



RTD (Resistance Thermometer) Wire



**A range of wire for use with RTD Sensors in
PVC, PFA, Fiberglass and MICA insulation
available from stock for immediate delivery**

TC for Temperature Sensing, Measurement and Control

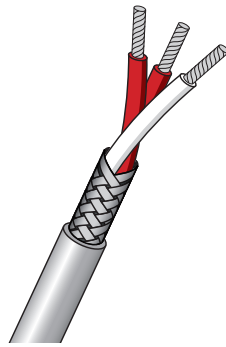
RTD (Resistance Thermometer) Wire

PVC Insulated RTD Wire -30°C to +105°C

- 2, 3, 4, 6 or 8 cores of 24 or 20 AWG diameter twisted conductors PVC insulated with tinned copper braid and overall PVC sheath for use up to 220°F

- Cores color coded:-
2 core: 1 cores red and 1 core white
3 core: 2 cores red and 1 core white
4 core: 2 cores red and 2 cores white
6 core: 4 cores red and 2 cores white
8 core: 4 cores red and 4 cores white
Outer sheath: Grey

- Ideal for general purpose applications



Heat Resistant PVC Insulated with Metal Braid

Cores of stranded copper conductors. Cores heat resistant PVC insulated. Cores bunched together. Tinned copper wire braided. heat resistant PVC sheathed overall.

Stock Number		RP27	RP37	RP47	RP67	RP87	RP33	RP43
CONDUCTORS	Wire Type (number of strands x AWG)	7x32	7x32	7x32	7x32	7x32	13x32	13x32
	Total Wire Size - AWG (S = Stranded)	24S	24S	24S	24S	24S	21S	21S
	Total Area (mm ²)	0.22	0.22	0.22	0.22	0.22	0.44	0.44
	Insulation	Heat Resistant PVC						
CORES	Number of Pairs	2	3	4	6	8	3	4
	Conductor Configuration	Twisted						
	Shielded*	Yes						
OVERALL	Insulation	Heat Resistant PVC						
	Insulation Rating (°F)	Continuous						
		-22 to +220						
	Short Term	—						
		—						
	Color Coding	Yes						
	Physical Properties	Abrasion Resistance						
		Good						
		Moisture Resistance						
		Very Good						
	Typical Weight (lbs/1000ft) (excluding reel)	14	14	21	28	55	55	68
	Diameter under Armor (inches)	—						
	Diameter over Armor (inches)	—						
	Overall Diameter† (inches)	0.16"	0.16"	0.20"	0.24"	0.28"	0.20"	0.24"
Notes		Ideal for general use in normal ambient applications. Rejects electromagnetic and electrostatic interference. Round section.						

* Where wire incorporate a metal braid, the braid can be used as a shield.

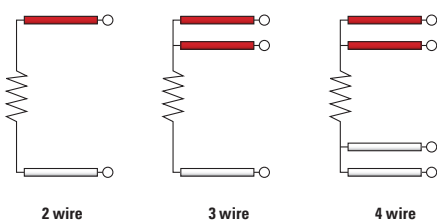
† These values are nominal and if critical to your application, please request a physical check.

The above wire where applicable have cores which are color coded in accordance with IEC 60751:2008 and BS EN 60751.

These wire are normally available from us for immediate delivery from stock.

If you have any specific requirements regarding cable lengths please let us know so that we may make a satisfactory offer to meet your needs.

Color Codes (as per IEC 60751)



Order Code - Example

Stock No.

RP37

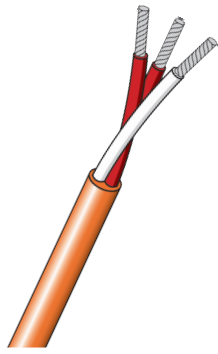
These wire are for use with RTD Resistance Thermometers.

These wire are normally available from us for **immediate** delivery from stock to IEC 60751 color coding.

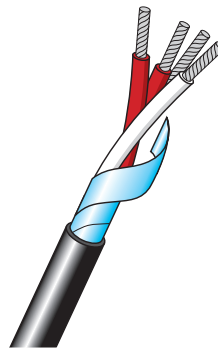
RTD (Resistance Thermometer) Wire

PFA Insulated RTD Wire -100°F to +480°F

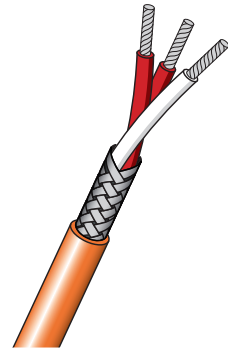
- 2, 3, 4, 6 or 8 cores of twisted conductors overall PFA sheath for use up to 480°F. Tinned copper braid and Mylar® aluminium tape shield option.
- Cores color coded:-
2 core: 1 cores red and 1 core white
3 core: 2 cores red and 1 core white
4 core: 2 cores red and 2 cores white
6 core: 4 cores red and 2 cores white
8 core: 4 cores red and 4 cores white
- Ideal for general purpose applications



PFA Insulated
Cores of stranded copper conductors. Cores PFA insulated and bunched together. PFA sheathed overall.



PFA Insulated with Shield
Cores of stranded copper conductors. PFA extruded, bunched together and shielded with Mylar aluminium tape and drain wire. PFA sheathed overall.



PFA Insulated with Metal Braid
Cores of stranded copper conductors. Cores PFA insulated. Cores bunched together. Nickel plated copper wire braided. PFA sheathed overall. Orange outer sheath (also available with a black outer, please suffix order code with a 'B' e.g. RT37B).

Stock Number			RT38	RT48	RT39	RT49	RT69	RT27	RT37	RT47	RT67	RT82	RT87	
CONDUCTORS	Wire Type (number of strands x AWG)		7x32	7x36	7x29	7x29	7x29	7x32	7x32	7x32	7x32	7x29	7x32	
	Total Wire Size - AWG (S = Stranded)		24S	26S	30S	30S	30S	24S	24S	24S	24S	30S	24S	
	Total Area (mm ²)		0.22	0.124	0.05	0.05	0.05	0.22	0.22	0.22	0.22	0.05	0.22	
	Insulation		PFA		PFA			PFA						
CORES	Number of Pairs		3	4	3	4	6	2	3	4	6	8	8	
	Conductor Configuration		Twisted		Twisted			Twisted						
	Shielded*		No		Yes			Yes						
OVERALL	Insulation		Thin PFA		PFA			PFA						
	Insulation Rating (°F)	Continuous	-100 to +480		-100 to +480			-100 to +480						
		Short Term	+570		+570			+570						
	Color Coding		Yes		Yes			Yes						
	Physical Properties	Abrasion Resistance		Good		Very Good			Very Good					
		Moisture Resistance		Good		Very Good			Very Good					
		Typical Weight (lbs/1000ft) (excluding reel)		7	14	7	8	11	21	14	14	21	21	34
	Diameter under Armor (inches)		—		—			—						
	Diameter over Armor (inches)		—		—			—						
	Overall Diameter† (inches)		0.08"	0.08"	0.09"	0.10"	0.11"	0.12"	0.12"	0.12"	0.16"	0.12"	0.20"	
Notes			Round section. Rejects electromagnetic interference.		Rejects electromagnetic interference.			Gas, steam and water tight insulation. Rejects electromagnetic and electrostatic interference. Round section.						

* Aluminised Mylar® tape in contact throughout by a bare 7/0.3mm diameter tinned copper drainwire. Where wire incorporate a metal braid, the braid can be used as a shield.

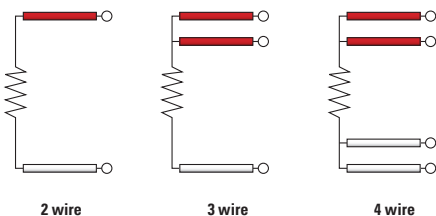
† These values are nominal and if critical to your application, please request a physical check.

The above wire where applicable have cores which are color coded in accordance with IEC 60751:2008 and BS EN 60751.

These wire are normally available from us for immediate delivery from stock.

If you have any specific requirements regarding cable lengths please let us know so that we may make a satisfactory offer to meet your needs.

Color Codes (as per IEC 60751)



Order Code - Example

Stock No.

RT37

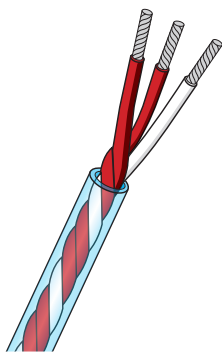
These wire are for use with RTD Resistance Thermometers.

These wire are normally available from us for **immediate** delivery from stock to IEC 60751 color coding.

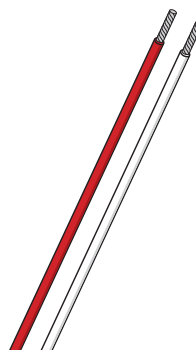
RTD (Resistance Thermometer) Wire

Other PFA Insulated RTD Wire -100°F to +390°F

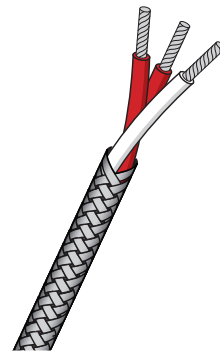
- 1, 3, 4 or 6 cores of PFA insulated wire for use up to 390°F.
- Cores color coded:-
3 core: 2 cores red and 1 core white
4 core: 2 cores red and 2 cores white
6 core: 4 cores red and 2 cores white
8 core: 4 cores red and 4 cores white
Outer sheath: Orange
- Ideal for general purpose applications



PFA / Silicone Rubber Insulated
Cores of **stranded** copper conductors. Cores PFA insulated. Cores bunched together. Silicone Rubber sheathed overall.



PFA 'single'
One core of **stranded** copper conductor PFA insulated. Red or White available.



PFA Insulated with Stainless Steel Braid
Cores of **stranded** copper conductors, PFA insulated and bunched together with overall stainless steel braid.

Stock Number		RS37	RS47	RS67	RS87
CONDUCTORS	Wire Type (number of strands x AWG)	7x32	7x32	7x32	7x32
	Total Wire Size - AWG (S = Stranded)	24S	24S	24S	24S
	Total Area (mm ²)	0.22	0.22	0.22	0.22
	Insulation	PFA			
CORES	Number of Pairs	3	4	6	8
	Conductor Configuration	Twisted			
	Shielded*	No			
OVERALL	Insulation	Silicone Rubber			
	Insulation Rating (°F)	Continuous			
		-40 to +390			
	Short Term	-50 to +480			
		Yes			
	Physical Properties	Abrasion Resistance			
		Good			
		Moisture Resistance			
		Very Good			
	Typical Weight (lbs/1000ft) (excluding reel)	14	21	21	28
	Diameter under Armor (inches)	—			
	Diameter over Armor (inches)	—			
	Overall Diameter† (inches)	0.16"	0.16"	0.20"	0.20"
Notes		Gas, steam and water tight insulation. Rejects electromagnetic and electrostatic interference. Round section.			

TEF7R	TEF7W	TEF2R	TEF2W
7x32	7x32	7x32	7x32
24S	24S	24S	24S
0.22	0.22	0.03	0.03
PFA			
1	1	1	1
—			
No			
PFA			
-100 to +480			
+570			
Red	White	Red	White
Very Good			
Very Good			
<7	<7	<7	<7
—			
—			
<0.04"	<0.04"	<0.04"	<0.04"
Ideal for use in sensor manufacture or for short extensions.			

RT32/SSB	RT37/SSB
7x28	7x32
30S	24S
0.05	0.22
PFA	
3	3
Twisted	
Yes	
PFA	
-100 to +480	
+570	
Yes	
Very Good	
Very Good	
7	14
—	
—	
0.08"	0.1"
Rejects electromagnetic and electrostatic interference. Round section.	

* Where wire incorporate a metal braid, the braid can be used as a shield.

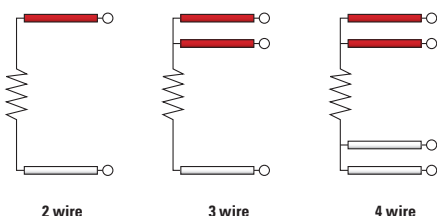
† These values are nominal and if critical to your application, please request a physical check.

The above wire where applicable have cores which are color coded in accordance with IEC 60751:2008 and BS EN 60751.

These wire are normally available from us for immediate delivery from stock.

If you have any specific requirements regarding cable lengths please let us know so that we may make a satisfactory offer to meet your needs.

Color Codes (as per IEC 60751)



Order Code - Example

Stock No.

RT32/SSB

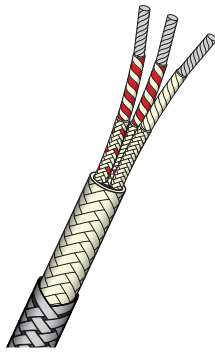
These wire are for use with RTD Resistance Thermometers.

These wire are normally available from us for **immediate** delivery from stock to IEC 60751 color coding.

RTD (Resistance Thermometer) Wire

Fiberglass Insulated RTD Wire -60°C to +480°C

- 3, 4, or 6 cores of 24 AWG bunched conductors fiberglass with fiberglass overall with a stainless steel braid overall.
- Cores color coded:-
3 core: 2 cores red and 1 core white
4 core: 2 cores red and 2 cores white
6 core: 4 cores red and 2 cores white
- Suitable for use at normal air ambient temperatures where there is a possibility of a hot spot which might damage lower rated wire such as PVC or PFA



Fiberglass Insulated with Stainless Steel Braid

Cores of **stranded** copper conductors. Cores double glass lapped, glass fibre braided and varnished. Cores bunched together, glass fibre braided overall and impregnated with silicone varnish. Stainless steel braid overall.

Stock Number		RF37	RF47	RF67
CONDUCTORS	Wire Type (number of strands x AWG)	7x32	7x32	7x32
	Total Wire Size - AWG (S = Stranded)	24S	24S	24S
	Total Area (mm ²)	0.22	0.22	0.22
	Insulation	Fiberglass		
CORES	Number of Pairs	3	4	6
	Conductor Configuration	Twisted		
	Shielded*	Yes		
OVERALL	Insulation	Fiberglass		
	Insulation Rating (°F)	Continuous		+870
		Short Term		+1000
	Color Coding	Yes		
	Physical Properties	Abrasion Resistance		Good
		Moisture Resistance		None
		Typical Weight (lbs/1000ft) (excluding reel)		14 21 28
	Diameter under Armor (inches)	—		
	Diameter over Armor (inches)	—		
	Overall Diameter† (inches)	0.12"	0.16"	0.20"
Notes		Above 356°F the integrity of the cable is maintained to the upper insulation rating limit provided the cable is not flexed particularly when cold.		

* Where wire incorporate a metal braid, the braid can be used as a shield.

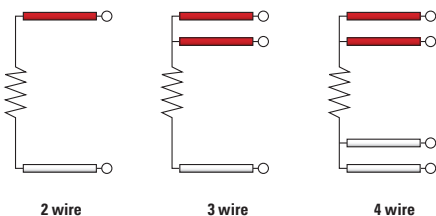
† These values are nominal and if critical to your application, please request a physical check.

The above wire where applicable have cores which are color coded in accordance with IEC 60751:2008 and BS EN 60751.

These wire are normally available from us for immediate delivery from stock.

If you have any specific requirements regarding cable lengths please let us know so that we may make a satisfactory offer to meet your needs.

Color Codes (as per IEC 60751)



Order Code - Example

Stock No.

RF37

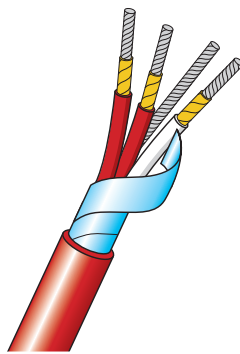
These wire are for use with RTD Resistance Thermometers.

These wire are normally available from us for **immediate** delivery from stock to IEC 60751 color coding.

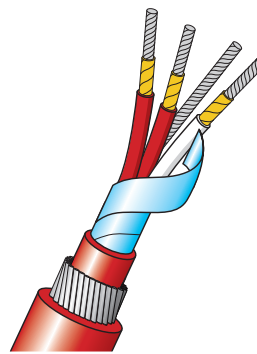
RTD (Resistance Thermometer) Wire

XLPE Insulated Twisted with Shield (Low Smoke and Fume) -22°F to +165°F

- 3 or 6 cores of 20 AWG twisted conductors. The cable incorporates a high temperature rated MICA glass tape with a XLPE (Cross Linked Polyethylene) insulation on the cores and Low Smoke and Fume material on the bedding and/or outer sheath
- Sheathing materials are Halogen free
- Essential for situations where it is of strategic importance to ensure that the cable continues to function during a major crisis involving fire



MICA Glass / XLPE / LSF with Shield
Cores of **stranded** copper conductors, MICA glass taped and XLPE insulated. Cores bunched and shielded with Mylar® aluminium tape and drain wire. LSF sheathed overall.



MICA Glass / XLPE / LSF with Shield and Armor
Cores of **stranded** copper conductors, MICA glass taped and XLPE insulated. Cores bunched and shielded with Mylar® aluminium tape and drain wire. LSF sheathed. Steel wire armored and LSF sheathed overall.

Stock Number		RM37	RM67	RM37/SWA	RM67/SWA
CONDUCTORS	Wire Type (number of strands x AWG)	7x28	7x28	7x28	7x28
	Total Wire Size - AWG (S = Stranded)	20S	20S	20S	20S
	Total Area (mm ²)	0.5	0.5	0.5	0.5
	Insulation	MICA and XLPE		MICA and XLPE	
CORES	Number of Pairs	3	6	3	6
	Conductor Configuration	Twisted		Twisted	
	Shielded*	Yes		Yes	
OVERALL	Insulation	LSF		LSF	
	Insulation Rating (°F)	Continuous		-22 to +165	
		Short Term		—	
	Color Coding	Yes		Yes	
	Physical Properties	Abrasion Resistance		Good	
		Moisture Resistance		Very Good	
		Typical Weight (lbs/1000ft) (excluding reel)		218	340
	Diameter under Armor (inches)	—		8	11
	Diameter over Armor (inches)	—		10	13
	Overall Diameter† (inches)	0.31"	0.43"	0.51"	0.63"
Notes		Excellent for signal continuity in the event of a fire. Free of Halogens. Round section. Rejects electromagnetic and electrostatic interference.		Excellent for signal continuity in the event of a fire. Free of Halogens. Round section. Rejects electromagnetic and electrostatic interference. Armored for mechanical strength.	

* Aluminised Mylar® tape in contact throughout by a bare 7/0.3mm diameter tinned copper drainwire.

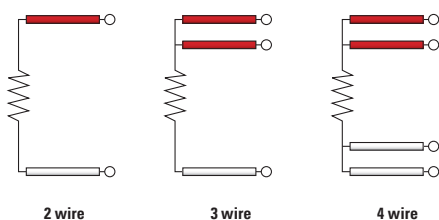
† These values are nominal and if critical to your application, please request a physical check.

The above wire where applicable have cores which are color coded in accordance with IEC 60751:2008 and BS EN 60751.

These wire are normally available from us for immediate delivery from stock.

If you have any specific requirements regarding cable lengths please let us know so that we may make a satisfactory offer to meet your needs.

Color Codes (as per IEC 60751)



Order Code - Example

Stock No.

RM37

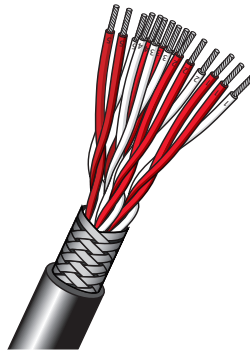
These wire are for use with RTD Resistance Thermometers.

These wire are normally available from us for **immediate** delivery from stock to IEC 60751 color coding.

RTD (Resistance Thermometer) Wire

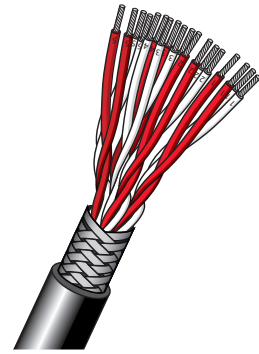
PVC Insulated Multi Triads and Multi Quads RTD Wire -22°F to +220°F

- Incorporates Heat Resistant (HR) PVC suitable for use in the temperature range -22°F to +220°F
- Extremely useful where there is a need to run a number of RTD signals back to instrumentation
- 20 AWG conductors PVC insulated and grouped in triads or quads with overall copper wire braid and overall PVC sheath



Multi Triad PVC Insulated

Triads of stranded copper conductors. Triads HR PVC insulated. Triads bunched together. Tinned copper wire braided. HR PVC sheathed overall.



Multi Quad PVC Insulated

Quads of stranded copper conductors. Quads HR PVC insulated. Quads bunched together. Tinned copper wire braided. HR PVC sheathed overall.

Stock Number		MT3705	MT3710	MT3715	MT4705	MT4710	MT4715
CONDUCTORS	Wire Type (number of strands x AWG)	7x32	7x32	7x32	7x32	7x32	7x32
	Total Wire Size - AWG (S = Stranded)	24S	24S	24S	24S	24S	24S
	Total Area (mm ²)	0.22	0.22	0.22	0.22	0.22	0.22
	Insulation	Heat Resistant PVC			Heat Resistant PVC		
CORES	Number of Pairs	5 x 3	10 x 3	15 x 3	5 x 4	10 x 4	15 x 4
	Conductor Configuration	Twisted			Twisted		
	Shielded*	Yes			Yes		
OVERALL	Insulation	Heat Resistant PVC			Heat Resistant PVC		
	Insulation Rating (°F)	Continuous		-22 to +165	Continuous		-22 to +165
		Short Term		—	Short Term		—
	Color Coding	Yes			Yes		
	Physical Properties	Abrasion Resistance		Good	Abrasion Resistance		Good
		Moisture Resistance		Very Good	Moisture Resistance		Very Good
		Typical Weight (lbs/1000ft) (excluding reel)		89	Typical Weight (lbs/1000ft) (excluding reel)		259
	Diameter under Armor (inches)	—			—		
	Diameter over Armor (inches)	—			—		
	Overall Diameter† (inches)	0.4"	0.5"	0.6"	0.4"	0.6"	0.7"
Notes		Rejects electromagnetic and electrostatic interference. Round section.			Rejects electromagnetic and electrostatic interference. Round section.		

* Where wire incorporate a metal braid, the braid can be used as a shield.

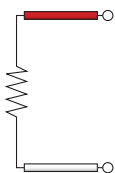
† These values are nominal and if critical to your application, please request a physical check.

The above wire where applicable have cores which are color coded in accordance with IEC 60751:2008 and BS EN 60751.

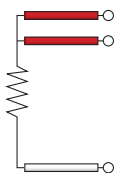
These wire are normally available from us for immediate delivery from stock.

If you have any specific requirements regarding cable lengths please let us know so that we may make a satisfactory offer to meet your needs.

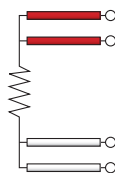
Color Codes (as per IEC 60751)



2 wire



3 wire



4 wire

Order Code - Example

Stock No.

MT3705

These wire are for use with RTD Resistance Thermometers.

These wire are normally available from us for **immediate** delivery from stock to IEC 60751 color coding.



TC Measurement and Control Inc
PO Box 685
Hillside , IL 60162
Tel: 708-449-0700
Toll Free: 877 244 1777
Fax: 708-449-0777
Email: info@tc-inc.com
Web: www.tc-inc.com

© TC Measurement and Control, Inc.
Issue Number: 0723

TC Inc for Temperature Sensing, Measurement and Control