ORBIT®

THE POWER OF PEOPLE

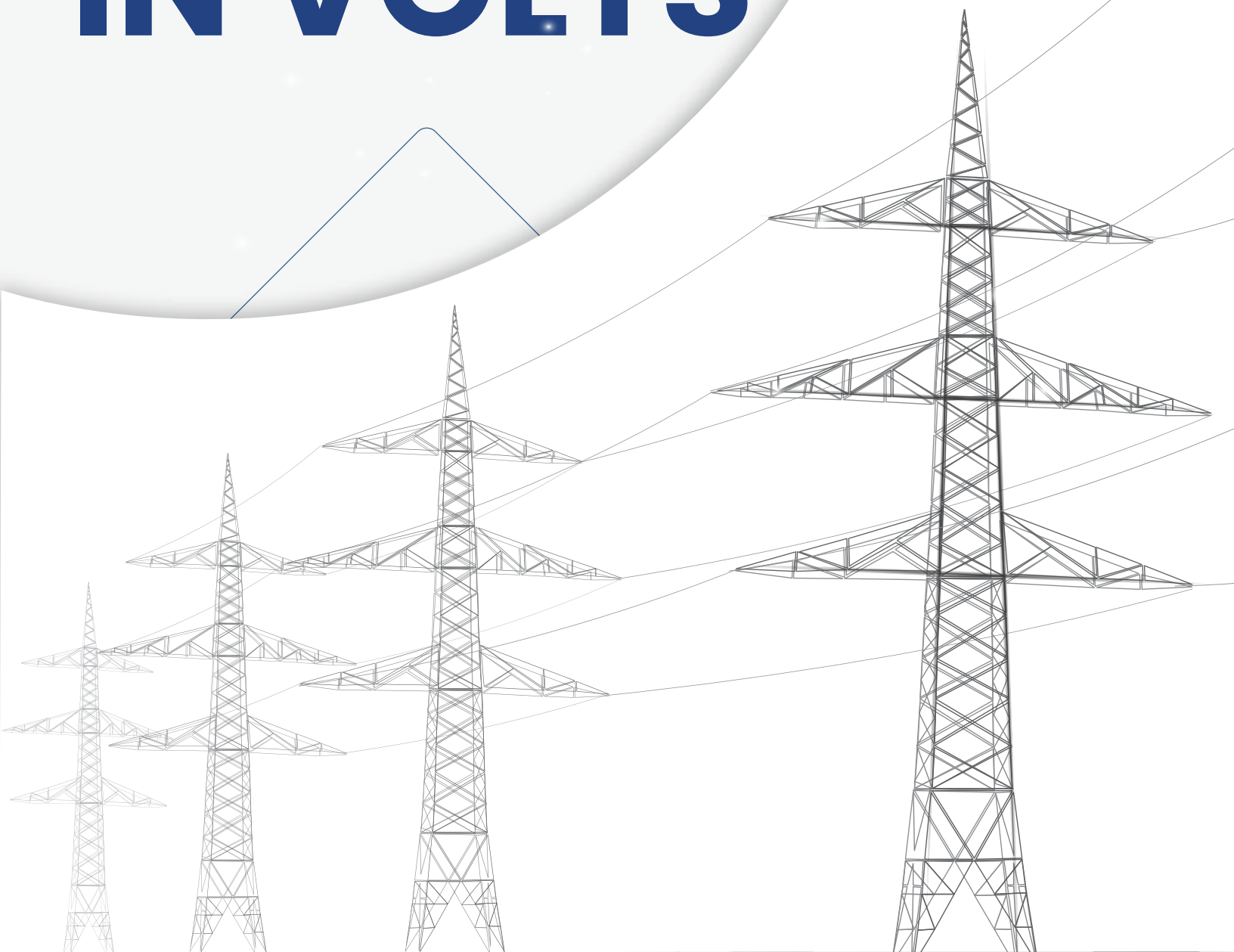
PURE POWER
PERFECTLY DEFINED

AN ISO 9001:2008/14001:2004 COMPANY

www.orbitcables.com

2023

DREAMS THAT ARE MEASURED IN VOLTS



CONTENTS

About **Company**

Orbit Group of Companies is a renowned wiring and cabling solution partner, established in 1996. We have dominated the trade and engineering of wires and cables for over two decades with dynamic and pioneering technology.
Orbit wires and cables are designed and manufactured by the industry's best and are continually evolving to stay ahead of market demands. Our trusted products are designed and fabricated with efficiency and focus on the minutiae to ensure a satisfactory experience for every customer.

Orbit wires and cables are credited to be a one-stop enterprise that manufactures and sells a variety of wiring and cabling solutions for diverse applications. As an established enterprise we promise to deliver reliable and standard wiring and cabling solutions for your specific needs at a competitive price.

Message From **The Chairman**

Mr. RK Agarwal
Founder

One of the core purposes of Orbit Wires India Pvt. Ltd. is to build a long term relationship with people and organizations across the globe. Orbit Wires Company has proactively worked towards creating brand credibility and recognition by maintaining the industry standards of our products. We strive to be an innocuous company with safety as our precedence and aim to ultimately have zero accidents. We aspire to be the best cable manufacturer in the country and establish our brand identity through quality product delivery and commitment towards customer value.

Mr. Amit Agarwal
Managing Director

Ms. Neelam Bansel
Managing Director

Mr. Govinda Agarwal
Managing Director

Mission Vision & **Values**

One of the core purposes of Orbit Wires India Pvt. Ltd. is to build a long term relationship with people and organizations across the globe. Orbit Wires Company has proactively worked towards creating brand credibility and recognition by maintaining the industry standards of our products.

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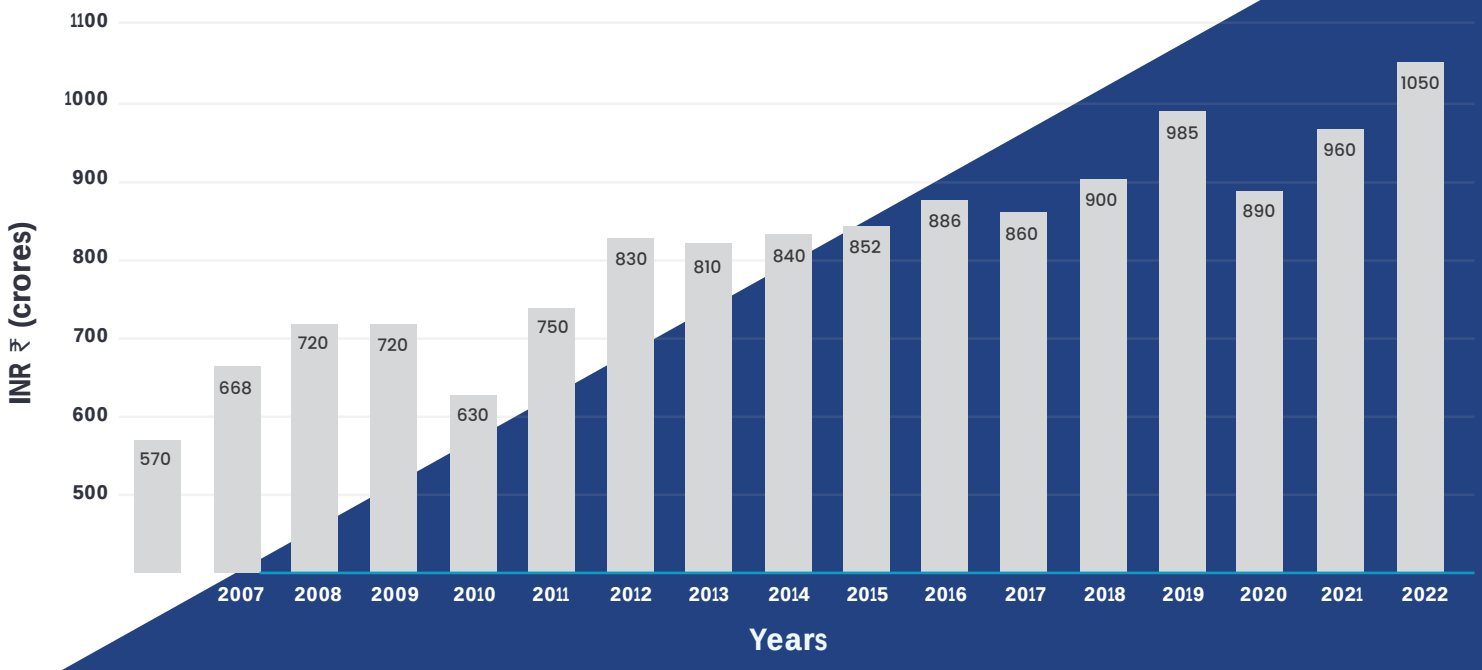


Certificates

QMS

EMS

HEALTH & SAFETY

CE

ROHS

CPRI

CONSTRUCTION OF LT CABLES

XLPE INSULATED ALUMINIUM ARMOURED CABLES

Application :

Power cables for medium voltage (upto 3.3kv) are used in – outdoor cable ducts, cable trays, conduits or underground locations under mechanical stresses in power and switching stations, local distribution systems and industrial plants.

Standards	**IS 8130 : 2013, IS 5831 : 1984, IS 7098 : 1 : 1988**
Operating Temperature	90°C
Short Circuit Temperature	250°C
Working Voltage	600/1000 Volts
Cable Range manufactured Sizes	50 sq.mm to 630 sq.mm in Single Core Cables 25 sq.mm to 400 sq.mm in Multi Cores Cables

Test Voltage :

3300 V

Construction :

Conductor Aluminium Stranded compacted circular conductor conform to IS 8130 : 2013, Class 1 or Class 2.

Insulation Cross linked polythylene to (XLPE)

Core Colour single core - natural
multi core - Numbered or colour polyster tapes applied over copper tapes

Bedding Extruded PVC

Armour Single core - Non-magnetic (Aluminum) wire / Flat wire
Multi core - Galvanished steel wire / flat wire / Tape

Outer Sheath Extruded PVC / Special PVC compound such as Flame Retardant (FR), Flame Retardant Low Smoke(FRLS), Low Smoke Zero Halogen(LSOH) can be used for outer sheath to suit a variety of environment and fire risk conditions. Flamability test conforms to IEC 60332-1-2 : 2015 . For installation where fire and associated problems such as emission of smoke and toxic fumes offer a serious potential threat, special LSF (Low, smoke & fumes) compound can be provided. LSF compound is Halogen free (Fluorine, Chlorine, Bromine) when tested. The acid gas evolved during combustion is less than 0.5% by weight of material.

Minimum Bending radius - Fixed installation | 12 x Overall diameter

XLPE insulated heavy duty cables were introduced worldwide in mid sixties. These cables have overcome the limitations of PVC Insulated Cables such as thermal degradation, poor moisture resistance and thermoplastic nature.

The advantages of XLPE Insulated cables in comparison to PVC insulated cable are as under:

APPLICATION :

The Cables are suitable for use on AC single phase or three phase systems for rated Voltage up to and including 1100 Volts. These Cables can be used on DC Systems for rated Voltage up to and including 1500 Volts to earth.

A. Commercial Advantages:

Lower installation charges as the diameter of the cable is comparatively lesser with a smaller bending requiring less space requirement for laying cables.

One size lower cable can be used as compared to PVC insulated cable.

Lower laying cost because of the comparatively smaller diameter of cable and higher weight.

B. Technical Advantages:

Higher resistance to moisture.

Better resistance to surge currents.

Higher insulation resistance 1000 times more than PVC cables.

Thermosetting in nature.

Longer service life.

Better resistance to chemicals.

Low dielectric losses.

Comparatively higher cable operation temperature 90°C and short circuit temperature 25°C.

Higher current rating, higher short circuit rating approx. 1.2 times that of PVC.

Minimum Bending Radius For HT Cables / LV Cables / Single Core Unsheathed.

HT Cables:	Single Core : 20 x D	Multicore : 15 x D
LV Cables:	Single Core : 15 x D	Multicore : 12 x D
Single Core Unsheathed:	Single Core : 8 x D	(Where D = Diameter of cable in mm)

Safe Pulling Force With Stockings

a) For Unarmoured Cable : P = 5 D 2 (Where P = Pulling force)

b) For Armoured Cable : P = 9 D 2 (Where D = Diameter of cable in mm)

Safe Pulling Force When Pulled With Pulling Eye

a) For Aluminium Conductors : 30 N / mm2

b) For Copper Conductor: 50 N / mm2

HIGHER ELECTRICAL STRENGTH RENTATION

HIGHER SHORT CIRCUIT RATING

BETTER ELECTRICAL, MECHANICAL & THERMAL PROPERTIES

EASY JOINTING AND TERMINATION

Selection of Cables

Power Cables are generally selected considering the application. However following factors are important for selection of suitable cable construction required to transport electrical energy from one end to the other.

Load to be carried.

Fault level.

Maximum operating voltage.

Route length and voltage drop.

Possible overloading duration & magnitude.

Flame retardant properties.

Mode of installation considering installation environment such as ambient & ground temperature as well as chemical & physical properties of soil, Grouping factors, arrangement of Cables during installation.

All sizes of ORBIT XLPE cables are designed for standard operating conditions in India. The standards adopted are after duly considering the geographical / Climactical conditions and general applications of power of utilities, distribution and generation purposes.

The cables are manufactured conforming to Indian & International cables specification for XLPE Insulated cables. Customer specific requirements can also be met.

Basic assumptions

The current rating given as per before mentioned following assumptions

Ambient air temperature: 40°C

Thermal resistivity of soil: 1.5k. m/w

Maximum Conductor temperature: 90°C

Ground temperature: 30°C

Depth of laying (measured to : 750mm)

TECHNICAL DATA

TABLE – 1 "ORBIT" COMPARATIVE CURRENT RATINGS OF 650/1100 VOLTS MULTICORE HEAVY DUTY PVC INSULATED CABLES & XLPE INSULATED CABLES. (3, 3.5 & 4 Core Unarmoured / Armoured PVC Sheathed Cables with Aluminium Conductor.)

Normal Size of Cable	3, 3.5 & 4 Core PVC Insulated & Sheathed Cables			3, 3.5 & 4 Core XLPE Insulated & Sheathed Cables		
	In Ground	In Air	Approx Voltage Drop	In Ground	In Air	Approx Voltage Drop
Sq. mm	Amp	Amp	Mv / anp / mtr	Amp	Amp	Mv / anp / mtr
16	61	52	3.96	74	69	4.24
25	78	70	2.49	95	93	2.67
35	94	85	1.80	114	114	1.94
50	111	104	1.34	134	138	1.43
70	136	131	0.93	164	175	0.99
95	163	162	0.68	197	216	0.72
120	185	186	0.54	223	249	0.58
150	206	212	0.45	249	284	0.48
185	234	245	0.36	282	329	0.39
240	271	291	0.29	327	392	0.31
300	305	335	0.25	369	452	0.26
400	348	390	0.21	420	526	0.21

TABLE – 2 "ORBIT" CONDUCTOR TECHNICAL INFORMATION FOR SINGLE CORE AND MULTICORE CABLES COPPER & ALUMINIUM CONDUCTORS.

Nominal Size of Conductor	Minimum no. of wires				Max D.C. Resistance at 20*C	
	Non Compacted		Compacted Round / Shaped		Plain Copper	Aluminium
Sq.mm	CU	ALU	CU	ALU	0hm/Km	0hm/Km
1.5*	3	3	-	-	12.10	18.1
2.5*	3	3	-	-	7.41	12.1
4*	7	3	-	-	4.61	7.41
6*	7	3	-	-	3.08	4.61
10*	7	7	6	-	1.83	3.08
16	7	7	6	6	1.15	1.91
25	7	7	6	6	0.727	1.20
35	7	7	6	6	0.524	0.868
50	19	19	6	6	0.387	0.641
70	19	19	12	12	0.268	0.443
95	19	19	15	15	0.193	0.32
120	37	37	18	15	0.153	0.253
150	37	37	18	15	0.124	0.206
185	37	37	30	30	0.0991	0.164
240	61	37	34	30	0.0754	0.125
300	61	61	34	30	0.0601	0.100
400	61	61	53	53	0.047	0.0778
500	61	61	53	53	0.0366	0.0605
630	91	91	53	53	0.0283	0.0469

TABLE – 3 "ORBIT" SINGLE CORE ALUMINIUM CONDUCTOR , XLPE INSULATED,

UNARMOURED & ARMOURED CABLES CONFIRMING TO IS 7098 (PART 1)

Nominal Size of Conductor	Form Conductor Circular	Nominal Thickness of XLPE Insulation For U/A	Minimum Thickness of PVC Inner Sheath	Unarmoured Cable			Nominal Thickness Of XLPE Insulation For Armoured Cable	Round Wire Armoured Cable				Formed wire / Strip Armoured Cable				Current Rating.*		*Normal Delivery Length
				Nominal Thickness of PVC Outer Sheath	Approx. Overall Diameter of Cable	Approx. Weight of Cable		Nominal Dimension of Alumini-um Round Wire	Minimum Thickness of PVC Outer Sheath	Appro. Overall Diameter of Cable	Approx. Weight of Cable	Nominal Dimension of Alumini-um Flat Strip	Minimum Thickness of PVC Outer Sheath	Approx. Overall Diameter of Cable	Approx. Weight of Cable	In Ground	In Air	
Sq.mm	mm	mm	mm	mm	mm	Kgs./Km	mm	mm	mm	mm	Kgs./Km	mm	mm	mm	Kgs./Km	Amps.	Amps.	Mtrs.
4	Solid	0.70	-NA-	1.80	7.50	60	-	-	-	-	-	-	-	-	-	43	38	1000
4	Stranded	0.70	-NA-	1.80	8	65	-	-	-	-	-	-	-	-	-	43	38	1000
6	Solid	0.70	-NA-	1.80	8	70	-	-	-	-	-	-	-	-	-	55	50	1000
6	Stranded	0.70	-NA-	1.80	8.50	75	-	-	-	-	-	-	-	-	-	55	50	1000
10	Solid	0.70	-NA-	1.80	9	80	1	-	-	-	-	-	-	-	-	69	64	1000
10	Stranded	0.70	-NA-	1.80	9.50	90	1	-	-	-	-	-	-	-	-	69	64	1000
16	Stranded	0.70	-NA-	1.80	10	115	1	1.40	1.24	12.5	190	-	-	-	-	89	84	1000
25	Stranded	0.90	-NA-	1.80	12	155	1.20	1.40	1.24	14	247	-	-	-	-	115	112	1000
35	Stranded	0.90	-NA-	1.80	13	180	1.20	1.40	1.24	15	290	-	-	-	-	137	137	1000
50	Stranded	1	-NA-	1.80	14	240	1.30	1.40	1.24	16.5	342	-	-	-	-	161	165	1000
70	Stranded	1.10	-NA-	1.80	15.5	310	1.40	1.40	1.24	18.5	428	-	-	-	-	198	209	1000
95	Stranded	1.10	-NA-	1.80	17.50	385	1.40	1.60	1.40	20.20	560	4 x 0.80	1.40	18.60	494	243	264	1000
120	Stranded	1.20	-NA-	1.80	19.5	470	1.50	1.60	1.40	22.50	665	4 x 0.80	1.40	20.40	589	276	308	1000
150	Stranded	1.40	-NA-	2	21.50	600	1.70	1.60	1.40	24.0	779	4 x 0.80	1.40	22.50	694	308	350	1000
185	Stranded	1.60	-NA-	2	23.50	710	1.90	1.60	1.40	26.50	921	4 x 0.80	1.40	24.50	827	349	406	1000
240	Stranded	1.70	-NA-	2	26	900	2	1.60	1.40	29	1121	4 x 0.80	1.40	26.60	1026	404	480	1000
300	Stranded	1.80	-NA-	2	28.50	1158	2.10	1.60	1.56	31.50	1349	4 x 0.80	1.56	29.60	1235	454	551	1000
400	Stranded	2	-NA-	2.20	31.5	1385	2.40	2	1.56	35.50	1739	4 x 0.80	1.56	33.00	1548.5	518	647	500
500	Stranded	2.20	-NA-	2.20	35.5	1650	2.60	2	1.56	39.50	2128	4 x 0.80	1.56	36.70	1909.5	588	751	500
630	Stranded	2.40	-NA	2.20	39.5	2100	2.80	2	1.72	43	2660	4 x 0.80	1.72	40.50	2413	663	868	500

TABLE – 4 "ORBIT" SINGLE CORE COPPER CONDUCTOR, XLPE INSULATED,

UNARMOURED & ARMOURED CABLES CONFIRMING TO IS 7098 (PART 1)

Nominal Size of Conductor	Form Conductor Circular	Nominal Thickness of XLPE Insulation For U/A	Minimum Thickness of PVC Inner Sheath	Unarmoured Cable			Nominal Thickness Of XLPE Insulation For Armoured Cable	Round Wire Armoured Cable				Formed wire / Strip Armoured Cable				Current Rating.*		*Normal Delivery Length
				Nominal Thickness of PVC Outer Sheath	Approx. Overall Diameter of Cable	Approx. Weight of Cable		Nominal Dimension of GI Round Strip	Minimum Thickness of PVC Outer Sheath	Appro. Overall Diameter of Cable	Approx. Weight of Cable	Nominal Dimension of Alumini-um Flat Strip	Minimum Thickness of PVC Outer Sheath	Approx. Overall Diameter of Cable	Approx. Weight of Cable	In Ground	In Air	
Sq.mm	mm	mm	mm	mm	mm	Kgs./Km	mm	mm	mm	mm	Kgs./Km	mm	mm	mm	Kgs./Km	Amps.	Amps.	Mtrs.
4	Solid	0.70	-NA-	1.80	7.50	85.5	-	-	-	-	-	-	-	-	-	54	48	1000
4	Stranded	0.70	-NA-	1.80	8	88	-	-	-	-	-	-	-	-	-	54	48	1000
6	Solid	0.70	-NA-	1.80	8	109	-	-	-	-	-	-	-	-	-	67	61	1000
6	Stranded	0.70	-NA-	1.80	8.50	114	-	-	-	-	-	-	-	-	-	67	61	1000
10	Stranded	0.70	-NA-	1.80	9.50	152	1	1.40	1.24	12	219	-	-	-	-	90	83	1000
16	Stranded	0.70	-NA-	1.80	10	209	1	1.40	1.24	13	281	-	-	-	-	115	108	1000
25	Stranded	0.90	-NA-	1.80	12	309	1.20	1.40	1.24	14	390	-	-	-	-	148	144	1000
35	Stranded	0.90	-NA-	1.80	13	399	1.20	1.40	1.24	16	485	-	-	-	-	177	176	1000
50	Stranded	1	-NA-	1.80	14	513	1.30	1.40	1.24	17	608	-	-	-	-	208	212	1000
70	Stranded	1.10	-NA-	1.80	16	712	1.40	1.40	1.24	19	817	-	-	-	-	255	269	1000
95	Stranded	1.10	-NA-	1.80	17.50	940	1.40	1.60	1.40	22	1102	4 x 0.80	1.40	18.60	1036	312	340	1000
120	Stranded	1.20	-NA-	1.80	19	1168	1.50	1.60	1.40	23.50	1339	4 x 0.80	1.40	20.40	1264	355	396	1000
150	Stranded	1.40	-NA-	2	21.50	1444	1.70	1.60	1.40	24.50	1615	4 x 0.80	1.40	22.20	1530	396	450	1000
185	Stranded	1.60	-NA-	2	23.50	1786	1.90	1.60	1.40	26.50	1976	4 x 0.80	1.40	24.40	1890	447	519	1000
240	Stranded	1.70	-NA-	2	26	2299	2	1.60	1.40	29	2508	4 x 0.80	1.40	26.60	2404	515	613	1000
300	Stranded	1.80	-NA-	2	28.50	2840.5	2.10	1.60	1.56	31.50	3078	4 x 0.80	1.56	29.60	2974	576	700	500
400	Stranded	2	-NA-	2.20	33	3629	2.40	2	1.56	36.00	3962	4 x 0.80	1.56	33.20	3762	651	813	500
500	Stranded	2.20	-NA-	2.20	36	4598	2.60	2	1.56	39.50	4969	4 x 0.80	1.56	36.70	4770	727	930	500
630	Stranded	2.40	-NA-	2.20	40	5880	2.80	2	1.72	43	6318	4 x 0.80	1.72	41.20	6070	806	1056	500

TABLE – 5 "ORBIT" TWO CORE ALUMINIUM CONDUCTOR, XLPE INSULATED,

UNARMOURED & ARMOURED CABLES CONFIRMING TO IS 7098 (PART 1)

Nominal Size of Conductor	Form Conductor Circular	Nominal Thickness of XLPE Insulation For U/A	Minimum Thickness of PVC Inner Sheath	Unarmoured Cable			Round Wire Armoured Cable				Formed wire / Strip Armoured Cable				Current Rating		Normal Delivery Length
				Nominal Thickness of PVC Outer Sheath	Approx. Overall Diameter of Cable	Approx. Weight of Cable	Nominal Dimension of Aluminium Round Wire	Minimum Thickness of PVC Outer Sheath	Appro. Overall Diameter of Cable	Approx. Weight of Cable	Nominal Dimension of Aluminium Flat Strip	Minimum Thickness of PVC Outer Sheath	Approx. Overall Diameter of Cable	Approx. Weight of Cable	In Ground	In Air	
Sq.mm	mm	mm	mm	mm	mm	Kgs./Km	mm	mm	mm	Kgs./Km	mm	mm	mm	Kgs./Km	Amps.	Amps.	Mtrs.
4	Solid	0.70	0.30	1.80	12.50	140	1.40	1.24	14.50	375.00	-NA-	-NA-	-NA-	-NA-	42	38	1000
4	Stranded	0.70	0.30	1.80	13	150	1.40	1.24	15.00	403.00	-NA-	-NA-	-NA-	-NA-	42	38	1000
6	Solid	0.70	0.30	1.80	13.50	170	1.40	1.24	15.50	437.00	-NA-	-NA-	-NA-	-NA-	55	50	1000
6	Stranded	0.70	0.30	1.80	14	180	1.40	1.24	16.50	465.00	-NA-	-NA-	-NA-	-NA-	55	50	1000
10	Solid	0.70	0.30	1.80	15	205	1.40	1.24	16	503.00	-NA-	-NA-	-NA-	-NA-	68	64	1000
10	Stranded	0.70	0.30	1.80	16	225	1.40	1.24	18	551.00	-NA-	-NA-	-NA-	-NA-	68	64	1000
16	Stranded	0.70	0.30	1.80	14	225	1.40	1.40	17	480.16	-NA-	-NA-	-NA-	-NA-	89	83	1000
25	Stranded	0.90	0.30	2	17	330	1.60	1.40	20	671.84	4 x 0.80	1.40	18.50	509.13	114	109	1000
35	Stranded	0.90	0.30	2	19	410	1.60	1.40	22	775.55	4 x 0.80	1.40	20	605.51	136	133	1000
50	Stranded	1	0.30	2	21	510	1.60	1.40	24	937.97	4 x 0.80	1.40	22.50	753.28	161	162	1000
70	Stranded	1.10	0.30	2	23	675	1.60	1.56	27	1186.85	4 x 0.80	1.56	22.50	989	197	204	1000
95	Stranded	1.10	0.40	2.20	26.50	893	2	1.56	28.68	1572.78	4 x 0.80	1.56	28	1204.30	235	251	1000
120	Stranded	1.20	0.40	2.20	28.50	1050	2	1.56	33	1849.49	4 x 0.80	1.56	30.50	1408.20	266	287	500
150	Stranded	1.40	0.40	2.20	32	1215	2	1.72	36	2182.96	4 x 0.80	1.72	31.79	1690.20	296	328	500
185	Stranded	1.60	0.50	2.40	35.50	1510	2	1.88	37.70	2597.60	4 x 0.80	1.72	34.95	2004.00	335	379	500
240	Stranded	1.70	0.50	2.60	39.50	1900	2.50	2.04	45	3418.52	4 x 0.80	1.88	38.69	2480.00	385	448	500
300	Stranded	1.80	0.60	2.80	43.50	2360	2.50	2.20	46.22	4019.07	4 x 0.80	2.04	42.53	2964.00	432	513	500
400	Stranded	2	0.60	3	49	3100	2.50	2.36	51.61	4854.00	4 x 0.80	2.36	48.24	3676.00	487	593	500
500	Stranded	2.20	0.70	3.40	55.50	4000	3.15	2.68	61.50	6517.00	4 x 0.80	2.52	56.50	4599.00	548	683	500
630	Stranded	2.40	0.70	3.60	61.50	4997	3.15	2.84	67.50	7790.00	4 x 0.80	2.68	62.50	5662.00	612	784	500

TABLE-6 "ORBIT" TWO CORE COPPER CONDUCTOR, XLPE INSULATED,

UNARMOURED & ARMOURED CABLES CONFIRMING TO IS 7098 (PART 1)

Nominal Size of Conductor	Form Conductor Circular	Nominal Thickness of XLPE Insulation For U/A	Minimum Thickness of PVC Inner Sheath	Unarmoured Cable			Round Wire Armoured Cable				Formed wire / Strip Armoured Cable				Current Rating		Normal Delivery Length
				Nominal Thickness of PVC Outer Sheath	Approx. Overall Diameter of Cable	Approx. Weight of Cable	Nominal Dimension of GI Round Strip	Minimum Thickness of PVC Outer Sheath	Appro. Overall Diameter of Cable	Approx. Weight of Cable	Nominal Dimension of Flat Strip	Minimum Thickness of PVC Outer Sheath	Approx. Overall Diameter of Cable	Approx. Weight of Cable	In Ground	In Air	
Sq.mm	mm	mm	mm	mm	mm	Kgs./Km	mm	mm	mm	Kgs./Km	mm	mm	mm	Kgs./Km	Amps.	Amps.	Mtrs.
4	Solid	0.70	0.30	1.80	12.50	165	1.40	1.24	14.00	408	-NA-	-NA-	-NA-	-NA-	54	48	1000
4	Stranded	0.70	0.30	1.80	13	175	1.40	1.24	14.50	427	-NA-	-NA-	-NA-	-NA-	54	48	1000
6	Solid	0.70	0.30	1.80	13.50	210	1.40	1.24	15.00	484	-NA-	-NA-	-NA-	-NA-	67	61	1000
6	Stranded	0.70	0.30	1.80	14	225	1.40	1.24	16.00	522	-NA-	-NA-	-NA-	-NA-	67	61	1000
10	Stranded	0.70	0.30	1.80	16	300	1.40	1.24	17.50	665	-NA-	-NA-	-NA-	-NA-	89	83	1000
16	Stranded	0.70	0.30	1.80	14	422	1.40	1.40	17	696.50	-NA-	-NA-	-NA-	-NA-	115	108	1000
25	Stranded	0.90	0.30	2	17	636	1.60	1.40	20	1001.70	4 x 0.80	1.40	18.50	804.40	147	140	1000
35	Stranded	0.90	0.30	2	19	817	1.60	1.40	22	1224.20	4 x 0.80	1.40	20	1019.70	176	172	1000
50	Stranded	1	0.30	2	21	1054	1.60	1.40	24	1520.00	4 x 0.80	1.40	22.50	1311.00	208	208	1000
70	Stranded	1.10	0.30	2	23	1453	1.60	1.56	27	2004.00	4 x 0.80	1.56	25.50	1757.00	253	262	1000
95	Stranded	1.10	0.40	2.20	26.50	1966	2	1.56	30.50	2736.00	4 x 0.80	1.56	28	2289.00	302	322	500
120	Stranded	1.20	0.40	2.20	28.50	2413	2	1.56	33	3230.00	4 x 0.80	1.56	30.50	2755.00	340	368	500
150	Stranded	1.40	0.40	2.20	32	2935	2	1.72	36	3876.00	4 x 0.80	1.72	31.80	3353.00	379	419	500
185	Stranded	1.60	0.50	2.40	35.50	3676	2	1.88	40	4731.00	4 x 0.80	1.72	37	4094.00	425	482	500
240	Stranded	1.70	0.50	2.60	39.50	4750	2.50	2.04	42.40	6203.00	4 x 0.80	1.88	38.70	5225.00	486	566	500
300	Stranded	1.80	0.60	2.80	43.50	5918	2.50	2.20	46.20	7514.00	4 x 0.80	2.04	42.50	6412.00	541	644	500
400	Stranded	2	0.60	3	49	7495	2.50	2.36	51.60	9262.00	4 x 0.80	2.36	48.20	8075.00	602	734	500

TABLE-7 "ORBIT" THREE CORE ALUMINIUM CONDUCTOR, XLPE INSULATED,

UNARMOURED & ARMOURED CABLES CONFIRMING TO IS 7098 (PART 1)

Nominal Size of Conductor	Form of Conductor Circular shaped	Nominal Thickness of XLPE Insulation	Minimum Thickness of PVC Inner Sheath	Unarmoured Cable			Round Wire Armoured Cable				Formed wire / Strip Armoured Cable				Current Rating		Normal Delivery Length
				Nominal Thickness of PVC Outer Sheath	Approx. Overall Diameter of Cable	Approx. Weight of Cable	Nominal Dimension of Aluminium Round Wire	Minimum Thickness of PVC Outer Sheath	Appro. Overall Diameter of Cable	Approx. Weight of Cable	Nominal Dimension of GL Flat Strip	Minimum Thickness of PVC Outer Sheath	Approx. Overall Diameter of Cable	Approx. Weight of Cable	In Ground	In Air	
Sq.mm	mm	mm	mm	mm	mm	Kgs./Km	mm	mm	mm	Kgs./Km	mm	mm	mm	Kgs./Km	Amps.	Amps.	Mtrs.
4	Solid	0.70	0.30	1.80	13	140	1.40	1.24	15	460	-NA-	-NA-	-NA-	-NA-	35	32	1000
4	Stranded	0.70	0.30	1.80	13.50	160	1.40	1.24	16	399	-NA-	-NA-	-NA-	-NA-	35	32	1000
6	Solid	0.70	0.30	1.80	14.50	170	1.40	1.24	16	530	-NA-	-NA-	-NA-	-NA-	46	42	1000
6	Stranded	0.70	0.30	1.80	15	190	1.40	1.24	17	470	-NA-	-NA-	-NA-	-NA-	46	42	1000
10	Solid	0.70	0.30	1.80	15.50	220	1.40	1.24	18	640	-NA-	-NA-	-NA-	-NA-	57	54	1000
10	Stranded	0.70	0.30	1.80	17	230	1.40	1.24	18.50	551	-NA-	-NA-	-NA-	-NA-	57	54	1000
16	Stranded	0.70	0.30	1.80	16.20	304	1.60	1.40	19	648.40	4 x 0.80	1.24	16.80	487.60	74	69	1000
25	Stranded	0.90	0.30	2	19.50	446	1.60	1.40	21.70	855.00	4 x 0.80	1.40	20.10	670.70	95	93	1000
35	Stranded	0.90	0.30	2	21.50	551	1.60	1.40	23.60	997.00	4 x 0.80	1.40	22	798.00	114	114	1000
50	Stranded	1	0.30	2	24.50	693	1.60	1.56	26.80	1235.00	4 x 0.80	1.40	24.80	960.00	134	138	1000
70	Stranded	1.10	0.40	2.20	28	950	2	1.56	30.90	1729.00	4 x 0.80	1.56	28.50	1282	164	175	500
95	Stranded	1.10	0.40	2.20	30.80	1206	2	1.56	33.70	2077.00	4 x 0.80	1.56	31.30	1577	197	216	500
120	Stranded	1.20	0.40	2.20	33.80	1463	2	1.72	37	2422.00	4 x 0.80	1.56	34.30	1871	223	249	500
150	Stranded	1.40	0.50	2.40	37.90	1814	2	1.88	41.10	2888.00	4 x 0.80	1.72	38.30	2100	249	284	500
185	Stranded	1.60	0.50	2.60	42	2242	2.50	2.04	46	3733.00	4 x 0.80	1.88	42.30	2500	282	329	500
240	Stranded	1.70	0.60	2.80	46.90	2869	2.50	2.20	50.90	4531.00	4 x 0.80	2.04	47.20	3382	327	392	500
300	Stranded	1.80	0.60	3	51.50	3505	2.50	2.36	55.45	5339.00	4 x 0.80	2.20	51.80	4066	369	452	500
400	Stranded	2	0.70	3.20	58.60	4427	3.15	2.68	64	7115.00	4 x 0.80	2.52	58.50	5101	420	526	500
500	Stranded	2.20	0.70	3.60	66	5681	3.15	2.84	73	8597.00	4 x 0.80	2.68	65	6365	478	612	250
630	Stranded	2.40	0.70	3.80	72	7125	4	3	78	11295	4 x 0.80	2.84	73	7894	542	712	250

TABLE-8 "ORBIT" THREE CORE COPPER CONDUCTOR, XLPE INSULATED,

UNARMOURED & ARMOURED CABLES CONFIRMING TO IS 7098 (PART 1)

Nominal Size of Conductor	Form Conductor Circular Shaped	Nominal Thickness of XLPE Insulation	Minimum Thickness of PVC Inner Sheath	Unarmoured Cable			Round Wire Armoured Cable				Formed wire / Strip Armoured Cable				Current Rating		Normal Delivery Length
				Nominal Thickness of PVC Outer Sheath	Approx. Overall Diameter of Cable	Approx. Weight of Cable	Nominal Dimension of GI Round Strip	Minimum Thickness of PVC Outer Sheath	Appro. Overall Diameter of Cable	Approx. Weight of Cable	Nominal Dimension of GL Flat Strip	Minimum Thickness of PVC Outer Sheath	Approx. Overall Diameter of Cable	Approx. Weight of Cable	In Ground	In Air	
Sq.mm	mm	mm	mm	mm	mm	Kgs./Km	mm	mm	mm	Kgs./Km	mm	mm	mm	Kgs./Km	Amps.	Amps.	Mtrs.
4	Solid	0.70	0.30	1.80	13.00	210	1.40	1.24	15	530	-NA-	-NA-	-NA-	-NA-	45	41	1000
4	Stranded	0.70	0.30	1.80	13.50	232	1.40	1.24	16	460	-NA-	-NA-	-NA-	-NA-	45	41	1000
6	Solid	0.70	0.30	1.80	14.00	280	1.40	1.24	16	640	-NA-	-NA-	-NA-	-NA-	56	52	1000
6	Stranded	0.70	0.30	1.80	15.00	299	1.40	1.24	17	551	-NA-	-NA-	-NA-	-NA-	56	52	1000
10	Stranded	0.70	0.30	1.80	16.50	415	1.40	1.24	19	722	-NA-	-NA-	-NA-	-NA-	74	70	1000
16	Stranded	0.70	0.30	1.80	16.20	425	1.60	1.40	18.80	921	4 x 0.80	1.24	16.80	772.30	95	89	1000
25	Stranded	0.90	0.30	2	19.50	874	1.60	1.40	21.70	1282	4 x 0.80	1.40	20.10	1102	122	119	1000
35	Stranded	0.90	0.30	2	21.50	1150	1.60	1.40	23.60	1596	4 x 0.80	1.40	22	1396	146	147	1000
50	Stranded	1	0.30	2	24.50	1501	1.60	1.56	26.80	2042	4 x 0.80	1.40	24.80	1767	173	179	1000
70	Stranded	1.10	0.40	2.20	28.00	2118	2	1.56	30.90	2888	4 x 0.80	1.56	28.50	2441	212	226	500
95	Stranded	1.10	0.40	2.20	30.80	2821	2	1.56	33.70	3686	4 x 0.80	1.56	31.30	3182	254	279	500
120	Stranded	1.20	0.40	2.20	33.80	3496	2	1.72	37	4455	4 x 0.80	1.56	34.30	3895	287	320	500
150	Stranded	1.40	0.50	2.40	37.90	4322	2	1.88	41.10	5396	4 x 0.80	1.72	38.30	4759	321	365	500
185	Stranded	1.60	0.50	2.60	42	5377	2.50	2.04	46	6868	4 x 0.80	1.88	42.30	5852	362	422	500
240	Stranded	1.70	0.60	2.80	46.90	6992	2.50	2.20	50.90	8654	4 x 0.80	2.04	47.20	7505	418	500	500
300	Stranded	1.80	0.60	3	51.50	8683	2.50	2.36	55.50	10526	4 x 0.80	2.20	51.80	9243	469	574	500
400	Stranded	2	0.70	3.20	58.60	11029	3.15	2.68	64	13718	4 x 0.80	2.52	58.50	11704	528	662	250

TABLE-9 "ORBIT" THREE AND HALF CORE ALUMINIUM CONDUCTOR, XLPE INSULATED,

UNARMOURED & ARMOURED CABLES CONFIRMING TO IS 7098 (PART 1)

Nominal Size of Conductor	Form of Conductor Circular shaped	Nominal Thickness of XLPE Insulation	Minimum Thickness of PVC Inner Sheath	Unarmoured Cable			Round Wire Armoured Cable				Formed wire / Strip Armoured Cable				Current Rating		Normal Delivery Length
				Nominal Thickness of PVC Outer Sheath	Approx. Overall Diameter of Cable	Approx. Weight of Cable	Nominal Dimension of GL Round Strip	Minimum Thickness of PVC Outer Sheath	Appro. Overall Diameter of Cable	Approx. Weight of Cable	Nominal Dimension of GL Flat Strip	Minimum Thickness of PVC Outer Sheath	Approx. Overall Diameter of Cable	Approx. Weight of Cable	In Ground	In Air	
Sq.mm	mm	mm	mm	mm	mm	Kgs./Km	mm	mm	mm	Kgs./Km	mm	mm	mm	Kgs./Km	Amps.	Amps.	Mtrs.
25/16	Stranded	0.90 0.70	0.30	2	21.30	525	1.6	1.4	23.6	969	4 x 0.80	21.90	21.90	733	95	93	1000
35/16	Stranded	0.90 0.70	0.30	2	23.60	625	1.6	1.4	25.8	1139	4 x 0.80	24.20	24.20	886	114	114	1000
50/25	Stranded	1 0.90	0.30	2	26.80	800	1.6	1.56	29.5	1387	4 x 0.80	27.40	27.40	1113	134	138	1000
70/35	Stranded	1.10 0.90	0.40	2.20	31	1100	2	1.56	34	1938	4 x 0.80	31.50	31.50	1451	164	175	500
95/50	Stranded	1.10 1	0.40	2.20	34.30	1400	2	1.56	37.2	2356	4 x 0.80	34.80	34.80	1796	197	216	500
120/70	Stranded	1.20 1.10	0.40	2.20	37.50	1650	2	1.72	41	2800	4 x 0.80	38.50	38.50	2199	223	249	500
150/70	Stranded	1.40 1.10	0.50	2.40	41	2000	2	1.88	45	3296	4 x 0.80	42	42	2579	249	284	500
185/95	Stranded	1.60 1.10	0.50	2.60	46.50	2550	2.5	2.04	50	4313	4 x 0.80	47.20	47.20	3156	282	329	500
240/120	Stranded	1.70 1.20	0.60	2.80	52.50	3200	2.5	2.2	56	5196	4 x 0.80	52.70	52.70	3913	327	392	500
300/150	Stranded	1.80 1.40	0.60	3	56	4000	2.5	2.36	61	6108	4 x 0.80	57	57	4693	369	452	500
400/185	Stranded	2 1.60	0.70	3.40	64	5177	3.15	2.68	70	8151	4 x 0.80	65	65	5890	420	526	500
500/240	Stranded	2.20 1.70	0.70	3.60	72.50	6500	3.15	2.84	77	9880	4 x 0.80	73.50	73.50	7400	478	612	250

TABLE-10 "ORBIT" THREE AND HALF CORE COPPER CONDUCTOR, XLPE INSULATED,

UNARMOURED & ARMOURED CABLES CONFIRMING TO IS 7098 (PART 1)

Nominal Size of Conductor	Form of Conductor Circular shaped	Nominal Thickness of XLPE Insulation	Minimum Thickness of PVC Inner Sheath	Unarmoured Cable			Round Wire Armoured Cable				Formed wire / Strip Armoured Cable				Current Rating		Normal Delivery Length
				Nominal Thickness of PVC Outer Sheath	Approx. Overall Diameter of Cable	Approx. Weight of Cable	Nominal Dimension of GL Round Strip	Minimum Thickness of PVC Outer Sheath	Appro. Overall Diameter of Cable	Approx. Weight of Cable	Nominal Dimension of GL Flat Strip	Minimum Thickness of PVC Outer Sheath	Approx. Overall Diameter of Cable	Approx. Weight of Cable	In Ground	In Air	
Sq.mm	mm	mm	mm	mm	mm	Kgs./Km	mm	mm	mm	Kgs./Km	mm	mm	mm	Kgs./Km	Amps.	Amps.	Mtrs.
25/16	Stranded	0.90 0.70	0.30	2	21.30	1035	1.6	1.4	23.6	1491	4x0.80	1.40	21.90	1272	122	119	1000
35/16	Stranded	0.90 0.70	0.30	2	23.60	1311	1.6	1.4	25.8	1824	4x0.80	1.40	24.20	1586	146	147	1000
50/25	Stranded	1 0.90	0.30	2	26.80	1748	1.6	1.56	29	2337	4x0.80	1.40	27.40	2061	173	179	1000
70/35	Stranded	1.10 0.90	0.40	2.20	31	2460	2	1.56	33.9	3296	4x0.80	1.56	31.50	2831	212	226	500
95/50	Stranded	1.10 1	0.40	2.20	34.30	3287	2	1.56	37.2	4237	4x0.80	1.56	34.80	3686	254	279	500
120/70	Stranded	1.20 1.10	0.40	2.20	37.60	4142	2	1.72	41	5225	4x0.80	1.72	38.50	4617	287	320	500
150/70	Stranded	1.40 1.10	0.50	2.40	42.30	4987	2	1.88	45	6194	4x0.80	1.72	42.70	5481	321	365	500
185/95	Stranded	1.60 1.10	0.50	2.60	46.80	6279	2.5	2.04	50	7989	4x0.80	1.88	47.20	6830	362	422	500
240/120	Stranded	1.70 1.20	0.60	2.80	52.40	8122	2.5	2.2	56	10003	4x0.80	2.04	52.70	8711	418	500	500
300/150	Stranded	1.80 1.40	0.60	3	57	10079	2.5	2.36	61	12131	4x0.80	2.20	57.90	10716	469	574	500
400/185	Stranded	2 1.60	0.70	3.40	65	12834.5	3.15	2.68	70	15817	4x0.80	2.52	65.50	13556	528	662	250

TABLE-11 "ORBIT" FOUR CORE ALUMINIUM CONDUCTOR, XLPE INSULATED,

UNARMOURED & ARMOURED CABLES CONFIRMING TO IS 7098 (PART 1)

Nominal cross sectional area	Nominal Thickness of pvc Insulation	Nominal Thickness of Inner Sheath	Minimum Thickness of PVC Inner Sheath	Unarmoured Cable			Round Wire Armoured Cable				Formed wire / Strip Armoured Cable				Current Rating		Normal Delivery Length
				Nominal Thickness of PVC Outer Sheath	Approx. Overall Diameter of Cable	Approx. Weight of Cable	Nominal Dimension of Aluminium Round Wire	Minimum Thickness of PVC Outer Sheath	Appro. Overall Diameter of Cable	Approx. Weight of Cable	Nominal Dimension of GL Flat Strip	Minimum Thickness of PVC Outer Sheath	Approx. Overall Diameter of Cable	Approx. Weight of Cable	In Ground	In Air	
Sq.mm	mm	mm	mm	mm	mm	Kgs./Km	mm	mm	mm	Kgs./Km	mm	mm	mm	Kgs./Km	Amps.	Amps.	Mtrs.
4	Solid	0.70	0.30	1.80	13.50	160	1.40	1.24	15.30	413	-NA-	-NA-	-NA-	-NA-	35	32	1000
4	Stranded	0.70	0.30	1.80	14.20	180	1.40	1.24	16	435	-NA-	-NA-	-NA-	-NA-	35	32	1000
6	Solid	0.70	0.30	1.80	14.70	200	1.40	1.24	16.50	473	-NA-	-NA-	-NA-	-NA-	46	42	1000
6	Stranded	0.70	0.30	1.80	15.50	215	1.40	1.24	17.30	506	-NA-	-NA-	-NA-	-NA-	46	42	1000
10	Solid	0.70	0.30	1.80	16.60	250	1.40	1.40	18.60	592	-NA-	-NA-	-NA-	-NA-	57	54	1000
10	Stranded	0.70	0.30	1.80	17.50	260	1.40	1.40	19.80	633	-NA	-NA-	-NA-	-NA-	57	54	1000
16	Stranded	0.70	0.30	1.80	17.80	350	1.60	1.40	21	795	4x0.80	1.40	20	608	74	69	1000
25	Stranded	0.90	0.30	2	21	550	1.60	1.40	25	1045	4x0.80	1.40	23	828.50	95	93	500
35	Stranded	0.90	0.30	2	23.50	680	1.60	1.40	26.50	1244	4x0.80	1.40	25	997	114	114	500
50	Stranded	1	0.30	2	26	875	1.60	1.56	29.50	1520	4x0.80	1.56	28	1235	134	138	500
70	Stranded	1.10	0.40	2.20	30.50	1200	2	1.56	34	2137	4x0.80	1.56	32	1615	164	175	500
95	Stranded	1.10	0.40	2.20	33.50	1530	2	1.72	38	2622	4x0.80	1.56	35	2014	197	216	500
120	Stranded	1.20	0.50	2.40	37.50	1850	2	1.88	42	3087	4x0.80	1.72	39	2403	223	249	500
150	Stranded	1.40	0.50	2.60	42	2280	2.50	2.04	47	3980	4x0.80	1.88	43	2888	249	284	500
185	Stranded	1.60	0.50	2.80	46.50	2800	2.50	2.20	52	4721	4x0.80	2.04	48	3505	282	329	500
240	Stranded	1.70	0.60	3	52.50	3700	2.50	2.36	57.50	5709	4x0.80	2.20	54	4389	327	392	500
300	Stranded	1.80	0.70	3.20	58	4600	3.15	2.52	64.50	7372	4x0.80	2.36	59.50	5291	369	452	500
400	Stranded	2	0.70	3.60	65.50	6000	3.15	2.84	71.50	8985	4x0.80	2.68	66.50	6583	420	526	500

TABLE-12 "ORBIT" FOUR CORE, COPPER CONDUCTOR, XLPE INSULATED

UNARMOURED & ARMOURED CABLES CONFIRMING TO IS 7098 (PART 1)

Nominal Size of Conductor	Form Conductor Circular Shaped	Nominal Thickness of XLPE Insulation	Minimum Thickness of PVC Inner Sheath	Unarmoured Cable			Round Wire Armoured Cable				Formed wire / Strip Armoured Cable				Current Rating		Normal Delivery Length
				Nominal Thickness of PVC Outer Sheath	Approx. Overall Diameter of Cable	Approx. Weight of Cable	Nominal Dimension of GI Round Strip	Minimum Thickness of PVC Outer Sheath	Appro. Overall Diameter of Cable	Approx. Weight of Cable	Nominal Dimension of GL Flat Strip	Minimum Thickness of PVC Outer Sheath	Approx. Overall Diameter of Cable	Approx. Weight of Cable	In Ground	In Air	
Sq.mm	mm	mm	mm	mm	mm	Kgs./Km	mm	mm	mm	Kgs./Km	mm	mm	mm	Kgs./Km	Amps.	Amps.	Mtrs.
4	Solid	0.70	0.30	1.80	13.50	260	1.40	1.24	15.30	503	-NA-	-NA-	-NA-	-NA-	45	41	1000
4	Stranded	0.70	0.30	1.80	14.20	280	1.40	1.24	16	533	-NA-	-NA-	-NA-	-NA-	45	41	1000
6	Solid	0.70	0.30	1.80	14.70	350	1.40	1.24	16.50	618	-NA-	-NA-	-NA-	-NA-	56	52	1000
6	Stranded	0.70	0.30	1.80	15.50	365	1.40	1.24	17.30	646	-NA-	-NA-	-NA-	-NA-	56	52	1000
10	Stranded	0.70	0.30	1.80	17.80	510	1.40	1.40	19.80	870	-NA-	-NA-	-NA-	-NA-	74	70	1000
16	Stranded	0.70	0.30	1.80	17.50	741	1.60	1.40	21	1159	4x0.80	1.40	20	969	95	89	1000
25	Stranded	0.90	0.30	2	21	1140	1.60	1.40	25	1615	4x0.80	1.40	23	1406	122	119	500
35	Stranded	0.90	0.30	2	23.50	1491	1.60	1.40	26.50	2033	4x0.80	1.40	25	1786	146	147	500
50	Stranded	1	0.30	2	26	1957	1.60	1.56	29.50	2593	4x0.80	1.56	28	2308	173	179	500
70	Stranded	1.10	0.40	2.20	30.50	2774	2	1.56	34	3686	4x0.80	1.56	32	3154	212	226	500
95	Stranded	1.10	0.40	2.20	33.50	3714	2	1.72	38	4769	4x0.80	1.56	35	4161	254	279	500
120	Stranded	1.20	0.50	2.40	37.50	4645	2	1.88	42	5795	4x0.80	1.72	39	5101	287	320	500
150	Stranded	1.40	0.50	2.60	42	5719	2.50	2.04	47	7324	4x0.80	1.88	43.50	6232	321	365	500
185	Stranded	1.60	0.50	2.80	46.50	7125	2.50	2.20	52	8901	4x0.80	2.04	48	7676	362	422	500
240	Stranded	1.70	0.60	3	52.50	9253	2.50	2.36	57.50	11210	4x0.80	2.20	54	9880	418	500	500
300	Stranded	1.80	0.70	3.20	58	11524	3.15	2.52	64.50	14279	4x0.80	2.36	59.50	12198	469	574	500

TABLE-13 "ORBIT" 650 / 1100 VOLTS MULTI CORE CONTROL CABLES WITH SOLID COPPER CONDUCTOR OF SIZE 1.5 SQ.MM XLPE INSULATED UNARMOURED & ARMOURED CABLES CONFIRMING TO IS 7098 (PART 1)

Nominal Size of Conductor	Nominal Thickness of XLPE Insulation	Minimum Thickness of PVC Inner Sheath	Unarmoured Cable			Round Wire Armoured Cable				Formed wire / Strip Armoured Cable				Current Rating		Normal Delivery Length
			Nominal Thickness of PVC Outer Sheath	Approx. Overall Diameter of Cable	Approx. Weight of Cable	Nominal Dimension of Aluminium Round Wire	Minimum Thickness of PVC Outer Sheath	Appro. Overall Diameter of Cable	Approx. Weight of Cable	Nominal Dimension of GL Flat Strip	Minimum Thickness of PVC Outer Sheath	Approx. Overall Diameter of Cable	Approx. Weight of Cable	In Ground	In Air	
Sq.mm	mm	mm	mm	mm	Kgs./Km	mm	mm	mm	Kgs./Km	mm	mm	mm	Kgs./Km	Amps.	Amps.	Mtrs.
2	0.70	0.30	1.80	10	140	1.40	1.24	11.90	288	-NA-	-NA-	-NA-	-NA-	31	27	1000
3	0.70	0.30	1.80	10.50	160	1.40	1.24	12.40	302	-NA-	-NA-	-NA-	-NA-	26	23	1000
4	0.70	0.30	1.80	11.50	171	1.40	1.24	13.10	349	-NA-	-NA-	-NA-	-NA-	26	23	1000
5	0.70	0.30	1.80	12.10	195	1.40	1.24	13.90	385	-NA-	-NA-	-NA-	-NA-	26	23	1000
6	0.70	0.30	1.80	12.90	222	1.40	1.24	14.70	432	-NA-	-NA-	-NA-	-NA-	23	20	1000
7	0.70	0.30	1.80	12.90	239	1.40	1.24	14.70	450	-NA-	-NA-	-NA-	-NA-	20	18	1000
8	0.70	0.30	1.80	14	275	1.40	1.24	16.50	494	-NA-	-NA-	-NA-	-NA-	17	15	1000
9	0.70	0.30	1.80	15	308	1.40	1.24	17.50	542	-NA-	-NA-	-NA-	-NA-	17	15	1000
10	0.70	0.30	1.80	15.70	327	1.40	1.24	17.50	594	-NA-	-NA-	-NA-	-NA-	17	15	1000
12	0.70	0.30	1.80	16.10	365	1.40	1.24	18	646	-NA-	-NA-	-NA-	-NA-	16	14	1000
14	0.70	0.30	1.80	16.80	413	1.40	1.40	18.90	709	-NA-	-NA-	-NA-	-NA-	16	14	1000
16	0.70	0.30	1.80	17.70	460	1.60	1.40	20.10	807	4x0.80	1.40	18.50	651	14	12	1000
19	0.70	0.30	1.80	18.50	513	1.60	1.40	20.90	900	4x0.80	1.40	19.30	736	14	12	1000
21	0.70	0.30	2	19.80	560	1.60	1.40	21.80	960	4X0.80	1.40	20.20	788	12	11	500
24	0.70	0.30	2	21.70	627	1.60	1.40	23.70	1094	4x0.80	1.40	22.10	874	12	11	500
27	0.70	0.30	2	22.10	684	1.60	1.40	24.10	1152	4x0.80	1.40	22.50	950	11	9	500
30	0.70	0.30	2	22.80	741	1.60	1.40	24.90	1229	4x0.80	1.40	23.20	1016	11	9	500
33	0.70	0.30	2	23.70	807	1.60	1.40	25.70	1322	4x0.80	1.40	24.10	1102	11	9	500
37	0.70	0.30	2	24.50	874	1.60	1.40	26.50	1415	4x0.80	1.40	24.90	1168	11	9	500
44	0.70	0.30	2	27.30	1026	1.60	1.56	29.70	1662	4x0.80	1.40	27.70	1358	9	8	500
52	0.70	0.30	2	28.40	1178	1.60	1.56	30.90	1833	4x0.80	1.56	29.20	1548	9	8	500
61	0.70	0.40	2.20	30.70	1387	2	1.56	33.50	2251	4x0.80	1.56	31.10	1757	9	8	500

TABLE-14 "ORBIT" 650 / 1100 VOLTS MULTI CORE CONTROL CABLES WITH SOLID COPPER CONDUCTOR OF SIZE 2.5 SQ.MM XLPE INSULATED UNARMOURED & ARMOURED CABLES CONFIRMING TO IS 7098 (PART 1)

Nominal Size of Conductor	Nominal Thickness of XLPE Insulation	Minimum Thickness of PVC Inner Sheath	Unarmoured Cable			Round Wire Armoured Cable				Formed wire / Strip Armoured Cable				Current Rating		Normal Delivery Length
			Nominal Thickness of PVC Outer Sheath	Approx. Overall Diameter of Cable	Approx. Weight of Cable	Nominal Dimension of Aluminium Round Wire	Minimum Thickness of PVC Outer Sheath	Appro. Overall Diameter of Cable	Approx. Weight of Cable	Nominal Dimension of GL Flat Strip	Minimum Thickness of PVC Outer Sheath	Approx. Overall Diameter of Cable	Approx. Weight of Cable	In Ground	In Air	
Sq.mm	mm	mm	mm	mm	Kgs./Km	mm	mm	mm	Kgs./Km	mm	mm	mm	Kgs./Km	Amps.	Amps.	Mtrs.
2	0.70	0.30	1.80	10.90	173	1.40	1.24	12.70	342	-NA-	-NA-	-NA-	-NA-	41	36	1000
3	0.70	0.30	1.80	11.40	202	1.40	1.24	13.20	360	-NA-	-NA-	-NA-	-NA-	34	30	1000
4	0.70	0.30	1.80	12.20	218	1.40	1.24	14	406	-NA-	-NA-	-NA-	-NA-	34	30	1000
5	0.70	0.30	1.80	13.10	254	1.40	1.24	14.90	464	-NA-	-NA-	-NA-	-NA-	34	30	1000
6	0.70	0.30	1.80	14	291	1.40	1.24	15.90	522	-NA-	-NA-	-NA-	-NA-	31	27	1000
7	0.70	0.30	1.80	14	313	1.40	1.24	15.90	549	-NA-	-NA-	-NA-	-NA-	27	23	1000
8	0.70	0.30	1.80	16	342	1.40	1.24	17	608	-NA-	-NA-	-NA-	-NA-	23	20	1000
9	0.70	0.30	1.80	16.50	385	1.40	1.40	18.50	684	-NA-	-NA-	-NA-	-NA-	23	20	1000
10	0.70	0.30	1.80	17.20	427	1.60	1.40	19.60	789	4x0.80	1.24	17.80	624	23	20	1000
12	0.70	0.30	1.80	17.70	484	1.60	1.40	20.10	865	4x0.80	1.40	18.50	694	20	18	1000
14	0.70	0.30	1.80	18.50	551	1.60	1.40	20.90	944	4x0.80	1.40	19.30	780	20	18	1000
16	0.70	0.30	2	19.80	636	1.60	1.40	21.90	1023	4x0.80	1.40	20.20	867	18	16	1000
19	0.70	0.30	2	20.80	722	1.60	1.40	22.80	1147	4x0.80	1.40	21.20	960	18	16	1000
21	0.70	0.30	2	21.80	769	1.60	1.40	23.90	1243	4x0.80	1.40	22.20	1016	16	14	500
24	0.70	0.30	2	24	864	1.60	1.40	26	1387	4x0.80	1.40	24.40	1159	16	14	500
27	0.70	0.30	2	24.50	950	1.60	1.40	26.50	1482	4x0.80	1.40	24.90	1235	14	13	500
30	0.70	0.30	2	25.30	1035	1.60	1.40	27.30	1586	4x0.80	1.40	25.70	1349	14	13	500
33	0.70	0.30	2	26.20	1130	1.60	1.56	28.60	1729	4x0.80	1.40	26.60	1437	14	13	500
37	0.70	0.30	2	27.20	1235	1.60	1.56	29.60	1852	4x0.80	1.40	27.60	1567	14	13	500
44	0.70	0.40	2.20	30.90	1501	2	1.56	33.70	2356	4x0.80	1.56	31.30	1862	12	11	500
52	0.70	0.40	2.20	32.20	1719	2	1.56	35	2631	4x0.80	1.56	32.60	2109	12	11	500
61	0.70	0.40	2.20	34.10	1976	2	1.56	36.90	2926	4x0.80	1.56	34.50	2375	12	11	500

CONSTRUCTION OF LT CABLES

PVC INSULATED COPPER ARMOURED CABLES

Application :

Indoors or Outdoors in cable ducts, cable trays, condults or underground locations under mechanical stresses in power and switching stations.

Local distribution systems, Industrial and Commercial units for basic power & lighting purpose.

Standards	**IS 8130 : 2013, IS 5831 : 1984, IS : 1554 (PART 1)**
Operating Temperature	70°C
Short Circuit Temperature	160°C
Working Voltage	600/1000 Volts
Test Voltage	3.5 KV r m s for 5 minutes

Construction :

Conductor Aluminium / Annealed plain copper solid* / stranded conductor conform IS 8130 : 2013, Class 1 or Class 2.(Circular / Sector shaped).

Insulation PVC.

Core Colour

Single Core	Red or Black
2 Core	Red, Black
3 Core	Red, Yellow, Blue
4 Core	Red, Yellow, Blue, Black
5 Core	Red, Yellow, Blue & Yellow-Green
6 Core	Black colour with number printing

Assembly Insulated conductors are laid up together, If necessary interstices may be filled with fillers.

Fillers Non – hygroscopic Poly propylene fillers are included between laid up cores whenever required.
A separator tape of non-hygroscopic poly propylene material is applied over laid up core Whenever necessary.

Armour For Single Core – Aluminium round wire / flat wire.
For Multicore – Galvanised Steel round wire / flat wire / tape.

Outer Sheath Extruded PVC / Special PVC compound such as Flame Retardant (FR), Flame Retardant Low Smoke(FRLS), Low Smoke Zero Halogen(LSOH) can be used for outer sheath to suit a variety of environment and fire risk conditions. Flamability test conforms to IEC 60332-1-2 : 2015. For installation where fire and associated problems such as emission of smoke and toxic fumes offer a serious potential threat, special LSf (Low smoke & fumes) compound can be provided. LSF compound is Halogen free (Fluorine, Chlorine, Bromine) when tested. The acid gas evolved during combustion is less than is 0.5% by weight of the material.
Admissible Pulling Force Aluminium – 30N/mm2 Copper - 50N/mm2
Minimum Bending radius - Fixed installation | 12 x Overall diameter

TECHNICAL DATA

TABLE-1 "ORBIT" 1.1 KV SINGLE CORE, ALUMINIUM CONDUCTOR, PVC INSULATED ALUMINIUM WIRE / STRIP ARMOURED & PVC SHEATHED CABLES CONFORMING TO IS:1554 (PART I)

Nominal cross sectional area	Thickness of insulation	ARMOURED		Nominal Thickness of pvc outer sheath	Approx overall diameter	Approx Net Weight of cable	Max D.C Resistance at 20	CURRENT RATING					
		Aluminium wire Dimensions	Aluminium strip Thickness					Direct in Ground		In Duct		In Air	
								2 cables	3 cables	2 cables	3 cables	2 cables	3 cables
Sq.mm	mm	mm	mm	mm	mm	Kg/ mm	Ohm/Km	Amps	Amps	Amps	Amps.	Amps.	Amps.
*4	1.3	1.4	-	1.24	11.0	155	7.410	36	31	33	30	32	27
*6	1.3	1.4	-	1.24	12.0	175	4.610	44	39	42	37	41	35
*10	1.3	1.4	-	1.24	13.0	205	3.080	50	51	56	51	56	47
16	1.3	1.4	-	1.24	14.0	230	1.910	75	66	71	65	72	64
25	1.5	1.4	-	1.24	15.0	300	1.200	97	86	93	84	99	84
35	1.5	1.4	-	1.24	16.0	350	0.868	97	100	110	100	120	105
50	1.7	1.4	-	1.24	18.0	430	0.641	120	120	130	115	150	130
70	1.7	-	4 x0.80	1.40	20.0	530	0.443	145	140	155	135	185	155
95	1.9	-	4 x0.80	1.40	21.0	610	0.320	170	175	180	155	215	190
120	1.9	-	4 x0.80	1.40	22.0	710	0.253	205	195	200	170	240	220
150	2.1	-	4 x0.80	1.40	24.0	840	0.206	230	220	220	190	270	250
185	2.3	-	4 x0.80	1.40	26.0	1020	0.164	265	240	240	210	305	290
240	2.5	-	4 x0.80	1.40	29.0	1250	0.125	300	270	270	225	350	335
300	2.7	-	4 x0.80	1.56	32.0	1500	0.100	335	295	295	245	395	380
400	3.0	-	4 x0.80	1.56	36.0	1910	0.078	370	325	335	275	455	435
500	3.4	-	4x 0.80	1.56	40.0	2350	0.061	410	345	335	295	490	480
630	3.9	-	4 x0.80	1.72	44.0	2920	0.047	435	390	395	320	560	550

TABLE- 2 "ORBIT" 1.1 KV SINGLE CORE, ALUMINIUM CONDUCTOR, PVC INSULATED UNARMOURED PVC SHEATHED CABLES CONFORMING TO IS :1554 (PART I)

Nominal cross sectional area	Thickness of insulation	Nominal Thickness of pvc outer sheath	Approx overall diameter	Approx Net Weight of cable	Max D.C Resistance at 20	CURRENT RATING					
						Direct in Ground		In Duct		In Air	
						2 cables	3 cables	2 cables	3 cables	2 cables	3 cables
Sq.mm	mm	mm	mm	Kg/ mm	Ohm/Km	Amps	Amps	Amps	Amps.	Amps.	Amps.
*1.5	0.8	1.8	7.0	55	18.100	21	17	19	17	18	15
*2.5	0.9	1.8	7.5	65	12.100	28	24	25	24	25	21
*4.0	1.0	1.8	8.0	75	7.410	36	31	33	30	32	27
*6.0	1.0	1.8	9.0	90	4.610	44	39	42	37	41	35
*10	1.0	1.8	10.0	105	3.080	54	51	56	51	56	47
16	1.0	1.8	11.0	140	1.910	75	66	71	65	72	64
25	1.2	1.8	12.5	195	1.200	97	86	93	84	99	84
35	1.2	1.8	13.5	235	0.868	120	100	110	100	120	105
50	1.4	1.8	15.0	305	0.641	145	120	130	115	150	130
70	1.4	1.8	17.0	385	0.443	170	140	155	135	185	155
95	1.6	1.8	19.0	515	0.320	205	175	180	155	215	190
120	1.6	2.0	21.0	610	0.253	230	195	200	170	240	220
150	1.8	2.0	22.5	735	0.206	265	220	220	190	270	250
185	2.0	2.0	25.0	885	0.164	300	240	240	210	305	290
240	2.2	2.0	28.0	1100	0.125	335	270	270	225	350	335
300	2.4	2.0	30.0	1335	0.100	370	295	295	245	395	380
400	2.6	2.2	34.0	1665	0.078	410	325	335	275	455	435
500	3.0	2.2	38.0	2130	0.061	435	345	355	295	490	480
630	3.4	2.4	43.0	2685	0.047	485	390	395	320	560	550

TABLE-3 "ORBIT" 1.1 KV SINGLE CORE, COPPER CONDUCTOR, PVC INSULATED ALUMINIUM WIRE / STRIP ARMOURED & PVS SHEATHED CABLES CONFORMING TO IS:1554 (PART I)

Nominal cross sectional area	Nominal Thickness of pvc insulation	ARMOURED		Nominal Thickness of pvc outer sheath	Approx overall diameter	Approx Weight of cable	Max D.C Resistance at 20	CURRENT RATING					
		Aluminium wir Dimensions	Aluminium strip Thickness					Direct in Ground		In Duct		In Air	
								2 cables	3 cables	2 cables	3 cables	2 cables	3 cables
Sq.mm	mm	mm	mm	mm	mm	Kg/ mm	Ohm/Km	Amps	Amps	Amps	Amps.	Amps.	Amps.
4	1.3	1.4	-	1.24	11.0	180	4.610	46	39	42	38	43	35
6	1.3	1.4	-	1.24	12.0	215	3.080	57	49	54	48	54	44
10	1.3	1.4	-	1.24	13.0	270	1.830	75	65	72	64	72	60
16	1.3	1.4	-	1.24	14.0	330	1.150	94	85	92	83	92	82
25	1.5	1.4	-	1.24	15.0	460	0.727	125	110	120	110	125	110
35	1.5	1.4	-	1.24	16.0	575	0.524	150	130	140	125	155	130
50	1.7	1.4	-	1.24	18.0	740	0.387	180	155	165	150	190	165
70	1.7	1.4	-	1.40	20.0	970	0.268	220	190	200	175	235	205
95	1.9	-	4 X0.80	1.40	21.0	1200	0.193	265	220	230	200	275	245
120	1.9	-	4 X0.80	1.40	22.0	1460	0.153	300	250	255	220	310	280
150	2.1	-	4X0.80	1.40	24.0	1770	0.124	340	280	280	245	345	320
185	2.3	-	4 X0.80	1.40	26.0	2170	0.099	380	305	305	260	390	370
240	2.5	-	4 X0.80	1.40	29.0	2740	0.075	420	345	340	285	445	425
300	2.7	-	4 X0.80	1.56	32.0	3360	0.060	465	375	370	310	500	475
400	3.0	-	4 X0.80	1.56	36.0	4400	0.047	500	400	405	335	570	550
500	3.4	-	4X0.80	1.56	40.0	5450	0.370	540	425	430	355	610	590
630	3.9	-	4X0.80	1.56	44.0	6820	0.280	590	470	465	375	680	660

TABLE-4 "ORBIT" 1.1 KV SINGLE CORE, COPPER CONDUCTOR, PVC INSULATED UNARMOURED PVC SHEATHED CABLES CONFORMING TO IS :1554 (PART I)

No of cores & cross sectional area	Thickness of insulation	Nominal Thickness of pvc outer sheath	Approx overall diameter	Approx Net Weight of cable	Max D.C Resistance at 20	CURRENT RATING					
						Direct in Ground		In Duct		In Air	
						2 cables	3 cables	2 cables	3 cables	2 cables	3 cables
Sq.mm	mm	mm	mm	Kg/ mm	Ohm/Km	Amps	Amps	Amps	Amps.	Amps.	Mtrs.
*1.5	0.8	1.8	7.0	65	12.100	25	22	23	21	24	20
*2.5	0.9	1.8	7.5	82	7.410	35	30	31	29	32	27
*4.0	1.0	1.8	8.0	100	4.610	46	39	42	38	43	35
*6.0	1.0	1.8	9.0	130	3.080	57	49	54	48	54	44
*10	1.0	1.8	10.0	170	1.830	75	65	72	64	72	60
16	1.0	1.8	11.0	240	1.150	94	85	92	83	92	82
25	1.2	1.8	12.5	350	0.727	125	110	120	110	125	110
35	1.2	1.8	13.5	455	0.524	150	130	140	125	155	130
50	1.4	1.8	15.0	620	0.387	180	155	165	150	190	165
70	1.4	1.8	17.0	820	0.268	220	190	200	175	235	205
95	1.6	1.8	19.0	1105	0.193	265	220	230	200	275	245
120	1.6	2.0	21.0	1355	0.153	300	250	255	220	310	280
150	1.8	2.0	22.5	1665	0.124	340	280	280	245	345	320
185	2.0	2.0	25.0	2040	0.099	380	305	305	260	390	370
240	2.2	2.0	28.0	2590	0.075	420	345	340	285	445	425
300	2.4	2.0	30.0	3200	0.060	465	375	370	310	500	475

TABLE-5 "ORBIT" 1.1 KV TWO CORE, ALUMINIUM CONDUCTOR, PVC INSULATED, INNER SHEATHED, ARMOURED PVC SHEATHED CABLES CONFORMING TO IS:1554 (PART I)

Nominal cross sectional area	Nominal Thickness of pvc Insulation	Nominal Thickness of Inner Sheath	ARMOURED		Min. Thickness of pvc outer sheath	Approx Overall Diameter	Approx Weight of Cable	"Max D.C Resistance" at 20	CURRENT RATING		
			Nominal Diameter	Nominal thickness					Direct in Ground	In Duct	In Air
Sq.mm	mm	mm	mm	mm	mm	mm	(Kg/Km)	Ohms/Km	Amps.	Amps.	Amps.
1.5	0.8	0.3	1.4	-	1.24	12.5	320	18.100	18	16	16
2.5	0.9	0.3	1.4	-	1.24	13.5	380	12.100	25	21	21
4	1.0	0.3	1.4	-	1.24	15.0	450	7.410	32	27	27
6	1.0	0.3	1.4	-	1.24	16.0	500	4.610	40	34	35
10	1.0	0.3	1.4	-	1.2	18.0	600	3.080	55	45	47
16	1.0	0.3	-	0.8	1.40	18.0	500	1.910	70	58	59
25	1.2	0.3	-	0.8	1.40	20.0	650	1.200	90	76	78
35	1.2	0.3	-	0.8	1.40	21.5	750	0.868	110	92	99
50	1.4	0.3	-	0.8	1.40	24.5	950	0.641	135	115	125
70	1.4	0.4	-	0.8	1.56	28.0	1150	0.443	160	140	150
95	1.6	0.4	-	0.8	1.56	31.0	1460	0.320	190	170	185
120	1.6	0.4	-	0.8	1.56	33.0	1670	0.253	210	190	210
150	1.8	0.5	-	0.8	1.72	37.0	2010	0.206	240	210	240
185	2.0	0.5	-	0.8	1.88	40.5	2450	0.164	275	240	275
240	2.2	0.6	-	0.8	2.04	45.0	2950	0.125	320	275	325
300	2.4	0.6	-	0.8	2.20	50.0	3560	0.100	355	305	365
400	2.6	0.7	-	0.8	2.36	56.0	4500	0.078	385	345	420
500	3.0	0.7	-	0.8	2.68	62.5	5600	0.061	425	380	475

TABLE-6 "ORBIT" 1.1 KV TWO CORE, ALUMINIUM CONDUCTOR, PVC INSULATED, INNER SHEATHED UNARMOURED, PVC SHEATHED CABLES CONFORMING TO IS :1554 (PART I)

Nominal Cross Sectional Area	Nominal Insulation	Nominal Thickness of	Nominal Thickness of Outer Sheath" "Nominal Thickness of	Approx. Overall Diameter	Approx. Weight of Cable	Max. Dc Conductor Resistance at 20	CURRENT RATING		
							Direct in Ground	In Duct	In Air
Sq.mm	mm	mm	mm	mm	Kgs/ Km	Ohm/Km	Amps.	Amps.	Amps.
*1.5	0.8	0.3	1.8	11.0	115	18.100	18	16	16
*2.5	0.9	0.3	1.8	12.0	150	12.100	25	21	21
*4.0	1.0	0.3	1.8	13.5	185	7.410	32	27	27
*6.0	1.0	0.3	1.8	14.5	220	4.610	40	34	35
*10	1.0	0.3	1.8	16.0	275	3.080	55	45	47
16	1.0	0.3	1.8	17.5	285	1.910	70	58	59
25	1.2	0.3	2.0	19.5	405	1.200	90	76	78
35	1.2	0.3	2.0	20.5	490	0.868	110	92	99
50	1.4	0.3	2.0	24.0	650	0.641	135	115	125
70	1.4	0.3	2.0	27.0	800	0.443	160	140	150
95	1.6	0.4	2.2	28.5	1065	0.320	190	170	185
120	1.6	0.4	2.2	33.0	1250	0.253	210	190	210
150	1.8	0.4	2.4	34.0	1550	0.206	240	210	240
185	2.0	0.5	2.4	37.0	1880	0.164	275	240	275
240	2.2	0.5	2.6	42.5	2400	0.125	320	275	325
300	2.4	0.6	2.8	45.5	2920	0.100	355	305	365
400	2.6	0.7	3.2	51.5	3815	0.078	385	345	420
500	3.0	0.7	3.4	57.0	4750	0.061	425	380	475

TABLE-7 "ORBIT" 1.1 KV TWO CORE, COPPER CONDUCTOR, PVC INSULATED, INNER SHEATHED, ARMOURED PVC SHEATHED CABLES CONFORMING TO IS:1554 (PART I)

Nominal cross sectional area	Nominal Thickness of pvc Insulation	Nominal Thickness of Inner Sheath	ARMOURED		Min. Thickness of pvc outer sheath	Approx Overall Diameter	Approx Weight of Cable	"Max D.C Resistance" at 20	CURRENT RATING		
			Nominal Diameter	Nominal thickness					Direct in Ground	In Duct	In Air
Sq.mm	mm	mm	mm	mm	mm	mm	(Kg/Km)	Ohms/Km	Amps.	Amps.	Amps.
1.5	0.8	0.3	1.4	-	1.24	12.5	350	12.100	23	20	20
2.5	0.9	0.3	1.4	-	1.24	13.5	415	7.410	32	27	27
4	1.0	0.3	1.4	-	1.24	15.0	500	4.610	41	35	35
6	1.0	0.3	1.4	-	1.24	16.0	580	3.080	50	44	45
10	1.0	0.3	1.4	-	1.2	18.0	730	1.830	70	58	60
16	1.0	0.3	-	0.8	1.40	18.0	740	1.150	90	75	78
25	1.2	0.3	-	0.8	1.40	20.0	960	0.727	115	97	105
35	1.2	0.3	-	0.8	1.40	21.5	1200	0.524	140	120	125
50	1.4	0.3	-	0.8	1.40	24.5	1580	0.387	165	145	155
70	1.4	0.4	-	0.8	1.56	28.0	2020	0.268	205	180	195
95	1.6	0.4	-	0.8	1.56	31.0	2650	0.193	240	215	230
120	1.6	0.4	-	0.8	1.56	33.0	3160	0.153	275	235	265
150	1.8	0.5	-	0.8	1.72	37.0	3870	0.124	310	270	305
185	2.0	0.5	-	0.8	1.88	40.5	4750	0.099	350	300	350
240	2.2	0.6	-	0.8	2.04	45.0	5930	0.075	405	345	410
300	2.4	0.6	-	0.8	2.20	56.0	7300	0.060	450	385	465
400	2.6	0.7	-	0.8	2.36	55.9	9450	0.047	490	485	530

TABLE-8 "ORBIT" 1.1 KV TWO CORE, COPPER CONDUCTOR, PVC INSULATED, INNER SHEATHED UNARMOURED, PVC SHEATHED CABLES CONFORMING TO IS :1554 (PART I)

Nominal Cross Sectional Area	Nominal Insulation	Nominal Thickness of	Nominal Thickness of Outer Sheath" "Nominal Thickness of	Approx. Overall Diameter	Approx. Weight of Cable	Max. Dc Conductor Resistance at 20	CURRENT RATING		
							Direct in Ground	In Duct	In Air
Sq.mm	mm	mm	mm	mm	Kgs/ Km	Ohm/Km	Amps.	Amps.	Amps.
*1.5	0.8	0.3	1.8	11.0	135	12.100	23	20	20
*2.5	0.9	0.3	1.8	12.0	185	7.410	32	27	27
*4.0	1.0	0.3	1.8	13.5	235	4.610	41	35	35
*6.0	1.0	0.3	1.8	14.5	295	3.080	50	44	45
*10	1.0	0.3	1.8	16.0	400	1.830	70	58	60
16	1.0	0.3	1.8	17.5	485	1.150	90	75	78
25	1.2	0.3	2.0	19.5	715	0.727	115	97	105
35	1.2	0.3	2.0	20.5	925	0.524	140	120	125
50	1.4	0.3	2.0	24.0	1270	0.387	165	145	155
70	1.4	0.3	2.0	27.0	1670	0.268	205	180	195
95	1.6	0.4	2.2	28.5	2250	0.193	240	215	230
120	1.6	0.4	2.2	33.0	2750	0.153	275	235	265
150	1.8	0.4	2.4	34.0	3410	0.124	310	270	305
185	2.0	0.5	2.4	37.0	4170	0.099	350	300	350
240	2.2	0.5	2.6	42.5	5370	0.750	405	345	410
300	2.4	0.6	2.8	45.5	6640	0.060	450	385	465
400	2.6	0.7	3.2	51.5	8770	0.047	490	485	530

TABLE-9 "ORBIT" 1.1 KV THREE CORE, ALUMINIUM CONDUCTOR, PVC INSULATED, INNER SHEATHED, ARMOURED PVC SHEATHED CABLES CONFORMING IS : 1554 (PART 1)

Nominal cross sectional area	Nominal Thickness of pvc Insulation	Nominal Thickness of Inner Sheath	ARMOURED		Min. Thickness of pvc outer sheath	Approx Overall Diameter	Approx Weight of Cable	Max D.C Resistance at 20°C	CURRENT RATING		
			Galv. Round Steel Wire Nominal Dia	Galv. Flat Steel Strip Nominal Thickness					Direct in Ground	In Duct	In Air
Sq.mm	mm	mm	mm	mm	mm	mm	(Kg/Km)	Ohms/Km	Amps.	Amps.	Amps.
1.5	0.8	0.3	1.4	-	1.24	12.5	375	18.100	16	14	13
2.5	0.9	0.3	1.4	-	1.24	14.0	425	12.100	21	18	18
4	1.0	0.3	1.4	-	1.24	15.5	500	7.410	28	23	23
6	1.0	0.3	1.4	-	1.24	17.0	575	4.610	35	30	30
10	1.0	0.3	1.4	-	1.4	19.0	700	3.080	46	39	40
16	1.0	0.3	-	0.8	1.40	20.0	650	1.910	60	50	51
25	1.2	0.3	-	0.8	1.40	22.0	800	1.200	76	63	70
35	1.2	0.3	-	0.8	1.40	25.0	950	0.868	92	77	86
50	1.4	0.3	-	0.8	1.56	27.0	1200	0.641	110	95	105
70	1.4	0.4	-	0.8	1.56	31.0	1500	0.443	135	115	130
95	1.6	0.4	-	0.8	1.56	34.0	1900	0.320	165	140	155
120	1.6	0.4	-	0.8	1.72	38.0	2240	0.253	185	155	180
150	1.8	0.5	-	0.8	1.88	42.0	2700	0.206	210	175	205
185	2.0	0.5	-	0.8	1.88	46.0	3200	0.164	235	200	240
240	2.2	0.6	-	0.8	2.20	52.0	3990	0.125	275	235	280
300	2.4	0.6	-	0.8	2.36	56.5	4850	0.100	305	260	315
400	2.6	0.7	-	0.8	2.52	64.0	6100	0.078	335	290	375
500	3.0	0.7	-	0.8	2.84	72.0	7600	0.061	370	320	425

TABLE-10 "ORBIT" 1.1 KV THREE CORE, ALUMINIUM CONDUCTOR, PVC INSULATED, INNER SHEATHED, UNARMOURED PVC SHEATHED CABLES CONFORMING IS : 1554 (PART 1)

Nominal Cross Sectional Area	Nominal Insulation	Nominal Thickness of	Nominal Thickness of Outer Sheath" "Nominal Thickness of	Approx. Overall Diameter	Approx. Weight of Cable	Max. Dc Conductor Resistance at 20	CURRENT RATING		
							Direct in Ground	In Duct	In Air
Sq.mm	mm	mm	mm	mm	Kgs/ Km	Ohm/Km	Amps.	Amps.	Amps.
*1.5	0.8	0.3	1.8	11.5	130	18.100	16	14	13
*2.5	0.9	0.3	1.8	12.5	170	12.100	21	18	18
*4.0	1.0	0.3	1.8	13.5	210	7.410	28	23	23
*6.0	1.0	0.3	1.8	15.0	255	4.610	35	30	30
*10	1.0	0.3	1.8	16.5	325	3.080	46	39	40
16	1.0	0.3	1.8	17.5	360	1.910	60	50	51
25	1.2	0.3	2.0	22.0	520	1.200	76	63	70
35	1.2	0.3	2.0	23.0	640	0.868	92	77	86
50	1.4	0.3	2.0	27.0	850	0.641	110	95	105
70	1.4	0.4	2.2	31.0	1110	0.443	135	115	130
95	1.6	0.4	2.2	33.0	1425	0.320	165	140	155
120	1.6	0.4	2.2	36.0	1690	0.253	185	155	180
150	1.8	0.5	2.4	41.0	2120	0.206	210	175	205
185	2.0	0.5	2.6	45.0	2600	0.164	235	200	240
240	2.2	0.6	2.8	50.0	3290	0.125	275	235	280
300	2.4	0.6	3.0	55.5	4050	0.100	305	260	315
400	2.6	0.7	3.4	63.5	5290	0.078	335	290	375
500	3.0	0.7	3.8	71.0	6570	0.061	370	320	425

TABLE-11 "ORBIT" 1.1 KV THREE CORE, COPPER CONDUCTOR, PVC INSULATED, INNER SHEATHED,

ARMOURED PVC SHEATHED CABLES CONFORMING IS : 1554 (PART 1)

Nominal cross sectional area	Nominal Thickness of pvc Insulation	Nominal Thickness of Inner Sheath	ARMOURED		Min. Thickness of pvc outer sheath	Approx Overall Diameter	Approx Weight of Cable	"Max D.C Resistance" at 20	CURRENT RATING		
			Nominal Diameter	Nominal thickness					Direct in Ground	In Duct	In Air
Sq.mm	mm	mm	mm	mm	mm	mm	(Kg/Km)	Ohms/Km	Amps.	Amps.	Amps.
1.5	0.8	0.3	1.4	-	1.24	12.5	405	12.100	21	17	17
2.5	0.9	0.3	1.4	-	1.24	14.0	475	7.410	27	24	24
4	1.0	0.3	1.4	-	1.24	15.5	580	4.610	36	30	30
6	1.0	0.3	1.4	-	1.24	17.0	700	3.080	45	38	39
10	1.0	0.3	1.4	-	1.4	19.0	890	1.830	60	50	52
16	1.0	0.3	-	0.8	1.40	20.0	950	1.150	77	64	66
25	1.2	0.3	-	0.8	1.40	22.0	1270	0.727	99	81	90
35	1.2	0.3	-	0.8	1.40	25.0	1600	0.524	120	99	110
50	1.4	0.3	-	0.8	1.56	27.0	2150	0.387	145	125	135
70	1.4	0.4	-	0.8	1.56	31.0	2800	0.268	175	150	165
95	1.6	0.4	-	0.8	1.56	34.0	3670	0.193	210	175	200
120	1.6	0.4	-	0.8	1.72	38.0	4470	0.153	240	195	230
150	1.8	0.5	-	0.8	1.88	42.0	5500	0.124	270	225	265
185	2.0	0.5	-	0.8	1.88	46.0	6650	0.099	300	255	305
240	2.2	0.6	-	0.8	2.20	52.0	8450	0.075	345	295	355
300	2.4	0.6	-	0.8	2.36	56.5	10450	0.060	385	335	400
400	2.6	0.7	-	0.8	2.52	64.0	13525	0.047	425	360	435

TABLE-12 "ORBIT" 1.1 KV THREE CORE, COPPER CONDUCTOR, PVC INSULATED, INNER SHEATHED,

UNARMOURED PVC SHEATHED CABLES CONFORMING IS : 1554 (PART 1)

Nominal Cross Sectional Area	Nominal Insulation	Nominal Thickness of	Nominal Thickness of Outer Sheath" "Nominal Thickness of	Approx. Overall Diameter	Approx. Weight of Cable	Max. Dc Conductor Resistance at 20	CURRENT RATING		
							Direct in Ground	In Duct	In Air
Sq.mm	mm	mm	mm	mm	Kgs/ Km	Ohm/Km	Amps.	Amps.	Amps.
*1.5	0.8	0.3	1.8	11.5	160	12.100	21	17	17
*2.5	0.9	0.3	1.8	12.5	220	7.410	27	24	24
*4.0	1.0	0.3	1.8	13.5	290	4.610	36	30	30
*6.0	1.0	0.3	1.8	15.0	370	3.080	45	38	39
*10	1.0	0.3	1.8	16.5	510	1.830	60	50	52
16	1.0	0.3	1.8	17.5	660	1.150	77	64	66
25	1.2	0.3	2.0	22.0	990	0.727	99	81	90
35	1.2	0.3	2.0	23.0	1290	0.524	120	99	110
50	1.4	0.3	2.0	27.0	1780	0.387	145	125	135
70	1.4	0.4	2.2	31.0	2410	0.268	175	150	165
95	1.6	0.4	2.2	33.0	3190	0.193	210	175	200
120	1.6	0.4	2.2	36.0	3920	0.153	240	195	230
150	1.8	0.5	2.4	41.0	4910	0.124	270	225	265
185	2.0	0.5	2.6	45.0	6040	0.099	300	255	305
240	2.2	0.6	2.8	50.0	7750	0.075	345	295	355
300	2.4	0.6	3.0	55.5	9620	0.060	385	335	400
400	2.6	0.7	3.4	63.5	12715	0.047	425	360	435

TABLE-13 "ORBIT" 1.1 KV 3 1/2 CORE, ALUMINIUM CONDUCTOR, PVC INSULATED, INNER SHEATHED,

ARMOURED PVC SHEATHED CABLES CONFORMING IS : 1554 (PART 1)

Nominal cross sectional area		Nominal Thickness of Insulation		Minimum Thickness of Inner Sheath	Armour	Minimum Thickness of Outer Sheath	Approx. Overall Diameter	Approx. Weight of Cable	Max DC Conductor Resistance at 20° C		Current Ratings		
Main	Neutral	Main	Neutral		Galv. Flat Steel Strip Nominal Thickness				Main	Neutral	Direct In Ground	In Ducts	In Air
Sq.mm	Sq.mm	mm	mm	mm	mm	mm	mm	Kgs.Km	Ohm/Km	Ohm/Km	Amps.	Amps.	Amps.
25	16	1.20	1.00	0.30	0.8	1.40	24	900	1.20	1.910	76	63	70
35	16	1.20	1.00	0.30	0.8	1.40	26	1030	0.868	1.910	92	77	86
50	25	1.40	1.20	0.30	0.8	1.56	30	1350	0.641	1.200	110	95	105
70	35	1.40	1.20	0.40	0.8	1.56	32.5	1725	0.443	0.868	135	115	130
95	50	1.60	1.40	0.40	0.8	1.72	36.5	2130	0.320	0.641	165	140	155
120	70	1.60	1.40	0.50	0.8	1.88	40.5	2580	0.253	0.443	185	155	180
150	70	1.80	1.40	0.50	0.8	1.88	44.0	3050	0.206	0.443	210	175	205
185	95	2.00	1.60	0.50	0.8	2.04	50.0	3650	0.164	0.320	235	200	240
240	120	2.20	1.60	0.60	0.8	2.36	55.0	4580	0.125	0.253	275	235	280
300	150	2.40	1.80	0.60	0.8	2.52	61.0	5500	0.100	0.206	305	260	315
400	185	2.60	2.00	0.70	0.8	2.68	68.0	7000	0.0778	0.164	335	290	375
500	240	3	2.2	0.7	0.8	2.84	75	8600	0.061	0.125	370	320	425

TABLE-14 "ORBIT" 1.1 KV 3 1/2 CORE, ALUMINIUM CONDUCTOR, PVC INSULATED, INNER SHEATHED,

UNARMOURED PVC SHEATHED CABLES CONFORMING IS : 1554 (PART 1)

Nominal cross sectional area		Nominal Thickness of Insulation		Minimum Thickness of Inner Sheath	Nominal Thickness of Outer Sheath	Approx. Overall Diameter	Approx. Weight of Cable	Max DC Conductor Resistance at 20° C		Current Ratings		
Main	Neutral	Main	Neutral					Main	Neutral	Direct In Ground	In Ducts	In Air
Sq.mm	Sq.mm	mm	mm	mm	mm	mm	Kgs.Km	Ohm/Km	Ohm/Km	Amps.	Amps.	Amps.
25	16	1.2	1.0	0.30	2.0	22.5	615	1.200	1.910	76	63	70
35	16	1.2	1.0	0.30	2.0	25.0	715	0.868	1.910	92	77	86
50	25	1.4	1.2	0.30	2.2	29.0	955	0.641	1.200	110	95	105
70	35	1.4	1.2	0.40	2.2	33..0	1290	0.443	0.868	135	115	130
95	50	1.6	1.4	0.40	2.2	36.5	1640	0.320	0.614	165	140	155
120	70	1.6	1.4	0.50	2.4	39.0	2020	0.253	0.443	185	155	180
150	70	1.8	1.4	0.50	2.4	42.5	2380	0.206	0.443	210	175	205
185	95	2.0	1.6	0.50	2.6	47.0	2945	0.164	0.320	235	200	240
240	120	2.2	1.6	0.60	3.0	54.0	3800	0.125	0.253	275	235	280
300	150	2.4	1.8	0.60	3.2	58.0	4650	0.100	0.206	305	260	315
400	185	2.6	2.0	0.70	3.4	65.0	6000	0.078	0.164	335	290	375
500	240	3.0	2.2	0.7	3.8	74.0	7400	0.061	0.125	370	320	425

TABLE-15 "ORBIT" 1.1 KV 3 1/2 CORE, COPPER CONDUCTOR, PVC INSULATED, INNER SHEATHED,

ARMOURED PVC SHEATHED CABLES CONFORMING IS : 1554 (PART 1)

Nominal cross sectional area		Nominal Thickness of Insulation		Minimum Thickness of Inner Sheath	Armour	Minimum Thickness of Outer Sheath	Approx. Overall Diameter	Approx. Weight of Cable	Max DC Conductor Resistance at 20° C		Current Ratings		
Main	Neutral	Main	Neutral		Galv. Flat Steel Strip Nominal Thickness				Main	Neutral	Direct In Ground	In Ducts	In Air
Sq.mm	Sq.mm	mm	mm	mm	mm	mm	mm	Kgs.Km	Ohm/Km	Ohm/Km	Amps.	Amps.	Amps.
25	16	1.20	1.00	0.30	0.8	1.40	24	1465	0.727	1.150	99	81	90
35	16	1.20	1.00	0.30	0.8	1.40	26	1780	0.524	1.150	120	99	110
50	25	1.40	1.20	0.30	0.8	1.56	30	2435	0.387	0.727	145	125	135
70	35	1.40	1.20	0.40	0.8	1.56	32.5	3245	0.268	0.524	175	150	165
95	50	1.60	1.40	0.40	0.8	1.72	36.5	4210	0.193	0.387	210	175	200
120	70	1.60	1.40	0.50	0.8	1.88	40.5	5240	0.153	0.268	240	195	230
150	70	1.80	1.40	0.50	0.8	1.88	44.0	6270	0.124	0.268	270	225	265
185	95	2.00	1.60	0.50	0.8	2.04	50.0	7675	0.099	0.193	300	255	305
240	120	2.20	1.60	0.60	0.8	2.36	55.0	9780	0.075	0.153	345	295	355
300	150	2.40	1.80	0.60	0.8	2.52	61.0	12000	0.060	0.124	385	335	400
400	185	2.60	2.00	0.70	0.8	2.68	68.0	15570	0.0470	0.099	425	360	435

TABLE-16 "ORBIT" 1.1 KV 3 1/2 CORE, COPPER CONDUCTOR, PVC INSULATED, INNER SHEATHED,

UNARMOURED PVC SHEATHED CABLES CONFORMING IS : 1554 (PART 1)

Nominal cross sectional area		Nominal Thickness of Insulation		Minimum Thickness of Inner Sheath	Nominal Thickness of Outer Sheath	Approx. Overall Diameter	Approx. Weight of Cable	Max DC Conductor Resistance at 20° C		Current Ratings		
Main	Neutral	Main	Neutral					Main	Neutral	Direct In Ground	In Ducts	In Air
Sq.mm	Sq.mm	mm	mm	mm	mm	mm	Kgs.Km	Ohm/Km	Ohm/Km	Amps.	Amps.	Amps.
25	16	1.2	1.0	0.3	2.0	22.5	1180	0.727	1.150	99	81	90
35	16	1.2	1.0	0.3	2.0	25.0	1465	0.524	1.150	120	99	110
50	25	1.4	1.2	0.3	2.2	29.0	2040	0.387	0.727	145	125	135
70	35	1.4	1.2	0.4	2.2	33..0	2810	0.268	0.524	175	150	165
95	50	1.6	1.4	0.4	2.2	36.5	3715	0.193	0.387	210	175	200
120	70	1.6	1.4	0.5	2.4	39.0	4680	0.153	0.268	240	195	230
150	70	1.8	1.4	0.5	2.4	42.5	5600	0.124	0.268	270	225	265
185	95	2.0	1.6	0.5	2.6	47.0	6970	0.099	0.193	300	255	305
240	120	2.2	1.6	0.6	3.0	54.0	9000	0.075	0.153	345	295	355
300	150	2.4	1.8	0.6	3.2	58.0	11150	0.060	0.124	385	335	400
400	185	2.6	2.0	0.7	3.4	65.0	14570	0.047	0.099	425	360	435

TABLE-17 "ORBIT" 1.1 KV FOUR CORE, ALUMINIUM CONDUCTOR, PVC INSULATED, INNER SHEATHED, ARMOURED PVC SHEATHED CABLES CONFORMING IS : 1554 (PART 1)

Nominal cross sectional area	Nominal Thickness of pvc Insulation	Nominal Thickness of Inner Sheath	ARMOURED		Min. Thickness of pvc outer sheath	Approx Overall Diameter	Approx Weight of Cable	Max D.C Resistance at 20°C	CURRENT RATING		
			Galv. Round Steel Wire Nominal Dia	Galv. Flat Steel Strip Nominal Thickness					Direct in Ground	In Duct	In Air
Sq.mm	mm	mm	mm	mm	mm	mm	(Kg/Km)	Ohms/Km	Amps.	Amps.	Amps.
1.5	0.8	0.3	1.4	-	1.24	15.0	400	18.100	16	14	13
2.5	0.9	0.3	1.4	-	1.24	16.5	480	12.100	21	18	18
4	1.0	0.3	1.4	-	1.24	18.0	550	7.4100	28	23	23
6	1.0	0.3	1.4	-	1.24	19.5	650	4.6100	35	30	30
10	1.0	0.3	-	0.8	1.40	20.0	660	3.0800	46	39	40
16	1.0	0.3	-	0.8	1.40	23.0	750	1.9100	60	50	51
25	1.2	0.3	-	0.8	1.40	24.0	950	1.200	76	63	70
35	1.2	0.3	-	0.8	1.40	27.0	1165	0.868	92	77	86
50	1.4	0.4	-	0.8	1.56	31.0	1540	0.641	110	95	105
70	1.4	0.4	-	0.8	1.56	35.0	1800	0.443	135	115	130
95	1.6	0.4	-	0.8	1.72	38.0	2400	0.320	165	140	155
120	1.6	0.5	-	0.8	1.88	42.0	2800	0.253	185	155	"180
150	1.8	0.5	-	0.8	1.88	46.0	3350	0.206	210	175	205
185	2.0	0.6	-	0.8	2.04	51.0	4000	0.164	235	200	240
240	2.2	0.6	-	0.8	2.36	58.0	5050	0.125	275	235	280
300	2.4	0.7	-	0.8	2.52	66.0	6200	0.100	305	260	315
400	2.6	0.7	-	0.8	2.84	72.0	7850	0.078	335	290	375
500	3.0	0.7	-	0.8	3.00	80.0	9600	0.061	370	320	425

TABLE-18 "ORBIT" 1.1 KV FOUR CORE, ALUMINIUM CONDUCTOR, PVC INSULATED, INNER SHEATHED, UNARMOURED PVC SHEATHED CABLES CONFORMING IS : 1554 (PART 1)

Nominal Cross Sectional Area	Nominal Insulation	Nominal Thickness of	Nominal Thickness of Outer Sheath" "Nominal Thickness of	Approx. Overall Diameter	Approx. Weight of Cable	Max. Dc Conductor Resistance at 20	CURRENT RATING		
							Direct in Ground	In Duct	In Air
Sq.mm	mm	mm	mm	mm	Kgs/ Km	Ohm/Km	Amps.	Amps.	Amps.
*1.5	0.8	0.3	1.8	12.5	150	18.100	16	14	13
*2.5	0.9	0.3	1.8	14.0	180	12.100	21	18	18
*4.0	1.0	0.3	1.8	15.5	220	7.410	28	23	23
*6.0	1.0	0.3	1.8	17.0	260	4.610	35	30	30
*10	1.0	0.3	1.8	19.0	340	3.080	46	39	40
16	1.0	0.3	2.0	21.5	460	1.910	60	50	51
25	1.2	0.3	2.0	24.0	600	1.200	76	63	70
35	1.2	0.3	2.0	26.5	800	0.868	92	77	86
50	1.4	0.4	2.2	32.5	1100	0.641	110	95	105
70	1.4	0.4	2.2	33.5	1400	0.443	135	115	130
95	1.6	0.4	2.4	38.5	1850	0.320	165	140	155
120	1.6	0.5	2.4	41.5	2250	0.253	185	155	180
150	1.8	0.5	2.6	46.0	2750	0.206	210	175	205
185	2.0	0.6	2.6	50.5	3400	0.164	235	200	240
240	2.2	0.6	3.0	58.0	4300	0.125	275	235	280
300	2.4	0.7	3.4	64.0	5300	0.100	305	260	315
400	2.6	0.7	3.6	72.0	6900	0.078	335	290	375
500	3.0	0.7	4.0	80.0	8600	0.061	370	320	425

TABLE-19 "ORBIT" 1.1 KV FOUR CORE, COPPER CONDUCTOR, PVC INSULATED, INNER SHEATHED,

ARMOURED PVC SHEATHED CABLES CONFORMING IS : 1554 (PART 1)

Nominal cross sectional area	Nominal Thickness of pvc Insulation	Nominal Thickness of Inner Sheath	ARMOURED		Min. Thickness of pvc outer sheath	Approx Overall Diameter	Approx Weight of Cable	Max D.C Resistance at 20°C	CURRENT RATING		
			Galv. Round Steel Wire Nominal Dia	Galv. Flat Steel Strip Nominal Thickness					Direct in Ground	In Duct	In Air
Sq.mm	mm	mm	mm	mm	mm	mm	(Kg/Km)	Ohms/Km	Amps.	Amps.	Amps.
1.5	0.8	0.3	1.4	-	1.24	15.0	440	12.100	21	17	17
2.5	0.9	0.3	1.4	-	1.24	16.5	550	7.4100	27	24	24
4	1.0	0.3	1.4	-	1.24	18.0	650	4.6100	36	30	30
6	1.0	0.3	1.4	-	1.24	19.5	800	3.0800	45	38	39
10	1.0	0.3	-	0.8	1.40	20.0	910	1.8300	60	50	52
16	1.0	0.3	-	0.8	1.40	23.0	1150	1.15	77	64	66
25	1.2	0.3	-	0.8	1.40	24.0	1570	0.727	99	81	90
35	1.2	0.3	-	0.8	1.56	27.0	2035	0.52	120	99	110
50	1.4	0.4	-	0.8	1.56	31.0	2780	0.387	145	125	135
70	1.4	0.4	-	0.8	1.56	35.0	3540	0.268	175	150	165
95	1.6	0.4	-	0.8	1.72	38.0	4760	0.193	210	175	200
120	1.6	0.5	-	0.8	1.88	42.0	5770	0.153	240	195	230
150	1.8	0.5	-	0.8	1.88	46.0	7065	0.124	270	225	265
185	2.0	0.6	-	0.8	2.20	51.0	8580	0.099	300	255	305
240	2.2	0.6	-	0.8	2.36	58.0	11000	0.075	345	295	355
300	2.4	0.7	-	0.8	2.52	66.0	13625	0.060	385	335	400
400	2.6	0.7	-	0.8	2.84	80.0	17750	0.047	425	360	435

TABLE-20 "ORBIT" 1.1 KV FOUR CORE, COPPER CONDUCTOR, PVC INSULATED, INNER SHEATHED,

UNARMOURED PVC SHEATHED CABLES CONFORMING IS : 1554 (PART 1)

Nominal Cross Sectional Area	Nominal Insulation	Nominal Thickness of	Nominal Thickness of Outer Sheath" "Nominal Thickness of	Approx. Overall Diameter	Approx. Weight of Cable	Max. Dc Conductor Resistance at 20	CURRENT RATING		
							Direct in Ground	In Duct	In Air
Sq.mm	mm	mm	mm	mm	Kgs/ Km	Ohm/Km	Amps.	Amps.	Amps.
*1.5	0.8	0.3	1.8	12.5	190	12.100	21	17	17
*2.5	0.9	0.3	1.8	14.0	245	7.410	27	24	24
*4.0	1.0	0.3	1.8	15.5	320	4.610	36	30	30
*6.0	1.0	0.3	1.8	17.0	410	3.080	45	38	39
*10	1.0	0.3	1.8	19.0	590	1.830	60	50	52
16	1.0	0.3	2.0	21.5	860	1.150	77	64	66
25	1.2	0.3	2.0	24.0	1220	0.727	99	81	90
35	1.2	0.3	2.0	26.5	1670	0.524	120	99	110
50	1.4	0.4	2.2	32.5	2340	0.387	145	125	135
70	1.4	0.4	2.2	33.5	3140	0.268	175	150	165
95	1.6	0.4	2.4	38.5	4210	0.193	210	175	200
120	1.6	0.5	2.4	41.5	5220	0.153	240	195	230
150	1.8	0.5	2.6	46.0	6470	0.124	270	225	265
185	2.0	0.6	2.6	50.5	7980	0.099	300	255	305
240	2.2	0.6	3.0	58.0	10250	0.075	345	295	355
300	2.4	0.7	3.4	64.0	12730	0.060	385	335	400
400	2.6	0.7	3.6	72.0	16800	0.047	425	360	435

TABLE-21 "ORBIT" 1.1 KV, ANNEALED HIGH CONDUCTIVITY SOLID COPPER CONDUCTOR, 1.5 SQ.MM PVC INSULATED, INNER SHEATHED,ARMOURED/ UNARMOURED PVC SHEATHED CONTROL CABLES CONFORMING IS : 1554 (PART 1)

Number of Cores	Nominal Thickness of insulation	Minimum Thickness of Inner Sheath	Armour		Nominal Sheath Thickness Unarmoured	Minimum Sheath Thickness Armoured	Approx. Overall Diameter		Armoured	Unarmoured	Max DC Conductor Resistance at 20° C	Current Ratings		
			Galv. Round Steel Wire Nom. Dia	Galv. Flat Steel Strip Nom. Thick			Armoured	Unarmoured				Direct In Ground	In Ducts	In Air
Sq.mm	mm	mm	mm	mm	mm	mm	mm	mm	Kg/ mm	Kg/ mm	Ohm/Km	Amps	Amps	Amps
2	0.8	0.30	1.4	-	1.80	1.24	10.5	13.5	130.0	350	12.100	23	20	20
3	0.8	0.30	1.4	-	1.80	1.24	11.0	14.0	160.0	400	12.100	21	17	17
4	0.8	0.30	1.4	-	1.80	1.24	11.5	15.0	190.0	450	12.100	21	17	17
5	0.8	0.30	1.4	-	1.80	1.24	12.5	15.5	225.0	500	12.100	21	17	17
6	0.8	0.30	1.4	-	1.80	1.24	13.0	16.0	250.0	550	12.100	15	13	13
7	0.8	0.30	1.4	-	1.80	1.24	13.5	16.5	265.0	565	12.100	14	13	13
10	0.8	0.30	1.4	-	1.80	1.4	16.5	19.0	350.0	750	12.100	13	11	11
12	0.8	0.30	-	0.8	1.80	1.24	17.5	19.5	400.0	650	12.100	12	10	10
14	0.8	0.30	-	0.8	1.80	1.4	18.0	20.0	450.0	760	12.100	11	10	10
16	0.8	0.30	-	0.8	1.80	1.4	19.5	21.0	500.0	800	12.100	11	9	9
19	0.8	0.30	-	0.8	2.00	1.4	20.0	22.0	600.0	850	12.100	10	9	9
24	0.8	0.30	-	0.8	2.00	1.4	23.0	25.0	725.0	1050	12.100	9	8	8
30	0.8	0.30	-	0.8	2.00	1.4	24.5	26.5	860.0	1200	12.100	9	7	7
37	0.8	0.30	-	0.8	2.00	1.4	26.5	28.0	1050.0	1400	12.100	8	7	7
61	0.8	0.40	-	0.8	2.20	1.56	33.0	35.0	1650.0	2100	12.100	7	6	6

TABLE-22 "ORBIT" 1.1 KV, ANNEALED HIGH CONDUCTIVITY SOLID COPPER CONDUCTOR, 2.5 SQ.MM PVC INSULATED, INNER SHEATHED,ARMOURED/ UNARMOURED PVC SHEATHED CONTROL CABLES CONFORMING IS : 1554 (PART 1)

Number of Cores	Nominal Thickness of insulation	Minimum Thickness of Inner Sheath	Armour		Nominal Sheath Thickness Unarmoured	Minimum Sheath Thickness Armoured	Approx. Overall Diameter		Armoured	Unarmoured	Max DC Conductor Resistance at 20° C	Current Ratings		
			Galv. Round Steel Wire Nom. Dia	Galv. Flat Steel Strip Nom. Thick			Armoured	Unarmoured				Direct In Ground	In Ducts	In Air
Sq.mm	mm	mm	mm	mm	mm	mm	mm	mm	Kg/ mm	Kg/ mm	Ohm/Km	Amps	Amps	Amps
2	0.9	0.3	1.4	-	1.8	1.24	11.00	14.50	160	425	7.41	32	27	27
3	0.9	0.3	1.4	-	1.8	1.24	11.50	15.50	225	475	7.41	27	24	24
4	0.9	0.3	1.4	-	1.8	1.24	11.50	16.50	250	530	7.41	27	24	24
5	0.9	0.3	1.4	-	1.8	1.24	14.00	17.50	300	600	7.41	27	24	24
6	0.9	0.3	1.4	-	1.8	1.24	15.50	18.50	340	675	7.41	20	18	18
7	0.9	0.3	1.4	-	1.8	1.24	15.50	18.50	375	700	7.41	20	17	17
10	0.9	0.3	-	0.8	1.8	1.40	19.00	21.00	500	780	7.41	18	15	15
12	0.9	0.3	-	0.8	2.0	1.40	20.00	22.00	600	850	7.41	17	14	14
14	0.9	0.3	-	0.8	2.0	1.40	21.00	23.00	650	950	7.41	16	13	13
16	0.9	0.3	-	0.8	2.0	1.40	22.00	24.00	750	1050	7.41	5	13	13
19	0.9	0.3	-	0.8	2.0	1.40	23.00	25.00	850	1150	7.41	14	12	12
24	0.9	0.3	-	0.8	2.0	1.40	27.00	29.00	1050	1400	7.41	13	11	11
30	0.9	0.3	-	0.8	2.0	1.56	28.50	30.50	1250	1700	7.41	12	10	10
37	0.9	0.4	-	0.8	2.2	1.56	31.00	33.00	1550	2000	7.41	11	10	10
61	0.9	0.4	-	0.8	2.2	1.56	38.50	41.00	2450	3100	7.41	9	8	8

CABLE HANDLING AND STORAGE

UNREELING (CABLE PULLING) :

For unreeling cable from a drum it should be mounted on cable jack. The drum should be lifted above the ground with clearance of 50-100 mm so that while unreeling the drum flanges should not touch the ground and get damaged. The drum should never be kept flat on its side on the ground and the cable unreeled in coil from the same. This invariably leads kinking and bird-caging.

"Bird-Caging" is a defect caused due to twist of cable during wrong unreeling. It results outer sheath crack or cuts and armour swelling.

Photograph of birdcaging.



The technique of pulling cables is also an important, Sub-standard and haphazard handling can cause damage to the cable which may weaken the cable components, and cause a failure in due course. Care must be taken to select a suitable position for the cable drum jacks in order to ensure that the drum may be raised and rotated with full safety.

The jacks should therefore be placed on a firm support of thick boards.

Care should be taken to exert a steady pull avoiding any jerks. Twisting or kinking of cable is very dangerous as this may cause damage to the small size of cable conductors, insulation and sheath, shifting and knife-edging of the armouring and damage to the serving, etc. Care should be taken to avoid short bends and consequent straining of conductors.

Proper handling of cables is very important both for safety as well as long life of the installation.

The most common causes of cable failure are due to mishandling of the product at installation stage.
This can be prevented by unwinding the cable by loading the drum on jacks & pulling in the proper direction with stocking or pulling eye.

For pulling longer lengths and higher diameter of cables Pulling Eyes can be used....
In case of samller lengths, pulling is carried out by manual labour and when the length is longer by means of winches or other mechanical means.

While pulling with a rope, care is necessary to avoid bending of the cable a close watch should be maintained to ensure the cable runs freely over the cable rollers and passes smoothly without rubbing against any surface.

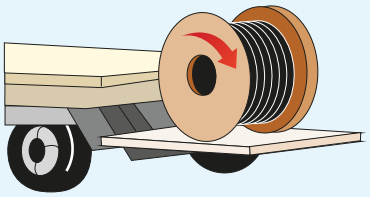
Great care is taken in the manufacturing of cable to ensure quality at every stage.

Handling of cable at site is the next important factor to ensure that by mishandling the cable, the outer sheath and insulation shall not damaged.

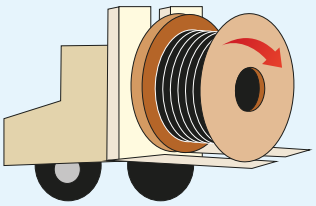
The handling is generally carried out by unskilled or semi-skilled men, strict supervision should be maintained so that the cables, which can be very easily damaged, is handled with great care.

DO

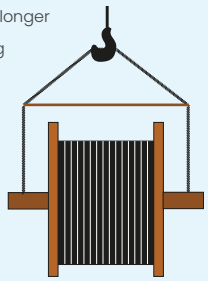
When offloading reels from a truck, lower reels carefully using a hydraulic gate, hoist or forklift truck.



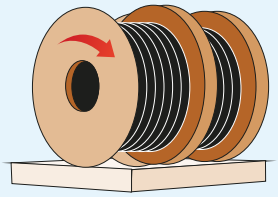
If a forklift is used for handling and shifting the cable drum, the forks shall approach the reel from the flange side. The forks shall be positioned such that the reel is lifted with both reel flanges.



When using a hoist, install a mandrel through the reel arbor holes and attach a sling. Use a spreader bar approximately 6 inches longer than the overall reel width placed between the sling ends just above the reel flanges.

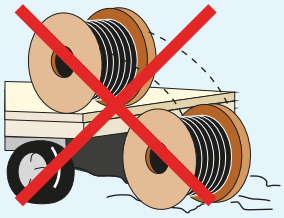


It is always safer to use a strong and well-drained surface for storing drums. If possible, the drums should be raised from the ground by the insertion of wooden planks, etc, below and on both sides of the drums: some check pieces should be placed so as not to allow the drums to be rolled and easily. Cable drums should also be stored away from the direct sun and rains.
Reason: Direct sunrays can cause deterioration due to UV rays and rain can cause damage to wooden drum, resulting drum collapse after a few months.

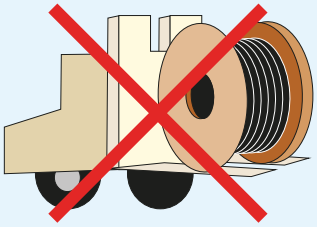


DON'T

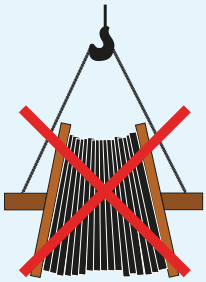
Never drop reels. If reels must be rolled, roll in opposite direction of the cable wraps to keep cable from loosening on the reel.



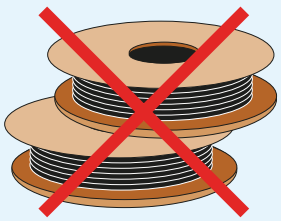
Do not allow the lift forks to contact the cable. Care must be taken by the forklift operator not to make sudden turns or stops.



This may lead to the bending of the reel flanges and mashing the cable.

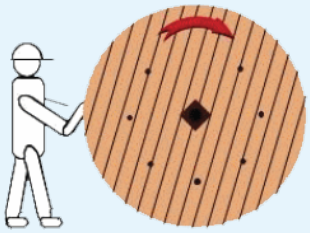


Multiple reels stacked on top of each other (Pancake Storage) is not recommended for cable drums. The weight of the stack can total thousands of kgs. creating an enormous load on the bottom reel. Also, damage to the reel and/or cable will likely occur when the reel is flipped for transit.
A concentration of stress on the reel flange may cause it to break and subsequently damage the cable.

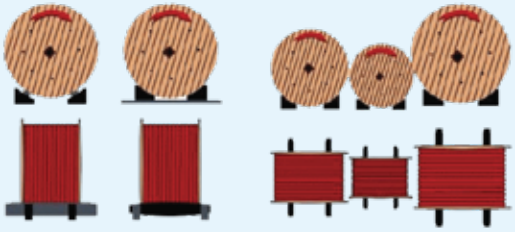


DO

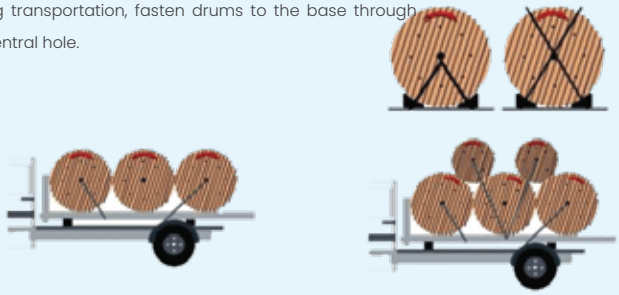
Always use proper stoppers to prevent the drum from rolling.



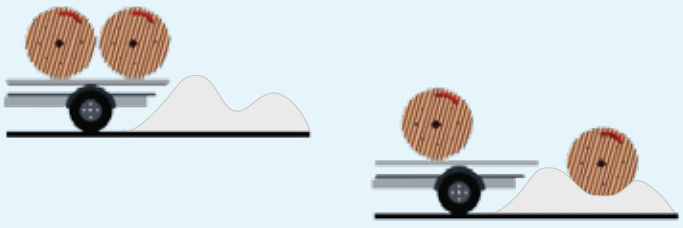
Ensure stoppers for every drum, to prevent mishaps during storage. Place the wedges by the flanges/full width of the drum



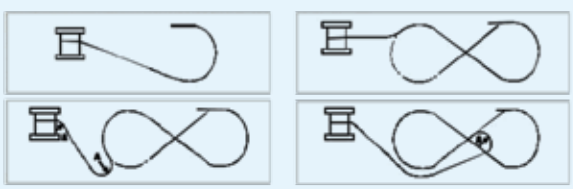
During transportation, fasten drums to the base through the central hole.



Use a winch, forklift or makeshift ramp



ON THE GROUND CABLE CAN BE FLAKED IN A FIGURE OF EIGHT FORMATION



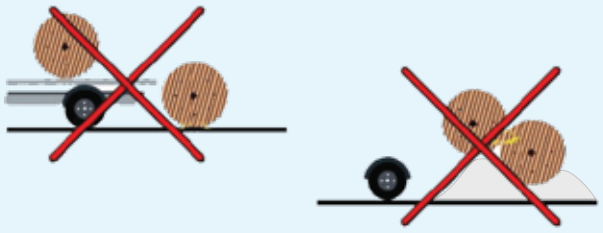
DON'T

When rolling in the direction of the arrow, never roll for more than 5 meters, Otherwise the cable may become unfit for use.

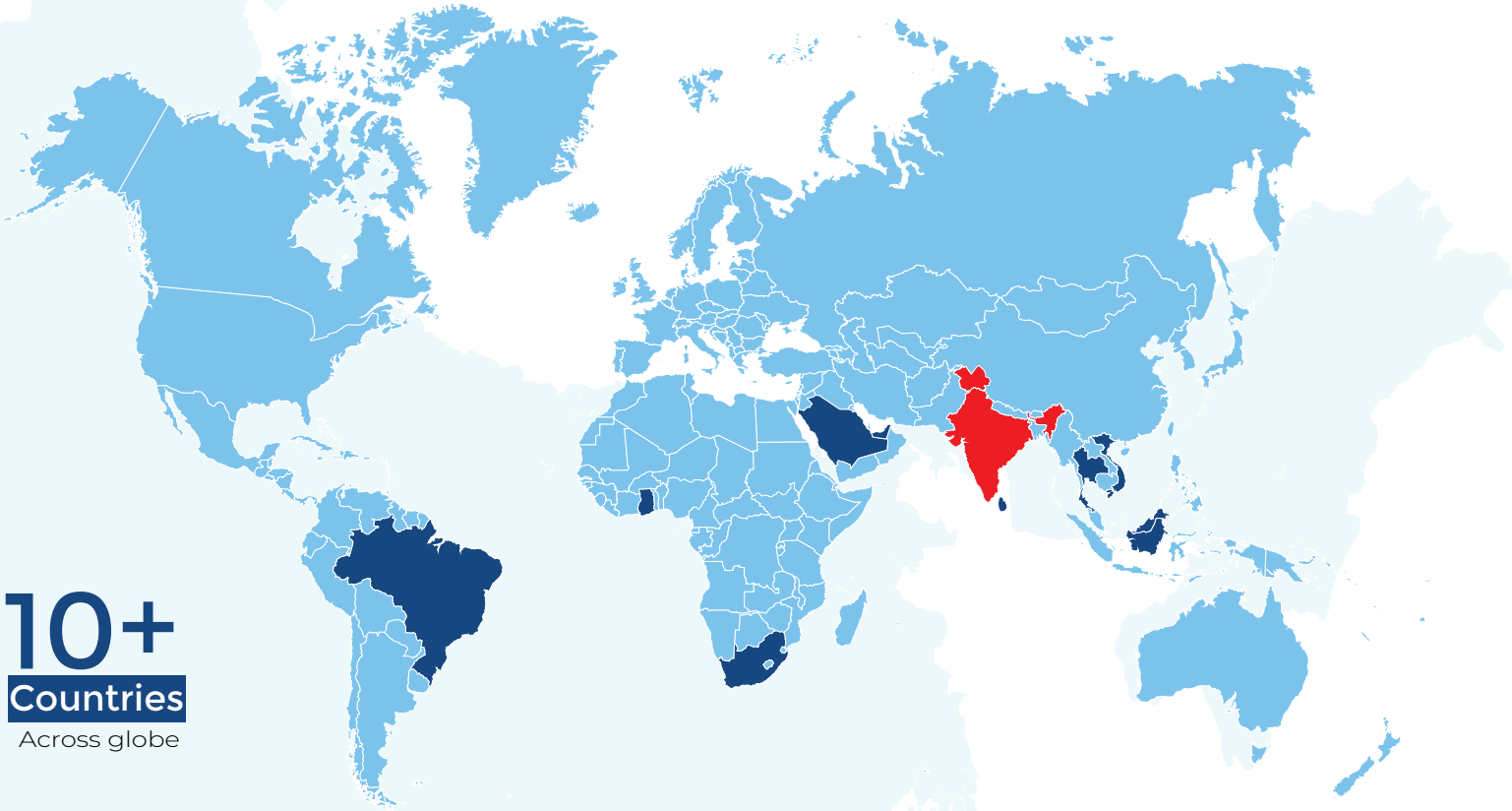
Allow the drums to roll at any cost. Stack the drums on non-triangular / non-square wedges.

fasten without taking adequate care. Always use support, and tie the drum from both the front and rear.

Allow one drum to strike another



DON'T ATTEMPT COILING OF CABLE ON THE GROUND



10+
Countries
Across globe

Regional Office:

Chennai	:	No. 36, Govindappa Naicken Street, Parrys, Chennai-600 001.
Bangalore	:	No.105, Paras mansion, 025, Brigade Rd, Ashok Nagar, Bengaluru, Karnataka-560025.
Telangana	:	Suryakiran complex, 203, Second Floor, SD Road, Secunderabad, Telangana-500003.
Jodhpur	:	Panji ka Bera, Pal Rd, opp. Paliwal Hospital, Gayatri Nagar, Jodhpur, Rajasthan-342008.
Chhattisgarh	:	S P Cold Storage, Near Khamtarai Railway Cross Khamtarai, (C.G) Raipur-492001

18+
States
Across India

Manufacturing units

Gujarat	:	Survey No. 2450, Ahmedabad-Mehsana Highway, Village - Rajpur, Taluka, Kadi, Gujarat-382715.
Delhi	:	179, FIE Patparganij Indl Area, Delhi-110092.
Chennai	:	40/3 Inner Ring Road, Manjambakkam, Chennai-600 060.
Mumbai	:	Shripal Industrial Estate, Bldg. No. 3, Wing-C, Gala No. 17, Near Gyandeep School, Waliv, Vasai (E)-Palghar - 401 208.

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