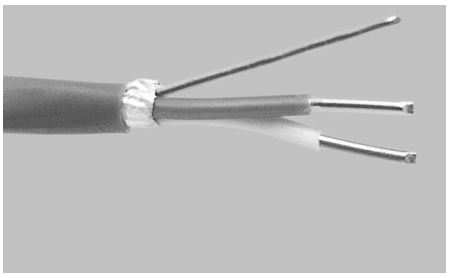
SERV-RITE Wire and Cable

Thermocouple Wire

FEP Insulated with Shield and Drain 300V UL® Listed PLTC Extension Cable SERIES 509 UL®



The SERIES 509 UL® is one of a family of constructions developed especially for use with microprocessor based systems. SERIES 509 UL® has UL® listings for Power Limited Tray Cable (PLTC) applications.

The conductors are first insulated with color coded FEP. The conductors are then twisted with a copper drain wire. An aluminized polyester tape is wrapped around the two conductors and drain wire. Finally, an FEP layer is applied over the taped conductors.

The finished construction can withstand temperatures in excess of 204°C (400°F). The twisted conductors minimizes electromagnetic interference and the taped shield eliminates most problems associated with AC "noise" in the sensing circuit.

Popular Constructions

Grade	AWG	Wire Type	Limits of Error	Type K	Type J	Type T
Extension	16	Solid	Standard	K16-5-509-UL®	J16-5-509-UL®	
		Stranded	Standard	K16-7-509-UL®	J16-7-509-UL®	
	20	Solid	Standard	K20-5-509-UL®	J20-5-509-UL®	T20-5-509-UL®
		Stranded	Standard	K20-7-509-UL®	J20-7-509-UL®	T20-7-509-UL®

Available Constructions

1	2	3	4	5	6	7	8	9
			-	-	5	0	9	-U	L

1. ASTM E 230 Calibrations

E K S
J N T

2-3. AWG

20 16
20 stranded (7/28) 16 stranded (7/24)

4. Conductor Type/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.

Performance Capabilities

- UL® listed 300V PLTC
- Listed under UL® Subject 13, File Number E116321
- Passes IEEE 383 70,000 BTU/hour flame test
- Passes VW-1 flame test
- Non-propagating
- UV light resistant
- Continuous temperature rating 204°C (400°F)
- Flexible FEP plastic insulation
- Twisted and shielded construction to reduce electrical noise interference
- Available with optional metallic overbraid for additional abrasion resistance

Applications

- General use extension wire

Continuous Use Temp.	Single Use Temp.
204˚C (400˚F)	260˚C (500˚F)

Resistance Properties		
Moisture	Chemical	Abrasion
Excellent	Excellent	Excellent

Wire Specifications

AWG	Nominal Conductor Size		Nominal Insulation Thickness: Conductor		Nominal Insulation Thickness: Overall		Nominal Overall Size		Approximate Shipping Weight	
	in.	(mm)	in.	(mm)	in.	(mm)	in.	(mm)	lbs/1000 ft	(kg/km)
20	0.032	(0.813)	0.008	(0.203)	0.018	(0.457)	0.142	(3.61)	22	(32.8)
20 S* (7/28)	0.038	(0.965)	0.008	(0.203)	0.018	(0.457)	0.158	(3.91)	24	(35.8)
16	0.051	(1.29)	0.008	(0.203)	0.018	(0.457)	0.180	(4.57)	38	(56.6)
16 S* (7/24)	0.060	(1.52)	0.008	(0.203)	0.018	(0.457)	0.198	(5.03)	41	(61.1)

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