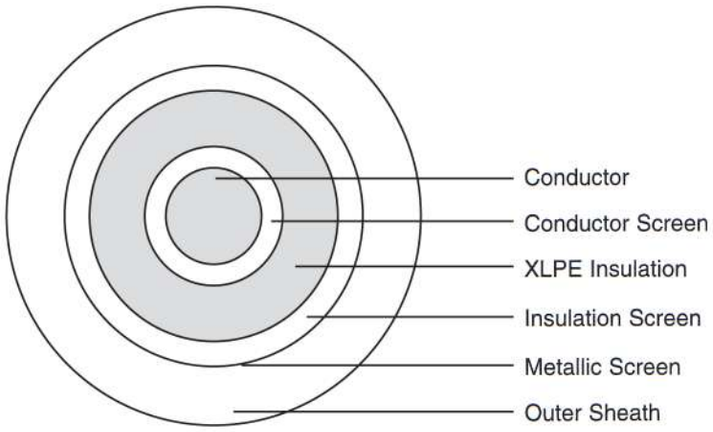
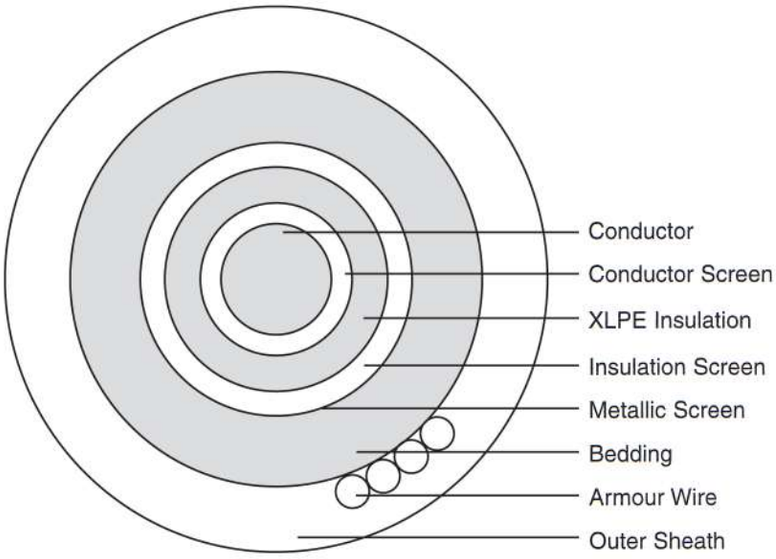
MEDIUM VOLTAGE SINGLE CORE XLPE INSULATED POWER CABLE

UNARMOURED CABLES



ARMOURED CABLES



BASIC CONSTRUCTION

CONDUCTOR MATERIAL	- COPPER OR ALUMINIUM
CONDUCTOR SHAPE	- COMPACTED CIRCULAR STRANDED
INSULATION	- XLPE
BEDDING	- PVC OR POLYETHYLENE
ARMOUR WIRE	- ALUMINIUM WIRES
SHEATH MATERIAL	- PVC OR POLYETHYLENE

TNB SPECIFICATION

REFERENCE TC-6-1-N

MEDIUM VOLTAGE XLPE INSULATED POWER CABLES

TABLE 5A SINGLE-CORE 6kV UNARMOURED CABLES (COPPER CONDUCTOR)

Nominal Area of Conductors	Thickness of Insulation	Thickness of Outer Sheath	Overall Diameter	Approx. Weight	ELECTRICAL CHARACTERISTICS					
					Current Rating		Conductor Resistance		Reactance at 50Hz	Capacitance
					In Air at 40°C	In Ground at 25°C	dc at 20°C	50Hz at 90°C		
sq. mm	mm	mm	mm	kg/km	amp	amp	Ω/km	Ω/km	Ω/km	μF/km
300	2.8	2.0	35.1	3560	629	540	0.0601	0.0791	0.094	0.64

BS 6622 IEC 60502-2

REFERENCE GC-11-1-N

MEDIUM VOLTAGE XLPE INSULATED POWER CABLES

TABLE 6A SINGLE-CORE 11kV UNARMOURED CABLES (COPPER CONDUCTOR)

Nominal Area of Conductors	Thickness of Insulation	Thickness of Outer Sheath	Overall Diameter	Approx. Weight	ELECTRICAL CHARACTERISTICS					
					Current Rating		Conductor Resistance		Reactance at 50Hz	Capacitance
					In Air at 40°C	In Ground at 25°C	dc at 20°C	50Hz at 90°C		
sq. mm	mm	mm	mm	kg/km	amp	amp	Ω/km	Ω/km	Ω/km	μF/km
50	3.4	1.7	23.7	950	217	198	0.387	0.493	0.126	0.27
70	3.4	1.7	25.3	1180	242	243	0.268	0.342	0.119	0.31
95	3.4	1.8	27.1	1470	306	288	0.193	0.247	0.112	0.34
120	3.4	1.8	28.6	1740	353	324	0.153	0.196	0.108	0.37
150	3.4	1.9	30.0	2030	400	369	0.124	0.159	0.106	0.40
185	3.4	1.9	31.7	2420	459	414	0.0991	0.128	0.103	0.44
240	3.4	2.0	34.0	3010	544	477	0.0754	0.0980	0.099	0.49
300	3.4	2.1	36.4	3640	629	540	0.0601	0.0790	0.096	0.54
400	3.4	2.2	39.4	4510	714	612	0.0470	0.0633	0.093	0.59
500	3.4	2.3	42.7	5620	799	675	0.0366	0.0511	0.090	0.66
630	3.4	2.4	46.5	7070	944	752	0.0283	0.0416	0.087	0.74

BS 6622 IEC 60502-2

REFERENCE GC-11-1-A

MEDIUM VOLTAGE XLPE INSULATED POWER CABLES

TABLE 6B SINGLE-CORE 11kV ARMOURED CABLES (COPPER CONDUCTOR)

Nominal Area of Conductors	Thickness of Insulation	Thickness of Extruded Bedding	Nominal of Armour Diameter	Thickness of Outer Sheath	Overall Diameter	Approx. Weight	ELECTRICAL CHARACTERISTICS					
							Current Rating		Conductor Resistance		Reactance at 50Hz	Capacitance
							In Air at 40°C	In Ground at 25°C	dc at 20°C	50Hz at 90°C		
sq. mm	mm	mm	mm	mm	mm	kg/km	amp	amp	Ω/km	Ω/km	Ω/km	μF/km
50	3.4	1.2	1.6	1.8	31.7	1600	217	198	0.387	0.493	0.126	0.27
70	3.4	1.2	1.6	1.9	33.3	1870	242	243	0.268	0.342	0.119	0.31
95	3.4	1.2	1.6	1.9	35.1	2210	306	288	0.193	0.247	0.112	0.34
120	3.4	1.2	1.6	2.0	36.6	2510	353	324	0.153	0.196	0.108	0.37
150	3.4	1.2	2.0	2.1	38.8	2950	400	369	0.124	0.159	0.106	0.40
185	3.4	1.2	2.0	2.1	40.5	3370	459	414	0.0991	0.128	0.103	0.44
240	3.4	1.2	2.0	2.2	42.8	4030	544	477	0.0754	0.0980	0.099	0.49
300	3.4	1.2	2.0	2.2	45.2	4720	629	540	0.0601	0.0790	0.096	0.54
400	3.4	1.2	2.0	2.4	47.9	5630	714	612	0.0470	0.0633	0.093	0.59
500	3.4	1.3	2.5	2.5	52.0	6990	799	675	0.0366	0.0511	0.090	0.66
630	3.4	1.4	2.5	2.6	55.6	8520	944	752	0.0283	0.0416	0.087	0.74

BS 6622
IEC 60502-2

REFERENCE
GA-11-1-N

MEDIUM VOLTAGE XLPE INSULATED POWER CABLES

TABLE 7A SINGLE-CORE 11kV UNARMOURED CABLES (ALUMINIUM CONDUCTOR)

Nominal Area of Conductors	Thickness of Insulation	Thickness of Outer Sheath	Overall Diameter	Approx. Weight	ELECTRICAL CHARACTERISTICS					
					Current Rating		Conductor Resistance		Reactance at 50Hz	Capacitance
					In Air at 40°C	In Ground at 25°C	dc at 20°C	50Hz at 90°C		
sq. mm	mm	mm	mm	kg/km	amp	amp	Ω/km	Ω/km	Ω/km	μF/km
50	3.4	1.7	23.8	650	153	153	0.641	0.821	0.126	0.27
70	3.4	1.7	25.4	760	191	189	0.443	0.569	0.119	0.31
95	3.4	1.8	27.1	880	238	225	0.320	0.410	0.112	0.34
120	3.4	1.8	28.6	990	272	252	0.253	0.325	0.108	0.37
150	3.4	1.9	30.0	1110	310	288	0.206	0.265	0.106	0.40
185	3.4	1.9	31.7	1260	361	324	0.164	0.211	0.103	0.44
240	3.4	2.0	34.0	1490	425	374	0.125	0.161	0.099	0.49
300	3.4	2.1	36.2	1720	493	428	0.100	0.130	0.096	0.54
400	3.4	2.2	39.2	2060	570	486	0.0778	0.102	0.093	0.59
500	3.4	2.3	42.5	2480	672	549	0.0605	0.0816	0.090	0.66
630	3.4	2.4	46.3	3010	774	612	0.0469	0.0647	0.087	0.74

BS 6622
IEC 60502-2

REFERENCE
GA-11-1-A

MEDIUM VOLTAGE XLPE INSULATED POWER CABLES

TABLE 7B SINGLE-CORE 11kV ARMOURED CABLES (ALUMINIUM CONDUCTOR)

Nominal Area of Conductors	Thickness of Insulation	Thickness of Extruded Bedding	Nominal of Armour Diameter	Thickness of Outer Sheath	Overall Diameter	Approx. Weight	ELECTRICAL CHARACTERISTICS					
							Current Rating		Conductor Resistance		Reactance at 50Hz	Capacitance
							In Air at 40°C	In Ground at 25°C	dc at 20°C	50Hz at 90°C		
sq. mm	mm	mm	mm	mm	mm	kg/km	amp	amp	Ω/km	Ω/km	Ω/km	μF/km
50	3.4	1.2	1.6	1.8	31.8	1310	153	153	0.641	0.821	0.126	0.27
70	3.4	1.2	1.6	1.9	33.4	1450	191	189	0.443	0.569	0.119	0.31
95	3.4	1.2	1.6	1.9	35.1	1610	238	225	0.320	0.410	0.112	0.34
120	3.4	1.2	1.6	2.0	36.6	1760	272	252	0.253	0.325	0.108	0.37
150	3.4	1.2	2.0	2.1	38.8	2020	310	288	0.206	0.265	0.106	0.40
185	3.4	1.2	2.0	2.1	40.5	2220	361	324	0.164	0.211	0.103	0.44
240	3.4	1.2	2.0	2.2	42.8	2510	425	374	0.125	0.161	0.099	0.49
300	3.4	1.2	2.0	2.2	45.0	2790	493	428	0.100	0.130	0.096	0.54
400	3.4	1.2	2.0	2.4	47.7	3180	570	486	0.0778	0.102	0.093	0.59
500	3.4	1.3	2.5	2.5	51.8	3840	672	549	0.0605	0.0816	0.090	0.66
630	3.4	1.4	2.5	2.6	55.4	4460	774	612	0.0469	0.0647	0.087	0.74

TNB
SPECIFICATION

REFERENCE
TA-11-1-N

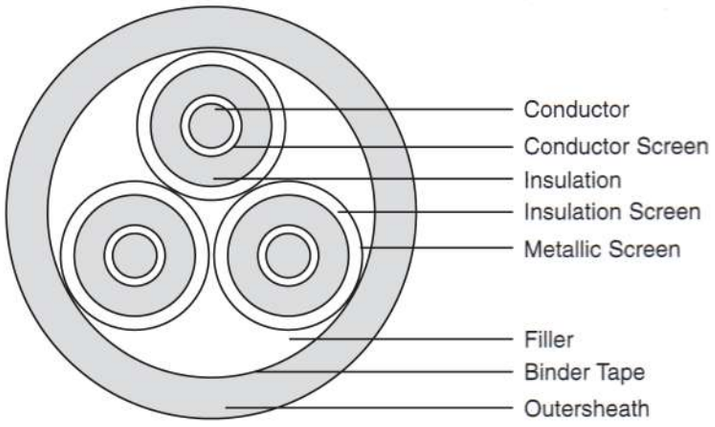
MEDIUM VOLTAGE XLPE INSULATED POWER CABLES

TABLE 8 SINGLE-CORE 11kV UNARMOURED CABLES (ALUMINIUM CONDUCTOR)

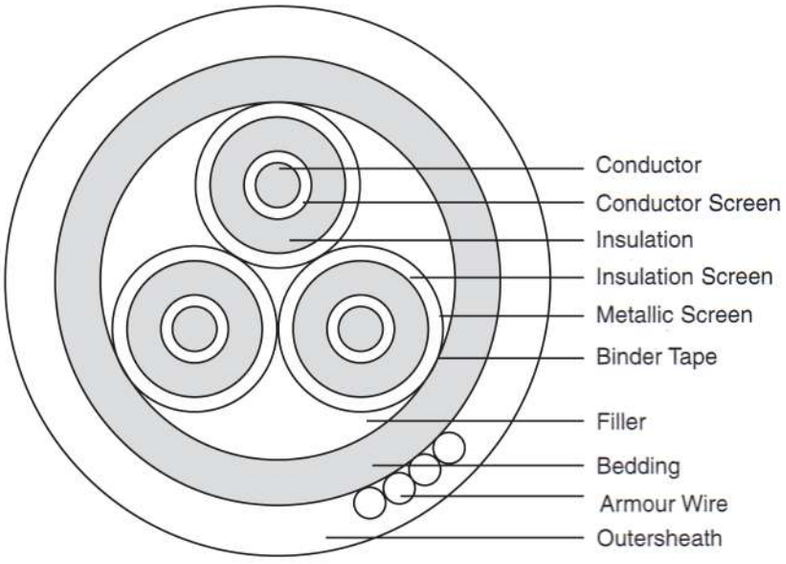
Nominal Area of Conductors	Thickness of Insulation	Thickness of Outer Sheath	Overall Diameter	Approx. Weight	ELECTRICAL CHARACTERISTICS					
					Current Rating		Conductor Resistance		Reactance at 50Hz	Capacitance
					In Air at 40°C	In Ground at 25°C	dc at 20°C	50Hz at 90°C		
sq. mm	mm	mm	mm	kg/km	amp	amp	Ω/km	Ω/km	Ω/km	μF/km
500	3.4	4.0	46.7	2740	672	549	0.0605	0.0816	0.090	0.66

MEDIUM VOLTAGE THREE CORE XLPE INSULATED POWER CABLE

UNARMOURED CABLES



ARMOURED CABLES



BASIC CONSTRUCTION

CONDUCTOR	-	COPPER OR ALUMINIUM
CONDUCTOR SHAPE	-	COMPACTED CIRCULAR STRANDED
INSULATION	-	XLPE
BEDDING	-	PVC OR POLYETHYLENE
ARMOUR WIRE	-	GALVANISED STEEL WIRE
SHEATH MATERIAL	-	PVC OR POLYETHYLENE

BS 6622
IEC 60502-2

REFERENCE
GA-11-3-N

MEDIUM VOLTAGE XLPE INSULATED POWER CABLES

TABLE 9A THREE-CORE 11kV UNARMOURED CABLES (COPPER CONDUCTOR)

Nominal Area of Conductors	Thickness of Insulation	Thickness of Outer Sheath	Overall Diameter	Approx. Weight	ELECTRICAL CHARACTERISTICS					
					Current Rating		Conductor Resistance		Reactance at 50Hz	Capacitance
					In Air at 40°C	In Ground at 25°C	dc at 20°C	50Hz at 90°C		
sq. mm	mm	mm	mm	kg/km	amp	amp	Ω/km	Ω/km	Ω/km	μF/km
16	3.4	2.2	38.7	1660	111	114	1.15	1.47	0.140	0.20
25	3.4	2.2	41.3	2040	123	126	0.727	0.927	0.124	0.22
35	3.4	2.3	43.7	2440	149	153	0.524	0.668	0.116	0.24
50	3.4	2.4	46.4	2910	187	189	0.387	0.493	0.111	0.27
70	3.4	2.5	50.1	3680	230	230	0.268	0.342	0.106	0.30
95	3.4	2.7	54.2	4650	281	270	0.193	0.247	0.100	0.34
120	3.4	2.8	57.6	5530	319	306	0.153	0.196	0.097	0.37
150	3.4	2.9	60.9	6490	366	342	0.124	0.159	0.094	0.40
185	3.4	3.0	64.7	7730	417	387	0.0991	0.128	0.092	0.43
240	3.4	3.1	70.0	9650	485	441	0.0754	0.0984	0.089	0.48
300	3.4	3.3	75.6	11710	553	486	0.0601	0.0797	0.086	0.53
400	3.4	3.5	81.8	14460	629	540	0.0470	0.0639	0.083	0.59

BS 6622
IEC 60502-2

REFERENCE
GC-11-3-S

MEDIUM VOLTAGE XLPE INSULATED POWER CABLES

TABLE 9B THREE-CORE 11kV ARMOURED CABLES (COPPER CONDUCTOR)

Nominal Area of Conductors	Thickness of Insulation	Thickness of Extruded Bedding	Nominal of Armour Diameter	Thickness of Outer Sheath	Overall Diameter	Approx. Weight	ELECTRICAL CHARACTERISTICS					
							Current Rating		Conductor Resistance		Reactance at 50Hz	Capacitance
							In Air at 40°C	In Ground at 25°C	dc at 20°C	50Hz at 90°C		
sq. mm	mm	mm	mm	mm	mm	kg/km	amp	amp	Ω/km	Ω/km	Ω/km	μF/km
16	3.4	1.2	2.0	2.3	47.2	3750	111	114	1.15	1.47	0.140	0.20
25	3.4	1.3	2.5	2.4	50.8	4750	123	126	0.727	0.927	0.124	0.22
35	3.4	1.3	2.5	2.5	53.0	5270	149	153	0.524	0.668	0.116	0.24
50	3.4	1.4	2.5	2.6	55.5	5870	187	189	0.387	0.493	0.111	0.27
70	3.4	1.4	2.5	2.7	59.0	6830	230	230	0.268	0.342	0.106	0.30
95	3.4	1.5	2.5	2.8	62.9	7990	281	270	0.193	0.247	0.100	0.34
120	3.4	1.6	2.5	3.0	66.4	9080	319	306	0.153	0.196	0.097	0.37
150	3.4	1.6	2.5	3.1	69.7	10220	366	342	0.124	0.159	0.094	0.40
185	3.4	1.7	2.5	3.2	73.5	11690	417	387	0.0991	0.128	0.092	0.43
240	3.4	1.8	3.15	3.4	80.2	14990	485	441	0.0754	0.0984	0.089	0.48
300	3.4	1.9	3.15	3.6	85.7	17320	553	486	0.0601	0.0797	0.086	0.53
400	3.4	2.0	3.15	3.8	90.9	20500	629	540	0.0470	0.0639	0.083	0.59

BS 6622
IEC 60502-2

REFERENCE
GA-11-3-N

MEDIUM VOLTAGE XLPE INSULATED POWER CABLES

TABLE 10A THREE-CORE 11kV UNARMOURED CABLES (ALUMINIUM CONDUCTOR)

Nominal Area of Conductors	Thickness of Insulation	Thickness of Outer Sheath	Overall Diameter	Approx. Weight	ELECTRICAL CHARACTERISTICS					
					Current Rating		Conductor Resistance		Reactance	Capacitance
					In Air at 40°C	In Ground at 25°C	dc at 20°C	50Hz at 90°C	at 50Hz	
sq. mm	mm	mm	mm	kg/km	amp	amp	Ω/km	Ω/km	Ω/km	μF/km
16	3.4	2.2	38.7	1360	80	87	1.91	2.44	0.130	0.20
25	3.4	2.2	41.3	1570	98	104	1.20	1.54	0.124	0.22
35	3.4	2.3	43.8	1780	119	122	0.868	1.11	0.116	0.24
50	3.4	2.4	46.5	2020	145	144	0.641	0.822	0.111	0.27
70	3.4	2.5	50.2	2400	179	176	0.443	0.568	0.106	0.30
95	3.4	2.7	54.2	2860	213	207	0.320	0.410	0.100	0.34
120	3.4	2.8	57.6	3270	251	239	0.253	0.325	0.097	0.37
150	3.4	2.9	60.9	3690	281	270	0.206	0.265	0.094	0.40
185	3.4	3.0	64.7	4240	327	302	0.164	0.211	0.092	0.43
240	3.4	3.1	70.0	5060	383	342	0.125	0.161	0.089	0.48
300	3.4	3.3	75.2	5910	434	392	0.100	0.130	0.086	0.53
400	3.4	3.5	81.4	7070	502	441	0.0778	0.102	0.083	0.59

BS 6622
IEC 60502-2

REFERENCE
GA-11-3-S

MEDIUM VOLTAGE XLPE INSULATED POWER CABLES

TABLE 10B THREE-CORE 11kV ARMOURED CABLES (ALUMINIUM CONDUCTOR)

Nominal Area of Conductors	Thickness of Insulation	Thickness of Extruded Bedding	Nominal of Armour Diameter	Thickness of Outer Sheath	Overall Diameter	Approx. Weight	ELECTRICAL CHARACTERISTICS					
							Current Rating		Conductor Resistance		Reactance	Capacitance
							In Air at 40°C	In Ground at 25°C	dc at 20°C	50Hz at 90°C	at 50Hz	
sq. mm	mm	mm	mm	mm	mm	kg/km	amp	amp	Ω/km	Ω/km	Ω/km	μF/km
16	3.4	1.2	2.0	2.3	47.2	3780	80	87	1.91	2.44	0.130	0.20
25	3.4	1.3	2.5	2.4	50.8	4280	98	104	1.20	1.54	0.124	0.22
35	3.4	1.3	2.5	2.5	53.1	4610	119	122	0.868	1.11	0.116	0.24
50	3.4	1.4	2.5	2.6	55.6	4990	145	144	0.641	0.822	0.111	0.27
70	3.4	1.4	2.5	2.7	59.1	5550	179	176	0.443	0.568	0.106	0.30
95	3.4	1.5	2.5	2.8	62.9	6200	213	207	0.320	0.410	0.100	0.34
120	3.4	1.6	2.5	3.0	66.4	6820	251	239	0.253	0.325	0.097	0.37
150	3.4	1.6	2.5	3.1	69.7	7420	281	270	0.206	0.265	0.094	0.40
185	3.4	1.7	2.5	3.2	73.5	8200	327	302	0.164	0.211	0.092	0.43
240	3.4	1.8	3.15	3.4	80.2	10300	383	342	0.125	0.161	0.089	0.48
300	3.4	1.9	3.15	3.6	85.3	11490	434	392	0.100	0.130	0.086	0.53
400	3.4	2.0	3.15	3.8	95.5	13070	502	441	0.0778	0.102	0.083	0.59

TNB SPECIFICATION

REFERENCE TA-11-3-S

MEDIUM VOLTAGE XLPE INSULATED POWER CABLES

TABLE 11 THREE-CORE 11kV ARMOURED CABLES (ALUMINIUM CONDUCTOR)

Nominal Area of Conductors	Thickness of Insulation	Thickness of Extruded Bedding	Nominal of Armour Diameter	Thickness of Outer Sheath	Overall Diameter	Approx. Weight	ELECTRICAL CHARACTERISTICS					
							Current Rating		Conductor Resistance		Reactance at 50Hz	Capacitance
							In Air at 40°C	In Ground at 25°C	dc at 20°C	50Hz at 90°C		
sq. mm	mm	mm	mm	mm	mm	kg/km	amp	amp	Ω/km	Ω/km	Ω/km	μF/km
95	3.4	1.5	2.5	2.8	63.8	5790	213	207	0.320	0.410	0.100	0.34
150	3.4	1.6	2.5	3.1	70.5	6940	281	270	0.206	0.265	0.094	0.40
240	3.4	1.8	3.15	3.4	81.1	9650	383	342	0.125	0.161	0.089	0.48

BS 6622 IEC 60502-2

REFERENCE GA-22-3-S

MEDIUM VOLTAGE XLPE INSULATED POWER CABLES

TABLE 12 THREE-CORE 22kV ARMOURED CABLES (ALUMINIUM CONDUCTOR)

Nominal Area of Conductors	Thickness of Insulation	Thickness of Extruded Bedding	Nominal of Armour Diameter	Thickness of Outer Sheath	Overall Diameter	Approx. Weight	ELECTRICAL CHARACTERISTICS					
							Current Rating		Conductor Resistance		Reactance at 50Hz	Capacitance
							In Air at 40°C	In Ground at 25°C	dc at 20°C	50Hz at 90°C		
sq. mm	mm	mm	mm	mm	mm	kg/km	amp	amp	Ω/km	Ω/km	Ω/km	μF/km
35	5.5	1.5	2.5	2.8	62.8	5870	123	122	0.868	1.11	0.133	0.178
50	5.5	1.5	2.5	2.9	65.5	6310	149	144	0.641	0.821	0.127	0.194
70	5.5	1.6	2.5	3.0	69.1	6930	183	176	0.443	0.569	0.119	0.216
95	5.5	1.7	2.5	3.2	73.1	7670	221	207	0.320	0.409	0.113	0.240
120	5.5	1.7	3.2	3.3	77.9	9270	255	234	0.253	0.324	0.109	0.261
150	5.5	1.8	3.2	3.4	81.1	9950	285	261	0.206	0.265	0.105	0.280
185	5.5	1.9	3.2	3.6	85.0	10850	332	297	0.164	0.211	0.102	0.303
240	5.5	1.9	3.2	3.7	90.2	12080	391	342	0.125	0.160	0.098	0.334
300	5.5	2.0	3.2	3.9	95.4	13360	442	383	0.100	0.129	0.094	0.367

TNB SPECIFICATION

REFERENCE TA-22-1-N

MEDIUM VOLTAGE XLPE INSULATED POWER CABLES

TABLE 13 SINGLE-CORE 22kV UNARMOURED CABLES (ALUMINIUM CONDUCTOR)

Nominal Area of Conductors	Thickness of Insulation	Thickness of Outer Sheath	Overall Diameter	Approx. Weight	ELECTRICAL CHARACTERISTICS					
					Current Rating		Conductor Resistance		Reactance at 50Hz	Capacitance
					In Air at 40°C	In Ground at 25°C	dc at 20°C	50Hz at 90°C		
sq. mm	mm	mm	mm	kg/km	amp	amp	Ω/km	Ω/km	Ω/km	μF/km
500	5.5	4.0	51.3	3080	672	549	0.0605	0.0790	0.096	0.44

BS 6622
IEC 60502-2

REFERENCE
GC-33-1-N

MEDIUM VOLTAGE XLPE INSULATED POWER CABLES

TABLE 14A SINGLE-CORE 33kV UNARMOURED CABLES (COPPER CONDUCTOR)

Nominal Area of Conductors	Thickness of Insulation	Thickness of Outer Sheath	Overall Diameter	Approx. Weight	ELECTRICAL CHARACTERISTICS					
					Current Rating		Conductor Resistance		Reactance at 50Hz	Capacitance
					In Air at 40°C	In Ground at 25°C	dc at 20°C	50Hz at 90°C		
sq. mm	mm	mm	mm	kg/km	amp	amp	Ω/km	Ω/km	Ω/km	μF/km
630	8.0	2.7	57.9	8050	961	765	0.0283	0.0405	0.099	0.35

BS 6622
IEC 60502-2

REFERENCE
GC-33-3-S

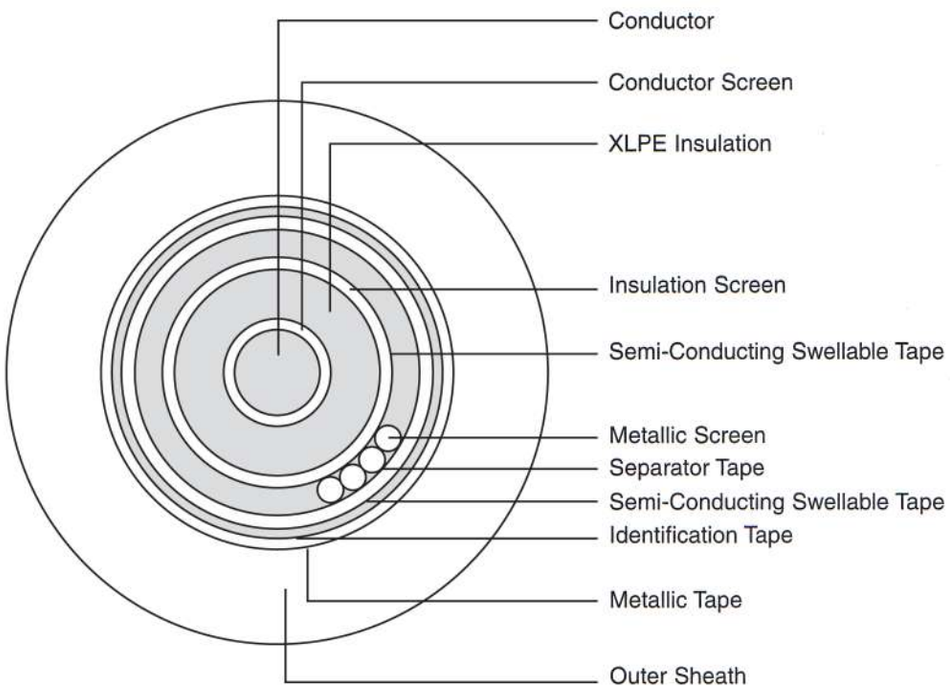
MEDIUM VOLTAGE XLPE INSULATED POWER CABLES

TABLE 14B THREE-CORE 33kV ARMOURED CABLES (COPPER CONDUCTOR)

Nominal Area of Conductors	Thickness of Insulation	Thickness of Extruded Bedding	Nominal of Armour Diameter	Thickness of Outer Sheath	Overall Diameter	Approx. Weight	ELECTRICAL CHARACTERISTICS					
							Current Rating		Conductor Resistance		Reactance at 50Hz	Capacitance
							In Air at 40°C	In Ground at 25°C	dc at 20°C	50Hz at 90°C		
sq. mm	mm	mm	mm	mm	mm	kg/km	amp	amp	Ω/km	Ω/km	Ω/km	μF/km
50	8.0	1.2	2.0	2.2	44.1	2590	191	189	0.387	0.494	0.143	0.155
70	8.0	1.2	2.0	2.2	45.7	2900	234	230	0.268	0.342	0.135	0.171
95	8.0	1.2	2.0	2.3	47.5	3260	281	266	0.193	0.246	0.128	0.188
120	8.0	1.2	2.0	2.3	49.0	3600	323	304	0.153	0.196	0.123	0.202
150	8.0	1.3	2.5	2.4	51.4	4130	366	338	0.124	0.159	0.119	0.216

TNB/KLIA SPECIFICATION MEDIUM VOLTAGE XLPE INSULATED POWER CABLE

SINGLE CORE COPPER WIRE SCREEN CABLE



BASIC CONSTRUCTION

CONDUCTOR	- COPPER OR ALUMINIUM
CONDUCTOR SHAPE	- COMPACTED CIRCULAR STRANDED
INSULATION	- XLPE
METALLIC SCREEN	- COPPER WIRE SCREEN
METALLIC TAPE	- LAMINATED ALUMINIUM TAPE
SHEATH MATERIAL	- POLYETHYLENE

TNB SPECIFICATION
KLIA/D/UTØ6/Ø58/95

REFERENCE
TA-33-1-W

MEDIUM VOLTAGE XLPE INSULATED POWER CABLES

TABLE 15 SINGLE-CORE 33kV COPPER WIRE SCREEN CABLES (ALUMINIUM CONDUCTOR)

Nominal Area of Conductors	Thickness of Insulation	Nominal of PACW Diameter	Thickness of Outer Sheath	Overall Diameter	Approx. Weight	ELECTRICAL CHARACTERISTICS					
						Current Rating		Conductor Resistance		Reactance at 50Hz	Capacitance
						In Air at 40°C	In Ground at 25°C	dc at 20°C	50Hz at 90°C		
sq. mm	mm	mm	mm	mm	kg/km	amp	amp	Ω/km	Ω/km	Ω/km	μF/km
630	9.0	2.52	5.0	71.4	7220	782	621	0.0469	0.0630	0.099	0.35

TNB SPECIFICATION
KLIA/D/UTØ6/Ø58/95

REFERENCE
TC-33-1-W

MEDIUM VOLTAGE XLPE INSULATED POWER CABLES

TABLE 16 SINGLE-CORE 33kV COPPER WIRE SCREEN CABLES (COPPER CONDUCTOR)

Nominal Area of Conductors	Thickness of Insulation	Nominal of PACW Diameter	Thickness of Outer Sheath	Overall Diameter	Approx. Weight	ELECTRICAL CHARACTERISTICS					
						Current Rating		Conductor Resistance		Reactance at 50Hz	Capacitance
						In Air at 40°C	In Ground at 25°C	dc at 20°C	50Hz at 90°C		
sq. mm	mm	mm	mm	mm	kg/km	amp	amp	Ω/km	Ω/km	Ω/km	μF/km
300	9.0	2.65	5.0	62.6	7680	629	540	0.0601	0.0785	0.112	0.27
630	9.0	2.52	5.0	72.1	11320	961	765	0.0283	0.0405	0.099	0.35

TNB SPECIFICATION
KLIA/D/UTØ6/Ø58/95

REFERENCE
TC-11-1-W

MEDIUM VOLTAGE XLPE INSULATED POWER CABLES

TABLE 17 SINGLE-CORE 11kV COPPER WIRE SCREEN CABLES (COPPER CONDUCTOR)

Nominal Area of Conductors	Thickness of Insulation	Nominal of PACW Diameter	Thickness of Outer Sheath	Overall Diameter	Approx. Weight	ELECTRICAL CHARACTERISTICS					
						Current Rating		Conductor Resistance		Reactance at 50Hz	Capacitance
						In Air at 40°C	In Ground at 25°C	dc at 20°C	50Hz at 90°C		
sq. mm	mm	mm	mm	mm	kg/km	amp	amp	Ω/km	Ω/km	Ω/km	μF/km
500	3.4	2.52	4.0	54.4	8100	799	675	0.0366	0.0511	0.090	0.66

TNB SPECIFICATION
KLIA/D/UTØ6/Ø58/95

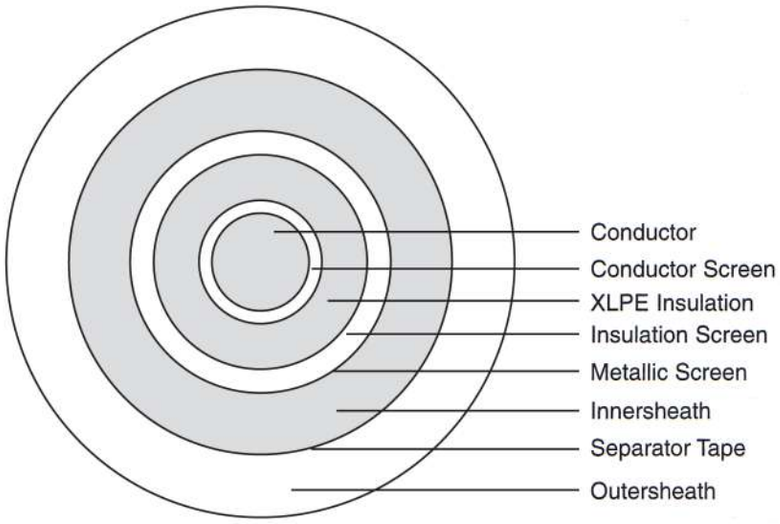
REFERENCE
TA-11-1-W

MEDIUM VOLTAGE XLPE INSULATED POWER CABLES

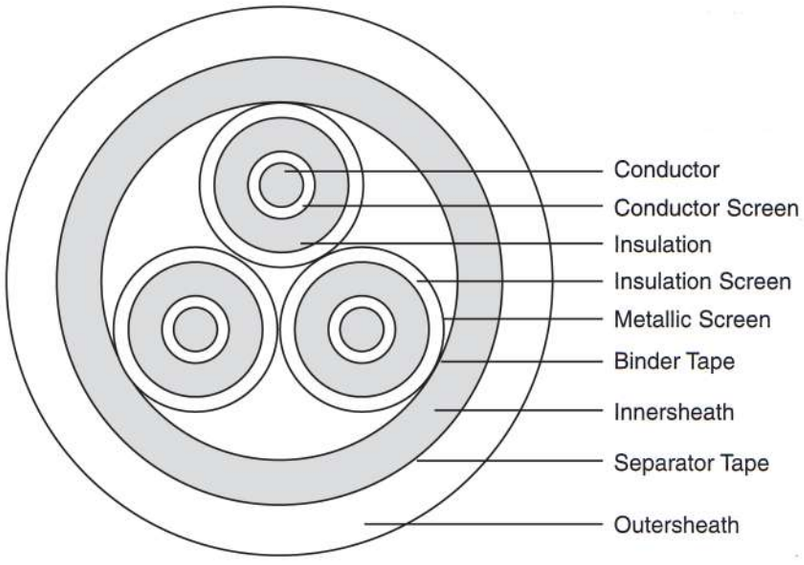
TABLE 18 SINGLE-CORE 11kV COPPER WIRE SCREEN CABLES (ALUMINIUM CONDUCTOR)

Nominal Area of Conductors	Thickness of Insulation	Nominal of PACW Diameter	Thickness of Outer Sheath	Overall Diameter	Approx. Weight	ELECTRICAL CHARACTERISTICS					
						Current Rating		Conductor Resistance		Reactance at 50Hz	Capacitance
						In Air at 40°C	In Ground at 25°C	dc at 20°C	50Hz at 90°C		
sq. mm	mm	mm	mm	mm	kg/km	amp	amp	Ω/km	Ω/km	Ω/km	μF/km
300	3.4	3.00	4.0	49.4	4250	493	428	0.100	0.130	0.096	0.54
500	3.4	2.52	4.0	54.2	4970	672	549	0.0605	0.0816	0.090	0.66

TNB SPECIFICATION MEDIUM VOLTAGE SINGLE-CORE XLPE INSULATED DOUBLE-SHEATHED POWER CABLE



TNB SPECIFICATION MEDIUM VOLTAGE THREE-CORE XLPE INSULATED DOUBLE-SHEATHED POWER CABLE



BASIC CONSTRUCTION

CONDUCTOR	-	COPPER OR ALUMINIUM
MATERIAL SHAPE	-	COMPACTED CIRCULAR STRANDED
INSULATION	-	XLPE
INNERSHEATH MATERIAL	-	POLYETHYLENE
OUTERSHEATH MATERIAL	-	POLYETHYLENE

TNB SPECIFICATION

REFERENCE TA-11-1-DS

MEDIUM VOLTAGE XLPE INSULATED POWER CABLES

TABLE 19 SINGLE-CORE 11kV DOUBLE-SHEATHED CABLES (ALUMINIUM CONDUCTOR)

Nominal Area of Conductors	Thickness of Insulation	Thickness of Outer Sheath	Overall Diameter	Approx. Weight	ELECTRICAL CHARACTERISTICS					
					Current Rating		Conductor Resistance		Reactance at 50Hz	Capacitance
					In Air at 40°C	In Ground at 25°C	dc at 20°C	50Hz at 90°C		
sq. mm	mm	mm	mm	kg/km	amp	amp	Ω/km	Ω/km	Ω/km	μF/km
500	3.4	2.4	47.8	2780	672	549	0.0606	0.0816	0.090	0.66

TNB SPECIFICATION

REFERENCE TA-22-1-DS

MEDIUM VOLTAGE XLPE INSULATED POWER CABLES

TABLE 20 SINGLE-CORE 22kV DOUBLE-SHEATHED CABLES (ALUMINIUM CONDUCTOR)

Nominal Area of Conductors	Thickness of Insulation	Thickness of Outer Sheath	Overall Diameter	Approx. Weight	ELECTRICAL CHARACTERISTICS					
					Current Rating		Conductor Resistance		Reactance at 50Hz	Capacitance
					In Air at 40°C	In Ground at 25°C	dc at 20°C	50Hz at 90°C		
sq. mm	mm	mm	mm	kg/km	amp	amp	Ω/km	Ω/km	Ω/km	μF/km
500	5.5	2.5	52.4	3145	672	549	0.0605	0.0816	0.090	0.66

TNB SPECIFICATION

REFERENCE TA-11-3-DS

MEDIUM VOLTAGE XLPE INSULATED POWER CABLES

TABLE 21 THREE-CORE 11kV DOUBLE-SHEATHED CABLES (ALUMINIUM CONDUCTOR)

Nominal Area of Conductors	Thickness of Insulation	Thickness of Outer Sheath	Overall Diameter	Approx. Weight	ELECTRICAL CHARACTERISTICS					
					Current Rating		Conductor Resistance		Reactance at 50Hz	Capacitance
					In Air at 40°C	In Ground at 25°C	dc at 20°C	50Hz at 90°C		
sq. mm	mm	mm	mm	kg/km	amp	amp	Ω/km	Ω/km	Ω/km	μF/km
95	3.4	2.7	59.2	3325	238	225	0.320	0.410	0.112	0.34
150	3.4	2.9	66.1	4095	310	288	0.206	0.265	0.106	0.40
240	3.4	3.2	79.0	5565	425	374	0.125	0.161	0.099	0.49

Minimum thickness of the innersheath shall be 2.0mm

TNB SPECIFICATION

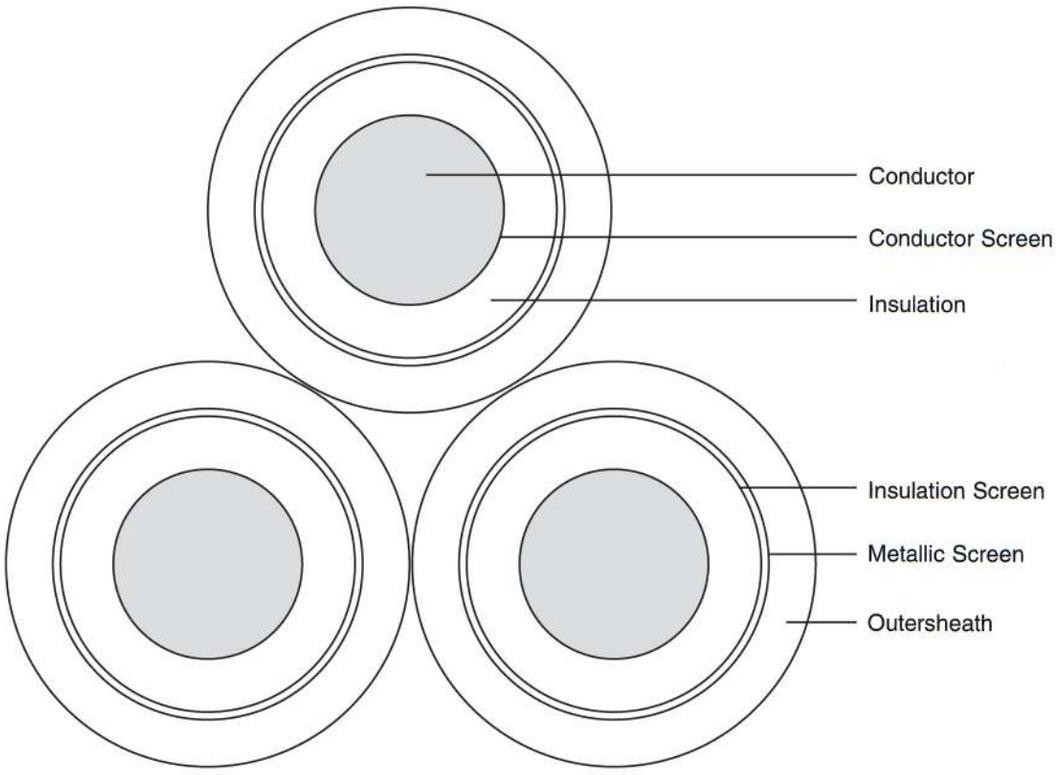
REFERENCE TA-11-3-T

MEDIUM VOLTAGE XLPE INSULATED POWER CABLES

TABLE 22 TRIPLEX 11kV XLPE INSULATED CABLES (ALUMINIUM CONDUCTOR)

Nominal Area of Conductors	Thickness of Insulation	Thickness of Outer Sheath	Overall Diameter Over Outersheath	Overall Diameter of Cable	Approx. Weight	ELECTRICAL CHARACTERISTICS					
						Current Rating		Conductor Resistance		Reactance at 50Hz	Capacitance
						In Air at 40°C	In Ground at 25°C	dc at 20°C	50Hz at 90°C		
sq. mm	mm	mm	mm	mm	kg/km	amp	amp	Ω/km	Ω/km	Ω/km	μF/km
240	3.4	3.0	35.8	77.3	4680	500	435	0.125	0.1611	0.1023	0.5490

MEDIUM VOLTAGE XLPE INSULATED, MDPE OUTERSHEATHED, TRIPLEX CABLE



BASIC CONSTRUCTION

CONDUCTOR	-	ALUMINIUM
MATERIAL SHAPE	-	COMPACTED CIRCULAR STRANDED
INSULATION	-	XLPE
METALLIC SCREEN	-	COPPER TAPES
SHEATH MATERIAL	-	POLYETHYLENE