1 Stranded copper conductor (optional water blocking)
2 Semi-conducting screen
3 XLPE insulation
4 Semi-conducting screen
5 70mm² copper wire screen (optional equalisation tape)
6 Binder tape
7 MDPE sheath (optional graphite coating)

Electricity Supply Industry
11kV SCWU 70M 0414
6350/11000V
Extruded insulation
Stranded copper conductor
70mm² copper wire screened
BS7870-4.10

		Conductor - nominal cross-sectional area										
Constructional Data	mm²	**95**	**120**	**150**	**185**	**240**	**300**	**400**	**500**	**630**	**800**	**1000**
Conductor diameter	mm	11.5	13.0	14.4	16.1	18.15	20.5	23.7	27.1	31.0	35.35	39.7
Insulation minimum average thickness	mm	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4
Copper wire screen nominal area	mm	70	70	70	70	70	70	70	70	70	70	70
Oversheath minimum average thickness	mm	1.8	1.9	1.9	1.9	2.0	2.1	2.2	2.3	2.4	2.5	2.6
Overall diameter	mm	28.0	29.5	31.0	33.0	35.0	37.5	41.0	44.5	49.0	53.5	58.5
Triplexed diameter (if applicable)	mm	60.5	64.0	67.0	70.5	75.5	81.0	88.5	-	-	-	-
Installation Data												
Cable mass	kg	1.9	2.1	2.4	2.8	3.3	3.9	4.7	5.8	7.2	9.0	10.9
Minimum bending radius	mm	600	600	650	700	700	750	850	900	1000	1100	1200
Maximum pulling tension (on conductor)	kg	475	600	750	925	1200	1500	2000	2000	2000	2000	2000
Internal diameter of twin wall PE duct (1 cable per duct)	mm	100	100	100	100	100	100	100	100	100	100	100
External diameter of twin wall PE duct (1 cable per duct)	mm	120	120	120	120	120	120	120	120	120	120	120
Internal diameter of twin wall PE duct (Triplex cable)	mm	150	150	150	150	150	150	225	-	-	-	-
External diameter of twin wall PE duct (Triplex cable)	mm	180	180	180	180	180	180	270	-	-	-	-
Electrical Data												
Conductor - maximum DC resistance @ 20℃	Ω/km	0.193	0.153	0.124	0.0991	0.0754	0.0601	0.047	0.0366	0.0283	0.0221	0.0176
Conductor - maximum AC resistance @ 90℃	Ω/km	0.247	0.196	0.159	0.128	0.098	0.079	0.0632	0.0509	0.0415	0.0349	0.0302
Copper wire screen - maximum DC resistance @ 20℃	Ω/km	0.271	0.271	0.271	0.271	0.271	0.271	0.271	0.271	0.271	0.271	0.271
Capacitance*	µF/km	0.326	0.357	0.386	0.421	0.463	0.512	0.577	0.647	0.727	0.816	0.921
Charging current - maximum at normal voltage and frequency*	A/km	0.650	0.712	0.770	0.840	0.924	1.021	1.152	1.291	1.450	1.628	1.838
Reactance @ 50Hz	Ω/km	0.116	0.112	0.108	0.105	0.101	0.098	0.094	0.091	0.088	0.085	0.084
Impedance @ 50Hz	Ω/km	0.273	0.226	0.193	0.165	0.141	0.126	0.113	0.104	0.097	0.092	0.089
Zero Sequence Resistance @ 20℃	Ω/km	0.464	0.424	0.395	0.371	0.347	0.332	0.319	0.309	0.301	0.295	0.291
Zero Sequence Reactance @ 50Hz	Ω/km	0.059	0.055	0.052	0.049	0.046	0.043	0.040	0.037	0.035	0.033	0.032
Current Ratings												
Laid in air	Amps	375	430	490	560	655	750	865	995	1135	1275	1410
Laid direct in ground	Amps	320	360	400	450	520	580	655	730	810	890	960
Drawn into trefoil ducts	Amps	290	320	355	390	440	485	535	595	655	715	775
Drawn into 1 duct	Amps	270	305	340	380	435	485	530	-	-	-	-
Short circuit ratings (1 second, adiabatic)												
Conductor (90 to 250℃)	kA	13.6	17.2	21.5	26.5	34.3	42.9	57.2	71.5	90.1	114.5	143.1
Copper wire screen (80 to 250℃)	kA	9.7	9.7	9.7	9.7	9.7	9.7	9.7	9.7	9.7	9.7	9.7
Current rating conditions												
Air temperature	℃	25										
Ground temperature	℃	15										
Depth of burial (to centre of cable group)	mm	800										
Thermal resistance of soil	℃ m/W	1.2										

Single core cables in trefoil, bonded and earthed at both ends.

All data are nominal and subject to manufacturing tolerances

* For EPR, multiply capacitance and charging current values by 1.2 Ref: IEC60287-2-1 (A2:2006)