

## FlexFlame BFOU(c) 250V S4/S8/S104 Instr. cable



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

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

**BFOU(c) 250V      NEK TS 606 Code S104**  
**BFOU(c) M 250V    NEK TS 606 Code S4/S8/S104**

**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(c) 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	
<b>Conductor</b>		Tinned annealed stranded circular copper (STCC), IEC 60228 class 2
<b>Insulation</b>	<b>B</b>	Mica-tape + EP-rubber, IEC 60092-360 (EPR)
<b>Pair / Triple / Quad twisting</b>		Color coded cores twisted together and wrapped with polyester tape. Pairs/Triples are laid up collectively and screened by copper backed polyester tape with tinned copper drain wire. Pairs/triples are identified by numbered tape or by numbers printed directly on the insulated conductors.
<b>Inner covering</b>	<b>F</b>	Flame retardant and halogen-free extruded compound
<b>Tape over inner covering</b>		PET tape
<b>Armour/screen</b>	<b>O</b>	Tinned annealed copper wire braid
<b>Tape over armour/screen</b>		PET tape
<b>Outer sheath</b>	<b>U</b>	Flame retardant, halogen-free thermoset compound, SHF2 (IEC 60092-360)
<b>Marking text (example)</b>		"meter" "year/week" DRAKA 01 Part no. <SAP code> BFOU(C) M 250V S4/S8/S104 4 PAIR 0,75 mm <sup>2</sup> FLEX - FLAME IEC 60092-376 IEC 60331-1*) or IEC 60331-2*) IEC 60331-21**) IEC 60332-3-22 Production no. <Prod.ordre no.>
<b>Manufacturing unit</b>		DRAKA 01 = Prysmian Group Norge AS
<b>Outer sheath colour</b>		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 <sup>2</sup>	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 <sup>2</sup>	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	0.6	1.1	11.5 ± 0.8	0.3	8.5	1.3	15 ± 0.8	380	112
4	2	0.75	1.1	0.6	1.1	12 ± 0.8	0.3	10.2	1.4	16 ± 0.8	435	152
8	2	0.75	1.1	0.6	1.1	16 ± 0.8	0.3	13.6	1.5	20 ± 1	670	235
12	2	0.75	1.1	0.6	1.1	18.5 ± 0.8	0.3	15.3	1.6	22.5 ± 1	845	306
16	2	0.75	1.1	0.6	1.5	21 ± 1	0.3	17.8	1.7	25 ± 1	1090	376
24	2	0.75	1.1	0.6	1.5	25.5 ± 1	0.3	22.9	2	30 ± 1.5	1500	525
2	3	0.75	1.1	0.6	1.1	13 ± 0.8	0.3	10.2	1.3	16.5 ± 0.8	455	140
4	3	0.75	1.1	0.6	1.1	14 ± 0.8	0.3	11.9	1.4	17.5 ± 0.8	530	193
8	3	0.75	1.1	0.6	1.1	19 ± 0.8	0.3	15.3	1.6	23 ± 1	875	301
12	3	0.75	1.1	0.6	1.1	21.5 ± 1	0.3	17.8	1.8	26 ± 1	1105	402
16	3	0.75	1.1	0.6	1.5	24 ± 1	0.3	20.4	1.9	28.5 ± 1	1435	501
24	3	0.75	1.1	0.6	1.5	29 ± 1	0.4	36.2	2.1	34.5 ± 1.5	2055	805
2	2	1.5	1.55	0.7	1.1	13.5 ± 0.8	0.3	10.2	1.4	17.5 ± 0.8	455	155
4	2	1.5	1.55	0.7	1.1	14.5 ± 0.8	0.3	11.9	1.4	18.5 ± 0.8	575	222
8	2	1.5	1.55	0.7	1.1	20 ± 1	0.3	17.8	1.7	24 ± 1	955	382
12	2	1.5	1.55	0.7	1.1	23 ± 1	0.3	20.4	1.8	27 ± 1	1225	509
16	2	1.5	1.55	0.7	1.5	25.5 ± 1	0.3	22.9	1.9	30 ± 1.5	1585	635
24	2	1.5	1.55	0.7	1.5	31 ± 1.5	0.4	36.2	2.2	36.5 ± 1.5	2290	969
2	3	1.5	1.55	0.7	1.1	15.5 ± 0.8	0.3	11.9	1.4	19 ± 0.8	550	197
4	3	1.5	1.55	0.7	1.1	16.5 ± 0.8	0.3	13.6	1.5	20.5 ± 1	730	289
8	3	1.5	1.55	0.7	1.1	22.5 ± 1	0.3	20.4	1.8	27 ± 1	1250	509
12	3	1.5	1.55	0.7	1.1	26.5 ± 1	0.3	22.9	1.9	31 ± 1.5	1605	688
16	3	1.5	1.55	0.7	1.5	29.5 ± 1	0.4	36.2	2.1	34.5 ± 1.5	2225	971
24	3	1.5	1.55	0.7	1.5	36 ± 1.5	0.4	40.7	2.4	41.5 ± 2	3030	1326
2	2	2.5	1.9	0.7	1.1	14 ± 0.8	0.3	11.9	1.4	17.5 ± 0.8	500	204
4	2	2.5	1.9	0.7	1.1	16 ± 0.8	0.3	13.6	1.5	20 ± 1	705	301
8	2	2.5	1.9	0.7	1.1	21.5 ± 1	0.3	17.8	1.8	26 ± 1	1145	502
12	2	2.5	1.9	0.7	1.5	26 ± 1	0.3	22.9	1.9	30.5 ± 1.5	1620	718
16	2	2.5	1.9	0.9	1.5	31.5 ± 1.5	0.4	31.7	2.1	36.5 ± 1.5	2265	971
24	2	2.5	1.9	0.9	1.5	38 ± 1.5	0.4	40.7	2.4	43.5 ± 2	3155	1382
4	3	2.5	1.9	0.7	1.1	18.5 ± 0.8	0.3	15.3	1.6	22.5 ± 1	900	400
8	3	2.5	1.9	0.7	1.1	25.5 ± 1	0.3	20.4	1.9	30 ± 1.5	1550	692
12	3	2.5	1.9	0.7	1.5	30 ± 1.5	0.4	31.7	2.1	35 ± 1.5	2235	1058

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Number of elements	No of cores in element	Cross section core, mm <sup>2</sup>	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 <sup>2</sup>	Thickness Outer Sheath, mm	Diameter outer sheath, mm	Weight of Cable Approx. (Kg/Km)	Copper content Approx. (kg/km)
16	3	2.5	1.9	0.9	1.5	35.5 ± 1.5	0.4	36.2	2.3	41.5 ± 2	3050	1343

### 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 0,75 mm <sup>2</sup>	100	0,67	26,3	12,7
Unshielded triple 0,75 mm <sup>2</sup>	100	0,67	26,3	12,7
Unshielded pair 1,5 mm <sup>2</sup>	110	0,63	12,9	24,4
Unshielded triple 1,5 mm <sup>2</sup>	110	0,63	12,9	24,4
Unshielded pair 2,5 mm <sup>2</sup>	125	0,59	8,02	36,8
Unshielded triple 2,5 mm <sup>2</sup>	125	0,59	8,02	36,8
Unshielded 16 and 24 pair 2,5 mm <sup>2</sup>	95	0,66	8,02	41,1
Unshielded 16 triple 2,5 mm <sup>2</sup>	95	0,66	8,02	41,1

### Ordering information

Part number	Description	Sheath Colour	GTIN 1m	EL No.
20110651	BFOU(C) M 250V 2P 0.75mm <sup>2</sup> S4/S8/S104 GY	GREY	7021528938067	1043821
20110652	BFOU(C) M 250V 2P 0.75mm <sup>2</sup> S4/S8/S104 BU	BLUE	7021528938074	1043822
20110653	BFOU(C) M 250V 4P 0.75mm <sup>2</sup> S4/S8/S104 GY	GREY	7021528938180	1043823
20110654	BFOU(C) M 250V 4P 0.75mm <sup>2</sup> S4/S8/S104 BU	BLUE	7021528938197	1043824
20110655	BFOU(C) M 250V 8P 0.75mm <sup>2</sup> S4/S8/S104 GY	GREY	7021528938302	1043828
20110656	BFOU(C) M 250V 8P 0.75mm <sup>2</sup> S4/S8/S104 BU	BLUE	7021528938319	1043829
20110657	BFOU(C) M 250V 12P 0.75mm <sup>2</sup> S4/S8/S104 GY	GREY	7021528938364	1043830
20110658	BFOU(C) M 250V 12P 0.75mm <sup>2</sup> S4/S8/S104 BU	BLUE	7021528938371	1043831
20110659	BFOU(C) M 250V 16P 0.75mm <sup>2</sup> S4/S8/S104 GY	GREY	7021528938425	1043833
20110660	BFOU(C) M 250V 16P 0.75mm <sup>2</sup> S4/S8/S104 BU	BLUE	7021528938432	1043834
20109505	BFOU(C) M 250V 24P 0.75mm <sup>2</sup> S4/S8/S104 GY	GREY	7021528938487	1043836
20118235	BFOU(C) M 250V 24P 0.75mm <sup>2</sup> S4/S8/S104 BU	BLUE	7021528938494	1043837
20110661	BFOU(C) M 250V 2T 0.75mm <sup>2</sup> S4/S8/S104 GY	GREY	7021528938661	1043921
20154488	BFOU(C) M 250V 2T 0.75mm <sup>2</sup> S4/S8/S104 BU	BLUE	7021528938678	1043922
20110662	BFOU(C) M 250V 4T 0.75mm <sup>2</sup> S4/S8/S104 GY	GREY	7021528938784	1043924
20118161	BFOU(C) M 250V 4T 0.75mm <sup>2</sup> S4/S8/S104 BU	BLUE	7021528938791	1043925
20110663	BFOU(C) M 250V 8T 0.75mm <sup>2</sup> S4/S8/S104 GY	GREY	7021528938906	1043928
20113359	BFOU(C) M 250V 8T 0.75mm <sup>2</sup> S4/S8/S104 BU	BLUE	7021528938913	1043929
20110664	BFOU(C) M 250V 12T 0.75mm <sup>2</sup> S4/S8/S104 GY	GREY	7021528938968	1043930
20110665	BFOU(C) M 250V 16T 0.75mm <sup>2</sup> S4/S8/S104 GY	GREY	7021528939026	1043933
20163603	BFOU(C) M 250V 24T 0.75mm <sup>2</sup> S4/S8/S104 GY	GREY	7021528939088	1043936
20110666	BFOU(C) M 250V 2P 1.5mm <sup>2</sup> S4/S8/S104 GY	GREY	7021528940060	1043862
20110667	BFOU(C) M 250V 2P 1.5mm <sup>2</sup> S4/S8/S104 BU	BLUE	7021528940077	1043861
20110668	BFOU(C) M 250V 4P 1.5mm <sup>2</sup> S4/S8/S104 GY	GREY	7021528940183	1043863
20110669	BFOU(C) M 250V 4P 1.5mm <sup>2</sup> S4/S8/S104 BU	BLUE	7021528940190	1043864
20110670	BFOU(C) M 250V 8P 1.5mm <sup>2</sup> S4/S8/S104 GY	GREY	7021528940305	1043868
20110671	BFOU(C) M 250V 8P 1.5mm <sup>2</sup> S4/S8/S104 BU	BLUE	7021528940312	1043869
20110672	BFOU(C) M 250V 12P 1.5mm <sup>2</sup> S4/S8/S104 GY	GREY	7021528940367	1043870
20110673	BFOU(C) M 250V 12P 1.5mm <sup>2</sup> S4/S8/S104 BU	BLUE	7021528940374	1043871
20109506	BFOU(C) M 250V 16P 1.5mm <sup>2</sup> S4/S8/S104 GY	GREY	7021528940428	1043873
20109507	BFOU(C) M 250V 16P 1.5mm <sup>2</sup> S4/S8/S104 BU	BLUE	7021528940435	1043874
20109508	BFOU(C) M 250V 24P 1.5mm <sup>2</sup> S4/S8/S104 GY	GREY	7021528940480	1043876
20109509	BFOU(C) M 250V 24P 1.5mm <sup>2</sup> S4/S8/S104 BU	BLUE	7021528940497	1043877

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Part number	Description	Sheath Colour	GTIN 1m	EL No.
20110775	BFOU(C) M 250V 2T 1.5mm <sup>2</sup> S4/S8/S104 GY	GREY	7021528940664	1043971
20170931	BFOU(C) M 250V 2T 1.5mm <sup>2</sup> S4/S8/S104 BU	BLUE	7021528940671	1043972
20110674	BFOU(C) M 250V 4T 1.5mm <sup>2</sup> S4/S8/S104 GY	GREY	7021528940787	1043973
20170943	BFOU(C) M 250V 4T 1.5mm <sup>2</sup> S4/S8/S104 BU	BLUE	7021528940794	1043974
20110675	BFOU(C) M 250V 8T 1.5mm <sup>2</sup> S4/S8/S104 GY	GREY	7021528940909	1043977
20109510	BFOU(C) M 250V 12T 1.5mm <sup>2</sup> S4/S8/S104 GY	GREY	7021528940961	1043979
20109511	BFOU(C) M 250V 16T 1.5mm <sup>2</sup> S4/S8/S104 GY	GREY	7021528941029	1043981
20110776	BFOU(C) M 250V 24T 1.5mm <sup>2</sup> S4/S8/S104 GY	GREY	7021528941081	1043987
20110676	BFOU(C) M 250V 2P 2.5mm <sup>2</sup> S4/S8/S104 GY	GREY	7021528942064	-
20110677	BFOU(C) M 250V 4P 2.5mm <sup>2</sup> S4/S8/S104 GY	GREY	7021528942187	-
20110678	BFOU(C) M 250V 8P 2.5mm <sup>2</sup> S4/S8/S104 GY	GREY	7021528942309	-
20122326	BFOU(C) M 250V 12P 2.5mm <sup>2</sup> S4/S8/S104 GY	GREY	7021528942361	-
20110777	BFOU(C) M 250V 16P 2.5mm <sup>2</sup> S4/S8/S104 GY	GREY	7021528942422	-
20140778	BFOU(C) M 250V 24P 2.5mm <sup>2</sup> S4/S8/S104 GY	GREY	7021528942484	-
20165410	BFOU(C) M 250V 4TRIP 2.5mm <sup>2</sup> S4/S8/S104 GY	GREY	7021528942781	-
20165421	BFOU(C) M 250V 8TRIP 2.5mm <sup>2</sup> S4/S8/S104 GY	GREY	7021528942903	-
20234353	BFOU(C) M 250V 12TRIP 2.5mm <sup>2</sup> S4/S8/S104 GY	GREY	7021528942965	-
20210040	BFOU(C) M 250V 16TRIP 2.5mm <sup>2</sup> S4/S8/S104 GY	GREY	7021528943023	-

### 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 <sup>2</sup> ) of conductors	-20°C

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