

Basic Values of Thermoelectric Voltages in mV

Temperature of reference junction (reference temperature) is 0 °C

| Basic values of thermoelectric voltages in mV | | | | | | | | | |
|---|-----------------------------|----------------------------------|--------------------------------|----------------------------------|--------------------------------|-----------------------------------|--------------------------------|--------------------------|-----------------------------------|
| short symbol of thermocouple | Fe-CuNi Type L DIN 43710 | | Fe-CuNi Type J DIN EN 60584 | | NiCr-Ni Type K DIN EN 60584 | | PtRh-Pt Type S DIN EN 60584 | | |
| pos. (+) leg | iron | | iron | | nickel chrome | | PtRh 90/10 % | | |
| neg. (-) leg | copper nickel | | copper nickel | | nickel | | platinum | | |
| temperature °C | basic values mV | tolerance (class 2) | basic values mV | tolerance (class 2) | basic values mV | tolerance (class 2) | basic values mV | tolerance (class 2) | |
| -200 | -8.15 | - | -7.890 | - | -5.891 | - | - | - | |
| -100 | -4.75 | - | -4.633 | - | -3.554 | - | - | - | |
| 0 | 0 | - | 0 | - | 0 | - | 0 | - | |
| 1) +20 | 1.05 | 0 °C to 500 °C 3 °C | 1.019 | -40 °C to 333 °C 2.5 °C | 0.798 | -40 °C to 333 °C 2.5 °C | 0.113 | 0 °C to 600 °C 1.5 °C | |
| 1) +50 | 2.65 | | 2.585 | | 2.023 | | 0.299 | | |
| +100 | 5.37 | | 5.269 | | 4.096 | | 0.646 | | |
| +200 | 10.95 | | 10.779 | | 8.138 | | 1.441 | | |
| +300 | 16.56 | | 16.327 | | 12.209 | | 2.323 | | |
| +400 | 22.16 | | 21.848 | | 16.397 | | 3.259 | | |
| +500 | 27.85 | 500 °C to 700 °C 0.0075 x [t] | 27.393 | 333 °C to 750 °C 0.0075 x [t] | 20.644 | 333 °C to 1200 °C 0.0075 x [t] | 4.233 | | |
| +600 | 33.67 | | 33.102 | | 24.905 | | 5.239 | | |
| +700 | 39.72 | | 39.132 | | 29.129 | | 6.275 | | |
| +800 | 46.22 | - | 45.494 | - | 33.275 | - | 7.345 | | 600 °C to 1600 °C 0.0025 x [t] |
| +900 | 53.14 | - | 51.877 | - | 37.326 | - | 8.449 | | |
| +1000 | | - | 57.953 | - | 41.276 | - | 9.587 | | |
| +1100 | | - | 63.792 | - | 45.119 | - | 10.757 | | |
| +1200 | | - | 69.553 | - | 48.838 | - | 11.951 | | |
| +1300 | | - | | - | 52.410 | - | 13.159 | | |
| +1400 | | - | | - | | - | 14.373 | | |
| +1500 | | - | | - | | - | 15.582 | | |
| +1600 | | - | | - | | - | 16.777 | | |
| +1700 | | - | | - | | - | 17.947 | | |
| +1800 | | - | | - | | - | | - | |

1) The thermoelectric voltages in this table are decreased by the indicated values if the temperature of the reference junction is 20 °C or 50 °C, respectively.