



Fire resistant and flame retardant halogen-free instrumentation cable. Unbraided. Individual pair shielded.

## BI(I) 250V

MGT/HFXLPE/PO

Operating temperature : 90°C  
Operating Voltage : 250V

### Application

Unarmoured fire resistant cable for fixed installation in ships where cable protection is not required. Recommended for instrumentation, communication, control, alarm, emergency and critical systems. Can be installed and operated both indoors and outdoors.

### Standards applied

IEC 60092-376	- 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 600754-1,2	- Halogen Free
IEC 61034-1,2	- Low Smoke

### Construction

	Code Letter	
<b>Conductor</b>		Annealed stranded circular copper, IEC 60228 class 2
<b>Insulation</b>	<b>B</b>	Mica-tape + HFXLPE, IEC 60092-351 (HFXLPE)
<b>Pair / Triple / Quad twisting</b>		Color coded cores twisted together and wrapped with polyester tape. Pairs/Triples are laid up and individually shielded by aluminium backed polyester tape with tinned copper drain wire. Each pair/triple is wrapped with polyester tape to prevent electrical contact with adjacent pairs/triples. Pairs/triples are identified by numbered tape or by numbers printed directly on the insulated conductors.
<b>Lay up / Shielding</b>		Individually shielded pairs are laid up in concentric layers and wrapped with a PETP tape.
<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" "år" DRAKA 01 BI(i) 250V 14 PAIR 0,75 mm <sup>2</sup> IEC 60092-376 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

### Core identification instrumentation cables

The pairs have the following number identification according to IEC 60092-376	Core no.
Pair no.1	1 - 2
Pair no. 2	3 - 4
Pair no. 3	5 - 6
Pair no. 4	7 - 8
Pair no. 5	etc - etc

The two pair cable may also be built up as a star quad

1 - 3 - 2 - 4

### Range and dimensions

Number of elements	No of cores in element	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	2	0.75	1.1	0.7	1	7.5 ± 0.5	65	18.5
2	2	0.75	1.1	0.7	1.1	12.5 ± 0.8	130	37
4	2	0.75	1.1	0.7	1.2	15 ± 0.8	210	74
7	2	0.75	1.1	0.7	1.3	18 ± 0.8	340	129
10	2	0.75	1.1	0.7	1.5	24 ± 1	490	184
14	2	0.75	1.1	0.7	1.6	26 ± 1	650	258
19	2	0.75	1.1	0.7	1.7	29 ± 1	840	350
24	2	0.75	1.1	0.7	1.8	34 ± 1.5	1060	442
1	2	1.5	1.6	0.7	1	8.5 ± 0.5	90	35
2	2	1.5	1.6	0.7	1.2	14.5 ± 0.8	180	69
4	2	1.5	1.6	0.7	1.3	17.5 ± 0.8	310	138
7	2	1.5	1.6	0.7	1.4	21 ± 1	490	241
10	2	1.5	1.6	0.7	1.7	28 ± 1	720	345
14	2	1.5	1.6	0.7	1.7	30.5 ± 1.5	940	482
19	2	1.5	1.6	0.7	1.9	34 ± 1.5	1250	655
24	2	1.5	1.6	0.7	2.1	40.5 ± 2	1590	827

### Electrical values instrumentation cables

Type	Capacitance, approx. (nF/km)	Inductance, approx. (mH/km)	Resistance at 20°C, max. (Ohm/km)	L/R ratio, (microH/km)
Shielded pair/triple 0.75 mm <sup>2</sup>	65	0.75	24.5	15.31
Shielded pair/triple 1.5 mm <sup>2</sup>	75	0.67	12.1	27.69

### Ordering information

Part number	Description	Sheath Colour	EAN No. DNK	EL No.	KDN Part number	EAN no. KDN
839920	BI(I) 250V 1PAIR 0.75mm <sup>2</sup>	GREEN	7021528399202	1065120	-	-
839922	BI(I) 250V 2PAIR 0.75mm <sup>2</sup>	GREEN	7021528399226	1065122	-	-
839924	BI(I) 250V 4PAIR 0.75mm <sup>2</sup>	GREEN	7021528399240	1065123	-	-
839926	BI(I) 250V 7PAIR 0.75mm <sup>2</sup>	GREEN	7021528399264	1065124	-	-
839928	BI(I) 250V 10PAIR 0.75mm <sup>2</sup>	GREEN	7021528399288	1065125	-	-
839930	BI(I) 250V 14PAIR 0.75mm <sup>2</sup>	GREEN	7021528399301	1065126	-	-
839932	BI(I) 250V 19PAIR 0.75mm <sup>2</sup>	GREEN	7021528399325	1065127	-	-
839934	BI(I) 250V 24PAIR 0.75mm <sup>2</sup>	GREEN	7021528399349	1065128	-	-
839970	BI(I) 250V 1PAIR 1.5mm <sup>2</sup>	GREEN	7021528399707	1065160	-	-
839972	BI(I) 250V 2PAIR 1.5mm <sup>2</sup>	GREEN	7021528399721	1065162	-	-
839974	BI(I) 250V 4PAIR 1.5mm <sup>2</sup>	GREEN	7021528399745	1065163	-	-
839976	BI(I) 250V 7PAIR 1.5mm <sup>2</sup>	GREEN	7021528399769	1065164	-	-
839978	BI(I) 250V 10PAIR 1.5mm <sup>2</sup>	GREEN	7021528399783	1065165	-	-
839980	BI(I) 250V 14PAIR 1.5mm <sup>2</sup>	GREEN	7021528399806	1065166	-	-
839982	BI(I) 250V 19PAIR 1.5mm <sup>2</sup>	GREEN	7021528399820	1065167	-	-
839984	BI(I) 250V 24PAIR 1.5mm <sup>2</sup>	GREEN	7021528399844	1065168	-	-

### 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