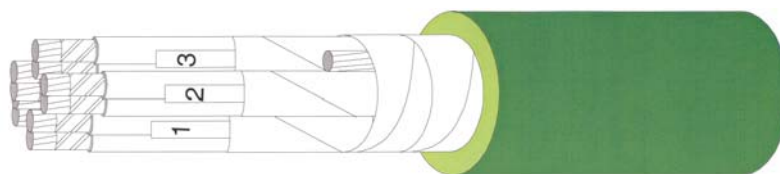




Shipline FR, BI(c) 250V Instrumentation cable

Fire resistant and flame retardant halogen-free instrumentation cable. Unbraided. Shielded



BI(c) 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	
Conductor		Annealed stranded circular copper, IEC 60228 class 2
Insulation	B	Mica-tape + HFXLPE, IEC 60092-351 (HFXLPE)
Pair / Triple / Quad twisting		Numbered cores twisted together and wrapped with polyester tape. Pairs are twisted together and wrapped with polyester tape. The pairs are twisted with different lay length to reduce mutual interference. Pairs are identified by numbered tape.
Lay up / Shielding		Collective shield by laminated aluminium backed PETP-tape with a multistranded tinned copper drainwire.
Inner covering		No inner covering. (Additional tapes may be applied)
Armour/screen		No armour
Tape over armour/screen		Additional tape may be applied
Outer sheath	I	Flame retardant halogen-free thermoplastic compound, SHF1
Marking text		E.g. "meter" "år" DRAKA 01 BI(c) 250V 10 PAIR 0,75 mm ² IEC 60092-376 IEC 60331-21 IEC 60332-3-22 ShipLine
Manufacturing unit		DRAKA 01 = Draka Norsk Kabel, DRAKA 02 = Draka Kabel BV Amsterdam, DRAKA 03 = Draka Kabel BV Emmen
Outer sheath colour		Green



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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 ²	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)
2	2	0.75	1.1	0.7	1.1	12.5 ± 0.8	120	33
4	2	0.75	1.1	0.7	1.2	15 ± 0.8	190	61
7	2	0.75	1.1	0.7	1.3	18 ± 0.8	290	103
10	2	0.75	1.1	0.7	1.4	22.5 ± 1	410	145
14	2	0.75	1.1	0.7	1.5	25 ± 1	530	201
19	2	0.75	1.1	0.7	1.6	27.5 ± 1	680	271
24	2	0.75	1.1	0.7	1.7	31.5 ± 1.5	850	341
2	2	1.5	1.6	0.7	1.2	14.5 ± 0.8	170	63
4	2	1.5	1.6	0.7	1.3	17 ± 0.8	275	118
7	2	1.5	1.6	0.7	1.4	21 ± 1	410	202
10	2	1.5	1.6	0.7	1.6	26.5 ± 1	610	286
14	2	1.5	1.6	0.7	1.7	29 ± 1	800	397
19	2	1.5	1.6	0.7	1.8	32 ± 1.5	1030	536
24	2	1.5	1.6	0.7	2	37 ± 1.5	1310	676

Electrical values instrumentation cables

Type	Capacitance, approx. (nF/km)	Inductance, approx. (mH/km)	Resistance at 20°C, max. (ohm/km)	L/R ratio, (microH/Ohm)
Unshielded pair/quad 0,75 mm ²	55	0.75	24.5	15.31
Unshielded pair/quad 1,5 mm ²	65	0.67	12.1	27.69

Ordering information

Part number	Description	Sheath Colour	EAN No. DNK	EL No.	KDN Part number	EAN no. KDN
839822	BI(C) 250V 2PAIR 0.75mm ²	GREEN	7021528398229	1065102	-	-
839824	BI(C) 250V 4PAIR 0.75mm ²	GREEN	7021528398243	1065103	-	-
839826	BI(C) 250V 7PAIR 0.75mm ²	GREEN	7021528398267	1065104	-	-
839828	BI(C) 250V 10PAIR 0.75mm ²	GREEN	7021528398281	1065105	-	-
839830	BI(C) 250V 14PAIR 0.75mm ²	GREEN	7021528398304	1065106	-	-
839832	BI(C) 250V 19PAIR 0.75mm ²	GREEN	7021528398328	1065107	-	-
839834	BI(C) 250V 24PAIR 0.75mm ²	GREEN	7021528398342	1065108	-	-
839862	BI(C) 250V 2PAIR 1.5mm ²	GREEN	7021528398625	1065142	-	-
839864	BI(C) 250V 4PAIR 1.5mm ²	GREEN	7021528398649	1065143	-	-
839866	BI(C) 250V 7PAIR 1.5mm ²	GREEN	7021528398663	1065144	-	-
839868	BI(C) 250V 10PAIR 1.5mm ²	GREEN	7021528398687	1065145	-	-
839870	BI(C) 250V 14PAIR 1.5mm ²	GREEN	7021528398700	1065146	-	-
839872	BI(C) 250V 19PAIR 1.5mm ²	GREEN	7021528398724	1065147	-	-
839874	BI(C) 250V 24PAIR 1.5mm ²	GREEN	7021528398748	1065148	-	-



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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 ²	-10°C