

Application

RFOU(i) 250 V is a flame-retardant, halogen-free instrumentation and control cable for fixed installation on offshore units, drilling rigs, FPSOs and ships, designed to NEK TS 606 and IEC 60092-376. The tinned copper conductors are insulated with halogen-free EPR and twisted into pairs, each pair having its own screen of

copper-laminated polyester tape with a tinned copper drain wire; the assembled pairs are protected by a halogen-free inner sheath, a braid of tinned copper wires and a halogen-free, mud-resistant thermoset outer sheath. The individual screens make the cable suitable for instrumentation, communication, control and alarm circuits requiring separation between signal pairs, in safe and hazardous areas, including installations exposed to oil, drilling fluids and mud. It is not intended for power distribution or for applications requiring fire-resistant (circuit-integrity) cable.



CONSTRUCTION

Conductor	Tinned annealed stranded copper, class 2 acc. to IEC 60228. Class 5 (flexible) on request.
Insulation	Halogen-free EPR compound.
Screen	Individual screen on every pair: copper-laminated polyester tape with tinned copper drain wire; pairs separated by polyester tape. The tinned copper braid forms the overall screen; there is no separate collective foil screen. A version with an additional collective screen, RFOU(i&c), is available on request.
Armour	Braid of tinned copper wires over a halogen-free inner sheath.
Sheath	Halogen-free, flame-retardant and mud-resistant thermoset compound (SHF2), grey; blue for intrinsically safe circuits.
Core identification	Pair: black / light blue; triple: black / light blue / brown; elements progressively numbered.

ELECTRICAL & THERMAL PROPERTIES

Rated voltage Uo/U	150/250 V (max. operating voltage 300 V).
Test voltage	1.5 kV.
Standard	NEK TS 606 (type S101); design acc. to IEC 60092-376; materials acc. to IEC 60092-360; conductors acc. to IEC 60228.
Flame-retardant	Acc. to IEC 60332-1-2 and IEC 60332-3-22 Cat. A.
Halogen-free	Acc. to IEC 60754-1/-2; low smoke density acc. to IEC 61034-1/-2.
Mud-resistant	Yes, sheath resistant to oil and drilling mud acc. to NEK TS 606.
Max. conductor temperature	+90 °C.
Permitted outer cable temperature, fixed	-20 °C to +90 °C.
Min. bending radius, fixed	6 × outer diameter (8 × outer diameter during installation).
Reaction to fire (CPR)	Outside the scope of EN 50575 (shipboard / offshore cable, classified under IEC 60092 and marine type approval, not for permanent installation in construction works).

DIMENSIONS & TECHNICAL DATA

Pairs × mm ²	Cond. R @20°C (Ω/km)	Nominal O.D. (mm)	Weight (kg/km)
1 × 0.75	26.3	10.9	210
2 × 0.75	26.3	13.2	325
4 × 0.75	26.3	16.2	480
7 × 0.75	26.3	19	670
8 × 0.75	26.3	20.4	755
9 × 0.75	26.3	22.6	835
10 × 0.75	26.3	23.5	875
12 × 0.75	26.3	24.1	1010
14 × 0.75	26.3	25.3	1040
15 × 0.75	26.3	26.9	1120
16 × 0.75	26.3	27.3	1165
18 × 0.75	26.3	28.7	1270
19 × 0.75	26.3	29	1360
20 × 0.75	26.3	30.1	1420
21 × 0.75	26.3	31	1490
23 × 0.75	26.3	31.5	1595
24 × 0.75	26.3	33.4	1720
27 × 0.75	26.3	34	1770
30 × 0.75	26.3	35.1	1910
32 × 0.75	26.3	36.1	2060
33 × 0.75	26.3	36.9	2160
37 × 0.75	26.3	38	2330
1 × 1	19.3	11.4	230
2 × 1	19.3	14.5	370
3 × 1	19.3	16.6	515
4 × 1	19.3	17.4	595
5 × 1	19.3	19.1	685
6 × 1	19.3	20.7	790
7 × 1	19.3	20.7	820
8 × 1	19.3	21.6	875
9 × 1	19.3	23.8	995
10 × 1	19.3	24.8	1010
12 × 1	19.3	25.6	1195
14 × 1	19.3	26.7	1210
15 × 1	19.3	28.5	1320
16 × 1	19.3	29	1375
18 × 1	19.3	30.5	1500
19 × 1	19.3	30.8	1555
20 × 1	19.3	31.9	1680
21 × 1	19.3	33.3	1790
23 × 1	19.3	33.7	1920
24 × 1	19.3	35.2	2015
27 × 1	19.3	36.5	2185
30 × 1	19.3	37.7	2365
33 × 1	19.3	39.2	2570

Pairs × mm2	Cond. R @20°C (Ω/km)	Nominal O.D. (mm)	Weight (kg/km)
37 × 1	19.3	40.4	2775
1 × 1.5	12.9	12.4	270
2 × 1.5	12.9	15.8	495
3 × 1.5	12.9	17.9	640
4 × 1.5	12.9	19.5	715
5 × 1.5	12.9	21.5	850
6 × 1.5	12.9	23.3	990
7 × 1.5	12.9	23.3	1030
8 × 1.5	12.9	24.8	1130
9 × 1.5	12.9	26.9	1230
10 × 1.5	12.9	28.2	1270
12 × 1.5	12.9	29.3	1375
14 × 1.5	12.9	30.2	1520
15 × 1.5	12.9	32.7	1685
16 × 1.5	12.9	33.4	1775
18 × 1.5	12.9	35	1920
19 × 1.5	12.9	35.3	1990
20 × 1.5	12.9	37.2	2255
21 × 1.5	12.9	38.2	2345
23 × 1.5	12.9	39	2540
24 × 1.5	12.9	40.7	2610
27 × 1.5	12.9	41.7	2775
30 × 1.5	12.9	43.1	3005
33 × 1.5	12.9	45.1	3480
37 × 1.5	12.9	46.7	3600
1 × 2.5	8.02	13.3	320
2 × 2.5	8.02	17.5	530
3 × 2.5	8.02	20.2	780
4 × 2.5	8.02	21.5	900
5 × 2.5	8.02	23.4	1060
6 × 2.5	8.02	25.4	1235
7 × 2.5	8.02	25.4	1290
8 × 2.5	8.02	27.5	1400
9 × 2.5	8.02	29.4	1495
10 × 2.5	8.02	30.9	1595
12 × 2.5	8.02	31.6	1755
14 × 2.5	8.02	33.6	1990
15 × 2.5	8.02	36	2165
16 × 2.5	8.02	36.9	2350
18 × 2.5	8.02	38.9	2565
19 × 2.5	8.02	39.3	2665
20 × 2.5	8.02	40.8	2880
21 × 2.5	8.02	42.1	3020
23 × 2.5	8.02	42.7	3255
24 × 2.5	8.02	45.2	3330
27 × 2.5	8.02	46.1	3615
30 × 2.5	8.02	47.8	3950

Pairs × mm2	Cond. R @20°C (Ω/km)	Nominal O.D. (mm)	Weight (kg/km)
33 × 2.5	8.02	49.7	4300
37 × 2.5	8.02	51.2	4670

Triples × mm2	Cond. R @20°C (Ω/km)	Nominal O.D. (mm)	Weight (kg/km)
1 × 0.75	26.3	11.3	225
2 × 0.75	26.3	16.4	490
3 × 0.75	26.3	17.2	520
4 × 0.75	26.3	18.5	610
5 × 0.75	26.3	19.8	720
6 × 0.75	26.3	21.7	835
7 × 0.75	26.3	21.7	870
8 × 0.75	26.3	23.5	950
9 × 0.75	26.3	24.6	1065
10 × 0.75	26.3	26.4	1095
12 × 0.75	26.3	27.3	1275
14 × 0.75	26.3	28.5	1320
15 × 0.75	26.3	29.3	1395
16 × 0.75	26.3	30.1	1465
18 × 0.75	26.3	31.6	1600
19 × 0.75	26.3	31.9	1655
20 × 0.75	26.3	33.2	1820
21 × 0.75	26.3	33.8	1890
23 × 0.75	26.3	35.1	2050
24 × 0.75	26.3	36	2220
27 × 0.75	26.3	37.9	2335
30 × 0.75	26.3	39.7	2555
32 × 0.75	26.3	40.7	2690
1 × 1	19.3	11.8	250
2 × 1	19.3	17.3	555
3 × 1	19.3	17.9	590
4 × 1	19.3	19.4	700
5 × 1	19.3	20.7	825
6 × 1	19.3	23	975
7 × 1	19.3	23	990
8 × 1	19.3	24.4	1095
9 × 1	19.3	26.4	1245
10 × 1	19.3	28	1265
12 × 1	19.3	28.9	1500
14 × 1	19.3	30	1545
15 × 1	19.3	31.1	1655
16 × 1	19.3	31.8	1870
18 × 1	19.3	33.9	1935
19 × 1	19.3	34.2	2040
20 × 1	19.3	35.1	2150
21 × 1	19.3	35.9	2245
23 × 1	19.3	37.6	2525
24 × 1	19.3	38.7	2685

Triples × mm ²	Cond. R @20°C (Ω/km)	Nominal O.D. (mm)	Weight (kg/km)
27 × 1	19.3	40.3	2785
30 × 1	19.3	42.1	3050
32 × 1	19.3	43.2	3215
1 × 1.5	12.9	13	300
2 × 1.5	12.9	17.5	510
3 × 1.5	12.9	20.1	740
4 × 1.5	12.9	21.8	870
5 × 1.5	12.9	23.3	1045
6 × 1.5	12.9	25.9	1230
7 × 1.5	12.9	26	1265
8 × 1.5	12.9	27.8	1405
9 × 1.5	12.9	29.5	1585
10 × 1.5	12.9	31.8	1680
12 × 1.5	12.9	33.1	1950
14 × 1.5	12.9	34.6	2020
15 × 1.5	12.9	35.6	2145
16 × 1.5	12.9	36.6	2450
18 × 1.5	12.9	39.2	2580
19 × 1.5	12.9	39.5	2675
20 × 1.5	12.9	40.5	2875
21 × 1.5	12.9	41.5	3000
23 × 1.5	12.9	43	3260
24 × 1.5	12.9	44.9	3310
27 × 1.5	12.9	46.4	3635
30 × 1.5	12.9	48.5	3980
32 × 1.5	12.9	50	4225
1 × 2.5	8.02	13.9	355
2 × 2.5	8.02	20.9	840
3 × 2.5	8.02	21.6	945
4 × 2.5	8.02	23.3	1115
5 × 2.5	8.02	25.4	1315
6 × 2.5	8.02	28.3	1555
7 × 2.5	8.02	28.3	1640
8 × 2.5	8.02	30.2	1780
9 × 2.5	8.02	32.6	2055
10 × 2.5	8.02	35.1	2080
12 × 2.5	8.02	36.8	2435
14 × 2.5	8.02	38.3	2700
15 × 2.5	8.02	39.7	2895
16 × 2.5	8.02	40.8	3050
18 × 2.5	8.02	42.9	3335
19 × 2.5	8.02	43.3	3470
20 × 2.5	8.02	44.9	3785
21 × 2.5	8.02	45.8	3935
23 × 2.5	8.02	47.7	4150
24 × 2.5	8.02	48.6	4300
27 × 2.5	8.02	51.1	4765

Triples × mm ²	Cond. R @20°C (Ω/km)	Nominal O.D. (mm)	Weight (kg/km)
30 × 2.5	8.02	53.5	5235
32 × 2.5	8.02	55.5	5620

Outer diameters, weights and conductor resistance are the nominal manufacturer values of the leading reference source (pair constructions $n \times 2 \times \text{mm}^2$ and triple constructions $n \times 3 \times \text{mm}^2$, tinned class-2 conductors); all values are indicative and non-binding.