

## Type J Thermocouple

ANSI MC96.1 1982  
JIS C 1602 1981 Unit: mV

°C	-100	-50	0	50	100	150	200	250	300	350	400	500	600	700	800	900	1,000	1,100	°C
0	-4.632	-3.980	0	0.608	2.268	10.777	26.325	21.466	27.268	27.268	33.098	39.130	45.498	51.975	57.942	63.771	0		
-10	-5.038	-4.384	10	0.307	5.802	11.332	26.879	22.017	27.819	27.819	33.662	39.714	46.144	52.196	58.023	64.255	10		
-20	-5.438	-4.785	20	1.019	6.399	11.897	17.432	32.049	28.311	34.273	40.362	46.798	53.115	59.121	64.933	70			
-30	-5.835	-5.181	30	1.536	6.967	12.442	17.564	32.541	29.875	34.867	41.013	47.434	53.729	59.768	65.510	70			
-40	-6.228	-5.580	40	2.058	7.501	12.968	18.037	33.054	29.842	35.484	41.947	48.378	54.581	60.582	66.397	70			
-50	-6.619	-5.971	50	2.583	8.008	13.452	18.088	33.607	30.210	36.098	42.383	48.718	54.938	60.876	66.684	70			
-60	-6.991	-6.382	60	3.113	8.490	14.108	18.648	35.181	30.782	36.676	42.932	49.254	55.553	61.459	67.240	70			
-70	-7.322	-6.744	70	3.649	8.113	14.860	20.192	25.716	31.256	37.238	43.563	49.980	56.155	62.009	67.815	70			
-80	-7.602	-7.180	80	4.288	8.687	15.217	20.743	26.272	31.833	37.893	44.287	50.833	56.752	62.618	68.380	80			
-90	-7.839	-7.415	90	4.735	10.223	16.771	21.293	26.829	32.513	38.518	44.893	51.249	57.348	63.189	68.964	90			
-100	-7.990	-7.632	100	5.268	10.777	16.325	21.848	27.388	33.098	39.130	45.488	51.875	57.842	63.771	69.538	100			

## Type E Thermocouple

ANSI MC96.1 1982  
JIS C 1602 1981 Unit: mV

°C	-100	-50	0	50	100	150	200	250	300	350	400	500	600	700	800	900	°C
0	-8.237	-6.809	0	0.980	6.317	23.419	21.033	28.943	28.999	43.040	53.120	61.032	68.783	0			
-10	-5.980	-6.581	10	0.591	6.908	24.181	21.834	29.744	29.808	43.890	53.907	61.806	69.549	10			
-20	-6.107	-7.151	20	1.192	7.660	24.909	22.580	30.546	30.617	44.600	54.703	62.586	70.313	20			
-30	-6.516	-7.709	30	1.881	8.277	25.682	23.382	31.293	31.293	45.438	55.488	63.286	71.075	30			
-40	-6.967	-8.284	40	2.499	8.878	26.417	24.173	32.105	32.105	46.298	56.291	64.147	71.835	40			
-50	-7.279	-8.787	50	3.047	9.707	27.178	24.993	32.980	32.980	47.145	56.939	65.003	72.595	50			
-60	-7.631	-9.308	60	3.683	10.508	27.942	25.754	33.793	33.793	48.033	57.613	65.780	73.350	60			
-70	-7.983	-9.811	70	4.329	11.232	28.719	26.588	34.574	34.574	48.962	58.213	66.662	74.184	70			
-80	-8.275	-10.301	80	4.983	11.949	29.484	27.348	35.387	35.387	49.870	58.813	67.540	74.987	80			
-90	-8.541	-10.777	90	5.646	12.684	30.258	28.140	36.190	36.190	49.758	59.312	68.427	75.686	90			
-100	-8.804	-11.237	100	6.317	13.419	31.032	28.943	36.999	36.999	49.885	59.810	69.312	76.388	100			

## Type T Thermocouple

ANSI MC96.1 1982  
JIS C 1602 1981 Unit: mV

°C	-200	-100	0	100	200	300	400	500	°C
0	-5.085	-3.375	0.000	0.000	4.277	9.258	14.280	0	
-10	-5.753	-3.656	-0.383	10	0.391	4.749	9.429	15.443	10
-20	-6.089	-4.023	-0.737	20	0.789	5.221	10.288	16.528	20
-30	-6.507	-4.377	-1.121	30	1.190	5.713	10.805	16.621	30
-40	-6.187	-4.659	-1.475	40	1.611	6.204	11.478	17.217	40
-50	-6.181	-4.948	-1.809	50	2.035	6.702	12.011	17.814	50
-60	-6.323	-5.260	-2.122	60	2.467	7.207	12.572	18.428	60
-70	-6.358	-5.589	-2.475	70	2.908	7.718	13.157	19.027	70
-80	-6.281	-5.788	-2.80	80	3.357	8.235	13.707	19.638	80
-90	-6.439	-5.989	-3.113	90	3.813	8.751	14.281	20.252	90
-100	-6.682	-6.276	-3.38	100	4.277	9.280	14.863	20.888	100

## Type N Thermocouple

NBS Monograph 161 Unit: mV

°C	0	100	200	300	400	500	600	700	800	900	1,000	1,100	1,200	1,300	1,400	1,500	°C
0	0.000	2.174	5.312	9.348	13.592	18.144	23.000	28.126	33.456	39.000	44.788	50.800	57.000	63.300	69.700	76.200	0
10	0.280	3.072	6.243	9.805	13.984	17.127	22.000	24.919	32.049	32.760	36.833	40.456	44.207	48.120	52.150	56.300	10
20	0.535	3.374	6.577	10.002	14.717	17.531	23.390	25.312	32.541	33.149	37.018	40.800	44.578	48.528	52.550	56.700	20
30	0.759	3.678	6.804	10.412	14.992	17.995	23.784	25.705	32.933	33.538	37.403	41.115	44.947	48.977	53.000	57.200	30
40	1.054	3.988	7.254	10.773	14.467	18.282	24.172	26.098	33.025	33.927	37.788	41.580	45.335	49.465	53.682	58.000	40
50	1.288	4.303	7.586	11.125	14.894	18.668	24.566	26.481	33.417	34.315	38.165	42.045	45.882	50.000	54.300	58.600	50
60	1.619	4.617	7.940	11.498	15.322	19.055	24.956	26.868	33.808	34.702	38.552	42.502	46.388	50.500	54.800	59.100	60
70	1.908	4.936	8.287	11.865	15.700	19.445	25.345	27.278	34.199	35.089	38.934	42.917	46.833	51.000	55.300	59.600	70
80	2.288	5.258	8.636	12.210	16.081	19.831	25.747	27.670	34.590	35.476	39.316	43.291	47.277	51.500	55.800	60.100	80
90	2.678	5.584	8.987	12.602	16.462	20.220	26.133	28.062	34.980	35.862	39.698	43.644	47.640	52.000	56.300	60.600	90
100	3.174	5.913	9.340	13.012	16.844	20.608	26.526	28.456	35.370	36.248	40.079	43.996	47.992	52.500	56.800	61.100	100

## Type Ws Thermocouple

Hobas Unit: mV

°C	0	100	200	300	400	500	600	700	800	900	1,000	1,100	1,200	1,300	1,400	1,500	1,600	1,700	1,800	1,900	2,000	°C	
0	0.000	4.482	8.964	13.446	17.928	22.410	26.892	31.374	35.856	40.338	44.820	49.302	53.784	58.266	62.748	67.230	71.712	76.194	80.676	85.158	89.640	94.122	0
10	0.120	4.602	9.084	13.566	18.048	22.530	27.012	31.494	35.976	40.458	44.940	49.422	53.904	58.386	62.868	67.350	71.832	76.314	80.796	85.278	89.760	94.242	10
20	0.240	4.722	9.168	13.686	18.168	22.650	27.132	31.614	36.096	40.578	45.060	49.542	54.024	58.506	62.988	67.470	71.952	76.434	80.916	85.398	89.880	94.362	20
30	0.360	4.842	9.252	13.806	18.288	22.770	27.252	31.734	36.216	40.698	45.180	49.662	54.144	58.626	63.108	67.590	72.072	76.554	81.036	85.518	89.998	94.482	30
40	0.480	4.962	9.336	13.926	18.408	22.890	27.372	31.854	36.336	40.818	45.300	49.782	54.264	58.746	63.230	67.710	72.192	76.674	81.156	85.638	90.118	94.602	40
50	0.600	5.082	9.420	14.046	18.528	23.010	27.492	31.974	36.456	40.938	45.420	49.902	54.384	58.866	63.352	67.830	72.312	76.794	81.276	85.758	90.238	94.722	50
60	0.720	5.202	9.504	14.166	18.648	23.130	27.612	32.094	36.576	41.058	45.540	50.022	54.504	58.986	63.474	67.950	72.432	76.914	81.396	85.878	90.358	94.842	60
70	0.840	5.322	9.588	14.286	18.768	23.250	27.732	32.214	36.696	41.178	45.660	50.142	54.624	59.106	63.594	68.070	72.552	77.034	81.516	85.998	90.478	94.962	70
80	0.960	5.442	9.672	14.406	18.888	23.370	27.852	32.334	36.816	41.298	45.780	50.262	54.744	59.226	63.714	68.190	72.672	77.154	81.636	86.118	90.598	95.082	80
90	1.080	5.562	9.756	14.526	19.008	23.490	27.972	32.454	36.936	41.418	45.900	50.382	54.864	59.346	63.834	68.310	72.792	77.274	81.756	86.238	90.718	95.202	90
100	1.200	5.682	9.840	14.646	19.128	23.610	28.092	32.574	37.056	41.538	46.020	50.502	54.984	59.466	63.954	68.430	72.912	77.394	81.876	86.358	90.838	95.322	100