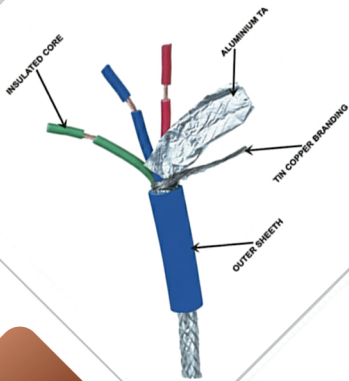
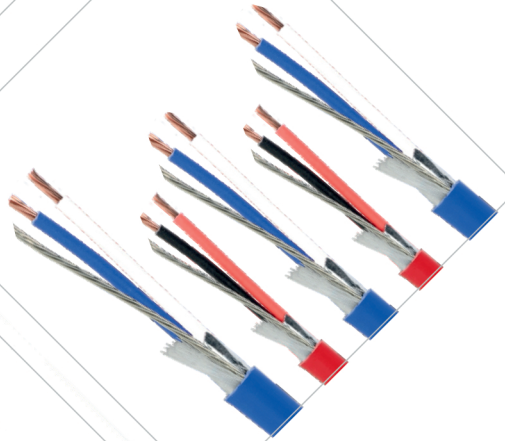




Hariom TECHNO CABLES
MANUFACTURER OF WIRES & CABLES



www.hariomtechnocables.com

IS 694



CM/L : 7100138597



Tested for Quality & Reliability



High Insulation Strength



100% Pure Copper Conductors

SINGLE CORE

With increased in demand of several application like Fire retardant (FR) Fire retardant Low smoke (FRLS-H), "ROLYCAB" have included and offer following range in single core with BIS approval.

- A) TYPE - A General purpose 70°C. (Normal)
- B) TYPE - C General purpose 85°C (HR)
- C) TYPE - C1 Fire Retardant properties (FR)
- D) TYPE - C2 Fire Retardant Low smoke Low halogen (FRLS-H)

In addition to above we also do have single core range in 105°C temperature rating (Subject to minimum order quantity (MOQ))

TECHNICAL DATA

Conductor formation	:	Class I to VI as per IS:8130
Nominal Voltage	:	Uo/u 650/1100v
Test Voltage	:	3000v
Insulation Resistance	:	>36.7 M-ohms/km
Volume Resistivity	:	1x10 ¹³ ohm/cm
Tensile Strength	:	>12.50 n/Sqmm
Elongation at break	:	>150%
Colors (Available)	:	Red, Yellow, Blue, Black,Grey, Yellow with Green Earth conductor
Packing	:	Coil of 100mtrs or as per requirement

Note : We can also supply specific colour requirment, subject to Minimum Order Quantity

"Rolycab" brand, Plain annealed copper conductor, PVC Insulated un-sheathed 650/1100V(uo/u) Single core industrial cables for panel board wiring as per IS:694(1990) with ISI marked (upto 50sqmm)

Nominal Area Sqmm	Apprx.O.D (max)	Nominal Insulation thickness mm	Max.DC Resistance . @20° C Class:5 IS:8130 **	Cond.Construction Class-5 OR Class-6	Current Rating AMP
0.50	2.40	0.60	39.00	16/0.20	4
0.75	2.60	0.60	26.00	24/0.20	7
1.00	2.80	0.60	19.50	32/0.20	11
1.50	3.10	0.60	13.30	30/0.25 or 48/0.20	14
2.50	3.80	0.70	7.98	50/0.25 or 80/0.20	19
4.00	4.50	0.80	4.95	56/0.30	26
6.00	5.50	0.80	3.30	84/0.30	33
10.00	7.00	1.00	1.910	80/0.40 or 140/0.30	45
16.00	8.00	1.00	1.210	128/0.40 or 226/0.30	60
25.00	9.50	1.20	0.780	200/0.40 or 353/0.30	75
35.00	11.50	1.20	0.554	280/0.40 or 495/0.30	95
50.00	14.00	1.40	0.386	400/0.40 or 707/0.30	125
70.00	15.50	1.60	0.272	356/0.50 or 990/0.30	170
95.00	18.50	1.80	0.206	485/0.50 or 1344/0.30	210
120.00	19.50	2.00	0.161	614/0.50 or 1698/0.30	235
150.00	21.80	2.00	0.129	765/.50 or 2123/030	295
185.00	24.00	2.20	0.106	944/0.50 or 1163/0.45	330
240.00	28.50	2.20	0.0801	1225/0.50 or 1508/0.45	400
300.00	32.00	2.60	0.0641	1886/0.45	475

The number of wires in columns 5 is optional and Specifies only Maximum diameter of the individual wires & Maximum Resistance assigned to the cross section.

Note : *Ampicity of cables are depending on use of cable in different length, temperature& wiring systems etc... Above information is given for general use, and as per standard. It may be higher or lower depending on design of wiring installation.

Note : **please see correction factor at different ambient temperature to get corresponding Resistance at 20° C. (Table 2)

CORRECTION FACTORS FOR CONDUCTOR RESISTANCE

Amb.Temp.*C	Correction Factor	Amb.Temp.*C	Correction Factor
5	1.064	28	0.969
6	1.059	29	0.965
7	1.055	30	0.962
8	1.050	31	0.958
9	1.046	32	0.954
10	1.042	33	0.951
11	1.037	34	0.947
12	1.033	35	0.943
13	1.029	36	0.940
14	1.025	37	0.936
15	1.020	38	0.933
16	1.016	39	0.929
17	1.012	40	0.926
18	1.008	41	0.923
19	1.004	42	0.919
20	1.000	43	0.916
21	0.996	44	0.912
22	0.992	45	0.909
23	0.988	46	0.906
24	0.984	47	0.903
25	0.980	48	0.899
26	0.977	49	0.896
27	0.973	50	0.893

MULTI CORE

“ROLYCAB” Make BIS standard approved flexible control cables with ISI mark upto 5core 4.00sqmm and As per IS: standard up to 24core cables.

APPLICATIONS :

Our multicore flexible is widely used in connection as control cables and flexible power cables in various industries and equipments.

SUITABLE FOR

- Machine Control Wiring
- Engineering Plants
- Refrigeration Plants
- Appliances (Home & Industrial)
- Office Equipment Machines
- Paint Shop
- Control Pannel Wiring
- General use as control cables in various machines and equipments

ADVANTAGES :

- Highest Electrical and Mechanical requirements
- High Test Voltage between cores 3000 provide high insulation safety.
- User friendly with colour code and numbered printed on cores for easy identification

CABLE MAKE UP

- 1) Fine stranded of Plain copper wires in accordance to IS:8130 various class to suite application.
- 2) Special PVC base core insulation with color coded and numbered for easy identification.
- 3) Insulation available with Type-A, Type-C, C1 and C2 for different application.

Type A General Purpose C70

Type C HR - Heat Resistant C 85

Type C1 Fire retardant properties (FR)

Type C2 Fire retardant Low smoke with Low helogen (FRLS-H)

Outer Sheath : PVC type ST1 & ST2 Colour Black or Grey

TECHNICAL DATA

Conductor stranding	:	Fine wire in accordance to IS:8130 class 5&6
Nominal Voltage	:	uo/u 650/1100v
Test Voltage	:	3000v between cores
Insulation Resistance	:	>36.7 Mohms/km@27°
Protective conductor	:	Yellow with Green line as earthing conductor
Tensile Strength	:	>12.50 n/Sqmm
Elongation at break	:	>150 Type A Insulation & sheathing Grade
	:	>125 Other Types

CORE IDENTIFICATION Up to 5 core : Referance table "A"

6 core & more white with numbers. & one protective (Earthing) core Yellow/Green on outer layer.

TABLE "A" Color code: As per BIS standard.(ISI)

Number of cores.	:	Color code
2	:	Red, Black
3	:	Red, Black, Yellow-Green
4	:	Red, Yellow, Blue, Yellow-Green
5 and more	:	Yellow/Green + other white with nos.
Outersheath	:	Upto 4 Core Black
(colours available)	:	5 Core and above Grey

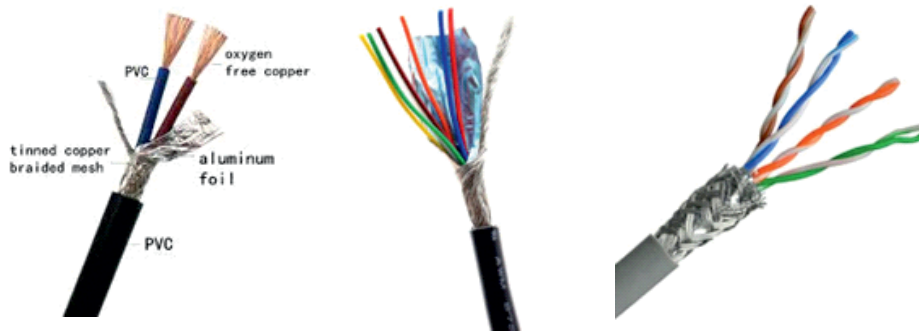
- Any other color on request subject to MOQ
- Approximate Diameter of Cables

Rolycab Multicore Flexible cables 1100v confirming to BIS Standard IS:694/1990				
Area in sqmm	Apprx.Overall Diameter(mm)			
	2 Core	3 Core	4 Core	5 Core
0.50	6.20	6.60	7.20	8.00
0.75	6.80	7.20	7.90	8.70
1.00	7.20	7.50	8.20	9.30
1.50	7.60	8.10	9.00	10.20
2.50	9.00	9.70	10.50	11.50
4.00	10.60	11.30	12.40	14.00

Rolycab Multi-core Flexible cables 1100v As per BIS Standard									
Area in sqmm	Approx. Overall Diameter (mm) Max								
	6 Core	7 Core	8 Core	10 Core	12 Core	14 Core	16 Core	19 Core	24 Core
-									
0.50	9.00	9.00	9.50	11.50	12.00	12.50	13.00	14.00	16.00
0.75	10.00	10.00	10.50	12.50	13.00	13.50	14.00	15.00	17.50
1.00	10.30	10.30	11.00	11.50	13.50	14.00	15.40	16.00	18.80
1.50	11.00	11.00	11.80	14.50	15.00	15.50	16.30	17.80	20.40
2.50	13.00	13.00	14.00	17.00	18.00	18.50	19.50	20.50	24.80
4.00	16.00	16.00	17.00	19.50	20.90	21.70	23.50	25.00	29.50

Diameter shown is approximate may very + or - with in tolerance limit as per standard

Shielded Control Cable







TECHNICAL DATA

Generally Confirms to IEC 60227-7 /EN 50525-2-51	Rated Voltage: Up to & including 300/500V
Specific Insulation Resistance :> 36.7Mohm.km	Test Voltage: 2Kv (ac) Breakdown Voltage: 8000V
RoHS Compliance: RoHS2 acc. to 2011/65/EU EMC Compliant : 2014/30/EU Mutual Capacitance:- Between cores:150nF/km, Core to Screen:270nF/km	Temperature Range: Flexing -10°C to + 80°C Fixed Installations: -40°C to + 80°C
Complies to Low voltage Directive 2014/35/EU	EMC Compliance: Directive 2014/30/EU

Shield Purpose : The shield acts as a Faraday cage – a surface that reflects electromagnetic radiation. This reduces both the interference from outside noise onto the signals and the signals from radiating out and potentially disturbing other devices.

APPLICATION	PRODUCT MAKEUP	PRODUCT FEATURES
<ul style="list-style-type: none"> ·Data Cable ·Computer & Electronics ·Panel wires ·Wind mills ·Engineering applications ·Machine ·Switchgears Suitable for single phase AC/DC & 3 Phase systems.	<ul style="list-style-type: none"> · Multistranded Plain finely bunched Cu wires conductor as per Cl-5 IEC 60228/VDE 0295/IS 8130 · Special PVC Compound T12 as per EN 50363-3 9Type A PVC IS 5831) · Laying up/assembling in round · Non hygroscopic Polyester Separator · Screen/Shield- Type 1:Foil Shield Type 2: Braid Screen of Copper with Type 3: Combination of Type 1 & 2 Overall Sheath –Oil Resistant TM5 PVC acc. to EN 50363-4-1 (ST1PVC) Color Coding Acc. to DIN VDE 0293:- <ul style="list-style-type: none"> · With Earth (G): Black with white nos. printed & Green/Yellow · Without Earth: All Black with white nos. printed · Outer Sheath/Jacket:- Grey (RAL 7001) 	<ul style="list-style-type: none"> · Less Diameter · Better Electromagnetic compatibility · Less noise · Suitable for Up to and including 80°C continuous temperature applications · Flame Retardant IEC 60332-1/IS 694 · Good Resistance to UV, Most of chemicals, Alkalis, Solvents, abrasion · Standard coil length: 100 meters · Minimum Bending Radius: Flexing: 10 x D Fixed Installation: 5 x D · Suitable for Outdoor Use · With Meter Marking · Also available in Paired Form. · Lower Mutual Capacitance below 200nF/km

Shield Types

<p>Unshielded Cable</p> 	<p>Cable that has no shield protection. Provides the smallest cable diameter for use in low-noise controlled environments such as inside a metal cabinet or a conduit, where it is protected from ambient EMI.</p>
<p>Foil/Metal tape Shielded Cable</p> 	<p>Thin film of metal (typically aluminum) attached to a laminate material (e.g. polyester) for moderate EMI protection, especially at lower frequencies. Foil shields allow for lighter weights and smaller cables. 100% foil coverage with Approx. 20% overlap is expected. Drain wire of tinned copper multi-stranded wire is laid longitudinally along with metallic side of foil.</p>
<p>Braid Shielded Cable</p> 	<p>Interwoven metal conductors in a cross-crossed pattern. Good strength and flexibility. Effective in lower frequency noise ranges. Up to 85% coverage provides good protection against higher frequency EMI. Annealed Tin copper or Bar copper is genelly used for braiding</p>
	<p>Combination of foil and braided shield. One of the most effective and superior shielding options for cable. Provides strength, high coverage, and great flexibility where noise rejection is critical.</p>

Technical Details

MC	Item	AWG size	Nominal Overall Dia mm	Avg. Sheath Thickness mm	Avg. Insulation Thickness mm	Max. C.R. at 20°C Ω/Km	Recommended Current Rating (A) at 30°C
31732	2C x 1.00sqmm	18	7.5+/-1.0	0.8	0.5	19.5	12
31741	3G x 1.00sqmm	18	7.8+/-1.0	0.8	0.5	19.5	12
31841	3G x 1.50Sqmm	16	8.2+/-1.0	0.9	0.6	13.30	15
32253	4G x 10Sqmm	8	19.2 +/-2.0	1.3	1.0	1.91	44
32153	4G x 6.00Sqmm	10	15.3+/-2.0	1.0	0.8	3.30	31
31767	7G x 1.00Sqmm	18	10.0 +/-1.0	1.0	0.6	19.50	11
31941	3G x 2.50Sqmm	14	9.8 +/-1.0	1.0	0.7	7.98	19
31532	2C x 0.5sqmm	20	6.4+/-1.0	0.8	0.5	39	5
	3C x 0.60sqmm	20	6.5+/-1.0	0.8	0.5	39	5
	4C x 0.50sqmm	20	7.0+/-1.0	0.8	0.5	39	5
	2C x 0.75sqmm	19	7.0+/-1.0	0.8	0.5	26	8
	3C x 0.75sqmm	19	7.2+/-1.0	0.8	0.5	26	8
	4C x 0.75sqmm	19	7.7+/-1.0	0.8	0.5	26	8



***Hariom* TECHNO CABLES**
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