



FLEXIBLE CABLES



SCREENED CABLES



SPEAKER CABLES



TELEPHONE CABLES



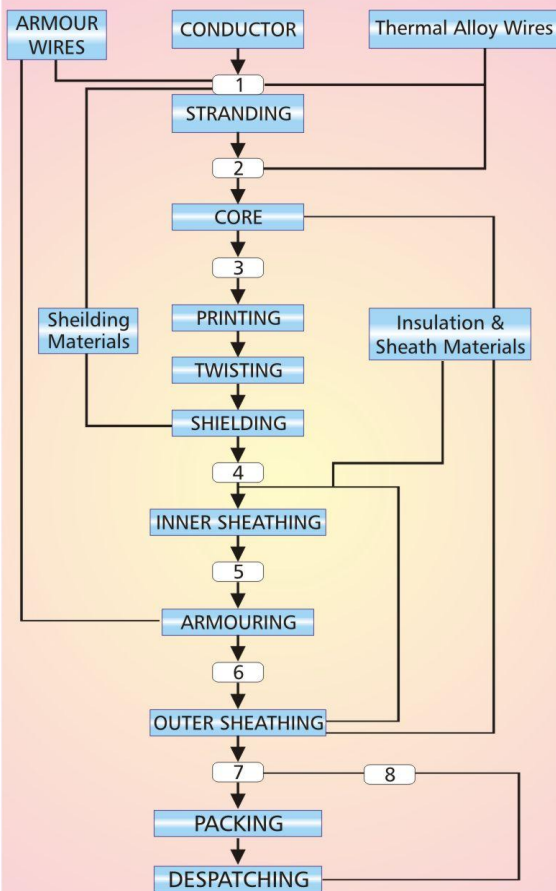
TECHNICAL GUIDE



CO-AXIAL CABLE



PROCESS FLOW CHART



Stage numbers 1 to 7 are the intermediate process quality control check points and number 8 is inspection from clients.

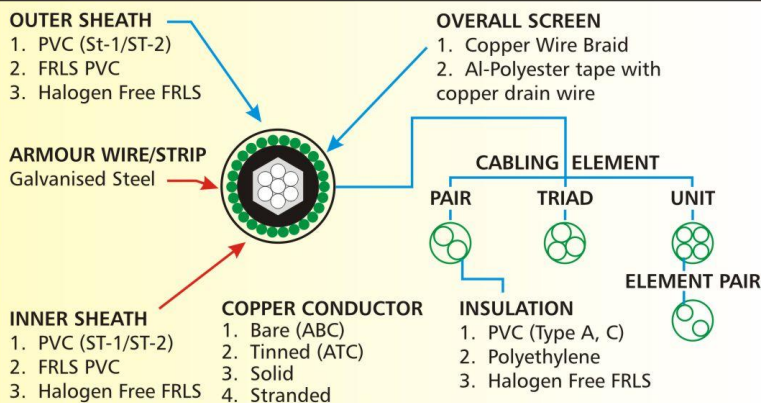
ESTIMATED FULL LOAD CURRENT FOR MOTORS

HP	KW	SINGLE PHASE AMP.	THREE PHASE AMP.	Recommended cable size in Sq. mm. Copper/Alu.	
0.5	0.37	3.7	1.0	1.5	2.5
0.75	0.55	5.0	1.3	1.5	2.5
1.00	0.75	6.5	1.9	1.5	2.5
1.50	1.10	11.5	2.6	1.5	2.5
2.0	1.50	-----	3.7	1.5	2.5
3.0	2.20	-----	4.8	1.5	2.5
5.0	3.70	-----	7.8	1.5	2.5
7.5	5.50	-----	11.2	1.5	2.5
10.0	7.50	-----	16.0	2.5	4.0
12.5	9.30	-----	19.0	2.5	4.0
15.0	11.00	-----	22.0	4.0	6.0
20.0	15.00	-----	29.0	6.0	10.0
25.0	18.50	-----	34.0	10.0	16.0
30.0	22.00	-----	41.0	10.0	16.0
35.0	26.00	-----	47.0	16.0	25.0
40.0	30.00	-----	54.0	16.0	25.0
50.0	37.00	-----	67.0	25.0	35.0
60.0	45.00	-----	80.0	35.0	50.0
75.0	55.00	-----	97.0	50.0	70.0
100.0	75.00	-----	131.0	70.0	95.0
125.0	90.00	-----	152.0	95.0	120/150
150.0	110.0	-----	191.0	150.0	185.0
180.0	132.0	-----	229.0	185.0	240.0
192.0	143.0	-----	248.0	185.0	240.0

BRIMPLAST SCREENED (SHIELDED) CABLES

AREA IN SQ. MM.	Current Rating (In Amp.)
0.5	4
0.75	7
1	11
1.5	14
2.5	19
4	26
6	33
10	45
16	60
25	75
35	95
50	125
70	170
95	210
120	235
150	295
185	330
240	400
300	475
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TYPICAL INSTRUMENTATION CABLE CONSTRUCTION :



APPLICATION	TYPE & SIZE	OPTIONS
INSTRUMENTATION SIGNAL CABLES FOR PROCESS CONTROL AND INSTRUMENTATION	PVC Sheathed 225/650/1100 V grade cables as per BS : 5308 / DIN VDE 0815 & 816/IS : 1554/IEC 189 Sizes : 0.5Sq. mm. • 0.75 Sq. mm. 1.00 Sq. mm. & 1.5 Sq. mm. etc.	Conductor - Stranded/Solid, Plain/Tinned. Insulation - PVC/HR PVC/P. E. / Zero Halogen Shielding - Individual Pair / Overall Pairs Drain Wire - Solid / Stranded Inner Sheath - PVC / FR PVC / Zero Halogen Unarmoured / Armoured- G. S. Round Wire, Flat Strip Outer Sheath - PVC / HR PVC / FRLS / Zero Halogen
THERMOCOUPLE EXTENSION COMPENSATING CABLES FOR BOILER / FURNACE & HEAT TREATMENT INDUSTRY	Specified alloy conductor, PVC insulated cores twisted to form pairs, individual/overall pair shielded armoured/unarmoured PVC Sheath as per ANSI-MC-96-I/IS : 8784 / IS : 1554 IS : 5608 IEC 189 Sizes : 0.5Sq. mm. • 0.75 Sq. mm. 1.5 Sq. mm. • 2 Core & 3 Core etc.	Conductor - Chromel - Alumel / Iron Constantan / Copper - Cupro Nickel etc. Insulation - PVC / HR PVC / XLPE Drain Wire - Stranded / Solid Inner Sheath - PVC / FR PVC / FRLS / Zero Halogen Unarmoured / Armoured- G. S. Round Wire, Flat Strip Outer Sheath - PVC / HR PVC / FRLS / Zero Halogen

OUR PRESTIGIOUS CUSTOMER'S LIST INCLUDES :

- BANKS SECTOR** : Citibank • HSBC • Punjab National Bank • ABN Amro Bank • Yes Bank.
- CORPORATE SECTOR** : Lloyds Steels • Patni Computers • Thermex • Lokhandwala Constructions • Asahee India Glass Ltd. Zenith • Nilon • Cipla.
- INFO SECTOR** : Vasu Infotech Pvt. Ltd. • Cummins India • Kodak House • Avaya India (Pune) • Logistic Parks • Rediff Electronic Data Systems (I) Pvt. Ltd. (EPS) • Cerers Software India Pvt. Ltd. • Advantage Global Services Ltd. • Samsung • Zuari Forex Ltd. • Zicom Electronic Security Systems Ltd.
- OTHER SECTORS** : Glenmark Laboratories Ltd. • Wilco Shipment • Kirloskar Bros Ltd. • Alfa Level • Yourk Refrigerators Citicorp • Nesco • Forbus House • Citi Finance • Deepak Fertilizers

INSTRUMENTATION CABLES (Armoured & Unarmoured)

BRIMPLAST Instrumentation Cables ensure Smooth Communication of low level signals from electronic transmitters to the control room. These cables effectively cut down any distortion or cross talk. The superior Aluminium Mylar shielding (optional) ensures almost complete elimination of any noise. These cables are widely used in core industries like Petrochemicals, Steel and Aviation.

Signal cables are imperative when you want to keep the signal to noiser ratio and the capacitance to the minimum in presence of stray magnetic fields. They are used in sensitive areas where accurate data inputs are necessary viz. Electronic Industries and Nuclear Power Plants.

RTD (Remote Temperature Detection) cables carry temperature readings from remote or inaccessible areas to the control room.

The variety of Instrumentation cables is vast with very few countries having national standards covering this area. The UK is one exception where the British Standard BS 5308 Part- I & II cover the requirements for multicore and multipair instrumentation cables with PVC or polyethylene insulation and with various forms of mechanical protection. Even with existence of a National Standard, our experiences id that customers still require variants from the use of different core identifications schemes to intermediate pair configurations to materials with enhanced characteristics for a particular environment.

The standard range includes multicore and multipair copper conductor instrumentation cables, thermocouple extension and compensating cables.

FLEXIBLE CABLES

BRIMPLAST Flexible Cables are used for transmission of low voltage signals, while permanently connecting fixed parts of machine such as panel board to any apparatus or mobile units.

They are used in : • Home Appliances • Robots • Numerically controlled machine tools • Cranes • Radars.

Where cables of voltages upto 1100 V. are utilized, they are manufactured as per IS : 694 and are packed in a coil form having a standard length of 90 meters. **BRIMPLAST** Cables manufactures single as well as multi core flexible cables.

Brimplast Flexible Cables consists of soft annealed bare copper bunched conductor, insulated & sheathed with PVC.

- i) 'Y' : PVC insulated copper conductor single core wire.
- ii) 'YY' : PVC insulated and sheathed copper conductor multicore cable.

Flexible Auto Cables are mainly used in Automobile Industries.

CO-AXIAL JELLYFILLED CABLES (ARMOURED & UN-ARMOURED)

BRIMPLAST Co-Axial Cables are used to connect broadcast transmitter to grounded antenna or UHF and micro frequencies so as to avoid the risk of radiation from transmission line. The important feature of such transmission lines is to carry signals without much effect on quality to other point of connection is characteristics impedance. These lines may be rigid, flexible, air-spaced or filled with different dielectric to achieve desired characteristic impedance.

They are mainly used in Cable TV, CC TV for both military and commercial applications. **BRIMPLAST** Cables manufactures Co-Axial Cables as per Belden Specifications.

In Co-Axial, shielding is provided which helps to eliminate external disturbances as as to give a clear reception at the receiving end that is on TV screen, etc. **BRIMPLAST** Co-axial Cables are packed in a coil form having standard length of 90 Meters & 305

TELEPHONE & SWITCHBOARD CABLES (ARMOURED & UN-ARMOURED)

BRIMPLAST UN-ARMOURED & ARMOURED high conductivity solid annealed tin copper .51 mm Telephone & Switchboard cables with high density PVC Insulation, Paired, Polyester and Sheathed, PVC Compound, Grey Outer Sheath generally confirming to 'ITD' S/SW 113 C.

COLOUR SCHEME AS PER ITI D-3003

No. of Pairs	COLOUR SCHEME	No. of Pairs	COLOUR SCHEME	No. of Pairs	COLOUR SCHEME	No. of Pairs	COLOUR SCHEME
1	White - Blue	7	Red - Orange	13	Black - Green	19	Blue - Grey
2	White - Orange	8	Red - Green	14	Black - Brown	20	Orange - Green
3	White - Green	9	Red - Brown	15	Black - Grey	21	Orange - Brown
4	White - Brown	10	Red - Grey	16	Blue - Orange	22	Orange - Grey
5	White - Grey	11	Black - Blue	17	Blue - Green	23	Green - Brown
6	Red - Blue	12	Black - Orange	18	Blue - Brown	24	Green - Grey
						25	Brown - Grey

Note : The same sequence is repeated again 1st layer of 25 Pairs and 2nd layer of the same sequence of 25 Pairs.

The above data is indicative and may be revised without prior information Brimplast will not be liable for any damages arising out of incorrect application.

Thermocouple Codes/Conductor combinations Characteristics. National & International Standards Extension & compensating cable colours

CODE CONDUCTOR COMBINATIONS
+ leg - leg

CODE	CONDUCTOR COMBINATIONS + leg - leg	Approximate generated EMF change per degree Celsius Change With reference junction at 0°C.			Approximate working temperature range of measuring junction. NB not related to wire and conductor insulating materials.		National Standards for output of thermocouple conductors These standards noted in this column all conform with each other and are based upon IPTS 1968 & IEC 584.1:1977	National colour coding for insulation of thermocouple and extension cable (and compensating cable where noted as such)				
		V/°C at			°C			BRITISH to BS 1843	AMERICAN to ANS/MC96.1	GERMAN to DIN 43714	FRENCH to NF C 42-323	JAPANESE to JISC 1610-1981
		100°C	500°C	1000°C	Continuous	Short Term						
K	NICKEL-CHROMIUM Also known as: Chromel, *Thermokanthal KP, Ni-Cr, *T1, *Tophel NICKEL-ALUMINIUM (magnetic) Also known as: Ni-Al, *Alumel, *Thermokanthal Kn, *t2, *Nial	42	43	39	0 to +1100	-180 to +1350	BS4937 part 4 ANS/MC96.1 type K DIN 43710 NF C 42-321 JISC 1602					
V	COPPER COPPER-NICKEL Also known as: Constantan, *Advance, Nickel	Used for interconnecting Type 'K' thermocouples and instrumentation as an alternative to Type 'K' materials. Only used where the interconnection temperature is in the range 0°C to + 80°C										
T	COPPER COPPER-NICKEL Also known as: Nickel, *Cupron *Advance, Constantan	46	-	-	-185 to +300	-250 to +300	BS4937 part 5 ANS/MC96.1 type T NF C 42-321 JISC 1602					
J	IRON (magnetic) Also known as: Fe COPPER-NICKEL Also known as: Constantan *Advance, *Cupron	46	56	59	+20 to +700	-180 to +750	BS4937 part 3 ANS/MC96.1 type J NF C 42-321 JISC 1602					
E	NICKEL-CHROMIUM Also known as: Chromel *Tophel, Chromium, Nickel COPPER-NICKEL Also known as: Nickel Copper Constantan, *Advance *Cupron	68	81	-	0 to +800	-	BS4937 part 6 ANS/MC96.1 type E NF C 42-321 JISC 1602					
N	NICKEL-CHROMIUM-SILICON Also known as: Nicrosil NICKEL-SILICON-MAGNESIUM Also known as: Nisil	30	38	39	0 to +1100	-270 to +1300						
R	PLATIUM-13% RHODIUM PLATINIUM	8	10	13	0 to +1600	-50 to +1700	BS4937 part 2 ANS/MC96.1 type R DIN 43710 NF C 42-321 JISC 1602					
S	PLATIUM-10% RHODIUM PLATINIUM	8	9	11	0 to +1550	-50 to +1700	BS4937 part 1 ANS/MC96.1 type S DIN 43710 NF C 42-321 JISC 1602					
B	PLATIUM-30% RHODIUM PLATINIUM-6% RHODIUM	1	5	9	+100 to +1600	+50 to +17500	BS4937 part 1 ANS/MC96.1 type B DIN 43710 NF C 42-321 JISC 1602					
U	COPPER COPPER LOW VALUE NICKLE Also known as: Nickel *Advance, *Cupron	Used for interconnecting Type 'R' and 'S' thermocouples and instrumentation. Only used where the interconnection temperature is in the range 0°C to + 80°C										
W	TUNGSTEN TUNGSTEN-26% RHENIUM	5	16	21	+20 to +2300	0 to +2600						
W5	TUNGSTEN 5% RHENIUM TUNGSTEN-26% RHENIUM	15	18	18	+20 to +2300	0 to +2600						
W3	TUNGSTEN 3% RHENIUM TUNGSTEN-25% RHENIUM	13	20	20	+20 to +2000	0 to +2100						

NB : THERMOCOUPLE TOLERANCES

At the time publishing this date the IEC 584.2:1982 (BS 4937 Part 203) specification has been introduced but the BSI has not yet officially superseded that Part of BS 1041 Part 4:1966, which relates to this subject. We understand that this will occur in due course.
* Trade name

* These codes have not been adopted Nationally or Internationally.

* With reference to NAS/MC96.1 colour coding, it is noted that a brown overall sheath, replacing that shown, denotes the incorporation of thermocouple grade conductors where relevant. However, cables available from us incorporate thermocouple grade conductors as standard within the colour coding illustrated where relevant.

CABLE CODE	Kx	Kx (A)	Tx	Jx	Kx	Sx/Rx
CABLE TYPE	EXT.	COMP.	EXT.	EXT.	EXT.	COMP.
Conductor + Ve leg - Ve leg	Chromel Alumel	Copper Constantan	Copper Constantan	Iron Constantan	Chromel Constantan	Copper Copper Alloy
Suitable for Thermocouple Type	Kx	Kx (A)	Tx	Jx	Kx	Sx/Rx
Conductor Combination	Chromel Alumel	Chromel Alumel	Copper Constantan	Iron Constantan	Chromel Constantan	Platium 10/13 & Rhodium Platium
Temperature range of measuring junction	0 to +1100	★	-185 to +300	+20 to +700	0 to +800	0 to +1550 0 to +1600
Applicable standards for output of Thermocouple conductor	BS 4937 part 4 ANS/MC 96.1 type K DIN 437 10 NF C JISC 1602	★	BS 4937 part 5 ANS/MC 96.1 type T DIN C NF C 42321 JISC 1602	BS 4937 part 3 ANS/MC 96.1 type E NF C NF C 42321 JISC 1602	BS 4937 part 6 ANS/MC 96.1 type E NF C NF C 42321 JISC 1602	BS 4937 part 6 ANS/MC 96.1 type S/R NF NF C 42321 JISC 1602

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