

## Halogen-free, mud resistant MV power cable, RFOU 18/30(36)kV, P20/P22

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

# RFOU 18/30(36) kV

EPR/EPR/TCWB/EVA

NEK 606 CodeP20/P22



Operating temperature : 90°C  
Operating Voltage : 18/30(36) kV

### Application

Fixed installation for medium voltage (MV) power in both EX- and safe areas, general purposes. For installation in areas exposed to MUD and drilling/cleaning fluids.

### 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

### 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>Lay up / Shielding</b>		Cores are laid up together. Cores are identified by Brown, Black or Grey threads under and over the metallic screen on each conductor.
<b>Inner covering</b>	<b>F</b>	Flame retardant and halogen-free thermoset 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 and mud resistant thermoset compound, SHF2 (IEC 60092-360)
<b>Marking text</b>		E.g. "meter" "year" DRAKA 04 RFOU 18/30(36)KV P20/P22 3x 120/60 mm2 IEC 60332-3-22
<b>Manufacturing unit</b>		DRAKA 04 = Draka Industrial Cable, Germany
<b>Outer sheath colour</b>		Red



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## Range and dimensions

Number of elements	Cross section core, mm <sup>2</sup>	Cross section screen, 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	50	25	8.8	8.0	1,5	32.0±1.5	0.4	36.2	2.0	38.5±2.0	2500	1119
1	70	30	10.3	8.0	1,5	33,5±2,0	0,4	36.2	2,2	40,0±3.0	3000	1463
1	95	30	12,1	8.0	1,5	35,0±2.0	0,4	40.7	2,2	42,0±3.0	3400	1698
1	120	20	13,6	8.0	1.5	37.0±2.5	0.4	40.7	2.4	44.0±3.0	3500	1939
1	150	30	15.1	8.0	1,5	39,0±2.5	0,4	45.2	2,3	45,5±3.0	3900	2280
1	185	30	16.8	8.0	1.5	40.0±2.5	0.4	49.8	2.5	47.5±3.0	4600	2675
1	240	40	19.1	8.0	1,5	42.0±2.5	0.4	49.8	2.4	50.0±3.0	5400	3250
1	300	35	21,5	8,0	1,5	45,0±2,5	0,4	54.3	2,6	53,0+,-3,5	6200	3867
3	35	45	7.4	8.0	1,8	65.0±2.5	0,6	112	3.5	74.5±3.5	7750	2879
3	70	85	10.3	8.0	1,8	70.0±2.5	0,6	122	3,7	80.5±3.5	10500	4244
3	95	90	12.1	8.0	1.8	74.0±2.5	0.6	122	3.6	85.0±3.5	11850	5088
3	120	95	13.6	8.0	2,0	78.0±2.5	0,6	122	3.8	88,0±4,0	13000	5403

## Ordering information

New Part number	Old Part number	Description	Sheath Colour	Stock item	EAN No. DNK	EL No.
	804303	RFOU 18/30KV 1x 50/25mm <sup>2</sup> P20/P22	RED	-	7021528043037	-
	804304	RFOU 18/30KV 1x 70/30mm <sup>2</sup> P20/P22	RED	-	7021528043044	-
	804305	RFOU 18/30KV 1x 95/30mm <sup>2</sup> P20/P22	RED	-	7021528043051	-
20099892		RFOU 18/30KV 1x 120/20mm <sup>2</sup> P20/P22	RED	-	7021528043068	-
	804307	RFOU 18/30KV 1x 150/ 30mm <sup>2</sup> P20/P22	RED	-	7021528043075	-
	804308	RFOU 18/30KV 1x 185/ 30mm <sup>2</sup> P20/P22	RED	-	7021528043082	-
	804309	RFOU 18/30KV 1x 240/40mm <sup>2</sup> P20/P22	RED	-	7021528043099	-
20077940		RFOU 18/30KV 1x 300/35mm <sup>2</sup> P20/P22	RED	-	7021528043105	-
	804322	RFOU 18/30KV 3x 35/45mm <sup>2</sup> P20/P22	RED	-	7021528043228	-
	804324	RFOU 18/30KV 3x 70/85mm <sup>2</sup> P20/P22	RED	-	7021528043242	-
	804325	RFOU 18/30KV 3x 95/90mm <sup>2</sup> P20/P22	RED	-	7021528043259	-
	804326	RFOU 18/30KV 3x 120/95mm <sup>2</sup> P20/P22	RED	-	7021528043266	-

## Electrical values power cables

Number of elements	Cross section core, mm <sup>2</sup>	Cross section screen, 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	50	25	STCC	0.391	0.499	0.152	0.182	180	196	7000
1	70	30	STCC	0.270	0.344	0.145	0.174	190	242	9800
1	95	30	STCC	0.195	0.249	0.138	0.165	210	293	13300
1	120	20	STCC	0.154	0.193	0.133	0.160	190	339	16800
1	150	30	STCC	0.126	0.161	0.129	0.154	250	389	21000
1	185	30	STCC	0.097	0.122	0.125	0.149	265	444	25900
1	240	40	STCC	0,0762	0,0972	0.120	0.143	290	522	33600
1	300	35	STCC	0.0607	0.0774	0.115	0.135	270	601	42000
3	35	45	STCC	0.529	0.675	0.141	0.170	160	110	4900
3	70	85	STCC	0.270	0.344	0.126	0.151	190	169	9800
3	95	90	STCC	0.195	0.249	0.117	0.141	180	205	13300
3	120	95	STCC	0.154	0.196	0.115	0.135	230	237	16800

## 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/mm <sup>2</sup>	-20°C



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