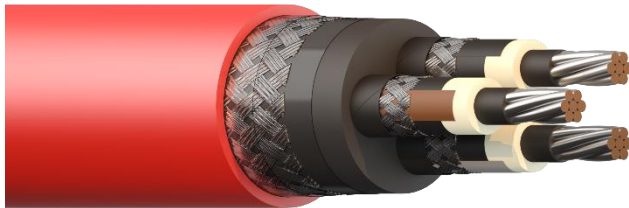


## FlexFlame RFOU 12/20kV P19/P21/P112 Power cable



**Flame retardant halogen-free medium voltage (MV) cable.**

**RFOU 12/20(24) kV**  
**EPR/EPR/TCWB/EVA**

RFOU 20kV      NEK 606 Code P112  
 RFOU M 20kV    NEK 606 Code P19/P21/P112

**Operating temperature**                : 90°C  
**Operating Voltage**                        : 12/20(24) kV

**Standards applied**

- |                   |                   |
|-------------------|-------------------|
| IEC 60092-354     | - 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 60754-1,2     | - Halogen Free    |
| IEC 61034-1,2     | - Low Smoke       |

**Application**

Fixed installation for medium voltage (MV) power in both EX- and safe areas, general purposes.  
 RFOU M 20kV for installation in areas exposed to MUD and drilling/cleaning fluids. Meets the Oil & Mud resistance requirement in NEK TS 606:2016.

**Construction**

	Code Letter	
<b>Conductor</b>		Tinned stranded and compressed copper (STCC), IEC 60228 class 2
<b>Conductor screen semiconductive</b>		Semiconductive layer (EP-rubber)
<b>Insulation</b>	<b>R</b>	EP-rubber, IEC 60092-360 (EPR)
<b>Insulation screen semiconductive</b>		Semiconductive layer (EP-rubber)
<b>Metallic screen</b>		Tinned copper wire braid
<b>Lay up</b>		Cores are laid up together. Cores are identified by Brown, Black or Grey threads over the metallic screen on each conductor.
<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 04 Part no. <SAP-code> RFOU M 12/20(24)KV P19/P21/P112 3x 95/50 mm2 IEC 60332-3-22 Production no. <Production order number>
<b>Manufacturing unit</b>		DRAKA 04 = Draka Industrial Cable, Germany
<b>Outer sheath colour</b>		Red

## FlexFlame RFOU 12/20kV P19/P21/P112 Power cable

### Range and dimensions

Number of elements	Cross section core, mm <sup>2</sup>	Electrical Cross section braid, 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)
1	35	13	7.2	5.5	1.5	25.5 ±1.5	0.3	20.4	1.9	31 ± 2	1665	691
1	70	13	10.3	5.5	1.5	28.5 ± 1.5	0.3	25.4	2.0	34 ± 2	2210	1109
1	95	17	12.1	5.5	1.5	30.5 ±1.5	0.3	25.4	2.0	36 ± 2	2590	1385
1	120	15	13.5	5.5	1.5	32 ±1.5	0.3	28	2.1	38 ± 2	2890	1557
1	150	15	14.7	5.5	1.5	33 ±1.5	0.3	30.5	2.2	40 ± 2.5	3220	1847
1	185	18	16.8	5.5	1.5	35 ±1.5	0.3	28	2.3	41.5 ± 2.5	3690	2188
1	240	23	19.1	5.5	1.5	37.5 ±1.5	0.3	30.5	2.3	44 ± 2.5	4480	2861
1	300	28	21.6	5.5	1.5	40 ±2.0	0.4	49.8	2.4	47 ± 3	5460	3678
1	400	38	24.2	5.5	1.5	42.5 ±2.0	0.4	54.3	2.6	51.5 ± 3	6470	4433
1	500	50	27.3	5.5	1.5	45.5 ± 2	0.5	77.7	2.8	54 ± 3.5	7920	5620
3	50	35	8.5	5.5	1.8	56 ± 2	0.4	54.3	3.1	65.5 ± 3.5	6700	2420
3	95	50	12.1	5.5	2.0	64 ± 3	0.5	84.8	3.3	73.5 ± 4	9650	4350
3	150	75	14.7	5.5	2.0	69.5 ± 3	0.6	112	3.6	80 ± 4.5	11970	5836
3	185	55	16.8	5.5	1.8	74 ± 3	0.5	84.8	3.7	84 ± 4.5	13080	6696
3	300	45	21.6	5.5	2.2	85 ± 4	0.5	77.7	4.1	95 ± 5	18290	9760

### Ordering information

Part number	Description	Sheath Colour	EAN No. DNK	EL No.
	RFOU M 20KV 1X 35/13mm <sup>2</sup> P19/P21/P112 RD	RED	7021528041026	-
20076155	RFOU M 20KV 1X 70/13mm <sup>2</sup> P19/P21/P112 RD	RED	7021528041040	-
20076158	RFOU M 20KV 1X 95/17mm <sup>2</sup> P19/P21/P112 RD	RED	7021528041057	-
	RFOU M 20KV 1X120/15mm <sup>2</sup> P19/P21/P112 RD	RED	7021528041064	-
20099891	RFOU M 20KV 1X150/15mm <sup>2</sup> P19/P21/P112 RD	RED	7021528041071	1061035
20092205	RFOU M 20KV 1X185/18mm <sup>2</sup> P19/P21/P112 RD	RED	7021528041088	-
20077821	RFOU M 20KV 1X240/23mm <sup>2</sup> P19/P21/P112 RD	RED	7021528041095	-
20076160	RFOU M 20KV 1X300/28mm <sup>2</sup> P19/P21/P112 RD	RED	7021528041101	1061038
20089316	RFOU M 20KV 1X400/35mm <sup>2</sup> P19/P21/P112 RD	RED	7021528041118	-
	RFOU M 20KV 1X500/50mm <sup>2</sup> P19/P21/P112 RD	RED	7021528041125	-
	RFOU M 20KV 3X 50/35mm <sup>2</sup> P19/P21/P112 RD	RED	7021528041231	-
20132431	RFOU M 20KV 3X 95/50mm <sup>2</sup> P19/P21/P112 RD	RED	7021528041255	-
20132432	RFOU M 20KV 3X150/75mm <sup>2</sup> P19/P21/P112 RD	RED	7021528041279	-
20077822	RFOU M 20kV 3X 185/55mm <sup>2</sup> P19/P21/P112 RD	RED	7021528041286	-
	RFOU M 20KV 3X300/45mm <sup>2</sup> P19/P21/P112 RD	RED	7021528041309	-

### Electrical values power cables

Number of elements	Cross section core, mm <sup>2</sup>	Electrical Cross section braid, mm <sup>2</sup>	Conductor type 2	Max. conductor resistance at 20°C, Ohm/km	Max. conductor resistance at 90°C, Ohm/km	Reactance at 50Hz, Ohm/km	Reactance at 60Hz, Ohm/km	Capacitance per phase, nF/km	Current rating IEC 60092-352 Table B.4, Ampere	Short circuit rating 1 second, Ampere
1	35	13	STCC	0.529	0.675	0.149	0.178	200	157	4900
1	70	13	STCC	0.270	0.344	0.133	0.160	250	242	9800
1	95	17	STCC	0.195	0.249	0.127	0.152	270	293	13300
1	120	15	STCC	0.154	0.196	0.124	0.149	300	339	16800
1	150	15	STCC	0.126	0.161	0.119	0.142	320	389	21000
1	185	18	STCC	0.100	0.128	0.116	0.139	340	444	25900
1	240	23	STCC	0.0762	0.0972	0.112	0.134	380	522	33600
1	300	28	STCC	0.0607	0.0774	0.108	0.130	410	601	42000

Subject to change without prior notice

## FlexFlame RFOU 12/20kV P19/P21/P112 Power cable

Number of elements	Cross section core, mm <sup>2</sup>	Electrical Cross section braid, mm <sup>2</sup>	Conductor type 2	Max. conductor resistance at 20°C, Ohm/km	Max. conductor resistance at 90°C, Ohm/km	Reactance at 50Hz, Ohm/km	Reactance at 60Hz, Ohm/km	Capacitans per phase, nF/km	Current rating IEC 60092-352 Table B.4, Ampere	Short circuit rating 1 second, Ampere
1	400	35	STCC	0,0475	0,0606	0.105	0.126	490	690 dc / 670 ac	56000
1	500	50	STCC	0.0369	0.0463	0.102	0.123		780 dc / 720 ac	70000
3	50	35	STCC	0.391	0.499	0.121	0.145	220	137	7000
3	95	50	STCC	0.195	0.249	0.109	0.131	270	205	13300
3	150	75	STCC	0.126	0.161	0.102	0.122	320	272	21000
3	185	55	STCC	0.100	0.128	0.099	0.118	340	311	25900
3	300	45	STCC	0.0607	0.0774	0.090	0.108	410	421	42000

### Ambient temperature correction factors

Ambient Temp °C	35	40	45	50	55	60	65	70	75	80
Rating factor	1.10	1.05	1.00	0.94	0.88	0.82	0.74	0.67	0.58	0.47

### Installation recommendations

Minimum Bending Radius during Installation	Minimum Bending Radius Fixed Installed	Maximum Tensile Load During Installation	Minimum Installation Temperature
15 x D	9 x D	50 N x total cross section (mm <sup>2</sup> ) of conductors	-20°C