

J Duplex Insulated Iron-Constantan Duplex ANSI Type J

ANSI Color Code: Positive Wire, White; Negative Wire, Red; Overall, Brown

OMEGA Engineering does not use reprocessed PFA or PVC in manufacturing thermocouple wire

MOST POPULAR MODELS HIGHLIGHTED!

| Insulation | AWG No. | Model Number | Price/1000' | SLE/1000' ^{†††} | Type Wire | Insulation | | Max Temp | | Nominal Size mm (inches) | Wt. [†] kg/300m (lb/1000') |
|---|-----------|-----------------------|-------------|--------------------------|-----------|----------------------|---------------------------|------------------|------------------------|---------------------------|-------------------------------------|
| | | | | | | Conductor | Overall | °C | °F | | |
| Ceramic* | 14 | XC-J-14 | \$3300 | \$3795 | Solid | Nextel Ceramic | Nextel Ceramic | 590 | 1100 | 3.6 x 5.0 (0.140 x 0.200) | 18 (38) |
| | 20 | XC-J-20 | 2475 | 2850 | Solid | | | 480 | 900 | 3.4 x 4.8 (0.135 x 0.190) | 8 (16) |
| | 20 | XT-J-20 | 2365 | 2725 | Solid | | | 480 | 900 | 2.7 x 3.9 (0.105 x 0.155) | 7 (15) |
| | 24 | XL-J-20 | 2310 | 2655 | Solid | | | 480 | 900 | 2.4 x 3.4 (0.095 x 0.135) | 7 (14) |
| | 24 | XC-J-24 | 2365 | 2725 | Solid | | | 370 | 700 | 2.9 x 4.4 (0.115 x 0.175) | 6 (12) |
| | 24 | XT-J-24 | 2255 | 2595 | Solid | | | 370 | 700 | 2.2 x 3.4 (0.088 x 0.132) | 5 (11) |
| | 24 | XL-J-24 | 2200 | 2530 | Solid | | | 370 | 700 | 2.0 x 3.0 (0.078 x 0.116) | 5 (10) |
| Silica* | 14 | XS-J-14 | 1980 | 2275 | Solid | Silica | Silica | 590 | 1100 | 3.6 x 5.0 (0.140 x 0.200) | 16 (35) |
| | 20 | XS-J-20 | 1375 | 1585 | Solid | | | 480 | 900 | 2.7 x 3.9 (0.105 x 0.155) | 6 (12) |
| | 24 | XS-J-24 | 1265 | 1460 | Solid | | | 370 | 700 | 2.2 x 3.4 (0.088 x 0.132) | 5 (10) |
| High Temp. Glass** | 20 | HH-J-20 | 480 | 515 | Solid | High Temp. Glass | High Temp. Glass | 480 | 900 | 1.5 x 2.7 (0.060 x 0.105) | 4 (9) |
| | 24 | HH-J-24 | 375 | 365 | Solid | | | 370 | 700 | 1.1 x 2.2 (0.055 x 0.090) | 3 (5) |
| Glass | 14 | GG-J-14 | 1085 | 1245 | Solid | Glass Braid | Glass Braid | 480 | 900 | 1.5 x 2.4 (0.060 x 0.095) | 4 (9) |
| | 20 | GG-J-20 | 370 | 425 | Solid | | | 480 | 900 | 1.5 x 2.5 (0.060 x 0.100) | 4 (9) |
| | 20 | GG-J-20S | 510 | 610 | 7 x 28 | | | 480 | 900 | 1.3 x 2.0 (0.050 x 0.080) | 3 (5) |
| | 24 | GG-J-24 | 265 | 305 | Solid | | | 370 | 700 | 1.3 x 2.2 (0.050 x 0.085) | 3 (5) |
| | 24 | GG-J-24S | 360 | 430 | 7 x 32 | | | 370 | 700 | 1.1 x 2.0 (0.045 x 0.075) | 2 (4) |
| | 28 | GG-J-28 | 225 | 260 | Solid | | | 370 | 700 | 1.0 x 1.4 (0.040 x 0.055) | 2 (3) |
| | 30 | GG-J-30 | 230 | 265 | Solid | | | 320 | 600 | 0.9 x 1.3 (0.037 x 0.050) | 2 (3) |
| | 36 | GG-J-36 | 310 | 360 | Solid | | | 320 | 600 | 0.8 x 1.1 (0.033 x 0.045) | 1 (2) |
| Glass with Stainless Steel Overbraid | 20 | GG-J-20-SB | 710 | 850 | Solid | Glass | SS Braid over Glass | 482 | 900 | 2.3 x 3.0 (0.090 x 0.120) | 6 (14) |
| | 20S | GG-J-20S-SB | 845 | 1015 | 7 x 28 | | | 482 | 900 | 2.3 x 3.2 (0.090 x 0.127) | 7 (15) |
| | 24 | GG-J-24-SB | 495 | 595 | Solid | | | 482 | 900 | 2.2 x 3.0 (0.085 x 0.117) | 5 (11) |
| | 24S | GG-J-24S-SB | 590 | 705 | 7 x 32 | | | 482 | 900 | 2.0 x 2.8 (0.080 x 0.110) | 5 (11) |
| Kapton Fused Polyimide Tape | 20 | KK-J-20 | 870 | 990 | Solid | Fused Polyimide Tape | Fused Polyimide Tape | 316 | 600 | 1.5 x 2.5 (0.060 x 0.100) | 5 (11) |
| | 20S | KK-J-20S | 1110 | 1270 | 7 x 28 | | | 316 | 600 | 1.5 x 2.7 (0.060 x 0.105) | 5 (11) |
| | 24 | KK-J-24 | 660 | 755 | Solid | | | 316 | 600 | 1.3 x 1.9 (0.050 x 0.075) | 3 (6) |
| | 24S | KK-J-24S | 825 | 945 | 7 x 32 | | | 316 | 600 | 1.3 x 2.2 (0.050 x 0.085) | 3 (6) |
| | 30 | KK-J-30 | 650 | 750 | Solid | | | 316 | 600 | 1.0 x 1.4 (0.040 x 0.055) | 3 (5) |
| PFA and Glass | 30 | TG-J-30 | 480 | - | Solid | PFA | Glass Braid | 260 | 500 | 0.9 x 1.2 (0.034 x 0.047) | 1 (2) |
| | 36 | TG-J-36 | 550 | - | Solid | | | 260 | 500 | 0.7 x 1.0 (0.028 x 0.038) | 1 (2) |
| | 40 | TG-J-40 | 620 | - | Solid | | | 260 | 500 | 0.7 x 0.9 (0.026 x 0.035) | 1 (2) |
| Neoflon PFA (High Performance) | 20 | TT-J-20 | 470 | 540 | Solid | PFA | PFA | 260 | 500 | 1.7 x 3.0 (0.068 x 0.116) | 5 (11) |
| | 20 | TT-J-20S | 620 | 745 | 7 x 28 | | | 260 | 500 | 1.9 x 3.2 (0.073 x 0.126) | 5 (11) |
| | 22 | TT-J-22S | 610 | 730 | 7 x 30 | | | 260 | 500 | 1.7 x 3.4 (0.065 x 0.133) | 4 (9) |
| | 24 | TT-J-24 | 370 | 405 | Solid | | | 260 | 500 | 1.4 x 2.4 (0.056 x 0.093) | 3 (6) |
| | 24 | TT-J-24S | 480 | 570 | 7 x 32 | | | 260 | 500 | 1.6 x 2.6 (0.063 x 0.102) | 3 (6) |
| | 30 | TT-J-30 ^{††} | 350 | 385 | Solid | | | 260 | 500 | 0.6 x 1.0 (0.024 x 0.040) | 1 (2) |
| | 36 | TT-J-36 ^{††} | 400 | 440 | Solid | | | 260 | 500 | 0.5 x 0.8 (0.019 x 0.030) | 1 (2) |
| | 40 | TT-J-40 ^{††} | 530 | 580 | Solid | | | 260 | 500 | 0.4 x 0.7 (0.017 x 0.026) | 1 (2) |
| PFA Polymer w/Twisted & Shielded Conductors | 20 | TT-J-20-TWSH | 990 | 1140 | Solid | PFA Polymer | PFA Polymer and Shielding | 260 | 500 | 3.7 (0.15) | 9 (20) |
| | 20S | TT-J-20S-TWSH | 1190 | 1430 | 7 x 28 | | | 260 | 500 | 3.8 (0.15) | 9 (20) |
| | 24 | TT-J-24-TWSH | 585 | 675 | Solid | | | 260 | 500 | 2.7 (0.11) | 4 (9) |
| | 24S | TT-J-24S-TWSH | 700 | 845 | 7 x 32 | | | 260 | 500 | 2.9 (0.12) | 4 (9) |
| | 20 | FF-J-20 | 590 | 735 | Solid | | | FEP | FEP | 200 | 392 |
| 24 | FF-J-24 | 385 | 485 | Solid | 200 | 392 | 1.7 x 3.0 (0.056 x 0.092) | | | 3 (5) | |
| FEP Polymer w/Twisted & Shielded Conductors | 20 | FF-J-20-TWSH | 750 | 860 | Solid | FEP Polymer | FEP Polymer and Shielding | 200 | 392 | 3.7 (0.15) | 9 (20) |
| | 20S | FF-J-20S-TWSH | 895 | 1080 | 7 x 28 | | | 200 | 392 | 3.8 (0.15) | 9 (20) |
| | 24 | FF-J-24-TWSH | 440 | 505 | Solid | | | 200 | 392 | 2.7 (0.11) | 4 (9) |
| | 24S | FF-J-24S-TWSH | 535 | 635 | 7 x 32 | | | 200 | 392 | 2.9 (0.12) | 4 (9) |
| | 20 | TFE-J-20 | 450 | 510 | Solid | | | TFE Tape Polymer | Fused TFE Tape Polymer | 260 | 500 |
| 20S | TFE-J-20S | 750 | 650 | 7 x 28 | 260 | 500 | 1.5 x 2.7 (0.060 x 0.105) | | | 5 (11) | |
| 24 | TFE-J-24 | 315 | 350 | Solid | 260 | 500 | 1.3 x 1.9 (0.050 x 0.075) | | | 3 (6) | |
| 24S | TFE-J-24S | 370 | 415 | 7 x 32 | 260 | 500 | 1.3 x 2.2 (0.050 x 0.085) | | | 3 (6) | |
| Polyvinyl | 24 | PR-J-24 | 143 | 165 | Solid | Polyvinyl | (Rip Cord)*** | | | 105 | 221 |
| | 24 | PP-J-24S | 260 | 310 | 7 x 32 | | | 105 | 221 | 2.0 x 3.4 (0.082 x 0.134) | 3 (5) |

* Has color tracers on jacket and conductors, **HH Wire has trace thread in Positive leg, Negative leg is red, overall has trace thread.

*** Two insulated leads bonded together, but with no overjacket.

† Weight of spool and wire rounded to the next highest lb. (does not include packing material).

†† Overall color clear

††† To order special limits of error wire, add "-SLE" to model number before spool length

Ordering Example: GG-J-24-SLE-1000, 1000' (300 m) of Type J duplex insulated special limits of error thermocouple wire, \$305.

Now You Can Add Stainless Steel, Inconel or Tinned Copper Overbraiding to Your Insulated Thermocouple Wire! See Page H-43.

Note: Published prices are based on market value at time of printing and are subject to change due to Nickel surcharges, Chromium and precious-metal market fluctuations.



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