



**Caledonian**

[www.caledonian-cables.co.uk](http://www.caledonian-cables.co.uk)

# THERMOCOUPLE CABLES



**ADDISON**

[www.addison-cables.com](http://www.addison-cables.com)



## Company Profile

Caledonian, established in 1978, offers one of the most complete lines of fiber and copper cabling system solutions with over hundreds of different cabling system products. Our superior products provide leading edge within every cable series and for every application.

Among the national and international standards with which our cables could comply are: BS - British Standard; LPCB Fire Performance Standard. ISO Standard etc. Caledonian Cables offers a comprehensive stock of cables and cabling products through its nationwide network of resellers and distributors. Caledonian Cables has continually expanded its global presence in Europe and Asia.

Caledonian & Addison. produces a wide range of cables for communication, power and electronics in its primary plants in UK, Italy and Spain. To stay in front, we continually keep expanding our manufacturing capabilities in more low cost region such as Romania, Taiwan, Malaysia etc. This low-cost manufacturing facilities enable us provide a flexible, scalable global system that delivers superior operational performance and optimal results for our customers.

Our extensive global network of manufacturing facilities gives us significant scale and the flexibility to fulfill our customer requirements. This global presence provides design and consultancy solutions that are combined with core cable manufacturing, logistic services, and vertically integrated with our E commerce technologies, to optimize customer operations by lowering costs and reducing time to market.

Caledonian & Addison has been respected for its high standards of quality, excellent service level, competitive pricing and a unique and innovative spirit. With our latest technologies, we are both inspired and well-positioned to meet the changing needs of our customers. We have the resources to diversify and to enhance our product lines and services. We understand the need for change and with our accurate planning. We are ready for the future and the promise of new marketing opportunities. Our tradition of growth through excellence is assured.

Our Design Centers work closely with customers to constantly improve its standard range of products and technologies and to develop customized, country and industryspecific solutions. Caledonian & Addison has established an extensive network of design, manufacturing and logistics facilities in the world's major markets to serve the growing outsourcing needs of both multinational and regional customers.



## Registration Certificate

**This document certifies that the administration systems of**

***Caledonian Cables Limited / Addison Technology Limited***  
***Marchants Industrial Centre, Mill Lane, Laughton, Lewes, Sussex, BN8 6AJ, United Kingdom***

**have been assessed and approved by QAS International**  
**to the following management systems, standards and guidelines:**

***ISO 9001 : 2008***

*With the permitted exclusion of clauses 7.3 Design and Development*

**The approved administration systems apply to the following:**

***The manufacture and supply of electrical cables and ancillary power equipment to customers internationally.***

Original Approval	.....	<b>6<sup>th</sup> September 1997</b>	.....
Current Certificate	.....	<b>7<sup>th</sup> February 2013</b>	.....
Certificate Expiry	.....	<b>7<sup>th</sup> February 2014</b>	.....
Certificate Number	.....	<b>A6211</b>	.....

**On behalf of QAS International**

www.qas-international.com

*This certificate remains valid while the holder maintains their quality administration systems in accordance with the standards and guidelines stated above, which will be audited annually by QAS International.*

*The holder is entitled to display the above registration mark for the duration of this certificate.*

*This certificate must be returned to QAS International on reasonable request.*

*Issuing Office: QAS International, 20A Oxford Street, Malmesbury, Wiltshire, SN16 9AX*



### Table of Content

General Description.....	5
Table of Alloy Combination .....	6

#### Single Pair

Flat Single Pair Silica Insulated .....	7
Flat Single Pair High Temp. Glass Insulated .....	8
Flat Single Pair Glass Insulated .....	9
Flat Single Pair PFA Insulated .....	12
Flat Single Pair FEP Insulated.....	15
Flat Single Pair TFE Insulated.....	17
Twisted Single Pair PFA Insulated.....	18
Twisted Single Pair FEP Insulated .....	19

#### Multipair

Single pair/multipair Overall Screen .....	20
Multipair Individual/Overall Screen .....	24
Single pair/multipair Overall Screen with Armor .....	28
Multipair Individual/Overall Screen with Armor .....	32
Multipair Individual/Overall Screen with Armor and Lead Sheath .....	36
Color code .....	40



### General Description

A Thermocouple is a temperature measuring device consisting of two conductors of dissimilar metals or alloys that are connected only at the ends. When the ends are at different temperatures a small voltage is produced in the wire that can be related directly to the temperature difference between the ends. If the temperature at one end is known, the temperature at the other end can be determined.

Thermocouple cable or extension cable is recommended to be used to connect thermocouples to the sensing or control instrumentation. The conditions of measurement determine the type of thermocouple cable and insulation to be used. Temperature range, environment, insulation requirements, response, and service life should be considered.

Thermocouple extension cable has approximately the same characteristics as thermocouple cable, but its accuracy is guaranteed over a more limited range of temperatures. Thermocouple extension cable can offer advantages in cost or mechanical properties when used for connections between thermocouple and instruments. For base metal types of thermocouples, extension cable is of substantially the same composition as the corresponding thermocouple type. For precious metal types, however, an entirely different alloy is formulated to match the noble metal characteristics over a specified temperature range. This is necessary due to the high cost of the precious metals, which would otherwise be necessary for the interconnection. The letter X indicates extension cable.

Compensating cables use completely different alloys that happen to exhibit very similar thermo-electric properties up to a limited temperature (usually 200 °C). Great care should be taken to control the temperature of the junction between the compensating cable and the actual thermocouple material to keep it below the acceptable maximum. Compensating cables come in convenient cabling forms for site installations. The letter C indicates compensation cable.



## THERMOCOUPLE CABLES

### Table of Alloy Combination

Type	Conductor Combinations		Operating Temperature (Continuous)
	Positive Electrode	Negative Electrode	
KX	Nickel-Chromium (Chromel)	Nickel-Alloy	0 to 1100 °C
TX	Copper (Cu)	Copper-Nickel (Constantan)	-185 to 300 °C
EX	Nickel-Chromium (Chromel)	Copper-Nickel (Constantan)	0 to 800 °C
JX	Iron (Fe)	Copper-Nickel (Constantan)	0 to 750 °C
NX	Nicrosil	Nisil	0 to 1200 °C
BC compensating	Copper (Cu)	Copper (Cu)	0 to 100 °C
NC compensating	Copper (Cu)	Copper-Nickel (Constantan)	0 to 150 °C
KCA compensating	Iron (Fe)	Copper-Nickel (Constantan)	0 to 150 °C
KCB compensating	Copper (Cu)	Copper-Nickel (Constantan)	0 to 100 °C
RCA/SCA compensating	Copper (Cu)	Copper-Low Value Nickel	0 to 100 °C
RCB/SCB compensating	Copper (Cu)	Copper-Nickel (Constantan)	0 to 200 °C



### Flat Single Pair Silica Insulated

#### Application

These cables are used with thermocouples for temperature measurements.

#### Specification

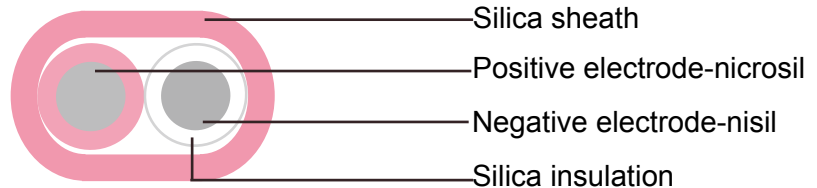
Conductor: Solid. Material is according to thermocouple type.

Insulation: Silica

Outer sheath: Silica

Construction: Flat

Color code: According to IEC 60584-3



#### NX silica insulated

#### K Type

AWG(mm)	Insulation Material	Sheath Material	Max. Temp. (°C)	Nominal O.D. (mm)	Weight (kg/km)
24 (0.51)	silica	silica	870	2.2 x 3.4	16.7
20 (0.81)	silica	silica	980	2.7 x 3.9	20.0
14 (1.63)	silica	silica	1090	3.6 x 5.0	53.4

#### J Type

AWG(mm)	Insulation Material	Sheath Material	Max. Temp. (°C)	Nominal O.D. (mm)	Weight (kg/km)
24 (0.51)	silica	silica	370	2.2 x 3.4	16.7
20 (0.81)	silica	silica	480	2.7 x 3.9	20.0
14 (1.63)	silica	silica	590	3.6 x 5.0	53.4

#### N Type

AWG(mm)	Insulation Material	Sheath Material	Max. Temp. (°C)	Nominal O.D. (mm)	Weight (kg/km)
24 (0.51)	silica	silica	980	2.2 x 3.4	10.0
20 (0.81)	silica	silica	980	2.7 x 3.9	11.7
14 (1.63)	silica	silica	1090	3.6 x 5.0	26.7



## THERMOCOUPLE CABLES

### Flat Single Pair High Temp. Glass Insulated

#### Application

These cables are used with thermocouples for temperature measurements.

#### Specification

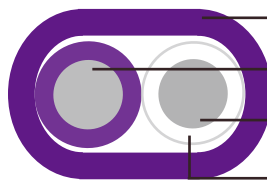
Conductor: Solid. Material is according to thermocouple type.

Insulation: High Temp. glass

Outer sheath: High Temp. glass

Construction: Flat

Color code: According to IEC 60584-3



High temp. glass sheath

Positive electrode-nickel-chromium

Negative electrode-copper-nickel

High temp. glass insulation

EX high temp. glass insulated

#### K Type

AWG(mm)	Insulation Material	Sheath Material	Max. Temp. (°C)	Nominal O.D. (mm)	Weight (kg/km)
24 (0.51)	High Temp. Glass	High Temp. Glass	704	1.4 x 2.3	10.0
20 (0.81)	High Temp. Glass	High Temp. Glass	704	1.5 x 2.7	13.4

#### E Type

AWG(mm)	Insulation Material	Sheath Material	Max. Temp. (°C)	Nominal O.D. (mm)	Weight (kg/km)
24 (0.51)	High Temp. Glass	High Temp. Glass	704	1.4 x 2.3	10.0
20 (0.81)	High Temp. Glass	High Temp. Glass	704	1.5 x 2.7	13.4

#### J Type

AWG(mm)	Insulation Material	Sheath Material	Max. Temp. (°C)	Nominal O.D. (mm)	Weight (kg/km)
24 (0.51)	High Temp. Glass	High Temp. Glass	370	1.1 x 2.2	10.0
20 (0.81)	High Temp. Glass	High Temp. Glass	480	1.5 x 2.7	13.4

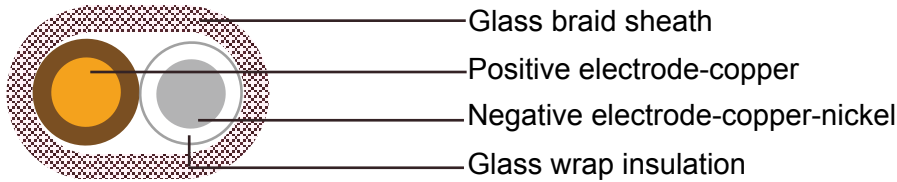
#### N Type

AWG(mm)	Insulation Material	Sheath Material	Max. Temp. (°C)	Nominal O.D. (mm)	Weight (kg/km)
24 (0.51)	High Temp. Glass	High Temp. Glass	704	1.4 x 2.3	3.4
20 (0.81)	High Temp. Glass	High Temp. Glass	704	1.5 x 2.7	6.7

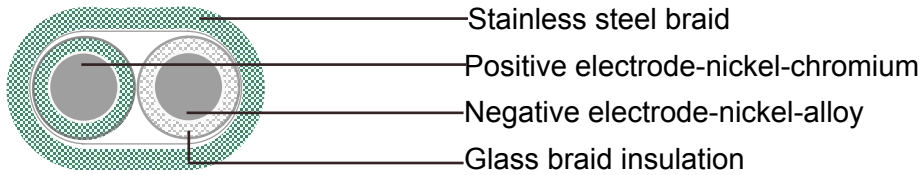




### Flat Single Pair Glass Insulated



TX glass wrap insulated



KX glass braid insulated

### Application

These cables are used with thermocouples for temperature measurements.

### Specification

Conductor: Solid or stranded. Material is according to thermocouple type.

Insulation: Glass wrap or glass braid

Outer sheath: Glass braid or stainless steel braid

Construction: Flat

Color code: According to IEC 60584-3

### K Type

AWG(mm)	Insulation Material	Sheath Material	Max. Temp. (°C)	Nominal O.D. (mm)	Weight (kg/km)
24 (0.51)	Glass Braid	Stainless Steel Braid	482	2.0 x 2.8	16.7
24 (7/0.2)	Glass Braid	Stainless Steel Braid	482	2.2 x 3.0	18.3
20 (0.81)	Glass Braid	Stainless Steel Braid	482	2.3 x 3.0	20.0
20 (7/0.32)	Glass Braid	Stainless Steel Braid	482	2.3 x 3.2	23.4



## THERMOCOUPLE CABLES

### K Type

AWG(mm)	Insulation Material	Sheath Material	Max. Temp. (°C)	Nominal O.D. (mm)	Weight (kg/km)
36 (0.13)	Glass Wrap	Glass Braid	482	0.8 x 1.1	3.4
30 (0.25)	Glass Wrap	Glass Braid	482	0.9 x 1.3	6.7
28 (0.32)	Glass Wrap	Glass Braid	482	1.0 x 1.4	7.3
26 (0.41)	Glass Braid	Glass Braid	482	1.1 x 1.9	8.4
24 (0.51)	Glass Braid	Glass Braid	482	1.3 x 2.0	10.0
24 (7/0.2)	Glass Braid	Glass Braid	482	1.3 x 2.2	10.3
20 (0.81)	Glass Braid	Glass Braid	482	1.5 x 2.1	13.4
20 (7/0.32)	Glass Braid	Glass Braid	482	1.5 x 2.5	13.8

### J Type

AWG(mm)	Insulation Material	Sheath Material	Max. Temp. (°C)	Nominal O.D. (mm)	Weight (kg/km)
36 (0.13)	Glass Wrap	Glass Braid	320	0.8 x 1.1	3.4
30 (0.25)	Glass Wrap	Glass Braid	320	0.9 x 1.3	6.7
28 (0.32)	Glass Wrap	Glass Braid	370	1.0 x 1.4	7.3
26 (0.41)	Glass Braid	Glass Braid	370	1.1 x 1.9	8.4
24 (0.51)	Glass Braid	Glass Braid	370	1.3 x 2.0	10.0
24 (7/0.2)	Glass Braid	Glass Braid	370	1.3 x 2.2	10.3
20 (0.81)	Glass Braid	Glass Braid	480	1.5 x 2.1	13.4
20 (7/0.32)	Glass Braid	Glass Braid	480	1.5 x 2.5	13.8



### N Type

AWG(mm)	Insulation Material	Sheath Material	Max. Temp. (°C)	Nominal O.D. (mm)	Weight (kg/km)
30 (0.25)	Glass Braid	Glass Braid	482	0.9 x 1.3	3.4
24 (0.51)	Glass Braid	Glass Braid	482	1.3 x 2.0	5.1
20 (0.81)	Glass Braid	Glass Braid	482	1.5 x 2.1	6.7

### T Type

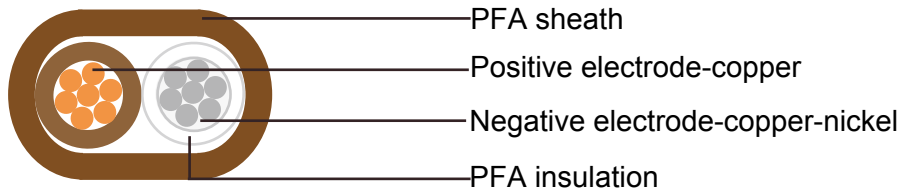
AWG(mm)	Insulation Material	Sheath Material	Max. Temp. (°C)	Nominal O.D. (mm)	Weight (kg/km)
30 (0.25)	Glass Wrap	Glass Braid	150	0.9 x 1.3	6.7
28 (0.32)	Glass Wrap	Glass Braid	200	1.0 x 1.4	7.3
26 (0.41)	Glass Wrap	Glass Braid	200	1.1 x 1.9	8.4
24 (0.51)	Glass Braid	Glass Braid	200	1.3 x 2.0	10.0
24 (7/0.2)	Glass Braid	Glass Braid	200	1.3 x 2.2	10.3
20 (0.81)	Glass Braid	Glass Braid	260	1.5 x 2.4	13.4
20 (7/0.32)	Glass Braid	Glass Braid	260	1.5 x 2.5	13.8





## THERMOCOUPLE CABLES

### Flat Single Pair PFA Insulated



TX PFA insulated

#### Application

These cables are used with thermocouples for temperature measurements.

#### Specification

Conductor: Solid or stranded. Material is according to thermocouple type.

Insulation: PFA

Outer sheath: PFA or glass braid

Construction: Flat

Color code: According to IEC 60584-3

#### K Type

AWG(mm)	Insulation Material	Sheath Material	Max. Temp. (°C)	Nominal O.D. (mm)	Weight (kg/km)
40 (0.08)	PFA	PFA	260	0.4 x 0.7	3.4
36 (0.13)	PFA	PFA	260	0.5 x 0.8	3.6
30 (0.25)	PFA	PFA	260	0.6 x 1.0	4.0
24 (0.51)	PFA	PFA	260	1.4 x 2.4	10.0
24 (7/0.2)	PFA	PFA	260	1.6 x 2.6	10.5
22 (7/0.25)	PFA	PFA	260	1.7 x 3.4	13.4
20 (0.81)	PFA	PFA	260	1.7 x 3.0	16.7
20 (7/0.32)	PFA	PFA	260	1.9 x 3.2	17.1



### E Type

AWG(mm)	Insulation Material	Sheath Material	Max. Temp. (°C)	Nominal O.D. (mm)	Weight (kg/km)
40 (0.08)	PFA	PFA	260	0.4 x 0.7	3.4
36 (0.13)	PFA	PFA	260	0.5 x 0.8	3.6
30 (0.25)	PFA	PFA	260	0.6 x 1.0	4.0
24 (0.51)	PFA	PFA	260	1.4 x 2.4	10.0
24 (7/0.2)	PFA	PFA	260	1.6 x 2.6	10.5
22 (7/0.25)	PFA	PFA	260	1.7 x 3.4	13.4
20 (0.81)	PFA	PFA	260	1.7 x 3.0	16.7
20 (7/0.32)	PFA	PFA	260	1.9 x 3.2	17.1

### J Type

AWG(mm)	Insulation Material	Sheath Material	Max. Temp. (°C)	Nominal O.D. (mm)	Weight (kg/km)
40 (0.08)	PFA	PFA	260	0.4 x 0.7	3.4
36 (0.13)	PFA	PFA	260	0.5 x 0.8	3.6
30 (0.25)	PFA	PFA	260	0.6 x 1.0	4.0
24 (0.51)	PFA	PFA	260	1.4 x 2.4	10.0
24 (7/0.2)	PFA	PFA	260	1.6 x 2.6	10.5
22 (7/0.25)	PFA	PFA	260	1.7 x 3.4	13.4
20 (0.81)	PFA	PFA	260	1.7 x 3.0	16.7
20 (7/0.32)	PFA	PFA	260	1.9 x 3.2	17.1



## THERMOCOUPLE CABLES

### T Type

AWG(mm)	Insulation Material	Sheath Material	Max. Temp. (°C)	Nominal O.D. (mm)	Weight (kg/km)
40 (0.08)	PFA	PFA	150	0.4 x 0.7	3.4
36 (0.13)	PFA	PFA	150	0.5 x 0.8	3.6
30 (0.25)	PFA	PFA	150	0.6 x 1.0	4.0
24 (0.51)	PFA	PFA	260	1.4 x 2.4	10.0
24 (7/0.2)	PFA	PFA	260	1.6 x 2.6	10.5
22 (7/0.25)	PFA	PFA	260	1.7 x 3.4	13.4
20 (0.81)	PFA	PFA	260	1.7 x 3.0	16.7
20 (7/0.32)	PFA	PFA	260	1.9 x 3.2	17.1

### N Type

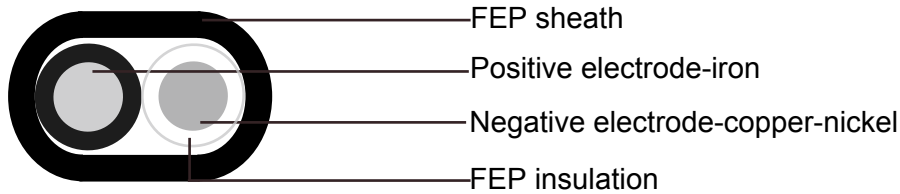
AWG(mm)	Insulation Material	Sheath Material	Max. Temp. (°C)	Nominal O.D. (mm)	Weight (kg/km)
30 (0.25)	PFA	PFA	260	0.6 x 1.0	1.7
24 (0.51)	PFA	PFA	260	1.4 x 2.4	6.7
20 (0.81)	PFA	PFA	260	1.7 x 3.0	10.0

### K Type

AWG(mm)	Insulation Material	Sheath Material	Max. Temp. (°C)	Nominal O.D. (mm)	Weight (kg/km)
40 (0.08)	PFA	Glass Braid	260	0.7 x 0.9	3.4
36 (0.13)	PFA	Glass Braid	260	0.7 x 1.0	3.6
30 (0.25)	PFA	Glass Braid	260	0.9 x 1.2	4.5



### Flat Single Pair FEP Insulated



JX FEP insulated

#### Application

These cables are used with thermocouples for temperature measurements.

#### Specification

Conductor: Solid. Material is according to thermocouple type.

Insulation: FEP

Outer sheath: FEP

Construction: Flat

Color code: According to IEC 60584-3

#### K Type

AWG(mm)	Insulation Material	Sheath Material	Max. Temp. (°C)	Nominal O.D. (mm)	Weight (kg/km)
30(0.25)	FEP	FEP	200	1.2 x 1.8	4.5
28(0.32)	FEP	FEP	200	1.2 x 2.0	5.5
26(0.41)	FEP	FEP	200	1.3 x 2.1	6.5
24 (0.51)	FEP	FEP	200	1.4 x 2.4	10.0
20 (0.81)	FEP	FEP	200	1.7 x 3.0	16.7



## THERMOCOUPLE CABLES

### E Type

AWG(mm)	Insulation Material	Sheath Material	Max. Temp. (°C)	Nominal O.D. (mm)	Weight (kg/km)
30(0.25)	FEP	FEP	200	1.2 x 1.8	4.5
28(0.32)	FEP	FEP	200	1.2 x 2.0	5.5
26(0.41)	FEP	FEP	200	1.3 x 2.1	6.5
24 (0.51)	FEP	FEP	200	1.4 x 2.4	10.0
20 (0.81)	FEP	FEP	200	1.7 x 3.0	16.7

### J Type

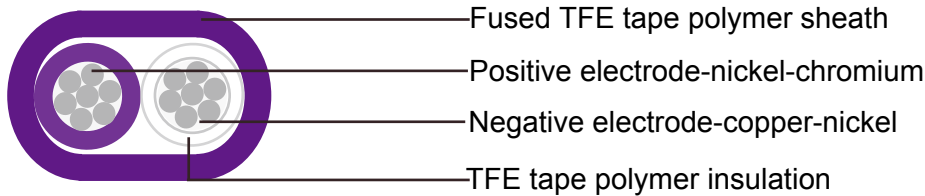
AWG(mm)	Insulation Material	Sheath Material	Max. Temp. (°C)	Nominal O.D. (mm)	Weight (kg/km)
30(0.25)	FEP	FEP	200	1.2 x 1.8	4.5
28(0.32)	FEP	FEP	200	1.2 x 2.0	5.5
26(0.41)	FEP	FEP	200	1.3 x 2.1	6.5
24 (0.51)	FEP	FEP	200	1.4 x 2.4	10.0
20 (0.81)	FEP	FEP	200	1.7 x 3.0	16.7







### Flat Single Pair TFE Insulated



EX TFE insulated

#### Application

These cables are used with thermocouples for temperature measurements.

#### Specification

Conductor: Solid or stranded. Material is according to thermocouple type.

Insulation: TFE Tape Polymer

Outer sheath: Fused TFE Tape Polymer

Construction: Flat

Color code: According to IEC 60584-3

#### K Type

AWG(mm)	Insulation Material	Sheath Material	Max. Temp. (°C)	Nominal O.D. (mm)	Weight (kg/km)
24 (0.51)	TFE Tape Polymer	Fused TFE Tape Polymer	260	1.3 x 1.9	10.0
24 (7/0.2)	TFE Tape Polymer	Fused TFE Tape Polymer	260	1.3 x 2.2	10.3
20 (0.81)	TFE Tape Polymer	Fused TFE Tape Polymer	260	1.5 x 2.5	16.7
20 (7/0.32)	TFE Tape Polymer	Fused TFE Tape Polymer	260	1.5 x 2.7	17.1

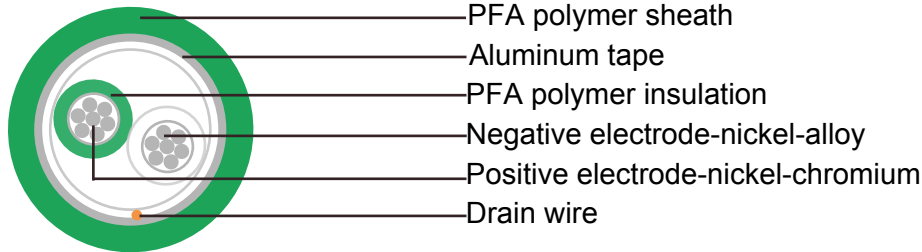
#### E Type

AWG(mm)	Insulation Material	Sheath Material	Max. Temp. (°C)	Nominal O.D. (mm)	Weight (kg/km)
24 (0.51)	TFE Tape Polymer	Fused TFE Tape Polymer	260	1.3 x 1.9	10.0
24 (7/0.2)	TFE Tape Polymer	Fused TFE Tape Polymer	260	1.3 x 2.2	10.3
20 (0.81)	TFE Tape Polymer	Fused TFE Tape Polymer	260	1.5 x 2.5	16.7
20 (7/0.32)	TFE Tape Polymer	Fused TFE Tape Polymer	260	1.5 x 2.7	17.1

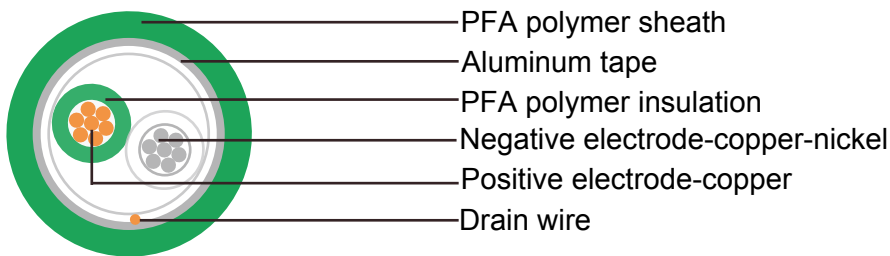


## THERMOCOUPLE CABLES

### Twisted Single Pair PFA Insulated



KX PFA insulated



KCB FPA insulated

#### Application

These cables are used with thermocouples for temperature measurements.

#### Specification

Conductor: Solid or stranded. Material is according to thermocouple type.

Insulation: PFA polymer

Screen: Aluminum tape

Drain wire: Tinned copper

Outer sheath: PFA polymer

Construction: Round

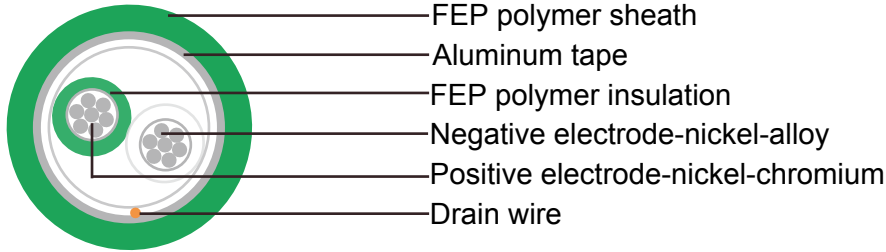
Color code: According to IEC 60584-3

#### K Type

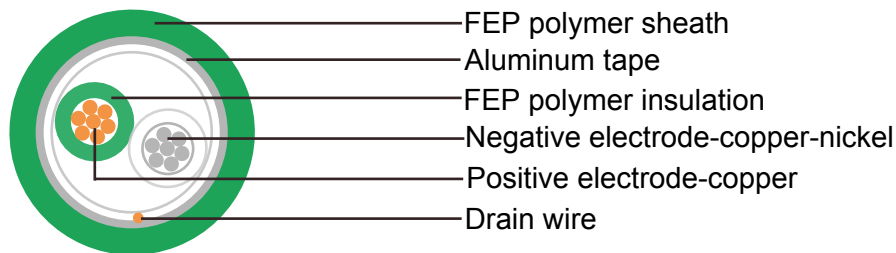
AWG(mm)	Insulation Material	Screen Material	Sheath Material	Max. Temp. (°C)	Nominal O.D. (mm)	Weight (kg/km)
24 (0.51)	PFA Polymer	Aluminum tape	PFA Polymer	260	2.7	13.4
24 (7/0.2)	PFA Polymer	Aluminum tape	PFA Polymer	260	2.9	13.8
20 (0.81)	PFA Polymer	Aluminum tape	PFA Polymer	260	3.7	30.0
20 (7/0.32)	PFA Polymer	Aluminum tape	PFA Polymer	260	3.8	30.3



### Twisted Single Pair FEP Insulated



KX FEP insulated



KCB FEP insulated

### Application

These cables are used with thermocouples for temperature measurements.

### Specification

Conductor: Solid or stranded. Material is according to thermocouple type.

Insulation: FEP polymer

Screen: Aluminum tape

Drain wire: Tinned copper

Outer sheath: FEP polymer

Construction: Round

Color code: According to IEC 60584-3

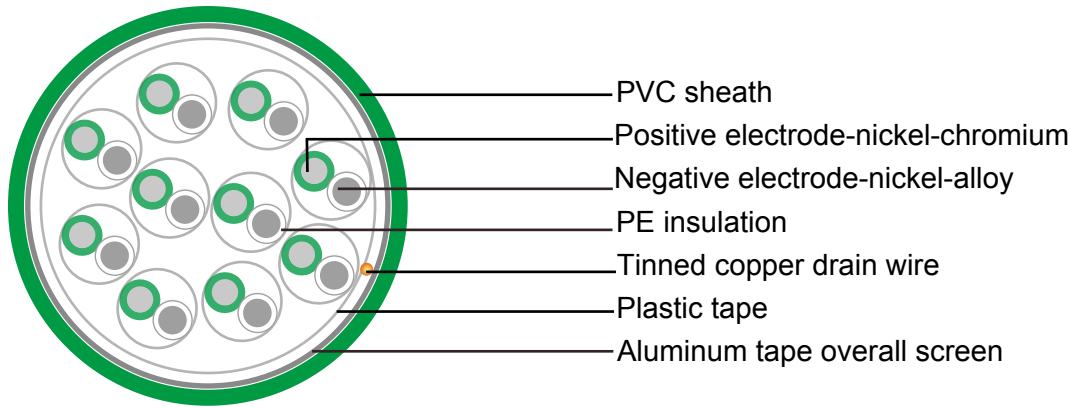
### K Type

AWG(mm)	Insulation Material	Screen Material	Sheath Material	Max. Temp. (°C)	Nominal O.D. (mm)	Weight (kg/km)
24 (0.51)	FEP Polymer	Aluminum tape	FEP Polymer	200	2.7	13.4
24 (7/0.2)	FEP Polymer	Aluminum tape	FEP Polymer	200	2.9	13.8
20 (0.81)	FEP Polymer	Aluminum tape	FEP Polymer	200	3.7	30.0
20 (7/0.32)	FEP Polymer	Aluminum tape	FEP Polymer	200	3.8	30.3



## THERMOCOUPLE CABLES

### Single pair/multipair Overall Screen



KX OS

### Application

These cables are used in thermocouple circuits, petrochemical plants, utilities and industrial plants.

### Specification

Conductor: Solid

Type applicable: KX, EX, JX, TX, NX, KCA, KCB, RCA, RCB, SCA, RCB, BC

Insulation: PVC, PE, XLPE or LSZH thermoplastic material

Wrapping: At least 1 layer of plastic tape

Overall screen: 24  $\mu\text{m}$  aluminium / PETP tape over 7-stranded tinned copper drain wire, 0.5  $\text{mm}^2$

Outer sheath: PVC or LSZH thermoplastic material

Color code: According to IEC 60584-3

Flame retardancy: IEC 60332-1

Flame propagation: IEC 60332 cat. C

Temperature range: -30°C up to 70°C during operation. -5°C up to 50°C during installation.



### 0.5 mm<sup>2</sup>

Conductor Size (mm <sup>2</sup> )	No. of Pairs	Insulation Thickness (mm)	Outer Sheath Thickness (mm)	Nominal O.D. (mm)	Weight* (kg/km)
0.5	1	0.4	1.0	5.6	42
0.5	2	0.4	1.0	7.9	68
0.5	4	0.4	1.0	9.0	106
0.5	6	0.4	1.0	10.6	145
0.5	8	0.4	1.0	11.3	181
0.5	10	0.4	1.2	13.1	235
0.5	12	0.4	1.2	13.7	269
0.5	16	0.4	1.2	15.4	341
0.5	20	0.4	1.2	16.8	412
0.5	24	0.4	1.4	18.6	508

### 0.8 mm<sup>2</sup>

Conductor Size (mm <sup>2</sup> )	No. of Pairs	Insulation Thickness (mm)	Outer Sheath Thickness (mm)	Nominal O.D. (mm)	Weight* (kg/km)
0.8	1	0.4	1.0	6.0	51
0.8	2	0.4	1.0	8.6	86
0.8	4	0.4	1.0	9.9	139
0.8	6	0.4	1.0	11.7	194
0.8	8	0.4	1.2	12.8	257
0.8	10	0.4	1.2	14.4	316
0.8	12	0.4	1.2	15.1	365
0.8	16	0.4	1.2	17.0	468
0.8	20	0.4	1.4	19.1	587
0.8	24	0.4	1.4	20.6	697



## THERMOCOUPLE CABLES

1.0 mm<sup>2</sup>

Conductor Size (mm <sup>2</sup> )	No. of Pairs	Insulation Thickness (mm)	Outer Sheath Thickness (mm)	Nominal O.D. (mm)	Weight* (kg/km)
1.0	1	0.4	1.0	6.3	57
1.0	2	0.4	1.0	9.0	98
1.0	4	0.4	1.0	10.3	161
1.0	6	0.4	1.2	12.6	238
1.0	8	0.4	1.2	13.4	300
1.0	10	0.4	1.2	15.2	369
1.0	12	0.4	1.2	15.8	428
1.0	16	0.4	1.4	18.3	568
1.0	20	0.4	1.4	20.0	690
1.0	24	0.4	1.4	21.6	821

1.3 mm<sup>2</sup>

Conductor Size (mm <sup>2</sup> )	No. of Pairs	Insulation Thickness (mm)	Outer Sheath Thickness (mm)	Nominal O.D. (mm)	Weight* (kg/km)
1.3	1	0.4	1.0	6.6	65
1.3	2	0.4	1.0	10.2	115
1.3	4	0.4	1.0	11.8	193
1.3	6	0.4	1.2	14.5	286
1.3	8	0.4	1.2	15.4	363
1.3	10	0.4	1.2	17.5	448
1.3	12	0.4	1.2	18.3	521
1.3	16	0.4	1.4	21.1	692
1.3	20	0.4	1.4	23.2	843
1.3	24	0.4	1.6	25.6	1005



1.5 mm<sup>2</sup>

Conductor Size (mm <sup>2</sup> )	No. of Pairs	Insulation Thickness (mm)	Outer Sheath Thickness (mm)	Nominal O.D. (mm)	Weight* (kg/km)
1.5	1	0.5	1.0	7.2	75
1.5	2	0.5	1.0	11.3	134
1.5	4	0.5	1.2	13.5	238
1.5	6	0.5	1.2	16.2	336
1.5	8	0.5	1.2	17.2	427
1.5	10	0.5	1.4	20.0	546
1.5	12	0.5	1.4	20.9	634
1.5	16	0.5	1.4	23.6	817
1.5	20	0.5	1.6	26.5	1021
1.5	24	0.5	1.6	28.7	1216

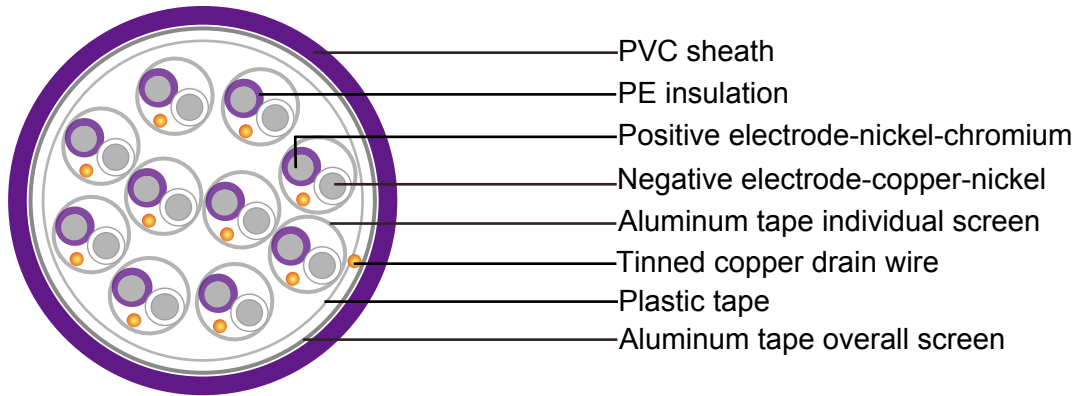
\*The number here is just approx. weight. It changes according to the insulation material and the conductor used in different type of extension cable and compensating cable.





## THERMOCOUPLE CABLES

### Multipair Individual/Overall Screen



EX IS/OS

### Application

These cables are used in thermocouple circuits, petrochemical plants, utilities and industrial plants.

### Specification

Conductor: Solid

Type applicable: KX, EX, JX, TX, NX, KCA, KCB, RCA, RCB, SCA, RCB, BC

Insulation: PVC, PE, XLPE or LSZH thermoplastic material

Individual screen: 24 µm aluminium / PETP tape over solid tinned copper drain wire, 0.6 mm

Wrapping: At least 1 layer of plastic tape

Overall screen: 24 µm aluminium / PETP tape over 7-stranded tinned copper drain wire, 0.5 mm<sup>2</sup>

Outer sheath: PVC or LSZH thermoplastic material

Color code: According to IEC 60584-3

Flame retardancy: IEC 60332-1

Flame propagation: IEC 60332 cat. C

Temperature range: -30°C up to 70°C during operation. -5°C up to 50°C during installation.





### 0.5 mm<sup>2</sup>

Conductor Size (mm <sup>2</sup> )	No. of Pairs	Insulation Thickness (mm)	Outer Sheath Thickness (mm)	Nominal O.D. (mm)	Weight* (kg/km)
0.5	2	0.4	1.0	9.1	83
0.5	4	0.4	1.0	10.4	132
0.5	6	0.4	1.2	12.8	196
0.5	8	0.4	1.2	13.6	244
0.5	10	0.4	1.2	15.3	300
0.5	12	0.4	1.2	16.0	346
0.5	16	0.4	1.4	18.5	459
0.5	20	0.4	1.4	20.3	555
0.5	24	0.4	1.4	21.9	659

### 0.8 mm<sup>2</sup>

Conductor Size (mm <sup>2</sup> )	No. of Pairs	Insulation Thickness (mm)	Outer Sheath Thickness (mm)	Nominal O.D. (mm)	Weight* (kg/km)
0.8	2	0.4	1.0	9.8	102
0.8	4	0.4	1.0	11.3	167
0.8	6	0.4	1.2	13.9	247
0.8	8	0.4	1.2	14.7	312
0.8	10	0.4	1.2	16.7	384
0.8	12	0.4	1.4	17.9	462
0.8	16	0.4	1.4	20.1	591
0.8	20	0.4	1.4	22.1	718
0.8	24	0.4	1.6	24.4	878



## THERMOCOUPLE CABLES

### 1.0 mm<sup>2</sup>

Conductor Size (mm <sup>2</sup> )	No. of Pairs	Insulation Thickness (mm)	Outer Sheath Thickness (mm)	Nominal O.D. (mm)	Weight* (kg/km)
1.0	2	0.4	1.0	10.2	114
1.0	4	0.4	1.0	11.7	189
1.0	6	0.4	1.2	14.4	281
1.0	8	0.4	1.2	15.3	355
1.0	10	0.4	1.2	17.4	439
1.0	12	0.4	1.4	18.6	527
1.0	16	0.4	1.4	21.0	677
1.0	20	0.4	1.6	23.5	846
1.0	24	0.4	1.6	25.5	1006

### 1.3 mm<sup>2</sup>

Conductor Size (mm <sup>2</sup> )	No. of Pairs	Insulation Thickness (mm)	Outer Sheath Thickness (mm)	Nominal O.D. (mm)	Weight* (kg/km)
1.3	2	0.4	1.0	11.5	131
1.3	4	0.4	1.2	13.8	234
1.3	6	0.4	1.2	16.5	330
1.3	8	0.4	1.2	17.6	420
1.3	10	0.4	1.4	20.4	537
1.3	12	0.4	1.4	21.3	624
1.3	16	0.4	1.4	24.1	804
1.3	20	0.4	1.6	27.1	1004
1.3	24	0.4	1.6	29.3	1196



1.5 mm<sup>2</sup>

Conductor Size (mm <sup>2</sup> )	No. of Pairs	Insulation Thickness (mm)	Outer Sheath Thickness (mm)	Nominal O.D. (mm)	Weight* (kg/km)
1.5	2	0.5	1.0	12.6	151
1.5	4	0.5	1.2	15.1	270
1.5	6	0.5	1.2	18.1	382
1.5	8	0.5	1.4	19.7	504
1.5	10	0.5	1.4	22.4	623
1.5	12	0.5	1.4	23.5	724
1.5	16	0.5	1.6	27.1	958
1.5	20	0.5	1.6	29.9	1168
1.5	24	0.5	1.6	32.8	1392

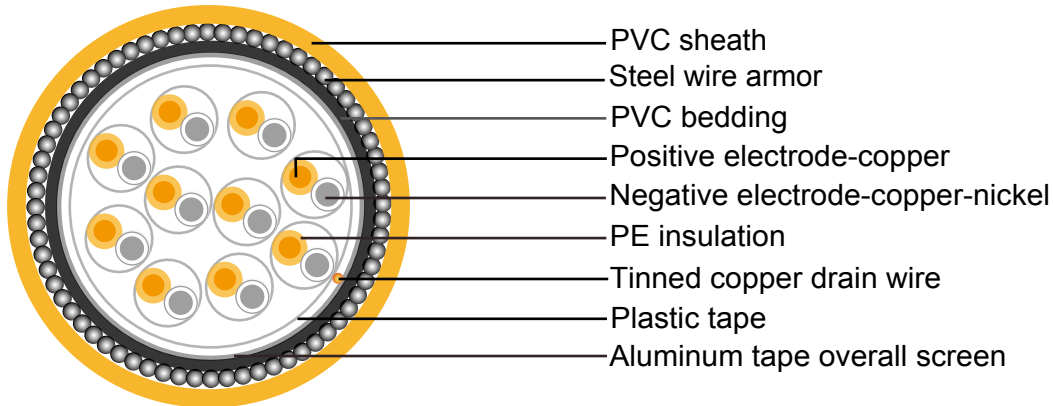
\*The number here is just approx. weight. It changes according to the insulation material and the conductor used in different type of extension cable and compensating cable.





## THERMOCOUPLE CABLES

### Single pair/multipair Overall Screen with Armor



SCB OS & armored

### Application

These cables are used in thermocouple circuits, petrochemical plants, utilities and industrial plants.

### Specification

Conductor: Solid

Type applicable: KX, EX, JX, TX, NX, KCA, KCB, RCA, RCB, SCA, RCB, BC

Insulation: PVC, PE, XLPE or LSZH thermoplastic material

Wrapping: At least 1 layer of plastic tape

Overall screen: 24  $\mu\text{m}$  aluminium / PETP tape over 7-stranded tinned copper drain wire, 0.5  $\text{mm}^2$

Bedding: PE, PVC or LSZH thermoplastic material

Armor: Galvanized round steel wires

Outer sheath: PVC or LSZH thermoplastic material

Color code: According to IEC 60584-3

Flame retardancy: IEC 60332-1

Flame propagation: IEC 60332 cat. C

Temperature range: -30°C up to 70°C during operation. -5°C up to 50°C during installation.



### 0.5 mm<sup>2</sup>

Conductor Size	No. of Pairs	Insulation Thickness (mm)	Bedding Thickness (mm)	Diameter of Armor Wire (mm)	Outer Sheath Thickness (mm)	Nominal O.D. (mm)	Weight* (kg/km)
0.5	1	0.4	0.8	0.9	1.3	9.6	206
0.5	2	0.4	0.8	0.9	1.4	12.1	295
0.5	4	0.4	0.9	0.9	1.4	13.4	374
0.5	6	0.4	1.1	0.9	1.4	15.4	480
0.5	8	0.4	1.1	0.9	1.5	16.3	546
0.5	10	0.4	1.2	0.9	1.5	17.9	656
0.5	12	0.4	1.2	0.9	1.5	18.5	703
0.5	16	0.4	1.2	1.25	1.6	21.1	975
0.5	20	0.4	1.2	1.25	1.6	22.5	1093
0.5	24	0.4	1.3	1.25	1.7	24.3	1285

### 0.8 mm<sup>2</sup>

Conductor Size	No. of Pairs	Insulation Thickness (mm)	Bedding Thickness (mm)	Diameter of Armor Wire (mm)	Outer Sheath Thickness (mm)	Nominal O.D. (mm)	Weight* (kg/km)
0.8	1	0.4	0.8	0.9	1.3	10.0	227
0.8	2	0.4	0.9	0.9	1.4	13.0	343
0.8	4	0.4	0.9	0.9	1.4	14.3	431
0.8	6	0.4	1.1	0.9	1.5	16.7	567
0.8	8	0.4	1.2	0.9	1.5	17.6	657
0.8	10	0.4	1.2	0.9	1.6	19.4	788
0.8	12	0.4	1.2	1.25	1.6	20.8	999
0.8	16	0.4	1.2	1.25	1.7	22.9	1175
0.8	20	0.4	1.3	1.25	1.7	24.8	1347
0.8	24	0.4	1.3	1.25	1.7	26.3	1556



## THERMOCOUPLE CABLES

### 1.0 mm<sup>2</sup>

Conductor Size	No. of Pairs	Insulation Thickness (mm)	Bedding Thickness (mm)	Diameter of Armor Wire (mm)	Outer Sheath Thickness (mm)	Nominal O.D. (mm)	Weight* (kg/km)
1.0	1	0.4	0.8	0.9	1.3	10.3	240
1.0	2	0.4	0.9	0.9	1.4	13.4	366
1.0	4	0.4	1.1	0.9	1.4	15.1	489
1.0	6	0.4	1.2	0.9	1.5	17.4	629
1.0	8	0.4	1.2	0.9	1.5	18.2	720
1.0	10	0.4	1.2	1.25	1.6	20.9	1016
1.0	12	0.4	1.2	1.25	1.6	21.5	1094
1.0	16	0.4	1.3	1.25	1.7	24.0	1312
1.0	20	0.4	1.3	1.25	1.7	25.7	1490
1.0	24	0.4	1.3	1.25	1.7	27.3	1727

### 1.3 mm<sup>2</sup>

Conductor Size	No. of Pairs	Insulation Thickness (mm)	Bedding Thickness (mm)	Diameter of Armor Wire (mm)	Outer Sheath Thickness (mm)	Nominal O.D. (mm)	Weight* (kg/km)
1.3	1	0.4	0.8	0.9	1.3	10.6	258
1.3	2	0.4	0.9	0.9	1.4	14.6	399
1.3	4	0.4	1.1	0.9	1.5	16.8	546
1.3	6	0.4	1.2	0.9	1.5	19.3	701
1.3	8	0.4	1.2	0.9	1.6	20.4	817
1.3	10	0.4	1.2	1.25	1.6	23.2	1136
1.3	12	0.4	1.2	1.25	1.7	24.2	1240
1.3	16	0.4	1.3	1.25	1.7	26.8	1484
1.3	20	0.4	1.3	1.25	1.7	28.9	1697
1.3	24	0.4	1.5	1.25	1.8	31.5	2025



1.5 mm<sup>2</sup>

Conductor Size	No. of Pairs	Insulation Thickness (mm)	Bedding Thickness (mm)	Diameter of Armor Wire (mm)	Outer Sheath Thickness (mm)	Nominal O.D. (mm)	Weight* (kg/km)
1.5	1	0.5	0.8	0.9	1.3	11.2	284
1.5	2	0.5	1.1	0.9	1.4	16.1	467
1.5	4	0.5	1.2	0.9	1.5	18.3	627
1.5	6	0.5	1.2	0.9	1.6	21.2	802
1.5	8	0.5	1.2	1.25	1.6	22.9	1082
1.5	10	0.5	1.3	1.25	1.7	25.7	1319
1.5	12	0.5	1.3	1.25	1.7	26.6	1430
1.5	16	0.5	1.3	1.25	1.7	29.3	1697
1.5	20	0.5	1.5	1.25	1.8	32.4	2000
1.5	24	0.5	1.5	1.6	1.9	35.5	2598

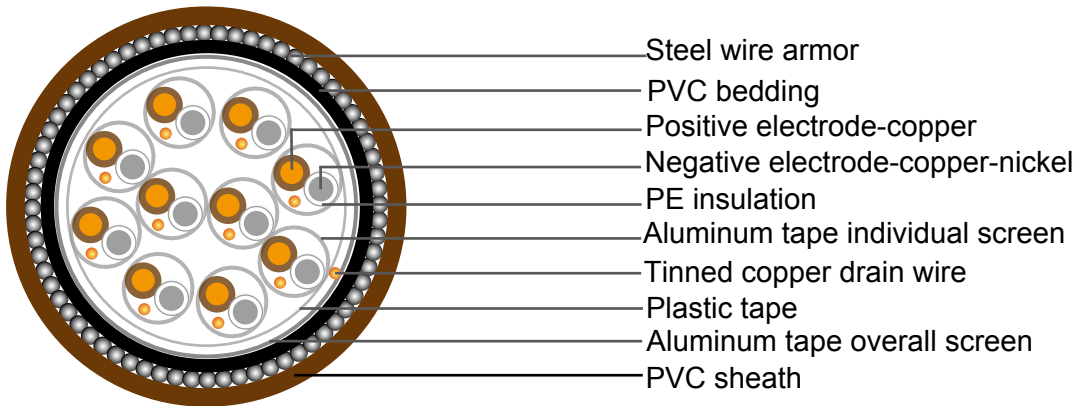
\*The number here is just approx. weight. It changes according to the insulation material and the conductor used in different type of extension cable and compensating cable.





## THERMOCOUPLE CABLES

### Multipair Individual/Overall Screen with Armor



TX IS/OS & armored

### Application

These cables are used in thermocouple circuits, petrochemical plants, utilities and industrial plants.

### Specification

Conductor: Solid

Type applicable: KX, EX, JX, TX, NX, KCA, KCB, RCA, RCB, SCA, RCB, BC

Insulation: PVC, PE, XLPE or LSZH thermoplastic material

Individual screen: 24 µm aluminium / PETP tape over solid tinned copper drain wire, 0.6 mm

Wrapping: At least 1 layer of plastic tape

Overall screen: 24 µm aluminium / PETP tape over 7-stranded tinned copper drain wire, 0.5 mm<sup>2</sup>

Bedding: PE, PVC or LSZH thermoplastic material

Aarmor: Galvanized round steel wires

Outer sheath: PVC or LSZH thermoplastic material

Color code: According to IEC 60584-3

Flame retardancy: IEC 60332-1

Flame propagation: IEC 60332 cat. C

Temperature range: -30°C up to 70°C during operation. -5°C up to 50°C during installation.





### 0.5 mm<sup>2</sup>

Conductor Size	No. of Pairs	Insulation Thickness (mm)	Bedding Thickness (mm)	Diameter of Armor Wire (mm)	Outer Sheath Thickness (mm)	Nominal O.D. (mm)	Weight* (kg/km)
0.5	2	0.4	0.9	0.9	1.4	13.5	314
0.5	4	0.4	1.1	0.9	1.4	15.2	393
0.5	6	0.4	1.2	0.9	1.5	17.6	497
0.5	8	0.4	1.2	0.9	1.5	18.4	567
0.5	10	0.4	1.2	1.25	1.6	21.0	832
0.5	12	0.4	1.2	1.25	1.6	21.7	893
0.5	16	0.4	1.3	1.25	1.7	24.2	1057
0.5	20	0.4	1.3	1.25	1.7	26.0	1196
0.5	24	0.4	1.3	1.25	1.8	27.8	1397

### 0.8 mm<sup>2</sup>

Conductor Size	No. of Pairs	Insulation Thickness (mm)	Bedding Thickness (mm)	Diameter of Armor Wire (mm)	Outer Sheath Thickness (mm)	Nominal O.D. (mm)	Weight* (kg/km)
0.8	2	0.4	0.9	0.9	1.4	14.2	351
0.8	4	0.4	1.1	0.9	1.5	16.3	460
0.8	6	0.4	1.2	0.9	1.5	18.7	576
0.8	8	0.4	1.2	0.9	1.6	19.7	675
0.8	10	0.4	1.2	1.25	1.6	22.4	966
0.8	12	0.4	1.3	1.25	1.7	23.6	1059
0.8	16	0.4	1.3	1.25	1.7	25.8	1246
0.8	20	0.4	1.3	1.25	1.8	28.0	1439
0.8	24	0.4	1.5	1.25	1.8	30.3	1667



## THERMOCOUPLE CABLES

### 1.0 mm<sup>2</sup>

Conductor Size	No. of Pairs	Insulation Thickness (mm)	Bedding Thickness (mm)	Diameter of Armor Wire (mm)	Outer Sheath Thickness (mm)	Nominal O.D. (mm)	Weight* (kg/km)
1.0	2	0.4	1.1	0.9	1.4	15.0	374
1.0	4	0.4	1.1	0.9	1.5	16.7	495
1.0	6	0.4	1.2	0.9	1.6	19.4	636
1.0	8	0.4	1.2	1.25	1.6	21.0	884
1.0	10	0.4	1.2	1.25	1.7	23.3	1064
1.0	12	0.4	1.3	1.25	1.7	24.3	1153
1.0	16	0.4	1.3	1.25	1.7	26.7	1365
1.0	20	0.4	1.5	1.25	1.8	29.4	1582
1.0	24	0.4	1.5	1.6	1.9	32.3	2098

### 1.3 mm<sup>2</sup>

Conductor Size	No. of Pairs	Insulation Thickness (mm)	Bedding Thickness (mm)	Diameter of Armor Wire (mm)	Outer Sheath Thickness (mm)	Nominal O.D. (mm)	Weight* (kg/km)
1.3	2	0.4	1.1	0.9	1.5	16.5	415
1.3	4	0.4	1.2	0.9	1.5	18.6	545
1.3	6	0.4	1.2	1.25	1.6	22.2	853
1.3	8	0.4	1.2	1.25	1.6	23.3	980
1.3	10	0.4	1.3	1.25	1.7	26.1	1183
1.3	12	0.4	1.3	1.25	1.7	27.0	1288
1.3	16	0.4	1.3	1.25	1.8	30.0	1553
1.3	20	0.4	1.5	1.25	1.9	33.2	1806
1.3	24	0.4	1.5	1.6	1.9	36.1	2358



1.5 mm<sup>2</sup>

Conductor Size	No. of Pairs	Insulation Thickness (mm)	Bedding Thickness (mm)	Diameter of Armor Wire (mm)	Outer Sheath Thickness (mm)	Nominal O.D. (mm)	Weight* (kg/km)
1.5	2	0.5	1.1	0.9	1.5	17.6	461
1.5	4	0.5	1.2	0.9	1.5	19.9	611
1.5	6	0.5	1.2	1.25	1.6	23.8	957
1.5	8	0.5	1.3	1.25	1.7	25.4	1119
1.5	10	0.5	1.3	1.25	1.7	28.1	1336
1.5	12	0.5	1.3	1.25	1.7	29.2	1459
1.5	16	0.5	1.5	1.25	1.9	33.2	1783
1.5	20	0.5	1.5	1.6	1.9	36.7	2308
1.5	24	0.5	1.7	1.6	2.0	39.8	2706

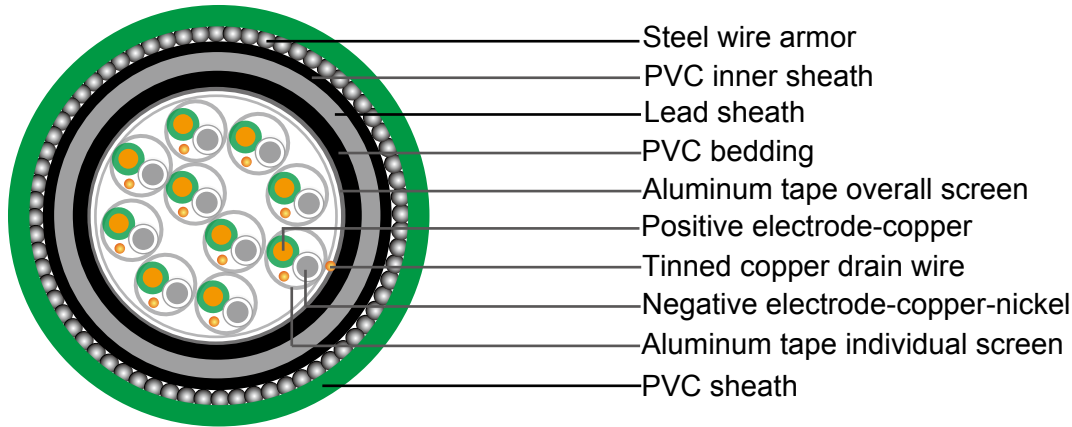
\*The number here is just approx. weight. It changes according to the insulation material and the conductor used in different type of extension cable and compensating cable.





## THERMOCOUPLE CABLES

### Multipair Individual/overall Screen with Armor and Lead Sheath



KCB IS/OS & armored with lead sheath

#### Applications

These cable can be used in cable tray or conduit to connect different types of thermocouple in industrial process controls, refineries, oil and gas plant. Excellent protection against corrosion, humidity and poor vibration resistance.

#### Specification

Conductor: Solid

Type applicable: KX, EX, JX, TX, NX, KCA, KCB, RCA, RCB, SCA, RCB, BC

Insulation: PVC, PE, XLPE or LSZH thermoplastic material

Individual screen: 24  $\mu\text{m}$  aluminium / PETP tape over solid tinned copper drain wire, 0.6 mm

Wrapping: At least 1 layer of plastic tape

Overall screen: 24  $\mu\text{m}$  aluminium / PETP tape over 7-stranded tinned copper drain wire, 0.5 mm<sup>2</sup>

Bedding: PE, PVC or LSZH thermoplastic material

Lead sheath: Lead alloy

Inner sheath: PVC or LSZH thermoplastic material

Armor: Galvanized round steel wires

Outer sheath: PVC or LSZH thermoplastic material

Color code: According to IEC 60584-3

Flame retardancy: IEC 60332-1

Flame propagation: IEC 60332 cat. C

Temperature range: -30°C up to 70°C during operation. -5°C up to 50°C during installation.



### 0.5 mm<sup>2</sup>

No. of Pairs	Insulation Thickness (mm)	Bedding Thickness (mm)	Lead Sheath Thickness (mm)	Inner Sheath Thickness (mm)	Diameter of Armor Wire (mm)	Outer Sheath Thickness (mm)	Nominal O.D. (mm)	Weight* (kg/km)
2	0.4	0.9	1.1	0.8	0.9	1.4	17.3	892
4	0.4	1.1	1.1	0.8	0.9	1.4	18.9	1078
6	0.4	1.2	1.1	0.8	0.9	1.5	21.2	1309
8	0.4	1.2	1.2	0.8	0.9	1.5	22.3	1491
10	0.4	1.2	1.2	0.8	1.25	1.6	25.4	1912
12	0.4	1.2	1.2	0.9	1.25	1.6	25.8	2000
16	0.4	1.3	1.3	0.9	1.25	1.7	28.2	2383
20	0.4	1.3	1.3	0.9	1.25	1.7	29.5	2610
24	0.4	1.3	1.4	1.0	1.25	1.8	32.6	3087

### 0.8 mm<sup>2</sup>

No. of Pairs	Insulation Thickness (mm)	Bedding Thickness (mm)	Lead Sheath Thickness (mm)	Inner Sheath Thickness (mm)	Diameter of Armor Wire (mm)	Outer Sheath Thickness (mm)	Nominal O.D. (mm)	Weight* (kg/km)
2	0.4	0.9	1.1	0.8	0.9	1.4	18.0	970
4	0.4	1.1	1.1	0.8	0.9	1.5	20.2	1204
6	0.4	1.2	1.1	0.8	0.9	1.5	22.3	1451
8	0.4	1.2	1.2	0.8	0.9	1.6	24.6	1848
10	0.4	1.2	1.2	0.9	1.25	1.6	26.9	2137
12	0.4	1.3	1.3	0.9	1.25	1.7	28.2	2383
16	0.4	1.3	1.3	0.9	1.25	1.7	30.0	2690
20	0.4	1.3	1.4	1.0	1.25	1.8	32.1	3092
24	0.4	1.5	1.4	1.0	1.25	1.8	35.2	3581



## THERMOCOUPLE CABLES

1.0 mm<sup>2</sup>

No. of Pairs	Insulation Thickness (mm)	Bedding Thickness (mm)	Lead Sheath Thickness (mm)	Inner Sheath Thickness (mm)	Diameter of Armor Wire (mm)	Outer Sheath Thickness (mm)	Nominal O.D. (mm)	Weight* (kg/km)
2	0.4	1.1	1.1	0.8	0.9	1.4	18.4	1011
4	0.4	1.1	1.1	0.8	0.9	1.5	20.2	1204
6	0.4	1.2	1.2	0.9	0.9	1.6	23.6	1691
8	0.4	1.2	1.2	0.9	1.25	1.6	24.6	1848
10	0.4	1.2	1.3	0.9	1.25	1.7	27.5	2244
12	0.4	1.3	1.3	0.9	1.25	1.7	28.2	2383
16	0.4	1.3	1.4	1.0	1.25	1.7	30.2	2781
20	0.4	1.5	1.4	1.1	1.25	1.8	32.5	3154
24	0.4	1.5	1.5	1.2	1.6	1.9	36.5	3982

1.3 mm<sup>2</sup>

No. of Pairs	Insulation Thickness (mm)	Bedding Thickness (mm)	Lead Sheath Thickness (mm)	Inner Sheath Thickness (mm)	Diameter of Armor Wire (mm)	Outer Sheath Thickness (mm)	Nominal O.D. (mm)	Weight* (kg/km)
2	0.4	1.1	1.1	0.8	0.9	1.5	19.8	1140
4	0.4	1.2	1.2	0.9	0.9	1.5	22.5	1588
6	0.4	1.2	1.2	1.0	1.25	1.6	25.1	1915
8	0.4	1.2	1.3	1.1	1.25	1.6	26.4	2190
10	0.4	1.3	1.3	1.1	1.25	1.7	29.7	2606
12	0.4	1.3	1.4	1.1	1.25	1.7	30.5	2843
16	0.4	1.3	1.4	1.2	1.25	1.8	32.5	3235
20	0.4	1.5	1.5	1.2	1.25	1.9	35.2	3797
24	0.4	1.5	1.5	1.2	1.6	1.9	39.5	4653



1.5 mm<sup>2</sup>

No. of Pairs	Insulation Thickness (mm)	Bedding Thickness (mm)	Lead Sheath Thickness (mm)	Inner Sheath Thickness (mm)	Diameter of Armor Wire (mm)	Outer Sheath Thickness (mm)	Nominal O.D. (mm)	Weight* (kg/km)
2	0.5	1.1	1.2	0.9	0.9	1.5	21.1	1303
4	0.5	1.2	1.2	1.0	0.9	1.5	23.7	1741
6	0.5	1.2	1.3	1.1	1.25	1.6	26.9	2193
8	0.5	1.3	1.3	1.1	1.25	1.7	28.7	2481
10	0.5	1.3	1.4	1.2	1.25	1.7	31.9	2995
12	0.5	1.3	1.4	1.2	1.25	1.7	32.6	3164
16	0.5	1.5	1.5	1.3	1.25	1.9	36.3	3863
20	0.5	1.5	1.6	1.3	1.6	1.9	39.2	4686
24	0.5	1.7	1.6	1.3	1.6	2.0	43.6	5471

\*The number here is just approx. weight. It changes according to the insulation material and the conductor used in different type of extension cable and compensating cable.





## THERMOCOUPLE CABLES

### Color code

IEC60584-3 (BS4937 part 30/DIN43722/NFC 42-324/JIS C 1610 sect.1)

Code	Color of Insulation		Color of Sheath
	Positive Electrode	Negative Electrode	
TX	brown	white	brown
EX	violet	white	violet
JX	black	white	black
KX	green	white	green
KCA	green	white	green
KCB	green	white	green
RCA/SCA	orange	white	orange
RCB/SCB	orange	white	orange
NX	pink	white	pink
NC	pink	white	pink
BC	gray	white	gray

ANSI MC 96.1

Code	Color of Insulation		Color of Sheath
	Positive Electrode	Negative Electrode	
TX	blue	red	blue
EX	purple	red	purple
JX	white	red	black
KX	yellow	red	yellow
VX	brown	red	red
SX	black	red	green
SX	black	red	green
BC	gray	red	gray
NX	orange	red	orange





JIS C 1610 section 2

Code	Color of Insulation		Color of Sheath
	Positive Electrode	Negative Electrode	
TX	red	white	brown
EX	red	white	purple
JX	red	white	yellow
KX	red	white	blue
KCB	red	white	blue
KCC	red	white	blue
RCA/SCA	red	white	black
RCB/SCB	red	white	black
BC	red	white	gray



**Address:**

**Marchants Industrial Centre,  
Mill Lane, Laughton, Lewes,  
East Sussex, BN8 6AJ, UK**

**Tel: 44 (0) 207 419 5087**

**Fax: 44 (0) 207 831 9489**

**Email: [sales@caledonian-cables.co.uk](mailto:sales@caledonian-cables.co.uk)**

**[sales@caledonian-cables.com](mailto:sales@caledonian-cables.com)**

**[sales@addison-cables.com](mailto:sales@addison-cables.com)**

**[sales@addison-tech.com](mailto:sales@addison-tech.com)**