

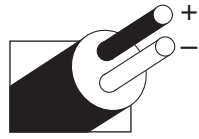
Thermoelement-Referenztabellen

TYP

Referenztabellen
N.I.S.T.
Monograph 175
Nach
ITS-90

J

Eisen und Kupfer-Nickel



IEC-584-3
Farbcodierung:
Thermoelement-
und Ausgleichs-
leitung

MAXIMALER TEMPERATURBEREICH

Thermoelementleitung
32 bis 1382°F, 0 bis 750°C

Verlängerungsleitung
32 bis 392°F, 0 bis 200°C

FEHLERTOLERANZEN

(je nachdem, welcher Wert größer ist)

Standard: 2,2°C oder 0,75%

Besonders enge Fehlertoleranz: 1,1°C oder 0,4%

KOMMENTARE, UMGEBUNG FÜR UNISOLIERTE LEITUNGEN:

Reduzierung, Vakuum, chemisch inaktiv; Nur begrenzt einsetzbar in oxidierender Umgebung und hohen Temperaturen; Nicht für tiefe Temperaturen empfohlen

TEMPERATUR IN °C

VERGLEICHSTELLE BEI 0°C

Thermoelektrische Spannung in mV

°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
-200	-8.095	-8.076	-8.057	-8.037	-8.017	-7.996	-7.976	-7.955	-7.934	-7.912	-7.890	-200	500	27.393	27.449	27.505	27.561	27.617	27.673	27.729	27.785	27.841	27.897	27.953	500
-190	-7.890	-7.868	-7.846	-7.824	-7.801	-7.778	-7.755	-7.731	-7.707	-7.683	-7.659	-190	510	27.953	28.010	28.066	28.122	28.178	28.234	28.291	28.347	28.403	28.460	28.516	510
-180	-7.659	-7.634	-7.610	-7.585	-7.559	-7.534	-7.508	-7.482	-7.456	-7.429	-7.403	-180	520	28.516	28.572	28.629	28.685	28.741	28.798	28.854	28.911	28.967	29.024	29.080	520
-170	-7.403	-7.376	-7.348	-7.321	-7.293	-7.265	-7.237	-7.209	-7.181	-7.152	-7.123	-170	530	29.080	29.137	29.194	29.250	29.307	29.363	29.420	29.477	29.534	29.590	29.647	530
-160	-7.123	-7.094	-7.064	-7.035	-7.005	-6.975	-6.944	-6.914	-6.883	-6.853	-6.821	-160	540	29.647	29.704	29.761	29.818	29.874	29.931	29.988	30.045	30.102	30.159	30.216	540
-150	-6.821	-6.790	-6.759	-6.727	-6.695	-6.663	-6.631	-6.598	-6.566	-6.533	-6.500	-150	550	30.216	30.273	30.330	30.387	30.444	30.502	30.559	30.616	30.673	30.730	30.788	550
-140	-6.500	-6.467	-6.433	-6.400	-6.366	-6.332	-6.298	-6.263	-6.229	-6.194	-6.159	-140	560	30.788	30.845	30.902	30.960	31.017	31.074	31.132	31.189	31.247	31.304	31.362	560
-130	-6.159	-6.124	-6.089	-6.054	-6.018	-5.982	-5.946	-5.910	-5.874	-5.838	-5.801	-130	570	31.362	31.419	31.477	31.535	31.592	31.650	31.708	31.766	31.823	31.881	31.939	570
-120	-5.801	-5.764	-5.727	-5.689	-5.650	-5.611	-5.572	-5.533	-5.494	-5.455	-5.416	-120	580	31.939	31.997	32.055	32.113	32.171	32.229	32.287	32.345	32.403	32.461	32.519	580
-110	-5.426	-5.388	-5.350	-5.311	-5.272	-5.233	-5.194	-5.155	-5.116	-5.077	-5.037	-110	590	32.519	32.577	32.635	32.693	32.751	32.809	32.867	32.925	32.983	33.041	33.099	590
-100	-5.037	-4.998	-4.957	-4.917	-4.877	-4.836	-4.796	-4.755	-4.714	-4.674	-4.633	-100	600	33.099	33.157	33.215	33.273	33.331	33.389	33.447	33.505	33.563	33.621	33.679	600
-90	-4.633	-4.591	-4.550	-4.509	-4.467	-4.425	-4.384	-4.342	-4.300	-4.257	-4.215	-90	610	33.679	33.736	33.794	33.852	33.910	33.968	34.026	34.084	34.142	34.200	34.258	610
-80	-4.215	-4.173	-4.130	-4.088	-4.045	-4.002	-3.959	-3.916	-3.872	-3.829	-3.786	-80	620	34.258	34.315	34.373	34.431	34.489	34.547	34.605	34.663	34.721	34.779	34.837	620
-70	-3.786	-3.742	-3.698	-3.654	-3.610	-3.566	-3.522	-3.478	-3.434	-3.389	-3.344	-70	630	34.837	34.894	34.952	35.010	35.068	35.126	35.184	35.242	35.300	35.358	35.416	630
-60	-3.344	-3.300	-3.255	-3.210	-3.165	-3.120	-3.075	-3.029	-2.984	-2.938	-2.893	-60	640	35.416	35.473	35.531	35.589	35.647	35.705	35.763	35.821	35.879	35.937	36.000	640
-50	-2.893	-2.847	-2.801	-2.755	-2.709	-2.663	-2.617	-2.571	-2.524	-2.478	-2.431	-50	650	36.000	36.057	36.115	36.173	36.231	36.289	36.347	36.405	36.463	36.521	36.579	650
-40	-2.431	-2.385	-2.338	-2.291	-2.244	-2.197	-2.150	-2.103	-2.055	-2.008	-1.961	-40	660	36.579	36.636	36.694	36.752	36.810	36.868	36.926	36.984	37.042	37.100	37.158	660
-30	-1.961	-1.913	-1.865	-1.818	-1.770	-1.722	-1.674	-1.626	-1.578	-1.530	-1.482	-30	670	37.158	37.215	37.273	37.331	37.389	37.447	37.505	37.563	37.621	37.679	37.737	670
-20	-1.482	-1.433	-1.385	-1.336	-1.288	-1.239	-1.190	-1.142	-1.093	-1.044	-0.995	-20	680	37.737	37.794	37.852	37.910	37.968	38.026	38.084	38.142	38.200	38.258	38.316	680
-10	-0.995	-0.946	-0.896	-0.847	-0.798	-0.749	-0.699	-0.650	-0.600	-0.550	-0.501	-10	690	38.316	38.373	38.431	38.489	38.547	38.605	38.663	38.721	38.779	38.837	38.895	690
0	-0.501	-0.451	-0.401	-0.351	-0.301	-0.251	-0.201	-0.151	-0.101	-0.050	0.000	0	700	38.895	38.952	39.010	39.068	39.126	39.184	39.242	39.300	39.358	39.416	39.474	700
10	0.000	0.050	0.101	0.151	0.202	0.253	0.303	0.354	0.405	0.456	0.507	10	710	39.474	39.531	39.589	39.647	39.705	39.763	39.821	39.879	39.937	39.995	40.053	710
20	0.507	0.558	0.609	0.660	0.711	0.762	0.813	0.865	0.916	0.968	1.019	20	720	40.053	40.110	40.168	40.226	40.284	40.342	40.400	40.458	40.516	40.574	40.632	720
30	1.019	1.071	1.122	1.174	1.226	1.277	1.329	1.381	1.433	1.485	1.537	30	730	40.632	40.689	40.747	40.805	40.863	40.921	40.979	41.037	41.095	41.153	41.211	730
40	1.537	1.589	1.641	1.693	1.745	1.797	1.849	1.902	1.954	2.006	2.058	40	740	41.211	41.268	41.326	41.384	41.442	41.500	41.558	41.616	41.674	41.732	41.790	740
50	2.059	2.111	2.164	2.216	2.269	2.322	2.374	2.427	2.480	2.532	2.585	50	750	41.790	41.847	41.905	41.963	42.021	42.079	42.137	42.195	42.253	42.311	42.369	750
60	2.585	2.638	2.691	2.744	2.797	2.850	2.903	2.956	3.009	3.062	3.116	60	760	42.369	42.426	42.484	42.542	42.600	42.658	42.716	42.774	42.832	42.890	42.948	760
70	3.116	3.169	3.222	3.275	3.329	3.382	3.436	3.489	3.543	3.596	3.650	70	770	42.948	43.005	43.063	43.121	43.179	43.237	43.295	43.353	43.411	43.469	43.527	770
80	3.650	3.703	3.757	3.810	3.864	3.918	3.971	4.025	4.079	4.133	4.187	80	780	43.527	43.584	43.642	43.700	43.758	43.816	43.874	43.932	43.990	44.048	44.106	780
90	4.187	4.240	4.294	4.348	4.402	4.456	4.510	4.564	4.618	4.672	4.726	90	790	44.106	44.163	44.221	44.279	44.337	44.395	44.453	44.511	44.569	44.627	44.685	790
100	4.726	4.781	4.835	4.889	4.943	4.997	5.052	5.106	5.160	5.215	5.269	100	800	44.685	44.742	44.800	44.858	44.916	44.974	45.032	45.090	45.148	45.206	45.264	800
110	5.269	5.323	5.378	5.432	5.487	5.541	5.595	5.650	5.705	5.759	5.814	110	810	45.264	45.321	45.379	45.437	45.495	45.553	45.611	45.669	45.727	45.785	45.843	810
120	5.814	5.868	5.923	5.977	6.032	6.087	6.141	6.196	6.251	6.306	6.360	120	820	45.843	45.900	45.958	46.016	46.074	46.132	46.190	46.248	46.306	46.364	46.422	820
130	6.360	6.415	6.470	6.525	6.579	6.634	6.689	6.744	6.799	6.854	6.909	130	830	46.422	46.479	46.537	46.595	46.653	46.711	46.769	46.827	46.885	46.943	47.001	830
140	6.909	6.964	7.019	7.074	7.129	7.184	7.239	7.294	7.349	7.404	7.459	140	840	47.001	47.058	47.116	47.174	47.232	47.290	47.348	47.406	47.464	47.522	47.580	840
150	7.459	7.514	7.569	7.624	7.679	7.734	7.789	7.844	7.900	7.955	8.010	150	850	47.580	47.637	47.695	47.753	47.811	47.869	47.927	47.985	48.043	48.101	48.159	850
160	8.010	8.065	8.120	8.175	8.231	8.286	8.341	8.396	8.452	8.507	8.562	160	860	48.159	48.216	48.274	48.332	48.390	48.448	48.506	48.564	48.622	48.680	48.738	860
170	8.562	8.618	8.673	8.728	8.783	8.839	8.894	8.949	9.005	9.060	9.115	170	870	48.738	48.795	48.853	48.911	48.969	49.027	49.085	49.143	49.201	49.259	49.317	870
180	9.115	9.171	9.226	9.282	9.337	9.392	9.448	9.503	9.559	9.614	9.669	180	880	49.317	49.374	49.432	49.490	49.548	49.606	49.664	49.722	49.780	49.838	49.896	880
190	9.669	9.725	9.780	9.836	9.891	9.947	10.002	10.057	10.113	10.168	10.224	190	890	49.896	49.953	50.011	50.069	50.127	50.185	50.243	50.301	50.359	50.417	50.475	890
200	10.224	10.279	10.335	10.390	10.446	10.501	10.557	10.612	10.668	10.723	10.779	200	900	50.475	50.532	50.590	50.648	50.706	50.764	50.822	50.880	50.938	50.996	51.054	900
210	10.779	10.834	10.890	10.945	11.001	11.056	11.112	11.167	11.223	11.278	11.334	210	910	51.054	51.111	51.169									