Physical & electrical characteristics

Copper 6.35/11kV – Three core light duty screened unarmoured										
Product code: 3CCUX11LD										
Nominal conductor area mm²		25	35	50	70	95	120	150	185	240	300
Nominal conductor diameter mm		6.1	7.0	8.2	9.8	11.5	12.9	14.3	16.1	18.2	20.6
Nominal insulation thickness mm		3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4
Approx cable diameter mm		42.6	44.6	47.3	51.2	55.1	58.3	61.5	65.5	70.6	76.3
Approx mass kg/100m		195	230	270	345	440	520	610	730	915	1110
Max pulling tension on conductors kN		5.3	7.4	11	15	20	25	25	25	25	25
Max pulling tension on stocking grip kN		5.3	7.0	7.8	9.2	11	12	13	15	17	20
Min bending radius* during installation mm		770	800	850	920	990	1050	1110	1180	1270	1370
Min bending radius* set in position mm		510	540	570	610	660	700	740	790	850	920
Max conductor resistance, dc @ 20°C Ohm/km		0.727	0.524	0.387	0.268	0.193	0.153	0.124	0.0991	0.0754	0.0601
Conductor resistance, ac @ 90°C & 50 Hz Ohm/km		0.927	0.668	0.494	0.342	0.247	0.196	0.159	0.128	0.0984	0.0796
Inductance mH/km		0.415	0.397	0.379	0.350	0.333	0.319	0.310	0.300	0.290	0.282
Inductive reactance, @ 50Hz Ohm/km		0.130	0.125	0.119	0.110	0.105	0.100	0.0973	0.0942	0.0910	0.0885
Zero seq. impedance @ 20°C & 50 Hz Ohm/km		3.46+ j0.0836	3.26+ j0.0781	3.12+ j0.0726	2.79+ j0.0635	2.54+ j0.0585	2.34+ j0.0543	2.17+ j0.0515	2.03+ j0.0485	1.90+ j0.0454	1.70+ j0.0431
Capacitance, phase to earth µF/km		0.212	0.231	0.255	0.290	0.325	0.354	0.383	0.419	0.465	0.518
Min insulation resistance @ 20°C MOhm.km		12,000	11,000	10,000	8,900	7,900	7,200	6,600	6,000	5,400	4,900
Electric stress at conductor screen kV/mm		2.64	2.56	2.49	2.40	2.33	2.29	2.25	2.22	2.18	2.14
Charging current @ rated voltage & 50 Hz A/phase/km		0.422	0.461	0.509	0.578	0.648	0.706	0.764	0.837	0.927	1.03
Short circuit rating	Phase conductor kA, 1 sec	3.6	5.0	7.2	10.0	13.6	17.2	21.5	26.5	34.3	42.9
	Metallic screen kA, 1 sec	3.0	3.0	3.0	3.3	3.5	3.8	4.0	4.3	4.6	5.1
Continuous current rating	In ground, direct buried A	140	165	195	235	280	325	365	410	475	530
	In ground, in singleway ducts A	120	145	170	205	240	280	310	350	405	455
	In free air, unenclosed & spaced from wall A	135	160	190	235	285	330	380	435	510	580

The cables described in this technical manual are designed to be used for the supply of electrical energy in fixed applications up to the rated voltages at a nominal power frequency between 49Hz and 61Hz. All values in this catalogue are for XLPE cables only. *Increased radius required for HDPE and nylon incorporating designs.