

Halogen-free, mud resistant MV power cable, RFOU 12/20(24)kV, P19/P21

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

RFOU 12/20(24) kV

EPR/EPR/TCWB/EVA

NEK TS 606 CodeP19/P21



Operating temperature : 90°C
Operating Voltage : 12/20(24) 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 12/20(24)KV P19/P21 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	13	5.2	5.5	1.0	22.5 ±1.0	0.3	15.3	1.6	28 ± 1.5	1200	495
1	25	13	6.5	5.5	1.0	24 ±1.0	0.3	15.3	1.7	29.5 ± 1.5	1300	561
1	35	13	7.4	5.5	1.2	25 ±1.5	0.3	15.3	1.8	31 ± 2	1450	671
1	50	15	8.8	5.5	1.2	26.5 ±1.5	0.3	17.8	2.0	32.5 ± 2	1700	811
1	70	13	10.3	5.5	1.2	28 ± 1.5	0.3	15.3	2.1	34 ± 2.0	2000	1001
1	95	17	12.1	5.5	1.2	30 ±1.5	0.3	20.4	2.1	36 ± 2	2400	1210
1	120	15	13.6	5.5	1.3	31.5 ±1.5	0.3	17.8	2.1	38 ± 2	2650	1491
1	150	15	15.1	5.5	1.3	33 ±1.5	0.3	17.8	2.2	40 ± 2.5	3000	1835
1	185	18	16.8	5.5	1.4	35 ±1.5	0.3	20.4	2.2	41.5 ± 2.5	3500	2201
1	240	23	19.1	5.5	1.4	37.5 ±1.5	0.3	25.4	2.4	45.0 ± 2.5	4350	2915
1	300	28	21.5	5.5	1.4	41.0 ±2.0	0.3	30.5	2.6	47.0 ± 3.0	5200	3640
1	400	35	35.0	5.5	1.5	44.8 ±2.0	0.3	40.0	2.6	51.5 ± 3.0	6500	4400
3	16	31	5.2	5.5	1.4	48 ± 2.0	0.4	36.2	2.6	55.5 ± 3.0	9300	4112
3	25	35	6.5	5.5	1.4	51 ± 2.0	0.4	40.7	2.7	58.5 ± 3.0	4950	1558
3	35	35	7.4	5.5	1.4	53 ± 2.0	0.4	40.7	2.8	61 ± 3.0	5500	1885
3	50	35	8.8	5.5	1.8	57.0 ± 2.0	0.4	40.7	3.0	65.5 ± 3.5	6500	2276
3	70	35	10.3	5.5	1.8	60 ± 2.5	0.4	40.7	3.1	68.5 ± 3.5	7500	2979
3	95	50	12.1	5.5	2.0	64.5 ± 3.0	0.5	56.5	3.3	73.5 ± 4.0	9300	4112
3	120	60	13.6	5.5	2.0	67.5 ± 3.0	0.5	70.7	3.4	77 ± 4.0	10250	4761
3	150	75	15.1	5.5	2.0	71.0 ± 3.0	0.5	91.9	3.5	80.0 ± 4.5	11700	5822
3	185	45	16.8	5.5	2.0	75.0 ± 3.5	0.5	56.5	3.7	85.0 ± 4.5	12950	6615
3	240	55	19.1	5.5	2.2	79.5 ± 3.5	0.5	70.7	3.9	90.0 ± 4.5	15900	8797

Ordering information

New Part number	Old Part number	Description	Sheath Colour	Stock item	EAN No. DNK	EL No.
	804100	RFOU 12/20KV 1X 16/13mm ² P19/P21	RED	-	7021528041002	-
	804101	RFOU 12/20KV 1X 25/13mm ² P19/P21	RED	-	7021528041019	-
	804102	RFOU 12/20KV 1X 35/13mm ² P19/P21	RED	-	7021528041026	-
	804103	RFOU 12/20KV 1X 50/15mm ² P19/P21	RED	-	7021528041033	-
20076155		RFOU 12/20KV 1X 70/13mm ² P19/P21	RED	-	7021528041040	-
20076158		RFOU 12/20KV 1X 95/17mm ² P19/P21	RED	-	7021528041057	-
	804106	RFOU 12/20KV 1X120/15mm ² P19/P21	RED	-	7021528041064	-
20099891		RFOU 12/20KV 1X150/15mm ² P19/P21	RED	Yes	7021528041071	1061035
20092205		RFOU 12/20KV 1X185/18mm ² P19/P21	RED	-	7021528041088	-
20077821		RFOU 12/20KV 1X240/23mm ² P19/P21	RED	-	7021528041095	-
20076160		RFOU 12/20KV 1X300/28mm ² P19/P21	RED	Yes	7021528041101	1061038
	804111	RFOU 12/20KV 1X400/35mm ² P19/P21	RED	-	7021528041118	-
	804120	RFOU 12/20KV 3X 16/31mm ² P19/P21	RED	-	7021528041200	-
	804121	RFOU 12/20KV 3X 25/35mm ² P19/P21	RED	-	7021528041217	-
	804122	RFOU 12/20KV 3X 35/35mm ² P19/P21	RED	-	7021528041224	-
	804123	RFOU 12/20KV 3X 50/35mm ² P19/P21	RED	-	7021528041231	-
	804124	RFOU 12/20KV 3X 70/35mm ² P19/P21	RED	-	7021528041248	-
	804125	RFOU 12/20KV 3X 95/50mm ² P19/P21	RED	-	7021528041255	-
	804126	RFOU 12/20KV 3X120/60mm ² P19/P21	RED	-	7021528041262	-
	804127	RFOU 12/20KV 3X150/75mm ² P19/P21	RED	-	7021528041279	-
20077822		RFOU 12/20kV 3X 185/45mm ² P19/P21	RED	-	7021528041286	-
	804129	RFOU 12/20KV 3X240/55mm ² P19/P21	RED	-	7021528041293	-

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	13	STCC	1.16	1.479	0.164	0.197	170	96	2240
1	25	13	STCC	0.734	0.936	0.154	0.185	190	127	3500
1	35	13	STCC	0.529	0.675	0.149	0.178	200	157	4900
1	50	15	STCC	0.391	0.499	0.140	0.169	220	196	7000
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
1	400	35	STCC	0,0475	0,0606	0.105	0.126	490	690 dc / 670 ac	56000
3	16	31	STCC	1.16	1.48	0.143	0.172	170	67	2240
3	25	35	STCC	0.734	0.936	0.133	0.160	190	89	3500
3	35	35	STCC	0.529	0.675	0.128	0.153	200	110	4900
3	50	35	STCC	0.391	0.499	0.121	0.145	220	137	7000
3	70	35	STCC	0.270	0.344	0.115	0.135	250	169	9800
3	95	50	STCC	0.195	0.249	0.109	0.131	270	205	13300
3	120	60	STCC	0.154	0.196	0.105	0.126	300	237	16800
3	150	75	STCC	0.126	0.161	0.102	0.122	320	272	21000
3	185	45	STCC	0.100	0.128	0.099	0.118	340	311	25900
3	240	55	STCC	0.0762	0.0972	0.095	0.114	380	365	33600

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