

Multipair Light Current Control Cables to Esi 09-6 Issue 6

Applications :

These cables are used with the control indication and alarm equipments where the working voltages does not exceed 110v(AC) or 150v(DC)

	CONSTRUCTIONS
Conductor	Solid Annealed Plain Copper Conductor as per IEC-28 in 0.8 mm. and the resistance of the conductor shall be as per the Spec.ESI 09-6 .
Insulation	The PVC insulation material and the thickness of the insulation shall be as per spec . ESI 09-6.
Assembly & shielding	Colour coded insulated cores twisted into pair and such required number of pairs are cabled as per Spec. ESI 09-6. The assembly is shielded with an Aluminium Mylar Tape with a solid tinned copper drain wire in contact with Aluminium part of the screen in case if it is required by the customer.
Inner sheath (In case of armoured Cables)	The inner sheath material shall be PVC and the thickness as well as the colour of the inner sheath shall be as per spec.ESI 09-6.
Armouring (In case of armoured Cables)	The armour material shall be galvanized round steel wire for Armoured type and in case of Screened & Armoured type for 2P, 5P, 10P the armour shall be round steel wire and for other sizes the armour material & Jail be galvanized double steel tape.
Jacket	The Jacket material shall be PVC and the thickness as well as the colour of the jacket shall be as per spec. ESI09-6.

0.6/1.0 Kv. PVC Insulated Wire Armoured Cables

BS - 6346VOE - 0271 IEC - 502

Applications :

Can be used indoors or outdoors in cable ducts, cable trays, conduits or underground locations under mechanical stresses in power and switching stations, local distribution systems, industrial plots and commercial buildings

Specifications : IEC 502, BS-6346 & VDE-0271

	CONSTRUCTIONS	TECHNICAL DATA	
Conductor	Annealed plain copper conductors solid as per class 1 and stranded as per class 2 of IEC-228.	Conductor resistance	As per class 1 or 2 of IEC-228.
Insulation	Solid extruded PVC Type A as per IEC-502.	Working Voltage	600/1000 Volts
Core colours	2Core : Red & Black 3Core : Red, Yellow & Blue 4Core : Red, Yellow Blue & Black 5Core : Black Cores & above : with Number printing	Test Voltage Temperature Bending Radius	3.5kV. RMS or 8.4kV. DC for 5 minutes -25°C to +80°C 6 X Cable diameter
Inner covering	Extruded PVC compatible with the operating temperature of the conductor.	Maximum short circuit temp.	160°C (5 Sec. Max.)
Steel wire Armour	Galvanized Steel wire as per IEC-502.		
Curter Sheath	Extruded PVC Type ST-1 as per IEC-502. passes flame retardant test as per IEC-332-1. Also passes flame test as per IEC-332-		

NOTE :: The given picture of the product may differ to its actual in construction/color.

Master Flex Control Cables confirming to IS : 1554 : Part-1, by using bright annealed Copper conductor, PVC insulated, PVC inner sheathed unarmoured / armoured PVC sheathed cable for 1100V

Control Cable - 1.5 sq.mm

No of cores	Nominal Insulation Thickness mm	Min. Inner Sheath Thickness mm	Armour		Nominal Sheath Thickness Unarm. mm	Min. Sheath Thickness Arm. mm	Overall Dia Approx.		Weight of Cables Approx.		Max. DC Resist. At 20°C Ω/Km	Current Ratings		
			GI Rd. Wire	GI Flat Strip 4x0.8			Unarm	Arm	Unarm	Arm		Direct In Grd Amp	In Ducts Amp	In Air Amp
2	0.80	0.30	1.4	---	1.80	1.24	10.6	13.0	130	350	12.1	23	20	20
3	0.80	0.30	1.4	---	1.80	1.24	11.2	14.0	160	400	12.1	21	17	17
4	0.80	0.30	1.4	---	1.80	1.24	12.0	14.8	190	450	12.1	21	17	17
5	0.80	0.30	1.4	---	1.80	1.24	13.0	15.7	225	500	12.1	21	17	17
6	0.80	0.30	1.4	---	1.80	1.24	14.0	16.6	250	550	12.1	15	13	13
7	0.80	0.30	1.4	---	1.80	1.24	14.0	16.6	265	565	12.1	14	13	13
10	0.80	0.30	1.4	---	1.80	1.40	17.0	20.0	350	750	12.1	13	11	11
12	0.80	0.30	---	0.80	1.80	1.40	17.6	19.5	400	650	12.1	12	10	10
14	0.80	0.30	---	0.80	1.80	1.40	18.5	20.0	450	760	12.1	11	10	10
16	0.80	0.30	---	0.80	1.80	1.40	19.5	21.0	500	800	12.1	11	09	09
19	0.80	0.30	---	0.80	2.00	1.40	20.8	22.0	600	850	12.1	10	09	09
24	0.80	0.30	---	0.80	2.00	1.40	24.0	25.6	725	1050	12.1	09	08	08
30	0.80	0.30	---	0.80	2.00	1.40	25.5	27.0	860	1200	12.1	09	07	07
37	0.80	0.30	---	0.80	2.00	1.40	27.0	28.6	1050	1400	12.1	08	07	07
61	0.80	0.40	---	0.80	2.20	1.56	33.5	35.5	1650	2100	12.1	07	06	06

Control Cable - 2.5 sq.mm

No of cores	Nominal Insulation Thickness mm	Min. Inner Sheath Thickness mm	Armour		Nominal Sheath Thickness Unarm. mm	Min. Sheath Thickness Arm. mm	Overall Dia Approx.		Weight of Cables Approx.		Max. DC Resist. At 20°C Ω/Km	Current Ratings		
			GI Rd. Wire	GI Flat Strip 4x0.8			Unarm	Arm	Unarm	Arm		Direct In Grd Amp	In Ducts Amp	In Air Amp
2	0.90	0.30	1.4	---	1.80	1.24	11.8	14.5	160	425	7.41	32	27	27
3	0.90	0.30	1.4	---	1.80	1.24	12.5	15.5	225	475	7.41	27	24	24
4	0.90	0.30	1.4	---	1.80	1.24	13.5	16.3	250	530	7.41	27	24	24
5	0.90	0.30	1.4	---	1.80	1.24	14.5	17.4	300	600	7.41	27	24	24
6	0.90	0.30	1.4	---	1.80	1.24	16.0	18.4	340	675	7.41	20	18	18
7	0.90	0.30	1.4	---	1.80	1.24	16.0	18.4	375	700	7.41	20	17	17
10	0.90	0.30	---	0.80	1.80	1.40	19.5	21.3	500	780	7.41	18	15	15
12	0.90	0.30	---	0.80	2.00	1.40	20.5	22.1	600	850	7.41	17	14	14
14	0.90	0.30	---	0.80	2.00	1.40	21.5	23.0	650	950	7.41	16	13	13
16	0.90	0.30	---	0.80	2.00	1.40	22.5	24.0	750	1050	7.41	15	13	13
19	0.90	0.30	---	0.80	2.00	1.40	23.5	25.1	850	1150	7.41	14	12	12
24	0.90	0.30	---	0.80	2.00	1.40	27.5	29.0	1050	1400	7.41	13	11	11
30	0.90	0.30	---	0.80	2.00	1.56	29.0	30.5	1250	1700	7.41	12	10	10
37	0.90	0.30	---	0.80	2.20	1.56	31.5	33.0	1550	2000	7.41	11	10	10
61	0.90	0.40	---	0.80	2.20	1.56	39.0	40.5	2450	3100	7.41	09	08	08

Master Flex Cables Shielded Armoured / Unarmoured & Instrumentation Cable Specialist

TECHNICAL SPECIFICATIONS OF INSTRUMENTATION CABLES

Control Cable - 1.5 sq.mm

SR. NO	1 CORE x 0.5 mm ² SIGNAL CABLE (ARMORED AND SCREENED)	2 CORE x 0.5 mm ² MULTICORE SIGNAL CABLE (ARMORED AND SCREENED)	12 PAIR x 0.5 mm ² MULTICORE SIGNAL CABLE (ARMORED AND SCREENED)	6 PAIR x 0.5 mm ² TIC EXTN. CABLE Cr.ALUMEL (ARMORED AND SCREENED)	12 PAIR x 0.5 mm ² TIC EXTN.CABLE (ARMORED AND SCREENED)	1 TRAJID (3CORE) X 1.5 MM ² (ARMORED AND SCREENED)	1 TRAJID (3CORE) X 1.5 MM ² (ARMORED AND SCREENED)	3 CORE x 0.5 mm ² POWER CABLE (UNSCREENED ARMORED)
1	General Application Std.							
	IS-1554 Part - 1							
	IS-8130/84	YES	YES AND ANSI - MC	YES AND ANSI - MC	YES AND ANSI - MC	IS-8130/84	IS-8130/84	IS-8130/84
	IS-5831/84		96.1	96.1	96.1			
	IS-3975/88		300V/550V	300V/550V	300V/550V			
2	Voltage Grade (RMS) Volts	300V/550V	300V/550V	300V/550V	300V/550V	300V/550V	300V/550V	1000V
3	Operating Temp In Deg.C	90	90	90	90	90	90	90
	Numbers of Cores/ Pairs Conductor	1 Pair	1 Pair	6 Pair	1 Pair	1 Pair	1 Pair	1 Pair
(A)	Material & Standard	Annealed Tinned Copper	Annealed Tinned Copper	+ve Chromel -ve Alumel	+ve Chromel -ve Alumel	Annealed Tinned Copper	Annealed Tinned Copper	Annealed Tinned Copper
	Confi Rming to	IS-8130/84	IS-8130/84	ANSI.MC.96.1	ANSI.MC.96.1	IS-8130/84	IS-8130/84	IS-8130/84
(B)	Grade	Electrolytic	Electrolytic	KX	KX	Electrolytic	Electrolytic	Electrolytic
(C)	No. of Strands / Dia of Each Strand (mm)	48/2.2 OR 48/36 AWG	16/2 OR 48/36 AWG	1/1/29 OR 1/16 AWG	1/0.810 OR 1/20 AWG	48/0.2 OR 48/36 AWG	16/0.2 OR 48/36 AWG OR	48/0.2 OR 48/36 AWG
(D)	Pair Identification (By Number Markings)	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	On Cores at Interval on Each Core							
(E)	Form of Conductor	Round	Round	Round	Round	Round	Round	ROUND
(F)	Area of Cross Section (SQ mm)	1.5	1.5	1.5	0.5	1.5	0.5	1.5