

# SERV-RITE Wire

## Thermocouple Wire

### High-Temperature Vitreous Silica Braided Thermocouple Wire **SERIES 301 and 365**

Both the SERIES 301 and 365 use vitreous silica yarn as the insulation on both the conductors and duplex. This yarn retains its flexibility after exposure to high temperatures. Because this insulation has no binders or impregnations, it may “flower” when stripped.

The vitreous silica yarn’s greater purity performs better at high temperatures than other fibrous glass products. Testing indicates that “contamination” will compromise this material’s upper use temperature. For this reason, our standard offering is supplied without color coding or impregnations. The SERIES 365 construction is a cost-effective, medium insulation build of the popular heavy duty SERIES 301 construction.

For higher temperatures consider SERIES 350.

#### Performance Capabilities

- Continuous temperature rating: 1800°F (982°C)
- Vitreous silica braided yarn insulation
- Available with an optional metallic overbraid for additional abrasion resistance



#### Applications

- Heat treating
- Oven and furnace
- Survey and load

#### Specifications

##### Continuous use temperature

- 1800°F (980°C)

##### Single use temperature

- 2000°F (1093°C)

##### Resistance properties

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

## Popular Constructions

Grade	AWG	Wire Type	Insulation	Limits of Error	Type K
Thermocouple	20	Solid	Heavy	Standard	<b>K20-1-301</b>
		Solid	Heavy	Special	<b>K20-2-301</b>
		Solid	Heavy	Special	<b>K20-2-301-CAL*</b>
		Solid	Medium	Standard	<b>K20-1-365</b>
		Solid	Medium	Special	<b>K20-2-365</b>

\* Calibrated from 200 to 2200°F (93 to 1204°C), every 200°F (93°C). Only available in this construction.

**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)		
20 <sup>①</sup>	0.032 (0.813)	0.018 (0.457)	0.015 (0.381)	0.098 x 0.154 (2.49 x 3.91)	15 (22.4)
18 <sup>①</sup>	0.040 (1.020)	0.018 (0.457)	0.015 (0.381)	0.110 x 0.180 (2.79 x 4.57)	19 (28.3)
16 <sup>①</sup>	0.051 (1.290)	0.016 (0.406)	0.015 (0.381)	0.118 x 0.198 (3.00 x 5.03)	25 (37.3)
20 <sup>②</sup>	0.032 (0.813)	0.015 (0.381)	0.012 (0.305)	0.090 x 0.140 (2.29 x 3.56)	13 (19.4)

<sup>①</sup>SERIES 301, <sup>②</sup>SERIES 365

## Ordering Information

### Part Number

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

①	ASTM E 230 Calibration
K =	Type K
N =	Type N
② ③	AWG
20 =	20 gauge solid

④	Conductor/Type Tolerance
1 =	Thermocouple grade, solid wire, standard tolerance
2 =	Thermocouple grade, solid wire, special tolerance
⑤ ⑥ ⑦	Insulation Type
301 =	Heavy build
365 =	Medium build

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