

## FlexFlame RFOU-FR 6/10(12)kV P121 Fire Resistant



**Fire Resistant halogen-free medium voltage (MV) cable. Mud resistant**

# RFOU-FR 6/10(12) kV

**EPR/HBC/TCWB/EVA**

**NEK TS 606:2016 Code P121**

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

Drawing for indication only

### 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 606:2016.

IEC 60092-354	- Design
IEC 60228 class 2	- Conductor
IEC 60092-360	- Insulation
IEC 60092-360	- Sheath
IEC 60331-21 (830°C / 2 hours)	- Fire Resistant
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, IEC 60228 class 2
<b>Conductor screen semiconductive</b>		Semi-conductive layer (EP-rubber)
<b>Insulation</b>	<b>R</b>	EP-rubber, IEC 60092-360 (EPR)
<b>Insulation screen semiconductive</b>		Semi-conductive layer (EP-rubber) Semi-conductive tape
<b>Metallic screen</b>		Tinned copper wire braid
<b>Tape over screen</b>		PET tape + Fire Resistant tape
<b>Lay up</b>		Single core cables
<b>Inner covering</b>	<b>F</b>	Flame retardant and halogenfree extruded compound
<b>Tape over inner covering</b>		PET tape
<b>Armour</b>	<b>O</b>	Tinned annealed copper wire braid
<b>Tape over armour</b>		PET tape + Fire Resistant tape
<b>Heat Block Barrier</b>		Extruded Heat Block Compound
<b>Tape over Heat Block Barrier</b>		Fire Resistant tape
<b>Outer sheath</b>	<b>U</b>	Flame retardant, halogen-free and mud resistant thermoset compound, SHF2 (IEC 60092-360)

Subject to change without prior notice

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<b>Marking text (example)</b>	"meter" "year/week" DRAKA 01 Part no. <SAP-code> RFOU-FR 6/10(12)KV P121 1 x 120/16 mm <sup>2</sup> IEC 60092-354 IEC 60331-21 (830 DEG. C) IEC 60332-3-22 Production no. <Production order number>
<b>Manufacturing unit</b>	DRAKA 01 = Prysmian Group Norge AS
<b>Outer sheath colour</b>	Red

### Range and dimensions

Number of elements	Cross section core, mm <sup>2</sup>	Electrical Cross section braided armour, 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 braided armour, mm <sup>2</sup>	Thickness of Heat Block Barrier mm	Thickness Outer Sheath, mm	Diameter outer sheath, mm	Weight of Cable Approx. (Kg/Km)	Copper content Approx. (kg/km)
1	95	16	12.1	3.4	1.1	25.5 ± 1	0.30	20.4	5.0	1.9	42 ± 2	3225	1296
1	120	16	13.5	3.4	1.1	27 ± 1	0.30	20.4	5.0	2.0	43.5 ± 2	3465	1417
1	150	16	14.7	3.4	1.2	28.5 ± 1	0.30	22.9	5.0	2.1	45.5 ± 2	3875	1698
1	185	16	16.8	3.4	1.2	30.5 ± 1.5	0.30	22.9	5.0	2.1	47.5 ± 2	4410	2079
1	240	25	19.1	3.4	1.2	32.5 ± 1.5	0.40	36.2	5.0	2.2	50 ± 2.5	5390	2861
1	300	25	21.6	3.4	1.2	35 ± 1.5	0.40	36.2	5.0	2.3	53 ± 2.5	5970	3231

### Ordering information

Part Number	Description	Sheath Colour	Stock item	EAN No. DNK	EL No.
20269620	RFOU-FR 6/10KV 1X 95/16mm <sup>2</sup> P121 RD	RED	-	7021528878592	-
20269621	RFOU-FR 6/10KV 1X 120/16mm <sup>2</sup> P121 RD	RED	-	7021528878608	-
20269622	RFOU-FR 6/10KV 1X 150/16mm <sup>2</sup> P121 RD	RED	-	7021528878615	-
20269623	RFOU-FR 6/10KV 1X185/16mm <sup>2</sup> P121 RD	RED	-	7021528878622	-
20269624	RFOU-FR 6/10KV 1X 240/25mm <sup>2</sup> P121 RD	RED	-	7021528878639	-
20269625	RFOU-FR 6/10KV 1X 300/25mm <sup>2</sup> P121 RD	RED	-	7021528878646	-

### Electrical values power cables

Number of elements	Cross section core, mm <sup>2</sup>	Electrical Cross section braid, mm <sup>2</sup>	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	95	16	0.195	0.249	0,137	0,165	380	293	13300
1	120	16	0.154	0.196	0,133	0,159	410	339	16800
1	150	16	0.126	0.161	0,130	0,156	450	389	21000
1	185	16	0.100	0.128	0,125	0,149	480	444	25900
1	240	25	0.0762	0.0972	0,120	0,144	540	522	33600
1	300	25	0.0607	0.0774	0,116	0,139	590	601	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
18 x D	12 x D	50 N x total cross section (mm <sup>2</sup> ) of conductors	-20°C