



Technical Information Data Bulletin

Copper 10 Ohms (Cu10)

α 0.00427

Temperature vs Resistance Table Resistance @ 32°F

Temperature Range:

-140 to 500°F

-100 to 260°C

TEMPERATURE & PROCESS INSTRUMENTS - CON-

Temp	0	-1	-2	-3	-4	-5	-6	-7	-8	-9
-140	5.872	5.847	5.823	5.798	5.774	5.749	5.725	5.700	5.676	
-130	6.117	6.092	6.068	6.043	6.019	5.994	5.970	5.945	5.921	5.896
-120	6.361	6.336	6.312	6.288	6.263	6.239	6.214	6.190	6.166	6.141
-110	6.604	6.580	6.556	6.531	6.507	6.483	6.458	6.434	6.410	6.385
-100	6.848	6.823	6.799	6.775	6.750	6.726	6.702	6.677	6.653	6.629
-90	7.090	7.066	7.042	7.017	6.993	6.969	6.945	6.920	6.896	6.872
-80	7.332	7.308	7.284	7.260	7.235	7.211	7.187	7.163	7.139	7.114
-70	7.574	7.550	7.526	7.501	7.477	7.453	7.429	7.405	7.381	7.356
-60	7.815	7.791	7.767	7.742	7.718	7.694	7.670	7.646	7.622	7.598
-50	8.053	8.029	8.005	7.982	7.958	7.934	7.910	7.887	7.863	7.839
-40	8.290	8.267	8.243	8.219	8.195	8.172	8.148	8.124	8.100	8.077
-30	8.528	8.504	8.480	8.457	8.433	8.409	8.385	8.362	8.338	8.314
-20	8.765	8.741	8.718	8.694	8.670	8.646	8.623	8.599	8.575	8.551
-10	9.003	8.979	8.955	8.931	8.908	8.884	8.860	8.836	8.813	8.789
0	9.240	9.216	9.193	9.169	9.145	9.121	9.098	9.074	9.050	9.026
Temp	0	1	2	3	4	5	6	7	8	9
0	9.240	9.264	9.288	9.311	9.335	9.359	9.383	9.406	9.430	9.454
10	9.478	9.501	9.525	9.549	9.573	9.596	9.620	9.644	9.668	9.691
20	9.715	9.739	9.763	9.786	9.810	9.834	9.858	9.881	9.905	9.929
30	9.953	9.976	10.000	10.024	10.048	10.071	10.095	10.119	10.143	10.166
40	10.190	10.214	10.238	10.261	10.285	10.309	10.332	10.356	10.380	10.404
50	10.427	10.451	10.475	10.499	10.522	10.546	10.570	10.594	10.617	10.641
60	10.665	10.689	10.712	10.736	10.760	10.784	10.807	10.831	10.855	10.879
70	10.902	10.926	10.950	10.974	10.997	11.021	11.045	11.069	11.092	11.116
80	11.140	11.164	11.187	11.211	11.235	11.259	11.282	11.306	11.330	11.354
90	11.377	11.401	11.425	11.449	11.472	11.496	11.520	11.544	11.567	11.591
100	11.615	11.639	11.662	11.686	11.710	11.734	11.757	11.781	11.805	11.829
110	11.852	11.876	11.900	11.923	11.947	11.971	11.995	12.018	12.042	12.066
120	12.090	12.113	12.137	12.161	12.185	12.208	12.232	12.256	12.280	12.303
130	12.327	12.351	12.375	12.398	12.422	12.446	12.470	12.493	12.517	12.541
140	12.565	12.588	12.612	12.636	12.660	12.683	12.707	12.731	12.755	12.778
150	12.802	12.826	12.850	12.873	12.897	12.921	12.945	12.968	12.992	13.016
160	13.040	13.063	13.087	13.111	13.135	13.158	13.182	13.206	13.230	13.253
170	13.277	13.301	13.325	13.348	13.372	13.396	13.419	13.443	13.467	13.491
180	13.514	13.538	13.562	13.586	13.609	13.633	13.657	13.681	13.704	13.728
190	13.752	13.776	13.799	13.823	13.847	13.871	13.894	13.918	13.942	13.966
200	13.989	14.013	14.037	14.061	14.084	14.108	14.132	14.156	14.179	14.203
210	14.227	14.251	14.274	14.298	14.322	14.346	14.369	14.393	14.417	14.441
220	14.464	14.488	14.512	14.536	14.559	14.583	14.607	14.631	14.654	14.678
230	14.702	14.726	14.749	14.773	14.797	14.821	14.844	14.868	14.892	14.915
240	14.939	14.963	14.987	15.010	15.034	15.058	15.082	15.105	15.129	15.153
250	15.177	15.200	15.224	15.248	15.272	15.295	15.319	15.343	15.367	15.390
260	15.414	15.438	15.462	15.485	15.509	15.533	15.557	15.580	15.604	15.628
270	15.652	15.675	15.699	15.723	15.747	15.770	15.794	15.818	15.842	15.865
280	15.889	15.913	15.937	15.960	15.984	16.008	16.032	16.055	16.079	16.103
290	16.127	16.150	16.174	16.198	16.222	16.245	16.269	16.293	16.317	16.340
300	16.364	16.388	16.411	16.435	16.459	16.483	16.507	16.531	16.555	16.579
310	16.603	16.627	16.651	16.675	16.699	16.723	16.747	16.771	16.795	16.819
320	16.843	16.867	16.890	16.914	16.938	16.962	16.986	17.010	17.034	17.058
330	17.082	17.106	17.130	17.154	17.178	17.202	17.226	17.250	17.274	17.298
340	17.322	17.346	17.369	17.393	17.417	17.441	17.465	17.489	17.513	17.537
350	17.561	17.585	17.609	17.633	17.657	17.681	17.705	17.729	17.753	17.777
360	17.801	17.825	17.849	17.873	17.897	17.921	17.944	17.968	17.992	18.016
370	18.040	18.064	18.088	18.112	18.136	18.160	18.184	18.208	18.232	18.256
380	18.280	18.304	18.328	18.352	18.376	18.400	18.424	18.448	18.472	18.496



Temperature vs Resistance Table Resistance @ 32°F

Temperature Range:
-140 to 500°F
-100 to 260°C

Temp	0	1	2	3	4	5	6	7	8	9
390	18.520	18.544	18.568	18.592	18.615	18.639	18.663	18.687	18.711	18.735
400	18.759	18.783	18.807	18.831	18.855	18.879	18.903	18.927	18.951	18.975
410	18.999	19.023	19.047	19.071	19.095	19.119	19.143	19.167	19.191	19.215
420	19.239	19.263	19.287	19.311	19.335	19.359	19.383	19.407	19.431	19.455
430	19.478	19.502	19.526	19.550	19.574	19.598	19.622	19.646	19.670	19.694
440	19.718	19.742	19.766	19.790	19.814	19.838	19.862	19.886	19.910	19.934
450	19.958	19.982	20.006	20.030	20.054	20.078	20.102	20.126	20.150	20.174
460	20.198	20.222	20.246	20.270	20.294	20.318	20.342	20.366	20.390	20.414
470	20.438	20.462	20.486	20.510	20.534	20.558	20.582	20.606	20.630	20.654
480	20.678	20.702	20.726	20.750	20.774	20.798	20.822	20.846	20.870	20.894
490	20.918	20.942	20.966	20.990	21.013	21.037	21.061	21.085	21.109	21.133
500	21.157									



Unical RTD Highly Accurate, Handheld RTD Calibrator

Features

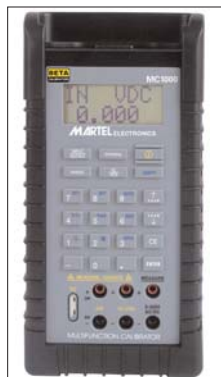
- Measure and simulate multiple RTD types with a programmable scale factor and averaging
- Calibrate and Read Pt100, Pt200, Pt1000, Cu10, Cu100, Ni100, Ni120
- 14 RTD Types + Ohm (to 4000 Ohm)
- High accuracy ($\pm 0.04\%$ of reading)
- Single-line LCD display (green, 7mm)
- Single value, multi-step or continuous ramp/soak simulation
- Selectable temperature scales (IPTS68 and ITS90)



MicroCal 200/200+ Two Channel High Accuracy Portable or Benchtop Laboratory Multifunction Calibrator

Features

- Resistance thermometers 2, 3, and 4 wire connections (Pt100/200/500/1000, Cu 10/100, and Ni100/120)
- High accuracy ($\pm 0.02\%/\pm 0.01\%$ of reading)
- Two insulated and independent channels
- Menu-driven procedures
- Compatible with 14 thermocouple types
- Ideal tool for measuring and simulating: Thermocouple, mV, V, mA, and Ohms



MC1000 High Accuracy Multifunction Process Calibrator

Features

- Read and source modes
- Eight (8) RTD types (Pt100/200/500/1000, Cu10, and Ni120)
- Thermocouple, mV, V, mA, and Ohms plus YSI 400 Thermistors
- Direct keyboard entry enables quick output changes
- Store up to nine (9) setpoints for each output function
- RTD function compatible with all pulsed transmitters
- RS-232 interface