

| Termo-couple | Type U<br>IPTS68 | Type T<br>ITS90 | Type L<br>IPTS68 | Type J<br>ITS90 | Type K<br>ITS90 | Type N<br>ITS90 | Type S<br>ITS90 | Type R<br>ITS90 | Type B<br>ITS90 |
|--------------|------------------|-----------------|------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Temp. in °C  | mV               | µV              | mV               | µV              | µV              | µV              | µV              | µV              | µV              |
| -200         | -5,70            | -5603           | -8,15            | -7890           | -5891           | -3990           |                 |                 |                 |
| -150         | -4,69            | -4648           | -6,60            | -6500           | -4913           | -3336           |                 |                 |                 |
| -100         | -3,40            | -3379           | -4,75            | -4633           | -3554           | -2407           |                 |                 |                 |
| -50          | -1,85            | -1819           | -2,51            | -2431           | -1889           | -1269           | -236            | -226            |                 |
| -40          | -1,50            | -1475           | -2,03            | -1961           | -1527           | -1023           | -194            | -188            |                 |
| -30          | -1,14            | -1121           | -1,53            | -1482           | -1156           | -772            | -150            | -145            |                 |
| -20          | -0,77            | -757            | -1,02            | -995            | -778            | -518            | -103            | -100            |                 |
| -10          | -0,39            | -383            | -0,51            | -501            | -392            | -260            | -53             | -51             |                 |
| 0            | 0,00             | 0               | 0,00             | 0               | 0               | 0               | 0               | 0               | 0               |
| 10           | 0,40             | 391             | 0,52             | 507             | 397             | 261             | 55              | 54              | -2              |
| 20           | 0,80             | 790             | 1,05             | 1019            | 798             | 525             | 113             | 111             | -3              |
| 30           | 1,21             | 1196            | 1,58             | 1537            | 1203            | 793             | 173             | 171             | -2              |
| 40           | 1,63             | 1612            | 2,11             | 2059            | 1612            | 1065            | 235             | 232             | 0               |
| 50           | 2,05             | 2036            | 2,65             | 2585            | 2023            | 1340            | 299             | 296             | 2               |
| 60           | 2,48             | 2468            | 3,19             | 3116            | 2436            | 1619            | 365             | 363             | 6               |
| 70           | 2,91             | 2909            | 3,73             | 3650            | 2851            | 1902            | 433             | 431             | 11              |
| 80           | 3,35             | 3358            | 4,27             | 4187            | 3267            | 2189            | 502             | 501             | 17              |
| 90           | 3,80             | 3814            | 4,82             | 4726            | 3682            | 2480            | 573             | 573             | 25              |
| 100          | 4,25             | 4279            | 5,37             | 5269            | 4096            | 2774            | 646             | 647             | 33              |
| 110          | 4,71             | 4750            | 5,92             | 5814            | 4509            | 3072            | 720             | 723             | 43              |
| 120          | 5,18             | 5228            | 6,47             | 6360            | 4920            | 3374            | 795             | 800             | 53              |
| 130          | 5,65             | 5714            | 7,03             | 6909            | 5328            | 3680            | 872             | 879             | 65              |
| 140          | 6,13             | 6206            | 7,59             | 7459            | 5735            | 3989            | 950             | 959             | 78              |
| 150          | 6,62             | 6704            | 8,15             | 8010            | 6138            | 4302            | 1029            | 1041            | 92              |
| 160          | 7,12             | 7209            | 8,71             | 8562            | 6540            | 4618            | 1110            | 1124            | 107             |
| 170          | 7,63             | 7720            | 9,27             | 9115            | 6941            | 4937            | 1191            | 1208            | 123             |
| 180          | 8,15             | 8237            | 9,83             | 9669            | 7340            | 5259            | 1273            | 1294            | 141             |
| 190          | 8,67             | 8759            | 10,39            | 10224           | 7739            | 5585            | 1357            | 1381            | 159             |
| 200          | 9,20             | 9288            | 10,95            | 10779           | 8138            | 5913            | 1441            | 1469            | 178             |
| 210          | 9,74             | 9822            | 11,51            | 11334           | 8539            | 6245            | 1526            | 1558            | 199             |
| 220          | 10,29            | 10362           | 12,07            | 11889           | 8940            | 6579            | 1612            | 1648            | 220             |
| 230          | 10,85            | 10907           | 12,63            | 12445           | 9343            | 6916            | 1698            | 1739            | 243             |
| 240          | 11,41            | 11458           | 13,19            | 13000           | 9747            | 7255            | 1786            | 1831            | 267             |
| 250          | 11,98            | 12013           | 13,75            | 13555           | 10153           | 7597            | 1874            | 1923            | 291             |
| 260          | 12,55            | 12574           | 14,31            | 14110           | 10561           | 7941            | 1962            | 2017            | 317             |
| 270          | 13,13            | 13139           | 14,88            | 14665           | 10971           | 8288            | 2052            | 2112            | 344             |
| 280          | 13,71            | 13709           | 15,44            | 15219           | 11382           | 8637            | 2141            | 2207            | 372             |
| 290          | 14,30            | 14283           | 16,00            | 15773           | 11795           | 8988            | 2232            | 2304            | 401             |
| 300          | 14,90            | 14862           | 16,56            | 16327           | 12209           | 9341            | 2323            | 2401            | 431             |
| 310          | 15,50            | 15445           | 17,12            | 16881           | 12624           | 9696            | 2415            | 2498            | 462             |
| 320          | 16,10            | 16032           | 17,68            | 17434           | 13040           | 10054           | 2507            | 2597            | 494             |
| 330          | 16,70            | 16624           | 18,24            | 17986           | 13457           | 10413           | 2599            | 2696            | 527             |
| 340          | 17,31            | 17219           | 18,80            | 18538           | 13874           | 10774           | 2692            | 2796            | 561             |
| 350          | 17,92            | 17819           | 19,36            | 19090           | 14293           | 11136           | 2786            | 2896            | 596             |
| 360          | 18,53            | 18422           | 19,92            | 19642           | 14713           | 11501           | 2880            | 2997            | 632             |
| 370          | 19,14            | 19030           | 20,48            | 20194           | 15133           | 11867           | 2974            | 3099            | 669             |
| 380          | 19,76            | 19641           | 21,04            | 20745           | 15554           | 12234           | 3069            | 3201            | 707             |
| 390          | 20,38            | 20255           | 21,60            | 21297           | 15975           | 12603           | 3164            | 3304            | 746             |
| 400          | 21,00            | 20872           | 22,16            | 21848           | 16397           | 12974           | 3259            | 3408            | 787             |
| 410          | 21,62            |                 | 22,72            | 22400           | 16820           | 13346           | 3355            | 3512            | 828             |
| 420          | 22,25            |                 | 23,29            | 22952           | 17243           | 13719           | 3451            | 3616            | 870             |
| 430          | 22,88            |                 | 23,86            | 23504           | 17667           | 14094           | 3548            | 3721            | 913             |
| 440          | 23,51            |                 | 24,43            | 24057           | 18091           | 14469           | 3645            | 3827            | 957             |
| 450          | 24,15            |                 | 25,00            | 24610           | 18516           | 14846           | 3742            | 3933            | 1002            |
| 460          | 24,79            |                 | 25,57            | 25164           | 18941           | 15225           | 3840            | 4040            | 1048            |
| 470          | 25,44            |                 | 26,14            | 25720           | 19366           | 15604           | 3938            | 4147            | 1095            |
| 480          | 26,09            |                 | 26,71            | 26276           | 19792           | 15984           | 4036            | 4255            | 1143            |
| 490          | 26,75            |                 | 27,28            | 26834           | 20218           | 16366           | 4134            | 4363            | 1192            |
| 500          | 27,41            |                 | 27,85            | 27393           | 20644           | 16748           | 4233            | 4471            | 1242            |

| Termo-couple | Type U<br>IPITS68 | Type T<br>ITS90 | Type L<br>IPITS68 | Type J<br>ITS90 | Type K<br>ITS90 | Type N<br>ITS90 | Type S<br>ITS90 | Type R<br>ITS90 | Type B<br>ITS90 |
|--------------|-------------------|-----------------|-------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Temp. in °C  | mV                | µV              | mV                | µV              | µV              | µV              | µV              | µV              | µV              |
| 510          | 28,08             |                 | 28,43             | 27953           | 21071           | 17131           | 4332            | 4580            | 1293            |
| 520          | 28,75             |                 | 29,01             | 28516           | 21497           | 17515           | 4432            | 4690            | 1344            |
| 530          | 29,43             |                 | 29,59             | 29080           | 21924           | 17900           | 4532            | 4800            | 1397            |
| 540          | 30,11             |                 | 30,17             | 29647           | 22350           | 18286           | 4632            | 4910            | 1451            |
| 550          | 30,80             |                 | 30,75             | 30216           | 22776           | 18672           | 4732            | 5021            | 1505            |
| 560          | 31,49             |                 | 31,33             | 30788           | 23203           | 19059           | 4833            | 5133            | 1561            |
| 570          | 32,19             |                 | 31,91             | 31362           | 23629           | 19447           | 4934            | 5245            | 1617            |
| 580          | 32,89             |                 | 32,49             | 31939           | 24055           | 19835           | 5035            | 5357            | 1675            |
| 590          | 33,60             |                 | 33,08             | 32519           | 24480           | 20224           | 5137            | 5470            | 1733            |
| 600          | 34,31             |                 | 33,67             | 33102           | 24905           | 20613           | 5239            | 5583            | 1792            |
| 610          |                   |                 | 34,26             | 33689           | 25330           | 21003           | 5341            | 5697            | 1852            |
| 620          |                   |                 | 34,85             | 34279           | 25755           | 21393           | 5443            | 5812            | 1913            |
| 630          |                   |                 | 35,44             | 34873           | 26179           | 21784           | 5546            | 5926            | 1975            |
| 640          |                   |                 | 36,04             | 35470           | 26602           | 22175           | 5649            | 6041            | 2037            |
| 650          |                   |                 | 36,64             | 36071           | 27025           | 22566           | 5753            | 6157            | 2101            |
| 660          |                   |                 | 37,25             | 36675           | 27447           | 22958           | 5857            | 6273            | 2165            |
| 670          |                   |                 | 37,85             | 37284           | 27869           | 23350           | 5961            | 6390            | 2230            |
| 680          |                   |                 | 38,47             | 37896           | 28289           | 23742           | 6065            | 6507            | 2296            |
| 690          |                   |                 | 39,09             | 38512           | 28710           | 24134           | 6170            | 6625            | 2363            |
| 700          |                   |                 | 39,72             | 39132           | 29129           | 24527           | 6275            | 6743            | 2431            |
| 710          |                   |                 | 40,35             | 39755           | 29548           | 24919           | 6381            | 6861            | 2499            |
| 720          |                   |                 | 40,98             | 40382           | 29965           | 25312           | 6486            | 6980            | 2569            |
| 730          |                   |                 | 41,62             | 41012           | 30382           | 25705           | 6593            | 7100            | 2639            |
| 740          |                   |                 | 42,27             | 41645           | 30798           | 26098           | 6699            | 7220            | 2710            |
| 750          |                   |                 | 42,92             | 42281           | 31213           | 26491           | 6806            | 7340            | 2782            |
| 760          |                   |                 | 43,57             | 42919           | 31628           | 26883           | 6913            | 7461            | 2854            |
| 770          |                   |                 | 44,23             | 43559           | 32041           | 27276           | 7020            | 7583            | 2928            |
| 780          |                   |                 | 44,89             | 44203           | 32453           | 27669           | 7128            | 7705            | 3002            |
| 790          |                   |                 | 45,55             | 44848           | 32865           | 28062           | 7236            | 7827            | 3078            |
| 800          |                   |                 | 46,22             | 45494           | 33275           | 28455           | 7345            | 7950            | 3154            |
| 810          |                   |                 | 46,89             | 46141           | 33685           | 28847           | 7454            | 8073            | 3230            |
| 820          |                   |                 | 47,57             | 46786           | 34093           | 29239           | 7563            | 8197            | 3308            |
| 830          |                   |                 | 48,25             | 47431           | 34501           | 29632           | 7673            | 8321            | 3386            |
| 840          |                   |                 | 48,94             | 48074           | 34908           | 30024           | 7783            | 8446            | 3466            |
| 850          |                   |                 | 49,63             | 48715           | 35313           | 30416           | 7893            | 8571            | 3546            |
| 860          |                   |                 | 50,32             | 49353           | 35718           | 30807           | 8003            | 8697            | 3626            |
| 870          |                   |                 | 51,02             | 49989           | 36121           | 31199           | 8114            | 8823            | 3708            |
| 880          |                   |                 | 51,72             | 50622           | 36524           | 31590           | 8226            | 8950            | 3790            |
| 890          |                   |                 | 52,43             | 51251           | 36925           | 31981           | 8337            | 9077            | 3873            |
| 900          |                   |                 | 53,14             | 51877           | 37326           | 32371           | 8449            | 9205            | 3957            |
| 910          |                   |                 |                   | 52500           | 37725           | 32761           | 8562            | 9333            | 4041            |
| 920          |                   |                 |                   | 53119           | 38124           | 33151           | 8674            | 9461            | 4127            |
| 930          |                   |                 |                   | 53735           | 38522           | 33541           | 8787            | 9590            | 4213            |
| 940          |                   |                 |                   | 54347           | 38918           | 33930           | 8900            | 9720            | 4299            |
| 950          |                   |                 |                   | 54956           | 39314           | 34319           | 9014            | 9850            | 4387            |
| 960          |                   |                 |                   | 55561           | 39708           | 34707           | 9128            | 9980            | 4475            |
| 970          |                   |                 |                   | 56164           | 40101           | 35095           | 9242            | 10111           | 4564            |
| 980          |                   |                 |                   | 56763           | 40494           | 35482           | 9357            | 10242           | 4653            |
| 990          |                   |                 |                   | 57360           | 40885           | 35869           | 9472            | 10374           | 4743            |
| 1000         |                   |                 |                   | 57953           | 41276           | 36256           | 9587            | 10506           | 4834            |
| 1010         |                   |                 |                   | 58545           | 41665           | 36641           | 9703            | 10638           | 4926            |
| 1020         |                   |                 |                   | 59134           | 42053           | 37027           | 9819            | 10771           | 5018            |
| 1030         |                   |                 |                   | 59721           | 42440           | 37411           | 9935            | 10905           | 5111            |
| 1040         |                   |                 |                   | 60307           | 42826           | 37795           | 10051           | 11039           | 5205            |
| 1050         |                   |                 |                   | 60890           | 43211           | 38179           | 10168           | 11173           | 5299            |
| 1060         |                   |                 |                   | 61473           | 43595           | 38562           | 10285           | 11307           | 5394            |
| 1070         |                   |                 |                   | 62054           | 43978           | 38944           | 10403           | 11442           | 5489            |
| 1080         |                   |                 |                   | 62634           | 44359           | 39326           | 10520           | 11578           | 5585            |
| 1090         |                   |                 |                   | 63214           | 44740           | 39706           | 10638           | 11714           | 5682            |
| 1100         |                   |                 |                   | 63792           | 45119           | 40087           | 10757           | 11850           | 5780            |
| 1110         |                   |                 |                   | 64370           | 45497           | 40466           | 10875           | 11986           | 5878            |
| 1120         |                   |                 |                   | 64948           | 45873           | 40845           | 10994           | 12123           | 5976            |
| 1130         |                   |                 |                   | 65525           | 46249           | 41223           | 11113           | 12260           | 6075            |
| 1140         |                   |                 |                   | 66102           | 46623           | 41600           | 11232           | 12397           | 6175            |
| 1150         |                   |                 |                   | 66679           | 46995           | 41976           | 11351           | 12535           | 6276            |

| Termo-couple | Type U<br>IPTS68 | Type T<br>ITS90 | Type L<br>IPTS68 | Type J<br>ITS90 | Type K<br>ITS90 | Type N<br>ITS90 | Type S<br>ITS90 | Type R<br>ITS90 | Type B<br>ITS90 |
|--------------|------------------|-----------------|------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Temp. in °C  | mV               | µV              | mV               | µV              | µV              | µV              | µV              | µV              | µV              |
| 1160         |                  |                 |                  | 67255           | 47367           | 42352           | 11471           | 12673           | 6377            |
| 1170         |                  |                 |                  | 67831           | 47737           | 42727           | 11590           | 12812           | 6478            |
| 1180         |                  |                 |                  | 68406           | 48105           | 43101           | 11710           | 12950           | 6580            |
| 1190         |                  |                 |                  | 68980           | 48473           | 43474           | 11830           | 13089           | 6683            |
| 1200         |                  |                 |                  | 69553           | 48838           | 43846           | 11951           | 13228           | 6786            |
| 1210         |                  |                 |                  |                 | 49202           | 44218           | 12071           | 13367           | 6890            |
| 1220         |                  |                 |                  |                 | 49565           | 44588           | 12191           | 13507           | 6995            |
| 1230         |                  |                 |                  |                 | 49926           | 44958           | 12312           | 13646           | 7100            |
| 1240         |                  |                 |                  |                 | 50286           | 45326           | 12433           | 13786           | 7205            |
| 1250         |                  |                 |                  |                 | 50644           | 45694           | 12554           | 13926           | 7311            |
| 1260         |                  |                 |                  |                 | 51000           | 46060           | 12675           | 14066           | 7417            |
| 1270         |                  |                 |                  |                 | 51355           | 46425           | 12796           | 14207           | 7524            |
| 1280         |                  |                 |                  |                 | 51708           | 46789           | 12917           | 14347           | 7632            |
| 1290         |                  |                 |                  |                 | 52060           | 47152           | 13038           | 14488           | 7740            |
| 1300         |                  |                 |                  |                 | 52410           | 47513           | 13159           | 14629           | 7848            |
| 1310         |                  |                 |                  |                 | 52759           |                 | 13280           | 14770           | 7957            |
| 1320         |                  |                 |                  |                 | 53106           |                 | 13402           | 14911           | 8066            |
| 1330         |                  |                 |                  |                 | 53451           |                 | 13523           | 15052           | 8176            |
| 1340         |                  |                 |                  |                 | 53795           |                 | 13644           | 15193           | 8286            |
| 1350         |                  |                 |                  |                 | 54138           |                 | 13766           | 15334           | 8397            |
| 1360         |                  |                 |                  |                 | 54479           |                 | 13887           | 15475           | 8508            |
| 1370         |                  |                 |                  |                 | 54819           |                 | 14009           | 15616           | 8620            |
| 1380         |                  |                 |                  |                 |                 |                 | 14130           | 15758           | 8731            |
| 1390         |                  |                 |                  |                 |                 |                 | 14251           | 15899           | 8844            |
| 1400         |                  |                 |                  |                 |                 |                 | 14373           | 16040           | 8956            |
| 1410         |                  |                 |                  |                 |                 |                 | 14494           | 16181           | 9069            |
| 1420         |                  |                 |                  |                 |                 |                 | 14615           | 16323           | 9182            |
| 1430         |                  |                 |                  |                 |                 |                 | 14736           | 16464           | 9296            |
| 1440         |                  |                 |                  |                 |                 |                 | 14857           | 16605           | 9410            |
| 1450         |                  |                 |                  |                 |                 |                 | 14978           | 16746           | 9524            |
| 1460         |                  |                 |                  |                 |                 |                 | 15099           | 16887           | 9639            |
| 1470         |                  |                 |                  |                 |                 |                 | 15220           | 17028           | 9753            |
| 1480         |                  |                 |                  |                 |                 |                 | 15341           | 17169           | 9868            |
| 1490         |                  |                 |                  |                 |                 |                 | 15461           | 17310           | 9984            |
| 1500         |                  |                 |                  |                 |                 |                 | 15582           | 17451           | 10099           |
| 1510         |                  |                 |                  |                 |                 |                 | 15702           | 17591           | 10215           |
| 1520         |                  |                 |                  |                 |                 |                 | 15822           | 17732           | 10331           |
| 1530         |                  |                 |                  |                 |                 |                 | 15942           | 17872           | 10447           |
| 1540         |                  |                 |                  |                 |                 |                 | 16062           | 18012           | 10563           |
| 1550         |                  |                 |                  |                 |                 |                 | 16182           | 18152           | 10679           |
| 1560         |                  |                 |                  |                 |                 |                 | 16301           | 18292           | 10796           |
| 1570         |                  |                 |                  |                 |                 |                 | 16420           | 18431           | 10913           |
| 1580         |                  |                 |                  |                 |                 |                 | 16539           | 18571           | 11029           |
| 1590         |                  |                 |                  |                 |                 |                 | 16658           | 18710           | 11146           |
| 1600         |                  |                 |                  |                 |                 |                 | 16777           | 18849           | 11263           |
| 1610         |                  |                 |                  |                 |                 |                 | 16895           | 18988           | 11380           |
| 1620         |                  |                 |                  |                 |                 |                 | 17013           | 19126           | 11497           |
| 1630         |                  |                 |                  |                 |                 |                 | 17131           | 19264           | 11614           |
| 1640         |                  |                 |                  |                 |                 |                 | 17249           | 19402           | 11731           |
| 1650         |                  |                 |                  |                 |                 |                 | 17366           | 19540           | 11848           |
| 1660         |                  |                 |                  |                 |                 |                 | 17483           | 19677           | 11965           |
| 1670         |                  |                 |                  |                 |                 |                 | 17600           | 19814           | 12082           |
| 1680         |                  |                 |                  |                 |                 |                 | 17717           | 19951           | 12199           |
| 1690         |                  |                 |                  |                 |                 |                 | 17832           | 20087           | 12316           |
| 1700         |                  |                 |                  |                 |                 |                 | 17947           | 20222           | 12433           |
| 1710         |                  |                 |                  |                 |                 |                 | 18061           | 20356           | 12549           |
| 1720         |                  |                 |                  |                 |                 |                 | 18174           | 20488           | 12666           |
| 1730         |                  |                 |                  |                 |                 |                 | 18285           | 20620           | 12782           |
| 1740         |                  |                 |                  |                 |                 |                 | 18395           | 20749           | 12898           |
| 1750         |                  |                 |                  |                 |                 |                 | 18503           | 20877           | 13014           |
| 1760         |                  |                 |                  |                 |                 |                 | 18609           | 21003           | 13130           |
| 1770         |                  |                 |                  |                 |                 |                 |                 |                 | 13246           |
| 1780         |                  |                 |                  |                 |                 |                 |                 |                 | 13361           |
| 1790         |                  |                 |                  |                 |                 |                 |                 |                 | 13476           |
| 1800         |                  |                 |                  |                 |                 |                 |                 |                 | 13591           |