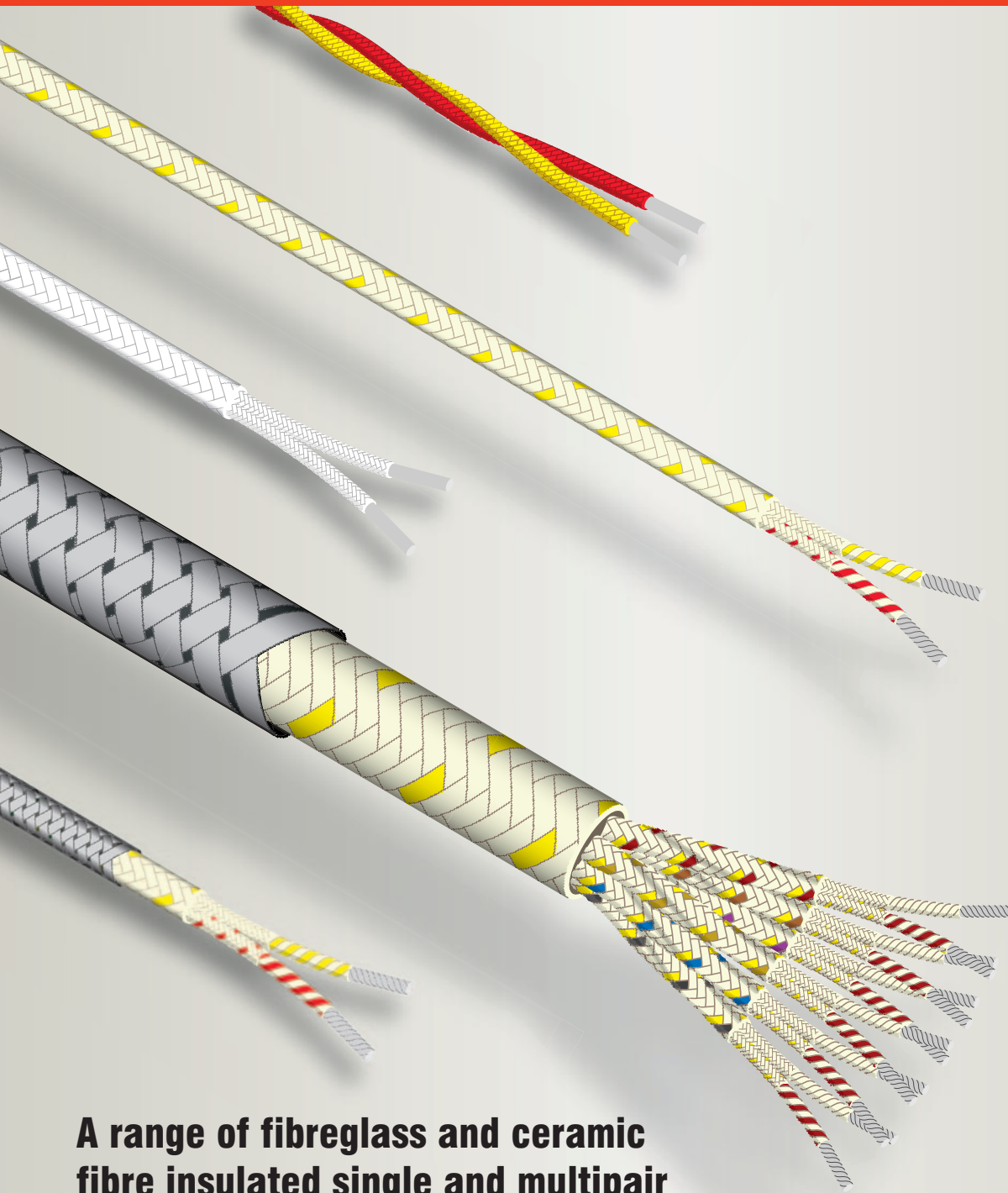




Fibreglass and Ceramic Fibre Insulated Thermocouple Cables - Single Pairs and Multipairs



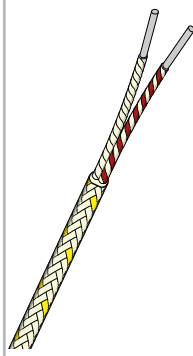
A range of fibreglass and ceramic fibre insulated single and multipair thermocouple cables available from stock for immediate delivery

TC for Temperature Sensing, Measurement and Control

Fibreglass Insulated Single Pair Thermocouple Cable

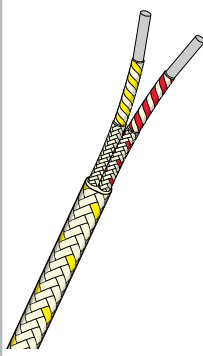
Fibreglass Insulated Flat Twin Cables for use up to +480°C or 800°C

- Excellent for high temperature applications up to 480°C we also offer High Temperature Fibreglass (800°C) and Ceramic Fibre (1200°C)
- Suitable for use at normal air ambient temperatures where there is a possibility of a hot spot which might damage lower rated cables such as PVC or PFA
- Flat twin construction with either solid or stranded conductors in a range of sizes. Ideal for general purpose high temperature applications
- For Fibreglass Multipairs see page 6



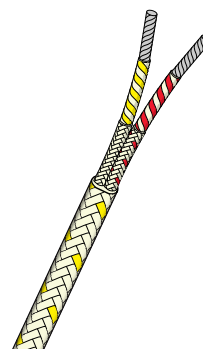
Basic Fibreglass Flat Twin

One pair of **solid** conductors. Cores double glass fibre lapped and varnished. Pair laid flat, glass fibre braided overall and varnished.



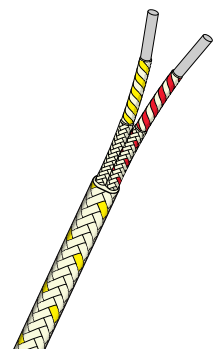
Fibreglass Flat Twin

One pair of **solid** conductors. Cores double glass fibre lapped, braided and varnished. Pair laid flat, glass fibre braided overall and varnished.



Fibreglass Flat Twin

One pair of **stranded** conductors. Cores double glass fibre lapped, braided and varnished. Pair laid flat, glass fibre braided overall and varnished.



High Temperature Fibreglass Flat Twin

One pair of **solid** conductors. Cores double HT glass fibre lapped, braided and varnished. Pair laid flat, glass fibre braided overall and varnished.

Stock Number		C05	C09	C10	C20	C30	C40	C50	C51	C52	C53	C76	C77	C70
CONDUCTORS	Conductor Style	Solid		Solid			Stranded					Solid		
	No. of Strands / Strand Diameter (mm)	1/0.2	1/0.3	1/0.3	1/0.5	1/0.8	7/0.2	13/0.2	23/0.2	32/0.2	40/0.2	1/0.5	1/0.8	1/1.29
	Total Area (mm ²)	0.03	0.07	0.07	0.2	0.5	0.22	0.44	0.75	1.0	1.3	0.2	0.5	1.3
	Total AWG (S = Stranded)	32	28	28	24	20	24S	21S	18S	17S	16S	24	20	16
PAIRS	Insulation	Fibreglass		Fibreglass			Fibreglass					High Temp. Fibreglass		
	Number of Pairs	1		1			1					1		
	Laid Flat or Twisted	Laid Flat		Laid Flat			Laid Flat					Lad Flat		
OVERALL	Screen	No		No			No					No		
	Insulation	Fibreglass		Fibreglass			Fibreglass					High Temp. Fibreglass		
	Insulation Rating (°C)	Continuous		+480			+480					+800		
		Short Term		+540			+540					—		
	Colour Coding	Yes		Yes			Yes					Yes		
	Physical Properties	Abrasion Resistance		Fair		Fair		Fair		Fair		Fair		
		Moisture Resistance		None		None		None		None		None		
		Typical Weight (Kg/100m) (excluding reel)		1	1	2	1	2	3	4	4	1	2	4
	Diameter under Armour (mm)	—		—			—					—		
	Diameter over Armour (mm)	—		—			—					—		
	Overall Diameter [†] (mm)	1x2	1x2	1x2	2x3	2x3	2x3	2x3	3x4	3x4	4x5	2x3	2x3	4x6
Notes		Above 180°C the integrity of the cable is maintained to the upper insulation rating limit provided the cable is not flexed particularly when cold.												

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

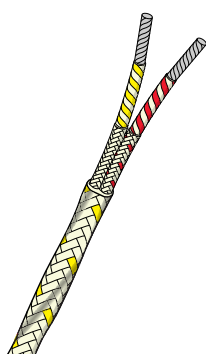
The cable constructions can also be manufactured to any other colour coding requirement that you may have, but might be subject to a minimum ordering quantity. If you have any specific requirements regarding cable lengths please let us know so that we may make a satisfactory offer to meet your needs.

Colour Codes available (other colour codes available on request)		Order Code - Example		
ANSI MC96.1		Stock No.	Thermocouple Type	Colour Code
		C40	- KX	- IEC
IEC 60584-3		These cables are available for Thermocouple Types: KX, JX, TX, NX, EX, RX or SX. Other less popular thermocouple types are available on request.		
		These cables are normally available from us for immediate delivery from stock to ANSI MC96.1 colour coding.		

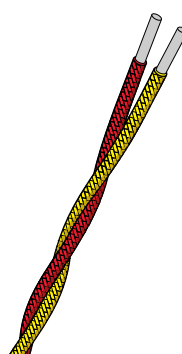
Fibreglass Insulated Single Pair Thermocouple Cable

Fibreglass Insulated Twisted Cables for use up to +480°C or 800°C

- Excellent for high temperature applications up to 480°C we also offer High Temperature Fibreglass (800°C) and Ceramic Fibre (1200°C)
- Suitable for use at normal air ambient temperatures where there is a possibility of a hot spot which might damage lower rated cables such as PVC or PFA
- Twisted construction with either solid or stranded conductors in a range of sizes. Ideal for general purpose high temperature applications or simple thermocouple sensors
- For Fibreglass Multipairs see page 6



Fibreglass Twisted Pair
One pair of **stranded** conductors. Cores double glass fibre lapped, braided and varnished. Pair twisted, glass fibre braided overall and varnished.



High Temperature Fibreglass Insulated Twisted Pair
One pair of **solid** conductors. Each conductor HT glass fibre braided. Pair varnished and twisted.

Stock Number		C37	C38	C27
CO	Conductor Style	Stranded		Solid
	No. of Strands / Strand Diameter (mm)	7/0.2	13/0.2	1/0.71
	Total Area (mm ²)	0.22	0.44	0.4
	Total AWG (S = Stranded)	24S	21S	21
PAIRS	Insulation	Fibreglass		High Temperature Fibreglass
	Number of Pairs	1		1
	Laid Flat or Twisted	Twisted		Twisted
	Screen	No		No
OVERALL	Insulation	Fibreglass		
	Insulation Rating (°C)	Continuous	+480	+800
		Short Term	540	—
	Colour Coding	Yes		Yes
	Physical Properties	Abrasion Resistance	Fair	Fair
		Moisture Resistance	None	None
		Typical Weight (Kg/100m) (excluding reel)	1	2
	Diameter under Armour (mm)	—		—
	Diameter over Armour (mm)	—		—
	Overall Diameter [†] (mm)	3	4	3
Notes		Rejects electromagnetic interference. Above 180°C the integrity of the cable is maintained to the upper insulation rating limit provided the cable is not flexed particularly when cold.		Rejects electromagnetic interference. Above 180°C the integrity of the cable is maintained to the upper insulation rating limit provided the cable is not flexed particularly when cold.

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

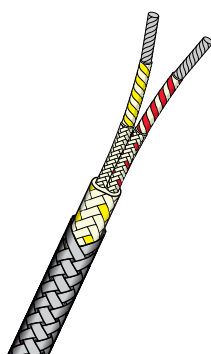
The cable constructions can also be manufactured to any other colour coding requirement that you may have, but might be subject to a minimum ordering quantity. If you have any specific requirements regarding cable lengths please let us know so that we may make a satisfactory offer to meet your needs.

Colour Codes available (other colour codes available on request)		Order Code - Example		
ANSI MC96.1		Stock No.	Thermocouple Type	Colour Code
		C37	- KX	- IEC
IEC 60584-3		These cables are available for Thermocouple Types: KX, JX, TX, NX, EX, RX or SX. Other less popular thermocouple types are available on request. These cables are normally available from us for immediate delivery from stock to ANSI MC96.1 colour coding.		

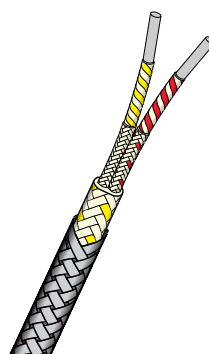
Fibreglass Insulated Single Pair Thermocouple Cable

Stainless Steel Braided Fibreglass Insulated Flat Twin Cables for use up to +480°C or 800°C

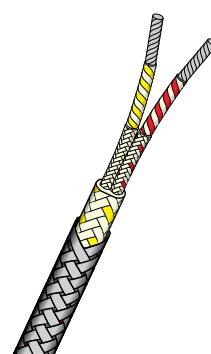
- Excellent for high temperature applications up to 480°C we also offer High Temperature Fibreglass (800°C) and Ceramic Fibre (1200°C)
- Suitable for use at normal air ambient temperatures where there is a possibility of a hot spot which might damage lower rated cables such as PVC or PFA
- Stainless Steel braided for mechanical protection
- For Fibreglass Multipairs see page 6



Fibreglass Flat Twin with Stainless Steel Braid
One pair of **stranded** conductors. Cores double glass fibre lapped, braided and varnished. Pair laid flat, glass fibre braided and varnished. Stainless steel wire braided overall.



High Temperature Fibreglass Flat Twin with Stainless Steel Braid
One pair of **solid** conductors. Cores double HT glass fibre lapped, braided and varnished. Pair laid flat, HT glass fibre braided & varnished. Stainless steel wire braided overall.



High Temperature Fibreglass Flat Twin with Stainless Steel Braid
One pair of **stranded** conductors. Cores double HT glass fibre lapped, braided and varnished. Pair laid flat, HT glass fibre braided & varnished. Stainless steel wire braided overall.

Stock Number		C60	C65	C66	C67	C68	C78	C79	C71	C80	
CONDUCTORS	Conductor Style	Stranded					Solid			Stranded	
	No. of Strands / Strand Diameter (mm)	7/0.2	13/0.2	23/0.2	32/0.2	40/0.2	1/0.5	1/0.8	1/1.29	13/0.2	
	Total Area (mm ²)	0.22	0.44	0.75	1.0	1.3	0.2	0.5	1.3	0.44	
	Total AWG (S = Stranded)	24S	21S	18S	17S	16S	24	20	16	21S	
	Insulation	Fibreglass					High Temperature Fibreglass			High Temperature Fibreglass	
PAIRS	Number of Pairs	1					1			1	
	Laid Flat or Twisted	Laid Flat					Laid Flat			Laid Flat	
	Screen*	Yes					Yes			Yes	
OVERALL	Insulation	Fibreglass					High Temperature Fibreglass			High Temperature Fibreglass	
	Insulation Rating (°C)	Continuous		+480			+800			+800	
		Short Term		+540			—			—	
	Colour Coding		Yes					Yes			Yes
	Physical Properties	Abrasion Resistance		Good			Good			Good	
		Moisture Resistance		None			None			None	
		Typical Weight (Kg/100m) (excluding reel)		2	3	4	5	5	2	3	5
	Diameter under Armour (mm)		—					—			—
	Diameter over Armour (mm)		—					—			—
Overall Diameter [†] (mm)		3x4	3x4	4x5	4x5	4x6	3x4	3x4	5x7	3x4	
Notes		Above 180°C the integrity of the cable is maintained to the upper insulation rating limit provided the cable is not flexed particularly when cold.					Above 180°C the integrity of the cable is maintained to the upper insulation rating limit provided the cable is not flexed particularly when cold.			Above 180°C the integrity of the cable is maintained to the upper insulation rating limit provided the cable is not flexed particularly when cold.	

* Where cables incorporate a metal braid, the braid can be used as a screen.

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

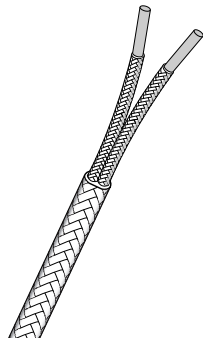
The cable constructions can also be manufactured to any other colour coding requirement that you may have, but might be subject to a minimum ordering quantity. If you have any specific requirements regarding cable lengths please let us know so that we may make a satisfactory offer to meet your needs.

Colour Codes available (other colour codes available on request)		Order Code - Example		
ANSI MC96.1		Stock No.	Thermocouple Type	Colour Code
		C60	- KX	- IEC
IEC 60584-3		These cables are available for Thermocouple Types: KX, JX, TX, NX, EX, RX or SX. Other less popular thermocouple types are available on request.		
		These cables are normally available from us for immediate delivery from stock to ANSI MC96.1 colour coding.		

Ceramic Fibre Single Pair Thermocouple Cable

Ceramic Fibre Insulated Flat Twin Cables for use up to +1200°C

- Ceramic fibre is excellent for very high temperature applications up to 1200°C
- Suitable for use at high air ambient temperatures where fibreglass cables are not suitable
- Flat twin construction



Ceramic Fibre Flat Twin
One pair of **solid** conductors.
Cores ceramic fibre braided and impregnated with a ceramic binder. Pair laid flat, ceramic fibre braided overall, impregnated with a ceramic binder.

Stock Number			D20
CONDUCTORS	Conductor Style		Solid
	No. of Strands / Strand Diameter (mm)		1/0.8
	Total Area (mm ²)		0.5
	Total AWG (S = Stranded)		20
	Insulation		Ceramic Fibre
PAIRS	Number of Pairs		1
	Laid Flat or Twisted		Laid Flat
	Screen		No
OVERALL	Insulation		Ceramic Fibre
	Insulation Rating (°C)	Continuous	-185 to +1200
		Short Term	—
	Colour Coding		No
	Physical Properties	Abrasion Resistance	Fair
		Moisture Resistance	None
		Typical Weight (Kg/100m) (excluding reel)	2
	Diameter under Armour (mm)		—
	Diameter over Armour (mm)		—
Overall Diameter [†] (mm)		2x3	
Notes			Outstanding high temperature performance. Requires free circulation of air. Do not use in a vacuum.

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

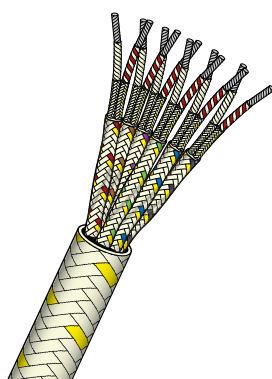
The cable constructions can also be manufactured to any other colour coding requirement that you may have, but might be subject to a minimum ordering quantity. If you have any specific requirements regarding cable lengths please let us know so that we may make a satisfactory offer to meet your needs.

Order Code - Example		
Stock No.	Thermocouple Type	
D20	-	KX
These cables are available for Thermocouple Types: KX, JX, TX, NX, EX, RX or SX. Other less popular thermocouple types are available on request.		

Fibreglass Insulated Multipair Thermocouple Cable

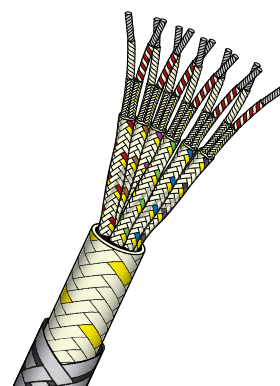
Fibreglass Insulated Multipair Cables for use up to +480°C

- Excellent for high temperature applications up to 480°C
- Suitable for use at normal air ambient temperatures where there is a possibility of a hot spot which might damage lower rated cables such as PVC or PFA
- By using multipair, the problem of having many unwieldy single pair cables is eliminated
- Available with and without stainless steel braid in the more popular conductor combinations



Fibreglass Multipair

Multipairs of **stranded** 14/0.2mm diameter conductors double glass fibre lapped, braided and varnished. Pairs twisted, glass fibre braided and varnished, bunched, braided and varnished overall.



Fibreglass Multipair with Stainless Steel Braid

Multipairs of **stranded** 14/0.2mm diameter conductors double glass fibre lapped, braided and varnished. Pairs twisted, glass fibre braided and varnished, bunched, braided and varnished with overall stainless steel braid.

Stock Number		CM1402	CM1403	CM1406	CM1412	CM1402/SSB	CM1403/SSB	CM1406/SSB	CM1412/SSB
CONDUCTORS	Conductor Style	Stranded				Stranded			
	No. of Strands / Strand Diameter (mm)	14/0.2	14/0.2	14/0.2	14/0.2	14/0.2	14/0.2	14/0.2	14/0.2
	Total Area (mm ²)	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44
	Total AWG (S = Stranded)	21S	21S	21S	21S	21S	21S	21S	21S
PAIRS	Insulation	Fibreglass				Fibreglass			
	Number of Pairs	2	3	6	12	2	3	6	12
	Laid Flat or Twisted	Twisted				Twisted			
	Screen	No				No			
OVERALL	Insulation	Fibreglass				Fibreglass			
	Insulation Rating (°C)	Continuous				Continuous			
		+480				+480			
	Short Term	+540				+540			
		Yes				Yes			
	Colour Coding	Yes				Yes			
	Screen*	No				Yes			
	Physical Properties	Abrasion Resistance				Good			
		Moisture Resistance				None			
		Typical Weight (Kg/100m) (excluding reel)				None			
	Diameter under Armour (mm)	6	9	14	22	8	12	18	27
	Diameter over Armour (mm)	—	—	—	—	—	—	—	—
	Overall Diameter [†] (mm)	4	6	9	14	6	8	11	16

Notes Impregnation retained up to 180°C. Above this temperature the integrity of the cable is maintained to the upper insulation rating limit provided the cable is not flexed particularly when cold.

* Where cables incorporate a metal braid, the braid can be used as a screen.

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

The cable constructions can also be manufactured to any other colour coding requirement that you may have, but might be subject to a minimum ordering quantity. 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.

Colour Codes available (other colour codes available on request)		Order Code - Example		
ANSI MC96.1		Stock No.	Thermocouple Type	Colour Code
		CM1406	- KX	- IEC
IEC 60584-3		These cables are available for Thermocouple Types: KX, JX, TX, NX, EX, RX or SX. Other less popular thermocouple types are available on request.		
		These cables are normally available from us for immediate delivery from stock to ANSI MC96.1 colour coding.		



TC Measurement & Control Pty Ltd
PO Box 7777
Oakleigh VIC 3166
Australia
Tel: 03 9543 8433
Fax: 03 9543 8466
Email: info@tcaus.com.au
Web: www.tcaus.com.au

© TC Measurement & Control Pty Ltd.
Issue Number: 0520

TC for Temperature Sensing, Measurement and Control