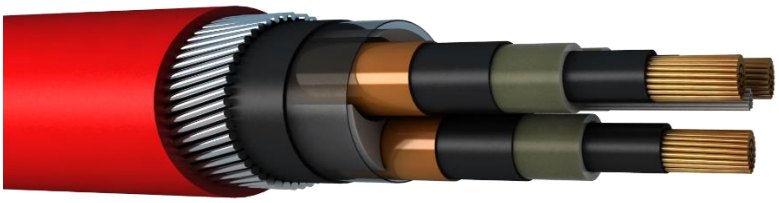
TECHNICAL DATA SHEET

MEDIUM VOLTAGE CABLES

Manufacturing Standard: **BS 7835**

Flame/Fire Performance: **BS EN / IEC 60332-3 CAT C Flame Propagation**



Construction

- Class 2 Copper or Aluminium Conductors to BS EN60228
- XLPE Insulation
- Metallic Screen
- LSZH Bedding (multicore cables only)
- Galvanised Steel Wire Armour (multicore), Aluminium Wire Armour (single Core)
- LSZH Outer Sheath

Voltage Rating 19000/33000 Volt

Operating Temp +90°C

Short Circuit Temp +250°C

Core Colours

1 Core Black
3 Core Brown, Black & Grey

Sheath Colour

Black or Red

BASEC APPROVED

www.aeicables.co.uk
sales@aeicables.co.uk

MEDIUM VOLTAGE CABLE – BS7835 (19/33KV)

CABLE CONSTRUCTION

Single Core – Class 2 Copper Conductor, XLPE Insulated, Copper Taped Screen, LSZH Sheathed.

Nominal Area of Conductor	mm²	1 x 50	1 x 70	1 x 95	1 x 120	1 x 150	1 x 185	1 x 240	1 x 300	1 x 400	1 x 500	1 x 630	1 x 800	1 x 1000
Insulation Thickness (Min)	mm	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00
Outer Sheath Thickness	mm	2.00	2.00	2.10	2.10	2.20	2.20	2.30	2.40	2.50	2.60	2.70	2.80	3.00
Overall Diameter (Nom)	mm	33.00	35.00	37.00	39.00	40.00	42.00	44.00	47.00	50.00	54.00	58.00	62.00	66.00
Cable Weight (Nom)	Kg/Km	1360	1620	1940	2240	2550	2940	3580	4230	5140	6270	7740	9540	11640
Internal Bending Radius (Min)	mm	660	700	740	780	800	840	880	940	1000	1080	1160	1240	1320
d.c. Conductor Resistance @ 20°C (Max)	Ω/Km	0.387	0.268	0.193	0.153	0.124	0.0991	0.0754	0.0601	0.047	0.0366	0.0283	0.0221	0.0176
a.c. Conductor Resistance @ 90°C (Max)	Ω/Km	0.494	0.342	0.247	0.196	0.159	0.128	0.098	0.0786	0.0626	0.0502	0.0406	0.0338	0.029
Inductance	mH/Km	0.477	0.447	0.423	0.405	0.394	0.382	0.364	0.354	0.337	0.327	0.317	0.308	0.298
Reactance @ 50Hz*	Ω/Km	0.1499	0.1404	0.1329	0.1272	0.1238	0.12	0.1144	0.1112	0.1059	0.1027	0.0996	0.0968	0.0936
Impedance @ 90°C & 50Hz	Ω/Km	0.52	0.37	0.28	0.23	0.20	0.17	0.15	0.14	0.12	0.11	0.11	0.10	0.10
Capacitance (Max)	µ/Km	0.14	0.16	0.17	0.19	0.2	0.21	0.24	0.26	0.28	0.31	0.34	0.38	0.41
Charging Current	A/Km	0.84	0.96	1.01	1.13	1.19	1.25	1.43	1.55	1.67	1.85	2.03	2.27	2.45
Continuous Current Carrying Capacity (Laid Direct)*	A	221	270	321	365	410	460	530	600	690	760	850	944	1023
Continuous Current Carrying Capacity (Ducts)*	A	225	270	320	360	405	445	520	570	630	702	783	860	941
Continuous Current Carrying Capacity (Air)*	A	260	320	390	445	510	580	680	770	890	1020	1160	1332	1460
Symmetrical Short Circuit Rating (Max)														
90°C - 250°C for 1.0 sec	kA	7.2	10.0	13.6	17.2	21.5	26.5	34.3	42.9	57.2	71.5	90.1	>100	>100
Earth Fault Short Circuit Rating (Max)														
80°C - 200°C for 1.0 sec	kA	2.0	2.2	2.3	2.5	2.5	2.7	2.8	3.0	3.2	3.5	3.7	4.0	4.3

- Cables in Trefoil arrangement

MEDIUM VOLTAGE CABLE – BS7835 (19/33KV)

CABLE CONSTRUCTION

Single Core – Class 2 Copper Conductor, XLPE Insulated, Copper Wire Screen, LSZH Sheathed.

Nominal Area of Conductor	mm²	1 x 50	1 x 70	1 x 95	1 x 120	1 x 150	1 x 185	1 x 240	1 x 300	1 x 400	1 x 500	1 x 630	1 x 800	1 x 1000
Insulation Thickness (Min)	mm	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00
Outer Sheath Thickness	mm	2.00	2.00	2.10	2.10	2.20	2.20	2.30	2.40	2.50	2.60	2.70	2.80	3.00
Overall Diameter (Nom)	mm	35.00	37.00	39.00	41.00	42.00	44.00	46.00	49.00	52.00	56.00	59.00	64.00	68.00
Cable Weight (Nom)	Kg/Km	1620	1880	2200	2490	2800	3180	3810	4460	5360	6480	7930	9740	11820
Internal Bending Radius (Min)	mm	700	740	780	820	840	880	920	980	1040	1120	1180	1280	1360
d.c. Conductor Resistance @ 20°C (Max)	Ω/Km	0.387	0.268	0.193	0.153	0.124	0.0991	0.0754	0.0601	0.047	0.0366	0.0283	0.0221	0.0176
a.c. Conductor Resistance @ 90°C (Max)	Ω/Km	0.494	0.342	0.247	0.196	0.159	0.127	0.0976	0.0785	0.0625	0.0501	0.0405	0.0336	0.0288
Inductance	mH/Km	0.487	0.455	0.431	0.411	0.402	0.388	0.372	0.359	0.343	0.331	0.320	0.311	0.303
Reactance @ 50Hz*	Ω/Km	0.153	0.1429	0.1354	0.1291	0.1263	0.1219	0.1169	0.1128	0.1078	0.104	0.1005	0.0977	0.0952
Impedance @ 90°C & 50Hz	Ω/Km	0.52	0.37	0.28	0.23	0.20	0.18	0.15	0.14	0.12	0.12	0.11	0.10	0.10
Capacitance (Max)	µ/Km	0.14	0.16	0.17	0.19	0.2	0.21	0.24	0.26	0.28	0.31	0.34	0.38	0.41
Charging Current	A/Km	0.84	0.96	1.01	1.13	1.19	1.25	1.43	1.55	1.67	1.85	2.03	2.27	2.45
Continuous Current Carrying Capacity (Laid Direct)*	A	221	270	321	365	410	460	530	600	690	760	850	944	1023
Continuous Current Carrying Capacity (Ducts)*	A	225	270	320	360	405	445	520	570	630	702	783	860	941
Continuous Current Carrying Capacity (Air)*	A	260	320	390	445	510	580	680	770	890	1020	1160	1332	1460
Symmetrical Short Circuit Rating (Max)														
90°C - 250°C for 1.0 sec	kA	7.2	10.0	13.6	17.2	21.5	26.5	34.3	42.9	57.2	71.5	90.1	>100	>100
Earth Fault Short Circuit Rating (Max)														
80°C - 200°C for 1.0 sec	kA	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5

- Cables in Trefoil arrangement

MEDIUM VOLTAGE CABLE – BS7835 (19/33KV)

CABLE CONSTRUCTION

Single Core – Class 2 Copper Conductor, XLPE Insulated, Copper Taped Screen, LSZH Bedding, Aluminium Wire Armour, LSZH Sheathed.

Nominal Area of Conductor	mm²	1 x 50	1 x 70	1 x 95	1 x 120	1 x 150	1 x 185	1 x 240	1 x 300	1 x 400	1 x 500	1 x 630	1 x 800	1 x 1000
Insulation Thickness (Min)	mm	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00
Inner Sheath Thickness	mm	1.20	1.20	1.20	1.20	1.30	1.30	1.30	1.40	1.40	1.50	1.50	1.60	1.70
Aluminium Wire Armour Diameter	mm	2.00	2.00	2.00	2.00	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50
Outer Sheath Thickness	mm	2.20	2.20	2.30	2.30	2.40	2.50	2.50	2.60	2.70	2.80	2.90	3.10	3.20
Overall Diameter (Nom)	mm	40.00	42.00	44.00	46.00	48.00	50.00	52.00	55.00	58.00	62.00	66.00	70.00	75.00
Cable Weight (Nom)	Kg/Km	1970	2260	2610	2940	3440	3880	4540	5260	6250	7480	9030	10980	13170
Internal Bending Radius (Min)	mm	600	630	660	690	720	750	780	825	870	930	990	1050	1125
d.c. Conductor Resistance @ 20°C (Max)	Ω/Km	0.387	0.268	0.193	0.153	0.124	0.0991	0.0754	0.0601	0.047	0.0366	0.0283	0.0221	0.0176
a.c. Conductor Resistance @ 90°C (Max)	Ω/Km	0.494	0.342	0.247	0.196	0.159	0.127	0.0977	0.0784	0.0623	0.0497	0.0401	0.0331	0.0283
Inductance	mH/Km	0.516	0.483	0.458	0.438	0.431	0.417	0.397	0.386	0.367	0.355	0.343	0.332	0.324
Reactance @ 50Hz*	Ω/Km	0.1621	0.1517	0.1439	0.1376	0.1354	0.131	0.1247	0.1213	0.1153	0.1115	0.1078	0.1043	0.1018
Impedance @ 90°C & 50Hz	Ω/Km	0.52	0.37	0.29	0.24	0.21	0.18	0.16	0.14	0.13	0.12	0.11	0.11	0.11
Capacitance (Max)	µ/Km	0.14	0.16	0.17	0.19	0.2	0.21	0.24	0.26	0.28	0.31	0.34	0.38	0.41
Charging Current	A/Km	0.84	0.96	1.01	1.13	1.19	1.25	1.43	1.55	1.67	1.85	2.03	2.27	2.45
Continuous Current Carrying Capacity (Laid Direct)*	A	221	270	320	362	410	450	512	570	640	700	762	813	868
Continuous Current Carrying Capacity (Ducts)*	A	212	260	300	340	370	400	450	490	530	573	620	670	700
Continuous Current Carrying Capacity (Air)*	A	260	320	385	441	497	565	656	741	842	946	1056	1171	1267
Symmetrical Short Circuit Rating (Max)														
90°C - 250°C for 1.0 sec	kA	7.2	10.0	13.6	17.2	21.5	26.5	34.3	42.9	57.2	71.5	90.1	>100	>100
Earth Fault Short Circuit Rating of Copper Tape (Max)														
80°C - 200°C for 1.0 sec	kA	1.0	1.1	1.2	1.2	1.3	1.3	1.4	1.5	1.6	1.7	1.9	2.0	2.2
Earth Fault Short Circuit Rating of Armour (Max)														
80°C - 200°C for 1.0 sec	kA	7.2	10.0	12.8	13.6	17.9	18.4	19.6	20.4	22.1	23.8	25.5	27.1	29.2

- Cables in Trefoil arrangement

MEDIUM VOLTAGE CABLE – BS7835 (19/33KV)

CABLE CONSTRUCTION

Three Core – Class 2 Copper Conductor, XLPE Insulated, Copper Taped Screen, LSZH Bedding, Galvanised Steel Wire Armour, LSZH Sheathed.

Nominal Area of Conductor	mm²	3 x 50	3 x 70	3 x 95	3 x 120	3 x 150	3 x 185	3 x 240	3 x 300	3 x 400
Insulation Thickness (Min)	mm	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00
Inner Sheath Thickness	mm	1.80	1.80	1.90	2.00	2.00	2.10	2.20	2.30	2.40
Galvanised Steel Wire Armour Diameter	mm	3.15	3.15	3.15	3.15	3.15	3.15	3.15	3.15	3.15
Outer Sheath Thickness	mm	3.40	3.50	3.60	3.70	3.80	3.90	4.10	4.30	4.50
Overall Diameter (Nom)	mm	79.00	84.00	87.00	91.00	94.00	98.00	104.00	109.00	117.00
Cable Weight (Nom)	Kg/Km	9290	10390	11610	12890	13980	15640	18040	20480	24020
Internal Bending Radius (Min)	mm	948	1008	1044	1092	1128	1176	1248	1308	1404
d.c. Conductor Resistance @ 20°C (Max)	Ω/Km	0.387	0.268	0.193	0.153	0.124	0.0991	0.0754	0.0601	0.047
a.c. Conductor Resistance @ 90°C (Max)	Ω/Km	0.494	0.342	0.247	0.196	0.159	0.128	0.101	0.0822	0.0668
Inductance	mH/Km	0.454	0.424	0.398	0.380	0.370	0.358	0.343	0.330	0.316
Reactance @ 50Hz*	Ω/Km	0.1426	0.1332	0.125	0.1194	0.1162	0.1125	0.1078	0.1037	0.0993
Impedance @ 90°C & 50Hz	Ω/Km	0.51	0.37	0.28	0.23	0.20	0.17	0.15	0.13	0.12
Capacitance (Max)	µ/Km	0.14	0.16	0.17	0.19	0.2	0.21	0.24	0.26	0.28
Charging Current	A/Km	0.84	0.96	1.01	1.13	1.19	1.24	1.43	1.55	1.64
Continuous Current Carrying Capacity (Laid Direct)	A	211	256	306	346	386	432	494	549	616
Continuous Current Carrying Capacity (Ducts)	A	186	229	268	305	346	382	441	484	559
Continuous Current Carrying Capacity (Air)	A	239	292	355	403	455	516	597	672	763
Symmetrical Short Circuit Rating (Max)										
90°C - 250°C for 1.0 sec	kA	7.2	10.0	13.6	17.2	21.5	26.5	34.3	42.9	57.2
Earth Fault Short Circuit Rating of Copper Tape (Max)										
80°C - 200°C for 1.0 sec	kA	2.1	2.2	2.3	2.4	2.5	2.6	2.8	3.0	3.2
Earth Fault Short Circuit Rating of Armour (Max)										
80°C - 200°C for 1.0 sec	kA	7.2	10.0	13.6	17.2	21.5	26.2	27.6	29.0	31.6

MEDIUM VOLTAGE CABLE – BS7835 (19/33KV)

CABLE CONSTRUCTION

Single Core – Class 2 Aluminium Conductor, XLPE Insulated, Copper Taped Screen, LSZH Sheathed.

Nominal Area of Conductor	mm²	1 x 50	1 x 70	1 x 95	1 x 120	1 x 150	1 x 185	1 x 240	1 x 300	1 x 400	1 x 500	1 x 630	1 x 800	1 x 1000
Insulation Thickness (Min)	mm	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00
Outer Sheath Thickness	mm	2.00	2.00	2.10	2.10	2.20	2.20	2.30	2.40	2.50	2.60	2.70	2.80	3.00
Overall Diameter (Nom)	mm	34.00	35.00	37.00	39.00	40.00	42.00	45.00	48.00	51.00	54.00	58.00	64.00	69.00
Cable Weight (Nom)	Kg/Km	1090	1220	1380	1510	1650	1850	2120	2410	2790	3250	3820	4660	5510
Internal Bending Radius (Min)	mm	680	700	740	780	800	840	900	960	1020	1080	1160	1280	1380
d.c. Conductor Resistance @ 20°C (Max)	Ω/Km	0.641	0.443	0.32	0.253	0.206	0.164	0.125	0.1	0.0778	0.0605	0.0469	0.0367	0.0291
a.c. Conductor Resistance @ 90°C (Max)	Ω/Km	0.822	0.568	0.411	0.325	0.265	0.211	0.161	0.129	0.101	0.0798	0.0631	0.0511	0.0423
Inductance	mH/Km	0.473	0.442	0.418	0.405	0.394	0.377	0.365	0.352	0.339	0.327	0.317	0.299	0.291
Reactance @ 50Hz*	Ω/Km	0.1486	0.1389	0.1313	0.1272	0.1238	0.1184	0.1147	0.1106	0.1065	0.1027	0.0996	0.0939	0.0914
Impedance @ 90°C & 50Hz	Ω/Km	0.84	0.58	0.43	0.35	0.29	0.24	0.20	0.17	0.15	0.13	0.12	0.11	0.10
Capacitance (Max)	µ/Km	0.14	0.16	0.18	0.19	0.2	0.22	0.24	0.26	0.29	0.31	0.34	0.4	0.44
Charging Current	A/Km	0.84	0.96	1.07	1.13	1.19	1.31	1.43	1.55	1.73	1.85	2.03	2.39	2.63
Continuous Current Carrying Capacity (Laid Direct)*	A	171	210	250	284	320	360	416	475	550	610	690	782	864
Continuous Current Carrying Capacity (Ducts)*	A	175	210	250	283	320	350	415	460	520	580	652	770	813
Continuous Current Carrying Capacity (Air)*	A	205	250	305	345	400	450	550	600	705	820	940	1100	1229
Symmetrical Short Circuit Rating (Max)														
90°C - 250°C for 1.0 sec	kA	4.7	6.6	8.9	11.3	14.1	17.4	22.6	28.2	37.6	47.0	59.2	75.2	94
Earth Fault Short Circuit Rating (Max)														
80°C - 200°C for 1.0 sec	kA	2.1	2.2	2.3	2.5	2.5	2.7	2.9	3.0	3.2	3.5	3.7	4.2	4.6

- Cables in Trefoil arrangement

MEDIUM VOLTAGE CABLE – BS7835 (19/33KV)

CABLE CONSTRUCTION

Single Core – Class 2 Aluminium Conductor, XLPE Insulated, Copper Wire Screen, LSZH Sheathed.

Nominal Area of Conductor	mm²	1 x 50	1 x 70	1 x 95	1 x 120	1 x 150	1 x 185	1 x 240	1 x 300	1 x 400	1 x 500	1 x 630	1 x 800	1 x 1000
Insulation Thickness (Min)	mm	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00
Outer Sheath Thickness	mm	2.00	2.00	2.10	2.10	2.20	2.20	2.30	2.40	2.50	2.60	2.70	2.80	3.00
Overall Diameter (Nom)	mm	36.00	37.00	39.00	41.00	42.00	44.00	47.00	49.00	52.00	56.00	59.00	66.00	71.00
Cable Weight (Nom)	Kg/Km	1360	1480	1640	1770	1900	2090	2350	2640	3010	3460	4020	4840	5680
Internal Bending Radius (Min)	mm	720	740	780	820	840	880	940	980	1040	1120	1180	1320	1420
d.c. Conductor Resistance @ 20°C (Max)	Ω/Km	0.641	0.443	0.32	0.253	0.206	0.164	0.125	0.10	0.0778	0.0605	0.0469	0.0367	0.0291
a.c. Conductor Resistance @ 90°C (Max)	Ω/Km	0.822	0.568	0.411	0.325	0.265	0.211	0.161	0.129	0.101	0.0797	0.063	0.0509	0.0422
Inductance	mH/Km	0.479	0.451	0.427	0.411	0.402	0.384	0.370	0.355	0.343	0.331	0.320	0.305	0.296
Reactance @ 50Hz*	Ω/Km	0.1505	0.1417	0.1341	0.1291	0.1263	0.1206	0.1162	0.1115	0.1078	0.104	0.1005	0.0958	0.093
Impedance @ 90°C & 50Hz	Ω/Km	0.84	0.59	0.43	0.35	0.29	0.24	0.20	0.17	0.15	0.13	0.12	0.11	0.10
Capacitance (Max)	µ/Km	0.14	0.16	0.18	0.19	0.2	0.22	0.24	0.26	0.29	0.31	0.34	0.4	0.44
Charging Current	A/Km	0.84	0.96	1.07	1.13	1.19	1.31	1.43	1.55	1.73	1.85	2.03	2.39	2.63
Continuous Current Carrying Capacity (Laid Direct)*	A	171	210	250	284	320	360	416	475	550	610	690	782	864
Continuous Current Carrying Capacity (Ducts)*	A	175	210	250	283	320	350	415	460	520	580	652	770	813
Continuous Current Carrying Capacity (Air)*	A	205	250	305	345	400	450	550	600	705	820	940	1100	1229
Symmetrical Short Circuit Rating (Max)														
90°C - 250°C for 1.0 sec	kA	4.7	6.6	8.9	11.3	14.1	17.4	22.6	28.2	37.6	47.0	59.2	75.2	94
Earth Fault Short Circuit Rating (Max)														
80°C - 200°C for 1.0 sec	kA	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5

- Cables in Trefoil arrangement

MEDIUM VOLTAGE CABLE – BS7835 (19/33KV)

CABLE CONSTRUCTION

Single Core – Class 2 Aluminium Conductor, XLPE Insulated, Copper Taped Screen, LSZH Bedding, Aluminium Wire Armour, LSZH Sheathed.

Nominal Area of Conductor	mm²	1 x 50	1 x 70	1 x 95	1 x 120	1 x 150	1 x 185	1 x 240	1 x 300	1 x 400	1 x 500	1 x 630	1 x 800	1 x 1000
Insulation Thickness (Min)	mm	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00
Inner Sheath Thickness	mm	1.20	1.20	1.20	1.20	1.30	1.30	1.30	1.40	1.40	1.50	1.50	1.60	1.70
Aluminium Wire Armour Diameter	mm	2.00	2.00	2.00	2.00	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50
Outer Sheath Thickness	mm	2.20	2.20	2.30	2.30	2.40	2.50	2.50	2.60	2.70	2.80	2.90	3.10	3.20
Overall Diameter (Nom)	mm	40.00	42.00	44.00	46.00	48.00	50.00	53.00	56.00	59.00	62.00	66.00	73.00	78.00
Cable Weight (Nom)	Kg/Km	1700	1870	2060	2220	2540	2800	3090	3460	3900	4460	5110	6150	7100
Internal Bending Radius (Min)	mm	600	630	660	690	720	750	795	840	885	930	990	1095	1170
d.c. Conductor Resistance @ 20°C (Max)	Ω/Km	0.641	0.443	0.32	0.253	0.206	0.164	0.125	0.1	0.0778	0.0605	0.0469	0.0367	0.0291
a.c. Conductor Resistance @ 90°C (Max)	Ω/Km	0.822	0.568	0.411	0.325	0.265	0.211	0.161	0.129	0.101	0.0795	0.0627	0.0505	0.0417
Inductance	mH/Km	0.505	0.478	0.452	0.438	0.431	0.412	0.398	0.382	0.368	0.355	0.343	0.326	0.316
Reactance @ 50Hz*	Ω/Km	0.1587	0.1502	0.142	0.1376	0.1354	0.1294	0.125	0.12	0.1156	0.1115	0.1078	0.1024	0.0993
Impedance @ 90°C & 50Hz	Ω/Km	0.84	0.59	0.43	0.35	0.30	0.25	0.20	0.18	0.15	0.14	0.12	0.11	0.11
Capacitance (Max)	µ/Km	0.14	0.16	0.18	0.19	0.2	0.22	0.24	0.26	0.29	0.31	0.34	0.4	0.44
Charging Current	A/Km	0.84	0.96	1.07	1.13	1.19	1.31	1.43	1.55	1.73	1.85	2.03	2.39	2.63
Continuous Current Carrying Capacity (Laid Direct)*	A	172	210	250	282	315	355	408	456	512	577	645	703	765
Continuous Current Carrying Capacity (Ducts)*	A	170	210	245	275	300	335	380	420	459	508	558	600	651
Continuous Current Carrying Capacity (Air)*	A	203	248	300	345	390	446	521	592	683	777	883	1003	1106
Symmetrical Short Circuit Rating (Max)														
90°C - 250°C for 1.0 sec	kA	4.7	6.6	8.9	11.3	14.1	17.4	22.6	28.2	37.6	47.0	59.2	75.2	94
Earth Fault Short Circuit Rating of Copper Tape (Max)														
80°C - 200°C for 1.0 sec	kA	1.0	1.1	1.2	1.2	1.3	1.3	1.4	1.5	1.6	1.7	1.9	2.1	2.3
Earth Fault Short Circuit Rating of Armour (Max)														
80°C - 200°C for 1.0 sec	kA	4.7	6.6	8.9	11.3	14.1	17.4	19.6	20.9	22.1	23.8	25.5	28.4	30.5

- Cables in Trefoil arrangement

MEDIUM VOLTAGE CABLE – BS7835 (19/33KV)

CABLE CONSTRUCTION

Three Core – Class 2 Aluminium Conductor, XLPE Insulated, Copper Taped Screen, LSZH Bedding, Galvanised Steel Wire Armour, LSZH Sheathed.

Nominal Area of Conductor	mm²	3 x 50	3 x 70	3 x 95	3 x 120	3 x 150	3 x 185	3 x 240	3 x 300	3 x 400
Insulation Thickness (Min)	mm	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00	8.00
Inner Sheath Thickness	mm	1.80	1.80	1.90	2.00	2.00	2.10	2.20	2.30	2.40
Galvanised Steel Wire Armour Diameter	mm	3.15	3.15	3.15	3.15	3.15	3.15	3.15	3.15	3.15
Outer Sheath Thickness	mm	3.40	3.50	3.60	3.70	3.80	3.90	4.10	4.30	4.50
Overall Diameter (Nom)	mm	81.00	85.00	88.00	92.00	94.00	99.00	105.00	111.00	117.00
Cable Weight (Nom)	Kg/Km	8600	9340	10030	10810	11380	12450	13740	15250	16970
Internal Bending Radius (Min)	mm	972	1020	1056	1104	1128	1188	1260	1332	1404
d.c. Conductor Resistance @ 20°C (Max)	Ω/Km	0.641	0.443	0.32	0.253	0.206	0.164	0.125	0.10	0.0778
a.c. Conductor Resistance @ 90°C (Max)	Ω/Km	0.822	0.568	0.411	0.325	0.265	0.211	0.163	0.132	0.104
Inductance	mH/Km	0.448	0.422	0.396	0.381	0.372	0.356	0.343	0.328	0.317
Reactance @ 50Hz*	Ω/Km	0.1407	0.1326	0.1244	0.1197	0.1169	0.1118	0.1078	0.103	0.0996
Impedance @ 90°C & 50Hz	Ω/Km	0.83	0.58	0.43	0.35	0.29	0.24	0.20	0.17	0.14
Capacitance (Max)	µ/Km	0.14	0.16	0.18	0.19	0.20	0.22	0.24	0.26	0.29
Charging Current	A/Km	0.84	0.96	1.07	1.13	1.19	1.31	1.43	1.55	1.73
Continuous Current Carrying Capacity (Laid Direct)	A	163	200	239	270	301	340	391	437	496
Continuous Current Carrying Capacity (Ducts)	A	145	179	210	240	269	301	351	385	451
Continuous Current Carrying Capacity (Air)	A	184	227	276	315	355	405	471	532	612
Symmetrical Short Circuit Rating (Max)										
90°C - 250°C for 1.0 sec	kA	4.7	6.6	8.9	11.3	14.1	17.4	22.6	28.2	37.6
Earth Fault Short Circuit Rating of Copper Tape (Max)										
80°C - 200°C for 1.0 sec	kA	2.1	2.2	2.4	2.5	2.5	2.7	2.9	3.1	3.3
Earth Fault Short Circuit Rating of Armour (Max)										
80°C - 200°C for 1.0 sec	kA	4.7	6.6	8.9	11.3	14.1	17.4	22.6	28.2	31.6

www.aeicables.co.uk
sales@aeicables.co.uk