

**D527** 12/11

Zoning

Replaces: 08/10

### **Installation & Operation Manual**

### Introduction

The tekmarNet<sup>®</sup>2 Thermostat 527 provides operation for:

· One Stage Heat



### **Features**

- · Zone Synchronization
- · Zone Post Purge
- · Intelligent Setback (Timer 033)
- · One touch overrides (User Switch)
- · Auto Heating Cycle
- tN2 Communication compatible
- Room temperature limiting
- · Requires 2 wires
- · Pulse Width Modulation
- CSA C US Approved for use in USA and Canada
- · Outdoor Temperature Display
- · Air Group Member
- Backlight
- · Freeze Protection
- · Equipment Exercising
- Supports Radiant Floor Cooling

### **Note**

 tN2 Zone Manager, Expansion Module, Wiring Center or House Control required for operation

### **Table of Contents**

Getting Started2	Settings8-12
Installation2	Sequence of Operation13
Caution2	Heating Operation13
Preparation2	Air Group Operation14
Removing The Thermostat Base3	Floor Cooling14
Mounting The Thermostat Base3	Schedules15
Thermostat Wiring4	Scenes (System Override) 15
Testing the Thermostat Wiring5	Troubleshooting16
Mounting the Thermostat5	Error Messages16-17
Cleaning the Thermostat6	Frequently Asked Questions 18
Switch Settings6	Job Record19
User Interface7	Technical Data19
Display7	Limited Warranty and Product
Button Operation7	Return Procedure20
Symbols Description7	

### **Getting Started**

Congratulations on the purchase of your new tekmar thermostat.

This manual will step through the complete installation, programming and sequence of operation for this control. At the back, there are tips for control and system troubleshooting.

### Installation

### Caution

Improper installation and operation of this control could result in damage to the equipment and possibly even personal injury or death. It is your responsibility to ensure that this control is safely installed according to all applicable codes and standards. This electronic control 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.

### Preparation

### **Tools Required**

- tekmar or jeweller screwdriver
- · Phillips head screwdriver

### **Materials Required**

- 2, #6 x 1" Wood Screws
- 18 AWG LVT Solid Wire

- Wire Stripper
- Optional Adapter Plate 007 (for installation on 2" x 4" gang box)

### Installation Location

Choose the placement of the thermostats early in the construction process to enable proper wiring during rough-in.

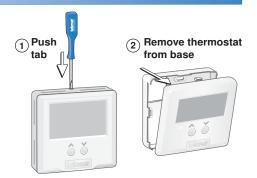
### Consider the following:

- · Interior Wall.
- Keep dry. Avoid potential leakage onto the control.
- Relative Humidity max 80% up to 88°F (31°C) decreasing linearly to 50% RH at 104°F (40°C). 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 1000 feet (300 m).
- Strip wire to 3/8" (10 mm) for all terminal connections.
- Use standard 18 AWG wire for the tN2 connections.

### **Removing The Thermostat Base**

To remove the thermostat base:

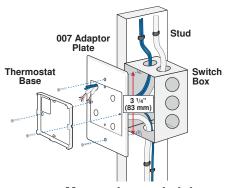
- Place a small slot screwdriver or similar tool into the slot located on the top of the thermostat.
- While pushing down against the plastic tab, pull the thermostat away from the thermostat's base.



### **Mounting The Thermostat Base**

If a single gang switch box is used, an Adaptor Plate 007 is required to mount the thermostat to the box.

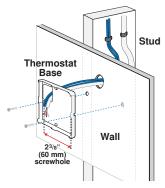
- Fasten the base of the thermostat to the adaptor plate.
- Feed the wiring through the openings in the back of the adaptor plate and thermostat.
- Use the upper and lower screw holes to fasten the adaptor plate to the box.



Mounted on switch box

If a switch box was not used, mount the thermostat directly to the wall.

- Feed the wiring through the openings in the back of the thermostat.
- Use screws in the screw holes to fasten the thermostat to the wall. At least one of the screws should enter a wall stud or similar rigid material.

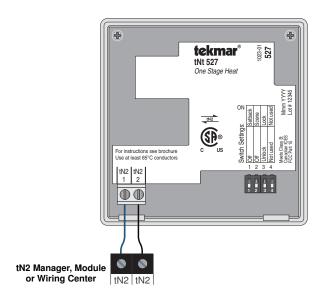


Mounted on wallboard

### **Thermostat Wiring**

The thermostat operates a single heating system zone.

Power and communication are provided to the thermostat by connecting the tN2 terminals on the thermostat to the tN2 terminals on a tN2 Wiring Center, House Control, Zone Manager or Expansion Module. tN2 terminals are not polarity sensitive.



### **Testing the Thermostat Wiring**

### **Testing the Power**

If the thermostat display turns on, this indicates that the thermostat is operating correctly and there are no electrical issues. In the event that the display is off, or the display is cycling on and off:

- 1. Remove the tN2 wires from the thermostat.
- 2. Use an electrical meter to measure DC voltage between the tN2 terminals.
- If the DC voltage is 0 V (dc) for 20 seconds, then there is an open or short circuit in the tN2 wires.
- If the DC voltage is 0 V (dc) for 10 seconds and then is 23 to 24 V (dc) for 5 seconds, this indicates the wiring is correct.
- 3. Connect the thermostat to the tN2 wires connected to a zone on a House Control, Wiring Center, or Zone Manager.
- 4. If the thermostat display is off, or is cycling on and off, move the thermostat to the next available zone on the House Control, Wiring Center, or Zone Manager.
- If the thermostat display remains permanently on, there may be a fault with the previously tried zone on the House Control, Wiring Center, or Zone Manager.
- If the thermostat display continues to be off, or is cycling on and off, there may be a fault on the thermostat.

If a fault is suspected, contact your tekmar sales representative for assistance.

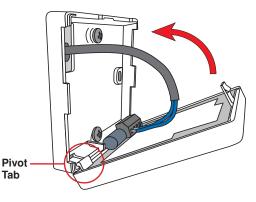
### **Testing the Heat Zone Output**

- 1. Press the  $\vee$  button and set the heating temperature below the current room temperature. There should be no H1 symbol on the display.
- 2. Check that the House Control, Wiring Center, or Zone Manager zone is off.
- 2. Press the  $\wedge$  button and set the heating temperature above the current room temperature. Make sure the display does not show "WWSD".
- 3. When the H1 symbol appears on the display, use an electrical meter to check for voltage on the House Control, Wiring Center, or Zone Manager relay. The voltage is 24 V (ac) for zone valves, and 120 V (ac) for zone pumps.

### **Mounting the Thermostat**

To place the thermostat back on the mounting base:

- Place thermostat bottom tabs on matching mounting base notches.
- Pivot top of the thermostat towards wall, ensuring wires clear obstructions.
- The top clasp makes a clicking sound when properly closed.

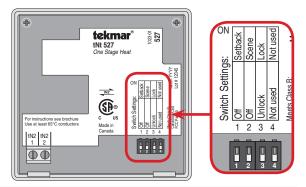


### **Cleaning the Thermostat**

The thermostats's exterior can be cleaned using a damp cloth. Moisten the cloth with water and wring out prior to wiping the control. Do not use solvents or cleaning solutions.

### **Switch Settings**

Switches are set to "On" position from the factory, and do not require changing for most applications.



Switch	Position	Action
1	ON	SETBACK The thermostat follows a programmable setback schedule as a schedule member if available. Requires the installation of a Timer 033 to use this feature.
	OFF	<b>OFF</b> The thermostat does not follow a programmable setback schedule.
2	ON	SCENE The thermostat responds to changes in the scene (system wide manual overrides). Requires the installation of a User Switch 479 to use this feature.
	OFF	<b>OFF</b> The thermostat does not respond to scenes.
	ON	LOCK ACCESS LEVEL Locked to 'User' access level. Set to Lock when installation completed.
3	OFF	UNLOCK ACCESS LEVEL Unlock to allow 'User' and "Installer' access level. Set to Unlock during installation process. tekmarNet® reset control must also be set to Unlocked (Installer access level).
4	ON	Not used
4	OFF	Not used

### **User Interface**

### **Display**

# MAIN DISPLAY SECONDARY DISPLAY OUTDOOR SET ROOM WWSD HEAT MAXMIN TYPE ADDRESS ZONE TEST FLUSH TO SECONDARY DISPLAY

### **Button Operation**

**Symbols Description** 

Press the  $\wedge$  or the  $\vee$  button to select the room temperature.

Cymb	ols Description		
H1	HEAT Heat is turned on.		LOCK Locked to 'User' access level.
*	SUN Operating at the occupied (day) temperature.	(3)	CLOCK Operating on a programmable schedule.
C	MOON Operating at the unoccupied (night) temperature.	<b>=</b>	tekmarNet® Communication is present.
Away	<b>AWAY</b> Operating at the <i>Away</i> scene temperature.	1	WARNING SYMBOL Indicates an error is present.
*	AIR GROUP The air group is cooling. Heating can start once the cooling is finished.	WWSD	WARM WEATHER SHUT DOWN The heating system has been shut off for the summer.

## Settings (1 of 5)

Press 

Press 

Together

Press and hold down both the A and V buttons for 2 seconds to change from one step to the next.

Release both buttons once the step has been reached.

Press and hold down both the A and V buttons for 2 seconds to go to the next step, OR Press the A or the V button to change the setting, if available.

After 10 seconds of no button activity, the display goes back to normal operation.

**Note:** Set switch setting #3 and tekmarNet<sup>®</sup> system control to Unlock to change Access level to Installer.

Display	Range	Access	Description	Set to
SET HEAT BOOM TO SE THEAT TO SE THEAT THEA	40 to 95°F (4.5 to 35.0°C) Default = 70°F (21.0°C)	Installer User	<b>SET ROOM HEAT ☆</b> Set the room heating temperature while in the ☆ event.	
ROOM HEAT	40 to 95°F (4.5 to 35.0°C) Default = 65°F (18.5°C)	Installer User	SET ROOM HEAT (C Set the room heating temperature while in the (C event.	
ROOM HEAT Away	40 to 95°F (4.5 to 35.0°C) Default = 62°F (16.5°C)	Installer	<b>SET ROOM HEAT AWAY</b> Set the room heating temperature while in the Away scene.	

Continued on next page.

Settings (2 of 5)

Display	Range	Access	Description	Set to
			BACKLIGHT	
ADMOST	,	:	Select the backlight operation.	
	OII, 30 Sec, OII,	Installer	Off = Permanently Off	
11 12 	Default = 30 sec	User	30 = Temporary on for 30 seconds	
			On = Permanently On	
			On + 🌣 = On during 🌣 and off during 📞	
ADJUST				
	S TO H °	Installer	TEMPERATURE UNITS	
30	Default = °F	User	Press the A or the V button to change from °F to °C and vice versa	
DEVICE	H		DEVICE TYPE	
	Software Version	Installer	Display alternates between the Device Type (large	
	Address	User	number) with Software Version (upper right corner)	
			and the thermostal address.	
ADJUST	40 to 95°E		÷	
SET ROOM HEAT	(4.5 to 35.0°C)	-	MAXIMUM SET ROOM HEAT ∜	
*	Default = 85°F	Installer	Set the maximum room heating limit while in the *	
	(29.5°C)		eveni.	

Continued on next page.

Settings (3 of 5)				
Display	Range	Access	Description	Set to
ROUSI MAX ROOM PEAT PEAT C F C	40 to 95°F (4.5 to 35.0°C) Default = 85°F (29.5°C)	Installer	MAXIMUM SET ROOM HEAT (C Set the maximum room heating limit while in the (C event.	
SET SET HEAT MINN	40 to 95°F (4.5 to 35.0°C) Default = 45°F (7.0°C)	Installer	MINIMUM SET ROOM HEAT Set the minimum room heating limit.	
Deutsin Co	1, 2, 3, 4 Default = 1	Installer	SCHEDULE  Thermostat can follow schedule master 1, 2, 3, or 4.  Available when:  • Switch setting 1 is set to Setback (On Position).	
TO UNITED THE STREET	OFF or On Default = On	Installer	HEAT SUPPLY PUMP  During heating, select whether or not the system supply pump should turn on or be off to allow a zone group pump per manifold.  Available when:  A reset control is present on the tekmarNet® system.	
:				

Continued on next page.

Settings (4 of 5)				
Display	Range	Access	Description	Set to
			HEAT SUPPLY PUMP DELAY	
SUPPLY	L		During heating, select whether or not the system supply oums should be delayed by 3 minutes before coming	
576	OFF or On Default = OFF	Installer	on (for thermal motor or wax actuator).  Available when:	
Щ			<ul> <li>A reset control is present on the tekmarNet® system.</li> </ul>	
			HEAT CYCLES PER HOUR	
	Auto,		Select either Auto cycle or Synchronize with other thermostats on the tekmarNet® system.	
		Installer	Choose Synchronize when zone heated using a boiler. Choose Auto when zone is non-hydronic heating.	
	Synchronize		Available when:	
			<ul> <li>No reset control on the tekmarNet<sup>®</sup> system.</li> </ul>	
MDUUST			Ain GhOof if this thermostat should be an air are in member	
0 0 1			Select off if the thermsotat is not an air group member.	
	OFF, 1 to 16	Installer	Select 1 though 16 to select the air group number.	
-			Available when:	
			<ul> <li>The thermostat is connected to other thermostats using tekmarNet®</li> </ul>	
			מסוווק ופעווומוועפו	

Continued on next page.

Settings (5 of 5)				
Display	Range	Access	Description	Set to
			tekmarNet® ADDRESS	
ADVUST	01 to 24		The address is shown in the large number field. "Auto" is	
	b:01 to b:24		anown in the upper number here when using automatic addressing.	
MINITERS ADDRESS	(reset control - boiler),	IIIstallei	Press the A or the V button to manually select	
	1:01 to 1:24		an address.	
	(reset control - mixing)		The address can be returned to automatic "Auto"	
			addressing when address set above 24.	
			FLOOR COOLING	
FLOOR COOL	OFF or On		Select if the thermostat should operate the heating relay W for radiant floor cooling	
	Default = OFF	Installer	Available when:	
			<ul> <li>Connected to a tekmarNet<sup>®</sup> heat pump or chiller system control.</li> </ul>	
	None	Installer	ESCAPE  Press the A or the V button to return to normal	
71.7	)	User	operation.	

### **Sequence of Operation**

### **Heating Operation**

Section A

The thermostat operates the heating system to maintain the Set Room Heat temperature. The H1 symbol is shown on the display when the thermostat is heating. The heat can cycle on and off within  $\pm$ 1.5°F (1°C) of the Set Room Heat temperature.

### Freeze Protection

The thermostat operates the heat whenever the room temperature falls below 40°F (4.5°C).

### **Exercising**

When connected to a tekmarNet® reset control, the thermostat exercises the heat relay for 10 seconds every 3 days. Exercising helps prevent zone valves or zone pumps from failing due to precipitate buildup. During exercising, the thermostat shows "TEST" on the display.

### Flushing

The flushing feature is for open-loop systems that use a domestic hot water tank as a heat source. Flushing ensures that fresh potable water is circulated through the system once each day. If the thermostat is connected to a tekmarNet® reset control with the Flushing feature turned on, the thermostat display will display the "FLUSH" icon for the duration of the flushing operation.

### **Hydronic System Supply Pump**

When connected to a tekmarNet® system control, the thermostat's Heat Supply Pump setting affects how the primary pump or mix pump on the system control operates. When connected to the boiler bus, the boiler system or primary pump is operated. When connected to the mix bus, the mix system pump is operated.

If the thermostat operates a motorized or thermal motor zone valve, the Heat Supply Pump setting should be set to On.

If the thermostat operates a thermal motor (wax actuator) zone valve, set the Heat Supply Pump Delay setting to On. This provides a three minute delay to allow the zone valve to open before the primary or mix pump is turned on.

In special applications with multiple zoning manifolds, the Heat Supply Pump setting can be set to Off. This allows a Zone Group Pump located on the Zone Manager, or Wiring Center to operate the pump for the manifold.

### **DHW Tank Priority**

When a tekmarNet® reset control is heating an indirect Domestic Hot Water (DHW) tank, the thermostat may shut off the heating zones to allow the DHW tank to recover quickly. This is determined by the DHW priority of the tekmarNet® reset control.

### Warm Weather Shut Down

When the outdoor air temperature exceeds the Warm Weather Shut Down (WWSD) setting on the tekmarNet<sup>®</sup> reset control, the heating system is shut off.

### **Air Group Operation**

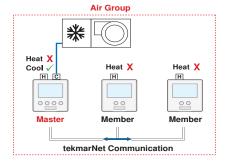
In order to prevent heating and cooling at the same time, this thermostat can operate together with other thermostats on a tekmarNet® system to form an air group.

In an air group, one thermostat is assigned as the air group master. The air group master operates the cooling equipment for the group. This thermostat can be set to be a member of the air group.

When operating as an air group, the air temperature readings of all the air group member thermostats are communicated to the air group master and a temperature average is determined.

When the air group master is in cooling operation, the air group member thermostats do not operate the heating system for air heating.

If the Set Room Heat temperature is adjusted while the air group is cooling, the snowflake icon is flashed to alert the user that the cooling is presently on. Once the cooling shuts off, the heating can start operation.



### Floor Cooling Section C

The thermostat has the option to support radiant floor cooling when connected to a heat pump control using tekmarNet® communication. The floor cooling setting must be set to On and the heating system must be in Warm Weather Shut Down (WWSD). When the heat pump system control operates in cooling mode, all thermostats set for floor cooling on the tekmarNet® bus all activate the first stage heating contact (H1) at the same time to allow chilled water into the system. The thermostat continues to operate the cooling until either the room temperature reaches the Set Heat temperature plus 3°F (Set Heat+1.5°C) or reaches a minimum temperature of 74°F. If only a floor sensor is installed, the floor cooling setpoint is 67°F (19.5°C).

Schedules Section D

Lowering the room temperature setting reduces the amount of fuel required to heat the building resulting in energy savings.

This thermostat can follow a programmable schedule in order to automatically lower the room temperature setting. A schedule master such as a Timer 033 is required in order to gain programmable schedule functionality.

When operating on a programmable schedule, a  $\circ$  symbol is shown, as well as a  $\Leftrightarrow$  or a  $\circ$ . The  $\Leftrightarrow$  or  $\circ$  indicates the current operating temperature.

If a  $\odot$  symbol does not appear, there is no schedule available.

Display	Action
*	Occupied temperature. No schedule.
C	Unoccupied temperature. No schedule.
<b>\$</b> ©	Programmable schedule at occupied temperature.
$\mathbb{C}$	Programmable schedule at unoccupied temperature.

When a programmable schedule is selected, there is a time delay for the temperature to change from the & temperature to the  $\Rightarrow$  temperature.

The thermostat uses Optimum Start to predict the heat up and cool off rate of the room. The optimum start feature allows the room to reach the set room ★ temperature by the time set in the programmable schedule. This applies for both heating and cooling.

### **Scenes (System Override)**

Section E

Scenes provide an easy way to save energy while away on vacation, or override a pre-set schedule when plans change. tekmarNet® devices such as a User Switch 479 provide scene adjustment.

This thermostat responds to the following scenes:

Scene	Display	Room Temperature Setting
1	* or *Oor CO	Follows programmable schedule or operates at the occupied ❖ temperature.
2	Away	Away temperature.
3	C	Unoccupied C temperature.

While in the *Away* scene, the room temperature cannot be changed using the  $\wedge$  or  $\vee$  buttons. Change the scene from *Away* to  $\Leftrightarrow$  or  $\varsigma$  to change the temperature.

# **Troubleshooting**

## Error Messages (1 of 2)

kma	Error Message	
r° D		CONTROL ERROF
527 -	1 [2] 2]	The thermostat was ur
12/1		Error clears once all
1	•	thermostat's switch se
	€	hittone together for 9

nable to correctly read settings from memory and has reloaded the factory default settings. not operate the heating while this error message is present.

Description

adjust menu settings in the Installer access level (unlocked) have been checked. Set etting #3 to unlock and unlock the tekmarNet $^{\scriptscriptstyle \odot}$  system control. Press and hold imes and imes2 seconds to enter the adjust menu. Continue until all settings have been reviewed. parions rogerner for

## PORT ERROR

Thermostat has been connected to a tN2 Zone already in use by a 2-stage device. A 2-stage device requires two tN2 ports to operate. This device may be connected to one such port. Move the thermostat's tN2 wires to an unused tN2 port on the control

### **BUS ERROR**

 $\Theta$ 

The tekmarNet®4 communication bus has either an open or a short circuit. The result is that there are no communications. Check for loose wires. Check for short circuits between the tN4 and C wires on the House Control, Wiring Center, or Zone Manager. Check for correct polarity between the C and R wires.

Error clears automatically once wiring fault has been corrected. If the thermostat is intentionally removed from the tekmarNet®4 bus, press the A and V buttons together to clear the error message.

 $\Theta$ 

### **DEVICE LIMIT**

DEVICE

**∄** ⊖

Setpoint Controls. The device count must be lowered to 24 or less. If possible, move devices to other tekmarNet® The number of devices on the tekmarNet® bus has exceeded 24. Devices include tekmarNet® Thermostats and buses. Error clears automatically once the number of devices on the tekmarNet $^{
m a}$  bus is at 24 or lower.

## Error Messages (2 of 2)

	Error Message	Description	
	L L L ADDRESS	<b>ADDRESS ERROR</b> This thermostat and another device have been manually given the same tekmarNet® address. Error clears automatically once this thermostat is given a new manually set address or if the thermostat is set to automatic addressing.	
47 - 47	ROOMSENSOR	ROOM SENSOR SHORT CIRCUIT  The built-in air temperature sensor has a short circuit fault.  This error cannot be field repaired.  Contact your wholesaler or tekmar sales representative for details on repair procedures.	
20 6 22	ROOMSENSOR	ROOM SENSOR OPEN CIRCUIT  The built-in air temperature sensor has an open circuit fault.  This error cannot be field repaired.  Contact your wholesaler or tekmar sales representative for details on repair procedures.	
taleman® DEST	MLJr- cool	AIR GROUP MEMBER ERROR  The thermostat has been selected to join an air group as a member, yet there is no air group master thermostat.  Error clears once the thermostat detects an air group master or the air group is set to OFF.	

### **Frequently Asked Questions**

Symptom	Look for	Corrective Action
No Heat	H1 Symbol	H1 symbol indicates heat is on. Check if zone valve or zone pump is operating.
	Flashing WWSD	Increase WWSD setting on tekmarNet® reset control.
	Flashing Away	Change User Switch to Normal scene 1.
Heat on before scheduled time	CO	Optimum start "learns" the heat up rate of the room and starts the heating early so that the room is comfortable at the scheduled time.
Pressing ^ button does not increase temperature	Flashing Max	Installer can increase the Maximum Set Room Heat limits.
Pressing V button does not decrease temperature	Flashing Min	Installer can decrease the Minimum Set Room Heat limits.

### Job Record

### Jobsite Location \_\_\_\_\_

### Thermostat Location \_\_\_\_\_

Item	Setting	Item	Setting
Set Room Heat ❖		Schedule Member	
Set Room Heat C		Heat Supply Pump	
Set Room Heat Away		Heat Supply Pump Delay	
Backlight		Heat Cycles Per Hour	
Units		Air Group	
Max Set Room Heat ❖		tekmarNet® Address	
Max Set Room Heat C		Floor Cooling	
Min Set Room Heat			

### **Technical Data**

tekmarNet®2 Thermostat 527; One Stage Heat		
Packaged weight	0.8 lb. (380 g)	
Enclosure	White PVC plastic, NEMA Type 1	
Dimensions	2-7/8" H x 2-7/8" W x 13/16" D (73 x 73 x 21 mm)	
Approvals	CSA C US, meets Class B: ICES and FCC Part 15	
Ambient conditions	Indoor use only, 32 to 122°F (0 to 50°C).	
	RH max 80% up to 88°F (31°C) decreasing linearly to 50% RH at 104°F (40°C)	
	Altitude 0 - 6560 feet (2000 m), Installation Category II, Pollution Category 2	
Power supply	Provided by tekmarNet®2 Control, 1.3 VA	

### **Limited Warranty and Product Return Procedure**

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 passthrough 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 passthrough 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.



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