

Halogen-free, fire resistant, unarmoured, mud resistant instrumentation cable BU(i) 150/250(300)V, S13



Fire resistant, flame retardant halogen-free instrumentation cable. Mud resistant

BU(i) 150/250(300)V
MGT/EPR/EVA

NEK TS 606 CodeS13

Operating temperature : 90°C
Operating Voltage : 150/250(300)V

Standards applied

Application

Fixed installation for instrumentation, communication, control and alarm systems in both EX-(Zone 2) and safe areas, emergency and critical systems where requirement for fire resistance exists. Meets the mud resistant requirements in NEK TS 606:2009.

- | | |
|-------------------------|-------------------|
| IEC 60092-376 (2003-05) | - Design |
| IEC 60228 class 2 | - Conductor |
| IEC 60092-360 | - Insulation |
| IEC 60092-360 | - Sheath |
| IEC 60332-1-2 | - Flame Retardant |
| IEC 60332-3-22 | - Flame Retardant |
| IEC 60331-1, -2, -21 | - Fire Resistant |
| IEC 60754-1,2 | - Halogen Free |
| IEC 61034-1,2 | - Low Smoke |

Construction

	Code Letter	
Conductor		Tinned annealed stranded circular copper (STCC), IEC 60228 class 2
Insulation	B	Mica-tape + EP-rubber, IEC 60092-360 (EPR)
Pair / Triple / Quad twisting		Color coded cores twisted together. Pairs/Triples are screened by copper 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.
Lay up / Shielding		Individually shielded pairs/triples/quads are laid up in concentric layers and wrapped with a PETP tape.
Inner covering		No inner covering. (Additional tapes may be applied)
Armour/screen		No armour.
Outer sheath	U	Flame retardant, halogen-free and mud resistant thermoset compound, SHF2 (IEC 60092-360)
Marking text		"meter" "year" DRAKA 01 BU(i) 250V S13 8 PAIR 0,75 mm ² FLEX - FLAME IEC 60092-376 IEC 60331-1*) or IEC 60331-2*) IEC 60331-21**) IEC 60332-3-22
Manufacturing unit		DRAKA 01 = Draka Norsk Kabel,
Outer sheath colour		Grey or Blue

*) IEC 60331-1 for cables with an overall diameter exceeding 20 mm and IEC 60331-2 for cables with an overall diameter not exceeding 20 mm

**) IEC 60331-21 also at enhanced temperature 1000°C for 180 minutes



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Core identification instrumentation cables

Pair - Black - Light Blue

Triple - Black - Light Blue - Brown

Quad - Black - Light Blue - Brown - Grey

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)
1	2	0.75	1.1	0.6	1	7.5 ± 0.5	95	17
1	2	0.75	1.1	0.6	1	7.5 ± 0.5	95	17
2	2	0.75	1.1	0.6	1.2	11 ± 0.8	165	34
2	2	0.75	1.1	0.6	1.2	11 ± 0.8	165	34
4	2	0.75	1.1	0.6	1.2	13 ± 0.8	260	67
8	2	0.75	1.1	0.6	1.4	17.5 ± 0.8	490	133
12	2	0.75	1.1	0.6	1.6	21 ± 1	700	199
12	2	0.75	1.1	0.6	1.6	21 ± 1	700	199
16	2	0.75	1.1	0.6	1.7	23.5 ± 1	900	265
24	2	0.75	1.1	0.6	1.9	29 ± 1	1300	397
1	3	0.75	1.1	0.6	1	7.5 ± 0.5	105	23
2	3	0.75	1.1	0.6	1.2	12 ± 0.8	200	46
4	3	0.75	1.1	0.6	1.3	14 ± 0.8	340	92
8	3	0.75	1.1	0.6	1.5	19.5 ± 0.8	640	184
12	3	0.75	1.1	0.6	1.7	23.5 ± 1	900	276
16	3	0.75	1.1	0.6	1.8	26 ± 1	1170	368
24	3	0.75	1.1	0.6	2	32 ± 1.5	1690	552
1	2	1.5	1.6	0.7	1	8.5 ± 0.5	130	34
1	2	1.5	1.6	0.7	1	8.5 ± 0.5	130	34
2	2	1.5	1.6	0.7	1.3	13.5 ± 0.8	250	68
2	2	1.5	1.6	0.7	1.3	13.5 ± 0.8	250	68
4	2	1.5	1.6	0.7	1.4	16 ± 0.8	420	136
4	2	1.5	1.6	0.7	1.4	16 ± 0.8	420	136
8	2	1.5	1.6	0.7	1.6	22 ± 1	770	271
8	2	1.5	1.6	0.7	1.6	22 ± 1	770	271
12	2	1.5	1.6	0.7	1.7	26 ± 1	1100	406
12	2	1.5	1.6	0.7	1.7	26 ± 1	1100	406
16	2	1.5	1.6	0.7	1.9	29.5 ± 1	1440	541
24	2	1.5	1.6	0.7	2.2	36.5 ± 1.5	2120	812
24	2	1.5	1.6	0.7	2.2	36.5 ± 1.5	2120	812
1	3	1.5	1.6	0.7	1.1	9.5 ± 0.5	165	48
1	3	1.5	1.6	0.7	1.1	9.5 ± 0.5	165	48
2	3	1.5	1.6	0.7	1.3	14.5 ± 0.8	310	96
4	3	1.5	1.6	0.7	1.4	17.5 ± 0.8	530	192
8	3	1.5	1.6	0.7	1.7	23.5 ± 1	1020	384
12	3	1.5	1.6	0.7	1.9	29 ± 1	1470	575
16	3	1.5	1.6	0.7	2	32.5 ± 1.5	1910	767
24	3	1.5	1.6	0.7	2.4	40.5 ± 2	2860	1150
1	2	2.5	2	0.7	1.1	9.5 ± 0.5	170	55

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)
Shielded pair 0,75 mm ²	110	0,67	26,3	12,7
Shielded triple 0,75 mm ²	110	0,67	26,3	12,7
Shielded pair 1,5 mm ²	125	0,63	12,9	24,4
Shielded triple 1,5 mm ²	125	0,63	12,9	24,4
Shielded pair 2,5 mm ²	145	0,59	8,02	36,8
Shielded triple 2,5 mm ²	145	0,59	8,02	36,8

Ordering information

New Part number	Old Part number	Description	Sheath Colour	Stock item	EAN No. DNK	EL No.
20109514		BU(I) 250V 1PAIR 0.75mm ² S13	GREY	-	7021528962000	1063500
	896201	BU(I) 250V 1PAIR 0.75mm ² S13	BLUE	-	7021528962017	1063501

	896206	BU(I) 250V 2PAIR 0.75mm ² S13	GREY	-	7021528962062	1063506
	896207	BU(I) 250V 2PAIR 0.75mm ² S13	BLUE	-	7021528962079	1063507
	896218	BU(I) 250V 4PAIR 0.75mm ² S13	GREY	-	7021528962185	1063518
	896230	BU(I) 250V 8PAIR 0.75mm ² S13	GREY	-	7021528962307	1063530
	896236	BU(I) 250V 12PAIR 0.75mm ² S13	GREY	-	7021528962369	1063536
	896237	BU(I) 250V 12PAIR 0.75mm ² S13	BLUE	-	7021528962376	-
	896242	BU(I) 250V 16PAIR 0.75mm ² S13	GREY	-	7021528962420	1063542
	896248	BU(I) 250V 24PAIR 0.75mm ² S13	GREY	-	7021528962482	1063548
20119107		BU(I) 250V 1TRIP 0.75mm ² S13	GREY	-	7021528962604	1063560
	896266	BU(I) 250V 2TRIP 0.75mm ² S13	GREY	-	7021528962666	1063566
	896278	BU(I) 250V 4TRIP 0.75mm ² S13	GREY	-	7021528962789	1063578
	896290	BU(I) 250V 8TRIP 0.75mm ² S13	GREY	-	7021528962901	1063590
	896296	BU(I) 250V 12TRIP 0.75mm ² S13	GREY	-	7021528962963	1063596
	896302	BU(I) 250V 16TRIP 0.75mm ² S13	GREY	-	7021528963021	1063602
	896308	BU(I) 250V 24TRIP 0.75mm ² S13	GREY	-	7021528963083	1063608
20109515		BU(I) 250V 1PAIR 1.5mm ² S13	GREY	-	7021528964004	1063700
20109516		BU(I) 250V 1PAIR 1.5mm ² S13	BLUE	-	7021528964011	1063701
20109517		BU(I) 250V 2PAIR 1.5mm ² S13	GREY	-	7021528964066	1063706
	896407	BU(I) 250V 2PAIR 1.5mm ² S13	BLUE	-	7021528964073	1063707
20109518		BU(I) 250V 4PAIR 1.5mm ² S13	GREY	-	7021528964189	1063718
	896419	BU(I) 250V 4PAIR 1.5mm ² S13	BLUE	-	7021528964196	-
	896430	BU(I) 250V 8PAIR 1.5mm ² S13	GREY	-	7021528964301	1063730
	896431	BU(I) 250V 8PAIR 1.5mm ² S13	BLUE	-	7021528964318	-
	896436	BU(I) 250V 12PAIR 1.5mm ² S13	GREY	-	7021528964363	1063736
	896437	BU(I) 250V 12PAIR 1.5mm ² S13	BLUE	-	7021528964370	1063737
	896442	BU(I) 250V 16PAIR 1.5mm ² S13	GREY	-	7021528964424	1063742
	896448	BU(I) 250V 24PAIR 1.5mm ² S13	GREY	-	7021528964486	1063748
	896449	BU(I) 250V 24PAIR 1.5mm ² S13	BLUE	-	7021528964493	-
	896460	BU(I) 250V 1TRIP 1.5mm ² S13	GREY	-	7021528964608	1063760
	896461	BU(I) 250V 1TRIP 1.5mm ² S13	BLUE	-	7021528964615	1063761
	896466	BU(I) 250V 2TRIP 1.5mm ² S13	GREY	-	7021528964660	1063766
	896478	BU(I) 250V 4TRIP 1.5mm ² S13	GREY	-	7021528964783	1063778
	896490	BU(I) 250V 8TRIP 1.5mm ² S13	GREY	-	7021528964905	1063790
	896496	BU(I) 250V 12TRIP 1.5mm ² S13	GREY	-	7021528964967	1063796
	896502	BU(I) 250V 16TRIP 1.5mm ² S13	GREY	-	7021528965025	1063802
	896508	BU(I) 250V 24TRIP 1.5mm ² S13	GREY	-	7021528965087	1063808
	896600	BU(I) 250V 1PAIR 2.5mm ² S13	GREY	-	7021528966008	1063900

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	-20°C



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