

Characteristic Thermocouple Type L

Measuring range: -40 °C to +750 °C

Accuracy class Thermocouple Type L according DIN IEC 60584	
Class	Formula
1/2 DIN	-40 °C to +400 °C: ±1,5 °C +400 °C to +750 °C: ±0,004 t
1 DIN	-40 °C to +400 °C: ±3,0 °C +400 °C to +750 °C: ±0,0075 t

Example values		
Value @ T = 100 °C	Wert @ t = 500 °C	Value @ T = 700 °C
±1,5 °C	±2,0 °C	±2,8 °C
±3,0 °C	±3,8 °C	±5,30 °C

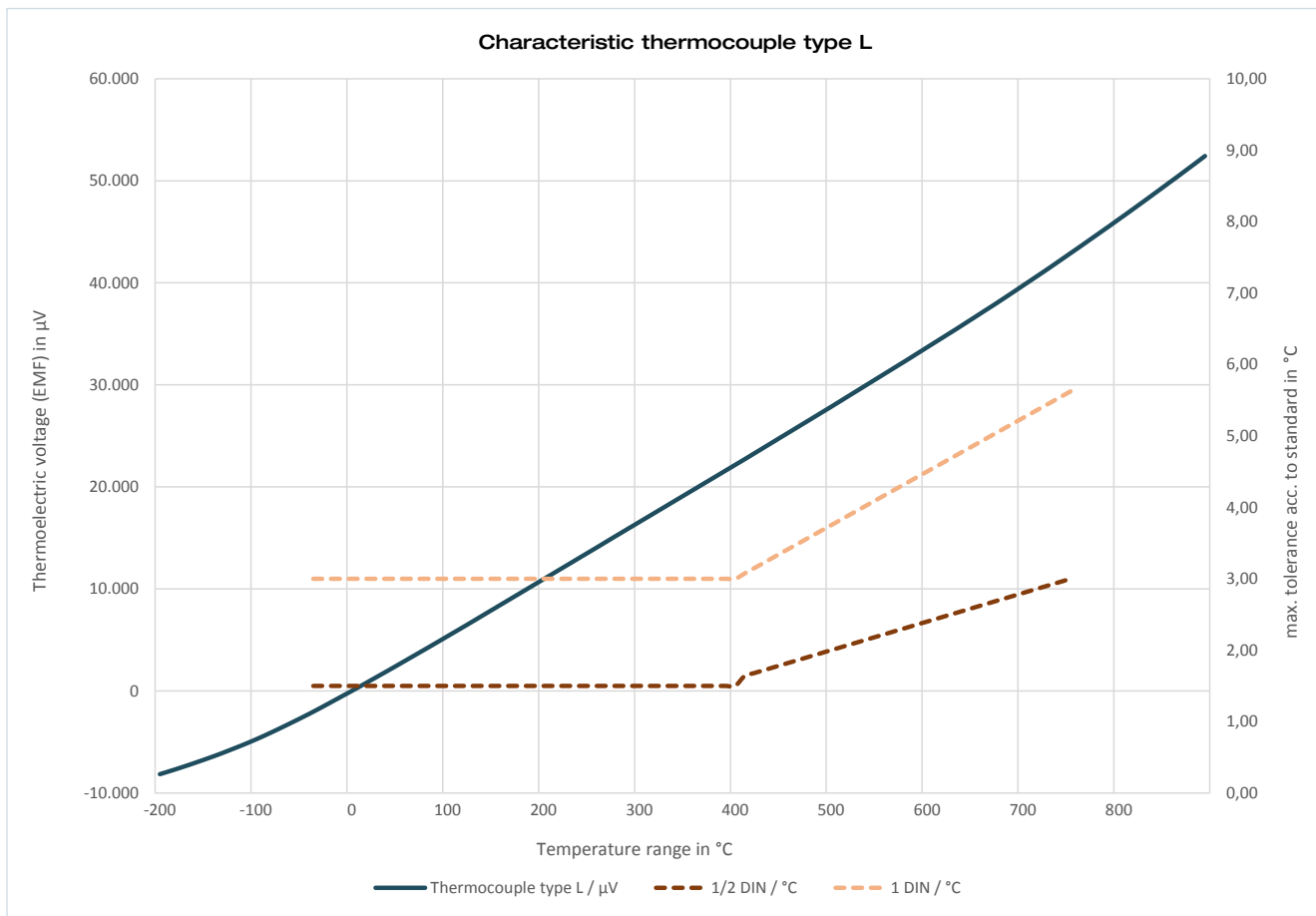
Type L T in °C	EMF* in µV	Max. Tol. ± in °C**		Type L T in °C	EMF* in µV	Max. Tol. ± in °C**		Type L T in °C	EMF* in µV	Max. Tol. ± in °C**		Type L T in °C	EMF* in µV	Max. Tol. ± in °C**	
		Cl. 1	Cl. 2			Cl. 1	Cl. 2			Cl. 1	Cl. 2			Cl. 1	Cl. 2
-200	-8.150			80	4.270	1,5	3,0	360	19.920	1,5	3,0	640	36.040	2,6	4,8
-190	-7.860			90	4.820	1,5	3,0	370	20.480	1,5	3,0	650	36.640	2,6	4,9
-180	-7.560			100	5.370	1,5	3,0	380	21.040	1,5	3,0	660	37.250	2,6	5,0
-170	-7.250			110	5.920	1,5	3,0	390	21.600	1,5	3,0	670	37.850	2,7	5,0
-160	-6.930			120	6.470	1,5	3,0	400	22.160	1,5	3,0	680	38.470	2,7	5,1
-150	-6.600			130	7.030	1,5	3,0	410	22.720	1,6	3,1	690	39.090	2,8	5,2
-140	-6.260			140	7.590	1,5	3,0	420	23.290	1,7	3,2	700	39.720	2,8	5,3
-130	-5.900			150	8.150	1,5	3,0	430	23.860	1,7	3,2	710	40.350	2,8	5,3
-120	-5.530			160	8.710	1,5	3,0	440	24.430	1,8	3,3	720	40.980	2,9	5,4
-110	-5.150			170	9.270	1,5	3,0	450	25.000	1,8	3,4	730	41.620	2,9	5,5
-100	-4.750			180	9.830	1,5	3,0	460	25.570	1,8	3,5	740	42.270	3,0	5,6
-90	-4.330			190	10.390	1,5	3,0	470	26.140	1,9	3,5	750	42.920	3,0	5,6
-80	-3.890			200	10.950	1,5	3,0	480	26.710	1,9	3,6	760	43.570		
-70	-3.440			210	11.510	1,5	3,0	490	27.280	2,0	3,7	770	44.230		
-60	-2.980			220	12.070	1,5	3,0	500	27.850	2,0	3,8	780	44.890		
-50	-2.510			230	12.630	1,5	3,0	510	28.430	2,0	3,8	790	45.550		
-40	-2.030	1,5	3,0	240	13.190	1,5	3,0	520	29.010	2,1	3,9	800	46.220		
-30	-1.530	1,5	3,0	250	13.750	1,5	3,0	530	29.590	2,1	4,0	810	46.890		
-20	-1.020	1,5	3,0	260	14.310	1,5	3,0	540	30.170	2,2	4,1	820	47.570		
-10	-510	1,5	3,0	270	14.880	1,5	3,0	550	30.750	2,2	4,1	830	48.250		
0	0	1,5	3,0	280	15.440	1,5	3,0	560	31.330	2,2	4,2	840	48.940		
10	520	1,5	3,0	290	16.000	1,5	3,0	570	31.910	2,3	4,3	850	49.630		
20	1.050	1,5	3,0	300	16.560	1,5	3,0	580	32.490	2,3	4,4	860	50.320		
30	1.580	1,5	3,0	310	17.120	1,5	3,0	590	33.080	2,4	4,4	870	51.020		
40	2.110	1,5	3,0	320	17.680	1,5	3,0	600	33.670	2,4	4,5	880	51.720		
50	2.650	1,5	3,0	330	18.240	1,5	3,0	610	34.260	2,4	4,6	890	52.430		
60	3.190	1,5	3,0	340	18.800	1,5	3,0	620	34.850	2,5	4,7				
70	3.730	1,5	3,0	350	19.360	1,5	3,0	630	35.440	2,5	4,7				

*Thermoelectric voltage (EMF) in µV

**Maximum tolerance according DIN 43710 (zurückgezogen)

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The standard specifies measuring ranges for thermocouples in which the respective measuring accuracy of the tolerance class applies. For use outside this specified measuring range, it is not possible to specify the measuring accuracy. If the thermocouple is operated outside the specified measuring range of its respective tolerance class, irreversible damage to the thermocouple may occur, which will result in a measurement deviation (even within the specified range). Use beyond the measuring range of the tolerance class represents misuse and leads to a loss of warranty.



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