

SERV-RITE Wire

Thermocouple and Extension Wire

Fiberglass Braided Thermocouple and Extension Wire SERIES 304

The uniform quality and availability of the SERIES 304 make it the ideal wire for general applications requiring moderate abrasion and moisture resistance, wide temperature capabilities and economy.

Each conductor is covered with a color coded glass braid. This braid is impregnated to enhance abrasion resistance and reduce fraying. The insulated single conductors are laid parallel and covered with another layer of woven glass. A final impregnation is then applied to the glass.

For higher temperatures, consider SERIES 321.

Performance Capabilities

- Continuous temperature rating: 900°F (482°C)
- Fiberglass braided yarn insulation
- Available with an optional metallic overbraid for additional abrasion resistance



Applications

- Heat treating
- Oven
- General use

Specifications

Continuous use temperature

- 900°F (482°C)

Single use temperature

- 1000°F (540°C)

Resin retained to 400°F (204°C)

Resistance properties

- Moisture: Good
- Chemical: Good
- Abrasion: Fair

Popular Constructions

Grade	AWG	Wire Type	Limits of Error	Type K	Type J	Type T	Type E
Thermocouple	20	Solid	Standard	K20-1-304*	J20-1-304*	T20-1-304	E20-1-304
		Solid	Special	K20-2-304	J20-2-304	T20-2-304	E20-2-304
		Stranded	Standard	K20-3-304*	J20-3-304*	T20-3-304	E20-3-304
	24	Solid	Standard	K24-1-304	J24-1-304	T24-1-304	
		Solid	Special	K24-2-304	J24-2-304	T24-2-304	
		Stranded	Standard	K24-3-304	J24-3-304		
Extension	20	Solid	Standard				

* These constructions stocked with a **stainless steel overbraid** (order overbraid by adding "-S" in front of construction type (i.e. K20-1-S-304).

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	(1.508)	0.005 (0.127)	0.006 (0.152)	0.045 x 0.072	(1.14 x 1.83)	7	(10.4)
24 S* (7/32)	0.024	(1.610)	0.005 (0.127)	0.006 (0.152)	0.048 x 0.080	(1.22 x 2.03)	8	(11.9)
20	0.032	(1.813)	0.005 (0.127)	0.006 (0.152)	0.056 x 0.096	(1.42 x 2.44)	9	(13.4)
20 S* (7/28)	0.038	(1.965)	0.006 (0.152)	0.006 (0.152)	0.064 x 0.112	(1.63 x 2.84)	10	(14.9)

* "S" denotes stranded wire: e.g., "20 S (7/28)" is seven strands of 28 gauge wire to make a 20 gauge stranded conductor.

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Ordering Information

Part Number

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

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)

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.