ITS-90 Thermocouple Direct & Inverse Polynomials

Direct Polynomials provide the thermoelectric voltage (μV) from a known temperature (°C); Inverse Polynomials provide the temperature (°C) from a known thermoelectric voltage (μV).

Type J Thermocouples - coefficients, c_i, of reference equations giving the thermoelectric voltage, E, as a function of temperature t_{90}, for the indicated temperature ranges. The equations are of the form:

$$E = \sum_{i=0}^{n} c_i (t_{90})^i$$

where E is in microvolts and t_{90} is in degrees Celsius.

Temperature Range:	-210 to 760°C	760 to 1,200°C
c_0 =	0.000 000 000 0	2.964 562 568 1 x 10^5
c_1 =	5.038 118 781 5 x10^1	-1.497 612 778 6 x 10^3
c_2 =	3.047 583 693 0 x 10^{-2}	3.178 710 392 4
c_3 =	-8.568 106 572 0 x 10^{-5}	-3.184 768 670 1 x 10^{-3}
c_4 =	1.322 819 529 5 x 10^{-7}	1.572 081 900 4 x 10^{-6}
c_5 =	-1.705 295 833 7 x 10^{-10}	-3.069 136 905 6 x 10^{-10}
c_6 =	2.094 809 069 7 x 10^{-13}	
c_7 =	-1.253 839 533 6 x 10^{-16}	
c_8 =	1.563 172 569 7 x 10^{-20}	

Type J Thermocouples - coefficients of approximate inverse functions giving temperature, t_{90}, as a function of the thermoelectric voltage, E, in selected temperature and voltage ranges. The functions are of the form:

$$t_{90} = c_0 + c_1E + c_2E^2 + \ldots c_iE^i$$

where E is in microvolts and t_{90} is in degrees Celsius.

Temperature Range:	-210 to 0°C	0 to 760°C	760 to 1,200°C
Voltage Range:	-8,095 to 0 μV	0 to 42,919 μV	42,919 to 69,553 μV
c_0 =	0.000 000 0	0.000 000	-3.113 581 87 x 10^3
c_1 =	1.952 826 8 x 10^{-2}	1.978 425 x 10^{-2}	3.005 436 84 x 10^{-1}
c_2 =	-1.228 618 5 x 10^{-6}	-2.001 204 x 10^{-7}	-9.947 732 30 x 10^{-6}
c_3 =	-1.075 217 8 x 10^{-9}	1.036 969 x 10^{-11}	1.702 766 30 x 10^{-10}
c_4 =	-5.908 693 3 x 10^{-13}	-2.549 687 x 10^{-16}	-1.430 334 68 x 10^{-15}
c_5 =	-1.725 671 3 x 10^{-16}	3.585 153 x 10^{-21}	4.738 860 84 x 10^{-21}
c_6 =	-2.813 151 3 x 10^{-20}	-5.344 285 x 10^{-26}	
c_7 =	-2.396 337 0 x 10^{-24}	5.099 890 x 10^{-31}	
c_8 =	-8.382 332 1 x 10^{-29}		
Error Range:	0.03 to -0.05°C	0.04 to -0.04°C	0.03 to -0.04°C

Type K Thermocouples - coefficients α_0, α_1 and α_i, of reference equations giving the thermoelectric voltage, E, as a function of temperature, t_{90} for the indicated temperature ranges. The equation below 0°C is of the form:

$$E = \sum_{i=0}^{n} c_1 (t_{90})^i$$

the equation above 0°C is of the form:

$$E = \sum_{i=0}^{n} c_i (t_{90})^i + \alpha_0 e^{\alpha 1 (t_{90} - 126.9686)^2}$$

where E is the natural logarithm constant, E is in microvolts and t_{90} is in degrees Celsius.

Temperature Range:	Coefficients
270 to 0°C	c_0 = 0.000 000 000 0 .... c_1 = 3.945 012 802 5 x 10^1 c_2 = 2.362 237 359 8 x 10^{-2} c_3 = -3.285 890 678 4 x 10^{-4} c_4 = -4.990 482 877 7 x 10^{-6} c_5 = -6.750 905 917 3 x 10^{-8} c_6 = -5.741 032 742 8 x 10^{-10} c_7 = -3.108 887 289 4 x 10^{-12} c_8 = -1.045 160 936 5 x 10^{-14} c_9 = -1.988 926 687 8 x 10^{-17} c_{10} = -1.632 269 748 6 x 10^{-20}
0 to 1372°C	c_0 = -1.760 041 368 6 x 10^1 c_1 = 3.892 120 497 5 x 10^1 c_2 = 1.855 877 003 2 x 10^{-2} c_3 = -9.945 759 287 4 x 10^{-5} c_4 = 3.184 094 571 9 x 10^{-7} c_5 = -5.607 284 488 9 x 10^{-10} c_6 = 5.607 505 905 9 x 10^{-13} c_7 = -3.202 072 000 3 x 10^{-16} c_8 = 9.715 114 715 2 x 10^{-20} c_9 = -1.210 472 127 5 x 10^{-23} α_0 = 1.185 976 x 10^2 α_1 = -1.183 432 x 10^{-4}

Type K Thermocouples - coefficients of approximate inverse functions giving temperature, t_{90}, as a function of the thermoelectric voltage, E, in selected temperature and voltage ranges. The functions are of the form:

$$t_{90} = c_o + c_1E + c_2E^2 \quad c_iE^i$$

where E is in microvolts and t_{90} is in degrees Celsius.

Temperature Range:	-200 to 0°C	0 to 500°C	500 to 1,372°C
Voltage Range:	-5891 to 0 μV	0 to 20,644 μV	20,644 to 54,886 μV
c_0 =	0.000 000 0	0.000 000	-1.318 058 x 10^2
c_1 =	2.517 346 2 x 10^{-2}	2.508 355 x 10^{-2}	4.830 222 x 10^{-2}
c_2 =	-1.166 287 8 x 10^{-6}	7.860 106 x 10^{-8}	-1.646 031 x 10^{-6}
c_3 =	-1.083 363 8 x 10^{-9}	-2.503 131 x 10^{-10}	5.464 731 x 10^{-11}
c_4 =	-8.977 354 0 x 10^{-13}	8.315 270 x 10^{-14}	-9.650 715 x 10^{-16}
c_5 =	-3.734 237 7 x 10^{-16}	-1.228 034 x 10^{-17}	8.802 193 x 10^{-21}
c_6 =	-8.663 264 3 x 10^{-20}	9.804 036 x 10^{-22}	-3.110 810 x 10^{-26}
c_7 =	-1.045 059 8 x 10^{-23}	-4.413 030 x 10^{-26}	
c_8 =	-5.192 057 7 x 10^{-28}	1.057 734 x 10^{-30}	
c_9 =		-1.052 755 x 10^{-35}	
Error Range:	0.04°C to -0.02°C	0.04°C to -0.05°C	0.06°C to -0.05°C

ITS-90 Thermocouple Direct & Inverse Polynomials Cont'd

Type T Thermocouples - coefficients, c_i, of reference equations giving the thermoelectric voltage, E, as a function of temperature, t_{90}, for the indicated temperature ranges. The equations are of the form:

$$E = \sum_{i=0}^{n} c_i (t_{90})^i$$

where E is in microvolts and t_{90} is in degrees Celsius.

Temperature Range:	-270 to 0°C	0 to 400°
c_0 =	0.000 000 000 0....	0.000 000 000 0....
c_1 =	3.874 810 636 4 x10^{1}	3.874 810 636 4 x10^{1}
c_2 =	4.419 443 434 7 x 10^{-2}	3.329 222 788 0 x10^{-2}
c_3 =	1.184 432 310 5 x 10^{-4}	2.061 824 340 4 x 10^{-4}
c_4 =	2.003 297 355 4 x 10^{-5}	-2.188 225 684 6 x 10^{-6}
c_5 =	9.013 801 955 9 x 10^{-7}	1.099 688 092 8 x 10^{-8}
c_6 =	2.265 115 659 3 x 10^{-8}	-3.081 575 877 2 x 10^{-11}
c_7 =	3.607 115 420 5 x 10^{-10}	4.547 913 529 0 x 10^{-14}
c_8 =	3.849 393 988 3 x 10^{-12}	-2.751 290 167 3 x 10^{-17}
c_9 =	2.821 352 192 5 x 10^{-14}	
c_{10} =	1.425 159 477 9 x 10^{-16}	
c_{11} =	4.876 866 228 6 x 10^{-19}	
c_{12} =	1.079 553 927 0 x 10^{-21}	
c_{13} =	1.394 502 706 2 x 10^{-24}	
c_{14} =	7.979 515 392 7 x 10^{-28}	

Type T Thermocouples - coefficients of approximate inverse functions giving temperature, t_{90}, as a function of the thermoelectric voltage, E, in selected temperature and voltage ranges. The functions are of the form:

$$t_{90} = c_0 + c_1E + c_2E^2 + \ldots c_iE^i$$

where E is in microvolts and t_{90} is in degrees Celsius.

Temperature Range:	-200 to 0°C	0 to 400°C
Voltage: Range:	**-5,603 to 0 μV**	**0 to 20,872 μV**
c_0 =	0.000 000 0....	0.000 000 ....
c_1 =	2.592 919 2 x 10^{-2}	2.592 800 x 10^{-2}
c_2 =	-2.131 696 7 x 10^{-7}	-7.602 961 x 10^{-7}
c_3 =	7.901 869 2 x 10^{-10}	4.637 791 x 10^{-11}
c_4 =	4.252 777 7 x 10^{-13}	-2.165 394 x 10^{-15}
c_5 =	1.330 447 3 x 10^{-16}	6.048 144 x 10^{-20}
c_6 =	2.024 144 6 x 10^{-20}	-7.293 422 x 10^{-25}
c_7 =	1.266 817 1 x 10^{-24}	
Error Range:	0.04 to -0.02°C	0.03 to -0.03°C

Type E Thermocouples - coefficients, c_i, of reference equations giving the thermoelectric voltage, E, as a function of temperature, t_{90}, for the indicated temperature ranges. The equations are of the form:

$$E = \sum_{i=0}^{n} c_i (t_{90})^i$$

where E is in microvolts and t_{90} is in degrees Celsius.

Temperature Range:	-270 to 0°C	0 to 400°C
c_0 =	0.000 000 000 0	0.000 000 000 0 ....
c_1 =	5.866 550 870 8 x10^{1}	5.866 550 871 0 x10^{1}
c_2 =	4.541 097 712 4 x 10^{-2}	4.503 227 558 2 x10^{-2}
c_3 =	-7.799 804 868 6 x 10^{-4}	2.890 840 721 2 x 10^{-5}
c_4 =	-2.580 016 084 3 x 10^{-5}	-3.305 689 665 2 x 10^{-7}
c_5 =	-5.945 258 305 7 x 10^{-7}	6.502 440 327 0 x 10^{-10}
c_6 =	-9.321 405 866 7 x 10^{-9}	-1.919 749 550 4 x 10^{-1}
c_7 =	-1.028 760 553 4 x 10^{-10}	-1.253 660 049 7 x 10^{-15}
c_8 =	-8.037 012 362 1 x 10^{-13}	2.148 921 756 9 x 10^{-18}
c_9 =	-4.397 949 739 1 x 10^{-15}	-1.438 804 178 2 x 10^{-21}
c_{10} =	-1.641 477 635 5 x 10^{-17}	3.596 089 948 1 x 10^{-25}
c_{11} =	-3.967 361 951 6 x 10^{-20}	
c_{12} =	-5.582 732 872 1 x 10^{-23}	
c_{13} =	-3.465 784 201 3 x 10^{-26}	

Type E Thermocouples - coefficients of approximate inverse functions giving temperature, t_{90}, as a function of the thermoelectric voltage, E, in selected temperature and voltage ranges. The functions are of the form:

$$t_{90} = c_0 + c_1E + c_2E^2 + \ldots c_iE^i$$

where E is in microvolts and t_{90} is in degrees Celsius.

Temperature Range:	-200 to 0°C	0 to 1,000°C
Voltage Range:	**-8,825 to 0 μV**	**0 to 76,373 μV**
c_0 =	0.000 000 0	0.000 000 0 ....
c_1 =	1.697 728 8 x 10^{-2}	1.705 703 5 x 10^{-2}
c_2 =	-4.351 497 0 x 10^{-7}	-2.330 175 9 x 10^{-7}
c_3 =	-1.585 969 7 x 10^{-10}	6.543 558 5 x 10^{-12}
c_4 =	-9.250 287 1 x 10^{-14}	-7.356 274 9 x 10^{-17}
c_5 =	-2.608 431 4 x 10^{-17}	-1.789 600 1 x 10^{-21}
c_6 =	-4.136 019 9 x 10^{-21}	8.403 616 5 x 10^{-26}
c_7 =	-3.403 403 0 x 10^{-25}	-1.373 587 9 x 10^{-30}
c_8 =	-1.156 489 0 x 10^{-29}	1.062 982 3 x 10^{-35}
c_9 =		-3.244 708 7 x 10^{-41}
Error Range:	0.03 to -0.01°C	0.02 to -0.02°C

Type N Thermocouples - coefficients, c_i, of reference equations giving the thermoelectric voltage, E, as a function of temperature, t_{90}, for the indicated temperature ranges. The equations are of the form:

$$E = \sum_{i=0}^{n} c_i (t_{90})^i$$

where E is in microvolts and t_{90} is in degrees Celsius.

Temperature Range:	-270 to 0°C	0 to 1,300°C
c_0 =	0.000 000 000 0....	0.000 000 000 0....
c_1 =	2.615 910 596 2 x10^{1}	2.592 939 460 1 x 10^{1}
c_2 =	1.095 748 422 8 x 10^{-2}	1.571 014 188 0 x 10^{-2}
c_3 =	-9.384 111 155 4 x 10^{-5}	4.382 562 723 7 x 10^{-5}
c_4 =	-4.641 203 975 9 x 10^{-8}	-2.526 116 979 4 x 10^{-7}
c_5 =	-2.630 335 771 6 x 10^{-9}	6.431 181 933 9 x 10^{-10}
c_6 =	-2.265 343 800 3 x 10^{-11}	-1.006 347 151 9 x 10^{-12}
c_7 =	-7.608 930 079 1 x 10^{-14}	9.974 533 899 2 x 10^{-16}
c_8 =	-9.341 966 783 5 x 10^{-17}	-6.086 324 560 7 x 10^{-19}
c_9 =		2.084 922 933 9 x 10^{-22}
c_{10} =		-3.068 219 615 1 x 10^{-26}

Type N Thermocouples - coefficients of approximate inverse functions giving temperature, t_{90}, as a function of the thermoelectric voltage, E, in selected temperature and voltage ranges. The functions are of the form:

$$t_{90} = c_0 + c_1E + c_2E^2 + \ldots\ c_iE^i$$

where E is in microvolts and t_{90} is in degrees Celsius.

Temperature Range:	-200 to 0°C	0 to 600°C	600 to 1,300°C	0 to 1,300°C
Voltage Range:	-3,990 to 0 μV	0 to 20,613 μV	20,613 to 47,513 μV	0 47,513 μV
c_0 =	0.000 000 0	0.000 00	1.972 485 x 10^{1}	0.000 000 0 ....
c_1 =	3.843 684 7 x 10^{-2}	3.868 96 x 10^{-2}	3.300 943 x 10^{-2}	3.878 327 7 x 10^{-2}
c_2 =	1.101 048 5 x 10^{-6}	-1.082 67 x 10^{-6}	-3.915 159 x 10^{-7}	-1.161 234 4 x 10^{-6}
c_3 =	5.222 931 2 x 10^{-9}	4.702 05 x 10^{-11}	9.855 391 x 10^{-12}	6.952 565 5 x 10^{-11}
c_4 =	7.206 052 5 x 10^{-12}	-2.121 69 x 10^{-18}	-1.274 371 x 10^{-16}	-3.009 007 7 x 10^{-15}
c_5 =	5.848 858 6 x 10^{-15}	-1.172 72 x 10^{-19}	7.767 022 x 10^{-22}	8.831 158 4 x 10^{-20}
c_6 =	2.775 491 6 x 10^{-18}	5.392 80 x 10^{-24}		-1.621 383 9 x 10^{-24}
c_7 =	7.707.516 6 x 10^{-22}	-7.981 56 x 10^{-29}		1.669 336 2 x 10^{-29}
c_8 =	1.158 266 5 x 10^{-25}			-7.311 754 0 x 10^{-35}
c_9 =	7.313 886 8 x 10^{-30}			
Error Range:	0.03 to -0.02°C	0.03 to -0.02°C	0.02 to -0.04°C	0.06 to -0.06°C

Type B Thermocouples - coefficients, c_i, of reference equations giving the thermoelectric voltage, E, as a function of temperature, t_{90}, for the indicated temperature ranges. The equations are of the form:

$$E = \sum_{i=0}^{n} c_i (t_{90})^i$$

where E is in microvolts and t_{90} is in degrees Celsius.

Temperature Range:	0 to 630.615°C	630.615 to 1,820°C
c_0 =	0.000 000 000 0	-3.893 816 862 1 x 10^{3}
c_1 =	-2.465 081 834 6 x10^{-1}	2.857 174 747 0 x 10^{1}
c_2 =	5.904 042 117 1 x 10^{-3}	-8.488 510 478 5 x 10^{-2}
c_3 =	-1.325 793 163 6 x 10^{-6}	1.578 528 016 4 x 10^{-4}
c_4 =	1.566 829 190 1 x 10^{-9}	-1.683 534 486 4 x 10^{-7}
c_5 =	-1.694 452 924 0 x 10^{-12}	1.110 979 401 3 x 10^{-10}
c_6 =	6.229 034 709 4 x 10^{-16}	-4.451 543 103 3 x 10^{-14}
c_7 =		9.897 564 082 1 x 10^{-18}
c_8 =		-9.379 133 028 9 x 10^{-22}

Type B Thermocouples - coefficients of approximate inverse functions giving temperature, t_{90}, as a function of the thermoelectric voltage, E, in selected temperature and voltage ranges. The functions are of the form:

$$t_{90} = c_0 + c_1E + c_2E^2 + \ldots\ c_iE^i$$

where E is in microvolts and t_{90} is in degrees Celsius.

Temperature Range:	250 to 700°C	700 to 1,820°C
Voltage Range:	291 to 2,431 μV	2,431 to 13,820 μV
c_0 =	9.842 332 1 x 10^{1}	-2.131 507 1 x 10^{2}
c_1 =	6.997 150 0 x 10^{-1}	2.851 050 4 x 10^{-1}
c_2 =	-8.476 530 4 x 10^{-4}	-5.274 288 7 x 10^{-5}
c_3 =	1.005 264 4 x 10^{-6}	9.916 080 4 x 10^{-9}
c_4 =	-8.334 595 2 x 10^{-10}	-1.296 530 3 x 10^{-12}
c_5 =	4.550 854 2 x 10^{-13}	1.119 587 0 x 10^{-16}
c_6 =	-1.552 303 7 x 10^{-16}	-6.062 519 9 x 10^{-21}
c_7 =	2.988 675 0 x 10^{-20}	1.866 169 6 x 10^{-25}
c_8 =	-2.474 286 0 x 10^{-24}	-2.487 858 5 x 10^{-30}
Error Range:	0.03 to -0.02°C	0.02 to -0.01°C

ITS-90 Thermocouple Direct & Inverse Polynomials Cont'd

Type R Thermocouples - coefficients, c_i, of reference equations giving the thermoelectric voltage, E, as a function of temperature, t_{90}, for the indicated temperature ranges. The equations are of the for:

$$E = \sum_{i=0}^{n} c_i (t_{90})^i$$

where E is in microvolts and t_{90} is in degrees Celsius.

Temperature Range:	-50 to 1,064.18°C	1,064.18 to 1,664.5°C	1,664.5 to 1,768.1°C
c_0 =	0.000 000 000 0	2.951 579 253 16 x 103	1.522 321 182 09 x 10^{5}
c_1 =	5.289 617 297 65	-2.520 612 513 32	-2.688 198 885 45 x 10^{2}
c_2 =	1.391 665 897 82 x 10^{-2}	1.595 645 018 65 x 10^{-2}	1.712 802 804 71 x 10^{-1}
c_3 =	-2.388 556 930 17 x 10^{-5}	-7.640 859 475 76 x 10^{-6}	-3.458 957 064 53 x 10^{-5}
c_4 =	3.569 160 010 63 x 10^{-8}	2.053 052 910 24 x 10^{-9}	-9.346 339 710 46 x 10^{-12}
c_5 =	-4.623 476 662 98 x 10^{-11}	-2.933 596 681 73 x 10^{-13}	
c_6 =	5.007 774 410 34 x 10^{-14}		
c_7 =	-3.731 058 861 91 x 10^{-17}		
c_8 =	1.577 164 823 67 x 10^{-20}		
c_9 =	-2.810 386 252 51 x 10^{-24}		

Type R Thermocouples - coefficients of approximate inverse functions giving temperature, t_{90}, as a function of the thermoelectric voltage, E, in selected temperature and voltage ranges. The functions are of the form:

$$t_{90} = c_0 + c_1E + c_2E^2 + \ldots c_iE^i$$

where E is in microvolts and t_{90} is in degrees Celsius.

Temperature Range:	-50°C to 250°C	2,500 to 1,200°C	1,064 to 1,664.5°C	1,664.5 to 1,768.1°C
Voltage Range:	-226 to 1,923 µV	1,923 to 13,228 µV	11,361 to 19,739 µV	19,739 to 21,103 µV
c_0 =	0.000 000 0	1.334 584 505 x 10^{1}	-8.199 599 416 x 10^{1}	3.406 177 836 x 10^{4}
c_1 =	1.889 138 0 x 10^{-1}	1.472 644 573 x 10^{-1}	1.553 962 042 x 10^{-1}	-7.023 729 171 ....
c_3 =	1.306 861 9 x 10^{-7}	4.031 129 x 726 10^{-9}	4.279 433 549 x 10^{-10}	-5.582 903 813 x 10^{-4}
c_4 =	-2.270 358 0 x 10^{-10}	-6.249 428 360 x 10^{-13}	-1.191 577 910 x 10^{-14}	-1.952 394 635 x 10^{-8}
c_5 =	3.514 565 9 x 10^{-13}	6.468 412 046 x 10^{-17}	1.492 290 091 x 10^{-19}	2.560 740 231 x 10^{-13}
c_6 =	-3.895 390 0 x 10^{-16}	-4.458 750 426 x 10^{-21}		
c_7 =	2.823.947 1 x 10^{-19}	1.994 710 146 x 10^{-25}		
c_8 =	-1.260 728 1 x 10^{-22}	-5.313 401 790 x 10^{-30}		
c_9 =	3.135 361 1 x 10^{-26}	6.481 976 217 x 10^{-35}		
c_{10} =	-3.318 776 9 x 10^{-30}			
Error Range:	0.02 to -0.02°C	0.005 to -0.005°C	0.001 to -0.0005°C	0.002 to -0.001°C

Type S Thermocouples - coefficients, c_i, of reference equations giving the thermoelectric voltage, E, as a function of temperature, t_{90}, for the indicated temperature ranges. The equations are of the for:

$$E = \sum_{i=0}^{n} c_i (t_{90})^i$$

where E is in microvolts and t_{90} is in degrees Celsius.

Temperature Range:	-50 to 1,064.18°C	1,064.18 to 1,664.5°C	1,664.5 to 1,768.1°C
c_0 =	0.000 000 000 0	1.329 004 450 85 x 10^{3}	1.466 282 326 36 x 10^{5}
c_1 =	5.403 133 086 31....	3.345 093 113 44	-2.584 305 167 52 x 10^{2}
c_2 =	1.259 342 897 40 x 10^{-2}	6.548 051 928 18 x 10^{-3}	1.636 935 746 41 x 10^{-1}
c_3 =	-2.324 779 686 89 x 10^{-5}	-1.648 562 592 09 x 10^{-6}	-3.304 390 469 87 x 10^{-5}
c_4 =	3.220 288 230 36 x 10^{-8}	1.299 896 051 74 x 10^{-11}	-9.432 236 906 12 x 10^{-12}
c_5 =	-3.314 651 963 89 x 10^{-11}		
c_6 =	2.557 442 517 86 x 10^{-14}		
c_7 =	-1.250 688 713 93 x 10^{-17}		
c_8 =	2.714 431 761 45 x 10^{-21}		

Type S Thermocouples - coefficients of approximate inverse functions giving temperature, t_{90}, as a function of the thermoelectric voltage, E, in selected temperature and voltage ranges. The functions are of the form:

$$t_{90} = c_0 + c_1E + c_2E^2 + \ldots c_iE^i$$

where E is in microvolts and t_{90} is in degrees Celsius.

Temperature Range:	-50 to 250°C	250 to 1,200°C	1,064 to 1,664.5°C	1,664.5 to 1,768.1°C
Voltage Range:	-235 to 1,874 µV	1,874 to 11,950 µV	10,332 to 17,536 µV	17,536 to 18,693 µV
c_0 =	0.000 000 0	1.291 507 177 x 10^{1}	-8.087 801 117 x 10^{1}	5.333 875 126 x 10^{4}
c_1 =	1.849 494 60 x 10^{-1}	1.466 298 863 x 10^{-1}	1.621 573 104 x 10^{-1}	-1.235 892 298 x 10^{1}
c_2 =	-8.005 040 62 x 10^{-5}	-1.534 713 402 x 10^{-5}	-8.536 869 453 x 10^{-6}	1.092 657 613 x 10^{-3}
c_3 =	1.022 374 30 x 10^{-7}	3.145 945 973 x 10^{-9}	4.719 686 976 x 10^{-10}	-4.265 693 686 x 10^{-8}
c_4 =	-1.522 485 92 x 10^{-10}	-4.163 257 839 x 10^{-13}	-1.441 693 666 x 10^{-14}	6.247 205 420 x 10^{-13}
c_5 =	1.888 213 43 x 10^{-13}	3.187 963 771 x 10^{-17}	2.081 618 890 x 10^{-19}	
c_6 =	-1.590 859 41 x 10^{-16}	-1.291 637 500 x 10^{-21}		
c_7 =	8.230 278 80 x 10^{-20}	2.183 475 087 x 10^{-26}		
c_8 =	-2.341 819 44 x 10^{-23}	-1.447 379 511 x 10^{-31}		
c_9 =	2.797 862 60 x 10^{-27}	8.211 272 125 x 10^{-36}		
Error Range:	0.02 to -0.02°C	0.01 to -0.01°C	0.0002 to -0.0002°C	0.002 to -0.002°C