

TABLE 24 Type M Thermocouple— thermoelectric voltage as a function of temperature (°F); reference junctions at 32 °F



°F	0	1	2	3	4	5	6	7	8	9	10	°F
Thermoelectric Voltage in Millivolts												
-50	-1.587	-1.605	-1.623	-1.641	-1.660	-1.678	-1.696	-1.714	-1.732			-50
-40	-1.404	-1.422	-1.441	-1.459	-1.477	-1.496	-1.514	-1.532	-1.551	-1.569	-1.587	-40
-30	-1.218	-1.236	-1.255	-1.274	-1.292	-1.311	-1.330	-1.348	-1.367	-1.385	-1.404	-30
-20	-1.029	-1.048	-1.067	-1.086	-1.105	-1.123	-1.142	-1.161	-1.180	-1.199	-1.218	-20
-10	-0.837	-0.856	-0.875	-0.895	-0.914	-0.933	-0.952	-0.971	-0.990	-1.009	-1.029	-10
0	-0.642	-0.662	-0.681	-0.701	-0.720	-0.740	-0.759	-0.779	-0.798	-0.817	-0.837	0
0	-0.642	-0.622	-0.603	-0.583	-0.563	-0.543	-0.524	-0.504	-0.484	-0.464	-0.444	0
10	-0.444	-0.424	-0.405	-0.385	-0.365	-0.345	-0.325	-0.304	-0.284	-0.264	-0.244	10
20	-0.244	-0.224	-0.204	-0.183	-0.163	-0.143	-0.123	-0.102	-0.082	-0.061	-0.041	20
30	-0.041	-0.020	0.000	0.021	0.041	0.062	0.082	0.103	0.123	0.144	0.165	30
40	0.165	0.186	0.206	0.227	0.248	0.269	0.290	0.311	0.331	0.352	0.373	40
50	0.373	0.394	0.415	0.436	0.458	0.479	0.500	0.521	0.542	0.563	0.585	50
60	0.585	0.606	0.627	0.648	0.670	0.691	0.713	0.734	0.755	0.777	0.798	60
70	0.798	0.820	0.841	0.863	0.885	0.906	0.928	0.950	0.971	0.993	1.015	70
80	1.015	1.037	1.058	1.080	1.102	1.124	1.146	1.168	1.190	1.212	1.234	80
90	1.234	1.256	1.278	1.300	1.322	1.344	1.366	1.388	1.411	1.433	1.455	90
100	1.455	1.477	1.500	1.522	1.544	1.567	1.589	1.612	1.634	1.656	1.679	100
110	1.679	1.701	1.724	1.747	1.769	1.792	1.814	1.837	1.860	1.882	1.905	110
120	1.905	1.928	1.951	1.974	1.996	2.019	2.042	2.065	2.088	2.111	2.134	120
130	2.134	2.157	2.180	2.203	2.226	2.249	2.272	2.295	2.318	2.342	2.365	130
140	2.365	2.388	2.411	2.435	2.458	2.481	2.504	2.528	2.551	2.575	2.598	140
150	2.598	2.621	2.645	2.668	2.692	2.715	2.739	2.763	2.786	2.810	2.833	150
160	2.833	2.857	2.881	2.904	2.928	2.952	2.976	2.999	3.023	3.047	3.071	160
170	3.071	3.095	3.119	3.143	3.167	3.191	3.215	3.238	3.263	3.287	3.311	170
180	3.311	3.335	3.359	3.383	3.407	3.431	3.455	3.480	3.504	3.528	3.552	180
190	3.552	3.577	3.601	3.625	3.650	3.674	3.698	3.723	3.747	3.772	3.796	190
200	3.796	3.820	3.845	3.869	3.894	3.919	3.943	3.968	3.992	4.017	4.042	200
210	4.042	4.066	4.091	4.116	4.140	4.165	4.190	4.215	4.239	4.264	4.289	210
220	4.289	4.314	4.339	4.364	4.389	4.414	4.438	4.463	4.488	4.513	4.538	220
230	4.538	4.563	4.588	4.614	4.639	4.664	4.689	4.714	4.739	4.764	4.789	230
240	4.789	4.815	4.840	4.865	4.890	4.916	4.941	4.966	4.992	5.017	5.042	240
250	5.042	5.068	5.093	5.118	5.144	5.169	5.195	5.220	5.246	5.271	5.297	250
260	5.297	5.322	5.348	5.373	5.399	5.424	5.450	5.476	5.501	5.527	5.553	260
270	5.553	5.578	5.604	5.630	5.655	5.681	5.707	5.733	5.758	5.784	5.810	270
280	5.810	5.836	5.862	5.888	5.913	5.939	5.965	5.991	6.017	6.043	6.069	280
290	6.069	6.095	6.121	6.147	6.173	6.199	6.225	6.251	6.277	6.303	6.329	290
300	6.329	6.355	6.381	6.408	6.434	6.460	6.486	6.512	6.538	6.565	6.591	300
310	6.591	6.617	6.643	6.670	6.696	6.722	6.748	6.775	6.801	6.827	6.854	310
320	6.854	6.880	6.906	6.933	6.959	6.985	7.012	7.038	7.065	7.091	7.118	320
330	7.118	7.144	7.171	7.197	7.224	7.250	7.277	7.303	7.330	7.356	7.383	330
340	7.383	7.409	7.436	7.463	7.489	7.516	7.542	7.569	7.596	7.622	7.649	340
350	7.649	7.676	7.702	7.729	7.756	7.782	7.809	7.836	7.863	7.889	7.916	350
360	7.916	7.943	7.970	7.996	8.023	8.050	8.077	8.104	8.130	8.157	8.184	360
370	8.184	8.211	8.238	8.265	8.292	8.318	8.345	8.372	8.399	8.426	8.453	370
380	8.453	8.480	8.507	8.534	8.561	8.588	8.615	8.642	8.669	8.696	8.723	380
390	8.723	8.750	8.777	8.804	8.831	8.858	8.885	8.912	8.939	8.966	8.993	390
400	8.993	9.020	9.047	9.074	9.101	9.128	9.155	9.183	9.210	9.237	9.264	400
410	9.264	9.291	9.318	9.345	9.372	9.400	9.427	9.454	9.481	9.508	9.535	410
420	9.535	9.562	9.590	9.617	9.644	9.671	9.698	9.726	9.753	9.780	9.807	420
430	9.807	9.834	9.862	9.889	9.916	9.943	9.971	9.998	10.025	10.052	10.079	430
440	10.079	10.107	10.134	10.161	10.188	10.216	10.243	10.270	10.297	10.325	10.352	440
°F	0	1	2	3	4	5	6	7	8	9	10	°F

TABLE 24 Type M Thermocouple— thermoelectric voltage as a function of temperature (°F); reference junctions at 32 °F

°F	0	1	2	3	4	5	6	7	8	9	10	°F
Thermoelectric Voltage in Millivolts												
450	10.352	10.379	10.406	10.434	10.461	10.488	10.516	10.543	10.570	10.597	10.625	450
460	10.625	10.652	10.679	10.707	10.734	10.761	10.788	10.816	10.843	10.870	10.898	460
470	10.898	10.925	10.952	10.979	11.007	11.034	11.061	11.088	11.116	11.143	11.170	470
480	11.170	11.198	11.225	11.252	11.279	11.307	11.334	11.361	11.389	11.416	11.443	480
490	11.443	11.470	11.498	11.525	11.552	11.579	11.607	11.634	11.661	11.688	11.716	490
500	11.716	11.743	11.770	11.797	11.825	11.852	11.879	11.906	11.933	11.961	11.988	500
510	11.988	12.015	12.042	12.069	12.097	12.124	12.151	12.178	12.205	12.233	12.260	510
520	12.260	12.287	12.314	12.341	12.368	12.395	12.423	12.450	12.477	12.504	12.531	520
530	12.531	12.558	12.585	12.612	12.639	12.667	12.694	12.721	12.748	12.775	12.802	530
540	12.802	12.829	12.856	12.883	12.910	12.937	12.964	12.991	13.018	13.045	13.072	540
550	13.072	13.099	13.126	13.153	13.180	13.206	13.233	13.260	13.287	13.314	13.341	550
560	13.341	13.368	13.395	13.421	13.448	13.475	13.502	13.529	13.555	13.582	13.609	560
570	13.609	13.636	13.663	13.689	13.716	13.743	13.769	13.796	13.823	13.849	13.876	570
580	13.876	13.903	13.929	13.956	13.982	14.009	14.036	14.062	14.089	14.115	14.142	580
590	14.142	14.168	14.195	14.221	14.248	14.274	14.300	14.327	14.353	14.380	14.406	590
600	14.406	14.432	14.459	14.485	14.511	14.538	14.564	14.590	14.616	14.643	14.669	600
610	14.669	14.695	14.721	14.747	14.773	14.799	14.825	14.852	14.878	14.904	14.930	610
620	14.930	14.956	14.982	15.008	15.033	15.059	15.085	15.111	15.137	15.163	15.189	620
630	15.189	15.214	15.240	15.266	15.292	15.317	15.343	15.369	15.394	15.420	15.446	630
640	15.446	15.471	15.497	15.522	15.548	15.573	15.599	15.624	15.649	15.675	15.700	640
650	15.700	15.726	15.751	15.776	15.801	15.827	15.852	15.877	15.902	15.927	15.952	650
660	15.952	15.977	16.002	16.027	16.052	16.077	16.102	16.127	16.152	16.177	16.202	660
670	16.202	16.227	16.251	16.276	16.301	16.325	16.350	16.375	16.399	16.424	16.448	670
680	16.448	16.473	16.497	16.522	16.546	16.570	16.595	16.619	16.643	16.667	16.692	680
690	16.692	16.716	16.740	16.764	16.788	16.812	16.836	16.860	16.884	16.908	16.932	690
700	16.932	16.955	16.979	17.003	17.027	17.051	17.075	17.099	17.123	17.146	17.170	700
710	17.170	17.194	17.218	17.242	17.266	17.290	17.314	17.338	17.362	17.386	17.410	710
720	17.410	17.434	17.458	17.482	17.506	17.530	17.554	17.578	17.602	17.626	17.650	720
730	17.650	17.674	17.698	17.722	17.746	17.770	17.794	17.818	17.843	17.867	17.891	730
740	17.891	17.915	17.939	17.963	17.987	18.011	18.036	18.060	18.084	18.108	18.132	740
750	18.132	18.157	18.181	18.205	18.229	18.254	18.278	18.302	18.326	18.351	18.375	750
760	18.375	18.399	18.424	18.448	18.472	18.497	18.521	18.545	18.570	18.594	18.618	760
770	18.618	18.643	18.667	18.692	18.716	18.740	18.765	18.789	18.814	18.838	18.863	770
780	18.863	18.887	18.912	18.936	18.961	18.985	19.010	19.034	19.059	19.083	19.108	780
790	19.108	19.133	19.157	19.182	19.206	19.231	19.256	19.280	19.305	19.330	19.354	790
800	19.354	19.379	19.404	19.428	19.453	19.478	19.502	19.527	19.552	19.577	19.601	800
810	19.601	19.626	19.651	19.676	19.701	19.725	19.750	19.775	19.800	19.825	19.850	810
820	19.850	19.875	19.899	19.924	19.949	19.974	19.999	20.024	20.049	20.074	20.099	820
830	20.099	20.124	20.149	20.174	20.199	20.224	20.249	20.274	20.299	20.324	20.349	830
840	20.349	20.374	20.399	20.425	20.450	20.475	20.500	20.525	20.550	20.575	20.601	840
850	20.601	20.626	20.651	20.676	20.701	20.727	20.752	20.777	20.802	20.828	20.853	850
860	20.853	20.878	20.904	20.929	20.954	20.980	21.005	21.030	21.056	21.081	21.107	860
870	21.107	21.132	21.157	21.183	21.208	21.234	21.259	21.285	21.310	21.336	21.361	870
880	21.361	21.387	21.412	21.438	21.463	21.489	21.514	21.540	21.566	21.591	21.617	880
890	21.617	21.642	21.668	21.694	21.719	21.745	21.771	21.796	21.822	21.848	21.874	890
900	21.874	21.899	21.925	21.951	21.977	22.002	22.028	22.054	22.080	22.106	22.131	900
910	22.131	22.157	22.183	22.209	22.235	22.261	22.287	22.313	22.339	22.365	22.390	910
920	22.390	22.416	22.442	22.468	22.494	22.520	22.546	22.572	22.598	22.624	22.651	920
930	22.651	22.677	22.703	22.729	22.755	22.781	22.807	22.833	22.859	22.886	22.912	930
940	22.912	22.938	22.964	22.990	23.017	23.043	23.069	23.095	23.122	23.148	23.174	940
°F	0	1	2	3	4	5	6	7	8	9	10	°F

TABLE 24 Type M Thermocouple— thermoelectric voltage as a function of temperature (°F); reference junctions at 32 °F



°F	0	1	2	3	4	5	6	7	8	9	10	°F
Thermoelectric Voltage in Millivolts												
950	23.174	23.200	23.227	23.253	23.279	23.306	23.332	23.358	23.385	23.411	23.437	950
960	23.437	23.464	23.490	23.517	23.543	23.570	23.596	23.623	23.649	23.675	23.702	960
970	23.702	23.728	23.755	23.782	23.808	23.835	23.861	23.888	23.914	23.941	23.968	970
980	23.968	23.994	24.021	24.047	24.074	24.101	24.127	24.154	24.181	24.208	24.234	980
990	24.234	24.261	24.288	24.315	24.341	24.368	24.395	24.422	24.448	24.475	24.502	990
1000	24.502	24.529	24.556	24.583	24.610	24.636	24.663	24.690	24.717	24.744	24.771	1000
1010	24.771	24.798	24.825	24.852	24.879	24.906	24.933	24.960	24.987	25.014	25.041	1010
1020	25.041	25.068	25.095	25.122	25.149	25.176	25.203	25.231	25.258	25.285	25.312	1020
1030	25.312	25.339	25.366	25.394	25.421	25.448	25.475	25.502	25.530	25.557	25.584	1030
1040	25.584	25.611	25.639	25.666	25.693	25.721	25.748	25.775	25.803	25.830	25.857	1040
1050	25.857	25.885	25.912	25.939	25.967	25.994	26.022	26.049	26.077	26.104	26.132	1050
1060	26.132	26.159	26.187	26.214	26.242	26.269	26.297	26.324	26.352	26.379	26.407	1060
1070	26.407	26.434	26.462	26.490	26.517	26.545	26.573	26.600	26.628	26.655	26.683	1070
1080	26.683	26.711	26.739	26.766	26.794	26.822	26.849	26.877	26.905	26.933	26.961	1080
1090	26.961	26.988	27.016	27.044	27.072	27.100	27.127	27.155	27.183	27.211	27.239	1090
1100	27.239	27.267	27.295	27.323	27.351	27.378	27.406	27.434	27.462	27.490	27.518	1100
1110	27.518	27.546	27.574	27.602	27.630	27.658	27.686	27.714	27.743	27.771	27.799	1110
1120	27.799	27.827	27.855	27.883	27.911	27.939	27.967	27.995	28.024	28.052	28.080	1120
1130	28.080	28.108	28.136	28.165	28.193	28.221	28.249	28.278	28.306	28.334	28.362	1130
1140	28.362	28.391	28.419	28.447	28.476	28.504	28.532	28.561	28.589	28.617	28.646	1140
1150	28.646	28.674	28.703	28.731	28.759	28.788	28.816	28.845	28.873	28.902	28.930	1150
1160	28.930	28.959	28.987	29.016	29.044	29.073	29.101	29.130	29.158	29.187	29.215	1160
1170	29.215	29.244	29.273	29.301	29.330	29.358	29.387	29.416	29.444	29.473	29.502	1170
1180	29.502	29.530	29.559	29.588	29.616	29.645	29.674	29.703	29.731	29.760	29.789	1180
1190	29.789	29.818	29.846	29.875	29.904	29.933	29.962	29.991	30.019	30.048	30.077	1190
1200	30.077	30.106	30.135	30.164	30.193	30.221	30.250	30.279	30.308	30.337	30.366	1200
1210	30.366	30.395	30.424	30.453	30.482	30.511	30.540	30.569	30.598	30.627	30.656	1210
1220	30.656	30.685	30.714	30.743	30.772	30.801	30.830	30.859	30.889	30.918	30.947	1220
1230	30.947	30.976	31.005	31.034	31.063	31.093	31.122	31.151	31.180	31.209	31.239	1230
1240	31.239	31.268	31.297	31.326	31.355	31.385	31.414	31.443	31.473	31.502	31.531	1240
1250	31.531	31.560	31.590	31.619	31.648	31.678	31.707	31.736	31.766	31.795	31.825	1250
1260	31.825	31.854	31.883	31.913	31.942	31.972	32.001	32.031	32.060	32.089	32.119	1260
1270	32.119	32.148	32.178	32.207	32.237	32.266	32.296	32.325	32.355	32.385	32.414	1270
1280	32.414	32.444	32.473	32.503	32.532	32.562	32.592	32.621	32.651	32.680	32.710	1280
1290	32.710	32.740	32.769	32.799	32.829	32.858	32.888	32.918	32.947	32.977	33.007	1290
1300	33.007	33.037	33.066	33.096	33.126	33.156	33.185	33.215	33.245	33.275	33.304	1300
1310	33.304	33.334	33.364	33.394	33.424	33.454	33.483	33.513	33.543	33.573	33.603	1310
1320	33.603	33.633	33.663	33.693	33.722	33.752	33.782	33.812	33.842	33.872	33.902	1320
1330	33.902	33.932	33.962	33.992	34.022	34.052	34.082	34.112	34.142	34.172	34.202	1330
1340	34.202	34.232	34.262	34.292	34.322	34.352	34.382	34.412	34.442	34.473	34.503	1340
1350	34.503	34.533	34.563	34.593	34.623	34.653	34.683	34.714	34.744	34.774	34.804	1350
1360	34.804	34.834	34.865	34.895	34.925	34.955	34.985	35.016	35.046	35.076	35.106	1360
1370	35.106	35.137	35.167	35.197	35.227	35.258	35.288	35.318	35.349	35.379	35.409	1370
1380	35.409	35.440	35.470	35.500	35.531	35.561	35.591	35.622	35.652	35.683	35.713	1380
1390	35.713	35.743	35.774	35.804	35.835	35.865	35.895	35.926	35.956	35.987	36.017	1390
1400	36.017	36.048	36.078	36.109	36.139	36.170	36.200	36.231	36.261	36.292	36.322	1400
1410	36.322	36.353	36.383	36.414	36.445	36.475	36.506	36.536	36.567	36.597	36.628	1410
1420	36.628	36.659	36.689	36.720	36.750	36.781	36.812	36.842	36.873	36.904	36.934	1420
1430	36.934	36.965	36.996	37.026	37.057	37.088	37.119	37.149	37.180	37.211	37.241	1430
1440	37.241	37.272	37.303	37.334	37.364	37.395	37.426	37.457	37.488	37.518	37.549	1440
°F	0	1	2	3	4	5	6	7	8	9	10	°F

TABLE 24 Type M Thermocouple — thermoelectric voltage as a function of temperature (°F); reference junctions at 32 °F

°F	0	1	2	3	4	5	6	7	8	9	10	°F
Thermoelectric Voltage in Millivolts												
1450	37.549	37.580	37.611	37.642	37.672	37.703	37.734	37.765	37.796	37.827	37.857	1450
1460	37.857	37.888	37.919	37.950	37.981	38.012	38.043	38.074	38.105	38.135	38.166	1460
1470	38.166	38.197	38.228	38.259	38.290	38.321	38.352	38.383	38.414	38.445	38.476	1470
1480	38.476	38.507	38.538	38.569	38.600	38.631	38.662	38.693	38.724	38.755	38.786	1480
1490	38.786	38.817	38.848	38.879	38.910	38.941	38.972	39.003	39.035	39.066	39.097	1490
1500	39.097	39.128	39.159	39.190	39.221	39.252	39.283	39.315	39.346	39.377	39.408	1500
1510	39.408	39.439	39.470	39.502	39.533	39.564	39.595	39.626	39.657	39.689	39.720	1510
1520	39.720	39.751	39.782	39.814	39.845	39.876	39.907	39.939	39.970	40.001	40.032	1520
1530	40.032	40.064	40.095	40.126	40.157	40.189	40.220	40.251	40.283	40.314	40.345	1530
1540	40.345	40.377	40.408	40.439	40.471	40.502	40.533	40.565	40.596	40.627	40.659	1540
1550	40.659	40.690	40.722	40.753	40.784	40.816	40.847	40.879	40.910	40.941	40.973	1550
1560	40.973	41.004	41.036	41.067	41.099	41.130	41.161	41.193	41.224	41.256	41.287	1560
1570	41.287	41.319	41.350	41.382	41.413	41.445	41.476	41.508	41.539	41.571	41.602	1570
1580	41.602	41.634	41.665	41.697	41.728	41.760	41.792	41.823	41.855	41.886	41.918	1580
1590	41.918	41.949	41.981	42.013	42.044	42.076	42.107	42.139	42.171	42.202	42.234	1590
1600	42.234	42.265	42.297	42.329	42.360	42.392	42.424	42.455	42.487	42.519	42.550	1600
1610	42.550	42.582	42.614	42.645	42.677	42.709	42.740	42.772	42.804	42.836	42.867	1610
1620	42.867	42.899	42.931	42.962	42.994	43.026	43.058	43.089	43.121	43.153	43.185	1620
1630	43.185	43.216	43.248	43.280	43.312	43.344	43.375	43.407	43.439	43.471	43.502	1630
1640	43.502	43.534	43.566	43.598	43.630	43.662	43.693	43.725	43.757	43.789	43.821	1640
1650	43.821	43.853	43.884	43.916	43.948	43.980	44.012	44.044	44.076	44.108	44.139	1650
1660	44.139	44.171	44.203	44.235	44.267	44.299	44.331	44.363	44.395	44.427	44.459	1660
1670	44.459	44.490	44.522	44.554	44.586	44.618	44.650	44.682	44.714	44.746	44.778	1670
1680	44.778	44.810	44.842	44.874	44.906	44.938	44.970	45.002	45.034	45.066	45.098	1680
1690	45.098	45.130	45.162	45.194	45.226	45.258	45.290	45.322	45.354	45.386	45.418	1690
1700	45.418	45.450	45.482	45.514	45.547	45.579	45.611	45.643	45.675	45.707	45.739	1700
1710	45.739	45.771	45.803	45.835	45.867	45.899	45.932	45.964	45.996	46.028	46.060	1710
1720	46.060	46.092	46.124	46.156	46.189	46.221	46.253	46.285	46.317	46.349	46.381	1720
1730	46.381	46.414	46.446	46.478	46.510	46.542	46.575	46.607	46.639	46.671	46.703	1730
1740	46.703	46.735	46.768	46.800	46.832	46.864	46.897	46.929	46.961	46.993	47.025	1740
1750	47.025	47.058	47.090	47.122	47.154	47.187	47.219	47.251	47.283	47.316	47.348	1750
1760	47.348	47.380	47.413	47.445	47.477	47.509	47.542	47.574	47.606	47.639	47.671	1760
1770	47.671	47.703	47.735	47.768	47.800	47.832	47.865	47.897	47.929	47.962	47.994	1770
1780	47.994	48.026	48.059	48.091	48.123	48.156	48.188	48.220	48.253	48.285	48.318	1780
1790	48.318	48.350	48.382	48.415	48.447	48.479	48.512	48.544	48.577	48.609	48.641	1790
1800	48.641	48.674	48.706	48.739	48.771	48.803	48.836	48.868	48.901	48.933	48.966	1800
1810	48.966	48.998	49.030	49.063	49.095	49.128	49.160	49.193	49.225	49.258	49.290	1810
1820	49.290	49.323	49.355	49.387	49.420	49.452	49.485	49.517	49.550	49.582	49.615	1820
1830	49.615	49.647	49.680	49.712	49.745	49.777	49.810	49.842	49.875	49.907	49.940	1830
1840	49.940	49.972	50.005	50.038	50.070	50.103	50.135	50.168	50.200	50.233	50.265	1840
1850	50.265	50.298	50.330	50.363	50.396	50.428	50.461	50.493	50.526	50.558	50.591	1850
1860	50.591	50.624	50.656	50.689	50.721	50.754	50.787	50.819	50.852	50.884	50.917	1860
1870	50.917	50.950	50.982	51.015	51.048	51.080	51.113	51.145	51.178	51.211	51.243	1870
1880	51.243	51.276	51.309	51.341	51.374	51.407	51.439	51.472	51.505	51.537	51.570	1880
1890	51.570	51.603	51.635	51.668	51.701	51.733	51.766	51.799	51.831	51.864	51.897	1890
1900	51.897	51.929	51.962	51.995	52.027	52.060	52.093	52.126	52.158	52.191	52.224	1900
1910	52.224	52.256	52.289	52.322	52.355	52.387	52.420	52.453	52.486	52.518	52.551	1910
1920	52.551	52.584	52.617	52.649	52.682	52.715	52.748	52.780	52.813	52.846	52.879	1920
1930	52.879	52.911	52.944	52.977	53.010	53.043	53.075	53.108	53.141	53.174	53.207	1930
1940	53.207	53.239	53.272	53.305	53.338	53.371	53.403	53.436	53.469	53.502	53.535	1940

TABLE 24 Type M Thermocouple— thermoelectric voltage as a function of temperature (°F); reference junctions at 32 °F



°F	0	1	2	3	4	5	6	7	8	9	10	°F
Thermoelectric Voltage in Millivolts												
1950	53.535	53.568	53.600	53.633	53.666	53.699	53.732	53.765	53.797	53.830	53.863	1950
1960	53.863	53.896	53.929	53.962	53.994	54.027	54.060	54.093	54.126	54.159	54.192	1960
1970	54.192	54.225	54.257	54.290	54.323	54.356	54.389	54.422	54.455	54.488	54.520	1970
1980	54.520	54.553	54.586	54.619	54.652	54.685	54.718	54.751	54.784	54.817	54.850	1980
1990	54.850	54.882	54.915	54.948	54.981	55.014	55.047	55.080	55.113	55.146	55.179	1990
2000	55.179	55.212	55.245	55.278	55.311	55.344	55.377	55.409	55.442	55.475	55.508	2000
2010	55.508	55.541	55.574	55.607	55.640	55.673	55.706	55.739	55.772	55.805	55.838	2010
2020	55.838	55.871	55.904	55.937	55.970	56.003	56.036	56.069	56.102	56.135	56.168	2020
2030	56.168	56.201	56.234	56.267	56.300	56.333	56.366	56.399	56.432	56.465	56.498	2030
2040	56.498	56.531	56.564	56.597	56.630	56.663	56.696	56.729	56.762	56.795	56.829	2040
2050	56.829	56.862	56.895	56.928	56.961	56.994	57.027	57.060	57.093	57.126	57.159	2050
2060	57.159	57.192	57.225	57.258	57.291	57.324	57.357	57.391	57.424	57.457	57.490	2060
2070	57.490	57.523	57.556	57.589	57.622	57.655	57.688	57.721	57.754	57.788	57.821	2070
2080	57.821	57.854	57.887	57.920	57.953	57.986	58.019	58.052	58.086	58.119	58.152	2080
2090	58.152	58.185	58.218	58.251	58.284	58.317	58.350	58.384	58.417	58.450	58.483	2090
2100	58.483	58.516	58.549	58.582	58.616	58.649	58.682	58.715	58.748	58.781	58.814	2100
2110	58.814	58.848	58.881	58.914	58.947	58.980	59.013	59.046	59.080	59.113	59.146	2110
2120	59.146	59.179	59.212	59.245	59.279	59.312	59.345	59.378	59.411	59.444	59.478	2120
2130	59.478	59.511	59.544	59.577	59.610	59.644	59.677	59.710	59.743	59.776	59.809	2130
2140	59.809	59.843	59.876	59.909	59.942	59.975	60.009	60.042	60.075	60.108	60.141	2140
2150	60.141	60.175	60.208	60.241	60.274	60.307	60.341	60.374	60.407	60.440	60.473	2150
2160	60.473	60.507	60.540	60.573	60.606	60.640	60.673	60.706	60.739	60.772	60.806	2160
2170	60.806	60.839	60.872	60.905	60.939	60.972	61.005	61.038	61.071	61.105	61.138	2170
2180	61.138	61.171	61.204	61.238	61.271	61.304	61.337	61.371	61.404	61.437	61.470	2180
2190	61.470	61.503	61.537	61.570	61.603	61.636	61.670	61.703	61.736	61.769	61.803	2190
2200	61.803	61.836	61.869	61.902	61.936	61.969	62.002	62.035	62.069	62.102	62.135	2200
2210	62.135	62.168	62.202	62.235	62.268	62.301	62.335	62.368	62.401	62.434	62.468	2210
2220	62.468	62.501	62.534	62.568	62.601	62.634	62.667	62.701	62.734	62.767	62.800	2220
2230	62.800	62.834	62.867	62.900	62.933	62.967	63.000	63.033	63.066	63.100	63.133	2230
2240	63.133	63.166	63.200	63.233	63.266	63.299	63.333	63.366	63.399	63.432	63.466	2240
2250	63.466	63.499	63.532	63.565	63.599	63.632	63.665	63.699	63.732	63.765	63.798	2250
2260	63.798	63.832	63.865	63.898	63.931	63.965	63.998	64.031	64.065	64.098	64.131	2260
2270	64.131	64.164	64.198	64.231	64.264	64.297	64.331	64.364	64.397	64.431	64.464	2270
2280	64.464	64.497	64.530	64.564	64.597	64.630	64.663	64.697	64.730	64.763	64.796	2280
2290	64.796	64.830	64.863	64.896	64.930	64.963	64.996	65.029	65.063	65.096	65.129	2290
2300	65.129	65.162	65.196	65.229	65.262	65.295	65.329	65.362	65.395	65.429	65.462	2300
2310	65.462	65.495	65.528	65.562	65.595	65.628	65.661	65.695	65.728	65.761	65.794	2310
2320	65.794	65.828	65.861	65.894	65.927	65.961	65.994	66.027	66.060	66.094	66.127	2320
2330	66.127	66.160	66.193	66.227	66.260	66.293	66.326	66.360	66.393	66.426	66.459	2330
2340	66.459	66.493	66.526	66.559	66.592	66.626	66.659	66.692	66.725	66.759	66.792	2340
2350	66.792	66.825	66.858	66.892	66.925	66.958	66.991	67.025	67.058	67.091	67.124	2350
2360	67.124	67.158	67.191	67.224	67.257	67.291	67.324	67.357	67.390	67.423	67.457	2360
2370	67.457	67.490	67.523	67.556	67.590	67.623	67.656	67.689	67.723	67.756	67.789	2370
2380	67.789	67.822	67.855	67.889	67.922	67.955	67.988	68.022	68.055	68.088	68.121	2380
2390	68.121	68.154	68.188	68.221	68.254	68.287	68.320	68.354	68.387	68.420	68.453	2390
2400	68.453	68.487	68.520	68.553	68.586	68.619	68.653	68.686	68.719	68.752	68.785	2400
2410	68.785	68.819	68.852	68.885	68.918	68.951	68.985	69.018	69.051	69.084	69.117	2410
2420	69.117	69.151	69.184	69.217	69.250	69.283	69.317	69.350	69.383	69.416	69.449	2420
2430	69.449	69.483	69.516	69.549	69.582	69.615	69.649	69.682	69.715	69.748	69.781	2430
2440	69.781	69.814	69.848	69.881	69.914	69.947	69.980	70.014	70.047	70.080	70.113	2440

TABLE 24 Type M Thermocouple— thermoelectric voltage as a function of temperature (°F); reference junctions at 32 °F

°F	0	1	2	3	4	5	6	7	8	9	10	°F
Thermoelectric Voltage in Millivolts												
2450	70.113	70.146	70.180	70.213	70.246	70.279	70.312	70.345	70.379	70.412	70.445	2450
2460	70.445	70.478	70.511	70.545	70.578	70.611	70.644	70.677	70.711	70.744	70.777	2460
2470	70.777	70.810	70.843	70.877	70.910	70.943	70.976	71.009	71.042	71.076	71.109	2470
2480	71.109	71.142	71.175	71.208	71.242	71.275	71.308	71.341	71.374	71.408	71.441	2480
2490	71.441	71.474	71.507	71.540	71.574	71.607	71.640	71.673	71.707	71.740	71.773	2490
2500	71.773	71.806	71.839	71.873	71.906	71.939	71.972	72.005	72.039	72.072	72.105	2500
2510	72.105	72.138	72.172	72.205	72.238	72.271	72.305	72.338	72.371	72.404	72.438	2510
2520	72.438	72.471	72.504	72.537	72.571	72.604	72.637	72.670	72.704	72.737	72.770	2520
2530	72.770	72.803	72.837	72.870	72.903	72.937	72.970	73.003	73.036	73.070	73.103	2530
2540	73.103	73.136	73.170	73.203	73.236	73.270	73.303	73.336	73.370	73.403	73.436	2540
2550	73.436	73.470	73.503	73.536	73.570	73.603	73.636	73.670	73.703	73.736	73.770	2550
2560	73.770	73.803	73.837	73.870	73.903	73.937	73.970	74.004	74.037	74.070	74.104	2560
2570	74.104											2570