Simulator for Temperature Sensors (resolution: 0.1 K)

	Sensor Type	Simulation Range in °C	Simulation Range in °F	Intrinsic Uncertainty	Over-load
°C / °F	**Resistance Thermometer per IEC 751**			±(% S + K)	I_{max}
	Pt100	–200 …+850	–328…+1562	0.1 + 0.5	5 mA
	Pt1000	–200 …+300	–328 …+572	0.1 + 0.2	
	Resistance Thermometer per DIN 43760			±(% S + K)	I_{max}
	Ni100	–60 …+180	–76 …+356	0.1 + 0.5	5 mA
	Ni1000	–60 …+180	–76 …+356	0.1 + 0.2	
	RTD sensor current 0.05 … 0.1 … 4 … 5 mA				
	Thermocouples per DIN and IEC 584-1			ΔU in mV [1]	I_{max}
	K (NiCr/Ni)	–250…+1372	–418…+2501	±(0.05% r |Setting| + 0.02)	18 mA
	J (Fe/CuNi)	–210…+1200	–346…+2192		
	T (Cu/CuNi)	–270…+400	–454…+ 752		
	B (Pt30Rh/Pt6Rh)	+500...+1820	+932…+3308		
	E (NiCr/CuNi)	–270…+1000	–454…+1832		
	R (Pt13Rh/Pt)	–50…+1768	–58…+3214		
	N (CU/Cu10)	–270…+1300	–454…+2372		
	S (Pt10Rh/Pt)	–50…+1768	–58…+3214		
	J (Fe/CuNi)	–200…+900	–328…+1652		
	U (Cu/CuNi)	–200…+600	–328…+1112		

[1] Without internal reference junction, relative to fixed external reference temperature and thermovoltage of the thermocouple, internal reference junction: intrinsic error of 2 K, external reference junction: entry of –30 … 60 °C