

FlexFlame BFOU(i) 250V S3/S7/S103 Instr. cable

Fire resistant, flame retardant halogen-free instrumentation cable.

BFOU(I) 150/250(300)V
MGT/EPR/EPR/TCWB/EVA



BFOU(i) 250V **NEK TS 606 Code S103**
BFOU(i) M 250V **NEK TS 606 Code S3/S7/S103**

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

Application

Fixed installation for instrumentation, communication, control and alarm systems in both EX (Zone 0, 1 & 2)- and safe areas, emergency and critical systems where requirement for fire resistance exists.

BFOU(i) M 250V for installation in areas exposed to MUD and drilling/cleaning fluids. Meets the Oil & Mud resistance requirement in NEK TS 606:2016.

Standards applied

IEC 60092-376 (2017-05)	- 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	F	Flame retardant and halogen-free extruded compound
Tape over inner covering		PET tape
Armour/screen	O	Tinned annealed copper wire braid
Tape over armour/screen		PET tape
Outer sheath	U	Flame retardant, halogen-free thermoset compound, SHF2 (IEC 60092-360)
Marking text (example)		"meter" "year/week" DRAKA 01 Part no. <SAP code> BFOU(I) M 250V S3/S7/S103 16 PAIR 0,75 mm ² FLEX - FLAME IEC 60092-376 IEC 60331-1*) or IEC 60331-2*) IEC 60331-21**) IEC 60332-3-22 Production no. <Prod.ordre no.>
Manufacturing unit		DRAKA 01 = Prysmian Group Norge AS
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 Inner covering, mm	Diameter inner covering, mm	Diameter Braid Wire, mm	Mechanical cross-section of the braid, mm ²	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	1.1	8 ± 0.5	0.2	4.5	1.1	11 ± 0.8	228	60
1	4	0.75	1.1	0.6	1.1	9 ± 0.5	0.2	4.5	1.2	12.5 ± 0.8	275	73
2	2	0.75	1.1	0.6	1.1	11.5 ± 0.8	0.3	10.2	1.3	15 ± 0.8	400	131
4	2	0.75	1.1	0.6	1.1	12.5 ± 0.8	0.3	11.9	1.4	16 ± 0.8	480	180
8	2	0.75	1.1	0.6	1.1	17 ± 0.8	0.3	15.3	1.6	21 ± 1	760	277
12	2	0.75	1.1	0.6	1.1	19.5 ± 0.8	0.3	17.8	1.7	24 ± 1	995	367
16	2	0.75	1.1	0.6	1.5	23 ± 1	0.3	20.4	1.8	27 ± 1	1295	458
24	2	0.75	1.1	0.6	1.5	27.5 ± 1	0.4	31.7	2.1	33 ± 1.5	1870	700
1	3	0.75	1.1	0.6	1.1	8.5 ± 0.5	0.2	4.5	1.1	11.5 ± 0.8	242	67
2	3	0.75	1.1	0.6	1.1	13 ± 0.8	0.3	10.2	1.4	16.5 ± 0.8	460	144
4	3	0.75	1.1	0.6	1.1	14 ± 0.8	0.3	11.9	1.4	17.5 ± 0.8	555	205
8	3	0.75	1.1	0.6	1.1	18.5 ± 0.8	0.3	17.8	1.7	23 ± 1	965	352
12	3	0.75	1.1	0.6	1.1	22 ± 1	0.3	20.4	1.8	26.5 ± 1	1225	467
16	3	0.75	1.1	0.6	1.5	25.5 ± 1	0.3	22.9	1.9	30 ± 1.5	1615	582
24	3	0.75	1.1	0.6	1.5	31 ± 1.5	0.4	36.2	2.2	36.5 ± 1.5	2325	891
1	2	1.5	1.55	0.7	1.1	9.5 ± 0.5	0.2	4.5	1.2	12.5 ± 0.8	270	75
2	2	1.5	1.55	0.7	1.1	14 ± 0.8	0.3	11.9	1.4	17.5 ± 0.8	485	178
4	2	1.5	1.55	0.7	1.1	15 ± 0.8	0.3	13.6	1.5	19 ± 0.8	645	256
8	2	1.5	1.55	0.7	1.1	20.5 ± 1	0.3	17.8	1.7	25 ± 1	1050	423
12	2	1.5	1.55	0.7	1.1	24.5 ± 1	0.3	20.4	1.9	29 ± 1	1400	575
16	2	1.5	1.55	0.7	1.5	28 ± 1	0.3	22.9	2	33 ± 1.5	1855	727
24	2	1.5	1.55	0.7	1.5	34.5 ± 1.5	0.4	40.7	2.3	40 ± 2	2720	1147
32	2	1.5	1.55	0.7	1.5	38 ± 1.5	0.4	45.2	2.5	44 ± 2	3355	1442
1	3	1.5	1.55	0.7	1.1	10 ± 0.8	0.2	5.3	1.2	13 ± 0.8	305	95
2	3	1.5	1.55	0.7	1.1	15 ± 0.8	0.3	11.9	1.5	19 ± 0.8	565	205
4	3	1.5	1.55	0.7	1.1	16.5 ± 0.8	0.3	15.3	1.6	20.5 ± 1	785	325
8	3	1.5	1.55	0.7	1.1	22.5 ± 1	0.3	20.4	1.8	27 ± 1	1335	551
12	3	1.5	1.55	0.7	1.1	27 ± 1	0.3	22.9	2	31.5 ± 1.5	1775	759
16	3	1.5	1.55	0.9	1.5	34 ± 1.5	0.4	36.2	2.2	39.5 ± 1.5	2700	1061
24	3	1.5	1.55	0.9	1.5	42 ± 2	0.4	45.2	2.5	48 ± 2	3760	1507
1	2	2.5	1.9	0.7	1.1	9.5 ± 0.5	0.2	5.3	1.2	12.5 ± 0.8	290	100
2	2	2.5	1.9	0.7	1.1	14 ± 0.8	0.3	11.9	1.5	18 ± 0.8	530	213

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Number of elements	No of cores in element	Cross section core, mm ²	Conductor Diameter, mm	Insulation Thickness, mm	Thickness Inner covering, mm	Diameter inner covering, mm	Diameter Braid Wire, mm	Mechanical cross-section of the braid, mm ²	Thickness Outer Sheath, mm	Diameter outer sheath, mm	Weight of Cable Approx. (Kg/Km)	Copper content Approx. (kg/km)
4	2	2.5	1.9	0.7	1.1	16.5 ± 0.8	0.3	15.3	1.6	20.5 ± 1	775	342
8	2	2.5	1.9	0.7	1.1	22.5 ± 1	0.3	20.4	1.8	27 ± 1	1285	587
12	2	2.5	1.9	0.7	1.5	27.5 ± 1	0.3	22.9	2	32.5 ± 1.5	1830	811
16	2	2.5	1.9	0.9	1.5	35 ± 1.5	0.4	36.2	2.2	40 ± 2	2630	1135
1	3	2.5	1.9	0.7	1.1	10 ± 0.8	0.2	6.0	1.2	13 ± 0.8	335	127
2	3	2.5	1.9	0.7	1.1	15.5 ± 0.8	0.3	13.6	1.5	19.5 ± 0.8	630	269
4	3	2.5	1.9	0.7	1.1	18.5 ± 0.8	0.3	15.3	1.6	22.5 ± 1	935	430
8	3	2.5	1.9	0.7	1.3	25 ± 1	0.3	22.9	2	29.5 ± 1	1670	772
16	3	2.5	1.9	0.9	1.5	38 ± 1.5	0.40	40.7	2.4	43.5 ± 2	3360	1506

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
Shielded 16 and 24 triple 1,5 mm ²	105	0,71	12,9	24,4
Shielded 16 pair/triple 2,5 mm ²	110	0,66	8,02	41,1

Ordering information

Part number	Description	Sheath Colour	GTIN 1m	EL No.
20110623	BFOU(I) M 250V 1PAIR 0.75mm ² S3/S7/S103 GY	GREY	7021528932003	1043820
20110624	BFOU(I) M 250V 1PAIR 0.75mm ² S3/S7/S103 BU	BLUE	7021528932010	1043819
20110625	BFOU(I) M 250V 1QUAD 0.75mm ² S3/S7/S103 GY	GREY	7021528932034	-
20311221	BFOU(I) M 250V 1QUAD 0.75mm ² S3/S7/S103 BU	BLUE	7021528932041	-
20110626	BFOU(I) M 250V 2PAIR 0.75mm ² S3/S7/S103 GY	GREY	7021528932065	1044020
20104969	BFOU(I) M 250V 2PAIR 0.75mm ² S3/S7/S103 BU	BLUE	7021528932072	1044019
20110627	BFOU(I) M 250V 4PAIR 0.75mm ² S3/S7/S103 GY	GREY	7021528932188	1044021
20110628	BFOU(I) M 250V 4PAIR 0.75mm ² S3/S7/S103 BU	BLUE	7021528932195	1044022
20109496	BFOU(I) M 250V 8PAIR 0.75mm ² S3/S7/S103 GY	GREY	7021528932300	1044028
20110773	BFOU(I) M 250V 8PAIR 0.75mm ² S3/S7/S103 BU	BLUE	7021528932317	1044029
20110629	BFOU(I) M 250V 12PAIR 0.75mm ² S3/S7/S103 GY	GREY	7021528932362	1044030
20110630	BFOU(I) M 250V 12PAIR 0.75mm ² S3/S7/S103 BU	BLUE	7021528932379	1044031
20110631	BFOU(I) M 250V 16PAIR 0.75mm ² S3/S7/S103 GY	GREY	7021528932423	1044033
20110632	BFOU(I) M 250V 16PAIR 0.75mm ² S3/S7/S103 BU	BLUE	7021528932430	1044034
20110633	BFOU(I) M 250V 24PAIR 0.75mm ² S3/S7/S103 GY	GREY	7021528932485	1044036
20166157	BFOU(I) M 250V 24PAIR 0.75mm ² S3/S7/S103 BU	BLUE	7021528932492	1044037
20110634	BFOU(I) M 250V 1T 0.75mm ² S3/S7/S103 GY	GREY	7021528932607	1043920
20110635	BFOU(I) M 250V 1T 0.75mm ² S3/S7/S103 BU	BLUE	7021528932614	1043919
20110636	BFOU(I) M 250V 2T 0.75mm ² S3/S7/S103 GY	GREY	7021528932669	1044121
20110864	BFOU(I) M 250V 2T 0.75mm ² S3/S7/S103 BU	BLUE	7021528932676	1044122
20111212	BFOU(I) M 250V 4T 0.75mm ² S3/S7/S103 GY	GREY	7021528932782	1044123
20110865	BFOU(I) M 250V 4T 0.75mm ² S3/S7/S103 BU	BLUE	7021528932799	1044124
20110637	BFOU(I) M 250V 8T 0.75mm ² S3/S7/S103 GY	GREY	7021528932904	1044128
20112240	BFOU(I) M 250V 8T 0.75mm ² S3/S7/S103 BU	BLUE	7021528932911	1044129

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Part number	Description	Sheath Colour	GTIN 1m	EL No.
20110878	BFOU(I) M 250V 12T 0.75mm ² S3/S7/S103 GY	GREY	7021528932966	1044130
20170930	BFOU(I) M 250V 12T 0.75mm ² S3/S7/S103 BU	BLUE	7021528932973	1044131
20110774	BFOU(I) M 250V 16T 0.75mm ² S3/S7/S103 GY	GREY	7021528933024	1044132
20170932	BFOU(I) M 250V 16T 0.75mm ² S3/S7/S103 BU	BLUE	7021528933031	-
20131938	BFOU(I) M 250V 24T 0.75mm ² S3/S7/S103 GY	GREY	7021528933086	1044138
20110638	BFOU(I) M 250V 1PAIR 1.5mm ² S3/S7/S103 GY	GREY	7021528934007	1043860
20110639	BFOU(I) M 250V 1PAIR 1.5mm ² S3/S7/S103 BU	BLUE	7021528934014	1043859
20110640	BFOU(I) M 250V 2PAIR 1.5mm ² S3/S7/S103 GY	GREY	7021528934069	1044060
20111213	BFOU(I) M 250V 2PAIR 1.5mm ² S3/S7/S103 BU	BLUE	7021528934076	1044061
20110641	BFOU(I) M 250V 4PAIR 1.5mm ² S3/S7/S103 GY	GREY	7021528934182	1044063
20110642	BFOU(I) M 250V 4PAIR 1.5mm ² S3/S7/S103 BU	BLUE	7021528934199	1044064
20110643	BFOU(I) M 250V 8PAIR 1.5mm ² S3/S7/S103 GY	GREY	7021528934304	1044068
20110644	BFOU(I) M 250V 8PAIR 1.5mm ² S3/S7/S103 BU	BLUE	7021528934311	1044069
20110645	BFOU(I) M 250V 12PAIR 1.5mm ² S3/S7/S103 GY	GREY	7021528934366	1044070
20110646	BFOU(I) M 250V 12PAIR 1.5mm ² S3/S7/S103 BU	BLUE	7021528934373	1044071
20109497	BFOU(I) M 250V 16PAIR 1.5mm ² S3/S7/S103 GY	GREY	7021528934427	1044073
20109498	BFOU(I) M 250V 16PAIR 1.5mm ² S3/S7/S103 BU	BLUE	7021528934434	1044074
20109499	BFOU(I) M 250V 24PAIR 1.5mm ² S3/S7/S103 GY	GREY	7021528934489	1044076
20109500	BFOU(I) M 250V 24PAIR 1.5mm ² S3/S7/S103 BU	BLUE	7021528934496	-
20272644	BFOU(I) M 250V 32PAIR 1.5mm ² S3/S7/S103 GY	GREY	7021528934540	-
20110647	BFOU(I) M 250V 1T 1.5mm ² S3/S7/S103 GY	GREY	7021528934601	1044170
20110648	BFOU(I) M 250V 1T 1.5mm ² S3/S7/S103 BU	BLUE	7021528934618	1044169
20110866	BFOU(I) M 250V 2T 1.5mm ² S3/S7/S103 GY	GREY	7021528934663	1044171
20109501	BFOU(I) M 250V 4T 1.5mm ² S3/S7/S103 GY	GREY	7021528934786	1044173
20117428	BFOU(I) M 250V 4T 1.5mm ² S3/S7/S103 BU	BLUE	7021528934793	1044174
20110649	BFOU(I) M 250V 8T 1.5mm ² S3/S7/S103 GY	GREY	7021528934908	1044177
20117424	BFOU(I) M 250V 8T 1.5mm ² S3/S7/S103 BU	BLUE	7021528934915	1044178
20109502	BFOU(I) M 250V 12T 1.5mm ² S3/S7/S103 GY	GREY	7021528934960	1044179
20170933	BFOU(I) M 250V 12T 1.5mm ² S3/S7/S103 BU	BLUE	7021528934977	1044180
20109503	BFOU(I) M 250V 16T 1.5mm ² S3/S7/S103 GY	GREY	7021528935028	1044181
20170929	BFOU(I) M 250V 16T 1.5mm ² S3/S7/S103 BU	BLUE	7021528935035	1044182
20210038	BFOU(I) M 250V 24T 1.5mm ² S3/S7/S103 GY	GREY	7021528935097	-
20210039	BFOU(I) M 250V 24T 1.5mm ² S3/S7/S103 BU	BLUE	7021528936001	-
20110650	BFOU(I) M 250V 1PAIR 2.5mm ² S3/S7/S103 GY	GREY	7021528936001	1044140
20110867	BFOU(I) M 250V 1PAIR 2.5mm ² S3/S7/S103 BU	BLUE	7021528936018	-
20142038	BFOU(I) M 250V 2PAIR 2.5mm ² S3/S7/S103 GY	GREY	7021528936063	-
20110868	BFOU(I) M 250V 4PAIR 2.5mm ² S3/S7/S103 GY	GREY	7021528936186	-
20161616	BFOU(I) M 250V 8PAIR 2.5mm ² S3/S7/S103 GY	GREY	7021528936308	-
20195592	BFOU(I) M 250V 8PAIR 2.5mm ² S3/S7/S103 BU	BLUE	7021528936315	-
20139737	BFOU(I) M 250V 12PAIR 2.5mm ² S3/S7/S103 GY	GREY	7021528936360	-
20109504	BFOU(I) M 250V 16PAIR 2.5mm ² S3/S7/S103 GY	GREY	7021528936421	-
20110869	BFOU(I) M 250V 1T 2.5mm ² S3/S7/S103 GY	GREY	7021528936605	-
20195593	BFOU(I) M 250V 2T 2.5mm ² S3/S7/S103 GY	GREY	7021528936667	-
20195594	BFOU(I) M 250V 4T 2.5mm ² S3/S7/S103 GY	GREY	7021528936780	-
20152769	BFOU(I) M 250V 8T 2.5mm ² S3/S7/S103 GY	GREY	7021528936902	-
20195595	BFOU(I) M 250V 16T 2.5mm ² S3/S7/S103 GY	GREY	7021528937022	-

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 x total cross section (mm ²) of conductors	-20°C

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