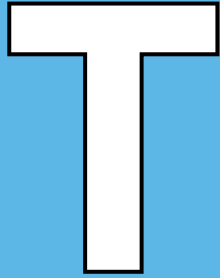


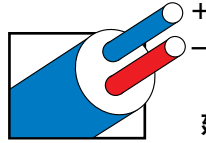
修订版热电偶参考表

型号
参考表
N.I.S.T.
专题论文175
ITS-90
修订



ANSI色标

IEC色标



铜与镍
铜镍
延展级

最大温度范围

热电偶级
- 328 ~ 662°F
- 200 ~ 350°C

延展级
- 76 ~ 212°F
- 60 ~ 100°C

误差限
(以较大者为准)

标配: 1.0°C或0.75%, 0°C以上
1.0°C或1.5%, 0°C以下
特殊: 0.5°C或0.4%

说明, 裸线环境:

轻度氧化、还原、真空或惰性环境;
在潮湿环境中性能良好; 低温和冷冻应用

温度单位为度°C
参比端处于0°C

热电电压单位为毫伏

°C	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	°C	°C	0	1	2	3	4	5	6	7	8	9	10	°C	°C	0	1	2	3	4	5	6	7	8	9	10	°C	°C
-260	-6.258	-6.256	-6.255	-6.253	-6.251	-6.248	-6.245	-6.242	-6.239	-6.236	-6.232	-260	50	2.036	2.079	2.122	2.165	2.208	2.251	2.294	2.338	2.381	2.425	2.468	50	60	2.036	2.079	2.122	2.165	2.208	2.251	2.294	2.338	2.381	2.425	2.468	60	
-250	-6.232	-6.228	-6.223	-6.219	-6.214	-6.209	-6.204	-6.198	-6.193	-6.187	-6.180	-250	60	2.468	2.512	2.556	2.600	2.643	2.687	2.732	2.776	2.820	2.864	2.909	60	70	2.468	2.512	2.556	2.600	2.643	2.687	2.732	2.776	2.820	2.864	2.909	70	
-240	-6.180	-6.174	-6.167	-6.160	-6.153	-6.146	-6.138	-6.130	-6.122	-6.114	-6.105	-240	70	2.909	2.953	2.998	3.043	3.087	3.132	3.177	3.222	3.267	3.312	3.358	70	80	2.909	2.953	2.998	3.043	3.087	3.132	3.177	3.222	3.267	3.312	3.358	80	
-230	-6.105	-6.096	-6.087	-6.078	-6.068	-6.059	-6.049	-6.038	-6.028	-6.017	-6.007	-230	80	3.358	3.403	3.448	3.494	3.539	3.585	3.631	3.677	3.722	3.768	3.814	80	90	3.358	3.403	3.448	3.494	3.539	3.585	3.631	3.677	3.722	3.768	3.814	90	
-220	-6.007	-5.996	-5.985	-5.973	-5.962	-5.950	-5.938	-5.926	-5.914	-5.901	-5.888	-220	90	3.814	3.860	3.907	3.953	3.999	4.046	4.092	4.138	4.185	4.232	4.279	90	100	3.814	3.860	3.907	3.953	3.999	4.046	4.092	4.138	4.185	4.232	4.279	100	
-210	-5.888	-5.876	-5.863	-5.850	-5.836	-5.823	-5.809	-5.795	-5.782	-5.767	-5.753	-210	100	4.279	4.325	4.372	4.419	4.466	4.513	4.561	4.608	4.655	4.702	4.750	100	110	4.279	4.325	4.372	4.419	4.466	4.513	4.561	4.608	4.655	4.702	4.750	110	
-200	-5.753	-5.739	-5.724	-5.710	-5.695	-5.680	-5.665	-5.650	-5.634	-5.619	-5.603	-200	110	4.750	4.798	4.845	4.893	4.941	4.988	5.036	5.084	5.132	5.180	5.228	110	120	4.750	4.798	4.845	4.893	4.941	4.988	5.036	5.084	5.132	5.180	5.228	120	
-190	-5.603	-5.587	-5.571	-5.555	-5.539	-5.523	-5.506	-5.489	-5.473	-5.456	-5.439	-190	120	5.228	5.277	5.325	5.373	5.422	5.470	5.519	5.567	5.616	5.665	5.714	120	130	5.228	5.277	5.325	5.373	5.422	5.470	5.519	5.567	5.616	5.665	5.714	130	
-180	-5.439	-5.421	-5.404	-5.387	-5.369	-5.351	-5.334	-5.316	-5.297	-5.279	-5.261	-180	130	5.714	5.763	5.812	5.861	5.910	5.959	6.008	6.057	6.107	6.156	6.206	130	140	5.714	5.763	5.812	5.861	5.910	5.959	6.008	6.057	6.107	6.156	6.206	140	
-170	-5.261	-5.242	-5.224	-5.205	-5.186	-5.167	-5.148	-5.128	-5.109	-5.089	-5.070	-170	140	6.206	6.255	6.305	6.355	6.404	6.454	6.504	6.554	6.604	6.654	6.704	140	150	6.206	6.255	6.305	6.355	6.404	6.454	6.504	6.554	6.604	6.654	6.704	150	
-160	-5.070	-5.050	-5.030	-5.010	-4.989	-4.969	-4.949	-4.928	-4.907	-4.886	-4.865	-160	150	6.704	6.754	6.805	6.855	6.905	6.956	7.006	7.057	7.107	7.158	7.209	150	160	6.704	6.754	6.805	6.855	6.905	6.956	7.006	7.057	7.107	7.158	7.209	160	
-150	-4.865	-4.844	-4.823	-4.802	-4.780	-4.759	-4.737	-4.715	-4.693	-4.671	-4.648	-150	160	7.209	7.260	7.310	7.361	7.412	7.463	7.515	7.566	7.617	7.668	7.720	160	170	7.209	7.260	7.310	7.361	7.412	7.463	7.515	7.566	7.617	7.668	7.720	170	
-140	-4.648	-4.626	-4.604	-4.581	-4.558	-4.535	-4.512	-4.489	-4.466	-4.443	-4.419	-140	170	7.720	7.771	7.823	7.874	7.926	7.977	8.029	8.081	8.133	8.185	8.237	170	180	7.720	7.771	7.823	7.874	7.926	7.977	8.029	8.081	8.133	8.185	8.237	180	
-130	-4.419	-4.395	-4.372	-4.348	-4.324	-4.300	-4.275	-4.251	-4.226	-4.202	-4.177	-130	180	8.237	8.289	8.341	8.393	8.445	8.497	8.550	8.602	8.654	8.707	8.759	180	190	8.237	8.289	8.341	8.393	8.445	8.497	8.550	8.602	8.654	8.707	8.759	190	
-120	-4.177	-4.152	-4.127	-4.102	-4.077	-4.052	-4.026	-4.000	-3.975	-3.949	-3.923	-120	190	8.759	8.812	8.865	8.917	8.970	9.023	9.076	9.129	9.182	9.235	9.288	190	200	8.759	8.812	8.865	8.917	8.970	9.023	9.076	9.129	9.182	9.235	9.288	200	
-110	-3.923	-3.897	-3.871	-3.844	-3.818	-3.791	-3.765	-3.738	-3.711	-3.684	-3.657	-110	200	9.288	9.341	9.395	9.448	9.501	9.555	9.608	9.662	9.715	9.769	9.822	200	210	9.288	9.341	9.395	9.448	9.501	9.555	9.608	9.662	9.715	9.769	9.822	210	
-100	-3.657	-3.629	-3.602	-3.574	-3.547	-3.519	-3.491	-3.463	-3.435	-3.407	-3.379	-100	210	9.822	9.876	9.930	9.984	10.038	10.092	10.146	10.200	10.254	10.308	10.362	210	220	9.822	9.876	9.930	9.984	10.038	10.092	10.146	10.200	10.254	10.308	10.362	220	
-90	-3.379	-3.350	-3.322	-3.293	-3.264	-3.235	-3.206	-3.177	-3.148	-3.118	-3.089	-90	220	10.362	10.417	10.471	10.525	10.580	10.634	10.689	10.743	10.798	10.853	10.907	220	230	10.362	10.417	10.471	10.525	10.580	10.634	10.689	10.743	10.798	10.853	10.907	230	
-80	-3.089	-3.059	-3.030	-3.000	-2.970	-2.940	-2.910	-2.879	-2.849	-2.818	-2.788	-80	230	10.907	10.962	11.017	11.072	11.127	11.182	11.237	11.292	11.347	11.403	11.458	230	240	10.907	10.962	11.017	11.072	11.127	11.182	11.237	11.292	11.347	11.403	11.458	240	
-70	-2.788	-2.757	-2.726	-2.695	-2.664	-2.633	-2.602	-2.571	-2.539	-2.507	-2.476	-70	240	11.458	11.513	11.569	11.624	11.680	11.735	11.791	11.846	11.902	11.958	12.013	240	250	11.458	11.513	11.569	11.624	11.680	11.735	11.791	11.846	11.902	11.958	12.013	250	
-60	-2.476	-2.444	-2.412	-2.380	-2.348	-2.316	-2.283	-2.251	-2.218	-2.186	-2.153	-60	250	12.013	12.069	12.125	12.181	12.237	12.293	12.349	12.405	12.461	12.518	12.574	250	260	12.013	12.069	12.125	12.181	12.237	12.293	12.349	12.405	12.461	12.518	12.574	260	
-50	-2.153	-2.120	-2.087	-2.054	-2.021	-1.987	-1.954	-1.920	-1.887	-1.853	-1.819	-50	260	12.574	12.630	12.687	12.743	12.799	12.856	12.912	12.969	13.026	13.082	13.139	260	270	12.574	12.630	12.687	12.743	12.799	12.856	12.912	12.969	13.026	13.082	13.139	270	
-40	-1.819	-1.785	-1.751	-1.717	-1.683	-1.648	-1.614	-1.579	-1.545	-1.510	-1.475	-40	270	13.139	13.196	13.253	13.310	13.366	13.423	13.480	13.537	13.595	13.652	13.709	270	280	13.139	13.196	13.253	13.310	13.366	13.423	13.480	13.537	13.595	13.652	13.709	280	
-30	-1.475	-1.440	-1.405	-1.370	-1.335	-1.299	-1.264	-1.228	-1.192	-1.157	-1.121	-30	280	13.709	13.766	13.823	13.881	13.938	13.995	14.053	14.110	14.168	14.226	14.283	280	290	13.709	13.766	13.823	13.881	13.938	13.995	14.053	14.110	14.168	14.226	14.283	290	
-20	-1.121	-1.085	-1.049	-1.013	-0.976	-0.940	-0.904	-0.867	-0.830	-0.794	-0.757	-20	290	14.283	14.341	14.399	14.456	14.514	14.572	14.630	14.688	14.746	14.804	14.862	290	300	14.283	14.341	14.399	14.456	14.514	14.572	14.630	14.688	14.746	14.804	14.862	300	
-10	-0.757	-0.720	-0.683	-0.646	-0.608	-0.571	-0.534	-0.496	-0.459	-0.421	-0.383	-10	300	14.862	14.920	14.978	15.036	15.095	15.153	15.211	15.270	15.328	15.386	15.445	300	310	14.862	14.920	14.978	15.036	15.095	15.153	15.211	15.270	15.328	15.386	15.445	310	
0	-0.383	-0.345	-0.307	-0.269	-0.231	-0.193	-0.154	-0.116	-0.077	-0.039	0.000	0	310	15.445	15.503	15.562	15.621	15.679	15.738	15.797	15.856	15.914	15.973	16.032	310	320	15.445	15.503	15.562	15.621	15.679	15.738	15.797	15.856	15.914	15.973	16.032	320	
10	0.000	0.039	0.078	0.117	0.156	0.195	0.234	0.273	0.312	0.352	0.391	10	320	16.032	16.091	16.150	16.209	16.268	16.327	16.387	16.446	16.505	16.564	16.624	320	330	16.032	16.091	16.150	16.209	16.268	16.327	16.387	16.446	16.505	16.564	16.624	330	
20	0.391	0.431	0.470	0.510	0.549	0.589	0.629	0.669	0.709	0.749	0.790	20	330	16.624	16.683	16.742	16.802	16.861	16.921	16.980	17.040	17.100	17.159	17.219	330	340	16.624	16.683	16.742	16.802</									