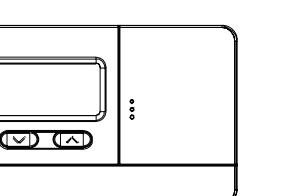


Digital Programmable Thermostat Installation and User Manual

Model: RS3110 and RS3210 Series



INSTALLATION MANUAL

The information supplied here is for the mounting, wiring and switch set up for the RS3110 and RS3210 thermostats. For programming and operating functions, refer to the User Manual section.

Thank you for selecting our wall thermostat. Robertshaw® products are manufactured to high quality standards and are designed to provide years of service.

The RS3110 and RS3210 thermostats work with the following climate control configurations:

- Heat Pump (No Auxiliary Heat)
- Heat Pump (With Auxiliary/Emergency Heat)
- Standard Heat and Cooling Systems
- One Stage Heat/Cool - RS3110
- Two Stage Heat, One Stage Cool - RS3210
- Standard Heat Only Systems
- Millivolt Heat Only Systems - Floor or Wall Furnaces
- Standard Central Air Conditioning
- Gas or Oil Heat
- Electric Furnace
- Hydronic (Hot Water) Zone Heat-2 Wires
- Not to Be Used With Split Transformer Systems

The RS3110 and RS3210 thermostats will NOT work with 3-Wire Hydronic (Hot Water) Zone Heat 110/220 Volts. This thermostat operates on 24 VAC power or battery power.

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IMPORTANT SAFETY INFORMATION

WARNING:

A Electrical Shock Hazard

Turn off power at the main power source by unscrewing the fuse or switching the circuit breaker to the OFF position before installing, removing or cleaning this thermostat.

A Fire and Electrical Shock Hazard

This device should be installed by a qualified service technician with due regard for safety as improper installation could result in a fire and electrical shock hazard.

A Fire and Electrical Shock Hazard

This is a 24 VAC low-voltage thermostat. Do not install on voltages higher than 30 VAC.

- Do not switch system to COOL if the temperature is below 50°F (10°C). This can damage your cooling system and may cause personal injury.

- Do not short (jumper) across terminals on the gas valve or at the system control to test installation. This will damage the thermostat and void the warranty.

- Do not connect ground to any terminal in this unit.

- All wiring must conform to local and national building and electrical codes and ordinances.

- Use this thermostat only as described in this manual.

CAUTION:

- Read all the information in this manual before installing this thermostat.

- This thermostat is equipped with automatic compressor protection to prevent damage due to short cycling or extended power outages. The short cycle protection provides a 4 minute delay between heating or cooling cycles to prevent the compressor from being damaged.

- The batteries must be replaced at least every 18-24 months to assure proper operation. The thermostat will display a flashing low battery when it is time to replace the batteries. The manufacturer recommends inserting fresh batteries before leaving for an extended period.

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CHECK THERMOSTAT OPERATION

Fan Operation

If your system does not have a G terminal connection, skip to Heating System.

- 1. Turn on power to system.

- 2. Move Fan switch to ON position. The blower should begin to operate.

- 3. Move Fan switch to AUTO position. The blower should stop immediately.

Heating System

- 1. Move System switch to HEAT mode. If the heating system has a standing pilot, be sure to light it.

- 2. Press the UP arrow to adjust thermostat setting to 1°F/1°C above room temperature. The heating system should begin to operate. The display should show the flame icon in motion.

- 3. For a RS3210 system, adjust temperature setting to 3°F/3°C above room temperature. If your system configuration is set for auxiliary heat, the auxiliary heat system should begin to operate.

- 4. Press the DOWN arrow to adjust the thermostat below room temperature. The heating system should stop operating.

Cooling System

- 1. Move System switch to the COOL mode.

- 2. Press the DOWN arrow to adjust thermostat setting below room temperature. The blower should come on immediately on high speed, followed by cold air circulation. The display should show the snowflake icon pulsing.

- 3. Press the UP arrow to adjust the temperature setting above room temperature. The cooling system should stop operating.

If these tests are not successful, remove the thermostat body and check for bent pins. Check all wiring connections.

If these tests are successful the thermostat is ready to operate using the factory defaults. To change the configuration settings, refer to Configuration in the User Manual section.

Installation of the thermostat is now complete. Remove the protective mylar over the screen and check that fresh batteries are properly installed. Close all doors.

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When the batteries are low the thermostat will enter a low battery mode. Low battery mode has two levels:

- Level 1 - The low battery icon will be displayed. The thermostat will continue to operate. Replace the batteries as soon as possible.

- Level 2 - The low battery icon will flash. If 24 VAC is present the thermostat will continue to operate if the batteries are discharged or removed. If 24 VAC is not present, the thermostat is powered by batteries only and THE SYSTEM WILL NOT OPERATE. Replace batteries immediately.

Replace batteries if leaving thermostat unattended for more than 30 days.

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OPERATION

System Selector Switch

The System Selector switch on the front of the thermostat determines the operating mode of the system. You may select COOL, OFF, HEAT or AUTO (RS3210 only).

- NOTE: Anytime you install or remove the thermostat from the wall-plate, slide the System Selector to the OFF position to prevent the possibility of a rapid system on-off.

Auto Changeover (RS3210 Only)

Auto changeover is the ability of the thermostat to switch automatically between heating settings and cooling settings. This is useful in spring and fall when the days are warm and the nights are cool. In heat mode, if the room continues to warm beyond a set threshold, the thermostat switches to the cool mode and the associated cool settings. Likewise, in cooling mode, if the room continues to cool beyond a set threshold, the thermostat switches to the heat mode and the associated heat settings.

As the room temperature changes, the thermostat will heat for cooling as needed. To prevent the heating and cooling systems from overriding each other, an automatic changeover deadband is used. The deadband is the number of degrees that the room temperature can vary from the active setpoint until heating or cooling is called for. The larger the deadband the more the room temperature will vary.

Fan Switch

The fan switch should normally be set in the AUTO position. The fan will be turned on along with normal operation of your system. In a normal gas or oil furnace, the fan will be turned on by your furnace after its warm-up delay. For electric heat, air conditioning, and heat pump operation, the fan will turn on with the system. To run the fan continuously, slide the Fan switch to the ON position.

After selecting one of the four programs, you can press the PROG DAY button to move to the next program. Use the UP and DOWN arrows to select the temperature for this program.

Press the PROG DAY button to move to the next program. Repeat steps 4 through 7 for all four programs for weekdays and weekend days.

Switch between HEAT and COOL. Start with step 2 and repeat steps 4 through 7 to set the four programs for weekdays and weekend days.

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Permanent Override

It is possible to set a temperature and hold it for an extended period, such as a vacation.

- Press and release the HOLD/RUN button. HOLD will flash on the display.

- You can use the UP and DOWN arrows to select a set temperature. The set temperature will be held until canceled.

- To cancel the permanent override, press and release the HOLD/RUN button. The word SCHEDULE will appear on the display.

Home Today

This feature allows you to quickly and temporarily override your program settings for a day with just one button.

- Press the HOME TODAY button to enter the Home Today override. When in Home Today mode, the thermostat will use the default temperature setpoint.

- The display will show HOME TODAY.

- The thermostat will remain in Home Today mode until the first program of the next day.

If the system is changed between HEAT and COOL modes during the Home Today override period, the setpoint temperature will automatically update. It will automatically change from the lowest cool program setpoint to the highest heat program setpoint.

• Press the HOME TODAY button to exit Home Today mode before the schedule ending time. HOME is no longer displayed on the LCD screen, and the thermostat returns to the current program settings.

• You can manually change the setpoint temperature while in Home Today mode. Refer to the Temporary Override instructions. Changing the set temperatures while in Home Today mode will not affect the Today ending time. However, the set temperature will not change automatically with a manual or automatic change in the system. To run the fan continuously, slide the Fan switch to the ON position.

Temporary Override

To temporarily change the current set temperature without affecting your program, follow these steps:

- Press the UP and DOWN arrows to change to your desired temperature.

- After 15 seconds the display will return to the normal run display.

At the next program change, the Temporary Override is canceled, and the next program temperature becomes the setpoint temperature.

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Lock Keypad

The keypad can be locked to disable the buttons on the front panel.

- To lock the keypad, press the HOLD/RUN button for 5 seconds. The lock icon will appear on the screen.

- To unlock, press the HOLD/RUN button for 5 seconds. The lock icon will disappear.

TROUBLESHOOTING

Problem

Solution

Scrambled or double display (numbers over numbers).

No display.

Entire display dims.

Auto/Fan does not turn On.

There may be as much as four minute delay before the heat or cool system turns on. Wait and check.

Check your circuit breakers and switches to ensure there is power to the system.

Replace batteries.

Make sure your furnace blower door is closed properly.

Check the position of the furnace or Heat Pump selector switches.

Erratic display.

Press Reset once with a small pin and hold for two seconds then reprogram.

Thermostat reads E1.

Temperature sensor defective. Replace unit.

Thermostat reads E2.

System switch in wrong position. Move system switch to correct position.

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Two Year Limited Warranty

Invensys Controls warrants to the original contractor/installer, or to the original consumer user, that each new Robertshaw thermostat will be free from defects in materials and workmanship under normal use and service for a period of two (2) years from the date of purchase ("Warranty Period"). If any Product fails within the applicable Warranty Period, Invensys Controls shall, at its option, repair or replace the Product or credit the purchase price, provided the Product is returned to Invensys Controls' facility or designated agent within the Warranty Period, with transportation or postage prepaid and proof of the date of purchase, and the Product is found to be defective.

Some states do not allow the exclusion or limitation of incidental or consequential damages, or allow limitations on how long an implied warranty lasts, so the above limitations or exclusions may not apply to you. This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

For warranty returns, send the thermostat, shipping prepaid and proof of date of purchase to:

Invensys Controls

Warranty Claims Department

515 S. Promenade Ave.

Corona, CA 92879-1736

In Canada:

Invensys Controls

Warranty Claims Department

3505 Laird Rd. Unit #14

Mississauga, Ontario L5L 5Y7 Canada

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Repair, Replacement, or Credit of the Purchase Price

AS PROVIDED HEREIN, SHALL CONSTITUTE THE SOLE REMEDIES WITH RESPECT TO DEFECTS IN THE PRODUCTS. THE CONSUMER ASSUMES ALL RISKS AND LIABILITY FOR INCIDENTAL AND CONSEQUENTIAL DAMAGE RESULTING FROM INSTALLATION AND USE OF THE THERMOSTAT.

Some states do not allow the exclusion or limitation of incidental or consequential damages, or allow limitations on how long an implied warranty lasts, so the above limitations or exclusions may not apply to you. This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

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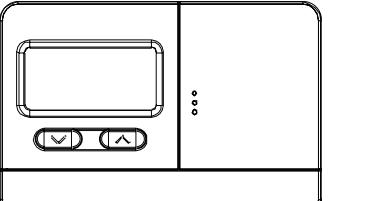
Mississauga, Ontario L5L 5Y7 Canada

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Termostato digital programable

Manual de instalación y del usuario

Modelo: series RS3110 y RS3210



MANUAL DE INSTALACIÓN

La información proporcionada en este manual se refiere al montaje, el cableado y la configuración del termostato para los termostatos RS3110 y RS3210. Para información sobre las funciones de programación y operación, diríjase a la sección Manual del Usuario.

Gracias por elegir nuestro termostato de pared. Los productos de Robertshaw® son fabricados con estandares de calidad y están diseñados para proporcionar años de servicio.

Los termostatos RS3110 y RS3210 operan con las siguientes configuraciones de control de clima:

- Bomba de calor (sin calor auxiliar)
- Bomba de calor para calor auxiliar/aire/emergencia)
- Sistemas estándar de calor y frío
- Calor/frío una etapa - RS3110
- Dos etapas calor, una etapa frío - RS3210
- Sistemas estándar de calor únicamente
- Sistemas Millivolt de calor únicamente - Calderas de piso o de pared
- Aire acondicionado central estándar
- Calefacción a gas o aceite
- Caldera eléctrica
- Calefacción de zona hidráulica (agua caliente) - 2 conductores
- No apto para uso con sistemas de transformador de separación

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Los termostatos RS3110 y RS3210 NO funcionan con calefacción de zona hidráulica (agua caliente) con 3 conectores de 110/220 voltios. Este termostato funciona con alimentación de 24 VCA o pilas.

INFORMACIÓN DE SEGURIDAD IMPORTANTE

ADVERTENCIA:

Peligro de choque eléctrico

Desconecte el suministro eléctrico principal desatornillando el fusible o moviendo la llave del disyuntor a OFF (apagado) antes de instalar, retirar o limpiar este termostato.

Peligro de incendio y choque eléctrico

Este dispositivo debe ser instalado por un técnico calificado con las debidas precauciones de seguridad, ya que una instalación inadequada puede generar peligro de incendio y choque eléctrico.

Peligro de incendio e choque eléctrico

Este es un termostato de bajo voltaje 24 VCA. No instale con voltaje superior a 30 VCA.

- No comute el sistema a FRIO si la temperatura es inferior a 50°F (10°C). Esto puede dañar el sistema de refrigeración y provocar lesiones personales.

- No deben quitarse los terminales de la válvula de gas ni el control del sistema para probar la instalación. Esta práctica perjudicará el termostato y causará la nulidad de la garantía.

- No conecte a tierra ninguno de los terminales de esta unidad.
- Todas las conexiones de cableado deben cumplir con las normas y disposiciones locales y nacionales que rigen en materia de construcción y electricidad.

- Use este termostato sólo según las indicaciones que aparecen en este manual.
- ADVERTENCIA:

- Lea toda la información que aparece en este manual antes de instalar el termostato.

- Este termostato está configurado con protección automática del compresor para prevenir daños por ciclos de corta duración o cortes prolongados de suministro de energía. La protección de ciclo corto ofrece un retardo de 4 minutos entre los ciclos de calefacción o refrigeración para evitar daños en el compresor.

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• Las pilas deben cambiarse por lo menos cada 18-24 meses para garantizar el correcto funcionamiento. El termostato mostrará el icono de pila baja destellante cuando llegue el momento de cambiar las pilas. El fabricante recomienda insertar pilas nuevas antes de ausentarse por un período prolongado.

Reciclado de termostatos

Este termostato no contiene mercurio. Sin embargo, si instala este termostato para reemplazar un equipo que contiene mercurio en tubo sellado, no deseche su viejo termostato con los residuos domésticos. Comuníquese con la autoridad local de manejo de los residuos para recibir instrucciones sobre la correcta disposición del termostato. Si tiene alguna pregunta llame al soporte técnico de Robertshaw al 1-800-445-8299.

MONTAJE

Lo que usted necesita:
Este termostato incluye dos tornillos ranurados N° 8 y dos anclajes de pared para su montaje. Para instalar su termostato deberá tener las siguientes herramientas y materiales:

- Destornillador(es) para torneos de montaje
- Pequeño destornillador Philips
- Martillo
- Dos pilas alcalinas de 1.5 V (AA) (incluidas)

Cambio del termostato existente

ADVERTENCIA:

- Peligro de choque eléctrico Desconecte el suministro eléctrico principal desatornillando el fusible o moviendo la llave del disyuntor a OFF (apagado) antes de instalar, retirar o limpiar este termostato.

IMPORTANTE:

- Antes de retirar los cables del termostato viejo, rotule cada cable con la designación del terminal del que lo desconectó.
- No instale con voltaje superior a 30 VCA.
- No instale en paredes exteriores ni al sol.

- Desconecte la electricidad desde la caja principal de fusibles hasta que la instalación esté terminada. Asegúrese de que esté desconectado el suministro de energía eléctrica.

Fije la base del termostato a la pared

- 1. Retire el material de embalaje del termostato. Empuje sobre la solapa de la base. Sustituya, tire de la base para separarla de la tapa. Forzar o hacer palanca sobre el termostato puede ocasionar daños a la unidad.

ADVERTENCIA: Asegúrese de que el sistema esté desconectado de la energía.

- 2. Jale los conectores a través del orificio de la base. Conecte los conectores debajo de los tornillos de los terminales de la base usando la taza que aparece debajo de las conexiones del terminal.

- 3. Coloque la base sobre el orificio de la pared y marque la ubicación de los orificios de montaje sobre la pared usando la base como plantilla.

Figura 1 Base del termostato

Llave selectora

Bomba de calor o sin bomba de calor (sólo el modelo RS3110)

Gas o electricidad

Figura 2 Llave electricidad/gas (opción ventilador)

Figura 3

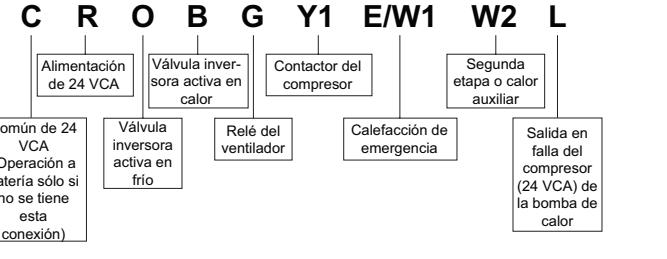
Figura 4

Figura 5

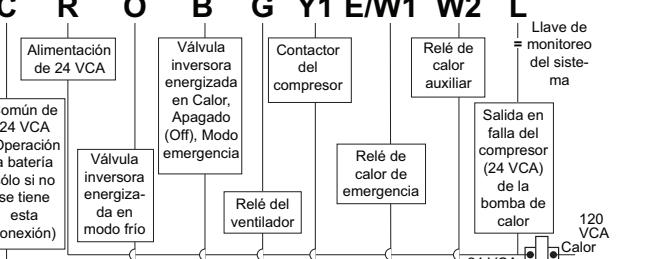
Figura 6

D. Diagrama de cableado para sistemas de bomba de calor de un solo transformador. El selector del sistema en el menú de configuración se debe fijar en HP.

NOTA: Operación a batería exclusivamente si no se tiene la conexión común de 24 VCA, caso contrario "Respaldo de batería".



E. Diagrama típico de cableado para sistemas de bombas de calor de un solo transformador.



F. Diagrama típico de cableado para bombas de calor de un solo transformador.

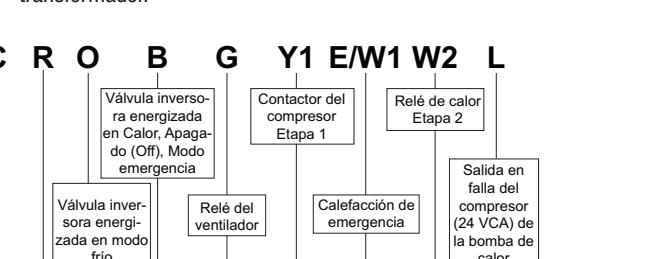


Figura 3

Figura 4

Figura 5

Figura 6

INSTALACIÓN DE PILAS

Estos termostatos funcionan con corriente de 24 VCA con dos pilas AA. Cuando las dos pilas AA están instaladas, el termostato seguirá funcionando si hay un corte de la corriente de 24 VCA.

Para abrir la puerta del gabinete de las pilas, empuje suavemente hacia abajo desde los costados. Coloque las dos pilas AA siguiendo las indicaciones de polaridad que figuran en el interior del compartimiento. Cierra la puerta.



Figura 3

Figura 4

Figura 5

Figura 6

CONTROL DE LA OPERACIÓN DEL THERMOSTATO

Operación del ventilador

Si su sistema no tiene una conexión a la terminal G, pase a Sistema de Calefacción.

- 1. Conecte la electricidad.
- 2. Lleve la llave del ventilador a la posición ON. El ventilador debe comenzar a funcionar.
- 3. Lleve la llave del ventilador a la posición AUTO. El ventilador debe detenerse de inmediato.

Sistema de calefacción

- 1. Lleve la llave del sistema al modo CALOR. Si el sistema de calefacción tiene un piloto fijo, asegúrese de encenderlo.

- 2. Presione la flecha UP (ARRIBA) para ajustar la configuración del termostato a 1°F/1°C sobre la temperatura ambiente. El sistema de calefacción debe comenzar a funcionar. La pantalla debe mostrar el icono de la llama en movimiento.

- 3. Para un sistema RS3210, ajuste el valor de temperatura a 3°F/3°C sobre la temperatura ambiente. Si la configuración del sistema está en calor auxiliar, el sistema de calor auxiliar debe comenzar a operar. Aparecerá un 2 al lado del ícono de la llama.

- 4. Presione la flecha DOWN (ABAJO) para ajustar el termostato por debajo de la temperatura ambiente. El sistema de calefacción debe dejar de operar.

Sistema de refrigeración

- 1. Mover la llave del sistema para seleccionar el modo FRIÓ.

- 2. Presione la flecha DOWN (ABAJO) para configurar el termostato por debajo de la temperatura ambiente. El ventilador debe encenderse inmediatamente a una velocidad, seguido de circulación de aire frío. El visor debe mostrar el icono del copo de nieve pulsando.

- 3. Presione la flecha UP (ARRIBA) para configurar la temperatura por encima de la temperatura ambiente. El sistema de refrigeración debe dejar de operar.

- 4. Cambie las pilas si el termostato quedará sin atención durante más de 30 días.

Si estas pruebas no funcionan, retire el cuerpo del termostato y verifique si hay clavijas dobladas. Verifique todas las conexiones de cableado.

Figura 1

Figura 2

Figura 3

Figura 4

Figura 5

Figura 6

Figura 7

Figura 8

Figura 9

Figura 10

Figura 11

Figura 12

Figura 13

Figura 14

Figura 15

Figura 16

Figura 17

Figura 18

Figura 19

Figura 20

Figura 21

Figura 22

Figura 23

Figura 24

Figura 25

Figura 26

Figura 27

Figura 28

Figura 29

Figura 30

Figura 31

Figura 32

Figura 33

Figura 34

Figura 35

Figura 36

Figura 37

Figura 38

Figura 39

Figura 40

Figura 41

Figura 42

Figura 43

Figura 44

Figura 45

Figura 46

Figura 47

Figura 48

Figura 49</p