

Low Temperature Stainless Steel Panel Series

Installation and Commissioning Guide



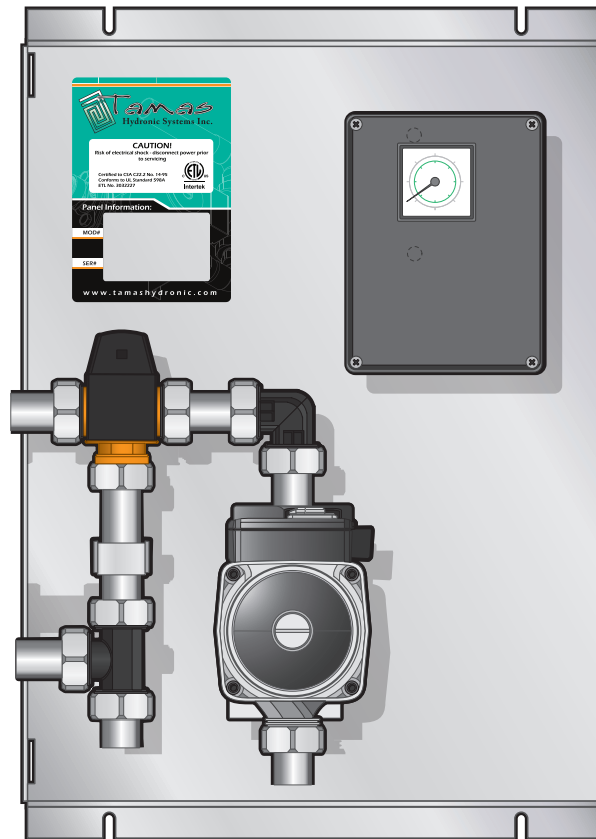
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This User Guide is Applicable to:

Low Temperature Stainless Steel Panels

- T-LO-TP-0010** Low temp Panel with (1) TMV and (1) Low Temp Zone
- T-LO-TP-0020** Low temp Panel with (1) TMV and (2) Low Temp Zones
- T-LO-TP-0030** Low temp Panel with (1) TMV and (3) Low Temp Zones

*** Note:**
The following parts lists and application drawings are general samplings. Each panel configuration dictates the required components, including pump type. See the Technical Data section of the manual for specific information on each part in your particular variation of the Tamas Stainless Steel Low Temperature Panel.



T-LO-TP-0010 Shown

Description

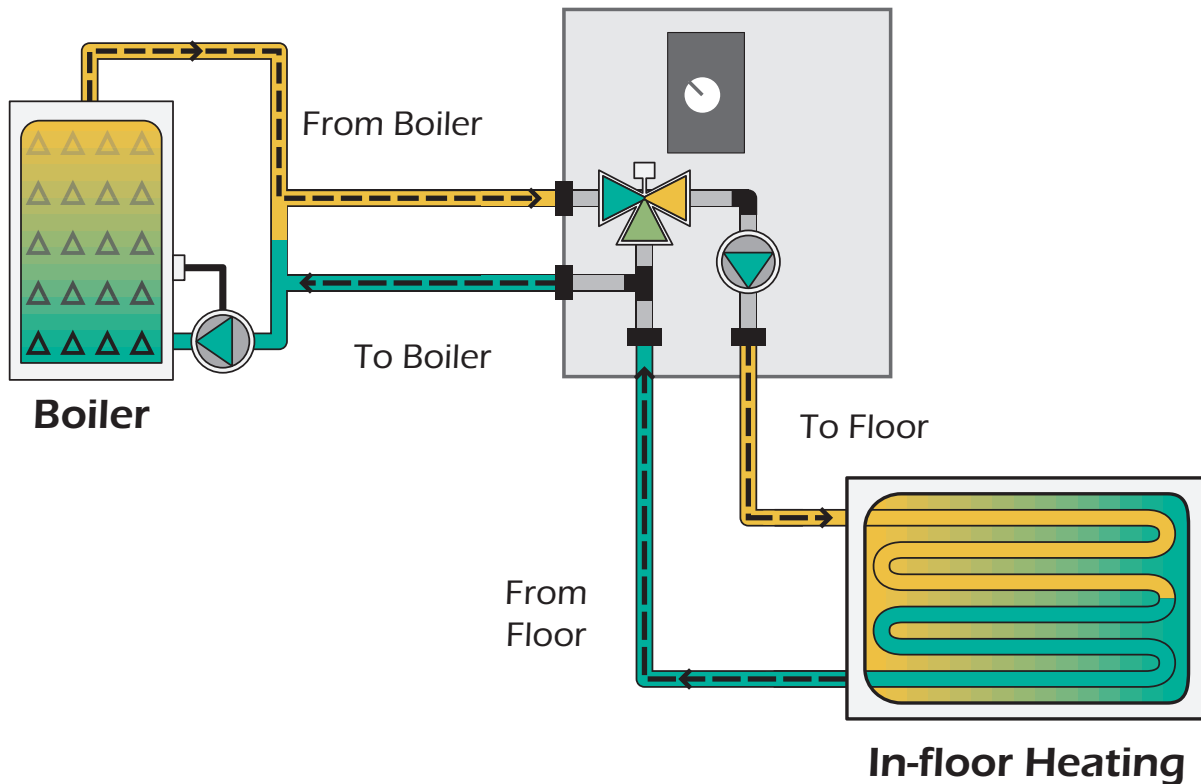
The Tamas Low Temperature Hydronic Panel (T-LO-TP-00XX) is designed for distributing hydronic heat for radiant floor heating systems. The panel can be utilized for floor warming and area heating such as bathrooms, basements, kitchens, sunrooms and tiled floors. The panel uses a control box which receives a signal from the buildings thermostat; this provides consistent heat distribution through the installation. The thermostatic mixing valve and 3 speed circulating pumps function to temper and distribute the water to the system.

Main Features

- Galvanized steel back plate and lockable galvanized steel cover
- Thermostatic mixing valve
- Plug and Play design
- ETL approved

Technical Data

- Max. Operating Temperature: 93°C/200°F
- Max. Ambient Temperature: 49°C/120°F
- Max. Operating Pressure: 3 Bar/45 PSI



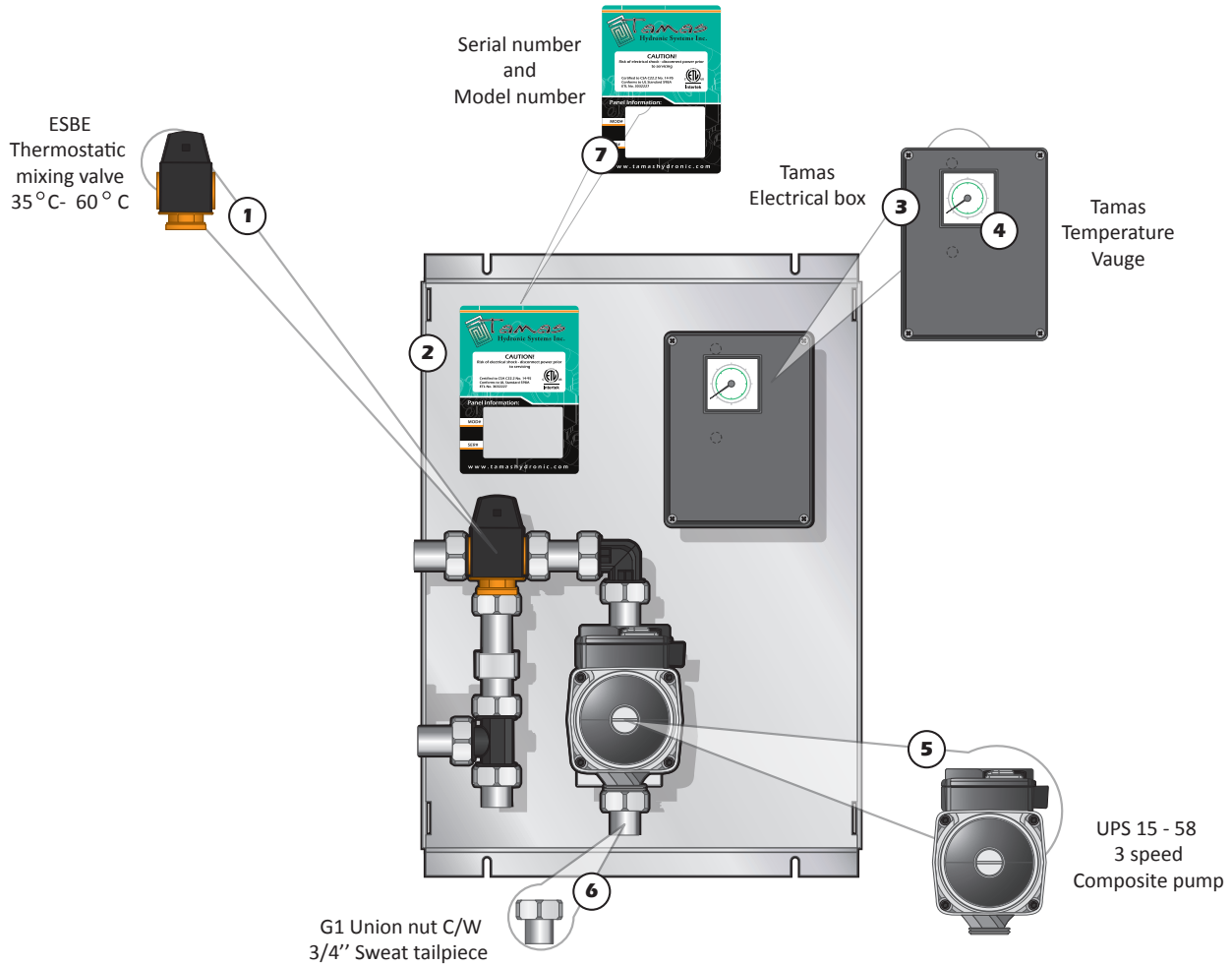
Operation

Boiler Connection

When the T-LO-TP-00X0 is connected to a boiler system the panel regulates the water distribution and temperature to accommodate demand. If the room or floor temperature falls below the user's desired setting on a thermostat (sold separately), the panel initiates a signal to the boiler which will turn on the boiler pump (field supplied) and at the same time, turn on the zone pumps on the T-LO-TP-00X0. When the room temperature is satisfied, the thermostat disconnects the demand to the Tamas Panel which will then end the boiler demand and turn off all pumps on the Tamas panel. (Depending on the boiler, the boiler pump will continue to run for a post purge on the boiler loop meanwhile the Tamas panel will be shut down.)

When the T-LO-TP-00X0 is connected to the boiler primary loop, a primary / secondary piping arrangement should be followed. The distance between the connections should not exceed 4 pipe diameters. This prevents unwanted circulation between the two systems.

Components

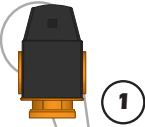


T-LO-TP-0010 Model Shown

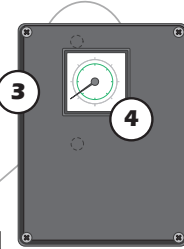
Components			
1	<i>Thermostatic Mixing Valve</i>	5	<i>UPS 15-58 Pump</i>
2	<i>Galvanized Backpan</i>	6	<i>Union Nut & Tailpiece</i>
3	<i>Tamas Electrical Box</i>	7	<i>Tamas Identification Label</i>
4	<i>Tamas Temperature Gauge</i>		

Components

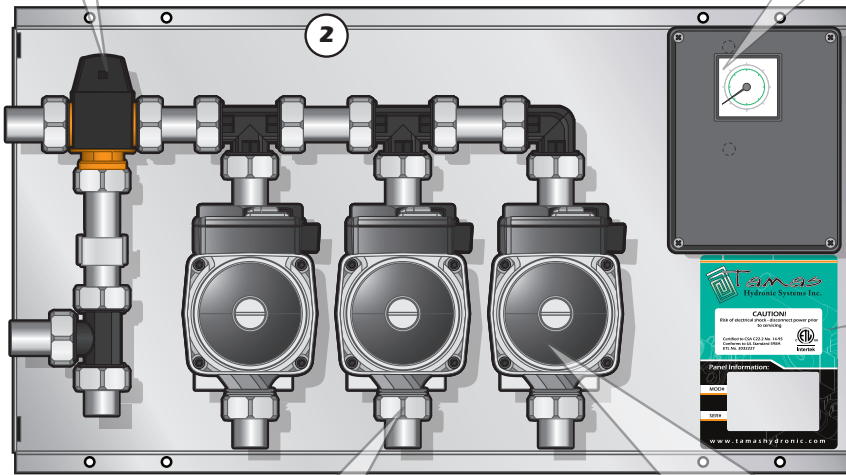
ESBE
 Thermostatic
 mixing valve
 35°C- 60°C



Tamas
 Electrical box



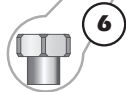
Tamas
 Temperature
 Gauge



Serial number
 and
 Model number



G1 Union nut C/W
 3/4" Sweat tailpiece



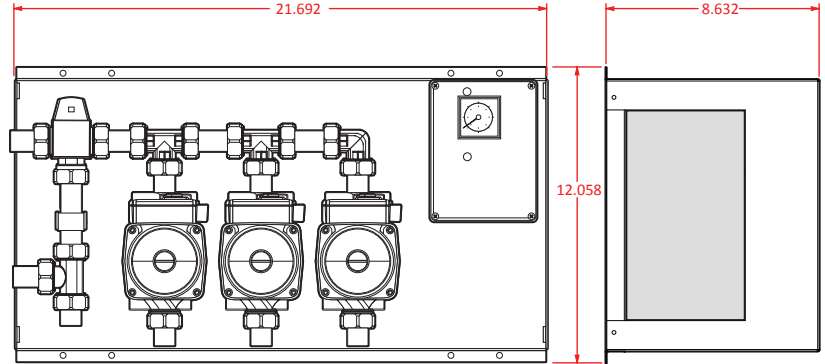
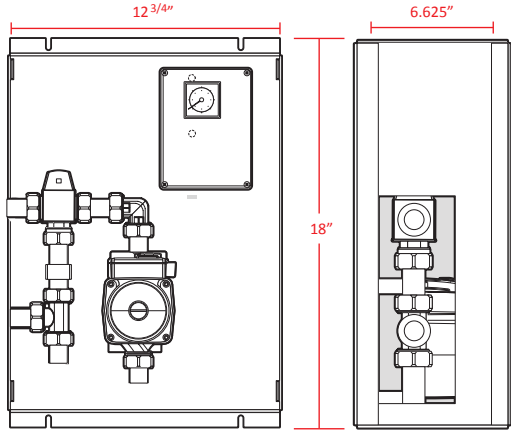
UPS 15 - 58
 3 speed
 Composite pump



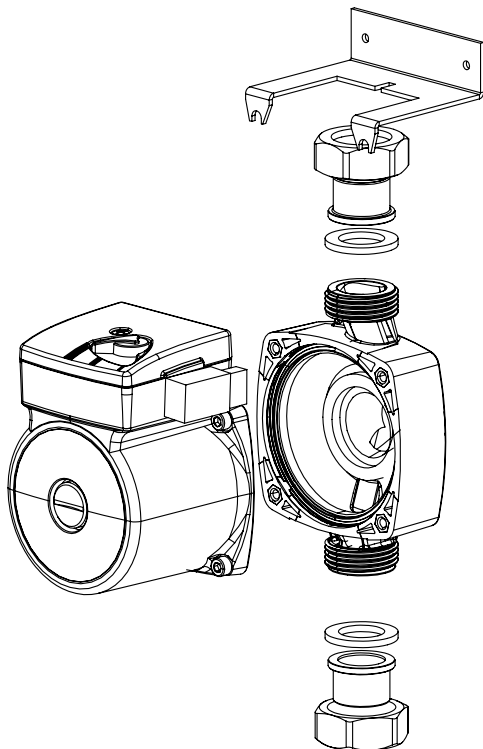
T-LO-TP-0030 Model Shown

Components			
1	Thermostatic Mixing Valve	5	UPS 15-58 Pump
2	Galvanized Backpan	6	Union Nut & Tailpiece
3	Tamas Electrical Box	7	Tamas Identification Label
4	Tamas Temperature Gauge		

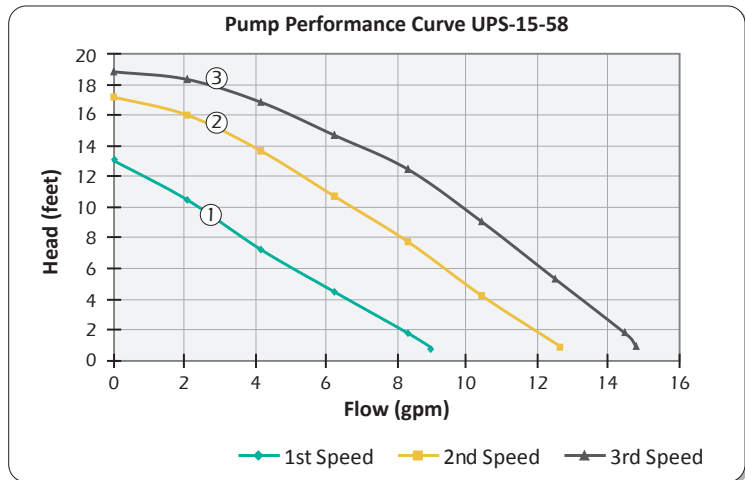
Dimensions



UPS 15-58 Pump



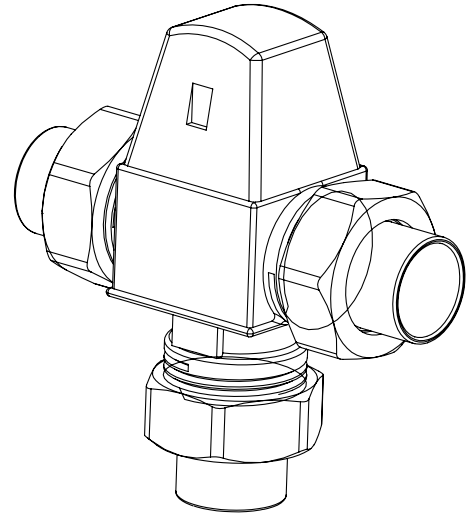
		AMPS	WATTS	HP	CAPACITOR
115V	Spd. 3	0.75	85	1/25	10mF/180V
	Spd. 2	0.66	75	1/25	10mF/180V
	Spd. 1	0.51	60	1/25	10mF/180V



- Flow range: 0 - 17 U.S. GPM
- Head range: 0 - 19 Feet
- Motors: 2 Pole, Single Phase
- Maximum fluid temperature: 230°F(110°C)
- Minimum fluid temperature: 36°F(2°C)
- Maximum fluid temperature with Check Valve present: 200°F

Thermostatic mixing valve (ASSE-1017 listed*)

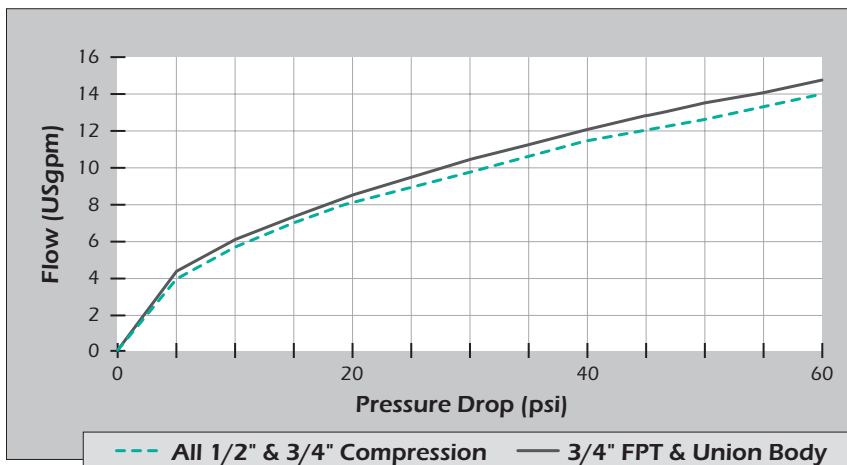
- Anti-scald function.
- Snap-on cover for protection and to prevent unauthorized adjustment or tampering.
- Cover label for recording settings including recorded outlet temperature and date installed.
- Available temperature ranges:
 - 70°F – 110°F (20°C - 45°C)* ◦ 85°F – 120°F (29°C - 49°C)*
 - 95°F – 140°F (35°C - 60°C)* ◦ 85°F – 160°F (30°C - 70°C)* (3/4" only)
- Available connections
 - Threaded body (FPT). ◦ Union solder.
 - Union solder w/ 1 check valve. ◦ Union solder c/w 2 check valves.
 - Union CPVC. ◦ Compression (3/4" only).
- Maximum working pressure: 150 psi (10 bar)**.
- Maximum system differential pressure between hot and cold: 44 psi (3 bar).
- Maximum system differential pressure: 72 psi (5 bar).
- Maximum hot water inlet temperature: 194°F (90°C).
- Minimum required flow***: 0.5 US gpm.



The thermostatic mixing valve will provide a mixed water temperature according to the table below. The outlet temperatures stated are approximate, based on given hot water supply temperature and a cold water supply of 50°F (10°C). For other cold water temperatures correct the outlet temperature by 1°F for every 10°F (or 1°C for every 10°C) deviation from 50°F (10°C), up or down.

Hot Water Temperature	95°F – 140°F					
	1	2	3	4	5	6
120°F	95	106	115	124	131	136
140°F	97	108	117	126	133	140
160°F	99	109	118	127	135	145
180°F	100	111	120	129	136	149

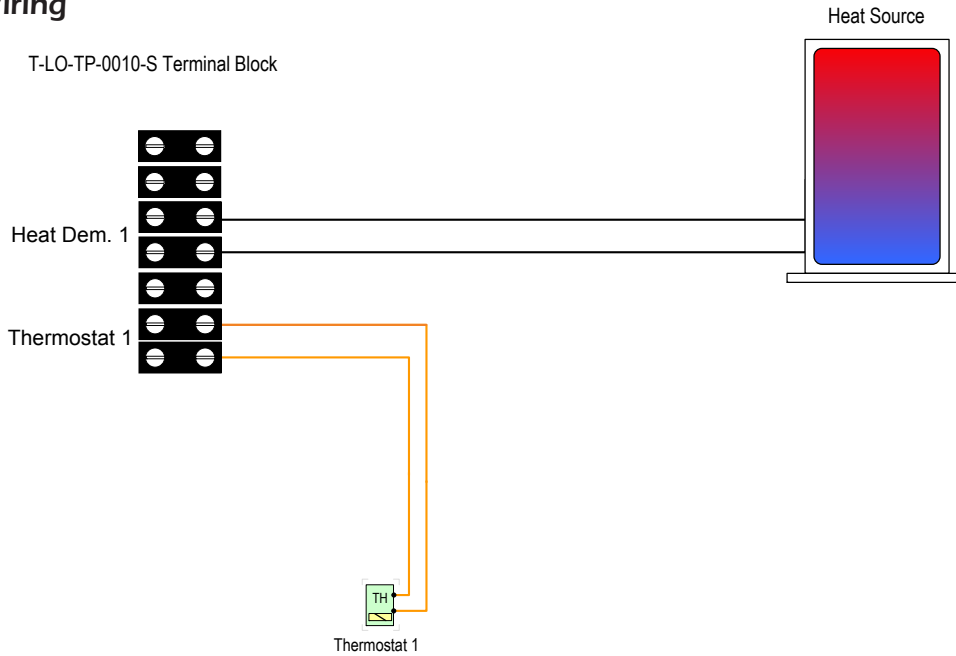
* Only ranges 85-120°F and 95-140°F are listed to ASSE-1017 standard
 ** Max. working pressure for CPVC: 80 psi (5.5 bar)
 *** For Correct temperature control



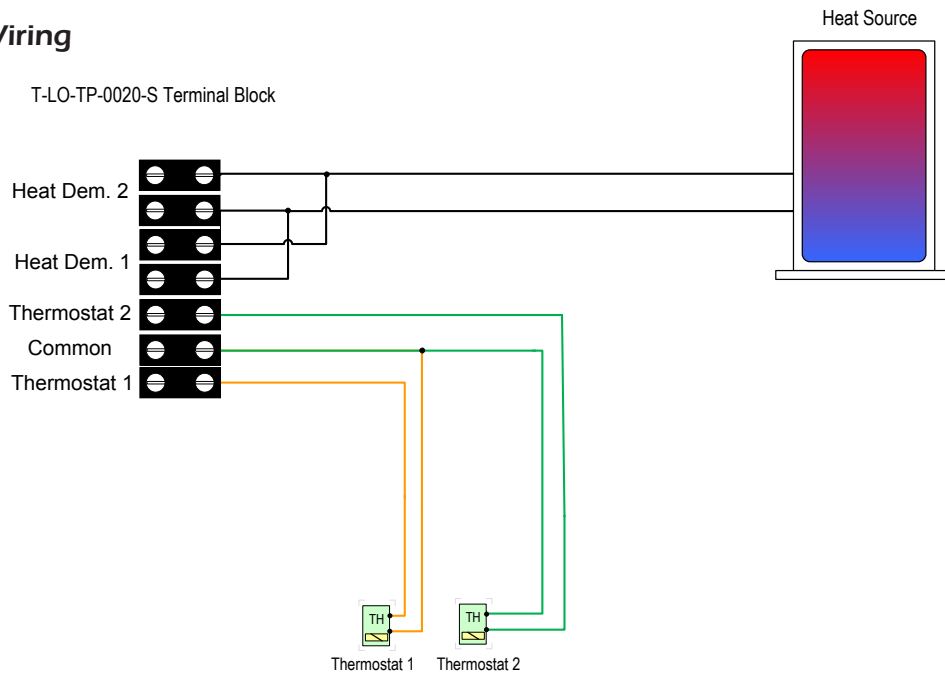
Wiring

All electrical wiring to the panel (including grounding) must conform to local electrical codes and/or National Electrical Code, ANS/NFPA No. 70-latest edition, or the Canadian Electrical Code, C22.1- Part 1.

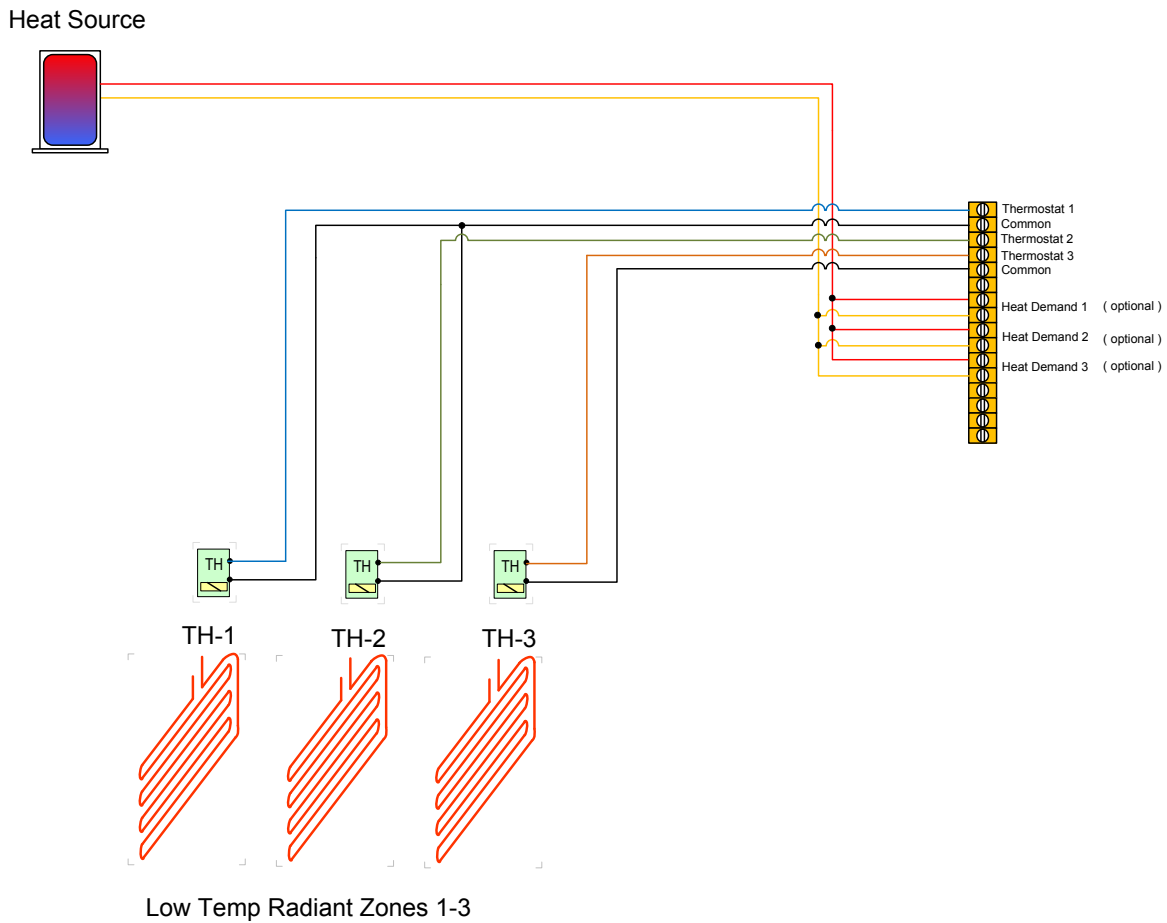
T-LO-TP-0010 Wiring



T-LO-TP-0020 Wiring



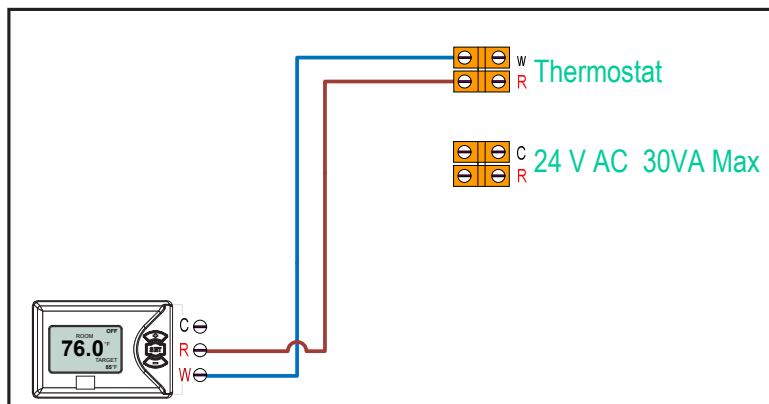
T-LO-TP-0030 Wiring



Thermostat Connections

Connect the thermostat for a space heating zone to the terminal block on the Tamas Panel. Do not supply 24V power to the thermostat circuits or attempt to supply 24V AC for any other application.

2 Wire Thermostat





Limited Warranty

Tamas Hydronic Systems Inc. warrants each of its products to be free from defects in workmanship and materials under normal use and service for a period of 24 months from date of purchase from a Tamas Hydronic Systems inc. authorized Dealer.

If the product proves to be defective within the applicable warranty period, Tamas Hydronic Systems inc. on its sole discretion will repair or replace said product. Replacement product may be new or refurbished of equivalent or better specifications, relative to the defective product. Replacement product need not be of identical design or model. Any repair or replacement product pursuant to this warranty shall be warranted for not less than 90 days from date of such repair, irrespective of any earlier expiration of original warranty period. When Tamas Hydronic Systems Inc. Provides replacement, the defective product becomes the property of Tamas Hydronic Systems Inc.

Warranty Service, within the applicable warranty period, may be obtained by contacting your nearest Tamas Hydronics Systems inc. office via the original Authorized Agent and requesting a Return Material Authorization Number (RMA #). Proof of purchase in the form a dated invoice/receipt must be provided to expedite the issuance of a Factory RMA.

After an RMA number has been issued, the defective product must be packaged securely in the original or other suitable shipping package to ensure that it will not be damaged in transit. The RMA number must be visible on the outside of the package and a copy included inside the package. The package must be mailed or otherwise shipped back to Tamas Hydronic Systems Inc. with all costs of mailing/shipping/insurance prepaid by the warranty claimant.

Any package/s returned to Tamas Hydronic Systems Inc. without an approved and visible RMA number will be rejected and shipped back to purchaser at purchaser's expense. Tamas Hydronic Systems Inc. Reserves the right, if deemed necessary, to charge a reasonable levy for costs incurred, additional to mailing or shipping costs.

Limitation of Warranties.

If the Tamas Hydronic Systems Inc. product does not operate as warranted above the purchasers sole remedy shall be, at Tamas Hydronic Systems Inc.' s option, repair or replacement. The foregoing warranties and remedies are exclusive and in lieu of all other warranties, expressed or implied, either in fact or by operation of law, statutory or otherwise, including warranties of merchantability and fitness for a particular purpose/application. Tamas Hydronic Systems Inc. neither assumes nor authorizes any other person to assume for it any other liability in connection with the sale, installation maintenance or use of Tamas Hydronic Systems Inc. products.

Tamas Hydronic Systems Inc. shall not be liable under this warranty; if its testing and examination discloses that the alleged defect in the product does not exist or was caused by the purchasers or third persons misuse, neglect, improper installation or testing, unauthorized attempts to repair or any other cause beyond the range of intended use, or by accident, fire, lightning or other hazard.

Limitation of Liability.

In no event will Tamas Hydronic Systems Inc. be liable for any damages, including loss of data, loss of profits, costs of cover or other incidental, consequential or indirect damages arising out of the installation, maintenance, commissioning, performance, failure or interruption of a Tamas Hydronic Systems Inc. product, however caused and on any theory of liability. This limitation will apply even if Tamas Hydronic Systems Inc. has been advised of the possibility of such damage.

Local Law.

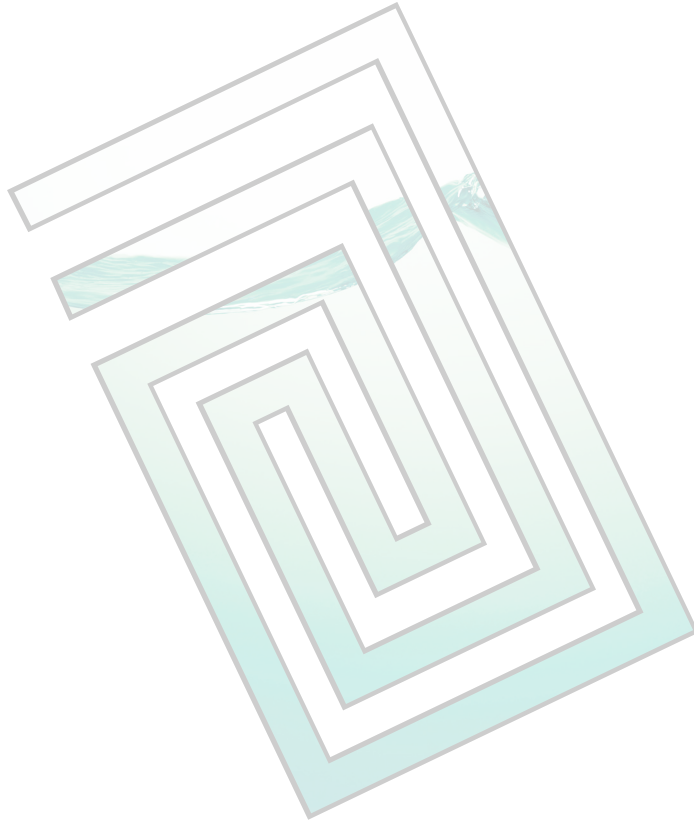
This limited warranty statement gives the purchaser specific legal rights. The purchaser may also have other rights which vary from state to state in the United States, from Province to Province in Canada and from Country to Country elsewhere in the world.

To the extent this Limited Warranty Statement is inconsistent with local law, this statement shall be deemed modified to be consistent with such local law. Under such local law, certain disclaimers and limitations of this statement may not apply to the purchaser. For example, some states in the United States, as well as some governments outside the United States (including Canadian Provinces), may:

Preclude the disclaimers and limitations in this statement from limiting the statutory rights of a consumer (e.g. United Kingdom);

Otherwise restrict the ability of a manufacturer to enforce such disclaimers or limitations; or

Grant the purchaser additional warranty rights which the manufacturer cannot disclaim, or not allow limitations on the duration of implied warranties.



Custom, Reliable Hydronic Systems

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