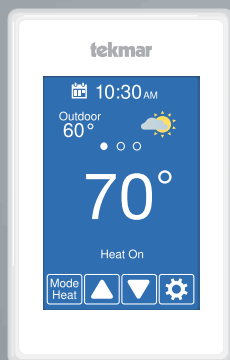


# Installation, Operation and Maintenance

## WiFi Thermostat 562



Download on the  
App Store



GET IT ON  
Google Play

Works with the  
Watts® Home Mobile App



### Compatible With

- 2-stage heating, 1-stage cooling and fan
- Supports optional floor sensor for radiant floor heating applications

#### ⚠ WARNING



**THINK  
SAFETY  
FIRST**

Please read carefully before proceeding with installation. Your failure to follow any attached instructions or operating parameters may lead to the product's failure. Keep this Manual for future reference.

**tekmar®**  
A **WATTS** Brand

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# Important Safety Information

It is your responsibility to ensure that this thermostat is safely installed according to all applicable codes and standards. tekmar® is not responsible for damages resulting from improper installation and/or maintenance.



This is a safety-alert symbol. The safety alert symbol is shown alone or used with a signal word (DANGER, WARNING, or CAUTION), a pictorial and/or a safety message to identify hazards.

When you see this symbol alone or with a signal word on your equipment or in this Manual, be alert to the potential for death or serious personal injury.



This pictorial alerts you to electricity, electrocution, and shock hazards.

## **WARNING**

This symbol identifies hazards which, if not avoided, could result in death or serious injury.

## **CAUTION**

This symbol identifies hazards which, if not avoided, could result in minor or moderate injury.

## **NOTICE**

This symbol identifies practices, actions, or failure to act which could result in property damage or damage to the equipment.

## **WARNING**



Read Manual and all product labels **BEFORE** using the equipment. Do not use unless you know the safe and proper operation of this equipment. Keep this Manual available for easy access by all users. Replacement Manuals are available at [tekmarControls.com](http://tekmarControls.com)

## **WARNING**

- It is the installer's responsibility to ensure that this thermostat is safely installed according to all applicable codes and standards.
- Improper installation and operation of this thermostat could result in damage to the equipment and possibly even personal injury or death.
- This thermostat is not intended for use as a primary limit control. Other controls that are intended and certified as safety limits must be placed into the control circuit.

## **NOTICE**

Do not attempt to service the thermostat. There are no user serviceable parts inside the thermostat. Attempting to do so voids warranty.

# Installation

## Preparation

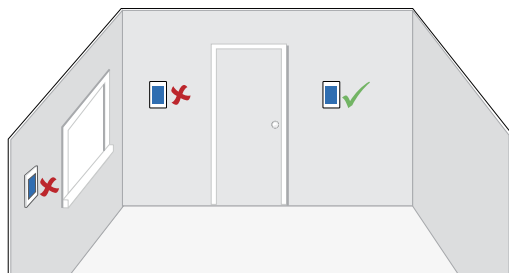
### Tools Required

- tekmar or jeweler screwdriver
- Wire stripper
- Phillips head screwdriver
- Drill (for wall anchor)
- $\frac{3}{16}$ " drill bit (for wall anchor)

### Materials Required

- 18 AWG LVT Solid Wire (Low Voltage Connections)

## Installation Location

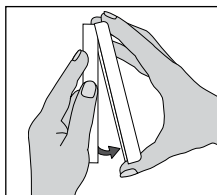


### NOTICE

Consider the following:

- Interior Wall.
- Keep dry. Avoid potential leakage onto the control.
- Relative Humidity less than 90%. Non-condensing environment.
- No exposure to extreme temperatures beyond 32-122°F (0-50°C).
- No draft, direct sun, or other cause for inaccurate temperature readings.
- Away from equipment, appliances, or other sources of electrical interference.
- Easy access for wiring, viewing, and adjusting the display screen.
- Approximately 5 feet (1.5 m) off the finished floor.
- The maximum length of wire is 500 feet (150 m).
- Strip wire to  $\frac{3}{8}$ " (10 mm) for all terminal connections.
- Use standard 8 conductor, 18 AWG wire.

## Removing the Thermostat Base



While holding the base section in one hand, pull the lower half of the display front towards you to pivot it away from the base.

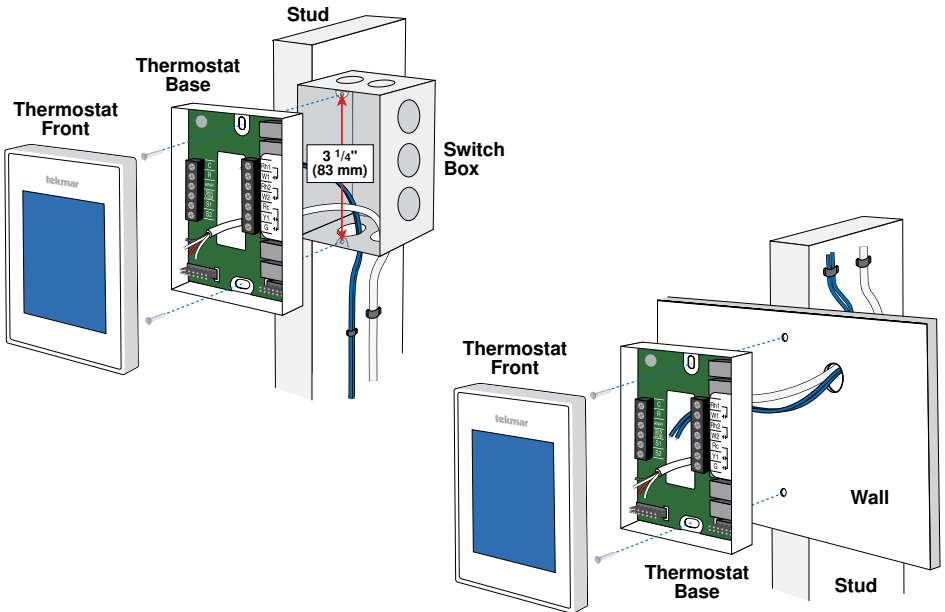
# Mounting the Thermostat

## ⚠ WARNING

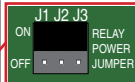
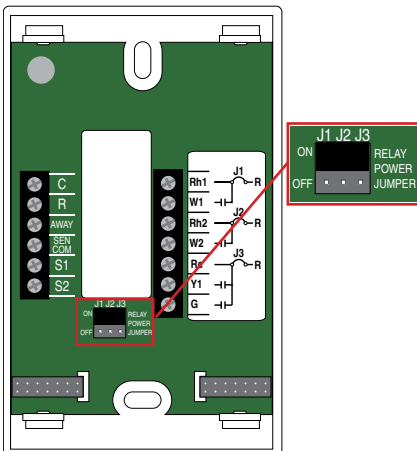


To prevent the risk of personal injury and/or death, make sure power is not applied to the thermostat until it is fully installed and ready for final testing. All work must be done with power to the circuit being worked on turned off.

Please be aware local codes may require this thermostat to be installed or connected by an electrician.



## Relay Power Jumpers



The thermostat includes three relay power jumper connectors located below the wiring hole.

- Set Jumper J1 to On to connect power R to the Rh1 terminal.
- Set Jumper J2 to On to connect power R to the Rh2 wiring terminal.
- Set Jumper J3 to On connects power R to the Rc wiring terminal.
- Set the jumper to off to disconnect the power from Rh1, Rh2, or Rc respectively.

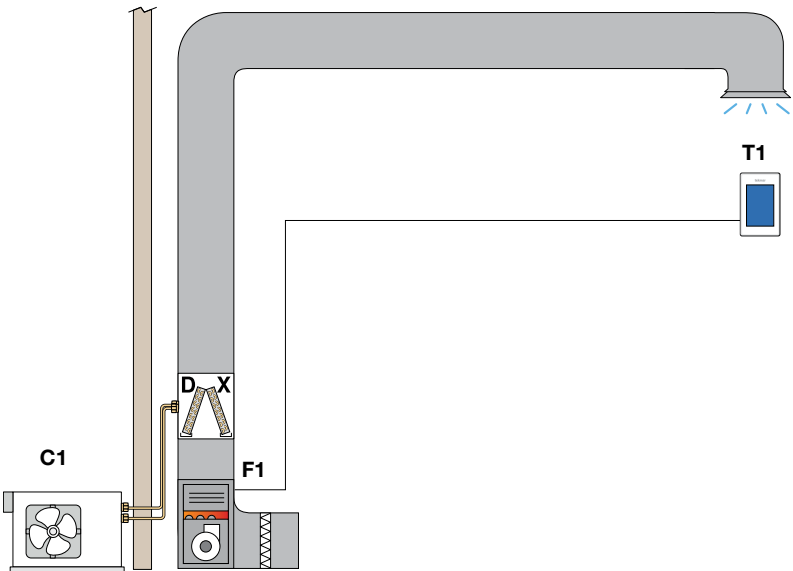
# Application 562-1

The WiFi Thermostat 562 operates a one or two-stage furnace for heating and an air conditioner for cooling.

## Mechanical

**Legend**

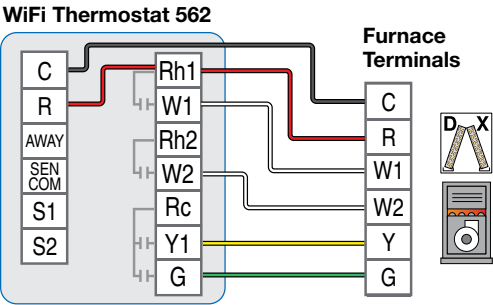
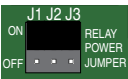
- C1 = Air Conditioner
- F1 = Furnace
- T1 = WiFi Thermostat 562



## Electrical

Thermostat  
jumpers:

- J1 = On
- J2 = On
- J3 = On



## Application 562-2

The WiFi Thermostat 562 operates a first stage radiant floor and a second stage furnace for heating, and an air conditioner for cooling.

## Mechanical

## Mechanical

<b>Legend</b>	F1 = Furnace	S1 = Optional Floor Sensor 079
B1 = Boiler	PS = System Pump	S2 = Optional Indoor Sensor 084
BP = Boiler Pump	T1 = WiFi Thermostat 562	ZVC1 = Zone Valve Control 304V, 306V
C1 = Air Conditioner	V1 = Zone Valve	

B1 = Boiler  
BP = Boiler Pump  
C1 = Air Conditioner  
PS = System Pump  
T1 = WiFi Thermostat 562  
V1 = Zone Valve  
S2 = Optional Indoor Sensor 084  
ZVC1 = Zone Valve Control 304V, 306V

BP = Boiler Pump      T1 = WiFi Thermostat 562      ZVC1 = Zone Valve Control 304V, 306V  
C1 = Air Conditioner      V1 = Zone Valve

C1 = Air Conditioner      V1 = Zone Valve

<b>Legend</b>	F1 = Furnace	S1 = Optional Floor Sensor 079
B1 = Boiler	PS = System Pump	S2 = Optional Indoor Sensor 084
BP = Boiler Pump	T1 = WiFi Thermostat 562	ZVC1 = Zone Valve Control 304V, 306V
C1 = Air Conditioner	V1 = Zone Valve	

B1 = Boiler  
BP = Boiler Pump  
C1 = Air Conditioner  
PS = System Pump  
T1 = WiFi Thermostat 562  
V1 = Zone Valve  
S2 = Optional Indoor Sensor 084  
ZVC1 = Zone Valve Control 304V, 306V

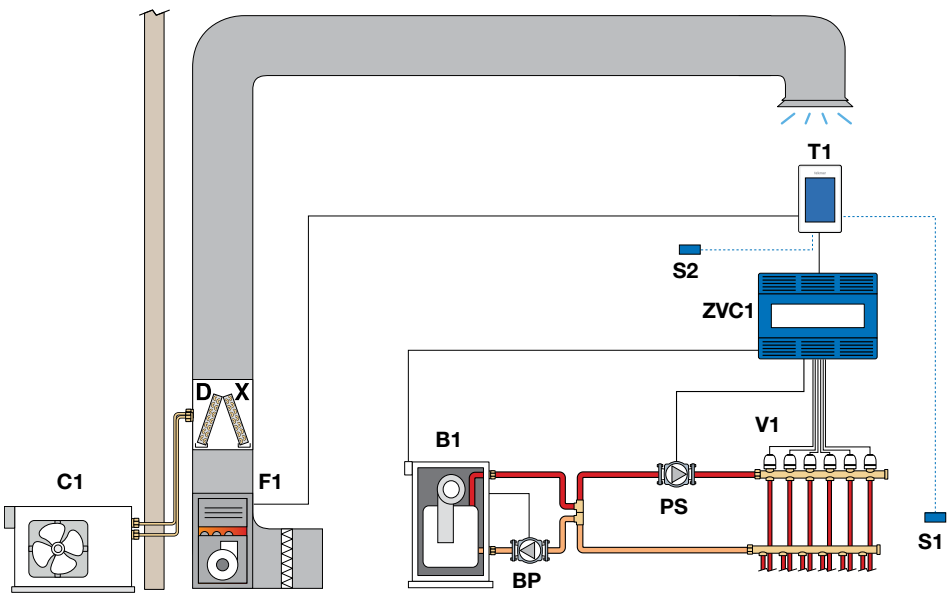
BP = Boiler Pump      T1 = WiFi Thermostat 562      ZVC1 = Zone Valve Control 304V, 306V  
C1 = Air Conditioner      V1 = Zone Valve

C1 = Air Conditioner      V1 = Zone Valve

<b>Legend</b>	F1 = Furnace	S1 = Optional Floor Sensor 079
B1 = Boiler	PS = System Pump	S2 = Optional Indoor Sensor 084
BP = Boiler Pump	T1 = WiFi Thermostat 562	ZVC1 = Zone Valve Control 304V, 306V
C1 = Air Conditioner	V1 = Zone Valve	

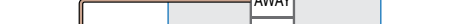
B1 = Boiler  
BP = Boiler Pump  
C1 = Air Conditioner  
PS = System Pump  
T1 = WiFi Thermostat 562  
V1 = Zone Valve  
S2 = Optional Indoor Sensor 084  
ZVC1 = Zone Valve Control 304V, 306V

BP = Boiler Pump      T1 = WiFi Thermostat 562      ZVC1 = Zone Valve Control 304V, 306V  
C1 = Air Conditioner      V1 = Zone Valve



## Electrical

Thermostat  
jumpers:  
J1 = On  
J2 = Off  
J3 = Off



AWAY  
C  
R  
W

**ZVC1**

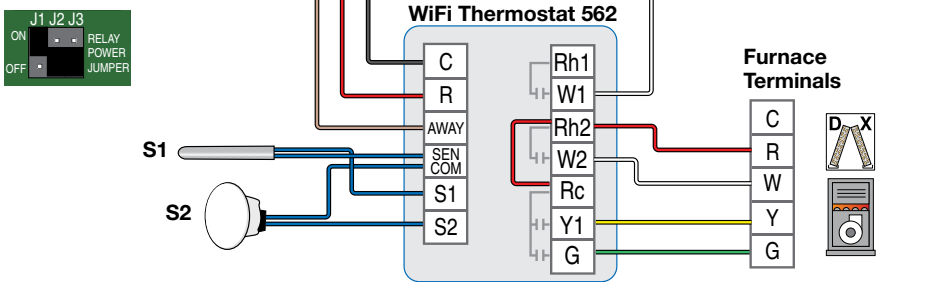
jumpers:  
J1 = On  
J2 = Off  
J3 = Off

The diagram shows a ZVC1 module with three terminals: C, R, and W. A red wire is connected to the R terminal. A black wire is connected to the C terminal. A grey wire is connected to the W terminal. The module is labeled ZVC1.

J1 = On  
J2 = Off  
J3 = Off

J2 = Off  
J3 = Off

J3 = Off



# Application 562-3

The WiFi Thermostat 562 operates a first stage radiant floor and a second stage fan coil for heating, and an air conditioner for cooling.

## Mechanical

### Legend

B1 = Boiler

BP = Boiler Pump

C1 = Air Conditioner

F1 = Fan Coil

PS = System Pump

S1 = Optional Floor Sensor 079

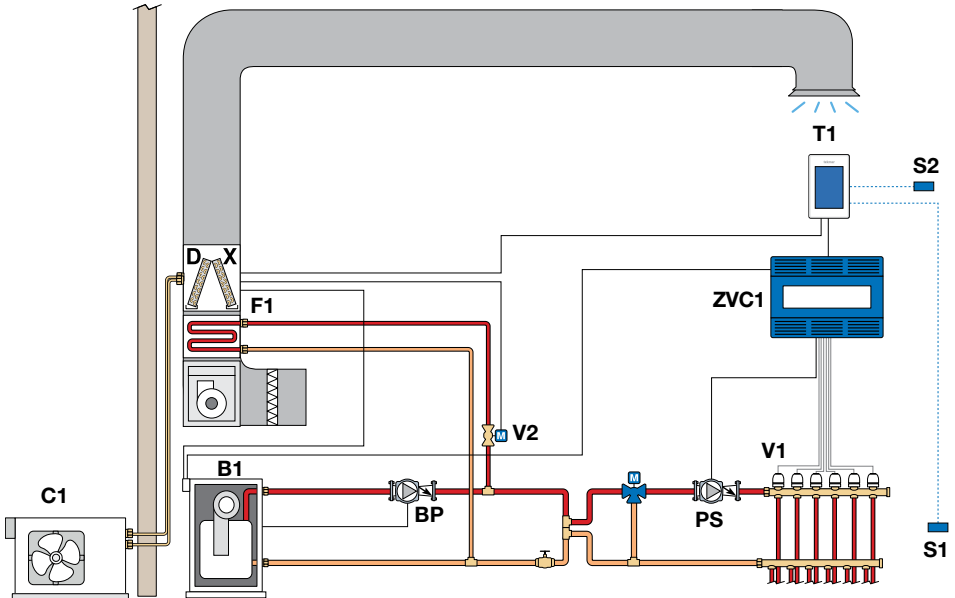
S2 = Optional Indoor Sensor 084

T1 = WiFi Thermostat 562

V1 = Radiant Zone Valve

V2 = Fan Coil Zone Valve

ZVC1 = Zone Valve Control 304V, 306V



## Electrical

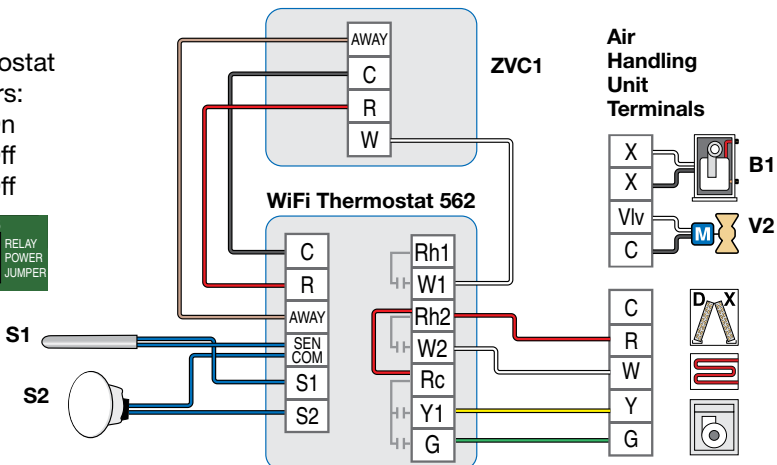
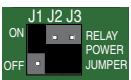
Thermostat

jumpers:

J1 = On

J2 = Off

J3 = Off



# Application 562-4

The WiFi Thermostat 562 operates a first stage baseboard/radiator and a second stage fan coil for heating, and an air conditioner for cooling.

## Mechanical

### Legend

B1 = Boiler

BP = Boiler Pump

C1 = Air Conditioner

F1 = Fan Coil

PS = System Pump

S1 = Optional Floor Sensor 079

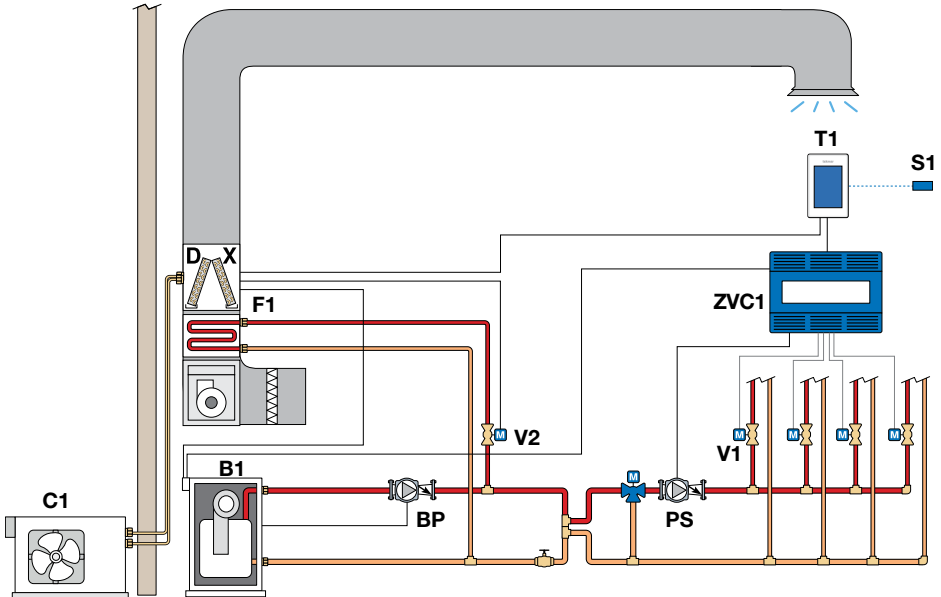
S2 = Optional Indoor Sensor 084

T1 = WiFi Thermostat 562

V1 = Radiant Zone Valve

V2 = Fan Coil Zone Valve

ZVC1 = Zone Valve Control 304V, 306V



## Electrical

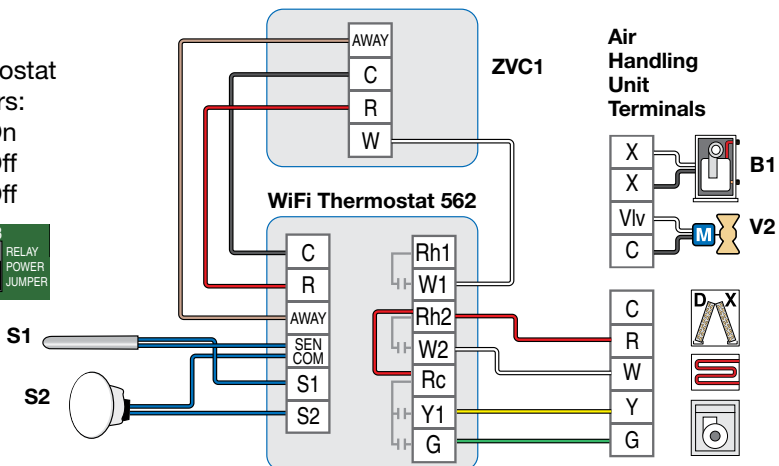
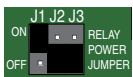
Thermostat

jumpers:

J1 = On

J2 = Off

J3 = Off



# Sequence of Operation

## Heating and Cooling Operation

- The heating setpoint can be set from 40 to 95°F (4.5 to 35°C).
- The Heat On symbol is shown on the display when the thermostat is heating.
- The cooling setpoint can be set from 45 to 100°F (7.0 to 38.0°C).
- Heating for freeze protection is provided whenever the air or floor temperature falls below 40°F (4.5°C), regardless of operating mode.
- The Cool On symbol is shown on the display when the thermostat is cooling

### Heating Differentials

Each heating stage has an adjustable differential and time delay setting to determine when the stage turns on. The heating stages Heat 2 and Heat 1 shut off are when they reach 0.5, and 0.0°F (0.25, and 0.0°C) of the Heat To setting respectively.

### Radiant Floor Heating

Radiant floor heating is operated differently than other heating types due to the large time delays to heat and cool the slab. When Radiant Floor Heating is selected in the setup menu, the W1 relay operates using Pulse Width Modulation. This improves comfort for radiant systems with high mass floors.

- 100% on time at Heat To setting -1.5°F
- 50% on time at Heat To setting
- 0% on time at Heat To setting + 1.5°F

### Room Sensor and Averaging

The thermostat can measure room temperature between -46 to 212°F (-43 to 100°C). The room temperature can be measured using a combination of the built-in and auxiliary sensors.

- Built-in room sensor only
- Built-in room sensor with auxiliary room sensor(s) (temperature is averaged)
- Auxiliary room sensor only

### Floor Sensor for Radiant Floor Heating

The thermostat can measure floor temperature between -46 to 212°F (-43 to 100°C). If a floor sensor is connected, floor minimum and maximum settings are

available. The floor heating setpoint is adjustable from 40 to 95°F (4.5 to 35°C).

For a combination of air and floor temperature control, leave the internal air sensor on in the setup menu. A floor minimum can be used to prevent a fast drop in temperature caused by receding solar exposure. This operation is recommended for areas heated by afternoon sun through large windows.

When the sun sets, it can take a long time for the floors to get warm again. This may cause the room to cool off too much in the early evening. A floor minimum setting can help with this condition by maintaining a floor minimum temperature. Keep in mind the floor minimum temperature will override the air temperature, and if set too high, may overheat the room.

A floor maximum is recommended for rooms with hardwood floors. Setting floor minimum and maximum temperatures is a way of enhancing the comfort of the living space while protecting floor coverings.

If there are more than one floor temperature sensors, the temperature is averaged.

It's possible to heat a radiant floor while the cooling system is operating. This is desirable in locations such as kitchens and bathrooms. To use this feature, set the Warm Floor During Cooling on.

### Cooling Differential

The cooling has an adjustable differential setting to determine when the stage turns on, and shuts off when the room temperature reaches the Cool To setting.

### Warm Weather Shut Down (WWSD)

The heating system can automatically shut off based upon the outdoor temperature and the WWSD setting. This provides a convenient way to shut off the heating system.

### Cold Weather Shut Down (CWSD)

The cooling system can automatically shut off based upon the outdoor temperature and CWSD setting. This prevents unwanted cooling during the winter.

# User Interface

After 60 seconds of inactivity, the thermostat home screen displays only the time and the temperature.

The main thermostat home screen displays the following information and controls:

- tekmar** logo at the top.
- Calendar icon** (labeled "Go to schedule") and **Current time** (10:30 AM).
- Outdoor temperature** (60°) and **Weather** icon (sun and cloud).
- Floor** indicator (three dots, with the first dot filled).
- Current temperature** (70°).
- Equipment operation** (Heat On).
- Change operating mode** (Mode Heat, Up arrow, Down arrow, and Settings gear icons).
- Go to settings** (Settings gear icon).

The **Mode** selection screen shows the following options:

- Heat
- Cool
- Auto Heat-Cool** (highlighted in yellow)
- Off

At the bottom, there are **Save** and **Cancel** buttons, each with a corresponding icon (checkmark and X).

Touch ▲ or ▼ to adjust temperatures

Select either Heat To or Cool To

The **Temperature Adjustment** screen shows the following settings:

- Heat To**: 70
- Cool To**: 75
- Hold Until 5:00 PM** (highlighted in yellow)
- Save to Schedule** button

At the bottom, there are four icons: a checkmark, an up arrow, a down arrow, and an X.

'Save to schedule' applies the new temperature to the current schedule event.

Hold overrides the programmed schedule until the time shown

The **MENU SELECTION** screen shows the following options:

- AWAY
- SCHEDULE
- DISPLAY
- TIME
- WIFI
- SETUP
- Back arrow**
- FAN

At the bottom, it indicates **WIFI: Connected**.

# User Settings

## Away

Use the Away setting to save energy when the building is unoccupied

Operates normally  
Operates using the  
Away temperature  
selected in the Setup  
menu

Save

- Selecting the Away setting on a thermostat or the mobile app will affect all devices linked to that location through the app.
- The Away temperature can be adjusted in the Setup / Temps menu.

## Schedule

Current group of  
program days.

Early Start anticipates the  
time required to heat or cool  
a room and starts early.

Creates a new schedule.

Go to the next group  
of program days.

Heating temperature

Cooling temperature

Set to On to follow the  
schedule. Set to Off to use  
the same temperature all  
of the time.

Set schedule start time

Set heating temperature

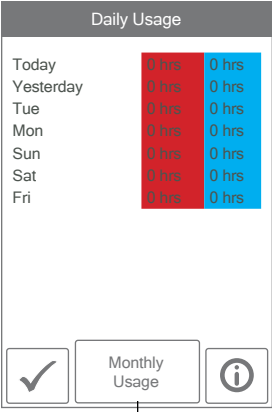
Set cooling temperature

Select skip if you don't want  
a temperature change.

# Display

Setting	Range	Default
<b>TEMPERATURE UNITS</b> Select °F or °C.	°F or °C	°F
<b>ENERGY USE</b> View the number of hours the heating or cooling has operated either daily or monthly.	0 to 24 (daily) 0 to 744 (monthly)	0 hours

## Energy Use



View each day's run time for both heating and cooling.

Toggle between Daily and Monthly Usage.







Setting	Range	Default
<b>BRIGHTNESS ACTIVE</b> Select the brightness when touching the screen.	30 to 100%	100%
<b>BRIGHTNESS INACTIVE</b> Select the brightness when not in use.	Off, 30 to 100%	50%
<b>BACKGROUND</b> Select the background color.	White, Blue, Black, Latte, Espresso	Blue
<b>LANGUAGE</b> Select the language.	English, Español, Français	English
<b>SCREEN CLEAN</b> Locks screen for 10 seconds to allow cleaning.	N/A	N/A
<b>INACTIVE TIME DISPLAY</b> Select if the time is visible when the display is inactive.	Off or On	On
<b>INACTIVE OUTDOOR DISPLAY</b> Select if the outdoor temperature is visible when the display is inactive.	Off or On	Off


# Time

TIME & DATE

Aug 25 2019

1 30 PM

☒ ☐ OPTIONS 

When connected to the Internet, the time can be set automatically.

The time and date can be manually set by highlighting a field and then using the ▲ or ▼ buttons.

Choose from the time options listed below.

Setting	Range	Default
<b>TIME FORMAT</b> Select the time format.	12 or 24 hour	12 hour
<b>TIME SOURCE</b> If Internet is available, the time source can be either automatically or manually set.	Automatic, Manual	Auto
<b>TIME ZONE</b> Select the local time zone.	Hawaii, Alaska, Pacific, Mountain, Central, Eastern, Atlantic, Newfoundland	Eastern
<b>DAYLIGHT SAVING TIME</b> Select the brightness when not in use.	Off, On	On

## NOTICE

Incorrectly setting the time and date manually may prevent the thermostat from communicating to the mobile app. Automatic time source is recommended when using an Internet connection.

# Fan

Fan

On

Auto

☒ ☐

The fan is normally off when set to auto but turns on when needed for the heating or cooling equipment.

When a programmable schedule is used, there is a fan setting for each time period.


Fan

Wake On

Leave Auto

Return On

Sleep Auto

☒ 

# WiFi

## NOTICE

Before using the WiFi features of this product, you must accept the Terms of Use, as amended from time to time and available at [Watts.com/terms-of-use](https://www.watts.com/terms-of-use). If you do not accept these terms, this product can still be used without WiFi features.

The thermostat includes a step by step tutorial to setup the WiFi connection.

**Tutorial**

Before first using WiFi features of this product, you must accept the Terms of Use available at <https://www.watts.com/terms-of-use> by pressing AGREE below.

If you do not accept these terms this product can still be used without WiFi features.

DISAGREE    AGREE

### Step 1

Agree to Terms of Use

**WIFI**

☐ Off  
☒ On

NEXT

### Step 2

Turn on WiFi

**NETWORK SSID**

Select a network from the list:

Your House ▼

←    CONNECT

### Step 3

Enter wireless network name. It must support WPA2 security encryption.

**Enter Password**

A B C D E F  
G H I J K L  
M N O P Q R  
S T U V W X  
Y Z    Shift A/1 Del

←    CONNECT

### Step 4

Enter WiFi password.

**ZIP/Postal**

1 2 3 4 5 6  
7 8 9 0 - /  
: ; ( ) \$ &  
@ " ' , ? !  
' \    Shift A/1 Del

OK

### Step 5

Enter ZIP or postal code. This determines your location for weather information.

**Time Source**

☒ Automatic  
☐ Manual


NEXT

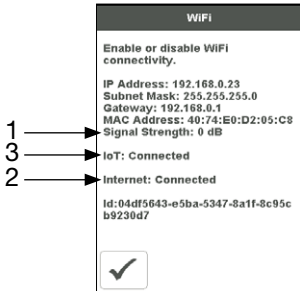
### Step 6

Select if the time is set automatically from the Internet or manually.

# WiFi and Connectivity Troubleshooting

## WiFi Connection Status

Press  > WiFi > WiFi:On > ③ to view the thermostat connection status.



### (1) WiFi Signal Strength

- The WiFi signal must measure between 0 and -69 dB to have a reliable connection to the Watts cloud.
- A WiFi extender is recommended to be installed if the WiFi signal is between -70 to -100 dB.

### (2) Internet Connected

- The WiFi information screen will show Internet Connected when the thermostat is connected to the router and there is a connection to the Internet.

### (3) IoT Connected

- The thermostat connection status will show IoT Connected when connected to the Watts Cloud and the thermostat is ready to be registered to the app.

If IoT is not connected, please follow these steps:

## Check Password

- Double check that you are using the correct WiFi network and password.
- The password is limited to 32 characters, and can include upper and lower case letters, numbers, special characters and spaces. A space counts as a character.
- The thermostat supports WPA2-Personal password security.

## Power Off and On

- Power the thermostat off. Next, power the router off, wait 10 seconds, then power

on and wait for the Internet status to be on. Then power the thermostat on.

## Check Router & Firewall

Consult the router manual or Internet Service Provider (ISP) for assistance with router setup with these configurations:

- The router must provide a 2.4 GHz signal. The thermostat is not compatible with 5 GHz networks.
- The router is using WPA2-Personal security.
- The router has DHCP enabled with enough available addresses for all Internet devices.
- The router firewall is not blocking the outbound UDP or TCP ports: 53, 123, 443, 8883.
- The router firewall is not blocking connections to \*.azure-devices.net
- The router firewall is not blocking the thermostat based upon a MAC filter list.

## Network Troubleshooting

- tekmar provides free access to a network troubleshooting tool called **RouteThis Helps**.
- Download the app from the App Store or Google Play Store to your mobile device.
- Enter code "TEKM" and click "Network scan". The app will provide further instructions.

## Create a WiFi Hotspot

- If you are unable to connect to the WiFi network, try creating a WiFi Hotspot on your mobile device to bypass the router.
- Apple\* iOS WiFi hotspot instructions <https://support.apple.com/en-us/HT204023>
- Android\*\* WiFi hotspot instructions <https://support.google.com/android/answer/9059108>
- If the thermostat displays IoT connected when using the WiFi Hotspot, please contact your Internet Service Provider (ISP) or IT professional for assistance with the router.

\* Apple and App Store are trademarks of Apple Inc.

\*\* Google, Android and Google Play are trademarks of Google LLC.

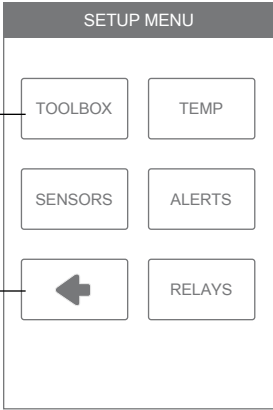
# Installer Settings

## Setup

The Setup menu contains five sub-menus that determine how the thermostat operates.

The Access Level setting in the Toolbox menu determines how many settings are available to the user.

Press back to return to the main Settings menu.



## Setup - Toolbox

Setting	Range	Default
<b>ERROR</b> Displays any error messages.	N/A	N/A
<b>ACCESS LEVEL</b> Select between user and installer access levels. User access level restricts access in the Setup Menu.	User, Installer	Installer
<b>STATUS</b> The current status of warm weather shut down, cold weather shut down and each of the relays.	WWSD, CWSD, W1, W2, Y1, G1	N/A
<b>SOFTWARE VERSION</b> Display the software version.	J1255A	N/A
<b>LOAD DEFAULTS</b> All settings are returned to factory defaults.	Yes, No	No
<b>CALIBRATE TOUCHSCREEN</b> Recalibrate the screen after loading factory defaults.	N/A	N/A

# Setup - Temp

Setting	Range	Default
<i>Screen Page 1</i>		
<b>HEAT TO AWAY</b> Select the heating temperature when away.	Off, 40 to 95°F Off, 4.5 to 35.0°C	Off
<b>HEAT TO MIN LIMIT</b> Select the minimum heating temperature limit.	Off, 40 to 95°F Off, 4.5 to 35.0°C	Off
<b>HEAT TO MAX LIMIT</b> Select the maximum heating temperature limit.	Off, 40 to 95°F Off, 4.5 to 35.0°C	Off
<b>COOL TO AWAY</b> Select the cooling temperature when away.	Off, 45 to 100°F Off, 7.0 to 38.0°C	Off
<b>COOL TO MIN LIMIT</b> Select the minimum cooling temperature limit.	Off, 45 to 100°F Off, 7.0 to 38.0°C	Off
<b>COOL TO MAX LIMIT</b> Select the maximum cooling temperature limit.	Off, 45 to 100°F Off, 7.0 to 38.0°C	Off
<i>Screen Page 2</i>		
<b>WARM WEATHER SHUT DOWN</b> Select the outdoor temperature at which the heating is shut off.	Off, 40 to 95°F Off, 4.5 to 35.0°C	Off
<b>COLD WEATHER SHUT DOWN</b> Select the outdoor temperature at which the cooling is shut off.	Off, 40 to 95°F Off, 4.5 to 35.0°C	Off
<i>Screen Page 3</i>		
<b>FLOOR MIN - WAKE</b> Select the floor temperature while in the wake schedule. Applies when there is both a floor and an air sensor.	Off, 40 to 95°F Off, 4.5 to 35.0°C	Off
<b>FLOOR MIN - LEAVE</b> Select the floor temperature while in the leave schedule. Applies when there is both a floor and an air sensor.	Off, 40 to 95°F Off, 4.5 to 35.0°C	Off
<b>FLOOR MIN - RETURN</b> Select the floor temperature while in the return schedule. Applies when there is both a floor and an air sensor.	Off, 40 to 95°F Off, 4.5 to 35.0°C	Off
<b>FLOOR MIN - SLEEP</b> Select the floor temperature while in the sleep schedule. Applies when there is both a floor and an air sensor.	Off, 40 to 95°F Off, 4.5 to 35.0°C	Off
<b>FLOOR MIN - AWAY</b> Select the floor temperature while in away. Applies when there is both a floor and an air sensor.	Off, 40 to 95°F Off, 4.5 to 35.0°C	Off
<b>FLOOR MAX</b> Select the maximum floor temperature. This protects the floor covering from over heating. Applies when there is a floor sensor.	Off, 40 to 95°F Off, 4.5 to 35.0°C	Off

## Setup - Sensors

Setting	Range	Default
<b>SENSOR 1</b> Select the type of sensor connected to S1 and Com wiring terminals.	Off, Room, Floor	Off
<b>SENSOR 2</b> Select the type of sensor connected to S2 and Com wiring terminals.	Off, Room, Floor, Outdoor	Off
<b>INTERNAL ROOM SENSOR</b> Select if the internal room temperature sensor is on or off. Only available when Sensor 1 or 2 is set to read a room sensor.	Off, On	On
<b>ROOM OFFSET</b> Manual offset correction of the room temperature measurement.	Off, -5 to +5°F -3.0 to 3.0°C	Off
<b>FLOOR OFFSET</b> Manual offset correction of the floor temperature measurement.	Off, -5 to +5°F -3.0 to 3.0°C	Off

## Setup - Alerts

Setting	Range	Default
<b>ROOM HOT WARNING</b> Sends an email notification if the room exceeds this temperature.	Off, 40 to 100°F Off, 4.5 to 38.0°C	Off
<b>ROOM COLD WARNING</b> Sends an email notification if the room falls below this temperature.	Off, 40 to 100°F Off, 4.5 to 38.0°C	Off
<b>AIR FILTER CHANGE</b> Sends an email notification to change the air filter when the fan exceeds this run time.	Off, 200 to 2000 hours	Off

## Setup - Relays

Setting	Range	Default
<b>EQUIPMENT</b> Select the number states of the heating and cooling equipment.	1 Heat/1 Cool, 2 Heat/1 Cool	1Heat/1 Cool
<b>RADIANT FLOOR HEATING</b> Select if the first stage W1 heats a radiant floor.	No, Yes	Yes
<b>HEAT 1 DIFFERENTIAL</b> Select when the first stage heating turns on. Turn on point is the Heat To setting minus the differential.	0.9 to 2.0°F 0.5 to 1.05°C	1.4°F 0.75°C
<b>HEAT 2 DIFFERENTIAL</b> Select when the second stage W2 heating turns on. Turn on point is the heat to minus the differential.	1 to 10°F 0.6 to 5.6°C	2.0°F 1.2°C
<b>HEAT 2 DELAY</b> Select the time delay when the second stage heating turns on. The time delay starts counting after the first stage heating is turned on. This setting is available when Equipment is set to 2 Heat/1 Cool.	0 to 180 minutes	1 minute
<b>COOL 1 DIFFERENTIAL</b> Select when the first stage cooling turns on. Turn on point is the Cool To setting plus the differential.	0.9 to 2.0°F 0.5 to 1.05°C	1.4°F 0.75°C
<b>Y MIN RUN TIME</b> Select the minimum time the cooling compressor must run before shutting off. This helps prevent compressor failure.	0:30 to 10:00 minutes	2:00 minutes
<b>Y MIN OFF TIME</b> Select the minimum time the cooling compressor must be off before turning back on. This helps prevent compressor failure.	0:30 to 10:00 minutes	5:00 minutes
<i>Screen Page 2</i>		
<b>FAN RELAY</b> Select which relays require fan operation. Combinations with W1 are not available when Radiant Floor Heating is set to yes.	G only, With Y With Y and W1, With Y and W2, With Y, W1 and W2	G only
<b>HEAT-COOL TIME INTERLOCK</b> When operating in Mode Auto, select the amount of time to wait between switching from heating to cooling and vice versa.	10 to 180 minutes	10 minutes
<b>WARM FLOOR DURING COOLING</b> Select whether the floor should be heated when in cooling mode. This setting is only available when Radiant Floor Heating is set to yes.	Yes or No	No

# Error Messages

When an error occurs an email notification will be sent to the registered tekmar Connect mobile or web app account owner.

Description
<b>MEMORY ERROR</b> The thermostat memory settings are corrupted. To clear, load the factory defaults in the Toolbox menu. The thermostat will not operate any heating or cooling equipment while this error message is present.
<b>INTERNAL ROOM SENSOR FAULT</b> Due to an open or short circuit, the thermostat is unable to read the internal room temperature sensor. If sensor 1 or 2 is set to room the thermostat continues to operate, otherwise operation stops. The error cannot be field repaired. Contact your tekmar sales representative for warranty or repair procedures.
<b>SENSOR 1 FAULT</b> Due to an open or short circuit, the thermostat is unable to read the sensor wired to S1 and Com. The thermostat stops normal operation if sensor 1 is the only active room or floor sensor or if a floor maximum temperature has been set. Check the auxiliary sensor wire for short circuits according to the sensor installation manual. It may be necessary to replace the auxiliary sensor. Once the error has been corrected, the error message automatically clears.
<b>SENSOR 2 FAULT</b> Due to an open or short circuit, the thermostat is unable to read the sensor wired to S2 and Com. The thermostat stops normal operation if sensor 2 is the only active room or floor sensor or if a floor maximum temperature has been set. Check the auxiliary sensor wire for short circuits according to the sensor installation manual. It may be necessary to replace the auxiliary sensor. Once the error has been corrected, the error message automatically clears.
<b>ROOM HOT WARNING</b> The room temperature is above the Room Hot Warning setting in the Alerts menu. The warning will automatically clear once the room temperature falls below the setting.
<b>ROOM COLD WARNING</b> The room temperature is below the Room Hot Warning setting in the Alerts menu. The warning will automatically clear once the room temperature falls below the setting.

Description
<p><b>CHANGE AIR FILTER</b></p> <p>The fan run time has exceeded the Change Air Filter setting in the Alerts menu. To ensure clean air it is recommended to replace the air filter on the heating and cooling equipment. While viewing the warning, press the Clear button to clear the warning and reset the fan run time counter.</p>
<p><b>INTERNET UNAVAILABLE</b></p> <p>The thermostat has a WiFi connection to the router but is unable to communicate to the Internet. Steps to clear the error include: 1) power off and on the router, 2) power off and on the thermostat.</p>
<p><b>ZIP/POSTAL CODE ERROR</b></p> <p>The thermostat was unable to locate the ZIP or Postal Code entered in the WiFi menu.</p> <p>Please try again with a ZIP or Postal Code of a nearby area.</p>

# Technical Data

## WiFi Thermostat 562 *Two Stage Heat, One Stage Cool, Fan*

Literature	562_C, 562_D, 562_J, 562_U
Control	Microprocessor control. This is not a safety (limit) control.
Packaged weight	0.7 lb. (300 g)
Dimensions	4 <sup>5</sup> / <sub>8</sub> " H x 3" W x 1 <sup>5</sup> / <sub>16</sub> " D (118 x 76 x 24 mm)
Enclosure	White PVC plastic, NEMA Type 1
Approvals	Meets Class B: ICES & FCC Part 15
Ambient conditions	Indoor use only, 32 to 122°F (0 to 50°C), RH ≤90% non-condensing
Power supply	15 to 30 V (ac/dc), 2 VA standby, Class 2
Relays	30V (ac/dc), 2 A, Class 2 circuits
Sensor	NTC thermistor, 10 kΩ @ 77°F (25°C ±0.2°C) β=3892
– Included	None
– Optional	tekmar type # 070, 072, 073, 076, 077, 079, 084
Communications	WiFi 802.11n, 2.4 GHz, WPA2 encryption
Mobile app	Apple iOS 12 or higher, Android 10 or higher

# Warranty

**Limited Warranty** *The liability of tekmar under this warranty is limited. The Purchaser, by taking receipt of any tekmar product ("Product"), acknowledges the terms of the Limited Warranty in effect at the time of such Product sale and acknowledges that it has read and understands same.*

The tekmar Limited Warranty to the Purchaser on the Products sold hereunder is a manufacturer's pass-through warranty which the Purchaser is authorized to pass through to its customers. Under the Limited Warranty, each tekmar Product is warranted against defects in workmanship and materials if the Product is installed and used in compliance with tekmar's instructions, ordinary wear and tear excepted. The pass-through warranty period is for a period of twenty-four (24) months from the production date if the Product is not installed during that period, or twelve (12) months from the documented date of installation if installed within twenty-four (24) months from the production date.

The liability of tekmar under the Limited Warranty shall be limited to, at tekmar's sole discretion: the cost of parts and labor provided by tekmar to repair defects in materials and / or workmanship of the defective product; or to the exchange of the defective product for a warranty replacement product; or to the granting of credit limited to the original cost of the defective product, and such repair, exchange or credit shall be the sole remedy available from tekmar, and, without limiting the foregoing in any way, tekmar is not responsible, in contract, tort or strict product liability, for any other losses, costs, expenses, inconveniences, or damages, whether direct, indirect, special, secondary, incidental or consequential, arising from ownership or use of the product, or from defects in workmanship or materials, including any liability for fundamental breach of contract.

The pass-through Limited Warranty applies only to those defective Products returned to tekmar during the warranty period. This Limited Warranty does not cover the cost of the parts or labor to remove or transport the defective Product, or to reinstall the repaired or replacement Product, all such costs and expenses being subject to Purchaser's agreement and warranty with its customers.

Any representations or warranties about the Products made by Purchaser to its customers which are different from or in excess of the tekmar Limited Warranty are the Purchaser's sole responsibility and obligation. Purchaser shall indemnify and hold tekmar harmless from and against any and all claims, liabilities and damages of any kind or nature which arise out of or are related to any such representations or warranties by Purchaser to its customers.

The pass-through Limited Warranty does not apply if the returned Product has been damaged by negligence by persons other than tekmar, accident, fire, Act of God, abuse or misuse; or has been damaged by modifications, alterations or attachments made subsequent to purchase which have not been authorized by tekmar; or if the Product was not installed in compliance with tekmar's instructions and / or the local codes and ordinances; or if due to defective installation of the Product; or if the Product was not used in compliance with tekmar's instructions.

THIS WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, WHICH THE GOVERNING LAW ALLOWS PARTIES TO CONTRACTUALLY EXCLUDE, INCLUDING, WITHOUT LIMITATION, IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, DURABILITY OR DESCRIPTION OF THE PRODUCT, ITS NON-INFRINGEMENT OF ANY RELEVANT PATENTS OR TRADEMARKS, AND ITS COMPLIANCE WITH OR NON-VIOLATION OF ANY APPLICABLE ENVIRONMENTAL, HEALTH OR SAFETY LEGISLATION; THE TERM OF ANY OTHER WARRANTY NOT HEREBY CONTRACTUALLY EXCLUDED IS LIMITED SUCH THAT IT SHALL NOT EXTEND BEYOND TWENTY-FOUR (24) MONTHS FROM THE PRODUCTION DATE, TO THE EXTENT THAT SUCH LIMITATION IS ALLOWED BY THE GOVERNING LAW.

**Product Warranty Return Procedure** All Products that are believed to have defects in workmanship or materials must be returned, together with a written description of the defect, to the tekmar Representative assigned to the territory in which such Product is located. If tekmar receives an inquiry from someone other than a tekmar Representative, including an inquiry from Purchaser (if not a tekmar Representative) or Purchaser's customers, regarding a potential warranty claim, tekmar's sole obligation shall be to provide the address and other contact information regarding the appropriate Representative.

**Need help? Go to our website or contact us.**

[tekmarControls.com](http://tekmarControls.com) | [tekmar.customerservice@wattswater.com](mailto:tekmar.customerservice@wattswater.com) | 1-800-438-3903

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