

# TECHNICAL REFERENCE GUIDE

## CONTROLLER TYPES

CONTROLLER TYPE	MODEL	SENSOR TYPE	CONTROLS	ENVIRONMENT	AMPS	MAX. TEMP.
Thermostat	TD101TN	Bimetal Surface	Preset On and Off	Indoor or Outdoor	25	200° F
Bulb & Capillary	TSO	Copper Bulb & Capillary	Set Point Dial	Indoor Only	15	550° F
Bulb & Capillary	TB250N	Tinned Copper Bulb & Capillary	Set Point Dial	NEMA 3R, Outdoor	22	350° F
Ambient Capillary	TB261N	Ambient Thermal Bulb	Set Point Dial	NEMA 3X, Outdoor	22	110° F
Time Percentage	TPO	None	% Dial	Indoor Only	15	100 %
Thermocouple	TTC175	Type J Thermocouple	Set Point Dial	Indoor Only	15	175° F
PID Controller	BriskONE	Type J Thermocouple	Two Line Digital	Indoor Only	15	1400° F

## AMPERAGE CONVERSION TABLE

WATTS	VOLTS	SINGLE	PHASE	THREE	PHASE
	120	240	480	240	480
100	0.83	0.42	0.21	0.24	0.12
150	1.25	0.63	0.31	0.36	0.18
200	1.67	0.83	0.42	0.48	0.24
250	2.08	1.04	0.52	0.60	0.30
300	2.50	1.25	0.63	0.72	0.36
350	2.92	1.46	0.73	0.84	0.42
400	3.33	1.67	0.83	0.96	0.48
500	4.17	2.08	1.04	1.20	0.60
600	5.00	2.50	1.25	1.44	0.72
700	5.83	2.92	1.46	1.68	0.84
800	6.67	3.33	1.67	1.92	0.96
900	7.50	3.75	1.88	2.17	1.08
1000	8.33	4.17	2.08	2.41	1.20
1100	9.17	4.58	2.29	2.65	1.32
1200	10.00	5.00	2.50	2.89	1.44
1300	10.83	5.42	2.71	3.13	1.56
1400	11.67	5.83	2.92	3.37	1.68
1500	12.50	6.25	3.13	3.61	1.80
1600	13.33	6.67	3.33	3.85	1.92
1700	14.17	7.08	3.54	4.09	2.04
1800	15.00	7.50	3.75	4.33	2.17
1900	15.83	7.92	3.96	4.57	2.29
2000	16.67	8.33	4.17	4.81	2.41
2500	20.83	10.42	5.21	6.01	3.01
3000	25.00	12.50	6.25	7.22	3.61
3500	29.17	14.58	7.29	8.42	4.21
4000	33.33	16.67	8.33	9.62	4.81
4500	37.50	18.75	9.38	10.83	5.41
5000	41.67	20.83	10.42	12.03	6.01
6000	50.00	25.00	12.50	14.43	7.22
7000	58.33	29.17	14.58	16.84	8.42
8000	66.67	33.33	16.67	19.25	9.62
9000	75.00	37.50	18.75	21.65	10.83
10000	83.33	41.67	20.83	24.06	12.03

## ELECTRICAL/POWER CONVERSIONS

FROM	MULTIPLY BY	TO
watts	0.001341	horse power
watts	3.413	Btu/hr
watts	44.25	ft/lb/min
OHM'S LAW VOLTS =		
watts/Amperes	Amperes x Ohms	(watts x Ohms) <sup>1/2</sup>

## CONTROLLER SELECTION GUIDE

HEATING PRODUCT	ENVIRONMENT	CONTROLLER METHODS
Self-limiting cable	Freeze protection	TB261N, TB250N, TD101N, or TSO
Constant wattage cable	Process applications	TB261N, TB250N, TD101N, or TSO, BriskOne
Heat tapes	Process applications requiring higher watt density	TPO, TSO, TB250N, TTC175, BriskOne, TB261N
Heating blankets	Freeze protection, process heater, heating of tanks, vessels and drums	TPO, TSO, TB250N, TTC175, BriskOne, TB261N
Heating jackets	Valves, complex shapes	Self-contained controllers



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