

Halogen-free, mud resistant MV power cable, RFOU 6/10(12)kV, P3/P10

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 ² IEC 60332-3-22
Manufacturing unit		DRAKA 04 = Draka Industrial Cable, Germany
Outer sheath colour		Red

Range and dimensions

Number of elements	Cross section core, mm ²	Electrical Cross section braid, mm ²	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 ²	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 ² P3/P10	RED	-	7021528040005	1061020
	804001	RFOU 6/10KV 1X 25/11mm ² P3/P10	RED	-	7021528040012	1061021
	804002	RFOU 6/10KV 1X 35/11mm ² P3/P10	RED	-	7021528040029	1061000
20080191		RFOU 6/10KV 1X 50/11mm ² P3/P10	RED	Yes	7021528040036	1061001
20113313		RFOU 6/10KV 1X 70/16mm ² P3/P10	RED	Yes	7021528040043	1061002
	804005	RFOU 6/10KV 1X 95/16mm ² P3/P10	RED	-	7021528040050	1061003
20076157		RFOU 6/10KV 1X 120/20mm ² P3/P10	RED	Yes	7021528040067	1061004
	804007	RFOU 6/10KV 1X 150/19mm ² P3/P10	RED	-	7021528040074	1061005
20098204		RFOU 6/10KV 1X185/18mm ² P3/P10	RED	-	7021528040081	1061006
20077819		RFOU 6/10KV 1X 240/21mm ² P3/P10	RED	-	7021528040098	1061007
20076156		RFOU 6/10KV 1X 300/29mm ² P3/P10	RED	-	7021528040104	1061008
	804011	RFOU 6/10KV 1X 400/35mm ² P3/P10	RED	-	7021528040111	1061022
	804012	RFOU 6/10KV 1X 500/40mm ² P3/P10	RED	-	7021528040128	1061023

New Part number	Old Part number	Description	Sheath Colour	Stock item	EAN No. DNK	EL No.
	804013	RFOU 6/10KV 1X 630/40mm ² P3/P10	RED	-	7021528040135	1061024
	804020	RFOU 6/10KV 3X 16/32mm ² P3/P10	RED	-	7021528040203	1061009
	804021	RFOU 6/10KV 3X 25/31mm ² P3/P10	RED	-	7021528040210	1061010
	804022	RFOU 6/10KV 3X 35/35mm ² P3/P10	RED	-	7021528040227	1061011
	804023	RFOU 6/10KV 3X 50/31mm ² P3/P10	RED	-	7021528040234	1061012
20076430		RFOU 6/10KV 3X 70/35mm ² P3/P10	RED	-	7021528040241	1061013
20076152		RFOU 6/10KV 3X 95/50mm ² P3/P10	RED	-	7021528040258	1061014
20086406		RFOU 6/10KV 3X 120/60mm ² P3/P10	RED	-	7021528040265	1061015
20076162		RFOU 6/10KV 3X 150/75mm ² P3/P10	RED	-	7021528040272	1061016
20077823		RFOU 6/10KV 3X 185/45mm ² P3/P10	RED	-	7021528040289	1061017
	804029	RFOU 6/10KV 3X 240/53mm ² P3/P10	RED	-	7021528040296	1061018
	804030	RFOU 6/10KV 3X 300/55mm ² P3/P10	RED	-	7021528040302	1061019

Electrical values power cables

Number of elements	Cross section core, mm ²	Electrical Cross section braid, mm ²	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	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

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 ²	-20°C