

# FlexFlame RFOU 6/10(12)kV P3/P10 Power cable



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

## RFOU 6/10(12) kV

EPR/EPR/TCWB/EVA

NEK TS 606 CodeP3/P10

Operating temperature : 90°C  
Operating Voltage : 6/10(12) kV

### Standards applied

### 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. Meets the MUD resistance requirement in NEK TS 606:2009

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	
Conductor		Tinned stranded and compressed copper (STCC), IEC 60228 class 2
Conductor screen semiconductive		Semiconductive layer (EP-rubber)
Insulation	R	EP-rubber, IEC 60092-360 (EPR)
Insulation screen semiconductive		Semiconductive layer (EP-rubber)
Lay up / Shielding		Cores are laid up together. Cores are identified by Brown, Black or Grey threads under and over the metallic screen on each conductor.
Inner covering	F	Flame retardant and halogen-free thermoset compound
Tape over inner covering		PET tape
Armour/screen	O	Tinned annealed copper wire braid
Tape over armour/screen		PET tape
Outer sheath	U	Flame retardant, halogen-free and mud resistant thermoset compound, SHF2 (IEC 60092-360)
Marking text		E.g. "meter" "year" DRAKA 04 RFOU 6/10(12)KV P3/P10 3 x 95/50 mm <sup>2</sup> IEC 60332-3-22
Manufacturing unit		DRAKA 04 = Draka Industrial Cable, Germany
Outer sheath colour		Red

# FlexFlame RFOU 6/10(12)kV P3/P10 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	16	11	5.2	3.4	1.0	18.5 ±1.0	0.3	12.7	1.6	24.0 ± 1.5	900	420
1	25	11	6.5	3.4	1.0	20.0 ±1.0	0.3	12.7	1.7	25.0 ± 1.5	1100	516
1	35	11	7.4	3.4	1.0	21.0 ± 1.5	0.3	12.7	1.7	26.0 ± 1.5	1200	611
1	50	11	8.8	3.4	1.0	22.0 ± 1.0	0.3	12.7	1.9	28.0 ± 1.5	1450	780
1	70	16	10.3	3.4	1.0	23.5 ±1.5	0.3	17.8	1.9	30.0 ± 2.0	1700	971
1	95	16	12.1	3.4	1.2	25.5 ±1.5	0.3	20.4	2.0	32.0 ± 2.0	2100	1251
1	120	20	13.6	3.4	1.2	27.5 ± 1.5	0.3	22.9	2.0	34.0 ± 2.0	2350	1506
1	150	19	15.1	3.4	1.2	28.5 ±1.5	0.3	20.4	2.0	35.0 ± 2.0	2600	1793
1	185	18	16.8	3.4	1.2	30.5 ±1.5	0.3	20.4	2.1	36.5 ± 2.0	3100	2138
1	240	21	19.1	3.4	1.2	33.0 ± 1.5	0.3	22.9	2.1	39.0 ± 2.0	3800	2702
1	300	29	21.5	3.4	1.2	35 ±1.5	0.3	30.5	2.2	41.5 ± 2.5	4600	3395
1	400	35	24.5	3.4	1.2	36 ±1.5	0.4	40.7	2.3	45.5 ± 2.5	5900	4536
1	500	40	27.5	3.4	1.4	41.5 ± 2.0	0.4	49.8	2.5	49.5 ± 2.5	7350	5782
1	630	40	32.3	3.4	1.4	46.5 ± 2.0	0.4	49.8	2.7	54.5 ± 3.0	8750	7016
3	16	32	5.2	3.4	1.4	39.0 ± 1.5	0.4	36.2	2.4	46.0 ± 2.5	3300	1145
3	25	31	6.5	3.4	1.4	42.0 ± 1.5	0.4	31	2.4	49.5 ± 2.5	3800	1465
3	35	35	7.4	3.4	1.4	43.5 ± 2.0	0.4	35	2.5	51.5 ± 3.0	4300	1573
3	50	31	8.8	3.4	1.6	47.0 ± 2.0	0.4	31	2.8	55 ± 3	5000	2124
3	70	35	10.3	3.4	1.6	50.0 ± 2.0	0.4	40.7	2.8	58.5 ± 3	6000	2880
3	95	50	12.1	3.4	1.6	54.0 ± 2.0	0.4	54.3	2.8	62.5 ± 3.0	7500	3975
3	120	60	13.6	3.4	1.6	57.5 ± 2.0	0.5	70.7	3	66.5 ± 3.0	8350	4650
3	150	75	15.1	3.4	1.6	60 ± 2	0.6	86.5	3.2	70.5 ± 3	9800	5634
3	185	45	16.8	3.4	1.6	64.5 ± 2.5	0.5	56.5	3.3	74.0 ± 3.5	11300	6511
3	240	53	19.1	3.4	1.6	69.5 ± 2.5	0.5	63.6	3.5	79.5 ± 3.5	13300	8609
3	300	55	21.5	3.4	1.6	74.5 ± 3.0	0.5	70.7	3.7	85.0 ± 4.0	16300	10725

## Ordering information

New Part number	Old Part number	Description	Sheath Colour	Stock item	EAN No. DNK	EL No.
	804000	RFOU 6/10KV 1X 16/11mm <sup>2</sup> P3/P10	RED	-	7021528040005	1061020
	804001	RFOU 6/10KV 1X 25/11mm <sup>2</sup> P3/P10	RED	-	7021528040012	1061021
	804002	RFOU 6/10KV 1X 35/11mm <sup>2</sup> P3/P10	RED	-	7021528040029	1061000
20080191		RFOU 6/10KV 1X 50/11mm <sup>2</sup> P3/P10	RED	Yes	7021528040036	1061001
20113313		RFOU 6/10KV 1X 70/16mm <sup>2</sup> P3/P10	RED	Yes	7021528040043	1061002
	804005	RFOU 6/10KV 1X 95/16mm <sup>2</sup> P3/P10	RED	-	7021528040050	1061003
20076157		RFOU 6/10KV 1X 120/20mm <sup>2</sup> P3/P10	RED	Yes	7021528040067	1061004

Subject to change without prior notice

# FlexFlame RFOU 6/10(12)kV P3/P10 Power cable

New Part number	Old Part number	Description	Sheath Colour	Stock item	EAN No. DNK	EL No.
	804007	RFOU 6/10KV 1X 150/19mm <sup>2</sup> P3/P10	RED	-	7021528040074	1061005
20098204		RFOU 6/10KV 1X185/18mm <sup>2</sup> P3/P10	RED	-	7021528040081	1061006
20077819		RFOU 6/10KV 1X 240/21mm <sup>2</sup> P3/P10	RED	-	7021528040098	1061007
20076156		RFOU 6/10KV 1X 300/29mm <sup>2</sup> P3/P10	RED	-	7021528040104	1061008
	804011	RFOU 6/10KV 1X 400/35mm <sup>2</sup> P3/P10	RED	-	7021528040111	1061022
	804012	RFOU 6/10KV 1X 500/40mm <sup>2</sup> P3/P10	RED	-	7021528040128	1061023
	804013	RFOU 6/10KV 1X 630/40mm <sup>2</sup> P3/P10	RED	-	7021528040135	1061024
	804020	RFOU 6/10KV 3X 16/32mm <sup>2</sup> P3/P10	RED	-	7021528040203	1061009
	804021	RFOU 6/10KV 3X 25/31mm <sup>2</sup> P3/P10	RED	-	7021528040210	1061010
	804022	RFOU 6/10KV 3X 35/35mm <sup>2</sup> P3/P10	RED	-	7021528040227	1061011
	804023	RFOU 6/10KV 3X 50/31mm <sup>2</sup> P3/P10	RED	-	7021528040234	1061012
20076430		RFOU 6/10KV 3X 70/35mm <sup>2</sup> P3/P10	RED	-	7021528040241	1061013
20076152		RFOU 6/10KV 3X 95/50mm <sup>2</sup> P3/P10	RED	-	7021528040258	1061014
20086406		RFOU 6/10KV 3X 120/60mm <sup>2</sup> P3/P10	RED	-	7021528040265	1061015
20076162		RFOU 6/10KV 3X 150/75mm <sup>2</sup> P3/P10	RED	-	7021528040272	1061016
20077823		RFOU 6/10KV 3X 185/45mm <sup>2</sup> P3/P10	RED	-	7021528040289	1061017
	804029	RFOU 6/10KV 3X 240/53mm <sup>2</sup> P3/P10	RED	-	7021528040296	1061018
	804030	RFOU 6/10KV 3X 300/55mm <sup>2</sup> P3/P10	RED	-	7021528040302	1061019

## 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	Capacitans per phase, nF/km	Current rating IEC 60092-352 Table B.4, Ampere	Short circuit rating 1 second, Ampere
1	16	11	STCC	1.16	1.48	0.154	0.185	220	96	2240
1	25	11	STCC	0.734	0.936	0.144	0.173	250	127	3500
1	35	11	STCC	0.529	0.675	0.138	0.166	270	157	4900
1	50	11	STCC	0.391	0.499	0.132	0.158	300	196	7000
1	70	16	STCC	0.270	0.344	0.125	0.150	340	242	9800
1	95	16	STCC	0.195	0.249	0.119	0.142	380	293	13300
1	120	20	STCC	0.154	0.196	0.116	0.139	410	339	16800
1	150	19	STCC	0.126	0.161	0.111	0.133	450	389	21000
1	185	18	STCC	0.100	0.128	0.108	0.130	480	444	25900
1	240	21	STCC	0.0762	0.0972	0.104	0.125	540	522	33600
1	300	29	STCC	0.0607	0.0774	0.104	0.124	590	601	42000
1	400	35	STCC	0.0475	0.0606	0.090	0.118	660	690 dc / 670 ac	56000
1	500	40	STCC	0.0369	0.0471	0.097	0.117	720	780 dc / 720 ac	70000
1	630	40	STCC	0.0286	0.0365	0.092	0.110	840	890 dc / 780 ac	88200
3	16	32	STCC	1.16	1.48	0.119	0.143	220	67	2240
3	25	31	STCC	0.734	0.936	0.119	0.143	250	89	3500
3	35	35	STCC	0.529	0.675	0.114	0.137	270	110	4900
3	50	31	STCC	0.391	0.499	0.108	0.130	300	137	7000
3	70	35	STCC	0.270	0.344	0.103	0.124	340	169	9800
3	95	50	STCC	0.195	0.249	0.098	0.118	380	205	13300
3	120	60	STCC	0.154	0.196	0.095	0.114	410	237	16800
3	150	75	STCC	0.126	0.161	0.092	0.111	450	272	21000
3	185	45	STCC	0.100	0.128	0.092	0.111	480	311	25900
3	240	53	STCC	0.0762	0.0972	0.087	0.104	540	365	33600
3	300	55	STCC	0.0607	0.0774	0.084	0.101	590	421	42000

Subject to change without prior notice

# FlexFlame RFOU 6/10(12)kV P3/P10 Power cable

## 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