BFOU (i) S3/S7 & BFOU (i) EMC

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

NEK TS 606 Code S3/S7, IEC 60092-376-Design guidelines

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

CONSTRUCTION

	Code letter	
Conductors		Tinned annealed circular stranded copper according to IEC 60228 class 2 or class 5
Insulation	**B**	Mica tape EP rubber thermosetting compound, 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 numbers printed directly on the insulated conductors.
Lay up/shielding		Individually shielded pairs/triples/quads are laid up in concentric layers and wrapped with polyester tape
Inner covering	**F**	Flame retardant and halogen-free thermosetting compound
Armour/screen	**O**	PET tape & Tinned annealed copper wire braid
For EMC cable		Cu/PET tape under the braid
Separator		Separator, suitable tape between the braid and outer sheath
Outer sheath	**U**	Flame retardant, halogen-free and mud resistant thermosetting compound SHF2 (IEC 60092-360)
Colour of outer sheath *		Grey or blue
Standard marking		E.g. TF KABLE 3 BFOU (c) 250 V S3/S7 2 PAIR 0.75 mm² IEC 60331-21 IEC 60332-3-22 IEC 60092-376

* Black outer sheathing is available on request

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CHARACTERISTIC

Maximum conductor operating temperature:	+90°C
Maximum conductor temperature during short circuit:	+250°C
Lowest ambient temperature for fixed installation:	-40°C
Lowest installation temperature:	-15°C
Oil resistance:	IEC 60092-360 SHF2. I RM 902 (100°C/24h)
Mud resistance:	NEK 606 (SHF MUD. SHF2)
Minimum bending radius:	6 D D – overall diameter of cable

Fire performance

Flame retardant:	IEC 60332-3-22 (Category A)
Fire resistant:	IEC 60331
Smoke emission:	IEC 61034-2
Corrosive gas emission:	IEC 60754-1

Applications

- Fixed installation for instrumentation, communication, control and alarm system in both EX- and safe areas emergency and critical systems where requirements for fire resistance exists.
- Meets the MUD resistance requirement in NEK TS 606
- For fixed wiring installations on Oil and Gas Rigs, Shipboard and other marine applications requiring screened cable for EMC
- Other industrial applications

Approvals

DNV-GL, ABS
Details related to particular Approvals are informative only. Please contact manufacturer to confirm whether the required cross-sections are covered by the Certificate.

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Standard length cable packing:	1,000 m on drums Other forms of packing and delivery are available on request

Size	Class of conductor	Insulation thickness	Thickness of inner sheath	Diameter of braid wire	Thickness of outer sheath	Approximate overall diameter	Approximate net weight of cable
N × 2 × mm²		**mm**	**mm**	**mm**	**mm**	**mm**	**kg/km**
1 × 2 × 0.75	2	0.6	1.1	0.2	1.1	11.7	171
2 × 2 × 0.75	2	0.6	1.1	0.3	1.3	13.5	258
4 × 2 × 0.75	2	0.6	1.1	0.3	1.4	18.8	438
8 × 2 × 0.75	2	0.6	1.1	0.3	1.6	23.4	680
12 × 2 × 0.75	2	0.6	1.4	0.3	1.7	28	949
16 × 2 × 0.75	2	0.6	1.9	0.3	1.8	32.3	1,250
19 × 2 × 0.75	2	0.6	1.9	0.3	1.9	34.6	1,422
24 × 2 × 0.75	2	0.6	2.3	0.4	2.1	39.4	1,879
1 × 3 × 0.75	2	0.6	1.1	0.2	1.1	12.2	200
2 × 3 × 0.75	2	0.6	1.1	0.3	1.4	18.2	384
4 × 3 × 0.75	2	0.6	1.1	0.3	1.4	20.3	521
8 × 3 × 0.75	2	0.6	1.1	0.3	1.7	26.6	860
12 × 3 × 0.75	2	0.6	1.4	0.3	1.8	31.3	1,192
16 × 3 × 0.75	2	0.6	2.1	0.4	1.9	36.9	1,603
19 × 3 × 0.75	2	0.6	2.3	0.4	2	39.9	1,866
24 × 3 × 0.75	2	0.6	2.5	0.4	2.2	44.4	2,395
1 × 2 × 1.5	2	0.7	1.1	0.2	1.1	13	214
2 × 2 × 1.5	2	0.7	1.1	0.3	1.4	20.1	454
4 × 2 × 1.5	2	0.7	1.1	0.3	1.5	23.2	648
8 × 2 × 1.5	2	0.7	1.1	0.3	1.7	27.3	947
12 × 2 × 1.5	2	0.7	1.4	0.3	1.9	36.5	1,519
16 × 2 × 1.5	2	0.7	2.1	0.4	2	38.7	1,810
19 × 2 × 1.5	2	0.7	1.9	0.4	2	40.9	2,092
24 × 2 × 1.5	2	0.7	2.3	0.4	2.3	46.2	2,657
1 × 3 × 1.5	2	0.7	1.1	0.2	1.1	13.6	259
2 × 3 × 1.5	2	0.7	1.1	0.3	1.5	21	508
4 × 3 × 1.5	2	0.7	1.1	0.3	1.6	23.8	730
8 × 3 × 1.5	2	0.7	1.1	0.3	1.8	31.1	1,221
12 × 3 × 1.5	2	0.7	1.6	0.4	2	37.7	1,765

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16 × 3 × 1.5	2	0.7	2.3	0.4	2.2	43.9	2,481
24 × 3 × 1.5	2	0.7	2.7	0.4	2.5	52.8	3,527
1 × 2 × 2.5	2	0.7	1.1	0.2	1.2	14.1	258
2 × 2 × 2.5	2	0.7	1.1	0.3	1.5	16.5	423
4 × 2 × 2.5	2	0.7	1.1	0.3	1.6	23.7	733
8 × 2 × 2.5	2	0.7	1.1	0.3	1.8	29.8	1,200
16 × 2 × 2.5	2	0.7	2.3	0.4	2.2	42.9	2,466
8 × 3 × 2.5	2	0.7	1.3	0.3	2	34.7	1,621
16 × 3 × 2.5	2	0.7	2.6	0.4	2.2	48.4	3,224

Without approvals

Size	Class of conductor	Insulation thickness	Thickness of inner sheath	Diameter of braid wire	Thickness of outer sheath	Approximate overall diameter	Approximate net weight of cable
N × 2 × mm²		**mm**	**mm**	**mm**	**mm**	**mm**	**kg/km**
1 × 2 × 1	2	0.6	1.0	0.2	1.1	11.9	187
5 × 2 × 1.5	2	0.7	1.1	0.3	1.5	25.1	754
6 × 2 × 1.5	2	0.7	1.1	0.3	1.6	27.4	870
10 × 2 × 1.5	2	0.7	1.1	0.3	1.8	34.6	1,299
1 × 2 × 2.5	2	0.7	1.1	0.2	1.1	13.1	222
5 × 2 × 2.5	2	0.7	1.1	0.3	1.6	27.4	953
12 × 2 × 2.5	2	0.7	1.1	0.3	1.9	39.1	1,838
20 × 2 × 2.5	2	0.7	1.2	0.4	2.2	49.1	2,855
1 × 3 × 2.5	2	0.7	1.1	0.2	1.2	14.8	312
2 × 3 × 2.5	2	0.7	1.1	0.3	1.5	23.9	653
4 × 3 × 2.5	2	0.7	1.1	0.3	1.6	27.7	985
12 × 3 × 2.5	2	0.7	1.3	0.4	2.1	44.6	2,532