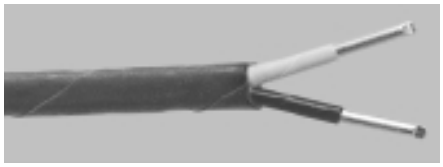
SERV-RITE Wire and Cable

TFE Tape Insulated Thermocouple and Extension Wire

Series 508



Temp.	Resistance Properties		
	Moisture	Chemical	Abrasion
500˚F (260˚C)	Excellent	Excellent	Good

The primary and duplex insulation of Series 508 is fused TFE tape. The tape is spirally applied to the conductor and heated. This process, called sintering, forms the tape into a homogeneous layer. When sintered, the tape exhibits all of the advantages of extruded TFE insulation, while eliminating the concentricity problems associated with TFE extrusions.

The Series 508 is fully color coded and capable of continuous operation in excess of 500°F (260°C). Because the fusing process causes the duplex tape to fuse with the primary insulation, Series 508 is not recommended for applications where it's necessary to remove the outer tape while leaving the primary insulation intact.

Construction Combinations

1	2	3	4	5	6	7
			/	/ 5	0	8

1. ASTM E 230 Calibrations

B C E J K N S T

2-3. B & S Gauge

26	20	16
	20 stranded (7/28)	16 stranded (7/24)
24	18	
24 stranded (7/32)	18 stranded (7/26)	

4. Conductor Type/Tolerance

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

When higher temperature capabilities are required, specify polyimide insulated constructions: Series 511, 512 or 513.

For improved abrasion resistance, consider Series 514 or a stainless steel overbraid.

Performance Capabilities

- Continuous temperature rating: 500°F (260°C)
- Single reading: 600°F (315°C)

Features and Benefits

- **Fused TFE tape single conductor and duplex insulation** to eliminate concentricity problems.
- **ASTM E 230 color code** for easy identification.
- **Excellent moisture and chemical resistance, good abrasion resistance.**
- **Additional abrasion resistance** with optional stainless steel and tinned copper wire overbraids.
- **Custom constructions available, consult factory.**

Applications

- Aircraft composite bonding
- Petroleum plants

Wire Specifications

B & S Gauge	Nominal Conductor Size inches	(mm)	Nominal Insulation Thickness Conductor inches	(mm)	Nominal Insulation Thickness Overall inches	(mm)	Nominal Overall Size inches	(mm)	Approximate Shipping Weight lbs/1000 ft	(kg/km)
26	0.016	(0.406)	0.006	(0.152)	0.008	(0.203)	0.044 X 0.072	(1.12 X 1.83)	4	(6.0)
24	0.020	(0.508)	0.006	(0.152)	0.008	(0.203)	0.047 X 0.077	(1.19 X 1.95)	5	(7.5)
24 S* (7/32)	0.024	(0.610)	0.006	(0.152)	0.008	(0.203)	0.049 X 0.084	(1.24 X 2.13)	6	(8.9)
20	0.032	(0.813)	0.006	(0.152)	0.008	(0.203)	0.061 X 0.106	(1.55 X 2.69)	11	(16.4)
20 S* (7/28)	0.038	(0.965)	0.006	(0.152)	0.008	(0.203)	0.064 X 0.112	(1.63 X 2.84)	12	(17.9)
18	0.040	(1.02)	0.006	(0.152)	0.008	(0.203)	0.068 X 0.120	(1.73 X 3.05)	16	(23.8)
18 S* (7/26)	0.048	(1.22)	0.006	(0.152)	0.008	(0.203)	0.076 X 0.136	(1.93 X 3.45)	18	(26.8)
16	0.051	(1.29)	0.010	(0.254)	0.008	(0.203)	0.087 X 0.158	(2.21 X 4.01)	25	(37.3)
16 S* (7/24)	0.060	(1.52)	0.010	(0.254)	0.008	(0.203)	0.096 X 0.176	(2.44 X 4.47)	27	(40.2)

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