

## MEDIUM VOLTAGE CABLES

### Physical & electrical characteristics

Copper 3.8/6.6kV – Three core heavy duty screened armoured										
Product code: 3CCUX6HDA										
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	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.6	
Approx cable diameter mm	45.4	49.4	52.0	56.0	60.2	63.4	66.8	71.0	78.4	
Approx mass kg/100m	345	450	515	625	735	830	940	1080	1390	
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	9.5	11	13	14	16	18	22	
Max pulling tension on amour wires kN	8.3	9.7	11	13	15	16	18	21	25	
Min bending radius* during installation mm	820	890	940	1010	1080	1140	1200	1280	1410	
Min bending radius* set in position mm	540	590	620	670	720	760	800	850	940	
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	0.0986	
Inductance mH/km	0.393	0.377	0.360	0.332	0.317	0.304	0.295	0.286	0.278	
Inductive Reactance, @ 50Hz Ohm/km	0.124	0.118	0.113	0.104	0.0994	0.0954	0.0927	0.0899	0.0875	
Zero seq. impedance @ 20°C & 50 Hz Ohm/km	3.07+ j0.0764	2.16+ j0.0713	1.56+ j0.0662	1.11+ j0.0577	1.03+ j0.0531	0.995+ j0.0493	0.966+ j0.0467	0.941+ j0.0441	0.917+ j0.0418	
Capacitance, phase to earth µF/km	0.267	0.293	0.325	0.372	0.420	0.459	0.499	0.548	0.588	
Min insulation resistance @ 20°C MOhm.km	9,700	8,800	8,000	6,900	6,100	5,500	5,100	4,600	4,300	
Electric stress at conductor screen kV/mm	2.00	1.95	1.90	1.84	1.80	1.78	1.75	1.73	1.65	
Charging current @ rated voltage & 50 Hz A/phase/km	0.319	0.350	0.388	0.444	0.501	0.548	0.595	0.654	0.702	
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	3.5	5.1	7.1	10	10	10	10	10	10
Contin-uous current rating	In ground, direct buried A	140	170	200	245	290	325	370	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	165	195	245	295	340	385	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.