Type T Bare Wire

TYPE T (Copper vs Constantan) is used or service in oxidizing, inert or reducing atmospheres or in vacuum. It is highly resistant to corrosion from atmospheric moisture and condensation and exhibits high stability at low temperatures. It is the only type with limits of error guaranteed for cryogenic temperatures.

1. Chemical Composition

Material	Chemical composition (%)				
	Ni	Cr	Cu	Mn	Al
TP(Copper)			100		
TN(Constantan)	45		55		

2. Physical properties and Mechnical properties

Material	Density(g/cm3)	Melting point(℃)	Tensile Strength(Mpa)	Volume resistivity (μΩ.cm)	Elongation rate (%)
TP(Copper)	8.9	1084	>196	1.71(20℃)	>30
TN(Constantan)	8.8	1220	>390	49.0(20℃)	>25

3. EMF Value range at different temperature

Material	EMF value Vs Pt(μ V)					
	-196℃	-79℃	100℃	150℃	200℃	250℃
TP(Copper)	-212	-332	761~785	1263~1287	1825~1849	2450~2474
TN(Constantan)	-5327	-2426	3493~3517	5412~5448	7420~7582	9507~9595

EMF value Vs Pt(μ V)				
300℃	350℃	400℃	500℃	600℃
3137~3161	3880~3904			
11655~11771	13864~13988			

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