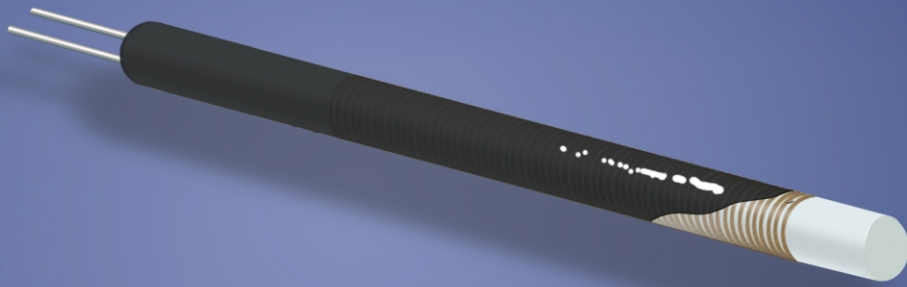


## Cu10 RTD Temperature Sensor



Copper stands out as an important material in temperature sensors for several reasons: high thermal conductivity, excellent stability and reliability, versatility in different types of sensors, and attractive cost-effectiveness

These sensors are manufactured with a ceramic core around which the copper wire (sensing element) is wound.

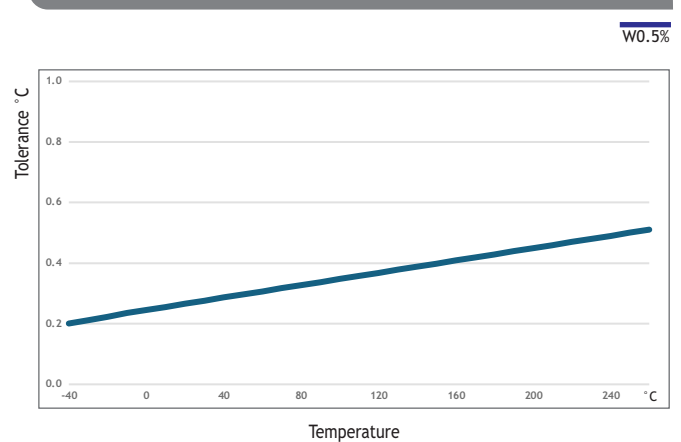
This assembly is then coated with insulating resin for high temperatures.

Copper temperature sensors are designed to have a nominal resistance of 10 Ohm at 25 °C and comply with a temperature coefficient (TC) of 4274 ppm.

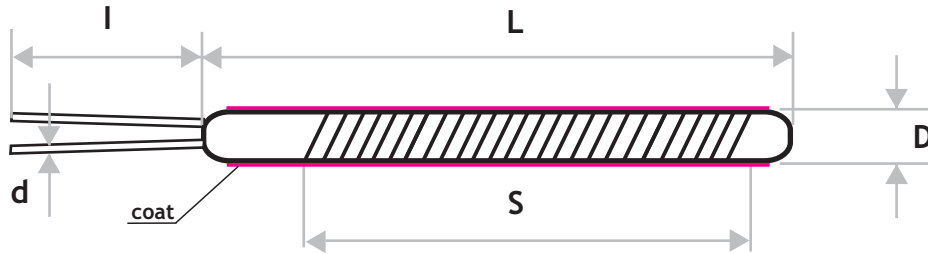
The most commonly used tolerance class for copper sensors is  $\pm 0.5\%$  at 25 °C.

They are suitable for applications ranging from -40 °C to 260 °C.

Class tolerance chart



# Cu10 RTD Temperature Sensor



Cu10						
Product	Part Number	Dimension (mm)				
		D	L	S	d	l
Ew10 40260 S33 CU8.9TC4274 2NIZZ30-5 M4T0.05	92.206.009	2.3±0.3	40 ±2	33 ±2	0.3 ±0.1	5 ±0.5

Specification			
Nominal Resistance:	10 Ohm @ 25 °C	Temperature Coefficient:	4274 ppm
Temperature Range:	-40° C a +260° C	Tolerance class:	± 0.5% @ 25° C
Leads:	201 Nickel		

### Cu10 - Temperatura versus Resistance

°C	0	1	2	3	4	5	6	7	8	9	10	°C
<b>-200</b>	1,058											<b>-200</b>
<b>-190</b>	1,472	1,430	1,389	1,348	1,306	1,265	1,223	1,182	1,141	1,099	1,058	<b>-190</b>
<b>-180</b>	1,884	1,843	1,802	1,761	1,719	1,678	1,637	1,596	1,554	1,513	1,472	<b>-180</b>
<b>-170</b>	2,295	2,254	2,213	2,172	2,131	2,090	2,049	2,008	1,967	1,925	1,884	<b>-170</b>
<b>-160</b>	2,705	2,664	2,623	2,582	2,541	2,500	2,459	2,418	2,377	2,336	2,295	<b>-160</b>
<b>-150</b>	3,113	3,072	3,031	2,990	2,950	2,909	2,868	2,827	2,786	2,746	2,705	<b>-150</b>
<b>-140</b>	3,519	3,478	3,438	3,397	3,356	3,316	3,275	3,235	3,194	3,153	3,113	<b>-140</b>
<b>-130</b>	3,923	3,883	3,843	3,802	3,762	3,721	3,681	3,640	3,600	3,559	3,519	<b>-130</b>
<b>-120</b>	4,327	4,286	4,246	4,206	4,165	4,125	4,085	4,045	4,004	3,964	3,923	<b>-120</b>
<b>-110</b>	4,728	4,688	4,648	4,608	4,568	4,527	4,487	4,447	4,407	4,367	4,327	<b>-110</b>
<b>-100</b>	5,128	5,088	5,048	5,008	4,968	4,928	4,888	4,848	4,808	4,768	4,728	<b>-100</b>
<b>-90</b>	5,526	5,487	5,447	5,407	5,367	5,327	5,288	5,248	5,208	5,168	5,128	<b>-90</b>
<b>-80</b>	5,923	5,884	5,844	5,804	5,765	5,725	5,685	5,646	5,606	5,566	5,526	<b>-80</b>
<b>-70</b>	6,318	6,279	6,239	6,200	6,160	6,121	6,081	6,042	6,002	5,963	5,923	<b>-70</b>
<b>-60</b>	6,712	6,673	6,633	6,594	6,555	6,515	6,476	6,437	6,397	6,358	6,318	<b>-60</b>
<b>-50</b>	7,104	7,065	7,026	6,987	6,947	6,908	6,869	6,830	6,791	6,751	6,712	<b>-50</b>
<b>-40</b>	7,490	7,452	7,413	7,374	7,336	7,297	7,259	7,220	7,181	7,143	7,104	<b>-40</b>
<b>-30</b>	7,876	7,838	7,799	7,761	7,722	7,683	7,645	7,606	7,568	7,529	7,490	<b>-30</b>
<b>-20</b>	8,263	8,224	8,185	8,147	8,108	8,070	8,031	7,992	7,954	7,915	7,876	<b>-20</b>
<b>-10</b>	8,649	8,610	8,572	8,533	8,494	8,456	8,417	8,378	8,340	8,301	8,263	<b>-10</b>
<b>0</b>	9,035	8,996	8,958	8,919	8,881	8,842	8,803	8,765	8,726	8,687	8,649	<b>0</b>
<b>0</b>	9,035	9,074	9,112	9,151	9,189	9,228	9,267	9,305	9,344	9,383	9,421	<b>0</b>
<b>10</b>	9,421	9,460	9,498	9,537	9,576	9,614	9,653	9,692	9,730	9,769	9,807	<b>10</b>
<b>20</b>	9,807	9,846	9,885	9,923	9,962	10,000	10,039	10,078	10,116	10,155	10,194	<b>20</b>
<b>30</b>	10,194	10,232	10,271	10,309	10,348	10,387	10,425	10,464	10,502	10,541	10,580	<b>30</b>
<b>40</b>	10,580	10,618	10,657	10,696	10,734	10,773	10,811	10,850	10,889	10,927	10,966	<b>40</b>
<b>50</b>	10,966	11,005	11,043	11,082	11,120	11,159	11,198	11,236	11,275	11,313	11,352	<b>50</b>
<b>60</b>	11,352	11,391	11,429	11,468	11,507	11,545	11,584	11,622	11,661	11,700	11,738	<b>60</b>
<b>70</b>	11,738	11,777	11,816	11,854	11,893	11,931	11,970	12,009	12,047	12,086	12,124	<b>70</b>
<b>80</b>	12,124	12,163	12,202	12,240	12,279	12,318	12,356	12,395	12,433	12,472	12,511	<b>80</b>
<b>90</b>	12,511	12,549	12,588	12,627	12,665	12,704	12,742	12,781	12,820	12,858	12,897	<b>90</b>
<b>100</b>	12,897	12,935	12,974	13,013	13,051	13,090	13,129	13,167	13,206	13,244	13,283	<b>100</b>
<b>110</b>	13,283	13,322	13,360	13,399	13,437	13,476	13,515	13,553	13,592	13,631	13,669	<b>110</b>
<b>120</b>	13,669	13,708	13,746	13,785	13,824	13,862	13,901	13,940	13,978	14,017	14,055	<b>120</b>
<b>130</b>	14,055	14,094	14,133	14,171	14,210	14,248	14,287	14,326	14,364	14,403	14,442	<b>130</b>
<b>140</b>	14,442	14,480	14,519	14,557	14,596	14,635	14,673	14,712	14,751	14,789	14,828	<b>140</b>
<b>150</b>	14,828	14,867	14,906	14,945	14,984	15,022	15,061	15,100	15,139	15,178	15,217	<b>150</b>
<b>160</b>	15,217	15,256	15,295	15,334	15,373	15,412	15,451	15,490	15,529	15,568	15,607	<b>160</b>
<b>170</b>	15,607	15,646	15,685	15,724	15,763	15,802	15,840	15,879	15,918	15,957	15,996	<b>170</b>
<b>180</b>	15,996	16,035	16,074	16,113	16,152	16,191	16,230	16,269	16,308	16,347	16,386	<b>180</b>
<b>190</b>	16,386	16,425	16,464	16,503	16,542	16,581	16,620	16,659	16,698	16,737	16,776	<b>190</b>
<b>200</b>	16,776	16,815	16,854	16,893	16,932	16,971	17,010	17,049	17,088	17,127	17,166	<b>200</b>
<b>210</b>	17,166	17,205	17,244	17,283	17,322	17,360	17,399	17,438	17,477	17,516	17,555	<b>210</b>
<b>220</b>	17,555	17,594	17,633	17,672	17,711	17,750	17,789	17,828	17,867	17,906	17,945	<b>220</b>
<b>230</b>	17,945	17,984	18,023	18,062	18,101	18,140	18,179	18,218	18,257	18,296	18,335	<b>230</b>
<b>240</b>	18,335	18,374	18,413	18,452	18,491	18,530	18,569	18,609	18,648	18,687	18,726	<b>240</b>
<b>250</b>	18,726	18,765	18,804	18,843	18,882	18,921	18,960	18,999	19,038	19,077	19,116	<b>250</b>
<b>260</b>	19,116											<b>260</b>
°C	0	1	2	3	4	5	6	7	8	9	10	°C