

# SERV-RITE Wire

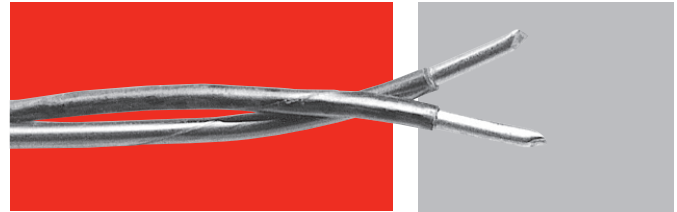
## Thermocouple and Extension Wire Polyimide Insulated and Twisted SERIES 511

SERIES 511 is the most economical polyimide taped construction. Polyimide film applied to the conductors is considered to be the ultimate “soft” insulation. The tape maintains its strength at temperatures up to 600°F (315°C). The FEP laminate serves as a moisture barrier and allows the tape to fuse with itself. The finished construction will not unravel when cut.

SERIES 511 conductors are wrapped with the polyimide tape which is fused to itself. Each conductor is color coded with a colored thread under the tape. The insulated conductors are twisted into a duplex construction to eliminate the overall duplex insulation and minimize cost.

### Performance Capabilities

- Continuous temperature rating: 600°F (315°C)
- Polyimide fused tape insulation
- Twisted design has no outer jacket
- Colored tracer used to indicate calibration type
- Available with an optional metallic overbraid for additional abrasion resistance



### Applications

- Aerospace
- Petrochemical
- Plastics

### Specifications

#### Continuous use temperature

- 600°F (315°C)

#### Single use temperature

- 800°F (430°C)

#### Resistance properties

- Moisture: Excellent
- Chemical: Excellent
- Abrasion: Excellent

## Popular Constructions

Grade	AWG	Wire Type	Limits of Error	Type K	Type J
Thermocouple	20	Solid	Standard	K20-1-511	J20-1-511
		Solid	Special	K20-2-511	J20-2-511
	24	Solid	Standard	K24-1-511	J24-1-511
		Solid	Special	K24-2-511	<b>J24-2-511</b>

**Note:** Bolded products are stocked.

## Wire Specifications

AWG	Nominal Conductor Size		Nominal Conductor Insulation Thickness		Nominal Overall Size		Approximate Shipping Weight	
	in.	(mm)	in.	(mm)	in.	(mm)	lbs/1000 ft	(kg/km)
30	0.010	(0.254)	0.004	(0.102)	0.040	(1.02)	3	(4.5)
24	0.020	(0.508)	0.005	(0.127)	0.060	(1.52)	4	(6.0)
24 S* (7/32)	0.024	(0.610)	0.005	(0.127)	0.068	(1.73)	5	(7.5)
20	0.032	(0.813)	0.005	(0.127)	0.084	(2.13)	8	(11.9)
20 S* (7/28)	0.038	(0.965)	0.005	(0.127)	0.094	(2.39)	9	(13.4)

**Note:** 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.

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*Polyimide Insulated and Twisted SERIES 511  
(Continued)*

### Ordering Information

Part Number

① ASTM E 230 Calibration	② ③ AWG	④ Conductor Type/ Tolerance	⑤	⑥	⑦
			5	1	1

① ASTM E 230 Calibration	
J =	Type J
K =	Type K
T =	Type T

② ③ AWG	
30 =	30 gauge solid
24 =	24 gauge solid or 24 gauge stranded (7/32)
20 =	20 gauge solid or 20 gauge stranded (7/28)
16 =	16 gauge solid

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.