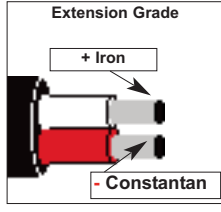


## Type J Thermocouple Iron-Constantan

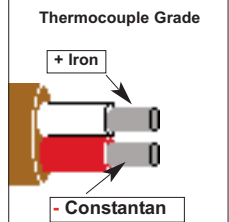
TEMPERATURE & PROCESS INSTRUMENTS - CONZ

### Temperature vs Millivolt Table Reference Junction 32°F



Temperature Range  
Maximum Useful Temperature Range:  
Thermocouple Grade: 32 to 1382°F  
0 to 750°C  
Extension Grade: 32 to 392°F  
0 to 200°C

Maximum Thermocouple Grade  
Temperature Range  
-346 to 2193°F  
-210 to 1200°C  
Accuracy: Standard: 2.2°C or 0.75%  
Special: 1.1°C or 0.4%



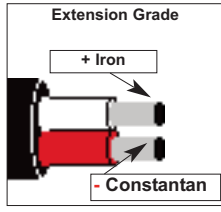
**Recommended Applications:**

Reducing, Vacuum, Inert Environments Limited Use in Oxidizing Environments at High Temperatures Not Recommended for Low Temperatures Applications

Temp	0	-1	-2	-3	-4	-5	-6	-7	-8	-9
-340	-8.0302	-8.0412	-8.0522	-8.0632	-8.0740	-8.0847	-8.0954			
-330	-7.9146	-7.9265	-7.9384	-7.9502	-7.9618	-7.9734	-7.9850	-7.9964	-8.0077	-8.0190
-320	-7.7908	-7.8035	-7.8162	-7.8288	-7.8413	-7.8537	-7.8660	-7.8783	-7.8905	-7.9026
-310	-7.6589	-7.6725	-7.6859	-7.6993	-7.7126	-7.7258	-7.7390	-7.7520	-7.7650	-7.7779
-300	-7.5194	-7.5337	-7.5480	-7.5621	-7.5762	-7.5901	-7.6041	-7.6179	-7.6317	-7.6453
-290	-7.3726	-7.3876	-7.4025	-7.4174	-7.4322	-7.4469	-7.4616	-7.4761	-7.4907	-7.5051
-280	-7.2185	-7.2343	-7.2499	-7.2655	-7.2810	-7.2964	-7.3118	-7.3271	-7.3423	-7.3575
-270	-7.0577	-7.0741	-7.0904	-7.1066	-7.1228	-7.1389	-7.1550	-7.1710	-7.1869	-7.2028
-260	-6.8902	-6.9072	-6.9242	-6.9411	-6.9580	-6.9748	-6.9915	-7.0081	-7.0247	-7.0412
-250	-6.7164	-6.7341	-6.7517	-6.7692	-6.7867	-6.8041	-6.8214	-6.8387	-6.8559	-6.8731
-240	-6.5365	-6.5547	-6.5729	-6.5911	-6.6092	-6.6272	-6.6451	-6.6631	-6.6809	-6.6987
-230	-6.3507	-6.3695	-6.3883	-6.4070	-6.4257	-6.4443	-6.4629	-6.4813	-6.4998	-6.5182
-220	-6.1592	-6.1786	-6.1980	-6.2172	-6.2365	-6.2557	-6.2748	-6.2938	-6.3128	-6.3318
-210	-5.9624	-5.9823	-6.0022	-6.0220	-6.0417	-6.0615	-6.0811	-6.1007	-6.1203	-6.1398
-200	-5.7602	-5.7807	-5.8011	-5.8214	-5.8417	-5.8619	-5.8821	-5.9023	-5.9223	-5.9424
-190	-5.5531	-5.5740	-5.5949	-5.6158	-5.6366	-5.6573	-5.6780	-5.6986	-5.7192	-5.7398
-180	-5.3411	-5.3625	-5.3839	-5.4052	-5.4265	-5.4477	-5.4689	-5.4900	-5.5111	-5.5321
-170	-5.1245	-5.1464	-5.1682	-5.1900	-5.2117	-5.2334	-5.2550	-5.2766	-5.2982	-5.3197
-160	-4.9035	-4.9258	-4.9480	-4.9702	-4.9924	-5.0145	-5.0366	-5.0587	-5.0807	-5.1026
-150	-4.6781	-4.7008	-4.7235	-4.7461	-4.7687	-4.7913	-4.8138	-4.8363	-4.8587	-4.8811
-140	-4.4486	-4.4718	-4.4948	-4.5179	-4.5409	-4.5639	-4.5868	-4.6097	-4.6325	-4.6553
-130	-4.2152	-4.2387	-4.2622	-4.2856	-4.3090	-4.3324	-4.3557	-4.3790	-4.4022	-4.4255
-120	-3.9780	-4.0019	-4.0257	-4.0495	-4.0733	-4.0970	-4.1207	-4.1444	-4.1680	-4.1916
-110	-3.7371	-3.7613	-3.7856	-3.8097	-3.8339	-3.8580	-3.8820	-3.9061	-3.9301	-3.9540
-100	-3.4927	-3.5173	-3.5419	-3.5664	-3.5909	-3.6153	-3.6398	-3.6641	-3.6885	-3.7128
-90	-3.2450	-3.2699	-3.2948	-3.3197	-3.3445	-3.3693	-3.3940	-3.4187	-3.4434	-3.4681
-80	-2.9940	-3.0193	-3.0445	-3.0697	-3.0948	-3.1199	-3.1450	-3.1700	-3.1951	-3.2200
-70	-2.7400	-2.7656	-2.7911	-2.8165	-2.8420	-2.8674	-2.8928	-2.9182	-2.9435	-2.9688
-60	-2.4830	-2.5089	-2.5347	-2.5604	-2.5862	-2.6119	-2.6376	-2.6632	-2.6889	-2.7144
-50	-2.2232	-2.2493	-2.2754	-2.3014	-2.3275	-2.3535	-2.3794	-2.4054	-2.4313	-2.4572
-40	-1.9607	-1.9870	-2.0134	-2.0397	-2.0660	-2.0923	-2.1185	-2.1447	-2.1709	-2.1971
-30	-1.6955	-1.7221	-1.7487	-1.7753	-1.8019	-1.8284	-1.8549	-1.8814	-1.9078	-1.9343
-20	-1.4279	-1.4547	-1.4816	-1.5084	-1.5352	-1.5620	-1.5887	-1.6155	-1.6422	-1.6689
-10	-1.1578	-1.1850	-1.2120	-1.2391	-1.2661	-1.2931	-1.3201	-1.3471	-1.3740	-1.4010
0	-0.8855	-0.9129	-0.9402	-0.9675	-0.9947	-1.0220	-1.0492	-1.0764	-1.1036	-1.1307
Temp	0	1	2	3	4	5	6	7	8	9
0	-0.8855	-0.8582	-0.8308	-0.8034	-0.7760	-0.7486	-0.7211	-0.6936	-0.6661	-0.6386
10	-0.6111	-0.5835	-0.5559	-0.5283	-0.5007	-0.4730	-0.4454	-0.4177	-0.3900	-0.3622
20	-0.3345	-0.3067	-0.2789	-0.2511	-0.2233	-0.1955	-0.1676	-0.1397	-0.1118	-0.0839
30	-0.0559	-0.0280	0.0000	0.0280	0.0560	0.0841	0.1121	0.1402	0.1683	0.1964
40	0.2245	0.2527	0.2808	0.3090	0.3372	0.3654	0.3937	0.4219	0.4502	0.4785
50	0.5068	0.5351	0.5634	0.5918	0.6202	0.6486	0.6770	0.7054	0.7338	0.7623
60	0.7908	0.8193	0.8478	0.8763	0.9048	0.9334	0.9620	0.9906	1.0192	1.0478
70	1.0764	1.1051	1.1337	1.1624	1.1911	1.2198	1.2485	1.2773	1.3061	1.3348
80	1.3636	1.3924	1.4212	1.4501	1.4789	1.5078	1.5367	1.5656	1.5945	1.6234
90	1.6523	1.6813	1.7102	1.7392	1.7682	1.7972	1.8262	1.8552	1.8843	1.9134
100	1.9424	1.9715	2.0006	2.0297	2.0589	2.0880	2.1171	2.1463	2.1755	2.2047

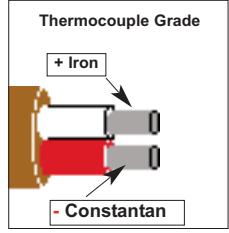
## Type J Thermocouple Iron-Constantan

TEMPERATURE & PROCESS INSTRUMENTS - INC.



### Temperature vs Millivolt Table Reference Junction 32°F

<b>Temperature Range</b>	<b>Maximum Thermocouple Grade Temperature Range</b>
Maximum Useful Temperature Range: Thermocouple Grade: 32 to 1382°F 0 to 750°C	-346 to 2193°F -210 to 1200°C
<b>Extension Grade:</b> 32 to 392°F 0 to 200°C	<b>Accuracy:</b> Standard: 2.2°C or 0.75% Special: 1.1°C or 0.4%



**Recommended Applications:**

Reducing, Vacuum, Inert Environments Limited Use in Oxidizing Environments at High Temperatures Not Recommended for Low Temperatures Applications

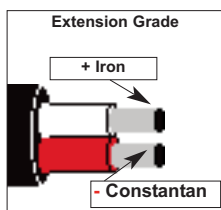
Temp	0	1	2	3	4	5	6	7	8	9
110	2.2339	2.2631	2.2923	2.3216	2.3508	2.3801	2.4094	2.4387	2.4680	2.4973
120	2.5266	2.5560	2.5853	2.6147	2.6441	2.6735	2.7029	2.7323	2.7617	2.7911
130	2.8206	2.8500	2.8795	2.9090	2.9385	2.9680	2.9975	3.0270	3.0566	3.0861
140	3.1157	3.1452	3.1748	3.2044	3.2340	3.2636	3.2933	3.3229	3.3525	3.3822
150	3.4119	3.4415	3.4712	3.5009	3.5306	3.5603	3.5901	3.6198	3.6495	3.6793
160	3.7091	3.7388	3.7686	3.7984	3.8282	3.8580	3.8879	3.9177	3.9475	3.9774
170	4.0072	4.0371	4.0670	4.0969	4.1268	4.1567	4.1866	4.2165	4.2464	4.2764
180	4.3063	4.3363	4.3663	4.3962	4.4262	4.4562	4.4862	4.5162	4.5462	4.5762
190	4.6063	4.6363	4.6664	4.6964	4.7265	4.7566	4.7866	4.8167	4.8468	4.8769
200	4.9070	4.9371	4.9673	4.9974	5.0275	5.0577	5.0878	5.1180	5.1482	5.1784
210	5.2085	5.2387	5.2689	5.2991	5.3293	5.3596	5.3898	5.4200	5.4502	5.4805
220	5.5107	5.5410	5.5713	5.6015	5.6318	5.6621	5.6924	5.7227	5.7530	5.7833
230	5.8136	5.8439	5.8743	5.9046	5.9349	5.9653	5.9956	6.0260	6.0564	6.0867
240	6.1171	6.1475	6.1779	6.2083	6.2387	6.2691	6.2995	6.3299	6.3603	6.3907
250	6.4212	6.4516	6.4820	6.5125	6.5429	6.5734	6.6039	6.6343	6.6648	6.6953
260	6.7258	6.7562	6.7867	6.8172	6.8477	6.8782	6.9087	6.9393	6.9698	7.0003
270	7.0308	7.0614	7.0919	7.1224	7.1530	7.1835	7.2141	7.2447	7.2752	7.3058
280	7.3364	7.3669	7.3975	7.4281	7.4587	7.4893	7.5199	7.5505	7.5811	7.6117
290	7.6423	7.6729	7.7035	7.7341	7.7648	7.7954	7.8260	7.8567	7.8873	7.9180
300	7.9486	7.9793	8.0099	8.0406	8.0712	8.1019	8.1326	8.1632	8.1939	8.2246
310	8.2553	8.2859	8.3166	8.3473	8.3780	8.4087	8.4394	8.4701	8.5008	8.5315
320	8.5622	8.5929	8.6236	8.6544	8.6851	8.7158	8.7465	8.7773	8.8080	8.8387
330	8.8695	8.9002	8.9309	8.9617	8.9924	9.0232	9.0539	9.0847	9.1154	9.1462
340	9.1769	9.2077	9.2385	9.2692	9.3000	9.3308	9.3615	9.3923	9.4231	9.4539
350	9.4846	9.5154	9.5462	9.5770	9.6078	9.6386	9.6694	9.7002	9.7309	9.7617
360	9.7925	9.8233	9.8541	9.8849	9.9157	9.9465	9.9774	10.0082	10.0390	10.0698
370	10.1006	10.1314	10.1622	10.1930	10.2238	10.2547	10.2855	10.3163	10.3471	10.3779
380	10.4088	10.4396	10.4704	10.5013	10.5321	10.5629	10.5937	10.6246	10.6554	10.6862
390	10.7171	10.7479	10.7787	10.8096	10.8404	10.8713	10.9021	10.9329	10.9638	10.9946
400	11.0255	11.0563	11.0872	11.1180	11.1488	11.1797	11.2105	11.2414	11.2722	11.3031
410	11.3339	11.3648	11.3956	11.4265	11.4573	11.4882	11.5190	11.5499	11.5807	11.6116
420	11.6424	11.6733	11.7041	11.7350	11.7658	11.7967	11.8276	11.8584	11.8893	11.9201
430	11.9510	11.9818	12.0127	12.0435	12.0744	12.1052	12.1361	12.1670	12.1978	12.2287
440	12.2595	12.2904	12.3212	12.3521	12.3829	12.4138	12.4446	12.4755	12.5064	12.5372
450	12.5681	12.5989	12.6298	12.6606	12.6915	12.7223	12.7532	12.7840	12.8149	12.8457
460	12.8766	12.9074	12.9383	12.9691	13.0000	13.0308	13.0617	13.0925	13.1234	13.1542
470	13.1851	13.2159	13.2468	13.2776	13.3085	13.3393	13.3701	13.4010	13.4318	13.4627
480	13.4935	13.5244	13.5552	13.5860	13.6169	13.6477	13.6785	13.7094	13.7402	13.7711
490	13.8019	13.8327	13.8636	13.8944	13.9252	13.9561	13.9869	14.0177	14.0485	14.0794
500	14.1102	14.1410	14.1718	14.2027	14.2335	14.2643	14.2951	14.3260	14.3568	14.3876
510	14.4184	14.4492	14.4801	14.5109	14.5417	14.5725	14.6033	14.6341	14.6649	14.6958
520	14.7266	14.7574	14.7882	14.8190	14.8498	14.8806	14.9114	14.9422	14.9730	15.0038
530	15.0346	15.0654	15.0962	15.1270	15.1578	15.1886	15.2194	15.2502	15.2810	15.3118
540	15.3425	15.3733	15.4041	15.4349	15.4657	15.4965	15.5273	15.5580	15.5888	15.6196
550	15.6504	15.6811	15.7119	15.7427	15.7735	15.8042	15.8350	15.8658	15.8966	15.9273
560	15.9581	15.9889	16.0196	16.0504	16.0811	16.1119	16.1427	16.1734	16.2042	16.2349
570	16.2657	16.2965	16.3272	16.3580	16.3887	16.4195	16.4502	16.4810	16.5117	16.5424
580	16.5732	16.6039	16.6347	16.6654	16.6962	16.7269	16.7576	16.7884	16.8191	16.8498





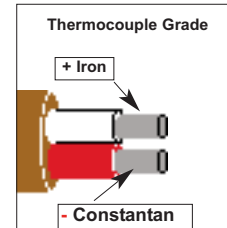


## Temperature vs Millivolt Table Reference Junction 32°F



Temperature Range  
 Maximum Useful Temperature Range:  
 Thermocouple Grade: 32 to 1382°F  
 0 to 750°C  
 Extension Grade: 32 to 392°F  
 0 to 200°C

Maximum Thermocouple Grade  
 Temperature Range  
 -346 to 2193°F  
 -210 to 1200°C  
 Accuracy: Standard: 2.2°C or 0.75%  
 Special: 1.1°C or 0.4%



#### Recommended Applications:

Reducing, Vacuum, Inert Environments Limited Use in Oxidizing Environments at High Temperatures Not Recommended for Low Temperatures Applications

Temp	0	1	2	3	4	5	6	7	8	9
2020	64.0492	64.0814	64.1135	64.1456	64.1777	64.2098	64.2419	64.2741	64.3062	64.3383
2030	64.3704	64.4025	64.4346	64.4667	64.4988	64.5309	64.5630	64.5951	64.6272	64.6593
2040	64.6914	64.7235	64.7556	64.7877	64.8198	64.8518	64.8839	64.9160	64.9481	64.9802
2050	65.0123	65.0443	65.0764	65.1085	65.1406	65.1727	65.2047	65.2368	65.2689	65.3010
2060	65.3330	65.3651	65.3972	65.4292	65.4613	65.4934	65.5254	65.5575	65.5896	65.6216
2070	65.6537	65.6857	65.7178	65.7498	65.7819	65.8140	65.8460	65.8781	65.9101	65.9422
2080	65.9742	66.0063	66.0383	66.0704	66.1024	66.1344	66.1665	66.1985	66.2306	66.2626
2090	66.2946	66.3267	66.3587	66.3908	66.4228	66.4548	66.4869	66.5189	66.5509	66.5829
2100	66.6150	66.6470	66.6790	66.7110	66.7431	66.7751	66.8071	66.8391	66.8711	66.9031
2110	66.9352	66.9672	66.9992	67.0312	67.0632	67.0952	67.1272	67.1592	67.1912	67.2232
2120	67.2552	67.2872	67.3192	67.3512	67.3832	67.4152	67.4472	67.4792	67.5111	67.5431
2130	67.5751	67.6071	67.6391	67.6711	67.7030	67.7350	67.7670	67.7989	67.8309	67.8629
2140	67.8948	67.9268	67.9588	67.9907	68.0227	68.0546	68.0866	68.1185	68.1505	68.1824
2150	68.2143	68.2463	68.2782	68.3102	68.3421	68.3740	68.4059	68.4379	68.4698	68.5017
2160	68.5336	68.5655	68.5974	68.6293	68.6612	68.6932	68.7250	68.7569	68.7888	68.8207
2170	68.8526	68.8845	68.9164	68.9482	68.9801	69.0120	69.0439	69.0757	69.1076	69.1394
2180	69.1713	69.2031	69.2350	69.2668	69.2986	69.3305	69.3623	69.3941	69.4259	69.4578
2190	69.4896	69.5214	69.5532							