

# SERV-RITE Wire

## RTD Lead Wire

### SERIES 701, 704, 705 and 707

Watlow's quality, experience and versatility extend from insulated thermocouple and extension wire to resistance temperature detector (RTD) lead wire and fiberglass wire.

### Performance Capabilities

- Continuous temperature rating: 220 to 900°F (105 to 480°C) depending upon construction
- Available with an optional metallic overbraid for additional abrasion resistance

### Applications

- General use RTD sensor wire

### Specifications

#### PVC

##### Continuous use temperature

- 220°F (105°C)

##### Single use temperature

- 220°F (105°C)

##### Resistance properties

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

#### FEP

##### Continuous use temperature

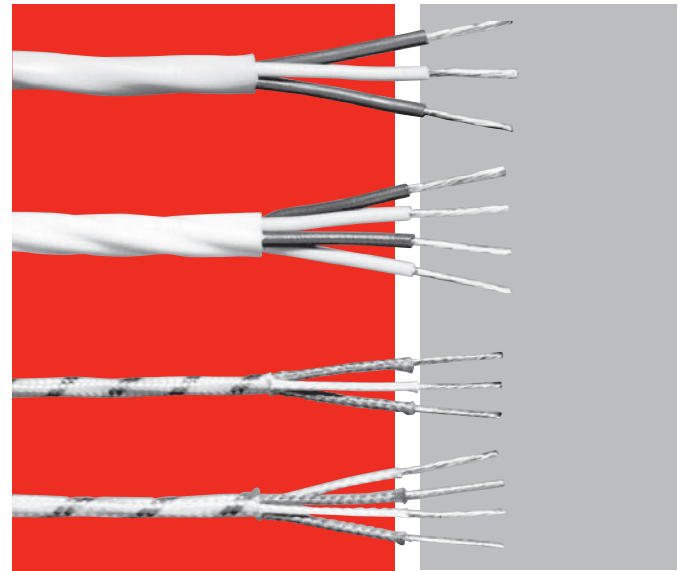
- 400°F (204°C)

##### Single use temperature

- 500°F (260°C)

##### Resistance properties

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



#### PFA

##### Continuous use temperature

- 500°F (260°C)

##### Single use temperature

- 550°F (290°C)

##### Resistance properties

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

#### Fiberglass

##### Continuous use temperature

- 900°F (480°C)

##### Single use temperature

- 1000°F (540°C)

##### Resistance properties

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

## Popular Constructions

No. of Conductors	AWG	Wire Type*	Insulation Material			
			PVC 220°F (105°C)	FEP 400°F (204°C)	PFA 500°F (260°C)	Fiberglass 900°F (480°C)
2	22	Nickel plated copper	RT2-22-8-701	RT2-22-8-704		RT2-22-8-705
	24	Nickel plated copper	RT2-24-8-701	RT2-24-8-704	RT2-24-8-707	RT2-24-8-705
3	22	Tinned copper	<b>RT3-22-4-701</b>			
		Nickel plated copper	RT3-22-8-701	<b>RT3-22-8-704</b>		RT3-22-8-705
	24	Nickel plated copper	RT3-24-8-701	RT3-24-8-704	RT3-24-8-707	<b>RT3-24-8-705</b>
4	22	Nickel plated copper		RT4-22-8-704		RT4-22-8-705
	24	Nickel plated copper		RT4-24-8-704	RT4-24-8-707	RT4-24-8-705

Note: Bolded products are stocked.

# SERV-RITE Wire

## RTD Lead Wire

**SERIES 701, 704, 705 and 707 (Continued)**

### Wire Specifications - SERIES 701 - PVC

No. of Conductors	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)						
2	22S* (7/30)	0.030	(0.762)	0.015	(0.381)	0.020	(0.508)	0.160	(4.06)	17	(25.3)
	20S* (7/28)	0.038	(0.965)	0.015	(0.381)	0.020	(0.508)	0.176	(4.47)	19	(28.3)
3	22S* (7/30)	0.030	(0.762)	0.015	(0.381)	0.020	(0.508)	0.172	(4.37)	20	(29.8)
	20S* (7/28)	0.038	(0.965)	0.015	(0.381)	0.020	(0.508)	0.190	(4.83)	25	(37.3)
4	22S* (7/30)	0.030	(0.762)	0.015	(0.381)	0.020	(0.508)	0.184	(4.67)	23	(34.3)
	20S* (7/28)	0.038	(0.965)	0.015	(0.381)	0.020	(0.508)	0.204	(5.18)	30	(44.7)

**Note:** 24 and 16 gauge constructions also available, contact factory for details.

### Wire Specifications - SERIES 704 - FEP

No. of Conductors	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)						
2	24S* (7/32)	0.024	(0.610)	0.008	(0.203)	0.010	(0.254)	0.118	(3.00)	12	(17.9)
	22S* (7/30)	0.030	(0.762)	0.008	(0.203)	0.010	(0.254)	0.130	(3.30)	14	(20.9)
	20S* (7/28)	0.038	(0.965)	0.008	(0.203)	0.010	(0.254)	0.146	(3.71)	17	(25.3)
3	24S* (7/32)	0.024	(0.610)	0.008	(0.203)	0.010	(0.254)	0.126	(3.20)	16	(23.8)
	22S* (7/30)	0.030	(0.762)	0.008	(0.203)	0.010	(0.254)	0.140	(3.56)	20	(29.8)
	20S* (7/28)	0.038	(0.965)	0.008	(0.203)	0.010	(0.254)	0.158	(4.01)	24	(35.8)
4	24S* (7/32)	0.024	(0.610)	0.008	(0.203)	0.010	(0.254)	0.136	(3.46)	19	(28.3)
	22S* (7/30)	0.030	(0.762)	0.008	(0.203)	0.010	(0.254)	0.150	(3.81)	23	(34.3)
	20S* (7/28)	0.038	(0.965)	0.008	(0.203)	0.010	(0.254)	0.170	(4.32)	27	(40.2)

### Wire Specifications - SERIES 707 - PFA

No. of Conductors	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)						
2	24S* (7/32)	0.024	(0.610)	0.008	(0.203)	0.010	(0.254)	0.108	(2.74)	12	(17.9)
3	24S* (7/32)	0.024	(0.610)	0.008	(0.203)	0.010	(0.254)	0.115	(2.91)	16	(23.8)
4	24S* (7/32)	0.024	(0.610)	0.008	(0.203)	0.010	(0.254)	0.126	(3.20)	19	(28.8)

### Wire Specifications - SERIES 705 - Fiberglass

No. of Conductors	AWG	Nominal Conductor Size in. (mm)		Nominal Insulation Thickness		Nominal Overall Size in. (mm)		Approximate Shipping Weight			
				Conductor in. (mm)	Overall in. (mm)			kg/km	(lbs/1000 ft)		
2	24S* (7/32)	0.024	(0.610)	0.005	(0.127)	0.006	(0.152)	0.080	(2.03)	6	(8.9)
	22S* (7/30)	0.030	(0.762)	0.005	(0.127)	0.006	(0.152)	0.092	(2.34)	7	(10.4)
	20S* (7/28)	0.038	(0.965)	0.006	(0.152)	0.006	(0.152)	0.112	(2.84)	9	(13.4)
3	24S* (7/32)	0.024	(0.610)	0.005	(0.127)	0.006	(0.152)	0.086	(2.18)	8	(11.9)
	22S* (7/30)	0.030	(0.762)	0.005	(0.127)	0.006	(0.152)	0.098	(2.49)	9	(13.4)
	20S* (7/28)	0.038	(0.965)	0.006	(0.152)	0.006	(0.152)	0.120	(3.05)	12	(17.9)
4	24S* (7/32)	0.024	(0.610)	0.005	(0.127)	0.006	(0.152)	0.092	(2.34)	10	(14.9)
	22S* (7/30)	0.030	(0.762)	0.005	(0.127)	0.006	(0.152)	0.106	(2.69)	12	(17.9)
	20S* (7/28)	0.038	(0.965)	0.006	(0.152)	0.006	(0.152)	0.130	(3.30)	16	(23.8)

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

# SERV-RITE Wire

## RTD Lead Wire

*SERIES 701, 704, 705 and 707 (Continued)*

### Ordering Information

Part Number

①	②	③	④ ⑤	⑥	⑦ ⑧ ⑨
R	T	Number of Conductors	AWG	Conductor Type/Tolerance	Insulation Type

③	Number of Conductors
2 =	Type 2
3 =	Type 3
4 =	Type 4

④ ⑤	AWG
24 =	24 gauge solid
22 =	22 gauge solid
20 =	20 gauge solid

⑥	Conductor Type/Tolerance
4 =	Stranded tinned copper
8 =	Stranded nickel plated copper

⑦ ⑧ ⑨	Insulation Type
701 =	PVC
704 =	FEP
705 =	Fiberglass
707 =	PFA

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