

Cable Solutions for
UTILITIES

PRODUCT OVERVIEW



B3 Cable Solutions leads the world in cable manufacturing, with a presence in Europe, Asia and the Middle East. As the fastest growing cable manufacturer in the world, B3 now operates in more market sectors and countries than ever before, delivering innovative value added services alongside an extensive range of cable products.

B3 serves a prestigious global customer base with cabling products and world-class value added services to the following market sectors:

- Utilities
- Buildings & Industrial
- Railways
- Communications

B3's product range is extensive and delivers quality approved products for a wide variety of applications. The company has a unique blend of business skills, industry knowledge and continuous improvement expertise to create and deliver a portfolio of innovative value added services. B3's portfolio has been developed with the benefit and feedback of real life customer experiences. Customers use a range of products and solutions to streamline processes, reduce overhead and logistics costs and improve the efficiency of their cable supply chain.

B3's manufacturing facilities and cable products are of the highest quality, but what sets B3 apart is world class service. If you're looking for any of these cabling solutions, then you should talk to B3:

- SWA
- Concentrics
- Infrastructure Lighting
- AAC
- AAAC
- ACSR
- ABC
- Hard Drawn Copper
- Medium Voltage Power Cables
- Energy Network Standards

Visit B3 at www.b3cables.com or contact your local office (see back page for details).

This brochure represents only a small selection of the products B3 can supply.



ABC

Aerial Bundled Conductors

Typical Cable Applications:

2 or 4 core XLPE insulated bundles for single or three phase supplies used primarily in overhead low voltage distribution networks

BS 7870-5

Compacted, circular stranded aluminium, black XLPE insulation

B3 P/N	No. of Cores	Nominal Cross Sectional Area of Conductor (sq mm)	Nominal Diameter Over Core (mm)	Nominal Diameter Over Bundle (mm)	Current Rating Pole Top (Amps)	Nominal weight (kg/km)
2GH569209	2	35	11.2	21.9	138	260
2GH569211	2	50	12.6	24.7	167	350
2GH569304*	2	50	12.6	26.7	167	570
2GH569215	2	95	16.6	32.7	262	650
2GH569403	4	35	11.2	26.2	117	520
2GH569510*	4	50	12.6	32.6	143	971
2GH569409	4	95	16.6	39.3	228	1300
2GH569412	4	120	18.1	43.5	309	1580

Please note: The above cables are available in conductor gauge 35mm² - 120mm²

*These cables have an additional bare messenger



CONCENTRICS

Split Concentrics

Typical Cable Applications:

Single and three core cables for use on underground separate Neutral and Earth Services

BS 7870-3.21

Stranded plain copper or solid aluminium conductors with cross-linked XLPE insulation, bare solid copper earth wires and insulated neutral wires applied helically around the insulation, with an overall black PVC or low smoke zero halogen sheath

B3 P/N	No. of Cores	Conductor Material	Nominal Cross Sectional Area of Conductor (sq mm)	Nominal Overall Diameter (mm)	Current Rating in Air (Amps)	Nominal Weight (kg/km)
2GH586810	1	Copper/Copper	4	10.4	42	205
2GH586816	1	Copper/Copper	16	14.6	97	580
2GH586834	3	Copper/Copper	35	27.2	160	1620
2GH586840L*	1	Solid Aluminium	25	16.4	97	350
2GH586842	1	Solid Aluminium	35	18.6	120	450
2GH586860	3	Solid Aluminium	25	24.1	97	900

Please note: The above cables are available in conductor gauge 4mm² - 35mm²

*Cables marked with an asterisk have a low smoke zero halogen sheath (all cables available with a low smoke zero halogen sheath)



Plain Concentrics

Typical Cable Applications:

Single and three core cables for use on underground Protective Multiple Earthed (PME) Electrical Services

BS 7870-3.11 & 3.12

Stranded plain copper or solid aluminium conductors with cross-linked XLPE insulation, bare solid copper earth wires applied helically around insulation, black PVC or low smoke zero halogen sheath

B3 P/N	No. of Cores	Conductor Material	Nominal Cross Sectional Area of Conductor (sq mm)	Nominal Overall Diameter (mm)	Current Rating in air (Amps)	Nominal Weight (kg/km)
2GH586610	1	Stranded Copper	4	10.4	42	205
2GH586612	1	Stranded Copper	16	14.6	97	580
2GH586614	1	Stranded Copper	25	18.6	130	840
2GH586642	1	Solid Aluminium	25	13	97	350
2GH586642L*	1	Solid Aluminium	25	13	97	350
2GH586662	3	Solid Aluminium	35	26.2	120	1100

Please note: The above cables are available in conductor gauge 4mm² - 35mm²

*Cables marked with an asterisk have a low smoke zero halogen sheath (all cables available with a low smoke zero halogen sheath)

SWA

Steel Wire Armoured (SWA) Power Cables

Typical Cable Applications:

Suitable for use on indoor/outdoor and direct buried installations

BS 5467, BASEC Approved with harmonised colour scheme

Stranded plain copper conductors with cross-linked insulation and PVC bedding with a single layer of galvanised mild steel wires and a black PVC sheath

B3 P/N	No. Cores/ CSA (mm ²)	Nominal Conductor Stranding (No/mm)	Nominal Overall Diameter (mm)	Current Rating in air single (Amps)	Nominal Weight (kgs/km)
2GH920100	2 x 1.5mm ²	7/0.53	12.1	24.0	305
2GH920200	2 x 2.5mm ²	7/0.67	13.6	33.0	352
2GH930203	2 x 2.5mm ² +E	7/0.67	14.1	33.0	397
2GH920300	2 x 4mm ²	7/0.85	14.7	45.0	419
2GH930400	3 x 6mm ²	7/1.04	16.6	52.0	639
2GH940600	4 x 16mm ²	7/1.70	22.9	96.0	1700

Please note: The above cables are available up to 48 cores, conductor range 1.5mm² - 1000mm², with an earthwire option (E)

Halogen Free Fire Retardant Steel Wire Armoured (SWA) Power Cables

Typical Cable Applications:

Suitable for use on indoor/outdoor and direct buried installations

BS 6724, BASEC Approved with harmonised colour scheme

Stranded plain copper conductors with cross-linked XLPE insulation, a low smoke zero halogen bedding with a single layer of galvanised steel wires and a black low smoke zero halogen sheath

B3 P/N	No. Cores/ CSA (mm ²)	Nominal Conductor Stranding (No/mm)	Nominal Overall Diameter (mm)	Current Rating in air single (Amps)	Nominal Weight (kgs/km)
2GH920100L	2 x 1.5mm ²	7/0.53	12.1	24.0	305
2GH930203L	2 x 2.5mm ² +E	7/0.67	14.1	33.0	397
2GH930300L	3 x 4mm ²	7/0.85	15.3	40.0	481
2GH930400L	3 x 6mm ²	7/1.04	16.6	52.0	639
2GH940500L	4 x 10mm ²	7/1.34	21.1	71.0	1064
2GH940600L	4 x 16mm ²	7/1.70	22.9	96.0	1700

Please note: The above cables are available up to 48 cores, conductor range 1.5mm² - 1000mm², with an earthwire option (E)



HARD DRAWN COPPER

Bare Hard Drawn Conductor

Typical Cable Applications:

Overhead power transmission and distribution cables used in the Electricity Utility Industry where extra corrosion resistance is required

BS 7884

Stranded hard drawn copper conductor

B3 P/N	CSA (mm ²)	Nominal Conductor Stranding (No/mm)	Nominal Overall Diameter (mm)	DC Resistance (ohm/km)	Breaking Load (kn)	Nominal weight (kg/km)
2GH561016	16	7/1.70	5.10	142	6.59	142.4
2GH561018	25	7/2.14	6.42	217	10.17	217.3
2GH571022	35	7/2.50	7.50	309	14.10	308.0
2GH561024	50	19/1.80	9.00	434	19.50	435.8
2GH571029	70	19/2.10	10.50	591	26.88	593.2
2GH571031	95	19/2.50	12.50	837	35.76	840.7



PVC Covered Hard Drawn Copper Conductor

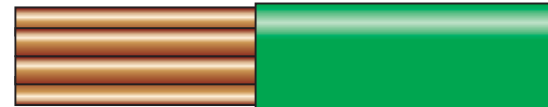
Typical Cable Applications:

Overhead power transmission and distribution cables used in the Electricity Utility Industry where bare overhead lines may be a hazard

BS6485 - Type 16 Green

Hard drawn copper covered with a green PVC sheath

B3 P/N	CSA (mm ²)	Nominal Conductor Stranding (No/mm)	Nominal Overall Diameter (mm)	DC Resistance (ohm/km)	Breaking Load (kn)	Nominal weight (kg/km)
2GH562026	25	7/2.10	9.90	0.7563	9473.00	290.0
2GH562040	50	19/1.80	13.20	0.3819	18100.00	540.0



AAAC

All Aluminium Alloy Conductors

Typical Cable Applications:

Overhead power transmission and distribution cables used in the Electricity Utility Industry

BS EN 50182

B3 P/N	Code Name	Construction	Nom. O/A Diameter (mm)	CSA (mm ²)	Max DC Resistance (ohm/km)	Breaking Load (kn)	Current Rating (A)	Nom. Weight (kg/km)
2GH572000	Box	7/1.85	5.55	18.8	1.7480	5.55	93	51.4
2GH572002	Acacia	7/2.08	6.24	23.9	1.3828	7.02	110	64.9
2GH572004	Almond	7/2.34	7.02	30.1	1.0926	8.88	128	82.2
2GH572006	Cedar	7/2.54	7.62	35.5	0.9273	10.46	132	96.8
2GH572008	Deodar	7/2.77	8.31	42.2	0.7797	12.44	148	115.2
2GH572010	Fir	7/2.95	8.85	47.8	0.6875	14.11	161	130.6
2GH572012	Hazel	7/3.30	9.90	59.9	0.5494	17.66	184	163.4
2GH572014	Pine	7/3.61	10.80	71.6	0.4591	21.14	204	195.6
2GH572016	Holly	7/3.91	11.70	84.1	0.3913	24.79	222	229.5
2GH572018	Willow	7/4.04	12.10	89.7	0.3665	26.47	233	245.0
2GH572020	Oak	7/4.65	13.95	118.9	0.2767	35.07	272	324.5
2GH572022	Mulberry	19/3.18	15.90	150.9	0.2192	44.52	319	414.3
2GH572024	Ash	19/3.48	17.40	180.7	0.1830	53.31	354	496.1
2GH572026	Elm	19/3.76	18.80	221.0	0.1568	62.24	385	579.2
2GH572028	Poplar	37/2.87	20.10	239.4	0.1387	70.61	414	659.4
2GH572030	Sycamore	37/3.23	22.60	303.2	0.1095	89.40	487	835.2
2GH572032	Upas	37/3.53	24.70	362.1	0.0917	106.82	527	997.5
2GH572034	Yew	37/4.06	28.40	479.0	0.0693	141.31	629	1319.6

Please note: The above cables are available in conductor gauge up to 1000mm²

ACSR

Aluminium Conductor Steel Reinforced

Typical Cable Applications:

Overhead power transmission and distribution cables used in the Electricity Utility Industry

BS 215, Part 2

B3 P/N	Code Name	Nominal Area (mm ²)	Construction Aluminium	Construction Steel	Nom. O/A Diameter (mm)	CSA (mm ²) Total	Max DC Resistance (ohm/km)	Breaking Load (kn)	Current Rating (A)	Nom. Weight (kg/km)
2GH572100	Gopher	25	6/2.36	1/2.36	7.08	30.62	1.0930	9.61	126	106
2GH572102	Weasel	30	6/2.59	1/2.59	7.77	36.88	0.9077	11.45	134	128
2GH572104	Ferret	40	6/3.00	1/3.00	9.00	49.48	0.6766	15.20	161	172
2GH572106	Rabbit	50	6/3.35	1/3.35	10.05	61.70	0.5426	18.35	185	214
2GH572108	Horse	70	12/2.79	7/2.79	13.95	116.20	0.3936	61.20	268	538
2GH572110	Dog	100	6/4.72	7/1.57	14.15	118.50	0.2733	32.70	278	394
2GH572112	Wolf	150	30/2.59	7/2.59	18.13	194.90	0.1828	69.20	355	726
2GH572114	Dingo	150	18/3.35	1/3.35	16.75	167.50	0.1815	35.70	349	506
2GH572116	Lynx	175	30/2.97	7/2.79	19.53	226.20	0.1576	79.80	386	842
2GH572118	Caracal	175	18/3.61	1/3.61	18.05	194.50	0.1563	41.10	383	587
2GH572120	Panther	200	30/3.00	7/3.00	21.00	261.50	0.1363	92.25	421	974
2GH572122	Jaguar	200	18/3.86	1/3.86	19.30	222.30	0.1367	46.55	415	617
2GH572124	Zebra	400	54/3.18	7/3.18	28.62	484.50	0.0067	131.90	635	1621

Please note: The above cables are available in conductor gauge up to 1000mm²



AAC

All Aluminium Conductor

Typical Cable Applications:

Overhead power transmission and distribution cables generally used in the Electricity Utility Industry

BS 215, Part 1

B3 P/N	Code Name	Nominal Area (mm ²)	Construction	CSA (mm ²)	Nom O/A Diameter (mm)	Max DC Resistance (ohm/km)	Breaking Load (kn)	Current Rating (A)	Nom Weight (kg/km)
2GH572200	Midge	22	7/2.06	23.33	6.18	1.22700	3.99	114	64
2GH572202	Ant	50	7/3.10	52.83	9.30	0.54190	8.28	181	145
2GH572204	Fly	60	7/3.40	63.55	10.20	0.45050	9.90	199	174
2GH572206	Wasp	100	7/4.39	106.00	13.17	0.27020	16.00	271	290
2GH572208	Hornet	150	19/3.25	157.60	16.25	0.18250	25.70	346	434
2GH572210	Chafer	200	19/3.78	213.20	18.90	0.13490	32.40	414	587
2GH572212	Cockroach	250	19/4.22	265.70	21.10	0.10830	40.40	470	731
2GH572214	Butterfly	300	19/4.65	322.70	23.25	0.08916	48.75	528	888
2GH572216	Centipede	400	37/3.78	415.20	26.46	0.06944	63.10	619	1145

INFRASTRUCTURE LIGHTING

Typical Cable Applications:

Primary cable for airfield ground lighting, used in circuits with continuous AC rms working voltage between conductor and ground. Stranded plain copper conductor with XLPE insulation, bare copper wire screen, polypropylene tape and red PVC sheath

B3 P/N	Core/Screen Size (mm ²)	Screen No Wires/Dia	Nom Insulated Dia (mm)	Nom Sheath Radial (mm)	Overall Dia (mm)	Nom Weight (kg/km)
2GH586625	6/6	28/0.525	3.80	1.90	15.50	309

Low Voltage Concentric Public Lighting Cable - Suitable for street lighting and car parks to ESB spec. 16378 (Based on VDE 0271). Stranded plain copper conductor with XLPE insulation, PVC bedding, bare copper wire screen, black PVC sheath

B3 P/N	No. Cores	Core/Screen Size (mm ²)	Nom Insulation (mm)	Nom Sheath Radial (mm)	Overall Dia (mm)	Nom Weight (kg/km)
2GH586620	2	6/6	0.70	1.80	15.00	290

Medium Voltage Power Cables - A2XS(F)2Y - 12/20KV

Typical Cable Applications:

Suitable for indoor/outdoor & direct burial installations.

Aluminium conductor, semi-conductive screen, XLPE insulation, semi-conductive screen, copper wire screen, copper tape, MDPE sheath

B3 P/N	Nominal Area (mm ²)	Nominal Diameter Over Core (mm)	Nom Sheath Radial (mm)	Overall Dia (mm)	Nom Weight (kg/km)
2GH597000	1x35/16	18.5	1.80	27.5	660
2GH597002	1x50/16	19.5	1.80	28.0	720
2GH597004	1x70/16	21.0	1.90	29.0	800
2GH597006	1x95/16	23.0	1.90	31.0	920
2GH597008	1x120/16	24.5	2.00	32.0	1000
2GH597010	1x150/16	26.0	2.00	34.0	1200
2GH597012	1x185/16	27.5	2.10	35.0	1400
2GH597014	1x240/16	30.0	2.10	38.0	1600
2GH597016	1x300/16	32.0	2.20	40.0	1800
2GH597018	1x400/16	34.0	2.30	44.0	2200
2GH597020	1x500/16	37.0	2.40	47.0	2600
2GH597022	1x630/35	41.0	2.50	51.0	3100

Energy Networks Standards Association 09-6 (ESI 09-6 Issue 7)

Typical Cable Applications:

Low & Medium Voltage polymeric insulated cables for use by distribution and generation utilities

Table E.1: PVC/PE/SWA/PVC

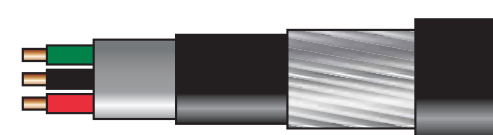
B3 P/N	No. Cores	Conductor Gauge/ No.Strands	Overall Dia (mm)	Nom Weight (kg/km)
EC-10119-01	2	7x0.67	13.5	330
EC-10119-02	3	7x0.67	14.0	370
EC-10119-03	4	7x0.67	14.9	430
EC-10119-04	7	7x0.67	17.9	690
EC-10119-05	12	7x0.67	22.1	980
EC-10119-06	19	7x0.67	26.4	1500
EC-10119-07	27	7x0.67	30.7	1930
EC-10119-08	37	7x0.67	33.8	2360

Table E.2(a): PE/PE/PJ FILLED/SWA/PVC

B3 P/N	No. Cores	Conductor Gauge (mm)	Overall Dia (mm)	Nom Weight (kg/km)
ECE-9624-01	4	0.8	16.6	415
ECE-9624-02	7	0.8	18.6	515
ECE-9624-03	19	0.8	26.9	1255
ECE-9624-04	37	0.8	31.8	1730
ECE-9624-05	61	0.8	39.1	2718

Table E.3(c): SCREENED - PVC/POLY CO-POLYMER/PVC/SWA/PVC

B3 P/N	No. Cores	Conductor Gauge (mm)	Overall Dia (mm)	Nom Weight (kg/km)
EC-10325-01	2(1x4)	0.8	13.0	330
EC-10326-01	5	0.8	16.7	505
EC-10326-02	10	0.8	20.0	775
EC-10327-01	20	0.8	23.3	955



UNITED KINGDOM

Delaunays Road, Blackley,
Manchester, M9 8FP

Tel: +44 161 740 9151

Fax: +44 161 741 2373

Email: info@b3cables.com

SPAIN and PORTUGAL

c/ Concha Espina s/n - 39600,
Maliaño, Cantabria

Tel: +34 942250100

Fax: +34 942269097

Email: spain@b3cables.com

MIDDLE EAST

PO Box 10974, Dubai,
United Arab Emirates

Tel: +971 42932550

Fax: +971 42932525

Email: mideast@b3cables.com

GERMANY, AUSTRIA and SWITZERLAND

Regensburger Straße 90
92318 Neumarkt
Germany

Tel: +49 9181 2650 470

Fax: +49 9181 2650 469

Email: dach@b3cables.com

THE NORDICS

Industrigatan 3
731 36 Köping
Sweden

Email: nordic@b3cables.com

ASIA

2401A, 24/F.
Park-In Commercial Centre
No.56 Dundas Street
Mongkok, Kowloon, Hong Kong

Tel: +852 27100668

Fax: +852 30119178

Email: asia@b3cables.com

CHINA

B3 Future Technologies Ltd
3/F Sunsea Mansion,
Hi Tech Park,
HuanGuan Nan Road,
GuanLan, Boa'an Dist.,
518067 Shenzhen,
China

China Mobile: +86 18688165105

Email: China@b3cables.com



**CABLE
SOLUTIONS**

www.b3cables.com