

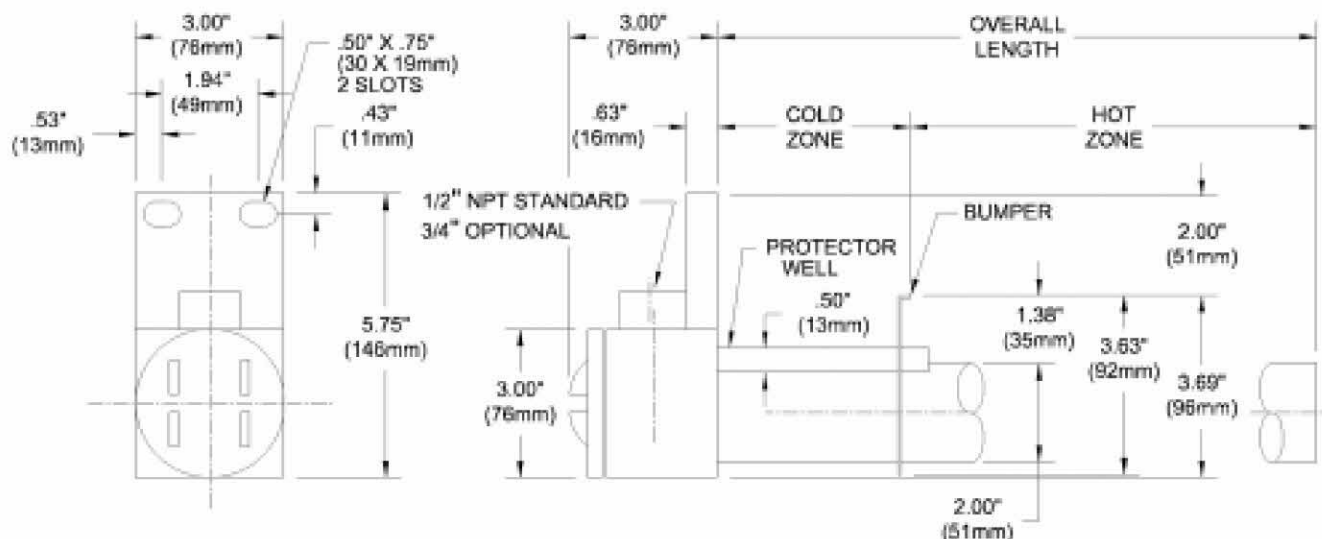
P, F, S, and T SERIES, METAL HEATERS									
WATTS	VOLTS	HOT ZONE	OVERALL LENGTH	STEEL	304 SS	316 SS	TITANIUM	SHIP WGT.	Lbs./.(kg)
		In./.(mm)	In./.(mm)						
1000	120	6	11	P1111-**	F1111-**	S1111-**	T1111-**	7	
	240	(155)	(280)	P1211-**	F1211-**	S1211-**	T1211-**	(3.5)	
2000	120	10	17	P2117-**	F2117-**	S2117-**	T2117-**	10	
	240	(255)	(430)	P2217-**	F2217-**	S2217-**	T2217-**	(4.5)	
3000	480			P2417-**	F2417-**	S2417-**	T2417-**		
	240	16	23	P3223-**	F3223-**	S3223-**	T3223-**	11	
4000	480	(405)	(585)	P3423-**	F3423-**	S3423-**	T3423-**	(5)	
	240	20	29	P4229-**	F4229-**	S4229-**	T4229-**	13	
5000	480	(510)	(735)	P4429-**	F4429-**	S4429-**	T4429-**	(6)	
	240	25	35	P5235-**	F5235-**	S5235-**	T5235-**	15	
6000	480	(635)	(890)	P5435-**	F5435-**	S5435-**	T5435-**	(7)	
	240	30	40	P6240-**	F6240-**	S6240-**	T6240-**	17	
8000	480	(760)	(1015)	P6440-**	F6440-**	S6440-**	T6440-**	(8)	
	240	37	47	P8247-**	F8247-**	S8247-**	T8247-**	23	
9000	480	(940)	(1195)	P8447-**	F8447-**	S8447-**	T8447-**	(10.5)	
	240	44	54	P9254-**	F9254-**	S9254-**	T9254-**	24	
10000	480	(1120)	(1370)	P9454-**	F9454-**	S9454-**	T9454-**	(11)	
	240	49	59	P10259-**	F10259-**	S10259-**	T10259-**	25	
12000	480	(1245)	(1500)	P10459-**	F10459-**	S10459-**	T10459-**	(11.5)	
	240	58	68	P12268-**	F12268-**	S12268-**	T12268-**	28	
	480	(1475)	(1730)	P12468-**	F12468-**	S12468-**	T12468-**	(13)	

Three phase available as option. Add "-3" before thermal protector designator.

Product Features and Benefits:

- ◆ **SUPERIOR CHEMICAL RESISTANCE:** Materials available for use in most aqueous alkaline solutions, plating solutions, and rinse tanks. Check solution recommendation chart or with your chemical supplier for proper sheath material selection.
- ◆ **RUGGED CONSTRUCTION:** Heavy wall metal sheaths available in:
 - Steel.
 - 304 stainless steel.
 - 316 stainless steel.
 - Titanium.
- ◆ **OUTSTANDING PERFORMANCE:** Watt densities of 35 watts per square inch (5.4 w/cm²) ensure long service life.
- ◆ **CORROSION RESISTANT HEAD:** Vapor tight, flame retardant polypropylene terminal enclosure with 3-foot (.9m) flexible PVC liquid tight conduit.
- ◆ **SAFETY FEATURES:**
 - Grounded construction.
 - Thermal protector built in. Replaceable PI fuse standard for solutions up to 180°F (82°C).
 - Non-floating construction.
- ◆ **CERTIFICATIONS:** UL (Except steel sheath), CSA, and CE.
- ◆ **SIZES:** 1,000 watts to 12,000 watts.
- ◆ **VOLTAGES:** 120, 240 or 480 volts. 208, 380, 415, 600 and other voltages available. Single phase standard, three phase available.
- ◆ **OPTIONS AVAILABLE (consult factory):**
 - Replaceable thermal protectors:
 - PIM: for solutions from 180°F (82°C) to 230°F (110°C).
 - PIH: for solutions from 230°F (110°C) to 300°F (150°C).
 - Resettable thermal protectors:
 - PII: for solutions up to 180°F (82°C).
 - PIIM: for solutions from 180°F (82°C) to 230°F (110°C).
 - PIIH: for solutions from 230°F (110°C) to 300°F (150°C).
 - Special configurations and lengths.
 - Longer wire and conduit lengths.
 - Lower watt densities for highly viscous solutions.
 - Temperature and level controls sized to match the heater.

DIMENSIONS



SINGLE TUBE METAL OVER THE SIDE HEATER ORDERING INFORMATION

Series	Wattage	Voltage	Length	Options	Type of Fuse	Wire and Conduit Length																		
	1 = 1000 2 = 2000 3 = 3000 4 = 4000 5 = 5000 6 = 6000 8 = 8000 9 = 9000 10 = 10000 12 = 12000	1 = 120 2 = 240 4 = 480 -208- = 208 -380- = 380 -415- = 415 -600- = 600	11 = 1kW 17 = 2kW 23 = 3kW 29 = 4kW 35 = 5kW 40 = 6kW 47 = 8kW 54 = 9kW 59 = 10kW 68 = 12kW specify custom lengths, not to exceed tank depth	P = steel F = 304 stainless steel S = 316 stainless steel T = titanium	-X = any special configuration not called out in the part number (specify in clear text) no designator = single phase power (standard) -3 = three phase power	no designator = 36" length standard specify variations from standard Ex: -X84 = 84" wire and conduit																		
					<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="2" style="text-align: center;">Replaceable Fuse</th> </tr> </thead> <tbody> <tr> <td style="width: 30%;">-PI (std)</td> <td>for solutions up to 180°F</td> </tr> <tr> <td>-PIM</td> <td>for 180° - 230°F solutions</td> </tr> <tr> <td>-PIH</td> <td>for 230° - 300°F solutions</td> </tr> <tr> <th colspan="2" style="text-align: center;">Resettable Fuse</th> </tr> <tr> <td colspan="2" style="text-align: center;">(additional control components required)</td> </tr> <tr> <td>-PII</td> <td>for solutions up to 180°F</td> </tr> <tr> <td>-PIIM</td> <td>for 180° - 230°F solutions</td> </tr> <tr> <td>-PIIH</td> <td>for 230° - 300°F solutions</td> </tr> </tbody> </table>		Replaceable Fuse		-PI (std)	for solutions up to 180°F	-PIM	for 180° - 230°F solutions	-PIH	for 230° - 300°F solutions	Resettable Fuse		(additional control components required)		-PII	for solutions up to 180°F	-PIIM	for 180° - 230°F solutions	-PIIH	for 230° - 300°F solutions
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ORDERING EXAMPLE:

T12468-PIM-X84

Titanium, 12,000 watts, 480 volt, 68" overall length, PIM fuse, 84" wire and conduit.

**PROCESS
TECHNOLOGY**