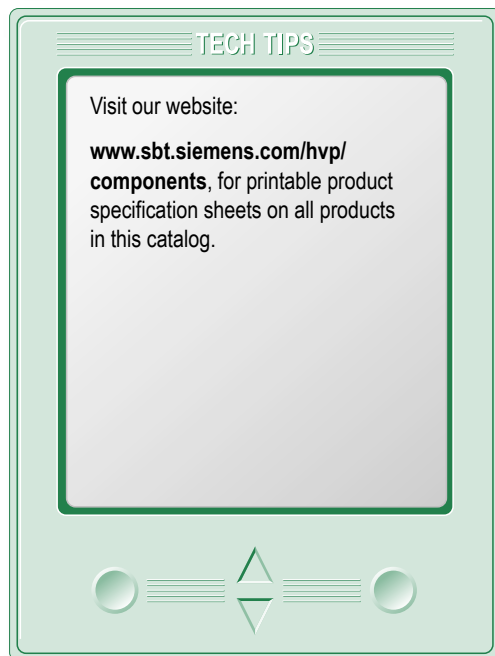
RCU61U Controller



Baseplate



Dimensions shown in inches.



Room Temperature Controllers with LCD for Heating and Cooling Systems



RDU50U Room Temperature Controller.



RDU50.2U Room Temperature Controller.

Description

The RDU Series Room Controller with LCD is designed for heating and cooling systems.

Applications

The RDU... Series of Room Temperature Controllers are used for control of the following:

- Individual room temperature HVAC applications that are heated or cooled.
- 0 to 10 Vdc valves or damper actuators.

features

- Modulating Proportional + Integral (P+I) control
- Control depending on room or remote air temperature
- Output for a 0 to 10 Vdc actuator
- Automatic heating/cooling changeover (RDU50U)
- Manual heating/cooling changeover (RDU50.2U)
- Operating modes: Normal, Energy Saving and Off
- Operating mode changeover input for remote control
- Selectable installation and control parameters
- Adjustable minimum limitation for cooling output
- Optional selectable Direct Acting or Reverse Acting output
- Selectable display of room temperature or set point
- Fahrenheit or Celsius selectable
- Minimum and maximum set point limitation
- Operating voltage 24 Vac
- Available with or without logo

Specifications/Product Ordering

Operating Voltage 24 Vac +20%
Frequency 50/60 Hz
Power Consumption Maximum 4 VA
Control Output 1-6 0 to 10 Vdc
 Resolution 39 mV
 Effective Current Maximum +1 mA
Return Air Temperature Input 4-3 and Changeover QAH11.1 Safety Class 2
 Temperature Input 2-3 (RDU50).NTC Resistor 3K Ohm at 77°F (25°C)
Dry Contact D1 and GND
 Contact Sensing 6 to 15 Vdc/3 to 6 mA
 Operating Action Normally Open (NO)
Maximum Cable Length 16 AWG for Connection to Terminals 4, 2 and D1 262 feet (80 m)
Setpoint Setting Range 41 to 95°F (5 to 35°C)
Control Deviation at 77°F (25°C) Maximum +1.5°F (0.9°C)
P-band in Heating Mode, Adjustable in 0.5K Increments (1 Kelvin = 2°F) 0.5 to 4K
 Factory Setting 2K
P-band in Cooling Mode, Adjustable in 0.5K Increments (1 Kelvin = 2°F) 0.5 to 4K
 Factory Setting 1K

Integral Action Time, Adjustable 1 to 10 Minutes
 Factory Setting 5 Minutes
Set Point (Energy Saving Mode), Heating 41 to 65°F (5 to 18°C)
Set Point (Energy Saving Mode), Cooling 75 to 95°F (24 to 35°C)
Operation
 Temperature 32 to 122°F (0 to 50°C)
 Humidity <95% RH
Shipping and Storage
 Temperature -13 to +158°F (-25 to +70°C)
 Humidity <95% RH
Agency Approvals Conforms to CE Requirements
 NEMA 1
Connection Terminals Use Solid Wires or Prepared Stranded Wires.
 2X16 AWG or 1X14 AWG
 Maximum 20 AWG
Housing Color
 Cover White
 Base Gray
Shipping Weight 0.5 lb. (0.23 kg)

RDU...	Description	Part No.
	Room Temperature Controller without Operating Mode Selector	RDU50U
	Room Temperature Controller with Manual Heating/Cooling Changeover Switch	RDU50.2U

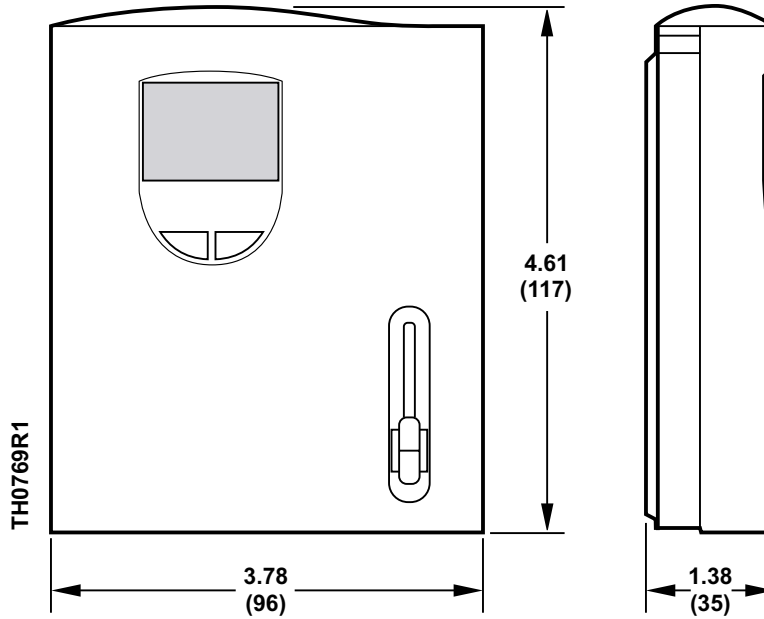
Ordering Note

To order without logo, change suffix to "/U/NL".

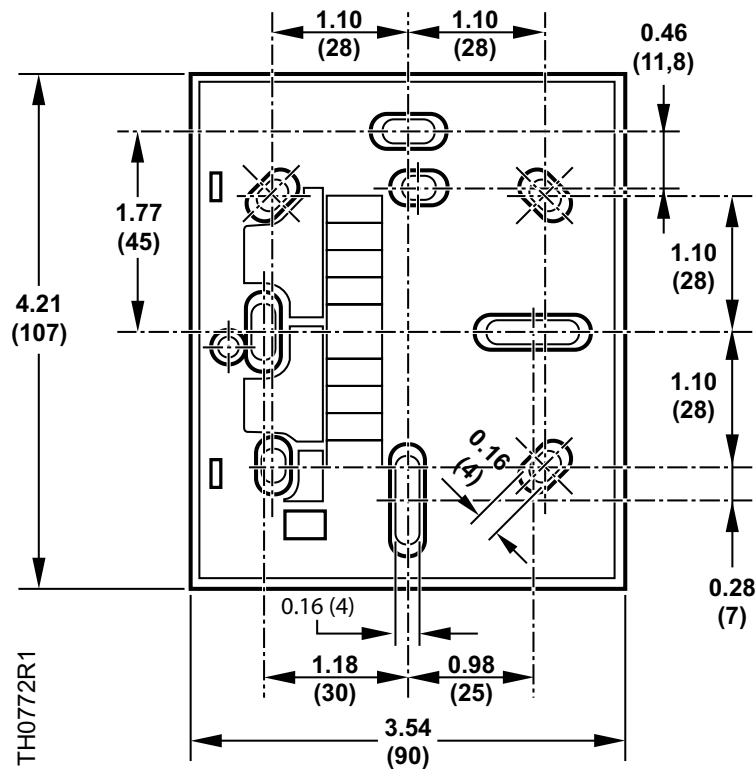
Example: RDU50/U/NL.



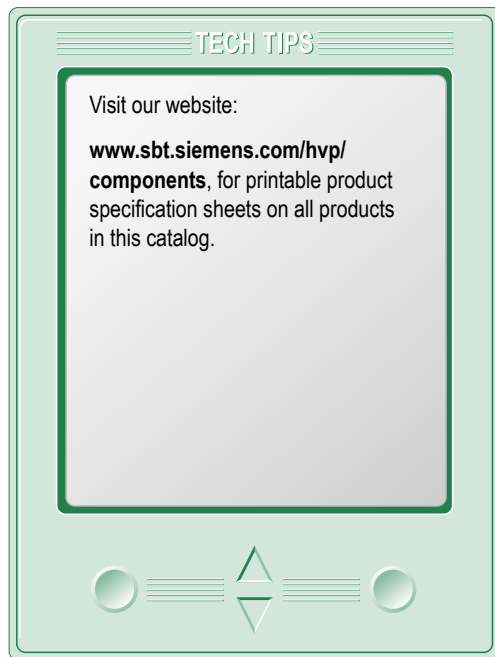
RDU...Controller



Baseplate



Dimensions shown in inches (mm).



RDX...

New!

Room Temperature Controllers with LCD



RDX42.22U Room Temperature Controller with LCD.

Description

The RDX... Room Temperature Controller with LCD is a controller for heat pump systems with reversing valve, optional electric heater, one- or two-stage heating and one-stage cooling.

Applications

The RDX... Series of Room Temperature Controllers are used for control of the following:

- Heat pump systems with reversing valve, optional electric heater, one- or two-stage heating and one-stage cooling.
- Room temperature in individual rooms that are heated or cooled with four-pipe fan coil units and optional electric heating.
- Opening and closing a valve.
- Switching a one-speed fan.

features

- Outputs for one-stage compressor and reversing valve or on/off valve actuators
- Output for auxiliary electric heating
- Output for a one-speed fan
- Room or return air temperature control
- Manual heating/cooling changeover
- Operating modes: Normal (heating, cooling), Energy Saving, Off
- Operating mode changeover input for remote control
- Selectable installation and control parameters
- Operating voltage 24 Vac

Specifications/Product Ordering

Operating Voltage 24 Vac + 20%
Frequency 50/60 Hz
Power Consumption Maximum 6 VA
Control Output FAN 24 Vac
 Rating Maximum 5(3)A
Control Outputs Cooling and Heating 24 Vac
 Rating Maximum 5(3)A
Control Output Aus. Heating 24 Vac
 Rating Maximum 5(3)A

Remote Temperature Sensor Status Input 8-7.QAH11.1 Safety Class II
 NTC resistor 3 k ohm at 77°F (25°C)

Status input D1 and GND
 Operating Action Selectable Normal Open (NO)
 Contact Sensing Normal Closed (NC)
 Insulation Against Line Voltage SELV 6 to 15 Vdc/3 to 6 mA, 4kV Reinforced Insulation

Permissible Cable Length with Copper Cable
2 X16 AWG or 1 X14 AWG for Connection to
Terminals 8 and D1 262 ft. (80 m)

Setpoint Setting Range 46 to 95°F (8 to 35°C)
Control Deviation at 77°F (25°C) Maximum + 1°F (0.5 K)
 Setting Range Factory Setting
Switching Differential in Heating Mode (adj) 1 to 7°F 3.5°F (2 K)
Switching Differential in Cooling Mode (adj) 1 to 7°F 2°F (1 K)
Setpoint Differential WD (Adjustable) 1 to 9°F 3.5°F (2 K)
Setpoint (Energy Saving Mode), Heating 46 to 64°F 61°(16°C)
Setpoint (Energy Saving Mode), Cooling 75 to 95°F 82.5°F (28°C)
Operation
 Temperature 32 to 122°F (0 to 50°C)
 Humidity <95% RH

Shipping and Storage
 Temperature -13 to +158°F (-25 to +70°C)
 Humidity <95% RH

Agency Approvals Conforms to CE Requirements NEMA 1

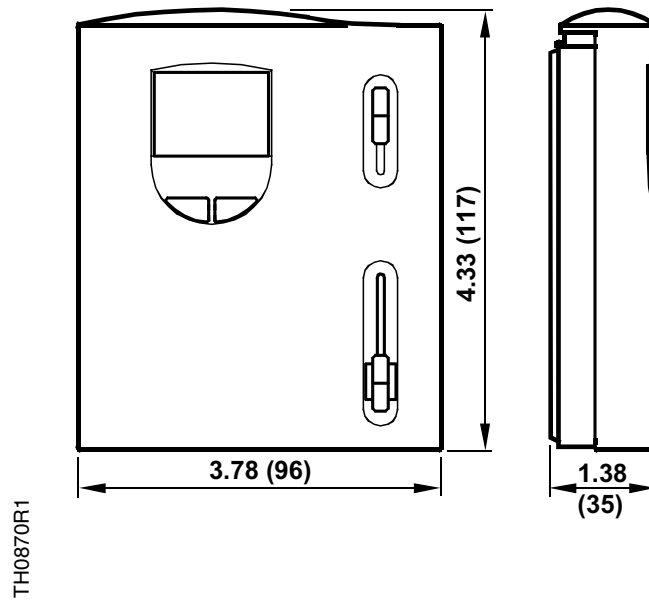
Connection Terminals Use Solid Wires or Prepared Stranded Wires. 22 AWG to 14 AWG

Housing Cover Color White
Shipping Weight 0.5 lb. (0.225 kg)

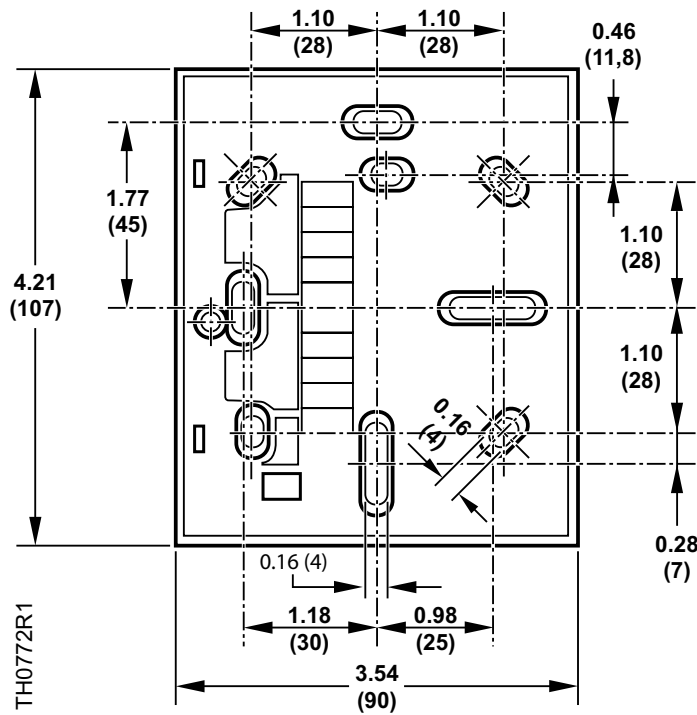
	Description	Part No.	
RDX...	Room Temperature Controller	RDX42.22U	With Logo
	Room Temperature Controller	RDX42.22/U/NL	Without Logo



RDX... Controller



Baseplate



Dimensions shown in inches (mm).