

www.fortgloster.com

HT XLPE CABLES

HIGH TENSION CROSS-LINKED
POLYETHYLENE CABLE



Since 1958

POWERING INNOVATION

Fort Gloster Industries Limited
From the house of Bangurs





Construction of HT Cables as per IS 7098 Part 2

Conductor

The conductor serves as the path for electric current flow. It is the most crucial part of the cable. The material used in conductor is High conductivity, Electrolytic-grade Aluminium and annealed copper as per IS 8130. Shape of conductor is Stranded Compacted Circular / Shaped conductor.

Conductor Screen

This is a layer of cross linkable semiconducting compound. It is extruded directly over the conductor. It not only eliminates any sharp points on conductor surface but also nullifies the chance of electric discharge at the interface between conductor & insulation.

Insulation

The insulation is of natural, Cross Linked Polyethylene (XLPE) extruded over conductor screen. XLPE Insulation is capable of operation continuously at 90°C and XLPE insulation is known for its excellent thermal and dielectric properties. The thickness of the XLPE insulation varies depending on the voltage rating of the cable.

Non Metallic Insulation Screen

This is a layer of cross linkable semiconducting compound extruded directly over the Insulation at the same time when conductor screen and insulation are extruded. These are extruded in one operation by TRIPLE EXTRUSION which eliminates the formation of micro voids during the extrusion and curing resulting in longer life of cables. It is provided to maintain uniform electrical field and smooth insulation interface. It is tightly bonded to prevent partial discharges and maintain long term performance.

Metallic Insulation Screen

The metallic Screen can be helically applied copper tape or a number of copper wires applied over semiconducting screen to carry an earth fault current. This ensures that the surface of insulation is at ground potential and hence no surface discharge and electric field will be radial in nature.

Assembly of Cores

For Three core cable, insulated cores are laid up together with Non hygroscopic PVC or Polypropylene Fiber



fillers to maintain circularity of cable. The core identification of three core cable is done either by coloured strips /numbered applied on the cores.

Inner Sheath

Polyvinyl Chloride (PVC) or Polyethylene (PE) compound is extruded over the laid up cores. The laid up cores shall be provided with inner sheath applied either by extrusion or by wrapping as per customer requirement. It shall be ensured that the shape is as circular as possible. It provides bedding for armour layer.

Armour

Galvanized steel armour are applied over the inner sheath in case of three core cables and for single core cables, non-magnetic armouring is applied over the inner sheath. The direction of lay of armouring shall be left hand. The purpose of armour is to give mechanical protection to cables. It also acts as a return path for earth fault current. For cables with a calculated diameter under armouring not exceeding 13 mm, armouring shall consist of round wires and for cables with a calculated diameter under armouring greater than 13 mm, armouring may consist of either round wires or strips.

Outer Sheath

It is an extruded layer of polyvinyl chloride (PVC) or Polyethylene (PE) material over armour. For single core unarmoured cables the outer sheath is extruded over the non-magnetic metallic part of insulation screen. It Protects the cable against environmental factors (moisture, sunlight, chemicals, rodents, etc.)

Fire Performance - Critical Applications

For enhanced fire safety, the following special PVC sheath compounds may be used:

FR (Flame Retardant): Designed to resist the spread of fire.

FR-LSH (Flame Retardant Low Smoke & Halogen): Limits smoke density and halogen gas emissions during combustion – ideal for indoor/public environments like hospitals, metros, and high-rise buildings.

Additional Protective Properties

For harsh or exposed installations, sheath compounds may also be enhanced with:

UV Radiation Resistant Compounds: Protect against degradation due to prolonged sunlight exposure.

Anti-Rodent and Anti-Termite Additives: Prevent damage from pests, suitable for underground and outdoor cabling.

Product Code

As per IS 7098 Part 2, the codes are

Constituent	Code
Aluminium conductor	A
XLPE insulation	2X
Steel round wire armour	W
Non-magnetic round wire armour	Wa
Steel strip armour	F
Non-magnetic strip armour	Fa
Double steel strip armour	FF
Double steel round wire armour	WW
PVC Outer sheath	Y
Polyethylene outer sheath	2Y



Advantages of XLPE Power Cables

High continuous current rating | Higher short circuit rating | High emergency load capacity | Low dielectric loss | Less charging currents | Free from height limitation & maintenance | Resistant to vibration, moisture, chemical & corrosive gases | Much longer life of the cable

Applications of HT Cable



Power Transmission and Distribution

Used in electric utilities, power plants, and substations for transmission and distribution of electricity at medium voltage levels (3.3 kV to 33 kV).

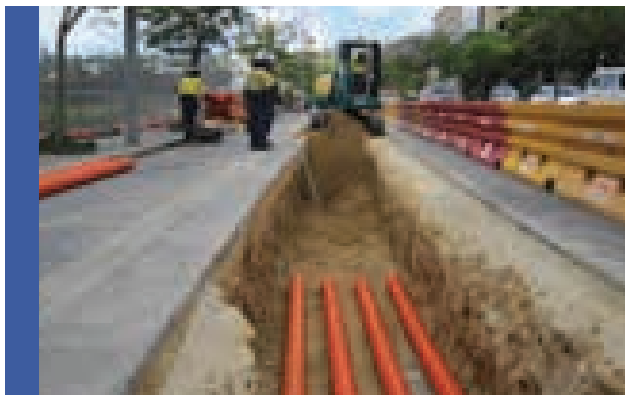
Suitable for feeder lines from substations to industrial and commercial loads.



Industrial Installations

Widely used in steel plants, chemical plants, oil refineries, mines, and manufacturing units.

Suitable for areas with continuous or high load operation requiring reliable and stable power supply.



Underground Power Networks

Installed in urban underground power networks where overhead lines are not feasible due to space or aesthetic reasons.

Ideal for congested city areas, townships, and large residential complexes.



Indoor and Outdoor Installations

Suitable for both indoor (in cable trays or ducts) and outdoor (direct burial or laid in trenches) installations.

Designed to withstand mechanical stress, moisture, and chemical exposure when properly protected.



Renewable Energy Projects

Used for interconnecting transformers, switchgear, and grid connection in solar power and wind energy plants.



Infrastructure and Metro Projects

Applied in railway electrification, metro rail systems, and airports for reliable high-voltage power distribution.

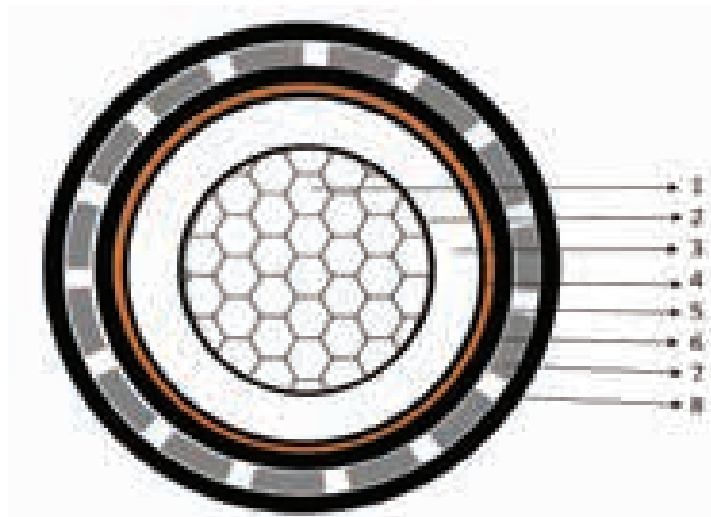


Temporary and Emergency Power

Can be used in temporary setups like construction sites or event power systems when installed with proper protective measures.

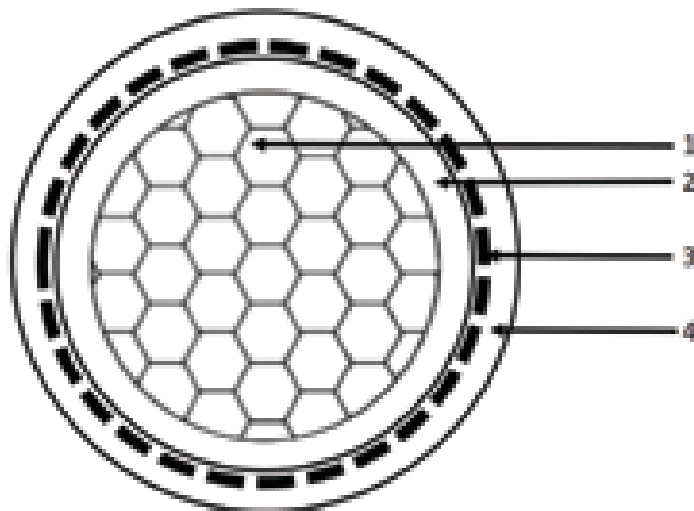
Cross Sectional Drawing

For Single Core screened Armoured Cable



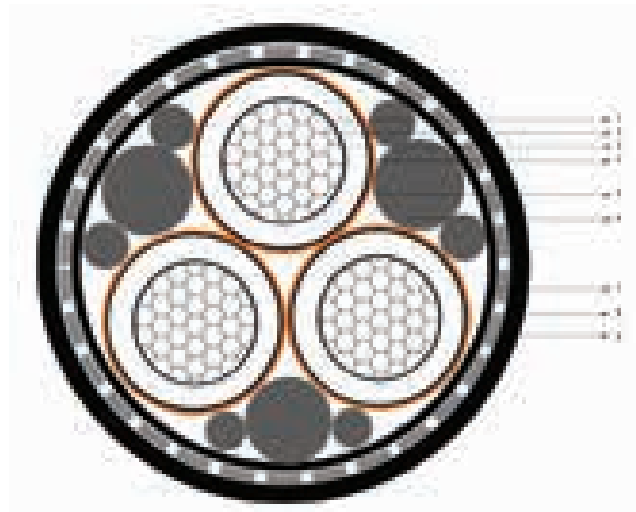
Label No.	Particulars
1	Standard Compacted Circular Aluminium/Copper as per Class-2 of IS 8130
2	Semiconducting compound for conductor screening
3	XLPE insulation as per IS 7098 Part 2
4	Semiconducting compound for insulation screening
5	Metallic screening
6	PVC Type ST2 as per IS 5831/Thermoplastic Tape/Polyethylene Outer sheath
7	Single Layer of Aluminium Flat strip/Round wire armour
8	PVC Type ST2 as per IS 5831/Polyethylene Outer sheath

For Single Core unscreened Armoured Cable



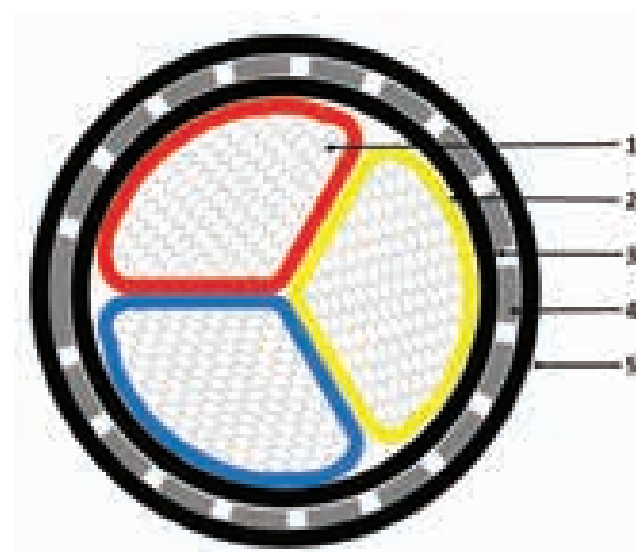
Label No.	Particulars
1	Standard Compacted Circular Aluminium/Copper as per Class-2 of IS 8130
2	XLPE insulation as per IS 7098 Part 2
3	Single Layer of Aluminium Flat strip/Round wire armour
4	PVC Type ST2 as per IS 5831/Polyethylene Outer sheath

For Three Core screened Armoured Cable



Label No.	Particulars
1	Standard Compacted Circular Aluminium/Copper as per Class-2 of IS 8130
2	Semiconducting compound for conductor screening
3	XLPE insulation as per IS 7098 Part 2
4	Semiconducting compound for insulation screening
5	Metallic screening
6	Non hygroscopic PVC/PP Filters
7	PVC Type ST2 as per IS 5831/Thermoplastic Tape/Polyethylene Outer sheath
8	Single Layer of Galvanized Sheet Flat strip/Round Wire armour as per IS 3975
9	PVC Type ST2 as per IS 5831/Polyethylene Outer sheath

For Three Core unscreened Armoured Cable



Label No.	Particulars
1	Standard Compacted Circular Aluminium/Copper as per Class-2 of IS 8130
2	XLPE insulation as per IS 7098 Part 2
3	PVC Type ST2 as per IS 5831/Thermoplastic Tape
4	Single Layer of Galvanized Steel Flat strip/Round Wire armour as per IS 3975
5	PVC Type ST2 as per IS 5831

Quality Assurance

Fort Gloster always aim to achieve satisfaction of customer, For that Fort Gloster has up to date laboratory facilities. In the manufacture of cables, intelligent efforts are incorporated to achieve quality. For a quality end product, Control starts from proper design of the product. All raw materials are selected carefully and only materials of high quality are used in Fort gloster product.

Test

Fort Gloster is self sufficient to carry out all Routine, Acceptance & Type Tests in its own laboratory. It has world class Testing facilities for Routine, Acceptance & Type Tests.

Routine Test:

- (i) Partial Discharge Test (For HT Screen cables).
- (ii) High Voltage Test.
- (iii) Conductor Resistance Test.

Type Tests:

The cable samples are type tested in-house to ensure conformance as to various standards.

- (i) Electrical Tests.
- (ii) Physical and mechanical Tests.
- (iii) Special Tests.
- (iv) Chemical & Fire Tests.



Conductor Short Circuit Current Ratings for XLPE Insulated Cables

Short Circuit Rating for 1 second duration for Copper and Aluminium Conductor with XLPE insulated cable (KAmps)

Nominal Size of Conductor (Sq.mm)	Copper	Aluminium
25	3.58	2.35
35	5.01	3.29
50	7.15	4.70
70	10.01	6.58
95	13.59	8.93
120	17.16	11.28
150	21.45	14.10
185	26.46	17.39
240	34.32	22.56
300	42.90	28.20
400	57.20	37.60
500	71.50	47.00
630	90.09	59.22
800	114.40	75.20
1000	143.00	94.00

For XLPE Insulation

Maximum conductor temperature during operation condition: 90°C

Maximum conductor temperature during short circuit condition: 250°C

Formula relating short Circuit Rating with duration

$$I_{sh} = \frac{K \times A}{\sqrt{t}}$$

Where,

A = Cross sectional area of the current carrying component in sq.mm

Ish = Short circuit current in KA for t second

t = Duration of short circuit in second

K = Short circuit current rating factor depending on conductor & Insulation material

K = 0.094 for Aluminium conductor & XLPE insulation

K = 0.143 for Copper conductor & XLPE insulation



Table 2: Minimum number of wires in a conductor, Maximum DC resistance of conductor and AC resistance of conductor

Nominal size of conductor (sq.mm)	Minimum Number of Wires		Maximum DC resistance of conductor at 20°C (Ω/Km)		Approx. AC resistance of conductor at 90°C (Ω/Km)	
	Aluminium	Copper	Aluminium	Copper	Aluminium	Copper
25	6	6	1.2	0.727	1.539	0.927
35	6	6	0.868	0.524	1.113	0.668
50	6	6	0.641	0.387	0.822	0.494
70	12	12	0.443	0.268	0.568	0.342
95	15	15	0.32	0.193	0.411	0.247
120	15	18	0.253	0.153	0.325	0.196
150	15	18	0.206	0.124	0.265	0.159
185	30	30	0.164	0.0991	0.211	0.128
240	30	34	0.125	0.0754	0.161	0.098
300	30	34	0.1	0.0601	0.130	0.080
400	53	53	0.0778	0.047	0.102	0.064
500	53	53	0.0605	0.0366	0.080	0.051
630	53	53	0.0469	0.0283	0.063	0.042
800	53	53	0.0367	0.0221	0.051	0.035
1000	53	53	0.0291	0.0176	0.042	0.030

Table 3 : Approximate Reactance for single core cable with flat strip armoured cable (mH/Km)

Nominal size of conductor (sq.mm)	Voltage Grade						
	1.9/3.3 KV	3.8/6.6 KV	6.6/6.6 KV or 6.35/11 KV	11/11 KV	12.7/22 KV	19/33 KV	33/33 KV
25	0.129	0.139	0.144	0.154	-	-	-
35	0.122	0.131	0.136	0.146	0.149	-	-
50	0.118	0.126	0.13	0.14	0.143	0.154	-
70	0.110	0.116	0.121	0.13	0.132	0.143	0.144
95	0.104	0.110	0.114	0.123	0.125	0.135	0.136
120	0.101	0.106	0.11	0.119	0.121	0.131	0.132
150	0.098	0.103	0.107	0.115	0.117	0.127	0.128
185	0.095	0.100	0.104	0.111	0.113	0.122	0.123
240	0.092	0.096	0.099	0.106	0.108	0.117	0.118
300	0.089	0.095	0.097	0.104	0.105	0.114	0.114
400	0.088	0.091	0.093	0.099	0.101	0.109	0.109
500	0.085	0.089	0.09	0.095	0.097	0.104	0.105
630	0.084	0.087	0.088	0.093	0.094	0.101	0.102
800	0.083	0.085	0.085	0.09	0.092	0.098	0.099
1000	0.082	0.083	0.083	0.088	0.089	0.095	0.095

Table 4 : Approximate Reactance for single core cable with round wire armoured cable (mH/Km)

Nominal size of conductor (sq.mm)	Voltage Grade						
	1.9/3.3 KV	3.8/6.6 KV	6.6/6.6 KV or 6.35/11 KV	11/11 KV	12.7/22 KV	19/33 KV	33/33 KV
25	0.129	0.144	0.148	0.158	-	-	-
35	0.122	0.136	0.141	0.15	0.153	-	-
50	0.118	0.13	0.134	0.144	0.146	0.158	-
70	0.110	0.121	0.124	0.134	0.136	0.148	0.149
95	0.104	0.114	0.117	0.127	0.129	0.139	0.140
120	0.101	0.11	0.114	0.124	0.125	0.135	0.136
150	0.098	0.107	0.111	0.12	0.121	0.131	0.131
185	0.095	0.103	0.108	0.115	0.117	0.126	0.127
240	0.092	0.101	0.104	0.11	0.112	0.121	0.121
300	0.089	0.099	0.101	0.107	0.109	0.119	0.119
400	0.088	0.096	0.097	0.103	0.104	0.113	0.113
500	0.085	0.093	0.094	0.1	0.102	0.109	0.109
630	0.084	0.091	0.091	0.097	0.098	0.105	0.106
800	0.083	0.089	0.09	0.095	0.096	0.102	0.102
1000	0.082	0.087	0.087	0.092	0.093	0.1	0.1

Table 5 : Approximate Reactance for Three core armoured cable (mH/Km)

Nominal size of conductor (sq.mm)	Voltage Grade						
	1.9/3.3 KV	3.8/6.6 KV	6.6/6.6 KV or 6.35/11 KV	11/11 KV	12.7/22 KV	19/33 KV	33/33 KV
25	0.099	0.119	0.126	0.14	-	-	-
35	0.096	0.113	0.119	0.133	0.136	-	-
50	0.092	0.108	0.114	0.127	0.13	0.144	-
70	0.085	0.100	0.106	0.117	0.12	0.134	0.135
95	0.082	0.095	0.100	0.111	0.113	0.126	0.127
120	0.079	0.092	0.097	0.107	0.11	0.122	0.123
150	0.078	0.09	0.094	0.104	0.106	0.118	0.119
185	0.076	0.087	0.091	0.1	0.102	0.113	0.114
240	0.074	0.084	0.088	0.096	0.098	0.109	0.109
300	0.073	0.083	0.086	0.094	0.096	0.105	0.106
400	0.071	0.081	0.083	0.09	0.092	0.101	0.101

Table 6 : Approximate Electrostatic capacitance of cable (µFd/km)

Nominal size of conductor (sq.mm)	Voltage Grade							
	1.9/3.3 KV	3.8/6.6 KV	6.6/6.6 KV	6.35/11 KV	11/11 KV	12.7/22 KV	19/33 KV	33/33 KV
25	0.23	0.24	0.20	0.20	0.15	-	-	-
35	0.26	0.26	0.22	0.22	0.16	0.15	-	-
50	0.29	0.29	0.24	0.24	0.18	0.17	0.13	-
70	0.33	0.33	0.27	0.27	0.2	0.18	0.14	0.14
95	0.39	0.38	0.31	0.31	0.22	0.21	0.16	0.16
120	0.42	0.41	0.33	0.33	0.24	0.22	0.17	0.17
150	0.46	0.45	0.36	0.36	0.26	0.24	0.18	0.18
185	0.5	0.48	0.39	0.39	0.28	0.26	0.19	0.19
240	0.57	0.54	0.44	0.44	0.31	0.29	0.21	0.21
300	0.62	0.55	0.47	0.47	0.33	0.31	0.23	0.22
400	0.68	0.57	0.53	0.53	0.37	0.34	0.25	0.25
500	0.73	0.61	0.60	0.60	0.41	0.38	0.28	0.28
630	0.76	0.69	0.67	0.67	0.46	0.43	0.31	0.31
800	0.77	0.76	0.74	0.74	0.51	0.47	0.34	0.33
1000	0.82	0.83	0.83	0.83	0.56	0.52	0.38	0.37



Weight, Dimension Data & Current Carrying Capacity of Cable

Table 1 : 1.9/3.3 KV or 3.3/3.3 KV, Single Core Aluminium/Copper Conductor, XLPE Insulated, armoured unscreened cables conforming to IS:7098 Part 2, Latest amendments

Nominal size of conductor (sq.mm)	Nominal Thickness of Insulation (mm)	Aluminium Flat Strip Armoured Cable					Aluminium Round Wire Armoured Cable					Current Carrying Capacity			
		Nominal size of Armour (mm)	Minimum Thickness of PVC Outer Sheath (mm)	Approx. overall diameter of Cable (mm)	Approx. Weight of cable (kg/km)		Nominal size of Armour (mm)	Minimum Thickness of PVC Outer Sheath (mm)	Approx. overall diameter of Cable (mm)	Approx. Weight of cable (kg/km)		In Ground at 30°C (A)		In Air at 40°C (A)	
					Aluminium	Copper				Aluminium	Copper	Aluminium	Copper	Aluminium	Copper
25	2.5	-	-	-	-	-	1.4	1.24	16.0	320	470	99	127	115	148
35	2.5	-	-	-	-	-	1.4	1.24	17.0	370	585	117	151	139	179
50	2.5	-	-	-	-	-	1.4	1.4	18.5	440	725	138	178	166	214
70	2.5	4.0 X 0.8	1.4	19	485	895	1.6	1.4	20.5	555	960	168	216	208	267
95	2.5	4.0 X 0.8	1.4	21	605	1160	1.6	1.4	22.5	665	1225	200	256	252	323
120	2.5	4.0 X 0.8	1.4	22	685	1390	1.6	1.4	24.0	760	1465	227	290	292	374
150	2.5	4.0 X 0.8	1.4	23.5	780	1665	1.6	1.4	25.0	860	1750	252	323	329	422
185	2.5	4.0 X 0.8	1.4	25	915	2005	1.6	1.4	26.5	1000	2090	285	362	380	484
240	2.5	4.0 X 0.8	1.4	27.5	1115	2545	1.6	1.56	29.5	1220	2650	326	411	448	565
300	2.5	4.0 X 0.8	1.56	29.5	1320	3135	1.6	1.56	31.0	1410	3235	365	456	511	641
400	2.6	4.0 X 0.8	1.56	33	1615	3945	2	1.56	35.5	1805	4135	412	508	593	734
500	2.8	4.0 X 0.8	1.56	37	2015	4975	2	1.56	39.5	2220	5180	461	559	680	828
630	3	4.0 X 0.8	1.72	41	2505	6330	2	1.72	43.5	2745	6565	514	611	777	929
800	3.3	4.0 X 0.8	1.88	45.5	3145	8045	2	1.88	48.0	3400	8310	552	638	863	1002
1000	3.5	4.0 X 0.8	1.88	50.5	3815	9975	2.5	2.04	54.0	4295	10450	595	672	954	1083

Table 2 : 3.8/6.6 KV, Single Core Aluminium/Copper Conductor, XLPE Insulated, armoured screened cables conforming to IS:7098 Part 2, Latest amendments

Nominal size of conductor (sq.mm)	Nominal Thickness of Insulation (mm)	Minimum thickness of inner sheath (mm)	Aluminium Flat Strip Armoured Cable					Aluminium Round Wire Armoured Cable					Current Carrying Capacity			
			Nominal size of Armour (mm)	Minimum Thickness of PVC Outer Sheath (mm)	Approx. overall diameter of Cable (mm)	Approx. Weight of cable (kg/km)		Nominal size of Armour (mm)	Minimum Thickness of PVC Outer Sheath (mm)	Approx. overall diameter of Cable (mm)	Approx. Weight of cable (kg/km)		In Ground at 30°C (A)		In Air at 30°C (A)	
						Aluminium	Copper				Aluminium	Copper	Aluminium	Copper	Aluminium	Copper
25	2.8	0.3	4 X 0.8	1.40	19.0	455	605	1.6	1.4	20.5	515	675	99	127	88	113
35	2.8	0.3	4 X 0.8	1.40	20.0	515	725	1.6	1.4	21.5	575	785	117	151	104	135
50	2.8	0.3	4 X 0.8	1.40	21.0	570	860	1.6	1.4	22.5	645	930	138	178	123	158
70	2.8	0.3	4 X 0.8	1.40	22.5	670	1085	1.6	1.4	24.0	745	1160	168	216	149	192
95	2.8	0.3	4 X 0.8	1.40	24.5	800	1360	1.6	1.4	26.0	880	1440	200	256	177	227
120	2.8	0.3	4 X 0.8	1.40	26.0	900	1605	1.6	1.4	27.5	980	1690	227	290	201	257
150	2.8	0.3	4 X 0.8	1.40	27.0	1000	1895	1.6	1.56	29.0	1115	2010	252	323	223	285
185	2.8	0.3	4 X 0.8	1.56	29.0	1165	2270	1.6	1.56	30.5	1265	2365	285	362	251	319
240	2.8	0.4	4 X 0.8	1.56	31.5	1400	2830	2	1.56	34.0	1585	3005	326	411	286	361
300	3.0	0.4	4 X 0.8	1.56	34.0	1630	3450	2	1.56	36.5	1820	3640	365	456	319	400
400	3.3	0.4	4 X 0.8	1.56	37.5	1985	4310	2	1.72	40.5	2225	4550	412	508	359	443
500	3.5	0.5	4 X 0.8	1.72	42.0	2465	5430	2	1.88	44.5	2740	5700	461	559	401	486
630	3.5	0.5	4 X 0.8	1.88	46.0	2990	6810	2	1.88	48.5	3245	7070	514	611	445	529
800	3.5	0.5	4 X 0.8	1.88	49.5	3580	8485	2.5	2.04	53.5	4040	8965	552	638	476	549
1000	3.6	0.6	4 X 0.8	2.04	55.0	4340	10515	2.5	2.2	58.5	4885	11050	595	672	509	575

Table 3 : 6.6/6.6 KV or 6.35/11 KV, Single Core Aluminium/Copper Conductor, XLPE Insulated, armoured screened cables conforming to IS:7098 Part 2, Latest amendments

Nominal size of conductor (sq.mm)	Nominal Thickness of Insulation (mm)	Minimum thickness of inner sheath (mm)	Aluminium Flat Strip Armoured Cable					Aluminium Round Wire Armoured Cable					Current Carrying Capacity			
			Nominal size of Armour (mm)	Minimum Thickness of PVC Outer Sheath (mm)	Approx. overall diameter of Cable (mm)	Approx. Weight of cable (kg/km)		Nominal size of Armour (mm)	Minimum Thickness of PVC Outer Sheath (mm)	Approx. overall diameter of cable (mm)	Approx. Weight of cable (kg/km)		In Ground at 30°C (A)		In Duct at 30°C (A)	
						Aluminium	Copper				Aluminium	Copper	Aluminium	Copper	Aluminium	Copper
25	3.6	0.3	4 X 0.8	1.40	20.5	515	665	1.6	1.4	22.0	585	735	99	127	88	113
35	3.6	0.3	4 X 0.8	1.40	21.5	575	785	1.6	1.4	23.0	650	860	118	151	104	134
50	3.6	0.3	4 X 0.8	1.40	22.5	645	925	1.6	1.4	24.5	720	1000	138	178	122	158
70	3.6	0.3	4 X 0.8	1.40	24.0	745	1155	1.6	1.4	26.0	820	1230	168	216	149	191
95	3.6	0.3	4 X 0.8	1.40	26.0	875	1435	1.6	1.4	28.0	960	1515	200	257	177	227
120	3.6	0.3	4 X 0.8	1.40	27.5	975	1680	1.6	1.56	29.5	1085	1790	227	290	200	256
150	3.6	0.3	4 X 0.8	1.56	29.0	1100	2000	1.6	1.56	31.0	1200	2095	252	323	223	285
185	3.6	0.4	4 X 0.8	1.56	31.0	1275	2370	2.0	1.56	33.5	1450	2540	284	360	250	317
240	3.6	0.4	4 X 0.8	1.56	33.5	1490	2920	2.0	1.56	35.5	1685	3115	326	411	286	361
300	3.6	0.4	4 X 0.8	1.56	35.0	1695	3515	2.0	1.56	37.5	1895	3715	365	456	319	399
400	3.6	0.4	4 X 0.8	1.72	38.5	2045	4375	2.0	1.72	41.0	2270	4595	412	508	359	443
500	3.6	0.5	4 X 0.8	1.72	42.0	2480	5445	2.0	1.88	45.0	2750	5715	461	559	401	486
630	3.6	0.5	4 X 0.8	1.88	46.5	3005	6825	2.0	1.88	48.5	3270	7095	514	611	445	529
800	3.6	0.5	4 X 0.8	1.88	50.0	3595	8510	2.5	2.04	53.5	4070	8980	553	639	476	550
1000	3.6	0.6	4 X 0.8	2.04	55.0	4340	10515	2.5	2.2	58.5	4885	11050	595	672	509	575

Table 4 : 11/11 KV, Single Core Aluminium/Copper Conductor, XLPE Insulated, armoured screened cables conforming to IS:7098 Part 2, Latest amendments

Nominal size of conductor (sq.mm)	Nominal Thickness of Insulation (mm)	Minimum thickness of inner sheath (mm)	Aluminium Flat Strip Armoured Cable				Aluminium Round Wire Armoured Cable				Current Carrying Capacity							
			Nominal size of Armour (mm)	Minimum Thickness of PVC Outer Sheath (mm)	Approx. overall diameter of Cable (mm)	Approx. Weight of cable (kg/km)		Nominal size of Armour (mm)	Minimum Thickness of PVC Outer Sheath (mm)	Approx. overall diameter of Cable (mm)	In Ground at 30°C (A)		In Duct at 30°C (A)		In Air at 40°C (A)			
						Aluminium	Copper				Aluminium	Copper	Aluminium	Copper	Aluminium	Copper		
25	5.5	0.3	4 X 0.8	1.40	24.5	680	830	1.6	1.40	26.0	755	905	99	127	88	113	116	150
35	5.5	0.3	4 X 0.8	1.40	25.5	740	950	1.6	1.40	27.0	825	1035	118	151	104	134	140	181
50	5.5	0.3	4 X 0.8	1.40	26.5	815	1095	1.6	1.56	28.5	925	1205	138	178	122	158	167	216
70	5.5	0.3	4 X 0.8	1.56	28.5	940	1350	1.6	1.56	30.0	1035	1445	168	216	149	191	209	269
95	5.5	0.3	4 X 0.8	1.56	30.5	1080	1640	2.0	1.56	33.0	1255	1815	200	257	177	227	254	326
120	5.5	0.4	4 X 0.8	1.56	32.0	1205	1910	2.0	1.56	34.0	1385	2095	227	290	200	256	294	376
150	5.5	0.4	4 X 0.8	1.56	33.0	1325	2220	2.0	1.56	35.5	1520	2410	252	323	223	285	331	424
185	5.5	0.4	4 X 0.8	1.56	34.5	1485	2580	2.0	1.56	37.0	1685	2785	284	360	250	317	383	487
240	5.5	0.4	4 X 0.8	1.56	37.0	1725	3145	2.0	1.72	40.0	1965	3385	326	411	286	361	450	568
300	5.5	0.4	4 X 0.8	1.72	39.0	1970	3790	2.0	1.72	41.5	2190	4010	365	456	319	399	512	643
400	5.5	0.5	4 X 0.8	1.72	42.5	2330	4660	2.0	1.88	45.0	2605	4940	412	508	359	443	594	735
500	5.5	0.5	4 X 0.8	1.88	46.5	2790	5755	2.5	2.04	50.0	3225	6190	461	559	401	486	680	828
630	5.5	0.5	4 X 0.8	1.88	50.0	3300	7125	2.5	2.04	54.0	3780	7600	514	611	445	529	778	930
800	5.5	0.6	4 X 0.8	2.04	54.0	3985	8895	2.5	2.20	58.0	4510	9425	553	639	476	550	863	1003
1000	5.5	0.6	4 X 0.8	2.20	59.0	4755	10920	2.5	2.36	62.5	5305	11485	595	672	509	575	954	1083

Table 5 : 12.7/22 KV, Single Core Aluminium/Copper Conductor, XLPE Insulated, armoured screened cables conforming to IS:7098 Part 2, Latest amendments

Nominal size of conductor (sq.mm)	Nominal Thickness of Insulation (mm)	Aluminium Flat Strip Armoured Cable				Aluminium Round Wire Armoured Cable				Current Carrying Capacity			
		Minimum thickness of inner sheath (mm)	Nominal size of Armour (mm)	Minimum Thickness of PVC Outer Sheath (mm)	Approx. overall diameter of Cable (mm)	Approx. Weight of cable (kg/km)		Nominal size of Armour (mm)	Minimum Thickness of PVC Outer Sheath (mm)	Approx. overall diameter of Cable (mm)	Approx. Weight of cable (kg/km)		In Ground at 30°C (A)
						Aluminium	Copper				Aluminium	Copper	Aluminium
35	6.0	0.3	4 X 0.8	1.40	26.5	785	995	1.6	1.56	28.5	900	1110	116
50	6.0	0.3	4 X 0.8	1.56	28.0	885	1165	1.6	1.56	29.5	975	1255	137
70	6.0	0.3	4 X 0.8	1.56	29.5	995	1405	1.6	1.56	31.0	1095	1500	167
95	6.0	0.4	4 X 0.8	1.56	31.5	1155	1715	2.0	1.56	34.0	1330	1890	198
120	6.0	0.4	4 X 0.8	1.56	33.0	1265	1970	2.0	1.56	35.0	1445	2155	224
150	6.0	0.4	4 X 0.8	1.56	34.0	1390	2280	2.0	1.56	36.5	1580	2480	249
185	6.0	0.4	4 X 0.8	1.56	35.5	1550	2645	2.0	1.72	38.5	1780	2875	280
240	6.0	0.4	4 X 0.8	1.56	38.0	1780	3210	2.0	1.72	41.0	2030	3460	321
300	6.0	0.4	4 X 0.8	1.72	40.0	2030	3860	2.0	1.72	42.5	2260	4090	355
400	6.0	0.5	4 X 0.8	1.88	44.0	2440	4770	2.0	1.88	46.0	2685	5015	400
500	6.0	0.5	4 X 0.8	1.88	47.5	2870	5835	2.5	2.04	51.0	3310	6275	447
630	6.0	0.5	4 X 0.8	2.04	51.5	3425	7245	2.5	2.04	55.0	3870	7690	496
800	6.0	0.6	4 X 0.8	2.04	55.0	4075	8990	2.5	2.2	59.0	4610	9525	543
1000	6.0	0.6	4 X 0.8	2.20	60.0	4845	11025	2.5	2.36	63.5	5410	11590	572

Table 6 : 19/33 KV, Single Core Aluminium/Copper Conductor, XLPE Insulated, armoured screened cables conforming to IS:7098 Part 2, Latest amendments

Nominal size of conductor (sq.mm)	Nominal Thickness of Insulation (mm)	Minimum thickness of inner sheath (mm)	Aluminium Flat Strip Armoured Cable				Aluminium Round Wire Armoured Cable				Current Carrying Capacity			
			Nominal size of Armour (mm)	Minimum Thickness of PVC Outer Sheath (mm)	Approx. overall diameter of Cable (mm)	Approx. Weight of cable (kg/km)		Nominal size of Armour (mm)	Minimum Thickness of PVC Outer Sheath (mm)	Approx. overall diameter of Cable (mm)	Approx. Weight of cable (kg/km)		In Ground at 30°C (A)	In Air at 40°C (A)
						Aluminium	Copper				Aluminium	Copper	Aluminium	Copper
50	8.8	0.4	4 X 0.8	1.56	33.5	1195	1480	2.0	1.56	36.0	1390	1670	137	174
70	8.8	0.4	4 X 0.8	1.56	35.0	1320	1730	2.0	1.56	37.5	1520	1930	167	217
95	8.8	0.4	4 X 0.8	1.56	37.0	1490	2045	2.0	1.72	40.0	1730	2290	198	262
120	8.8	0.4	4 X 0.8	1.72	38.5	1630	2335	2.0	1.72	41.0	1850	2555	224	302
150	8.8	0.4	4 X 0.8	1.72	40.0	1765	2670	2.0	1.72	42.5	1995	2900	249	339
185	8.8	0.5	4 X 0.8	1.72	42.0	1955	3065	2.0	1.88	44.5	2230	3340	280	389
240	8.8	0.5	4 X 0.8	1.88	44.5	2255	3685	2.0	1.88	47.0	2505	3935	321	455
300	8.8	0.5	4 X 0.8	1.88	46.5	2490	4315	2.5	2.04	50.0	2925	4750	355	515
400	8.8	0.5	4 X 0.8	2.04	49.5	2905	5235	2.5	2.04	53.0	3330	5660	400	594
500	8.8	0.6	4 X 0.8	2.04	53.5	3395	6360	2.5	2.2	57.0	3910	6875	447	678
630	8.8	0.6	4 X 0.8	2.20	57.5	4005	7830	2.5	2.36	61.5	4550	8375	496	770
800	8.8	0.6	4 X 0.8	2.36	61.5	4705	9630	2.5	2.36	65.0	5240	10160	543	866
1000	8.8	0.7	4 X 0.8	2.36	66.0	5495	11680	3.15	2.52	71.0	6385	12555	572	944

Table 7 : 33/33 KV, Single Core Aluminium/Copper Conductor, XLPE Insulated, armoured screened cables conforming to IS:7098 Part 2, Latest amendments

Nominal size of conductor (sq.mm)	Nominal Thickness of Insulation (mm)	Minimum thickness of inner sheath (mm)	Aluminium Flat Strip Armoured Cable				Aluminium Round Wire Armoured Cable				Current Carrying Capacity			
			Nominal size of Armour (mm)	Minimum Thickness of PVC Outer Sheath (mm)	Approx. overall diameter of Cable (mm)	Approx. Weight of cable (kg/km)		Nominal size of Armour (mm)	Minimum Thickness of PVC Outer Sheath (mm)	Approx. overall diameter of Cable (mm)	Approx. Weight of cable (kg/km)		In Ground at 30°C (A)	
						Aluminium	Copper				Aluminium	Copper	Aluminium	Copper
70	9.0	0.4	4 X 0.8	1.56	35.5	1350	1760	2.0	1.72	38.5	1580	1990	167	214
95	9.0	0.4	4 X 0.8	1.56	37.5	1510	2070	2.0	1.72	40.5	1750	2310	198	253
120	9.0	0.4	4 X 0.8	1.72	39.0	1660	2370	2.0	1.72	41.5	1880	2590	224	285
150	9.0	0.4	4 X 0.8	1.72	40.5	1800	2695	2.0	1.72	43.0	2030	2925	249	317
185	9.0	0.5	4 X 0.8	1.72	42.0	1990	3090	2.0	1.88	45.0	2265	3365	280	355
240	9.0	0.5	4 X 0.8	1.88	45.0	2285	3710	2.0	1.88	47.5	2540	3970	321	404
300	9.0	0.5	4 X 0.8	1.88	46.5	2520	4350	2.5	2.04	50.5	2955	4795	355	442
400	9.0	0.5	4 X 0.8	2.04	50.0	2935	5265	2.5	2.04	53.5	3375	5705	400	490
500	9.0	0.6	4 X 0.8	2.04	54.0	3430	6395	2.5	2.2	57.5	3945	6910	447	538
630	9.0	0.6	4 X 0.8	2.20	58.0	4045	7865	2.5	2.36	61.5	4585	8410	496	586
800	9.0	0.6	4 X 0.8	2.36	62.0	4740	9670	2.5	2.36	65.0	5280	10195	543	629
1000	9.0	0.7	4 X 0.8	2.36	66.5	5535	11720	3.15	2.52	71.5	6425	12595	572	643

Table 8 : 1.9/3.3 KV or 3.3/3.3 KV, Three Core Aluminium/Copper Conductor, XLPE Insulated, Armoured unscreened cables conforming to IS:7098 Part 2, Latest amendments

Nominal size of conductor (sq.mm)	Nominal Thickness of Insulation (mm)	Minimum thickness of inner sheath (mm)	Galvanized steel Flat Strip Armoured Cable				Galvanized steel Round Wire Armoured Cable				Current Carrying Capacity			
			Nominal Dimension of Strip (mm)	Minimum Thickness of PVC Outer Sheath (mm)	Approx. overall diameter of Cable (mm)	Approx. Weight of cable (kg/km)		Nominal size of Armour (mm)	Minimum Thickness of PVC Outer Sheath (mm)	Approx. overall diameter of Cable (mm)	Approx. Weight of cable (kg/km)		In Ground at 30°C (A)	
						Aluminium	Copper				Aluminium	Copper	Aluminium	Copper
25	2.2	0.3	4.0 X 0.8	1.4	28.5	1040	1490	1.6	1.56	30.5	1365	1815	94	121
35	2.2	0.3	4.0 X 0.8	1.56	31	1200	1835	1.6	1.56	32.5	1530	2180	112	144
50	2.2	0.4	4.0 X 0.8	1.56	34	1420	2265	2	1.56	36.5	1995	2870	131	169
70	2.2	0.4	4.0 X 0.8	1.56	38	1740	2955	2	1.56	40.5	2400	3620	160	206
95	2.2	0.4	4.0 X 0.8	1.72	42	2090	3820	2	1.72	44.5	2840	4570	191	246
120	2.2	0.5	4.0 X 0.8	1.72	47	2475	4605	2	1.88	49.5	3350	5475	216	278
150	2.2	0.5	4.0 X 0.8	1.88	49.5	2815	5465	2.5	2.04	53.5	4115	6810	241	310
185	2.2	0.5	4.0 X 0.8	2.04	53.5	3290	6605	2.5	2.04	57	4670	8005	273	350
240	2.2	0.6	4.0 X 0.8	2.2	60.5	4090	8425	2.5	2.2	63.5	5640	10015	315	401
300	2.2	0.6	4.0 X 0.8	2.2	64.5	4680	10195	2.5	2.36	68	6440	11975	354	449
400	2.2	0.7	4.0 X 0.8	2.52	72.5	5800	12845	3.15	2.68	77.5	8540	15630	403	506

Table 9 : 3.8/6.6 KV, Three Core Aluminium/Copper Conductor, XLPE Insulated, Armoured screened cables conforming to IS:7098 Part 2, 2011

Nominal size of conductor (sq.mm)	Nominal Thickness of Insulation (mm)	Minimum thickness of inner sheath (mm)	Galvanized steel Flat Strip Armoured Cable				Galvanized steel Round Wire Armoured Cable				Current Carrying Capacity			
			Nominal size of Armour (mm)	Minimum Thickness of PVC Outer Sheath (mm)	Approx. overall diameter of Cable (mm)	Approx. Weight of cable (kg/km)	Approx. Weight of cable (kg/km)	Nominal size of Armour (mm)	Minimum Thickness of PVC Outer Sheath (mm)	Approx. overall diameter of Cable (mm)	Approx. Weight of cable (kg/km)		In Ground at 30°C (A)	
											Aluminium	Copper	Aluminium	Copper
25	2.8	0.4	4 X 0.8	1.56	35.5	1705	2155	2.0	1.72	38.0	2345	2795	94	121
35	2.8	0.4	4 X 0.8	1.72	38.0	2005	2630	2.0	1.72	40.5	2650	3300	112	144
50	2.8	0.5	4 X 0.8	1.72	40.5	2240	3085	2.0	1.88	43.5	2975	3820	131	169
70	2.8	0.5	4 X 0.8	1.88	44.0	2670	3895	2.0	1.88	46.5	3430	4655	160	206
95	2.8	0.5	4 X 0.8	1.88	48.5	3155	4840	2.5	2.04	52.5	4455	6135	191	246
120	2.8	0.6	4 X 0.8	2.04	51.5	3660	5790	2.5	2.20	55.5	5025	7155	216	278
150	2.8	0.6	4 X 0.8	2.20	55.0	4055	6875	2.5	2.20	58.5	5455	8295	241	310
185	2.8	0.6	4 X 0.8	2.20	58.5	4650	7960	2.5	2.36	62.0	6220	9505	273	350
240	2.8	0.7	4 X 0.8	2.36	64.0	5555	9860	3.15	2.52	69.0	7945	12250	315	401
300	3.0	0.7	4 X 0.8	2.52	69.0	6390	11860	3.15	2.68	74.0	8975	14450	354	449
400	3.3	0.7	4 X 0.8	2.84	77.5	7945	14955	4.0	3.00	84.5	11925	18945	403	506

Table 10 : 6.6/6.6 KV or 6.35/11 KV, Three Core Aluminium Conductor, XLPE Insulated, Armoured screened cables conforming to IS:7098 Part 2, 2011

Nominal size of conductor (sq.mm)	Nominal Thickness of Insulation (mm)	Minimum thickness of inner sheath (mm)	Galvanized steel Flat Strip Armoured Cable				Galvanized steel Round Wire Armoured Cable				Current Carrying Capacity			
			Nominal size of Armour (mm)	Minimum Thickness of PVC Outer Sheath (mm)	Approx. overall diameter of Cable (mm)	Approx. Weight of cable (kg/km)	Approx. Weight of cable (kg/km)	Nominal size of Armour (mm)	Minimum Thickness of PVC Outer Sheath (mm)	Approx. overall diameter of Cable (mm)	Approx. Weight of cable (kg/km)		In Ground at 30°C (A)	
											Aluminium	Copper	Aluminium	Copper
25	3.6	0.4	4 X 0.8	1.72	39.0	2030	2485	2.0	1.72	41.5	2700	3155	94	121
35	3.6	0.5	4 X 0.8	1.72	41.5	2225	2940	2.0	1.88	44.5	2990	3705	112	144
50	3.6	0.5	4 X 0.8	1.88	44.5	2575	3420	2.5	2.04	48.0	3745	4595	131	169
70	3.6	0.5	4 X 0.8	1.88	47.5	2995	4220	2.5	2.04	51.5	4250	5515	161	207
95	3.6	0.6	4 X 0.8	2.04	52.5	3610	5295	2.5	2.20	56.5	4995	6880	190	245
120	3.6	0.6	4 X 0.8	2.20	55.5	3950	6080	2.5	2.20	59.0	5395	7525	216	278
150	3.6	0.6	4 X 0.8	2.20	58.5	4445	7140	2.5	2.36	62.0	6015	8725	242	311
185	3.6	0.7	4 X 0.8	2.36	62.5	5155	8440	3.15	2.52	67.5	7500	10785	273	349
240	3.6	0.7	4 X 0.8	2.52	68.0	5970	10275	3.15	2.68	73.0	8515	12750	315	401
300	3.6	0.7	4 X 0.8	2.68	72.0	6805	12305	3.15	2.84	77.0	9505	14985	354	449
400	3.6	0.7	4 X 0.8	2.84	79.0	8075	15090	4.0	3.00	85.5	12145	19160	404	506

Table 11 : 11/11 KV, Three Core Aluminium Conductor, XLPE Insulated, Armoured screened cables conforming to IS:7098 Part 2, 2011

Nominal size of conductor (sq. mm)	Nominal Thickness of Insulation (mm)	Minimum thickness of inner sheath (mm)	Galvanized steel Flat Strip Armoured Cable					Galvanized steel Round Wire Armoured Cable					Current Carrying Capacity						
			Nominal size of Armour (mm)	Minimum Thickness of PVC Outer Sheath (mm)	Approx. overall diameter of Cable (mm)	Approx. Weight of cable (kg/km)	Approx. Weight of cable (kg/km)		Nominal size of Armour (mm)	Minimum Thickness of PVC Outer Sheath (mm)	Approx. overall diameter of Cable (mm)	Approx. Weight of cable (kg/km)		In Ground at 30°C (A)		In Duct at 30°C (A)		In Air at 40°C (A)	
							Aluminium	Copper				Aluminium	Copper	Aluminium	Copper	Aluminium	Copper	Aluminium	Copper
25	5.5	0.5	4 X 0.8	1.88	48.0	2795	3250	3250	2.5	2.04	51.5	4050	4540	94	121	81	104	103	133
35	5.5	0.5	4 X 0.8	2.04	50.5	3065	3715	3715	2.5	2.20	54.5	4385	5035	112	144	97	124	124	160
50	5.5	0.6	4 X 0.8	2.20	53.5	3465	4310	4310	2.5	2.20	57.0	4850	5695	131	169	114	146	148	191
70	5.5	0.6	4 X 0.8	2.20	57.0	3940	5195	5195	2.5	2.36	60.5	5445	6680	161	207	139	178	184	237
95	5.5	0.6	4 X 0.8	2.36	61.5	4585	6270	6270	3.15	2.52	66.5	6885	8570	190	245	165	212	222	286
120	5.5	0.7	4 X 0.8	2.36	64.0	4965	7095	7095	3.15	2.52	69.0	7350	9480	216	278	188	240	256	329
150	5.5	0.7	4 X 0.8	2.52	67.5	5475	8160	8160	3.15	2.68	72.5	7950	10705	242	311	209	268	288	371
185	5.5	0.7	4 X 0.8	2.68	71.5	6180	9470	9470	3.15	2.84	76.5	8810	12170	273	349	240	302	330	422
240	5.5	0.7	4 X 0.8	2.84	76.5	7140	11440	11440	3.15	3.00	81.5	9975	14275	315	401	278	353	387	493
300	5.5	0.7	4 X 0.8	3.00	81.0	8055	13550	13550	4.0	3.00	87.0	12150	17635	354	449	312	395	441	560
400	5.5	0.7	4 X 0.8	3.00	87.5	9330	16345	16345	4.0	3.00	94.0	13750	20760	404	506	356	445	512	643

Table 12 : 12.7/22 KV, Three Core Aluminium Conductor, XLPE Insulated, Armoured screened cables conforming to IS:7098 Part 2, 2011

Nominal size of conductor (sq.mm)	Nominal Thickness of Insulation (mm)	Minimum thickness of inner sheath (mm)	Galvanized steel Flat Strip Armoured Cable					Galvanized steel Round Wire Armoured Cable					Current Carrying Capacity						
			Nominal size of Armour (mm)	Minimum Thickness of PVC Outer Sheath (mm)	Approx. overall diameter of Cable (mm)	Approx. Weight of cable (kg/km)	Approx. Weight of cable (kg/km)	Nominal size of Armour (mm)	Minimum Thickness of PVC Outer Sheath (mm)	Approx. overall diameter of Cable (mm)	Approx. Weight of cable (kg/km)		In Ground at 30°C (A)		In Duct at 30°C (A)		In Air at 40°C (A)		
											Aluminium	Copper	Aluminium	Copper	Aluminium	Copper	Aluminium	Copper	
35	6	0.6	4 X 0.8	2.04	53.0	3350	3980	3980	2.50	2.20	56.5	4730	5410	111	143	97	124	127	164
50	6	0.6	4 X 0.8	2.20	55.5	3645	4490	4490	2.50	2.36	59.5	5110	5955	130	167	116	146	152	196
70	6	0.6	4 X 0.8	2.36	59.0	4170	5405	5405	2.50	2.36	62.5	5670	6950	159	204	142	178	189	243
95	6	0.7	4 X 0.8	2.36	64.0	4810	6495	6495	3.15	2.52	69.0	7195	8880	189	243	169	212	227	293
120	6	0.7	4 X 0.8	2.52	66.5	5260	7385	7385	3.15	2.68	71.5	7755	9885	215	276	192	240	227	336
150	6	0.7	4 X 0.8	2.68	70.0	5710	8560	8560	3.15	2.68	74.5	8245	11140	239	307	214	268	294	378
185	6	0.7	4 X 0.8	2.68	73.5	6375	9690	9690	3.15	2.84	78.5	9120	12410	270	346	245	302	336	431
240	6	0.7	4 X 0.8	2.84	79.0	7370	11645	11645	4.00	3.00	85.5	11440	15635	312	398	282	353	393	503
300	6.0	0.7	4 X 0.8	3.00	83.0	8280	13785	13785	4.00	3.00	89.5	12445	18040	351	446	317	395	448	571
400	6	0.7	4 X 0.8	3.00	89.5	9735	16775	16775	4.00	3.00	96.0	14235	21355	400	503	361	445	519	655

Table 13 : 19/33 KV, Three Core Aluminium Conductor, XLPE Insulated, Armoured screened cables conforming to IS:7098 Part 2, 2011

Nominal size of conductor (sq.mm)	Nominal Thickness of Insulation (mm)	Minimum thickness of inner sheath (mm)	Galvanized steel Flat Strip Armoured Cable					Galvanized steel Round Wire Armoured Cable					Current Carrying Capacity						
			Nominal size of Armour (mm)	Minimum Thickness of PVC Outer Sheath (mm)	Approx. overall diameter of Cable (mm)	Approx. Weight of cable (kg/km)	Approx. Weight of cable (kg/km)	Nominal size of Armour (mm)	Minimum Thickness of PVC Outer Sheath (mm)	Approx. overall diameter of Cable (mm)	Approx. Weight of cable (kg/km)		In Ground at 30°C (A)		In Duct at 30°C (A)		In Air at 40°C (A)		
											Aluminium	Copper	Aluminium	Copper	Aluminium	Copper	Aluminium	Copper	
50	8.8	0.7	4 X 0.8	2.52	68.5	5080	5955	5955	3.15	2.68	73.5	7625	8535	130	167	116	146	152	196
70	8.8	0.7	4 X 0.8	2.68	72.0	5695	6935	6935	3.15	2.84	77.0	8370	9615	159	204	142	178	189	243
95	8.8	0.7	4 X 0.8	2.84	77.0	6425	8110	8110	3.15	3.00	82.0	9325	11005	189	243	169	212	227	293
120	8.8	0.7	4 X 0.8	2.84	79.5	6815	8945	8945	4.00	3.00	86.0	10885	13015	215	276	192	240	227	336
150	8.8	0.7	4 X 0.8	3.00	83.0	7485	10205	10205	4.00	3.00	89.0	11660	14465	239	307	214	268	294	378
185	8.8	0.7	4 X 0.8	3.00	86.0	8215	11515	11515	4.00	3.00	92.5	12555	15850	270	346	245	302	336	431
240	8.8	0.7	4 X 0.8	3.00	91.0	9215	13510	13510	4.00	3.00	97.5	13795	18095	312	398	282	353	393	503
300	8.8	0.7	4 X 0.8	3.00	95.0	10170	15660	15660	4.00	3.00	101.5	15000	20495	351	446	317	395	448	571
400	8.8	0.7	4 X 0.8	3.00	102.0	11750	18770	18770	4.00	3.00	108.0	16910	23930	400	503	361	445	519	655

Table 14 : 33/33 KV, Three Core Aluminium Conductor, XLPE Insulated, Armoured screened cables conforming to IS:7098 Part 2, 2011

Nominal size of conductor (sq.mm)	Nominal Thickness of Insulation (mm)	Minimum thickness of inner sheath (mm)	Galvanized steel Flat Strip Armoured Cable					Galvanized steel Round Wire Armoured Cable					Current Carrying Capacity						
			Nominal size of Armour (mm)	Minimum Thickness of PVC Outer Sheath (mm)	Approx. overall diameter of Cable (mm)	Approx. Weight of cable (kg/km)	Approx. Weight of cable (kg/km)	Nominal size of Armour (mm)	Minimum Thickness of PVC Outer Sheath (mm)	Approx. overall diameter of Cable (mm)	Approx. Weight of cable (kg/km)		In Ground at 30°C (A)		In Duct at 30°C (A)		In Air at 40°C (A)		
											Aluminium	Copper	Aluminium	Copper	Aluminium	Copper		Aluminium	Copper
70	9.0	0.7	4 X 0.8	2.68	73.0	5765	7005	7005	3.15	2.84	78.0	8505	9750	159	204	142	178	189	243
95	9.0	0.7	4 X 0.8	2.84	77.5	6520	8205	8205	4.00	3.00	84.5	10505	12190	189	243	169	212	227	293
120	9.0	0.7	4 X 0.8	3.00	80.5	6985	9270	9270	4.00	3.00	87.0	11075	13365	215	276	192	240	227	336
150	9.0	0.7	4 X 0.8	3.00	83.5	7580	10450	10450	4.00	3.00	90.0	11835	14710	239	307	214	268	294	378
185	9.0	0.7	4 X 0.8	3.00	87.0	8320	11620	11620	4.00	3.00	93.5	12740	16035	270	346	245	302	336	431
240	9.0	0.7	4 X 0.8	3.00	92.0	9320	13620	13620	4.00	3.00	98.5	13990	18285	312	398	282	353	393	503
300	9.0	0.7	4 X 0.8	3.00	96.0	10255	15770	15770	4.00	3.00	102.5	15085	20690	351	446	317	395	448	571
400	9.0	0.7	4 X 0.8	3.00	102.5	11860	18880	18880	4.00	3.00	109.0	17105	24130	400	503	361	445	519	655



Fort Gloster Industries Limited

From the house of Bangurs - Since 1958

An ISO 9001 : 2015 Company | CIN: U17232WB1890PLC000627

Corporate Office

Woodburn Central | 6th Floor | Unit 601
5A Woodburn Park | Kolkata - 700020

Regd Office & Works

PO Fort Gloster | Bauria | Howrah 711310

E sales@fortgloster.in | M +91 6292319430 | U www.fortgloster.com

Follow us



DISCLAIMER

Fort Gloster Industries Limited policy of continuous improvement may result in a change in specifications without prior notice. Any warranty of any nature relating to any Fort Gloster product is only contained in the written agreement between Fort Gloster Industries Limited and the direct purchaser of such product(s).