



## ShiplineFR BI 0,6/1kV Power cable



**Fire resistant and flame retardant halogen-free power cable.**

**Unbraided**

### BI 0,6/1kV

**MGT/XLPE/PO**

**Operating temperature : 90°C**  
**Operating Voltage : 0,6/1kV**

#### Standards applied

- IEC 60092-353 - Design
- IEC 60228 class 2 - Conductor
- IEC 60092-351 - Insulation
- IEC 60092-359 - Sheath
- IEC 60332-1 - Flame Retardant
- IEC 60332-3-22 - Flame Retardant
- IEC 60331-21 - Fire Resistant
- IEC 60754-1,2 - Halogen Free
- IEC 61034-1,2 - Low Smoke

#### Application

Unarmoured fire resistant cable for fixed installation in ships where cable protection is required. Control, alarm, power, emergency and critical systems. Can be installed and operated both indoors and outdoors. The cable is dual wall insulated.

#### Construction

	Code Letter	
<b>Conductor</b>		Annealed stranded copper, IEC 60228 class 2, stranded circular copper SCC (single core cables 1,5 ... 300 mm <sup>2</sup> , multicore cables 1,5 ... 35 mm <sup>2</sup> ), sector shaped copper SSC (3 and 4 core cables above 35 mm <sup>2</sup> )
<b>Insulation</b>	<b>B</b>	Mica-tape + HFXLPE, IEC 60092-351 (HFXLPE)
<b>Lay up / Shielding</b>		Cores laid up in concentric layers
<b>Inner covering</b>		No inner covering. (Additional tapes may be applied)
<b>Armour/screen</b>		No armour.
<b>Outer sheath</b>	<b>I</b>	Flame retardant halogen-free thermoplastic compound, SHF1
<b>Marking text</b>		E.g. "meter" "year" DRAKA 01 BI 0,6/1KV 3 x 2,5/2,5 mm <sup>2</sup> IEC 60331-21 IEC 60332-3-22 ShipLine
<b>Manufacturing unit</b>		DRAKA 01 = Draka Norsk Kabel, DRAKA 02 = Draka Kabel BV Amsterdam, DRAKA 03 = Draka Kabel BV Emmen
<b>Outer sheath colour</b>		Green



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### Core identification power cables

- Single core - Black
- Two cores - Blue - Brown
- Three cores - Brown - Black - Grey
- Four cores - Blue - Brown - Black - Grey
- Five cores - Blue - Brown - Black - Grey - Black
- Seven cores and above - White with black numbers
- Two cores + earth (3G) - Yellow/green - Blue - Brown
- Three cores + earth (4G) - Yellow/green - Brown - Black - Grey
- Four cores + earth (5G) - Yellow/green - Blue - Brown - Black - Grey

### Range and dimensions

Number of elements	Cross section core, mm <sup>2</sup>	Conductor Diameter, mm	Insulation Thickness, mm	Thickness Outer Sheath, mm	Diameter outer sheath, mm	Weight of Cable Approx. (Kg/Km)	Copper content Approx. (kg/km)
1	35	7.56	0.9	1.2	12.5 ± 0.8	420	317
1	95	12.6	1.1	1.4	18.5 ± 0.8	1040	861
1	240	19.8	1.7	1.7	27.5 ± 1	2490	2140
1	300	23.9	1.8	1.7	31.5 ± 1.5	3520	3109
2	1.5	1.6	0.7	1	8.5 ± 0.5	80	28
3G	1.5	1.6	0.7	1.1	9.5 ± 0.5	105	42
3	1.5	1.6	0.7	1.1	9.5 ± 0.5	105	42
4G	1.5	1.6	0.7	1.1	10.5 ± 0.8	130	56
4	1.5	1.6	0.7	1.1	10.5 ± 0.8	130	56
5G	1.5	1.6	0.7	1.1	11 ± 0.8	165	70
5	1.5	1.6	0.7	1.1	11 ± 0.8	165	70
7	1.5	1.6	0.7	1.2	12.5 ± 0.8	205	99
7G	1.5	1.6	0.7	1.2	12.5 ± 0.8	205	99
12	1.5	1.6	0.7	1.3	16.5 ± 0.8	340	169
19	1.5	1.6	0.7	1.4	19.5 ± 0.8	510	267
27	1.5	1.6	0.7	1.6	23.5 ± 1	710	379
2	2.5	2	0.7	1.1	9.5 ± 0.5	110	46
3G	2.5	2	0.7	1.1	10.5 ± 0.8	140	69
3	2.5	2	0.7	1.1	10.5 ± 0.8	140	69
4G	2.5	2	0.7	1.1	11.5 ± 0.8	175	92
4	2.5	2	0.7	1.1	11.5 ± 0.8	175	92
5G	2.5	2	0.7	1.2	12.5 ± 0.8	230	115
5	2.5	2	0.7	1.2	12.5 ± 0.8	230	115
7	2.5	2	0.7	1.2	13.5 ± 0.8	285	161
2	4	2.55	0.7	1.1	11 ± 0.8	150	74
3	4	2.55	0.7	1.2	12 ± 0.8	205	111
3G	4	2.55	0.7	1.2	12 ± 0.8	205	111
4G	4	2.55	0.7	1.2	13 ± 0.8	260	148
2	6	3.15	0.7	1.2	12.5 ± 0.8	200	114
3	6	3.15	0.7	1.2	13 ± 0.8	270	171
4	6	3.15	0.7	1.3	14.5 ± 0.8	350	228
4G	6	3.15	0.7	1.3	14.5 ± 0.8	350	228
3G	6	3.15	0.7	1.2	13 ± 0.8	270	171
5G	6	3.15	0.7	1.3	16 ± 0.8	440	285
3	10	4.05	0.7	1.2	15 ± 0.8	400	272
4	10	4.05	0.7	1.3	16.5 ± 0.8	520	363
4G	10	4.05	0.7	1.3	16.5 ± 0.8	530	364
3	16	5.15	0.7	1.3	17.5 ± 0.8	590	437
3G	16	5.15	0.7	1.3	17.5 ± 0.8	600	438
4G	16	5.15	0.7	1.4	19.5 ± 0.8	780	584
4G	25	6.45	0.9	1.6	24 ± 1	1220	925
3	35	7.56	0.9	1.6	24.5 ± 1	1230	951
4G	35	7.56	0.9	1.7	27.5 ± 1	1640	1268



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Number of elements	Cross section core, mm <sup>2</sup>	Conductor Diameter, mm	Insulation Thickness, mm	Thickness Outer Sheath, mm	Diameter outer sheath, mm	Weight of Cable Approx. (Kg/Km)	Copper content Approx. (kg/km)
5G	50	7.56	1.0	1.9	37 ± 1.5	3150	2504
3	70	-	1.1	1.8	27.5 ± 1	2210	1794

### Ordering information

Part number	Description	EAN No. DNK	EL No.	KDN Part number	EAN no. KDN
839502	BI 0.6/1kV 1X 35mm <sup>2</sup>	7021528395020	-	-	-
839505	BI 0.6/1kV 1X 95mm <sup>2</sup>	7021528395051	-	-	-
839509	BI 0.6/1kV 1X 240mm <sup>2</sup>	7021528395099	-	-	-
839510	BI 0.6/1kV 1X 300mm <sup>2</sup>	7021528395105	-	-	-
839515	BI 0,6/1KV 2X 1,5 mm2	7021528395150	1059820	126458NN	871140103939
839516	BI 0.6/1kV 3G 1.5mm <sup>2</sup>	7021528395167	1059830	-	-
839518	BI 0.6/1kV 3X 1.5mm <sup>2</sup>	7021528395181	1059840	126458NN	8711401039446
839519	BI 0,6/1KV 4G 1,5 mm2	7021528395198	1059860	-	-
839521	BI 0.6/1kV 4X 1.5mm <sup>2</sup>	7021528395211	-	126460NN	8711401039453
839523	BI 0.6/1kV 5G 1.5mm <sup>2</sup>	7021528395235	-	-	8711401148179
839524	BI 0.6/1kV 5X 1.5mm <sup>2</sup>	7021528395242	1059890	-	-
839525	BI 0.6/1kV 7X 1.5mm <sup>2</sup>	7021528395259	1059990	-	-
839526	BI 0.6/1kV 7G 1.5mm <sup>2</sup>	7021528395266	-	-	-
839527	BI 0.6/1kV 12X 1.5mm <sup>2</sup>	7021528395273	1059903	-	-
839529	BI 0.6/1kV 19X 1.5mm <sup>2</sup>	7021528395297	-	-	-
839531	BI 0.6/1kV 27X 1.5mm <sup>2</sup>	7021528395310	-	-	-
839533	BI 0,6/1KV 2X 2,5 mm2	7021528395334	1059821	126461NN	8711401039460
839534	BI 0.6/1kV 3G 2.5mm <sup>2</sup>	7021528395341	1059831	-	-
839536	BI 0.6/1kV 3X 2.5mm <sup>2</sup>	7021528395365	1059841	126462NN	8711401039477
839537	BI 0.6/1kV 4G 2.5mm <sup>2</sup>	7021528395372	1059861	-	-
839539	BI 0.6/1kV 4X 2.5mm <sup>2</sup>	7021528395396	1059871	-	-
839540	BI 0.6/1kV 5G 2.5mm <sup>2</sup>	7021528395402	-	-	-
839541	BI 0.6/1kV 5X 2.5mm <sup>2</sup>	7021528395419	-	-	-
839542	BI 0,6/1KV 7X 2,5 mm2	7021528395426	1059901	-	-
839550	BI 0.6/1kV 2X 4mm <sup>2</sup>	7021528395501	-	126463NN	8711401039484
839551	BI 0.6/1kV 3X 4mm <sup>2</sup>	7021528395518	1059842	126463NN	8711401039484
839552	BI 0.6/1kV 3G 4mm <sup>2</sup>	7021528395525	-	-	-
839553	BI 0.6/1kV 4G 4mm <sup>2</sup>	7021528395532	-	-	-
839556	BI 0.6/1kV 2X 6mm <sup>2</sup>	7021528395563	-	127061NN	8711401058355
839557	BI 0,6/1KV 3X 6 mm2	7021528395570	1059843	-	-
839558	BI 0.6/1kV 4X 6mm <sup>2</sup>	7021528395587	-	127061NN	8711401058355
839559	BI 0.6/1KV 4G 6mm <sup>2</sup>	7021528395594	-	-	-
839560	BI 0.6/1kV 3G 6mm <sup>2</sup>	7021528395600	-	-	-
839561	BI 0.6/1KV 5G 6mm <sup>2</sup>	7021528395617	-	-	-
839563	BI 0,6/1KV 3X 10 mm2	7021528395631	1059844	-	-
839564	BI 0.6/1kV 4X 10mm <sup>2</sup>	7021528395648	-	-	-
839565	BI 0.6/1kV 4G 10mm <sup>2</sup>	7021528395655	-	-	-
839569	BI 0.6/1kV 3X 16mm <sup>2</sup>	7021528395693	1059845	-	-
839570	BI 0.6/1kV 3G 16mm <sup>2</sup>	7021528395709	-	-	-
839571	BI 0.6/1kV 4G 16mm <sup>2</sup>	7021528395716	-	-	-
839578	BI 0.6/1kV 4G 25mm <sup>2</sup>	7021528395785	-	-	-
839581	BI 0.6/1kV 3X 35mm <sup>2</sup>	7021528395815	-	-	-
839584	BI 0.6/1kV 4G 35mm <sup>2</sup>	7021528395846	-	-	-
839589	BI 0.6/1kV 5G 50mm <sup>2</sup>	7021528395891	-	-	-
839593	BI 0,6/1KV 3X 70mm2	7021528395938	-	-	-

### Electrical values power cables

Number of elements	Cross section core, mm <sup>2</sup>	Conductor type 2	Max. conductor resistance at 20°C, Ohm/km	Max. conductor resistance at 90°C, Ohm/km	Reactance at 50Hz, Ohm/km	Reactance at 60Hz, Ohm/km	Current rating IEC 60092-352 Table B.4, Ampere	Short circuit rating 1 second, Ampere
1	35	SCC	0.524	1.466	0.090	0.108	157	4900

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1	95	SCC	0.193	1.466	0.083	0.099	293	13300
1	240	SCC	0.0754	0.0961	0.080	0.096	522	33600
1	300	SCC	0.0601	0.0961	0.080	0.096	601	42000
2	1.5	SCC	12.1	15.428	0.105	0.126	20	210
3G	1.5	SCC	12.1	15.428	0.105	0.126	20	210
3	1.5	SCC	12.1	15.428	0.105	0.126	16	210
4G	1.5	SCC	12.1	15.428	0.105	0.126	16	210
4	1.5	SCC	12.1	15.428	0.105	0.126	16	210
5G	1.5	SCC	12.1	15.428	0.105	0.126	16	210
5	1.5	SCC	12.1	15.428	0.105	0.126	13.5	210
7	1.5	SCC	12.1	15.428	0.105	0.126	12	210
7G	1.5	SCC	12.1	15.428	0.105	0.126	12.5	210
12	1.5	SCC	12.1	15.428	0.105	0.126	10	210
19	1.5	SCC	12.1	15.428	0.105	0.126	8.5	210
27	1.5	SCC	12.1	15.428	0.105	0.126	7.5	210
2	2.5	SCC	7.41	9.448	0.098	0.117	26	350
3G	2.5	SCC	7.41	9.448	0.098	0.117	26	350
3	2.5	SCC	7.41	9.448	0.098	0.117	21	350
4G	2.5	SCC	7.41	9.448	0.098	0.117	21	350
4	2.5	SCC	7.41	9.448	0.098	0.117	21	350
5G	2.5	SCC	7.41	9.448	0.098	0.117	21	350
5	2.5	SCC	7.41	9.448	0.098	0.117	17.5	350
7	2.5	SCC	7.41	9.448	0.098	0.117	15.5	350
2	4	SCC	4.61	5.878	0.091	0.110	34	560
3	4	SCC	4.61	5.878	0.091	0.110	28	560
3G	4	SCC	4.61	5.878	0.091	0.110	34	560
4G	4	SCC	4.61	5.878	0.091	0.110	28	560
2	6	SCC	3.08	3.927	0.086	0.104	44	840
3	6	SCC	3.08	3.927	0.086	0.104	36	840
4	6	SCC	3.08	3.927	0.086	0.104	36	840
4G	6	SCC	3.08	3.927	0.086	0.104	36	840
3G	6	SCC	3.08	3.927	0.086	0.104	44	840
5G	6	SCC	3.08	3.927	0.086	0.104	36	840
3	10	SCC	1.83	2.333	0.081	0.098	50	1400
4	10	SCC	1.83	2.333	0.081	0.098	50	1400
4G	10	SCC	1.83	2.333	0.081	0.098	50	1400
3	16	SCC	1.15	1.466	0.077	0.093	67	2240
3G	16	SCC	1.15	1.466	0.077	0.093	80	2240
4G	16	SCC	1.15	1.466	0.077	0.093	67	2240
4G	25	SCC	0.727	1.466	0.077	0.093	89	3500
3	35	SCC	0.524	1.466	0.075	0.089	110	4900
4G	35	SCC	0.524	1.466	0.075	0.089	110	4900
5G	50	SCC	0.387	1.466	0.075	0.090	137	7000
3	70	SSC	0.268	0.342	0.074	0.088	160	9800

### Ambient temperature correction factors

Ambient Temp °C	35	40	45	50	55	60	65	70	75	80
Rating factor	1.10	1.05	1.00	0.94	0.88	0.82	0.74	0.67	0.58	0.47

### Installation recommendations

Minimum Bending Radius during Installation	Minimum Bending Radius Fixed Installed	Maximum Tensile Load During Installation	Minimum Installation Temperature
8 x D	6 x D	50 N /mm <sup>2</sup>	-10°C