



ITS – 90 Table for S - Type Thermocouple (Reference Junction at 0 °C)

- Thermoelectric voltage in mV for 5 °C Temperature steps

°C	0	5	10	15	20	25	30	35	40	45
-50	-0.236	-0.215	-0.194	-0.173	-0.150	-0.127	-0.103	-0.078	-0.053	-0.027
0	0.000	0.027	0.055	0.084	0.113	0.143	0.173	0.204	0.235	0.267
50	0.299	0.332	0.365	0.399	0.433	0.467	0.502	0.538	0.573	0.609
100	0.646	0.683	0.720	0.758	0.795	0.834	0.872	0.911	0.950	0.990
150	1.029	1.069	1.110	1.150	1.191	1.232	1.273	1.315	1.357	1.399
200	1.441	1.483	1.526	1.569	1.612	1.655	1.698	1.742	1.786	1.829
250	1.874	1.918	1.962	2.007	2.052	2.096	2.141	2.187	2.232	2.277
300	2.323	2.369	2.415	2.461	2.507	2.553	2.599	2.646	2.692	2.739
350	2.786	2.833	2.880	2.927	2.974	3.021	3.069	3.116	3.164	3.212
400	3.259	3.307	3.355	3.403	3.451	3.500	3.548	3.596	3.645	3.694
450	3.742	3.791	3.840	3.889	3.938	3.987	4.036	4.085	4.134	4.184
500	4.233	4.283	4.332	4.382	4.432	4.482	4.532	4.582	4.632	4.682
550	4.732	4.782	4.833	4.883	4.934	4.984	5.035	5.086	5.137	5.188
600	5.239	5.290	5.341	5.392	5.443	5.495	5.546	5.598	5.649	5.701
650	5.753	5.805	5.857	5.909	5.961	6.013	6.065	6.118	6.170	6.223
700	6.275	6.328	6.381	6.434	6.486	6.539	6.593	6.646	6.699	6.752
750	6.806	6.859	6.913	6.967	7.020	7.074	7.128	7.182	7.236	7.291
800	7.345	7.399	7.454	7.508	7.563	7.618	7.673	7.728	7.783	7.838
850	7.893	7.948	8.003	8.059	8.114	8.170	8.226	8.281	8.337	8.393
900	8.449	8.505	8.562	8.618	8.674	8.731	8.787	8.844	8.900	8.957
950	9.014	9.071	9.128	9.185	9.242	9.300	9.357	9.414	9.472	9.529
1000	9.587	9.645	9.703	9.761	9.819	9.877	9.935	9.993	10.051	10.110
1050	10.168	10.227	10.285	10.344	10.403	10.461	10.520	10.579	10.638	10.697
1100	10.757	10.816	10.875	10.934	10.994	11.053	11.113	11.172	11.232	11.291
1150	11.351	11.411	11.471	11.531	11.590	11.650	11.710	11.770	11.830	11.890
1200	11.951	12.011	12.071	12.131	12.191	12.252	12.312	12.372	12.433	12.493
1250	12.554	12.614	12.675	12.735	12.796	12.856	12.917	12.977	13.038	13.098
1300	13.159	13.220	13.280	13.341	13.402	13.462	13.523	13.584	13.644	13.705
1350	13.766	13.826	13.887	13.948	14.009	14.069	14.130	14.191	14.251	14.312
1400	14.373	14.433	14.494	14.554	14.615	14.676	14.736	14.797	14.857	14.918
1450	14.978	15.039	15.099	15.160	15.220	15.280	15.341	15.401	15.461	15.521
1500	15.582	15.642	15.702	15.762	15.822	15.882	15.942	16.002	16.062	16.122
1550	16.182	16.241	16.301	16.361	16.420	16.480	16.539	16.599	16.658	16.718
1600	16.777	16.836	16.895	16.954	17.013	17.072	17.131	17.190	17.249	17.308
1650	17.366	17.425	17.483	17.542	17.600	17.658	17.717	17.775	17.832	17.890
1700	17.947	18.004	18.061	18.118	18.174	18.230	18.285	18.341	18.395	18.449
1750	18.503	18.557	18.609	18.661						