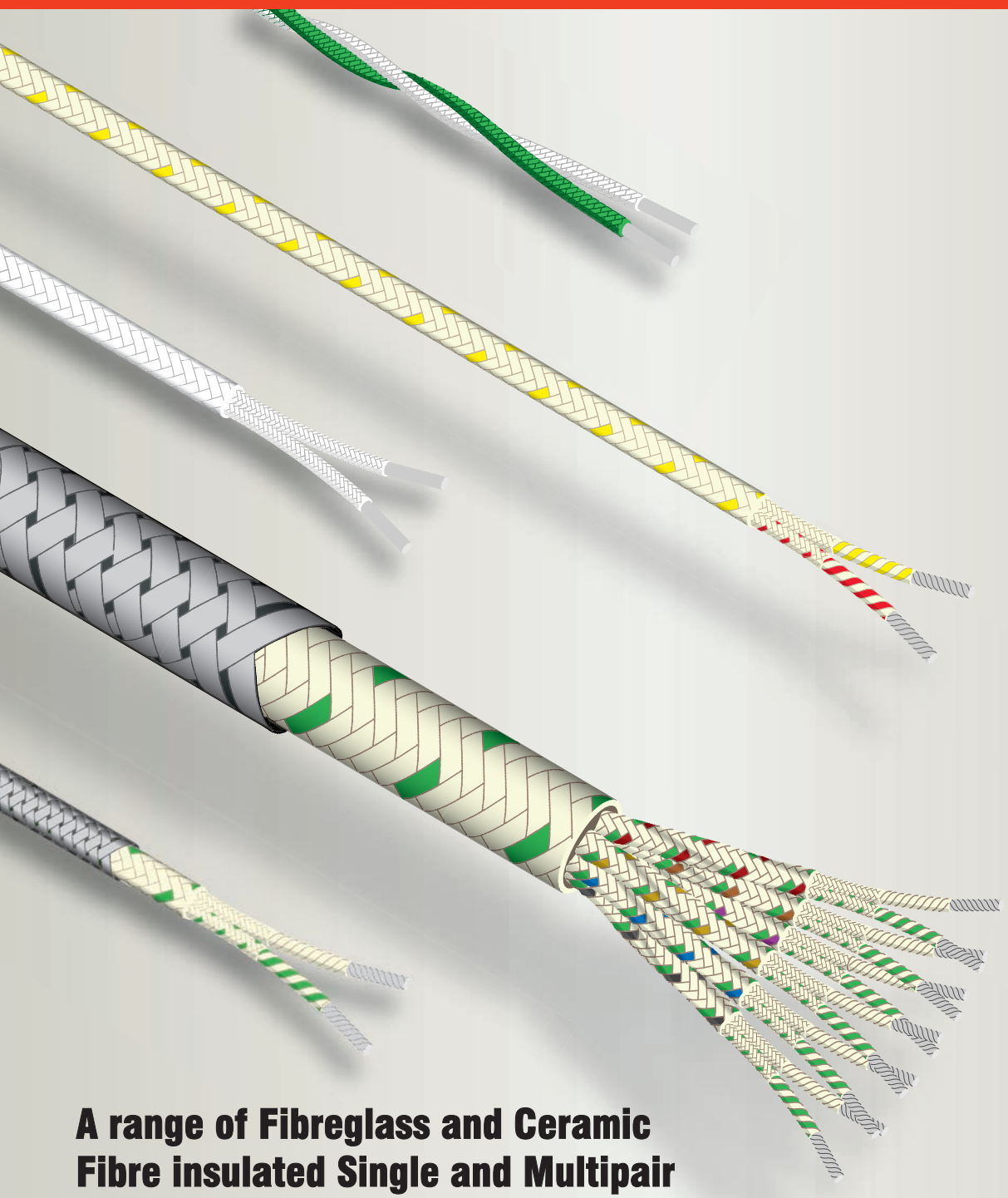
Fibreglass and Ceramic Fibre Insulated Thermocouple Cables - Single and Multipairs



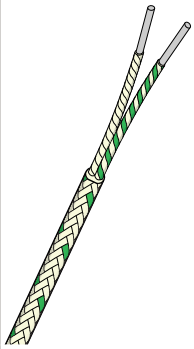
A range of Fibreglass and Ceramic Fibre insulated Single and Multipair Thermocouple Cables available from stock for immediate delivery

TC Ltd for Temperature Sensing, Measurement and Control

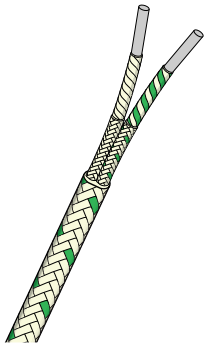
Fibreglass Insulated Single Pair Thermocouple Cable

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

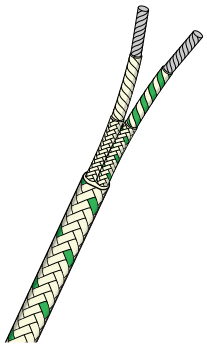
- Excellent for high temperature applications up to 480°C we also offer High Temperature Fibreglass (800°C) and Ceramic Fibre (1200°C)
- Suitable for use at normal air ambient temperatures where there is a possibility of a hot spot which might damage lower rated cables such as PVC or PFA
- Flat twin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



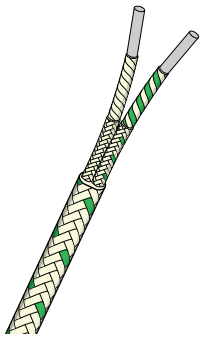
Basic Fibreglass Flat Twin
One pair of **solid** conductors. Cores double glass fibre lapped and varnished. Pair laid flat, glass fibre braided overall and varnished.



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 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 and varnished.

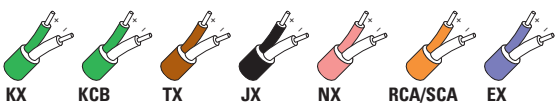
	Stock Number	**C05**	**C09**	**C10**	**C20**	**C30**	**C40**	**C50**	**C51**	**C52**	**C53**	**C76**	**C77**	**C70**
CONDUCTORS	**Conductor Style**	**Solid**		**Solid**			**Stranded**					**Solid**		
	No. of Strands / Strand Diameter (mm)	**1/0.2**	**1/0.3**	**1/0.3**	**1/0.5**	**1/0.8**	**7/0.2**	**13/0.2**	**23/0.2**	**32/0.2**	**40/0.2**	**1/0.5**	**1/0.8**	**1/1.29**
	Total Area (mm²)	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
	Insulation	Fibreglass		Fibreglass			Fibreglass					**High Temp. Fibreglass**		
PAIRS	**Number of Pairs**	1		1			1					1		
	Laid Flat or Twisted	Laid Flat		Laid Flat			Laid Flat					Lad Flat		
	Screen	No		No			No					No		
OVERALL	**Insulation**	Fibreglass		Fibreglass			Fibreglass					**High Temp. Fibreglass**		
	Insulation Rating (°C) Continuous	+480		+480			+480					+800		
	Insulation Rating (°C) Short Term	+540		+540			+540					—		
	Colour Coding	Yes		Yes			Yes					Yes		
	Physical Properties Abrasion Resistance	Fair		Fair			Fair					Fair		
	Physical Properties Moisture Resistance	None		None			None					None		
	Physical Properties Typical Weight (Kg/100m) (excluding reel)	1	1	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.										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.

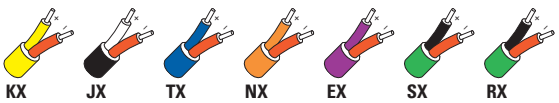
The cable constructions can also be manufactured to any other colour coding requirement that you may have, but might be subject to a minimum ordering quantity. If you have any specific requirements regarding cable lengths please let us know so that we may make a satisfactory offer to meet your needs.

Colour Codes available (other colour codes available on request)

IEC 60584-3



ANSI MC96.1



Order Code - Example

Stock No.		Thermocouple Type		Colour Code
C40	-	**KX**	-	**IEC**

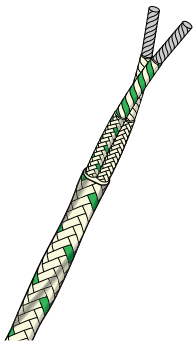
These cables are available for Thermocouple Types: KX, KCB, JX, TX, NX, EX, RCA or SCA. Other less popular thermocouple types are available on request.

These cables are normally available from us for **immediate** delivery from stock to IEC 60584-3 colour coding.

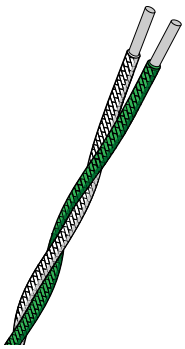
Fibreglass Insulated Single Pair Thermocouple Cable

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.

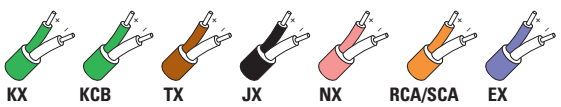
		Stock Number	**C37**	**C38**	**C27**
CONDUCTORS		**Conductor Style**	**Stranded**		**Solid**
		No. of Strands / Strand Diameter (mm)	**7/0.2**	**13/0.2**	**1/0.71**
		Total Area (mm^2)	0.22	0.44	0.4
		Total AWG (S = Stranded)	24S	21S	21
		Insulation	Fibreglass		**High Temperature Fibreglass**
PAIRS		**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	1
	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.

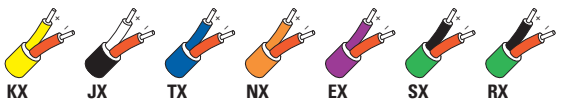
The cable constructions can also be manufactured to any other colour coding requirement that you may have, but might be subject to a minimum ordering quantity. If you have any specific requirements regarding cable lengths please let us know so that we may make a satisfactory offer to meet your needs.

Colour Codes available (other colour codes available on request)

IEC 60584-3



ANSI MC96.1



Order Code - Example

Stock No.		Thermocouple Type		Colour Code
C37	-	**KX**	-	**IEC**

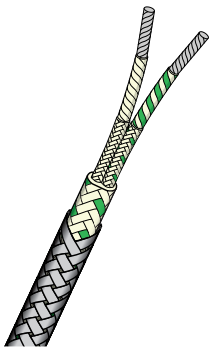
These cables are available for Thermocouple Types: KX, KCB, JX, TX, NX, EX, RCA or SCA. Other less popular thermocouple types are available on request.

These cables are normally available from us for **immediate** delivery from stock to IEC 60584-3 colour coding.

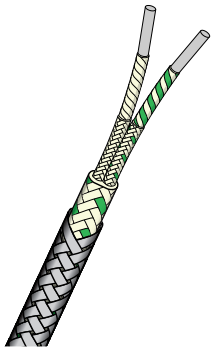
Fibreglass Insulated Single Pair Thermocouple Cable

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

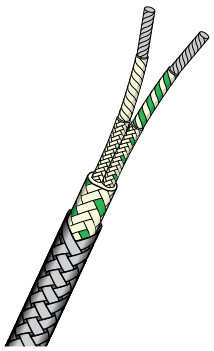
- Excellent for high temperature applications up to 480°C we also offer High Temperature Fibreglass (800°C) and Ceramic Fibre (1200°C)
- Suitable for use at normal air ambient temperatures where there is a possibility of a hot spot which might damage lower rated cables such as PVC or PFA
- Stainless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

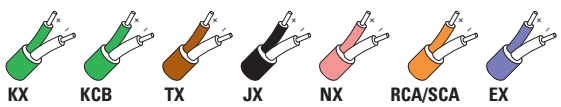
		C60	C65	C66	C67	C68	C78	C79	C71	C80
	Stock Number									
CONDUCTORS	**Conductor Style**	Stranded					Solid			Stranded
	No. of Strands / Strand Diameter (mm)	7/0.2	13/0.2	23/0.2	32/0.2	40/0.2	1/0.5	1/0.8	1/1.29	13/0.2
	Total Area (mm²)	0.22	0.44	0.75	1.0	1.3	0.2	0.5	1.3	0.44
	Total AWG (S = Stranded)	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
	Insulation Rating (°C) Short Term	+540					—			—
	Colour Coding	Yes					Yes			Yes
	Physical Properties Abrasion Resistance	Good					Good			Good
	Physical Properties Moisture Resistance	None					None			None
	Typical Weight (Kg/100m) (excluding reel)	2	3	4	5	5	2	3	5	2
	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)

IEC 60584-3



ANSI MC96.1

Order Code - Example

Stock No.		Thermocouple Type		Colour Code
C60	-	KX	-	IEC

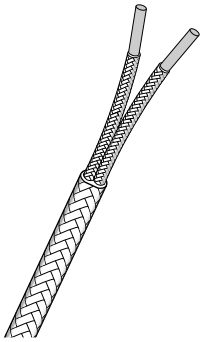
These cables are available for Thermocouple Types: KX, KCB, JX, TX, NX, EX, RCA or SCA. Other less popular thermocouple types are available on request.

These cables are normally available from us for **immediate** delivery from stock to IEC 60584-3 colour coding.

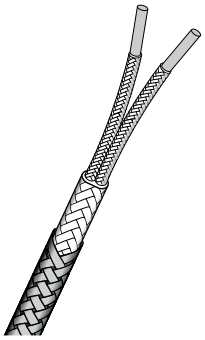
Ceramic Fibre Single Pair Thermocouple Cable

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 and Inconel 600 braided versions available



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



Ceramic Fibre Flat Twin with Inconel 600 Braid
One pair of **solid** conductors. Cores ceramic fibre braided. Pair laid flat, ceramic fibre braided overall. Inconel 600 braid overall.

			Stock Number	D20	D22
CONDUCTORS	Conductor Style			Solid	Solid
	No. of Strands / Strand Diameter (mm)			1/0.8	1/0.8
	Total Area (mm^2)			0.5	0.5
	Total AWG (S = Stranded)			20	20
	Insulation			Ceramic Fibre	Ceramic Fibre
PAIRS	Number of Pairs			1	1
	Laid Flat or Twisted			Laid Flat	Laid Flat
	Screen			No	Yes
OVERALL	Insulation			Ceramic Fibre	Ceramic Fibre
	Insulation Rating (°C)	Continuous		-185 to +1200	-185 to +1200
		Short Term		—	—
	Colour Coding			No	No
	Physical Properties	Abrasion Resistance		Fair	Fair
		Moisture Resistance		None	None
		Typical Weight (Kg/100m) (excluding reel)		2	3
	Diameter under Armour (mm)			—	—
	Diameter over Armour (mm)			—	—
	Overall Diameter† (mm)			2x3	3x4
			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

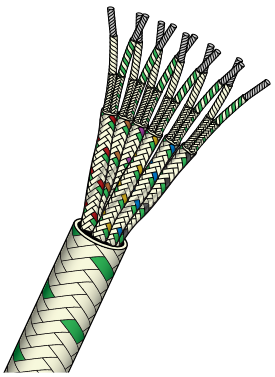
Stock No.		Thermocouple Type
D20	-	KX

These cables are available for Thermocouple Types: KX, KCB, JX, TX, NX, EX, RCA or SCA. Other less popular thermocouple types are available on request.

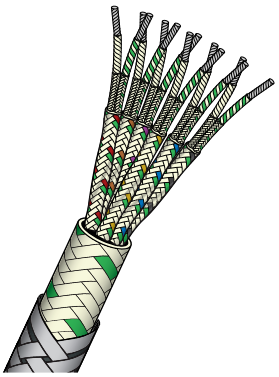
Fibreglass Insulated Multipair Thermocouple Cable

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.

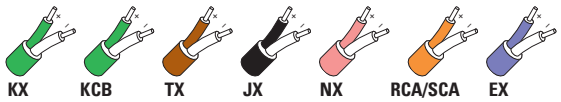
	Stock Number	CM1402	CM1403	CM1406	CM1412	CM1402/SSB	CM1403/SSB	CM1406/SSB	CM1412/SSB
CONDUCTORS	Conductor Style	Stranded				Stranded			
	No. of Strands / Strand Diameter (mm)	14/0.2	14/0.2	14/0.2	14/0.2	14/0.2	14/0.2	14/0.2	14/0.2
	Total Area (mm^2)	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44
	Total AWG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

IEC 60584-3



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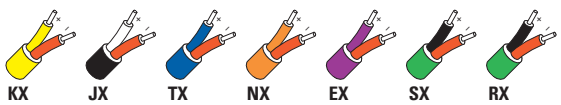

Order Code - Example

Stock No.		Thermocouple Type		Colour Code
CM1406	-	KX	-	IEC

These cables are available for Thermocouple Types: KX, KCB, JX, TX, NX, EX, RCA or SCA. Other less popular thermocouple types are available on request.

These cables are normally available from us for **immediate** delivery from stock to IEC 60584-3 colour coding.

Notes

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Issue Number: 0424

TC Ltd for Temperature Sensing, Measurement and Control