

# SERV-RITE Wire

## Thermocouple and Extension Wire

### PVC Insulated and Shielded Thermocouple and Extension Wire SERIES 510

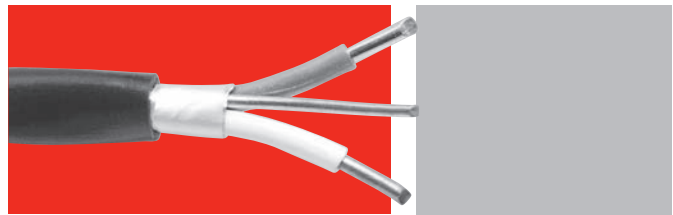
The SERIES 510 is a PVC insulated, twisted and shielded construction for systems sensitive to induced voltages and “noise.”

The conductors are insulated with color coded PVC and then twisted with a copper drain wire. An aluminized polyester tape is wrapped around the two conductors and drain wires to impart 100 percent shielding. Then, another layer of PVC is applied.

The twisting eliminates most EMI while the shield tape minimizes AC “noise” in the sensing circuit.

#### Performance Capabilities

- Continuous temperature rating: 220°F (105°C)
- Flexible PVC plastic insulation
- Twisted and shielded construction to reduce electrical noise interference
- Available with an optional metallic overbraid for additional abrasion resistance



#### Applications

- General use extension wire

#### Specifications

##### Continuous use temperature

- 220°F (105°C)

##### Single use temperature

- 220°F (105°C)

##### Resistance properties

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

## Popular Constructions

Grade	AWG	Wire Type	Limits of Error	Type K	Type J	Type T	Type E	Type S
Extension	16	Solid	Standard	<b>K16-5-510</b>	<b>J16-5-510</b>	<b>T16-5-510</b>		
		Stranded	Standard	K16-7-510	J16-7-510	T16-7-510		
	20	Solid	Standard	<b>K20-5-510</b>	<b>J20-5-510</b>	<b>T20-5-510</b>	<b>E20-5-510</b>	<b>S20-5-510</b>
		Stranded	Standard	<b>K20-7-510</b>	<b>J20-7-510</b>	T20-7-510		
	24	Solid	Standard	K24-5-510	J24-5-510	T24-5-510		
		Stranded	Standard	K24-7-510	J24-7-510	T24-7-510		

**Note:** Bolded products are stocked.

## 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)					
24	0.020	(0.508)	0.015	(0.381)	0.020	(0.508)	0.140	(3.56)	13	(19.4)
24 S* (7/32)	0.024	(0.610)	0.015	(0.381)	0.020	(0.508)	0.148	(3.76)	14	(20.9)
20	0.032	(0.813)	0.015	(0.381)	0.020	(0.508)	0.164	(4.17)	22	(32.8)
20 S* (7/28)	0.038	(0.965)	0.015	(0.381)	0.020	(0.508)	0.176	(4.47)	24	(35.8)
18	0.040	(1.02)	0.020	(0.508)	0.020	(0.508)	0.200	(5.08)	30	(44.7)
18 S* (7/26)	0.048	(1.22)	0.020	(0.508)	0.020	(0.508)	0.216	(5.49)	32	(47.7)
16	0.051	(1.29)	0.020	(0.508)	0.020	(0.508)	0.222	(5.64)	39	(58.1)
16 S* (7/24)	0.060	(1.52)	0.020	(0.508)	0.020	(0.508)	0.240	(6.10)	41	(61.1)

\* “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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## Thermocouple and Extension Wire

*PVC Insulated and Shielded Thermocouple and Extension Wire SERIES 510 (Continued)*

### Ordering Information

Part Number

①	② ③	④	⑤	⑥	⑦
ASTM E 230 Calibration	AWG	Conductor Type/Tolerance			
			5	1	0

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

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

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
5 =	Extension grade, solid wire, standard tolerance
6 =	Extension grade, solid wire, special tolerance
7 =	Extension grade, stranded wire, standard tolerance
8 =	Extension grade, stranded wire, special tolerance

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