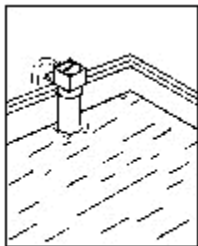


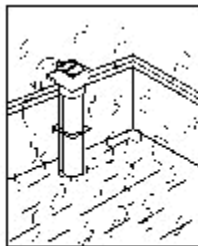
Thermal Overload Protection

The Protector 1 Series

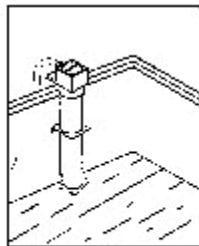
The protector 1 over-temperature control system utilizes a heat sensitive fuse to detect overheat conditions. The fuse, placed inside a thermowell and positioned in contact with the heater sheath, will cut power to the heater in the event of low liquid level.



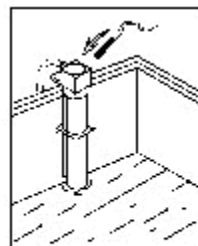
Immersion heater with PROTECTOR 1 working normally.



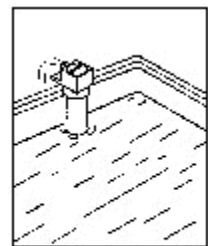
Process bath level drops due to tank leak or evaporation.



PROTECTOR 1 fuse sensor detects elevating temperature and shuts off power to heater.



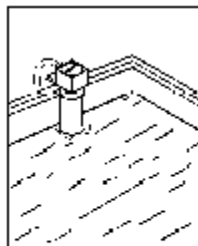
Replace fuse.



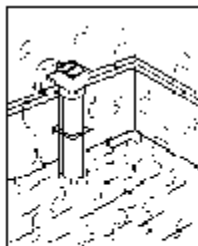
Restore the liquid level and resume operation.

The Protector 2 and 3 Series

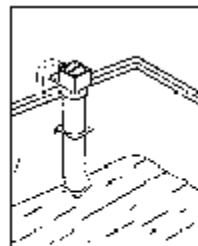
The protector 2 and 3 systems provide the same reliable over-temperature protection as the Protector 1; however, the control systems feature a heat sensing thermostat. If the liquid level drops and the heater reaches a preset overheat temperature, the thermostat cuts power to the heater and an alarm sounds. After filling the tank, the immersion heater can quickly be made operational by pushing the reset button on the control to restore power. Protector 3 is designed for flexible lead or high temperature fluoropolymer (PTFE) heater applications only. DO NOT wire P2, P6, P7, or P8 devices directly to power or heater load, as a dangerous short circuit will result with irreparable damage to the heater. Refer to wiring diagrams for proper installation.



Immersion heater with PROTECTOR 2 working normally.



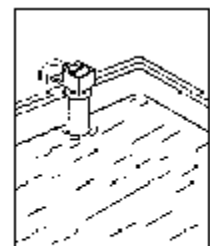
Process bath level drops due to tank leak or evaporation.



PROTECTOR 2's thermostat fuse detects elevated temperature and shuts power to the heater.



The alarm is activated.



Restore the liquid level and push the reset button to resume operation.

Heater Thermal Protection Chart

Replaceable Fuse

Tank Temp °F	Metal Over-the-Side & Flanged	Metal L-Shaped	Metal Flex Riser	Over the Side PTFE	L-Shaped PTFE	Flex Riser PTFE
To 180	P1 White, 6021	P1 White 6024	---	P1 to 190F Red, 6032	P1 to 190F Red, 6035	---
180-230	P4 Blue, 6022	P4 Blue, 6025	---	---	---	---
230-300	P5 Red, 6023	P5 Red, 6026	---	---	---	---

Resettable Fuse

Tank Temp °F	Metal Over-the-Side & Flanged	Metal L-Shaped	Metal Flex Riser	Over the Side PTFE	L-Shaped PTFE	Flex Riser PTFE
To 180	P2 White, 576	P2 White, 2804	P2 White, 2804	P2 to 190F White, 4576	P2 to 190F White, 4576	P3
180-230	P6 Blue, 4047	P6 Blue, 4047	P6 Blue 4047	P8 190-210F Brown, 5163	P8 190-210F Brown, 5163	P3
230-300	P7 Red, 2805	P7 Red, 2805	P7 Red, 2805	P3 210-250F	P3 210-250F	P3

Voltages Available (Most heaters and controls)

120 Volt **208 Volt** **240 Volt** **400 Volt** **480 Volt**
200 Volt **220 Volt** **380 Volt** **415 Volt** **600 Volt**

Must Specify 1 or 3 phase at time of order. Consult OEM Heaters for additional options.

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