

Single Core Cables to BS 6622/BS 7835 APPLICATIONS

The single core cables are designed for distribution of electrical power with nominal voltage U_0/U ranging from 3.8/6.6KV to 19/33KV and frequency 50Hz. They are suitable for installation mostly in power supply stations, indoors and in cable ducts, outdoors, underground and in water as well as for installation on cable trays for industries, switchboards and power stations.

STANDARD

BS 6622

BS 7835 (LSZH Version)

CONSTRUCTION

Conductor	Plain annealed copper or aluminium complying with IEC 60228/BS 6360. Copper conductors shall be stranded (class 2) and aluminium conductors shall be either solid or stranded (class 2).
Conductor Screen	Extruded layer of semi-conducting cross-linkable compound is applied over the conductor and shall cover the surface completely. The minimum thickness is 0.3mm and the maximum resistivity shall not exceed 500 Ohm-m at 90°C.
Insulation	Insulation is of cross-linked polyethylene compound XLPE (GP8) conforming to BS 7655-1.3 or EPR (GP7), conforming to BS 7655-1.2.

TABLE 1. INSULATION THICKNESS

NOM. CROSS SECTION AREA	INSULATION THICKNESS AT NOMINAL VOLTAGE				
	3.8/6.6KV (UM=7.2KV)	6.35/11KV (UM=12KV)	8.7/15KV (UM=17.5KV)	12.7/22KV (UM=24KV)	19/33KV (UM=36KV)
MM ²	MM	MM	MM	MM	MM
70 – 185	2.5	3.4	4.5	5.5	8.0
240	2.6	3.4	4.5	5.5	8.0
300	2.8	3.4	4.5	5.5	8.0
400	3.0	3.4	4.5	5.5	8.0
Above 500	3.2	3.4	4.5	5.5	8.0

Insulation Screen	Extruded layer of semi-conducting cross-linkable compound is applied over the insulation. The extruded semi-conducting layer shall consist of bonded or cold strippable semi-conducting compound capable of removal for jointing or terminating. As an option, a semi-conducting tape may be applied over the extruded semi-conducting layer as a bedding for the metallic layer. The minimum thickness is 0.3 mm and the maximum resistivity is 500 Ohm-m at 90°C. The screen is tightly fitted to the insulation to exclude all air voids and can be easily hand stripped on site.
Metallic Layer	The metallic layer shall consist of either copper tapes or a concentric layer of copper wires or a combination of tapes and wires. The metallic layer provides an earth fault current path, capable of withstanding fault current to earth of 1000A for one second at maximum temperature 160°C. Copper wires are applied over the conducting water blocking layer with a minimum diameter of 0.5mm. As an alternative, copper tape(s) with minimum thickness of 0.1mm can be applied with overlap. Total cross section of copper wire screen and copper tape screen layer are shown in Table 2a and 2b.

TABLE 2A. TOTAL CROSS SECTION AND MAX. DC RESISTANCE OF COPPER WIRE SCREEN

NOMINAL CROSS-	TOTAL CROSS SECTION					MAX. DC RESISTANCE OF COPPER WIRE SCREEN AT 20°C
	3.8/6.6KV	6.35/11KV	8.7/15KV	12.7/22KV	19/33KV	

SECTION OF CABLES MM ²	(UM=7.2KV)	(UM=12KV)	(UM=17.5KV)	(UM=24KV)	(UM=36KV)	
MM ²	MM ²					Ω
70	16	16	16	16	16	1.19
95	16	16	16	16	16	1.19
120	16	16	16	16	16	1.19
150	25	25	25	25	25	0.759
185	25	25	25	25	25	0.759
240	25	25	25	25	25	0.759
300	25	25	25	25	25	0.759
400	35	35	35	35	35	0.271
500	35	35	35	35	35	0.217
630	35	35	35	35	35	0.271

TABLE 2B. TOTAL CROSS SECTION AND MAX. DC RESISTANCE OF COPPER TAPE SCREEN (0.1MM)

NOMINAL CROSS-SECTION OF CONDUCTOR	TOTAL CROSS SECTION & MAX DC RESISTANCE									
	3.8/6.6KV (UM=7.2KV)		6.35/11KV (UM=12KV)		8.7/15KV (UM=17.5KV)		12.7/22KV (UM=24KV)		19/33KV (UM=36KV)	
	TOTAL CROSS SECTION	MAX. DC RESISTANCE AT 20°C	TOTAL CROSS SECTION	MAX. DC RESISTANCE AT 20°C	TOTAL CROSS SECTION	MAX. DC RESISTANCE AT 20°C	TOTAL CROSS SECTION	MAX. DC RESISTANCE AT 20°C	TOTAL CROSS SECTION	MAX. DC RESISTANCE AT 20°C
MM ²	MM ²	Ω	MM ²	Ω	MM ²	Ω	MM ²	Ω	MM ²	Ω
70	7.4	2.314	8.2	2.106	9.1	1.897	9.9	1.740	11.9	1.442
95	8.2	2.095	8.9	1.923	9.8	1.748	10.7	1.614	12.7	1.354
120	9.0	1.905	9.8	1.761	10.7	1.613	11.5	1.498	13.5	1.272
150	9.7	1.781	10.4	1.655	11.3	1.523	12.1	1.420	14.2	1.215
185	10.6	1.626	11.2	1.540	12.2	1.407	12.9	1.335	14.9	1.153
240	11.7	1.465	12.4	1.388	13.3	1.294	14.1	1.219	16.2	1.065
300	12.9	1.334	13.4	1.285	14.3	1.204	15.1	1.139	17.1	1.003
400	14.3	1.205	14.6	1.178	15.5	1.110	16.3	1.054	18.4	0.937
500	15.7	1.094	16.2	1.061	17.1	1.005	17.5	0.982	20.0	0.861

630	17.3	0.992	18.9	0.912	18.7	0.918	19.5	0.880	21.6	0.797
-----	------	-------	------	-------	------	-------	------	-------	------	-------

Separation Sheath (for armoured cable)	The separation sheath comprises a layer of extruded PVC, PE or LSZH. The nominal thickness where Du is the fictitious diameter under the sheath in mm. The nominal separation sheath thickness shall not be less than 1.2mm.
Armour (for armoured cable)	The armour consists of round aluminium wire with diameter specified as in Table 3.

TABLE 3. ARMOUR WIRE DIAMETER

FICTITIOUS DIAMETER UNDER THE ARMOUR		ARMOUR WIRE DIAMETER
MM		MM
>	<	
-	25	1.6
25	35	2.0
35	60	2.5
60	-	3.15

Over Sheath	Overall sheath comprises a layer of extruded either PVC type 9 conforming to BS 7665-4.2 or MDPE type TS2 conforming to BS 7655-10.1. LSZH can be offered as an option. The over sheath is normally black in colour. When a DC voltage test is to be performed on the over sheath, a semi-conducting layer such as graphite coating shall be applied over the surface of the extruded over sheath. The nominal over sheath thickness is calculated by $0.035D+1.0$ where D is the diameter immediately under the over sheath in mm. For cables with the over sheath not applied over the armour, the nominal over sheath thickness shall not be less than 1.4mm. And for cables with over sheath applied over the armour, the nominal over sheath thickness shall not be less than 1.8mm.
-------------	---

PHYSICAL PROPERTIES

Operating Temperature	up to 90°C
Temperature Range	-5°C (PVC or LSZH sheath); -20°C (PE sheath)
Short Circuit Temperature	250°C (short circuit duration up to 5 seconds)
Bending Radius	15 x OD

TABLE 4. NOMINAL /OPERATING /TEST VOLTAGES

RATED VOLTAGE UO/U	OPERATING VOLTAGE (UM)	TESTING VOLTAGE (RMS)
3.8/6.6KV	7.2KV	15KV
6.35/11KV	12KV	25.5KV
8.7/15KV	17.5KV	35KV
12.7/22KV	24KV	51KV

19/33KV	36KV	76KV
---------	------	------

SINGLE CORE 3.8/6.6KV (UM=7.2KV)

Dimensional Data

NOM. CROSS-SECTION AREA	NOM. INSULATION THICKNESS	COPPER WIRE SCREEN AREA	COPPER TAPE SCREEN AREA	NOM. BEDDING THICKNESS	NOM. ARMOUR WIRE DIAMETER	NOM. SHEATH THICKNESS	APPROX. OVERALL DIAMETER	APPROX. WEIGHT	
								CU	AL
MM ²	MM	MM ²	MM ²	MM	MM	MM	MM	KG/KM	
70	2.5	16	7.4	1.2	1.6	1.8	30.0	1740	1300
95	2.5	16	8.2	1.2	1.6	1.9	31.8	2030	1430
120	2.5	16	9.0	1.2	1.6	1.9	33.2	2310	1550
150	2.5	25	9.7	1.2	1.6	2.0	35.1	2660	1720
185	2.5	25	10.6	1.2	2.0	2.0	37.4	3120	1950
240	2.6	25	11.7	1.2	2.0	2.1	40.3	3740	2200
300	2.8	25	12.9	1.2	2.0	2.2	42.9	4400	2520
400	3.0	35	14.3	1.2	2.0	2.3	47.2	5490	2960
500	3.2	35	15.7	1.3	2.5	2.5	51.6	6760	3660
630	3.2	35	17.3	1.4	2.5	2.6	57.0	8200	4160

Electrical Data

Nom. Cross-Section Area	D C Resistance CU / AL	A C Resistance CU / AL	Short Circuit Rating of Conductor CU / AL 1 sec	Capacitance	Charging Current	Short Circuit Rating of Screen 1 sec		Reactance		Inductance		Impedance			
						Copper Wire	Copper Tape	Trefoil	Flat spaced	Trefoil	Flat Spaced	Trefoil		Flat Spaced	
												CU	AL	CU	AL
mm ²	μΩ/m	μΩ/m	kA	pF/m	mA/m	kA	kA	μΩ/m	μΩ/m	nH/m	nH/m	μΩ/m	μΩ/m	μΩ/m	μΩ/m
70	268/443	343/568	9.8/6.3	371	0.45	1.96	1.09	115	173	370	550	364	583	386	597
95	193/320	248/410	13.3/8.5	417	0.50	1.96	1.20	110	168	350	540	272	427	300	446
120	153/253	196/325	17.2/11.0	459	0.55	1.96	1.32	107	165	340	520	225	345	257	367
150	124/206	159/265	21.2/13.5	494	0.59	3.06	1.41	103	161	330	510	193	287	229	313
185	99.1/164	128/211	26.6/17.0	543	0.65	3.06	1.54	100	158	320	500	165	237	206	267
240	75.4/125	98/161	34.9/22.3	583	0.70	3.06	1.71	97	155	310	490	140	191	185	226
300	60.1/100	80/130	43.8/28.0	602	0.72	3.06	1.88	95	153	300	490	126	163	174	203
400	47.0/77.8	64/102	57.3/36.6	627	0.75	4.29	2.08	92	150	290	480	113	141	164	184

500	36.6/60.5	51/81	72.3/46.2	654	0.79	4.29	2.30	90	149	290	470	105	124	158	171
630	28.3/46.9	42/64	91.2/58.3	726	0.87	4.29	2.53	87	145	280	460	97	110	151	160

SINGLE CORE 6.35/11KV (UM=12KV)

Dimensional Data

NOM. CROSS-SECTION AREA	NOM. INSULATION THICKNESS	COPPER TAPE SCREEN AREA	NOM. BEDDING THICKNESS	NOM. ARMOUR WIRE DIAMETER	NOM. SHEATH THICKNESS	APPROX. OVERALL DIAMETER	APPROX. WEIGHT	
							CU	AL
MM ²	MM	MM ²	MM	MM	MM	MM	KG/KM	
50	3.4	4.4	1.2	1.6	1.8	30.2	1600	1280
70	3.4	4.7	1.2	1.6	1.9	32.0	1840	1400
95	3.4	5.2	1.2	1.6	1.9	33.6	2130	1530
120	3.4	5.5	1.2	1.6	2.0	35.2	2430	1670
150	3.4	5.8	1.2	1.6	2.1	37.9	2870	1930
185	3.4	6.2	1.2	2.0	2.1	39.4	3240	2080
240	3.4	6.8	1.2	2.0	2.2	42.1	3490	2330
300	3.4	7.3	1.2	2.0	2.2	44.1	4490	2560
400	3.4	8.0	1.2	2.0	2.4	48.2	5589	3040
500	3.4	8.6	1.3	2.5	2.5	52.0	6780	3680
630	3.4	9.5	1.4	2.5	2.6	57.4	8230	4200

Electrical Data

NOM. CROSS-SECTION AREA	DC RESISTANCE CU / AL	AC RESISTANCE CU / AL	SHORT CIRCUIT RATING OF CONDUCTOR CU / AL 1 SEC	CAPACITANCE	CHARGING CURRENT	SHORT CIRCUIT RATING OF SCREEN 1 SEC		REACTANCE		INDUCTANCE		IMPEDANCE			
						COPPER WIRE	COPPER TAPE	TREFOIL	FLAT SPACE D	TREFOIL	FLAT SPACE D	TREFOIL		FLAT SPACE D	
												CU	AL	CU	AL
MM ²	MΩ/M	MΩ/M	KA	PF/M	MA/M	KA	KA	MΩ/M	MΩ/M	NH/M	NH/M	MΩ/M	MΩ/M	MΩ/M	MΩ/M
70	268/443	343/568	9.8/6.3	288	0.58	1.96	1.19	122	188	390	600	364	583	386	597
95	193/320	248/410	13.3/8.5	323	0.65	1.96	1.31	122	182	390	580	272	427	300	446
120	153/253	196//325	17.2/11.0	353	0.71	1.96	1.43	116	172	370	550	225	345	257	367
150	124/206	159/265	21.2/13.5	380	0.76	3.06	1.52	110	166	350	530	193	287	229	313

185	99.1/164	128/211	26.6/17.0	416	0.83	3.06	1.63	107	166	340	530	165	237	206	267
240	75.4/125	98/161	34.9/22.3	460	0.92	3.06	1.81	104	163	330	520	140	191	185	226
300	60.1/100	80/130	43.8/28.0	506	1.01	3.06	1.95	100	157	320	500	126	163	174	203
400	47/77.8	64/102	57.3/36.6	561	1.12	4.29	2.13	94	154	300	490	113	141	164	184
500	36.6/60.5	51/81	72.3/46.2	619	1.24	4.29	2.37	91	151	290	480	105	124	158	171
630	28.3/46.9	42/64	91.2/58.3	698	1.37	4.29	2.75	91	148	290	470	97	110	151	160

SINGLE CORE 8.7/15KV (UM=17.5KV)

Dimensional Data

Nom. Section Area	Cross-Section Area	Nom. Insulation Thickness	Copper Wire Screen Area	Copper Tape Screen Area	Nom. Bedding Thickness	Nom. Armour Wire Diameter	Nom. Sheath Thickness	Approx. Overall Diameter	Approx. Weight	
									CU	AL
mm ²	mm	mm ²	mm ²	mm	mm	mm	mm	mm	kg/km	kg/km
70	4.5	4.5	16	9.1	1.2	1.6	1.9	34.2	1970	1520
95	4.5	4.5	16	9.8	1.2	2.0	2.0	36.8	2370	1770
120	4.5	4.5	16	10.7	1.2	2.0	2.1	38.4	2670	1910
150	4.5	4.5	25	11.3	1.2	2.0	2.1	40.1	3020	2080
185	4.5	4.5	25	12.2	1.2	2.0	2.2	41.8	3420	2240
240	4.5	4.5	25	13.3	1.2	2.0	2.3	44.5	4050	2500
300	4.5	4.5	25	14.3	1.2	2.0	2.3	46.5	4680	2780
400	4.5	4.5	35	15.5	1.3	2.5	2.5	51.8	5970	3430
500	4.5	4.5	35	17.1	1.3	2.5	2.6	54.4	7010	3910
630	4.5	4.5	35	18.7	1.4	2.5	2.7	59.8	8480	4420

Electrical Data

NOM. CROSS-SECTION AREA	DC RESISTANCE CU / AL	AC RESISTANCE CU / AL	SHORT CIRCUIT RATING OF CONDUCTOR CU / AL 1 SEC	CAPACITANCE	CHARGING CURRENT	SHORT CIRCUIT RATING OF SCREEN 1 SEC		REACTANCE		INDUCTANCE		IMPEDANCE			
						COPPER WIRE	COPPER TAPE	TREFOIL	FLAT SPACE D	TREFOIL	FLAT SPACE D	TREFOIL		FLAT SPACE D	
MM ²	MΩ/M	MΩ/M	KA	PF/M	MA/M	KA	KA	MΩ/M	MΩ/M	NH/M	NH/M	MΩ/M		MΩ/M	
70	268/443	343/568	9.8/6.3	232	0.63	1.96	1.32	132	188	420	600	364	583	386	597
95	193/320	248/410	13.3/8.5	258	0.70	1.96	1.44	126	182	400	580	272	427	300	446

120	153/253	196/325	17.2/11.0	281	0.77	1.96	1.56	119	179	380	570	225	345	257	367
150	124/206	159/265	21.2/13.5	301	0.82	3.06	1.65	113	176	360	560	193	287	229	313
185	99.1/164	128/211	26.6/17.0	329	0.90	3.06	1.79	110	170	350	540	165	237	206	267
240	75.4/125	98/161	34.9/22.3	363	0.99	3.06	1.94	107	166	340	530	140	191	185	226
300	60.1/100	80/130	43.8/28.0	398	1.09	3.06	2.09	104	160	330	510	126	163	174	203
400	47/77.8	64/102	57.3/36.6	439	1.20	4.29	2.26	97	157	310	500	113	141	164	184
500	36.6/60.5	51/81	72.3/46.2	483	1.32	4.29	2.50	94	154	300	490	105	124	158	171
630	28.3/46.9	42/64	91.2/58.3	534	1.46	4.29	2.73	91	151	290	480	97	110	151	160

SINGLE CORE 12.7/22KV (UM=24KV)

Dimensional Data

Nom. Cross-Section Area	Nom. Insulation Thickness	Copper Screen Area	Wire Copper Screen Area	Copper Tape	Nom. Bedding Thickness	Nom. Wire Diameter	Armour Thickness	Nom. Sheath Thickness	Approx. Overall Diameter	Approx. Weight	
										CU	AL
mm ²	mm	mm ²	mm ²		mm	mm	mm	mm	kg/km		
70	5.5	16	9.9		1.2	2.0	2.0	37.2	2190	1750	
95	5.5	16	10.7		1.2	2.0	2.1	39.0	2510	1900	
120	5.5	16	11.5		1.2	2.0	2.1	40.4	2810	2040	
150	5.5	25	12.1		1.2	2.0	2.2	42.3	3180	2240	
185	5.5	25	12.9		1.2	2.0	2.2	43.8	3560	2380	
240	5.5	25	14.1		1.2	2.0	2.3	46.5	4200	2640	
300	5.5	25	15.1		1.3	2.5	2.4	49.9	5030	3130	
400	5.5	35	16.3		1.3	2.5	2.5	53.8	6140	3600	
500	5.5	35	17.5		1.4	2.5	2.6	56.6	7210	4100	
630	5.5	35	19.5		1.4	2.5	2.8	62.0	8700	4650	

Electrical Data

NOM. CROSS-SECTION AREA	DC RESISTANCE / CU / AL	AC RESISTANCE / CU / AL	SHORT CIRCUIT RATING OF CONDUCTOR CU / AL 1 SEC	CAPACITANCE	CHARGING CURRENT	SHORT CIRCUIT RATING OF REACTANCE				INDUCTANCE		IMPEDANCE					
						SCREEN 1 SEC		OF		TREFOIL	FLAT SPACE D	TREFOIL	FLAT SPACE D	TREFOIL		FLAT SPACE D	
						COPPER WIRE	COPPER TAPE	TREFOIL	FLAT SPACE D					CU	AL	CU	AL

MM ²	MΩ/M	MΩ/M	KA	PF/M	MA/M	KA		MΩ/M	MΩ/M	NH/M	NH/M	MΩ/M	MΩ/M		
70	268/443	343/568	9.8/6.3	200	0.8	1.96	1.44	135	195	430	620	364	583	386	597
95	193/320	248/410	13.3/8.5	222	0.9	1.96	1.56	129	188	410	600	272	427	300	446
120	153/253	196/325	17.2/11.0	241	0.9	1.96	1.68	122	182	390	580	225	345	257	367
150	124/206	159/265	21.2/13.5	257	1.0	3.06	1.77	116	176	370	560	193	287	229	313
185	99.1/164	128/211	26.6/17.0	280	1.0	3.06	1.88	116	173	370	550	165	237	206	267
240	75.4/125	98/161	34.9/22.3	307	1.1	3.06	2.06	110	170	350	540	140	191	185	226
300	60.1/100	80/130	43.8/28.0	336	1.2	3.06	2.21	107	166	340	530	126	163	174	203
400	470/77.8	64/102	57.3/36.6	370	1.3	4.29	2.38	100	160	320	510	113	141	164	184
500	36.6/60.5	51/81	72.3/46.2	406	1.4	4.29	2.56	97	154	310	490	105	124	158	171
630	28.3/46.9	42/64	91.2/58.3	449	1.5	4.29	2.85	94	151	300	480	97	110	151	160

SINGLE CORE 19/33KV (UM=36KV)

Dimensional Data

NOM. CROSS-SECTION AREA	NOM. INSULATION THICKNESS	COPPER WIRE SCREEN AREA	COPPER TAPE SCREEN AREA	NOM. BEDDING THICKNESS	NOM. ARMOUR WIRE DIAMETER	NOM. SHEATH THICKNESS	APPROX. OVERALL DIAMETER	APPROX. WEIGHT	
								CU	AL
MM ²	MM	MM ²	MM ²	MM	MM	MM	MM	KG/KM	
70	8.0	16	11.9	1.2	2.0	2.2	42.6	2560	2120
95	8.0	16	12.7	1.2	2.0	2.3	44.4	2890	2290
120	8.0	16	13.5	1.2	2.0	2.3	45.8	3200	2430
150	8.0	25	14.2	1.3	2.5	2.4	48.9	3760	2830
185	8.0	25	14.9	1.3	2.5	2.5	50.6	4180	3010
240	8.0	25	16.2	1.3	2.5	2.5	53.1	4830	3270
300	8.0	25	17.1	1.4	2.5	2.6	55.5	5540	3630
400	8.0	35	18.4	1.4	2.5	2.7	59.4	6680	4130
500	8.0	35	20.0	1.5	2.5	2.8	62.2	7790	4690
630	8.0	35	21.6	1.5	2.5	2.9	67.4	9290	5220

Electrical Data

NOM. CROSS-SECTION	DC RESISTANCE	AC RESISTANCE	SHORT CIRCUIT RATING	CAPACITANCE	CHARGING CURRENT	SHORT CIRCUIT RATING OF SCREEN 1 SEC	REACTANCE		INDUCTANCE		IMPEDANCE	
							TREFOIL	FLAT SPACE	TREFOIL	FLAT SPACE	TREFOIL	FLAT SPACE
	CE	CU	/	CE	CU	/	RATING OF					

N AREA	AL	AL	CONDUCTOR CU / AL		T	R	R TAPE		D		D	CU	AL	C	A
MM ²	MΩ/M	MΩ/M	KA	PF/M	MA/M	KA		MΩ/M	MΩ/M	NH/M	NH/M	MΩ/M	MΩ/M		
70	268/443	343/568	9.8/6.3	154	0.92	1.96	1.74	144	201	460	640	364	583	386	597
95	193/320	248/410	13.3/8.5	169	1.01	1.96	1.85	138	195	440	620	272	427	300	446
120	153/253	196/325	17.2/11.0	183	1.10	1.96	1.97	132	188	420	600	225	345	257	367
150	124/206	159/265	21.2/13.5	194	1.16	3.06	2.07	126	182	400	580	193	287	229	313
185	99.1/164	128/211	26.6/17.0	210	1.26	3.06	2.18	122	182	390	580	165	237	206	267
240	75.4/125	98/161	34.9/22.3	229	1.37	3.06	2.36	119	176	380	560	140	191	185	226
300	60.1/100	80/130	43.8/28.0	249	1.49	3.06	2.50	113	173	360	550	126	163	174	203
400	47/77.8	64/102	57.3/36.6	273	1.64	4.29	2.68	107	163	340	520	113	141	164	184
500	36.6/60.5	51/81	72.3/46.2	298	1.79	4.29	2.92	104	163	330	520	105	124	158	171
630	28.3/46.9	42/64	91.2/58.3	327	1.96	4.29	3.15	100	160	320	510	97	110	151	160

CURRENT RATING FOR 3.8/6.6KV (UM=7.2KV), 6.35/11KV (UM=12KV) & 8.7/15KV (UM=17.5KV)

NOM. CROSS-SECTION AREA	GROUND				DUCT				AIR			
	TREFOIL UNARM'D/ARM'D		FLAT SPACED UNARM'D/ARM'D		TREFOIL UNARM'D/ARM'D		FLAT TOUCHING UNARM'D/ARM'D		TREFOIL UNARM'D/ARM'D		FLAT SPACED UNARM'D/ARM'D	
	CU	AL	CU	AL	CU	AL	CU	AL	CU	AL	CU	AL
MM ²	A		A		A		A		A		A	
50	220/220	170/170	230/230	175/175	225/220	175/170	220/220	170/170	235/250	180/195	295/300	230/230
70	270/270	210/210	280/280	215/215	270/260	215/210	270/270	210/210	285/310	225/240	370/370	290/290
95	320/320	250/250	335/335	260/260	320/305	255/245	325/325	250/250	360/375	280/295	455/460	350/355
120	360/360	280/280	380/380	295/295	360/340	285/275	370/370	285/285	415/430	320/355	520/530	410/410
150	410/410	320/315	430/430	330/330	400/375	315/300	415/410	320/320	470/490	365/380	600/600	465/465
185	460/455	360/355	485/485	375/375	440/410	350/335	465/460	360/360	540/550	425/435	690/690	530/530
240	530/520	415/405	560/560	440/440	505/460	405/380	540/540	420/420	640/650	500/510	820/820	640/630
300	600/580	475/455	640/640	495/495	560/500	455/420	610/610	475/470	740/740	580/580	940/940	730/730
400	680/650	540/510	730/730	570/570	610/530	510/455	690/690	540/540	840/840	670/670	1100/1100	860/860
500	750/710	610/570	830/830	650/650	680/570	570/500	790/780	620/620	940/930	790/770	1280/1280	1010/1010
630	830/760	680/640	940/940	750/750	750/620	640/550	890/890	710/700	1110/1040	910/880	1500/1480	1190/1180

CURRENT RATING FOR 12.7/22KV (UM=24KV)

NOM. CROSS- SECTION AREA	GROUND				DUCT				AIR			
	TREFOIL UNARM'D/ARM'D		FLAT SPACED UNARM'D/ARM'D		TREFOIL UNARM'D/ARM'D		FLAT TOUCHING UNARM'D/ARM'D		TREFOIL UNARM'D/ARM'D		FLAT SPACED UNARM'D/ARM'D	
	CU	AL	CU	AL	CU	AL	CU	AL	CU	AL	CU	AL
MM ²	A		A		A		A		A		A	
50	220/220	170/170	230/230	175/175	225/210	175/170	225/220	175/170	245/260	190/200	295/300	230/230
70	270/270	210/210	280/280	215/215	270/260	210/205	270/270	210/210	300/320	235/245	365/370	285/285
95	320/320	250/245	335/335	260/260	320/300	250/245	320/325	250/250	360/380	280/295	450/450	345/350
120	360/360	280/280	380/380	295/295	360/340	280/275	365/365	285/285	425/440	330/340	520/520	400/400
150	410/410	320/310	430/430	330/330	405/370	320/300	410/410	320/315	485/490	375/385	590/590	455/455
185	460/450	360/350	485/485	375/375	445/400	350/335	460/460	360/360	550/560	430/440	670/670	520/520
240	530/510	415/405	560/560	440/440	520/450	415/380	530/530	415/415	650/650	510/510	800/800	620/620
300	600/570	475/450	640/640	495/495	570/490	460/415	600/600	470/470	740/730	580/580	920/910	710/710
400	690/640	550/510	730/730	570/570	630/530	520/460	690/680	540/530	850/830	680/670	1070/1060	840/830
500	760/700	610/570	830/830	650/650	700/570	570/510	780/770	610/610	980/940	790/770	1250/1230	980/970
630	850/760	690/640	950/940	750/750	780/610	650/560	890/880	700/700	1130/1050	920/880	1450/1430	1060/1140

CURRENT RATING FOR 19/33KV (UM=36KV)

NOM. CROSS- SECTION AREA	GROUND				DUCT				AIR			
	TREFOIL UNARM'D/ARM'D		FLAT SPACED UNARM'D/ARM'D		TREFOIL UNARM'D/ARM'D		FLAT TOUCHING UNARM'D/ARM'D		TREFOIL UNARM'D/ARM'D		FLAT SPACED UNARM'D/ARM'D	
	CU	AL	CU	AL	CU	AL	CU	AL	CU	AL	CU	AL
MM ²	A		A		A		A		A		A	
50	220/220	170/170	230/230	175/175	225/220	175/170	225/220	175/170	245/260	190/200	295/300	230/230
70	270/270	210/210	280/280	215/215	270/260	210/205	270/270	210/210	300/320	235/245	365/370	285/285
95	320/320	250/245	335/335	260/260	320/300	250/245	320/325	250/250	360/380	280/295	450/450	345/350
120	360/360	280/280	380/380	295/295	360/340	280/275	365/365	285/285	425/440	330/340	520/520	400/400
150	410/410	320/310	430/430	330/330	405/370	320/300	410/410	320/315	485/490	375/385	590/590	455/455
185	460/450	360/350	485/485	375/375	445/400	350/335	460/460	360/360	550/560	430/440	670/670	520/520
240	530/510	415/405	560/560	440/440	520/450	415/380	530/530	415/415	650/650	510/510	800/800	620/620
300	600/570	475/450	640/640	495/495	570/490	460/415	600/600	470/470	740/730	580/580	920/910	710/710
400	690/640	550/510	730/730	570/570	630/530	520/460	690/680	540/530	850/830	680/670	1070/1060	840/830

500	760/700	610/570	830/830	650/650	700/570	570/510	780/770	610/610	980/940	790/770	1250/1230	980/970
630	850/760	690/640	940/940	750/750	780/610	650/560	890/880	700/700	1130/1050	920/880	1450/1430	1060/1140