

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

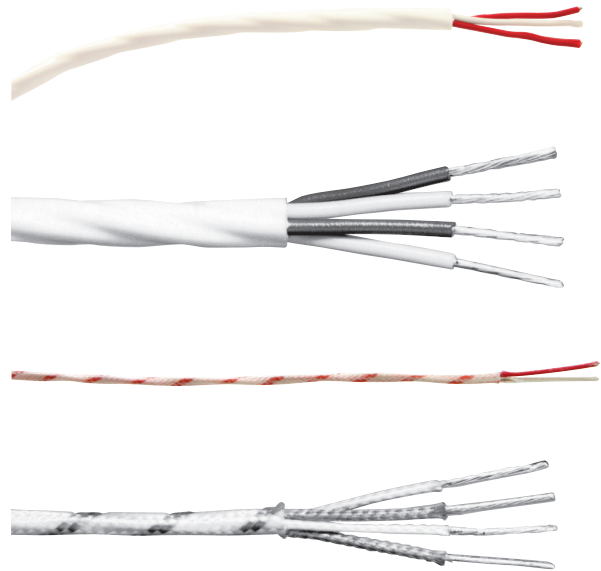
- 400°F (204°C)

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	RT3-22-4-701			
		Nickel plated copper	RT3-22-8-701	RT3-22-8-704		RT3-22-8-705
	24	Nickel plated copper	RT3-24-8-701	RT3-24-8-704	RT3-24-8-707	RT3-24-8-705
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.

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 kg/km (lbs/1000 ft)			
				Conductor in. (mm)	Overall in. (mm)						
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.



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Ordering Information

Part Number

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

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.