

## MEDIUM VOLTAGE CABLES

### Physical & electrical characteristics

Copper 6.35/11kV – Three core light duty screened armoured										
Product code: 3CCUX11LDA										
Nominal conductor area mm <sup>2</sup>	25	35	50	70	95	120	150	185	240	
Nominal conductor diameter mm	6.1	7.0	8.2	9.8	11.5	12.9	14.3	16.1	18.2	
Nominal insulation thickness mm	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	
Approx cable diameter mm	51.3	53.5	56.3	60.4	64.2	67.7	71.1	75.2	82.1	
Approx mass kg/100m	430	475	535	630	745	850	955	1100	1400	
Max pulling tension on conductors kN	5.3	7.4	11	15	20	25	25	25	25	
Max pulling tension on stocking grip kN	5.3	7.4	11	13	14	16	18	20	24	
Max pulling tension on amour wires kN	11	12	13	15	17	19	21	23	25	
Min bending radius* during installation mm	920	960	1010	1090	1160	1220	1280	1350	1480	
Min bending radius* set in position mm	620	640	680	720	770	810	850	900	980	
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	
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	
Inductance mH/km	0.415	0.397	0.379	0.350	0.333	0.319	0.310	0.300	0.290	
Inductive reactance, @ 50Hz Ohm/km	0.130	0.125	0.119	0.110	0.105	0.100	0.0973	0.0942	0.0910	
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	
Capacitance, phase to earth µF/km	0.212	0.231	0.255	0.290	0.325	0.354	0.383	0.419	0.465	
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	
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	
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	
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
	Metallic screen kA, 1 sec	3.0	3.0	3.0	3.3	3.5	3.8	4.0	4.3	4.6
Contin- uous current rating	In ground, direct buried A	140	165	195	235	280	325	365	410	475
	In ground, in singleway ducts A	120	145	170	205	240	280	310	350	405
	In free air, unenclosed & spaced from wall A	135	160	190	235	285	330	380	435	510

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.