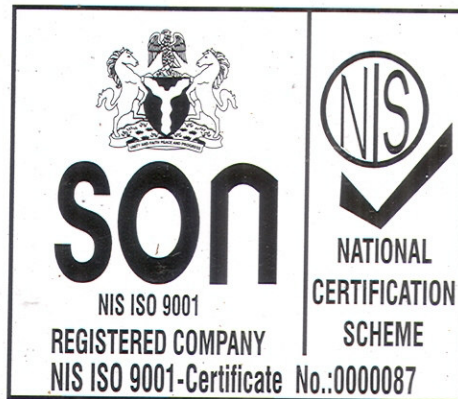


NIGERCHIN ELECTRICAL DEVELOPMENT CO. LTD.

NC

WIRE AND CABLE



COPPER AND ALUMINIUM

NIGERCHIN ELECTRICAL DEVELOPMENT COMPANY LIMITED

PRODUCT CATALOGUE

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ALL ALUMINIUM CONDUCTORS (AAC)
FOR OVERHEAD POWER TRANSMISSION
BS 215: PART 1
NIS 231

CROSS SECTIONAL AREA OF CONDUCTOR	STRANDING AND WIRE DIAMETER	APPROXIMATE OVERALL DIAMETER	APPROXIMATE WEIGHT OF CONDUCTOR	CALCULATED D.C RESISTANCE AT 20°C	CALCULATED BREAKING LOAD	CODE NAME	CURRENT RATINGS	DELIVERY LENGTH
mm ²	No/mm	mm	Kg./km.	Ohm/km	KN		amp	METRES
22	7/2.06	6.20	64	1.227	3.99	MIDGE	90	4000
35	7/2.50	7.50	94	0.833	5.732	-	157	3500
50	7/3.10	9.30	145	0.5419	8.28	ANT	205	6000
60	7/3.40	10.20	174	0.4505	9.90	FLY	215	4000
70	19/2.10	10.50	181	0.437	13.176	-	225	4000
100	19/2.67	13.40	292	0.2699	20.757	BEETLE	316	3000
100	7/4.39	13.20	290	0.2702	16.00	WASP	316	3000
150	19/3.25	16.30	434	0.1825	25.70	HORNET	400	2000
200	19/3.78	18.90	587	0.1349	32.40	CHAFER	470	2500
250	19/4.22	21.10	731	0.1083	40.40	COCKROACH	600	2500

ALUMINIUM CONDUCTORS STEEL REINFORCED (ACSR)**FOR OVERHEAD POWER TRANSMISSION****BS 215: PART 2****NIS 234**

CROSS SECTIONAL AREA OF CONDUCTOR	STRANDING AND WIRE DIAMETER		SECTIONAL AREA	APPROXIMATE OVERALL DIAMETER	APPROXIMATE WEIGHT OF CONDUCTOR	CALCULATED D.C RESISTANCE AT 20°C	CALCULATED BREAKING LOAD	CODE NAME	CURRENT RATINGS	DELIVERY LENGTH
mm ²	ALUMINIUM mm	STEEL mm	ALUMINIUM mm ²	mm	Kg./km	Ohm/km	KN		amp	METRES
25	6/2.36	1/2.36	26.24	7.08	106	1.093	9.61	GOPHER	130	5000
30	6/2.59	1/2.59	31.61	7.77	128	0.9077	11.45	WEASEL	135	3500
40	6/3.00	1/3.00	42.41	9.00	172	0.6766	15.20	FERRET	166	3500
50	6/3.35	1/3.35	52.88	10.05	214	0.5426	18.35	RABBIT	205	3500
70	12/2.79	7/2.79	73.37	13.95	538	0.3936	61.20	HORSE	267	3000
100	6/4.72	7/1.57	105.00	14.15	394	0.2733	32.70	DOG	366	2500
120	26/2.44	7/1.90	121.60	15.50	495	0.2376	45.65	-	410	2000
150	30/2.59	7/2.59	158.10	18.13	726	0.1828	69.20	WOLF	470	3000
150	18/3.35	1/3.35	158.70	16.75	506	0.1815	35.70	DINGO	470	3000
175	30/2.79	7/2.79	183.40	19.53	842	0.1576	79.80	LYNX	535	2500
175	18/3.61	1/3.61	184.30	18.05	587	0.1563	41.10	CARACAL	535	2500
200	30/3.00	7/3.00	212.10	21.00	974	0.1363	92.25	PANTHER	570	2500
200	18/3.86	1/3.86	210.60	19.30	671	0.1367	46.55	JAGUAR	570	2500
400	54/3.18	7/3.18	428.90	28.62	1621	0.0674	131.90	ZEBRA	843	1500

HARD DRAWN COPPER CONDUCTORS
FOR OVERHEAD POWER TRANSMISSION
BS 7884

CROSS SECTIONAL AREA OF CONDUCTOR mm ²	STRANDING AND WIRE DIAMETER No/mm	APPROXIMATE OVERALL DIAMETER mm	APPROXIMATE WEIGHT OF CONDUCTOR Kg./km	CALCULATED D.C RESISTANCE AT 20°C Ohm/km	MINIMUM BREAKING LOAD N	CURRENT RATINGS AMP	DELIVERY LENGTH METRES
10	7/1.35	4.05	90	1.829	3752	67	5000
16	3/2.65	5.70	150	1.106	6194	93	4000
25	7/2.10	6.30	220	0.7563	9073	118	4000
35	7/2.50	7.50	310	0.5337	12860	148	3000
50	7/3.00	9.00	440	0.3706	18520	186	2000
70	7/3.55	10.65	620	0.2646	25930	229	2000
100	7/4.30	12.90	910	0.1810	36540	281	1000
125	7/2.90	14.50	1130	0.1471	45940	326	1000
150	19/3.20	16.00	1380	0.1208	55940	377	1000
185	19/3.55	17.75	1700	0.09815	68860	433	1000

**BARE COPPER TRAILING CONDUCTORS
FOR STEEL MANUFACTURER'S FURNACE**

CROSS SECTIONAL AREA OF CONDUCTOR mm ²	STRANDING AND WIRE DIAMETER No/mm	APPROXIMATE OVERALL DIAMETER mm	APPROXIMATE WEIGHT OF CONDUCTOR Kg/km	CALCULATED D.C RESISTANCE AT 20°C Ohm/km	DELIVERY LENGTH METRES
750	1159/0.90	41	6880	0.0243	500
800	1159/0.94	42	7500	0.0221	500
1000	1729/0.85	47	9150	0.0176	500
1250	1729/0.96	53	11680	0.0140	250

PVC INSULATED, NON – SHEATHED, GENERAL PURPOSE CABLE**SINGLE CORE 450/750V****BS 6004 || NIS/IEC 60227 – 3**

CROSS SECTIONAL AREA OF CONDUCTOR (mm²)	1.0	1.5	2.5	4	6	10	16	25	35	50	70	95	120	150	185	240	300
NOMINAL INSULATION THICKNESS. (mm)	0.7	0.7	0.8	0.8	0.8	1.0	1.0	1.2	1.2	1.4	1.4	1.6	1.6	1.8	2.0	2.2	2.4
APPROXIMATE OVERALL DIAMETER (mm)	2.6	2.9	3.4	3.9	4.7	6.1	7.1	8.8	10.1	11.7	13.5	15.8	17.4	19.4	21.6	24.7	27.5
APPROXIMATE CABLE WEIGHT (kg/km)	15	21	32	47	71	118	178	280	366	496	698	965	1203	1480	1854	2427	3035
– COPPER CONDUCTOR –	-	-	-	-	-	-	80	120	145	200	270	370	-	-	-	-	-
– ALUMINIUM CONDUCTOR –	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

PVC INSULATED, PVC SHEATHED CABLE**SINGLE CORE, COPPER CONDUCTOR 300/500V****BS 6004**

CROSS SECTIONAL AREA OF CONDUCTOR (mm²)	1.0	1.5	2.5	4	6	10	16	25	35
INSULATION THICKNESS (mm)	0.6	0.7	0.8	0.8	0.8	1.0	1.0	1.2	1.2
APPROXIMATE OVERALL DIAMETER	4	4.4	5	6	7	8	9.1	11	12
APPROXIMATE CABLE WEIGHT (kg/km)	25	33	45	66	94	147	217	332	423

AMBIENT TEMPERATURE = 30⁰C**MAXIMUM OPERATING CONDUCTOR TEMPERATURE AT RATED CURRENT = 70⁰C**

**PVC – INSULATED, PVC – SHEATHED CABLE, 300/500V
FLAT TWIN AND THREE CORE, COPPER CONDUCTOR
BS 6004**

	NOMINAL AREA OF CONDUCTOR mm ²	RADIAL THICKNESS OF INSULATION mm.	RADIAL THICKNESS OF SHEATH mm.	APPROXIMATE OVERALL DIMENSIONS mm.		APPROXIMATE WEIGHT OF CABLE Kg./km
				MINOR	MAJOR	
. T W I N C O R E	1.0	0.6	0.9	4.2	6.5	48
	1.5	0.7	0.9	4.6	7.4	63
	2.5	0.8	1.0	5.4	8.8	92
	4	0.8	1.0	5.9	9.7	133
	6	0.8	1.1	7.0	11.7	195
	10	1.0	1.2	8.5	14.5	309
	16	1.0	1.3	9.7	16.8	450
. T H R E E C O R E	1.0	0.6	0.9	4.2	8.8	71
	1.5	0.7	0.9	4.6	10.2	96
	2.5	0.8	1.0	5.4	12.2	143
	4	0.8	1.1	6.1	13.8	200
	6	0.8	1.1	7.3	16.7	290
	10	1.0	1.2	8.9	21.0	462
	16	1.0	1.3	10.2	24.4	672

AMBIENT TEMPERATURE = 30°C

MAXIMUM OPERATING CONDUCTOR TEMPERATURE AT RATED CURRENT = 70°C

PVC INSULATED DISTRIBUTION CABLES 600 / 1000V.**SINGLE CORE – COPPER / ALUMINIUM CONDUCTOR – ARMOURED / UNARMOURED****BS 6346 || NIS/IEC 60502 – 1**

<u>ARMOURED (AWA)</u>													
CROSS SECTIONAL AREA OF CONDUCTOR (mm²)	50	70	95	120	150	185	240	300	400	500	630	800	1000
NOMINAL INSULATION THICKNESS (mm)	1.4	1.4	1.6	1.6	1.8	2.0	2.2	2.4	2.6	2.8	2.8	2.8	3.0
APPROXIMATE OVERALL DIAMETER (mm)	20	22	24	26	28	30	34	38	42	45	50	55	61
APPROXIMATE CABLE WEIGHT (kg/km)													
– COPPER CONDUCTOR –	820	1060	1380	1700	2030	2460	3120	3890	4880	5990	7480	9440	11860
– ALUMINIUM CONDUCTOR –	520	630	780	940	1100	1300	1590	1970	2430	2900	3500	4380	5350
<u>UNARMOURED</u>													
CROSS SECTIONAL AREA OF CONDUCTOR (mm²)	50	70	95	120	150	185	240	300	400	500	630	800	1000
NOMINAL INSULATION THICKNESS (mm)	1.4	1.4	1.6	1.6	1.8	2.0	2.2	2.4	2.6	2.8	2.8	2.8	3.0
APPROXIMATE OVERALL DIAMETER (mm.)	15	17	19	21	23	25	28	31	35	39	43	47	53
APPROXIMATE CABLE WEIGHT (kg/km)													
– COPPER CONDUCTOR–	580	800	1090	1330	1620	2040	2650	3280	4170	5210	6800	8340	10460
– ALUMINIUM CONDUCTOR –	280	370	490	580	690	880	1120	1360	1720	2110	2820	3280	3950

AMBIENT TEMPERATURE = 30°C**MAXIMUM OPERATING CONDUCTOR TEMPERATURE AT RATED CURRENT = 70°C**

PVC INSULATED DISTRIBUTION CABLES**TWO CORE – COPPER / ALUMINIUM CONDUCTOR – ARMOURED / UNARMOURED 600 / 1000V****BS 6346 || NIS/IEC 60502 – 1**

<u>ARMOURED (SWA)</u>														
CROSS SECTIONAL AREA OF CONDUCTOR (mm²)	1.5	2.5	4	6	10	16	25	35	50	70	95	120	150	185
NOMINAL INSULATION THICKNESS. (mm)	0.8	0.8	1.0	1.0	1.0	1.0	1.2	1.2	1.4	1.4	1.6	1.6	1.8	2.0
APPROXIMATE OVERALL DIAMETER (mm)	13	14	16	18	20	22	23	25	28	32	36	39	43	47
APPROXIMATE CABLE WEIGHT (kg/km)														
– COPPER CONDUCTOR –	300	340	420	600	780	980	1290	1560	1950	2710	3490	4100	5170	6270
– ALUMINIUM CONDUCTOR –	280	310	370	530	650	780	970	1110	1350	1850	2290	2590	3310	3940
<u>UNARMOURED</u>														
CROSS SECTIONAL AREA OF CONDUCTOR (mm²)	1.5	2.5	4	6	10	16	25	35	50	70	95	120	150	185
NOMINAL INSULATION THICKNESS (mm)	0.8	0.8	1.0	1.0	1.0	1.0	1.2	1.2	1.4	1.4	1.6	1.6	1.8	2.0
APPROXIMATE OVERALL DIAMETER (mm.)	10	10	12	13	16	19	19	20	22	25	29	32	35	39
APPROXIMATE CABLE WEIGHT (kg/km)														
– COPPER CONDUCTOR –	110	140	190	240	440	610	680	890	1170	1510	2190	2710	3310	4140
– ALUMINIUM CONDUCTOR	90	110	140	170	310	410	360	450	580	650	1000	1200	1450	1810

AMBIENT TEMPERATURE = 30°C**MAXIMUM OPERATING CONDUCTOR TEMPERATURE AT RATED CURRENT = 70°C**

PVC INSULATED DISTRIBUTION CABLES 600 / 1000V.**THREE CORE – COPPER / ALUMINIUM CONDUCTOR – ARMOURED / UNARMOURED****BS 6346 || NIS/IEC 60502 – 1**

<u>ARMOURED (SWA)</u>																
CROSS SECTIONAL AREA OF CONDUCTOR (mm²)	1.5	2.5	4	6	10	16	25	35	50	70	95	120	150	185	240	300
NOMINAL INSULATION THICKNESS. (mm)	0.8	0.8	1.0	1.0	1.0	1.0	1.2	1.2	1.4	1.4	1.6	1.6	1.8	2.0	2.2	2.4
APPROXIMATE OVERALL DIAMETER (mm)	14	15	17	18	21	23	28	30	31	36	40	43	49	53	59	65
APPROXIMATE CABLE WEIGHT (kg/km)																
– COPPER CONDUCTOR –	330	390	580	700	940	1190	1770	2160	2610	3650	4680	5560	7100	8550	10730	12960
– ALUMINIUM CONDUCTOR –	300	340	510	590	750	630	1300	1500	1720	2360	2890	3290	4320	5060	6140	7200
<u>UNARMOURED</u>																
CROSS SECTIONAL AREA OF CONDUCTOR (mm²)	1.5	2.5	4	6	10	16	25	35	50	70	95	120	150	185	240	300
NOMINAL INSULATION THICKNESS (mm)	0.8	0.8	1.0	1.0	1.0	1.0	1.2	1.2	1.4	1.4	1.6	1.6	1.8	2.0	2.2	2.4
APPROXIMATE OVERALL DIAMETER (mm.)	10	11	13	14	17	20	20	23	26	29	33	36	40	45	50	56
APPROXIMATE CABLE WEIGHT (kg/km)																
– COPPER CONDUCTOR –	145	200	260	380	570	680	990	1300	1710	2390	3200	3980	4950	6160	8010	9930
– ALUMINIUM CONDUCTOR –	120	150	190	270	380	380	510	640	810	1100	1400	1710	2170	2670	3420	4170

AMBIENT TEMPERATURE = 30°C**MAXIMUM OPERATING CONDUCTOR TEMPERATURE AT RATED CURRENT = 70°C**

PVC INSULATED DISTRIBUTION CABLES 600 / 1000V.

FOUR CORE – COPPER / ALUMINIUM CONDUCTOR – ARMOURED / UNARMOURED

BS 6346 || NIS/IEC 60502 – 1

<u>ARMOURED (SWA)</u>																
CROSS SECTIONAL AREA OF CONDUCTOR (mm²)	1.5	2.5	4	6	10	16	25	35	50	70	95	120	150	185	240	300
NOMINAL INSULATION THICKNESS. (mm)	0.8	0.8	1.0	1.0	1.0	1.0	1.2	1.2	1.4	1.4	1.6	1.6	1.8	2.0	2.2	2.4
APPROXIMATE OVERALL DIAMETER (mm)	14	15	18	20	21	26	28	30	35	39	45	49	53	59	63	73
APPROXIMATE CABLE WEIGHT (kg/km)																
– COPPER CONDUCTOR –	370	440	670	820	1050	1560	2070	2510	3470	4480	6190	7470	8910	10860	13460	16660
–ALUMINIUM CONDUCTOR –	330	380	570	670	800	1160	1440	1630	2280	2760	3800	4450	5200	6200	7340	8990
<u>UNARMOURED</u>																
CROSS SECTIONAL AREA OF CONDUCTOR (mm²)	1.5	2.5	4	6	10	16	25	35	50	70	95	120	150	185	240	300
NOMINAL INSULATION THICKNESS (mm)	0.8	0.8	1.0	1.0	1.0	1.0	1.2	1.2	1.4	1.4	1.6	1.6	1.8	2.0	2.2	2.4
APPROXIMATE OVERALL DIAMETER (mm.)	11	12	14	15	19	22	23	25	29	33	38	42	46	51	58	65
APPROXIMATE CABLE WEIGHT (kg/km)																
– COPPER CONDUCTOR–	180	250	330	470	540	810	1280	1720	2390	3310	4560	5580	6900	8450	10510	13200
– ALUMINIUM CONDUCTOR –	140	190	230	320	290	410	640	840	1200	1580	2170	2560	3190	3800	4390	5530

AMBIENT TEMPERATURE = 30⁰CMAXIMUM OPERATING CONDUCTOR TEMPERATURE AT RATED CURRENT = 70⁰C

PVC INSULATED CONTROL /AUXILIARY CABLES 600 / 1000V.
COPPER CONDUCTOR – ARMOURED / UNARMOURED
BS 6346 || NIS/IEC 60502 – 1

<u>ARMOURED (SWA)</u> CROSS SECTIONAL AREA OF CONDUCTOR (mm²) NO OF CORES	1.5					2.5					4				
	7	12	19	27	37	7	12	19	27	37	7	12	19	27	37
	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	1.0	1.0	1.0	1.0	1.0
	16	21	24	27	30	18	22	26	30	33	21	27	30	37	41
APPROXIMATE CABLE WEIGHT (kg/km)	460	830	1190	1510	1860	710	1020	1480	1930	2390	940	1510	2050	2970	3690
<u>UNARMOURED</u> CROSS SECTIONAL AREA OF CONDUCTOR (mm²) NO OF CORES	1.5					2.5					4				
	7	12	19	27	37	7	12	19	27	37	7	12	19	27	37
	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	1.0	1.0	1.0	1.0	1.0
	13	16	19	22	25	14	18	21	25	28	16	21	25	30	34
APPROXIMATE CABLE WEIGHT (kg/km)	250	380	560	770	1010	330	520	780	1070	1430	480	780	1180	1660	2230

AMBIENT TEMPERATURE = 30⁰C

MAXIMUM OPERATING CONDUCTOR TEMPERATURE AT RATED CURRENT = 70⁰C

CURRENT RATING FOR SINGLE – CORE NON – SHEATHED CONDUIT CABLES AND SINGLE CORE SHEATHED CABLES**PVC WIRING CABLES, 300/500V AND 450/750V****BS 6004 || NIS/IEC 60227 – 3**

Conductor Size (mm ²)	Bunched and enclosed in conduct or trunking		Clipped direct.		On perforated tray.	
	2 Cables		2 Cables		2 Cables	
	Single Phase a . c or d . c	3 or 4 Cables 3 Phase a. c	Single Phase a. c or d. c	3 or 4 Cables 3 – Phase a. c	Single Phase a. c. or d. c.	3 or 4 Cables 3-Phase a. c
	(A)	(A)	(A)	(A)	(A)	(A)
1.0	13.5	12	15.5	14		
1.5	17.5	15.5	20	18		
2.5	24	21	27	25		
4	32	28	37	33		
6	41	36	47	43		
10	57	50	65	59		
16	76	68	87	79		
25	101	89	114	104	126	112
35	125	110	141	129	156	141
50	151	134	182	167	191	172
70	192	171	234	214	246	223
95	232	207	284	261	300	273
120	269	239	330	303	349	318
150	300	262	381	349	404	369
185	341	296	436	400	463	424
240	400	346	515	472	549	504
300	458	394	594	545	635	584

* The ratings are for a single circuit only

* $\geq 50\text{mm}^2$ single core insulated and sheathed cables are covered by BS 6346 || NIS/IEC 60502 - 1

VOLTAGE DROP (m V / A /m)**SINGLE CORE NON- SHEATHED CONDUIT CABLES AND SINGLE CORE SHEATHED CABLES**

Conductor Size (mm ²)	Bunched and enclosed in conduit or trunking		Clipped Direct		On Perforated Tray	
	2 Cables Single Phase a . c or d . c	3 or 4 Cables 3 Phase a. c	2 Cables Single Phase a. c or d. c	3 or 4 Cables 3 – Phase a. c	2 Cables Single Phase a. c. or d. c.	3 or 4 Cables 3-Phase a. c
	(mv)	(mv)	(mv)	(mv)	(mv)	(mv)
1.0	44	38	44	38		
1.5	29	25	29	25		
2.5	18	15	18	15		
4	11	9.5	11	9.5		
6	7.3	6.4	7.3	6.4		
10	4.4	3.8	4.4	3.8		
16	2.8	2.4	2.8	2.4		
25	1.8	1.55	1.75	1.5	1.75	1.5
35	1.3	1.10	1.25	1.1	1.25	1.1
	<u>a. c.</u>	<u>d. c.</u>	<u>a. c.</u>	<u>d. c.</u>	<u>a. c.</u>	<u>d. c.</u>
50	1.0	0.93	0.85	0.95	0.84	0.95
70	0.72	0.63	0.61	0.66	0.60	0.66
95	0.56	0.46	0.48	0.50	0.47	0.50
120	0.47	0.36	0.41	0.41	0.40	0.41
150	0.41	0.29	0.36	0.34	0.34	0.34
185	0.37	0.23	0.32	0.29	0.31	0.29
240	0.33	0.18	0.29	0.25	0.27	0.25
300	0.31	0.145	0.27	0.22	0.25	0.22

* The ratings are for a single circuit only.

CURRENT RATING AND VOLTAGE DROP FOR FLAT CABLES**PVC WIRING CABLES 300/500V****BS 6004 || NIS/IEC 60227 - 3**

Conductor Size (mm ²)	Enclosed in conduct on a wall or ceiling or in trunking		Clipped Direct		On a perforated cable tray or free air	
	2 - Core Cable, Single Phase a. c. or d. c.	3- or 4- Core Cable, 3 – Phase a. c.	2–Core Cable, Single Phase a. c or d. c	3- or 4- Core Cables 3 – Phase a. c	2- Core Cable, Single Phase a. c. or d. c.	3 or 4 Cables 3-Phase a. c
Current Rating (A)						
1.0	13	11.5	15	13.5	17	14.5
1.5	16.5	15	19.5	17.5	22	18.5
2.5	23	20	27	24	30	25
4	30	27	36	32	40	34
6	38	34	46	41	51	43
10	52	46	63	57	70	60
16	69	62	85	76	94	80
Volt drop [m V / A / m]						
1.0	44	38	44	38	44	38
1.5	29	25	29	25	29	25
2.5	18	15	18	15	18	15
4	11	9.5	11	9.5	11	9.5
6	7.3	6.4	7.3	6.4	7.3	6.4
10	4.4	3.8	4.4	3.8	4.4	3.8
16	2.8	2.4	2.8	2.4	2.8	2.4

CURRENT RATING AND VOLT DROP**PVC INSULATED POWER OR CONTROL COPPER CONDUCTOR ARMoured CABLES 600/1000V****BS 6346 || NIS/IEC 60502 – 1**

Conductor Size (mm ²)	2 Core Cable, d. c. or Single Phase a. c.		3 – or 4 – Core Cable 3 Phase a. c.	
	Rating (A)	Volt Drop per A/m (mv)	Rating (A)	Volt Drop per A/m (mv)
In free air (ambient temperature 30°C, maximum conductor temperature 70°C)				
1.5	22	29	19	25
2.5	31	18	26	15
4	41	11	35	9.5
6	53	7.3	45	6.4
10	72	4.4	62	3.8
16	97	2.8	83	2.4
Direct in ground at 0.5m depth (ground temperature 15°C, conductor temperature 70°C)				
1.5	32	29	27	25
2.5	41	18	35	15
4	55	11	47	9.5
6	69	7.3	59	6.4
10	92	4.4	78	3.8
16	119	2.8	101	2.4

The ratings are for a single circuit only.

CURRENT RATINGS**PVC INSULATED DISTRIBUTION COPPER ARMOURED CABLES 600/1000V****BS 6346 || NIS/IEC 60502 – 1**

CONDUCTOR SIZE (mm²)	In Air				In Ground			
	<u>Single Core</u> <u>Trefoil</u> (A)	<u>Flat</u> (A)	<u>2 - Core</u> (A)	<u>3 – or 4 -</u> <u>Core</u> (A)	<u>Single Core</u> <u>Trefoil</u> (A)	<u>Flat</u> (A)	<u>2 - Core</u> (A)	<u>3 – 4 - Core</u> (A)
16			97	83			119	101
25			128	110			158	132
35			157	135			190	159
50	181	230	190	163	203	211	225	188
70	231	286	241	207	248	257	277	233
95	280	338	291	251	297	305	332	279
120	324	385	336	290	337	341	377	317
150	373	436	386	332	376	377	422	355
185	425	490	439	378	423	417	478	401
240	501	566	516	445	485	469	551	462
300	567	616	592	510	542	515	616	517
400	657	674	683	590	600	549	693	580
500	731	721			660	586		
630	809	771			721	627		
800	886	824			756	648		
1000	945	872			797	679		

* Single core cables with Aluminium wire armour 3 phase circuit

CURRENT RATINGS**PVC INSULATED DISTRIBUTION ALUMINIUM ARMOURED CABLES 600/1000V****BS 6346 || NIS/IEC 60502 – 1**

CONDUCTOR SIZE (mm²)	In Air				In Ground			
	Single	Core	2-Core	3 – or 4 - Core	Single Core		2-Core	3 – 4 - Core
	Trefoil	Flat			Trefoil	Flat		
	(A)	(A)	(A)	(A)	(A)	(A)	(A)	(A)
16			71	61			91	77
25			94	80			118	100
35			115	99			142	120
50	131	169	139	119	154	160	168	143
70	168	213	175	151	188	197	209	176
95	205	255	211	186	226	235	250	213
120	238	293		216	257	267		243
150	275	335		250	288	298		272
185	315	379		287	326	332		309
240	372	443		342	377	380		360
300	430	505		399	424	423		407
380	497	551			475	457		
480	568	604			532	501		
600	642	656			586	540		
740	715	707			648	582		
960	808	770			701	608		
1200	880	822			755	644		

* Single core cables with Aluminium wire armoured 3-phase circuit

CURRENT RATINGS**PVC INSULATED DISTRIBUTION COPPER UNARMoured CABLES 600/1000V****BS 6346 || NIS/IEC 60502 – 1**

CONDUCTOR SIZE (mm²)	IN AIR			
	Single Core		2 - Core	3 – or 4 - Core
	Trefoil (A)	Flat (A)	(A)	(A)
16			94	80
25			119	101
35			148	126
50	167	219	180	153
70	216	281	232	196
95	264	341	282	238
120	308	396	328	276
150	356	456	379	319
185	409	521	434	364
240	485	615	514	430
300	561	709	593	497
400	656	852	715	597
500	749	982		
630	855	1138		
800	971	1265		
1000	1079	1420		

CURRENT RATINGS**PVC INSULATED DISTRIBUTION ALUMINIUM CONDUCTORS UNARMoured CABLES 600/1000V-****BS 6346 || NIS/IEC 60502 – 1**

CONDUCTOR SIZE (mm²)	IN AIR			
	Single – Core		2 – Core	3 – or 4 - Core
	Trefoil (A)	Flat (A)	(A)	(A)
16			73	61
25			89	78
35			111	96
50	128	163	135	117
70	165	210	173	150
95	203	256	210	183
120	237	298		212
150	274	344		245
185	316	394		280
240	375	466		330
300	435	538		381

VOLTAGE DROP (m V / A / m)**PVC INSULATED DISTRIBUTION ARMOURED CABLES 600/1000V****BS 6346 || NIS/IEC 60502 – 1**

CONDUCTOR SIZE (mm²)	COPPER				ALUMINIUM			
	Single – Core*		2 – Core	3- or 4-Core	Single – Core*		2 – Core	3 -or 4 -Core
	Trefoil	Flat			Trefoil	Flat		
	mv	mv	mv	mv	mv	mv	mv	mv
16			2.8	2.4			4.5	3.9
25			1.75	1.5			2.9	2.5
35			1.25	1.1			2.1	1.8
50	0.82	0.86	0.94	0.81	1.35	1.35	1.55	1.35
70	0.58	0.68	0.65	0.57	0.93	1.00	1.05	0.92
95	0.45	0.57	0.50	0.43	0.70	0.80	0.79	0.68
120	0.37	0.50	0.41	0.35	0.57	0.68		0.55
150	0.32	0.45	0.34	0.29	0.47	0.58		0.44
185	0.27	0.41	0.29	0.25	0.39	0.51		0.37
240	0.23	0.37	0.24	0.21	0.32	0.44		0.30
300	0.21	0.34	0.21	0.185	0.27	0.40		0.25
400	0.195	0.32	0.185	0.16				
500	0.18	0.30						
630	0.17	0.28						
800	0.16	0.26						
1000	0.155	0.24						

* Data for Aluminium wire armoured cables, 3 - phase circuit

VOLTAGE DROP (m V / A / m)

PVC INSULATED DISTRIBUTION UNARMoured CABLES 600/1000V

BS 6346 || NIS/IEC 60502 – 1

CONDUCTOR SIZE (mm ²)	COPPER				ALUMINIUM			
	Single – Core		2 – Core	3-or 4 -Core	Single – Core		2 – Core	3- or 4 -Core
	Trefoil	Flat			Trefoil	Flat		
	(mv)	(mv)	(mv)	(mv)	(mv)	(mv)	(mv)	(mv)
16			2.8	2.4			4.5	3.9
25			1.75	1.5			2.9	2.5
35			1.25	1.1			2.1	1.8
50	0.82	0.86	0.94	0.81	1.35	1.4	1.55	1.35
70	0.57	0.63	0.65	0.57	0.92	0.96	1.05	0.92
95	0.43	0.51	0.50	0.43	0.69	0.74	0.79	0.68
120	0.36	0.44	0.41	0.35	0.55	0.61		0.55
150	0.30	0.40	0.34	0.29	0.45	0.52		0.44
185	0.26	0.36	0.29	0.25	0.37	0.46		0.37
240	0.22	0.34	0.24	0.21	0.30	0.40		0.30
300	0.19	0.32	0.21	0.185	0.26	0.36		0.25
400	0.175	0.31	0.185	0.16				
500	0.16	0.30						
630	0.15	0.29						
800	0.145	0.29						
1000	0.14	0.28						
380					0.22	0.34		
480					0.195	0.32		
600					0.18	0.31		
740					0.165	0.30		
960					0.155	0.29		
1200					0.15	0.29		

XLPE INSULATED DISTRIBUTION CABLES 600 / 1000V.

SINGLE CORE – COPPER / ALUMINIUM CONDUCTOR – ARMoured / UNARMoured

BS 5467 || BS 7889 || NIS/IEC 60502 – 1

<u>ARMoured</u> (AWA)													
CROSS SECTIONAL AREA OF CONDUCTOR (mm ²)	50	70	95	120	150	185	240	300	400	500	630	800	1000
NOMINAL INSULATION THICKNESS (mm)	1.0	1.1	1.1	1.2	1.4	1.6	1.7	1.8	2.0	2.2	2.4	2.6	2.8
APPROXIMATE OVERALL DIAMETER (mm)	19	21	23	25	27	30	33	35	40	44	49	55	60
APPROXIMATE CABLE WEIGHT (kg/km)													
– COPPER CONDUCTOR –	760	1010	1300	1610	1930	2340	2970	3610	4660	5740	7220	9210	11590
– ALUMINIUM CONDUCTOR –	470	580	700	860	1000	1180	1440	1690	2200	2650	3240	4150	5080
<u>UNARMoured</u>													
CROSS SECTIONAL AREA OF CONDUCTOR (mm ²)	50	70	95	120	150	185	240	300	400	500	630	800	1000
NOMINAL INSULATION THICKNESS (mm)	1.0	1.1	1.1	1.2	1.4	1.6	1.7	1.8	2.0	2.2	2.4	2.6	2.8
APPROXIMATE OVERALL DIAMETER (mm.)	15	17	18	20	22	24	28	30	34	38	42	47	53
APPROXIMATE CABLE WEIGHT (kg/km)													
– COPPER CONDUCTOR –	570	790	1050	1300	1580	1960	2540	3140	4000	5010	6420	8110	10370
– ALUMINIUM CONDUCTOR –	270	350	450	540	650	790	1010	1220	1550	1920	2440	3060	3860

AMBIENT TEMPERATURE = 30°C

MAXIMUM OPERATING CONDUCTOR TEMPERATURE AT RATED CURRENT = 90°C

XLPE INSULATED DISTRIBUTION CABLES 600 / 1000V.**TWO CORE – COPPER / ALUMINIUM CONDUCTOR – ARMoured / UNARMoured****BS 5467 || NIS/IEC 60502 – 1**

<u>ARMoured (SWA)</u>														
CROSS SECTIONAL AREA OF CONDUCTOR (mm²)	1.5	2.5	4	6	10	16	25	35	50	70	95	120	150	185
NOMINAL INSULATION THICKNESS. (mm)	0.7	0.7	0.7	0.7	0.7	0.7	0.9	0.9	1.0	1.1	1.1	1.2	1.4	1.6
APPROXIMATE OVERALL DIAMETER (mm)	13	14	15	16	19	21	22	24	27	30	34	35	38	44
APPROXIMATE CABLE WEIGHT (kg/km)														
– COPPER CONDUCTOR –	280	320	370	440	710	900	1090	1480	1840	2380	3280	3680	4390	5680
– ALUMINIUM CONDUCTOR –	260	290	320	370	580	700	770	1040	1240	1520	1180	2170	2530	3350
<u>UNARMoured</u>														
CROSS SECTIONAL AREA OF CONDUCTOR (mm²)	1.5	2.5	4	6	10	16	25	35	50	70	95	120	150	185
NOMINAL INSULATION THICKNESS (mm)	0.7	0.7	0.7	0.7	0.7	0.7	0.9	0.9	1.0	1.1	1.1	1.2	1.4	1.6
APPROXIMATE OVERALL DIAMETER (mm.)	9	10	11	12	15	17	17	19	21	24	28	29	32	36
APPROXIMATE CABLE WEIGHT (kg/km)														
– COPPER CONDUCTOR –	100	130	160	210	310	440	630	830	1090	1520	2050	2550	3130	3860
– ALUMINIUM CONDUCTOR –	80	90	110	140	190	240	310	390	490	650	850	1030	1270	1530

AMBIENT TEMPERATURE = 30°C**MAXIMUM OPERATING CONDUCTOR TEMPERATURE AT RATED CURRENT = 90°C**

XLPE INSULATED DISTRIBUTION CABLES 600 / 1000V.**THREE CORE – COPPER / ALUMINIUM CONDUCTOR – ARMoured / UNARMoured****BS 5467 || NIS/IEC 60502 – 1**

<u>ARMoured (SWA)</u>																
CROSS SECTIONAL AREA OF CONDUCTOR (mm²)	1.5	2.5	4	6	10	16	25	35	50	70	95	120	150	185	240	300
NOMINAL INSULATION THICKNESS. (mm)	0.7	0.7	0.7	0.7	0.7	0.7	0.9	0.9	1.0	1.1	1.1	1.2	1.4	1.6	1.7	1.8
APPROXIMATE OVERALL DIAMETER (mm)	13	14	15	16	20	22	27	28	29	34	38	41	47	51	57	62
APPROXIMATE CABLE WEIGHT (kg/km)																
– COPPER CONDUCTOR –	310	360	440	520	840	1100	1640	2030	2410	3430	4400	5260	6670	8080	10190	12280
– ALUMINIUM CONDUCTOR –	280	310	370	410	650	800	1160	1370	1510	2240	2600	2990	3890	4590	5600	6520
<u>UNARMoured</u>																
CROSS SECTIONAL AREA OF CONDUCTOR (mm²)	1.5	2.5	4	6	10	16	25	35	50	70	95	120	150	185	240	300
NOMINAL INSULATION THICKNESS (mm)	0.7	0.7	0.7	0.7	0.7	0.7	0.9	0.9	1.0	1.1	1.1	1.2	1.4	1.6	1.7	1.8
APPROXIMATE OVERALL DIAMETER (mm.)	10	11	12	13	15	18	21	24	26	30	32	35	39	43	48	53
APPROXIMATE CABLE WEIGHT (kg/km)																
– COPPER CONDUCTOR –	120	160	210	270	420	600	910	1210	1590	2250	3030	3750	4620	5750	7490	9330
– ALUMINIUM CONDUCTOR –	90	110	130	160	230	300	430	650	700	960	1230	1480	1840	2260	2900	3580

AMBIENT TEMPERATURE = 30⁰C**MAXIMUM OPERATING CONDUCTOR TEMPERATURE AT RATED CURRENT = 90⁰C**

XLPE INSULATED DISTRIBUTION CABLES 600 / 1000V.**FOUR CORE – COPPER / ALUMINIUM CONDUCTOR – ARMoured / UNARMoured****BS 5467 || NIS/IEC 60502 – 1**

<u>ARMoured (SWA)</u>																
CROSS SECTIONAL AREA OF CONDUCTOR (mm²)	1.5	2.5	4	6	10	16	25	35	50	70	95	120	150	185	240	300
NOMINAL INSULATION THICKNESS. mm)	0.7	0.7	0.7	0.7	0.7	0.7	0.9	0.9	1.0	1.1	1.1	1.2	1.4	1.6	1.7	1.8
APPROXIMATE OVERALL DIAMETER (mm)	14	15	16	18	21	25	27	28	32	37	41	47	51	57	61	70
APPROXIMATE CABLE WEIGHT (kg/km)	350	420	500	730	1000	1450	1910	2360	3180	4230	5450	7090	8410	10230	12790	15810
– COPPER CONDUCTOR	310	360	400	580	750	1050	1270	1480	2000	2500	3060	4070	4700	5570	6670	8140
–ALUMINIUM CONDUCTOR																
<u>UNARMoured</u>																
CROSS SECTIONAL AREA OF CONDUCTOR (mm²)	1.5	2.5	4	6	10	16	25	35	50	70	95	120	150	185	240	300
NOMINAL INSULATION THICKNESS (mm)	0.7	0.7	0.7	0.7	0.7	0.7	0.9	0.9	1.0	1.1	1.1	1.2	1.4	1.6	1.7	1.8
APPROXIMATE OVERALL DIAMETER (mm.)	10	11	12	14	17	19	22	23	26	30	34	39	43	48	52	62
APPROXIMATE CABLE WEIGHT (kg/km)	150	190	260	340	540	780	1170	1550	2050	2900	3940	4960	6080	7620	9860	12410
– COPPER CONDUCTOR–	110	130	160	200	280	380	530	670	860	1180	1550	1940	2370	2960	3740	4730
– ALUMINIUM CONDUCTOR –																

AMBIENT TEMPERATURE = 30⁰C**MAXIMUM OPERATING CONDUCTOR TEMPERATURE AT RATED CURRENT = 90⁰C**

**XLPE INSULATED CONTROL / AUXILIARY CABLES 600 / 1000V.
COPPER CONDUCTOR – ARMOURED / UNARMOURED
BS 5467 || NIS/IEC 60502 – 1**

<u>ARMOURED (SWA)</u>	1.5					2.5					4				
CROSS SECTION AREA OF CONDUCTOR (mm²)	7	12	19	27	37	7	12	19	27	37	7	12	19	27	37
NO OF CORES	7	12	19	27	37	7	12	19	27	37	7	12	19	27	37
NOMINAL INSULATION THICKNESS (mm)	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
APPROXIMATE OVERALL DIAMETER (mm.)	16	20	22	26	28	17	21	25	28	31	19	24	27	32	36
APPROXIMATE CABLE WEIGHT (kg/km)	440	750	950	1350	1640	550	930	1350	1730	2140	810	1300	1720	2260	3100
<u>UNARMOURED</u>	1.5					2.5					4				
CROSS SECTIONAL AREA OF CONDUCTOR (mm²)	7	12	19	27	37	7	12	19	27	37	7	12	19	27	37
NO OF CORES	7	12	19	27	37	7	12	19	27	37	7	12	19	27	37
NOMINAL INSULATION THICKNESS (mm)	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
APPROXIMATE OVERALL DIAMETER (mm.)	12	15	18	21	23	13	17	20	23	26	15	19	22	26	29
APPROXIMATE CABLE WEIGHT (kg/km)	210	330	470	640	840	290	460	680	930	1230	400	650	970	1340	1800

AMBIENT TEMPERATURE = 30⁰C

MAXIMUM OPERATING CONDUCTOR TEMPERATURE AT RATED CURRENT = 90⁰C

CURRENT RATINGS**XLPE INSULATED COPPER CONDUCTORS DISTRIBUTION ARMOURED CABLES 600/1000V****BS 5467 || NIS/IEC 60502 – 1**

Conductor Size (mm ²)	In air				In ground			
	<u>Single Core *</u>		<u>2-Core</u>	<u>3 – or 4 – Core</u>	<u>Single Core</u>		<u>2-Core</u>	<u>3 – or 4 – core</u>
	Trefoil	Flat			Trefoil	Flat		
	(A)	(A)	(A)	(A)	(A)	(A)	(A)	(A)
16			115	99			141	119
25			152	131			183	152
35			188	162			219	182
50	222	288	228	197	231	242	259	217
70	285	358	291	251	284	295	317	266
95	346	425	354	304	340	350	381	319
120	402	485	410	353	386	395	433	363
150	463	549	472	406	431	434	485	406
185	529	618	539	463	485	482	547	458
240	625	715	636	546	558	545	632	529
300	720	810	732	628	623	597	708	592
400	815	848	847	728	691	637	799	667
500	918	923			765	688		
630	1027	992			841	737		
800	1119	1042			888	760		
1000	1214	1110			942	797		

* Single core cable with Aluminium wire armour, 3 phase circuit.

CURRENT RATINGS**XLPE INSULATED ALUMINIUM CONDUCTORS DISTRIBUTION ARMOURED CABLES 600/1000V****BS 5467 || NIS/IEC 60502 – 1**

Conductor Size (mm ²)	In air				In ground			
	<u>Single Core</u> *		<u>2-Core</u>	<u>3 – or 4 – Core</u>	<u>Single Core</u>		<u>2-Core</u>	<u>3 – or 4 – Core</u>
	Trefoil	Flat			Trefoil	Flat		
	(A)	(A)	(A)	(A)	(A)	(A)	(A)	(A)
16			85	74			108	91
25			112	98			138	116
35			138	120			165	139
50	162	215	166	145	177	185	196	165
70	207	270	211	185	218	227	241	203
95	252	324	254	224	260	270	288	244
120	292	372		264	296	306		278
150	337	424		305	331	339		311
185	391	477		350	374	380		353
240	465	554		418	433	435		409
300	540	626		488	486	483		461

*Single – Core cables with Aluminium wire armour, 3 phase circuit.

CURRENT RATINGS**XLPE INSULATED COPPER CONDUCTORS DISTRIBUTION UNARMoured CABLES 600/1000V****BS 7889 || NIS/IEC 60502 – 1**

Conductor Size (mm ²)	In air			
	<u>Single Trefoil</u>	<u>Core Flat</u>	<u>2-Core</u>	<u>3 – or 4 – Core</u>
	(A)	(A)	(A)	(A)
16			115	100
25			149	127
35			185	158
50	209	274	225	192
70	270	351	289	246
95	330	426	352	298
120	385	495	410	346
150	445	570	473	399
185	511	651	542	456
240	606	769	641	538
300	701	886	741	621
400	820	1065	865	741
500	936	1228		
630	1069	1423		
800	1214	1581		
1000	1349	1775		

CURRENT RATINGS**XLPE INSULATED ALUMINIUM CONDUCTORS DISTRIBUTION UNARMoured CABLES 600/1000V****BS 7889 || NIS/IEC 60502 – 1**

Conductor Size (mm²)	In air			
	Single Core*		<u>2 – Core</u>	<u>3 – or 4 – Core</u>
	Trefoil	Flat		
	(A)	(A)	(A)	(A)
16			91	77
25			108	97
35			135	120
50	159	210	164	146
70	206	271	211	187
95	253	332	257	227
120	296	387		263
150	343	448		304
185	395	515		347
240	471	611		409
300	544	708		471

VOLTAGE DROP (mv / A / m)**XLPE INSULATED DISTRIBUTION ARMOURED CABLES 600/1000V****BS 5467 || NIS/IEC 60502 – 1****Conductor**

Size (mm ²)	COPPER				ALUMINIUM			
	Single Core*		2-Core	3 – or 4 – Core	Single Core*		2-Core	3 – or 4 – Core
	Trefoil	Flat			Trefoil	Flat		
16			2.9	2.5			4.8	4.2
25			1.9	1.65			3.1	2.7
35			1.35	1.15			2.2	1.95
50	0.87	0.90	1.00	0.87	1.4	1.4	1.65	1.45
70	0.62	0.70	0.69	0.60	0.98	1.05	1.15	0.97
95	0.47	0.58	0.52	0.45	0.74	0.83	0.84	0.72
120	0.39	0.51	0.42	0.37	0.60	0.70		0.58
150	0.33	0.45	0.35	0.30	0.49	0.60		0.47
185	0.28	0.41	0.29	0.26	0.41	0.53		0.39
240	0.24	0.37	0.24	0.21	0.34	0.46		0.31
300	0.21	0.34	0.21	0.185	0.29	0.41		0.26
400	0.195	0.33	0.19	0.165				
500	0.18	0.31						
630	0.17	0.29						
800	0.165	0.26						
1000	0.155	0.24						

*Data for Aluminium wire armoured Cables, 3 – Phase circuit

VOLTAGE DROP (mv/A/m)**XLPE INSULATED DISTRIBUTION UNARMoured CABLES 600/1000V****BS 7889 || NIS/IEC 60502 – 1****Conductor**

Size (mm ²)	COPPER				ALUMINIUM			
	<u>Single</u> Trefoil	<u>Core</u> Flat	<u>2-Core</u>	<u>3 – or 4 – Core</u>	<u>Single</u> Trefoil	<u>Core</u> Flat	<u>2-Core</u>	<u>3 – or 4 – Core</u>
16			2.9	2.5			4.8	4.2
25			1.9	1.65			3.1	2.7
35			1.35	1.15			2.2	1.95
50	0.87	0.89	1.00	0.87	1.45	1.48	1.65	1.45
70	0.61	0.65	0.69	0.60	0.98	1.02	1.15	0.97
95	0.45	0.49	0.52	0.45	0.73	0.78	0.84	0.72
120	0.37	0.42	0.42	0.37	0.59	0.64		0.58
150	0.31	0.37	0.35	0.30	0.47	0.54		0.47
185	0.26	0.33	0.29	0.26	0.39	0.47		0.39
240	0.22	0.29	0.24	0.21	0.32	0.41		0.31
300	0.195	0.27	0.21	0.185	0.27	0.37		0.26
400	0.175	0.26						
500	0.160	0.25						
630	0.150	0.24						
800	0.145	0.24						
1000	0.140	0.24						

CURRENT RATINGS AND VOLT DROP**XLPE INSULATED POWER OR CONTROL COPPER CONDUCTORS ARMoured CABLES 600/1000V****BS 5467 || NIS/IEC 60502 – 1**

Conductor Size (mm ²)	2-Core Cable, d,c, or Single phase a . c		3 – or 4 – Core Cable 3 phase a . c	
	Rating (A)	Volt drop (m v/A/m)	Rating (A)	Volt drop (m v/A/m)
<u>Clipped direct (ambient temperature 30⁰C, Conductor temperature 90⁰C)</u>				
1.5	27	31	23	27
2.5	36	19	31	16
4	49	12	42	10
6	62	7.9	53	6.8
10	85	4.7	73	4.0
<u>In free air</u>				
1.5	29	31	25	27
2.5	39	19	33	16
4	52	12	44	10
6	66	7.9	56	6.8
10	90	4.7	78	4.0

The ratings are for a single circuit only.

DISTRIBUTION CABLES**A. CABLES INSTALLED IN AIR****STANDARD CONDITIONS**

1. Ambient Temperature 30°C
2. Cables fastened to a wall should be spaced of least 20mm from it.
3. Adjacent circuits spaced at least 150mm apart.

B. CABLES LAID DIRECT IN GROUND**STANDARD CONDITIONS**

1. Ground Temperature 15°C
2. Soil thermal resistivity 1.2 K m/W
3. Adjacent circuits of least 1.8m distance
4. Depth of laying 0.5m

C. CABLES INSTALLED IN DUCTS

1. Ground Temperature 15°C
2. Soil thermal resistivity 1.2 K m/W
3. Adjacent circuits of least 1.8m distance
4. Depth of laying 0.5m

RATING FACTORS FOR AMBIENT TEMPERATURE [for Current Carrying Capacity]

Cable Insulation Maximum Conductor		<u>Ambient Air Temperature (°C)</u>							
Operating Temp °C		25	30	35	40	45	50	55	
PVC	70	1.03	1.0	0.94	0.87	0.79	0.71	0.61	
XLPE	90	1.02	1.0	0.96	0.91	0.87	0.82	0.76	

RATING FACTORS FOR GROUND TEMPERATURE [for Current Carrying Capacity]

Cable Insulation Maximum Conductor		<u>Ground Temperature (°C)</u>						
Operating Temp °C		15	20	25	30	35	40	
PVC	70	1.0	0.95	0.90	0.85	0.81	0.74	
XLPE	90	1.0	0.97	0.93	0.89	0.85	0.81	

NIGERCHIN Electric wire and cable

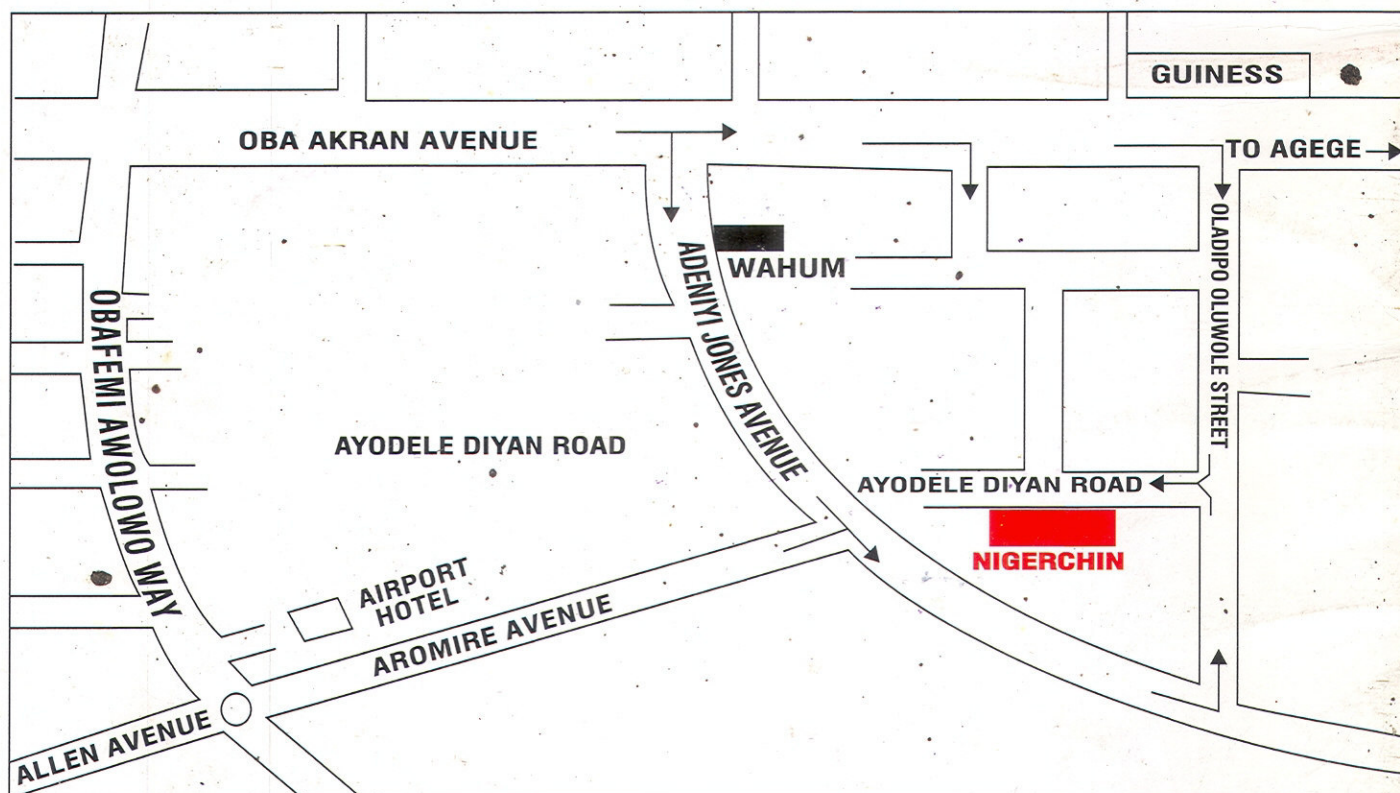
**NIGERCHIN ELECTRICAL DEVELOPMENT
COMPANY LIMITED**

Head Office / Factory
1, AYODELE DIYAN ROAD,
IKEJA INDUSTRIAL ESTATE,
P.M.B. 21096, IKEJA, NIGERIA

Telephone: 08023329723, 01-7739752, 01-8701576
Fax: 4971913, 4961802
E-mail : nigerchin@yahoo.com, nigerchin@hyperia.com
website: www.nigerchin.com



LOCATION OF NIGERCHIN FACTORY AND HEAD OFFICE **AYODELE DIYAN ROAD** **IKEJA INDUSTRIAL ESTATE**



PORT HARCOURT BRANCH: NO. 256, PORT HARCOURT / ABA EXPRESSWAY,
OPPOSITE SPDC CORPORATE RECRUITMENT CENTRE, RUMUOGBA,
P.O. BOX 10656, PORT HARCOURT, RIVERS STATE, NIGERIA.
TEL: 08023329723, 07028112580, 08023106642.

KANO OFFICE: **No. 1, AMINU KANO WAY, BY KOFAR GARDON, KAYA, KANO**
TEL: 064-636427, 08057126280.

ABUJA OFFICE: **PLOT 1058 KOLDA LINK OFF ADETOKUNBO ADEMOLA CRESCENT,**
BEHIND EQUITY BANK,
WUSE 11, ABUJA.
TEL: 09-5242185, 08023329723, 07028112580, 08033188297.

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