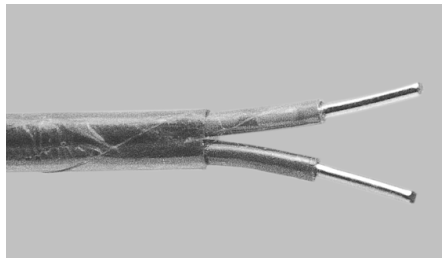


SERV-RITE Wire and Cable

Thermocouple Wire Double Polyimide Insulated SERIES 513



The SERIES 513 is the ultimate polyimide insulated wire. The multiple polyimide tape layers along with fully color coded conductors make this insulation system the choice for high reliability circuits. Abrasion, moisture and chemical resistance are all enhanced by additional layers of tape and application of polyimide varnish.

The actual construction consists of a double polyimide tape layer applied to each conductor. The tape is fused by heating. Each insulated single conductor is then coated to impart the proper color code. Finally, the insulated conductors are laid parallel and covered by a double, heat fused layer of polyimide tape. When applications require higher heat resistance, it is necessary to specify fiberglass insulation.

Popular Constructions

Grade	AWG	Wire Type	Limits of Error	Type K	Type J
Thermocouple	20	Solid	Standard	K20-1-513	J20-1-513
			Special	K20-2-513	J20-2-513
	Stranded	Standard	K20-3-513	J20-3-513	
		Special	K20-4-513	J20-4-513	
	24	Solid	Standard	K24-1-513	J24-1-513
			Special	K24-2-513	J24-2-513
30	Solid	Special	K30-2-513	J24-2-513	

Note: Bolded products are stocked and shipped in 100, 250, 500 and 1000 foot spools.

Available Constructions

1. ASTM E 230 Calibrations

E K T
J N

2-3. AWG

30 24 20
 24 stranded (7/32) 20 stranded (7/28)

4. Conductor Type/Tolerance

- 1 = Thermocouple grade, solid wire, standard tolerance
- 2 = Thermocouple grade, solid wire, special tolerance
- 3 = Thermocouple grade, stranded wire, standard tolerance
- 4 = Thermocouple grade, stranded wire, special tolerance

Note: Minimum order sizes apply for non-stock constructions.

Performance Capabilities

- Continuous temperature rating 315°C (600°F)
- Double polyimide fused tape insulation
- Colored coated conductors used to indicate calibration type

- Available with optional metallic overbraid for additional abrasion resistance

Applications

- Aerospace
- Petrochemical
- Plastics

*Continuous Use Temp.	*Single Use Temp.
315°C (600°F)	430°C (800°F)

Resistance Properties		
Moisture	Chemical	Abrasion
Excellent	Excellent	Excellent

Wire Specifications

AWG	Nominal Conductor Size in. (mm)	Nominal Insulation Thickness		Nominal Overall Size in. (mm)	Approximate Shipping Weight lbs/1000 ft (kg/km)
		Conductor in. (mm)	Overall in. (mm)		
30	0.010 (0.254)	0.006 (0.152)	0.006 (0.152)	0.038 x 0.058 (0.097 x 1.47)	3 (4.5)
24	0.020 (0.508)	0.006 (0.152)	0.006 (0.152)	0.054 x 0.076 (1.37 x 1.93)	5 (7.5)
24 S** (7/32)	0.024 (0.610)	0.006 (0.152)	0.006 (0.152)	0.056 x 0.084 (1.42 x 2.13)	6 (8.9)
20	0.032 (0.813)	0.006 (0.152)	0.006 (0.152)	0.065 x 0.100 (1.65 x 2.54)	10 (14.9)
20 S** (7/28)	0.038 (0.965)	0.006 (0.152)	0.006 (0.152)	0.070 x 0.112 (1.78 x 2.84)	11 (16.4)

*FEP laminate melts at approximately 260°C (500°F).

** "S" denotes stranded wire: e.g., "24 S (7/32)" is seven strands of 32 gauge wire to make a 24 gauge stranded conductor.