# FlexFlame RFOU 8,7/15(17,5)kV P4/P11 Power cable

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

## RFOU 8,7/15(17,5) kV

**EPR/EPR/TCWB/EVA**

**NEK TS 606 CodeP4/P11**

**Operating temperature : 90°C**
**Operating Voltage : 8,7/15(17,5) kV**

**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 |

**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

## 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 semicoductive** | | 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 8,7/15(17,5)KV P4/P11 1 x 300/29 mm2 IEC 60332-3-22 |
| **Manufacturing unit** | | DRAKA 04 = Draka Industrial Cable, Germany |
| **Outer sheath colour** | | Red |

# FlexFlame RFOU 8,7/15(17,5)kV P4/P11 Power cable

## Range and dimensions

| Number of elements | Cross section core, mm² | Electrical Cross section braid, mm² | Conductor Diameter, mm | Insulation Thickness, mm | Thickness Inner covering, mm | Diameter inner covering, mm | Diameter Braid Wire, mm | Mechanical cross-section of the braid, mm² | Thickness Outer Sheath, mm | Diameter outer sheath, mm | Weight of Cable Approx. (Kg/Km) | Copper content Approx. (kg/km) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | |
| 1 | 25 | 20 | 6.5 | 4.5 | 1.0 | 22 ± 1.0 | 0.4 | 35 | 1.8 | 28.0 ± 1.5 | 1370 | 733 |
| 1 | 35 | 20 | 7.4 | 4.5 | 1.0 | 23.0 ± 1.5 | 0.4 | 27.1 | 1.8 | 29.0 ± 1.5 | 1500 | 824 |
| 1 | 50 | 20 | 8.8 | 4.5 | 1.0 | 24.0 ± 1.5 | 0.4 | 27.1 | 1.9 | 30.5 ± 1.5 | 1700 | 978 |
| 1 | 70 | 20 | 10.3 | 4.5 | 1.0 | 26.0 ± 1.5 | 0.4 | 27.1 | 1.9 | 32.0 ± 1.5 | 2000 | 1204 |
| 1 | 95 | 20 | 12.1 | 4.5 | 1.2 | 28.0 ± 1.5 | 0.4 | 31.7 | 2.0 | 34.5 ± 2.0 | 2450 | 1500 |
| 1 | 120 | 20 | 13.6 | 4.5 | 1.2 | 29.5 ± 1.5 | 0.4 | 31.7 | 2.0 | 36.0 ± 2.0 | 2700 | 1766 |
| 1 | 150 | 20 | 15.1 | 4.5 | 1.2 | 31.0 ±1.5 | 0.4 | 31.7 | 2.1 | 38.0 ± 2.0 | 3000 | 1793 |
| 1 | 185 | 20 | 16.8 | 4.5 | 1.2 | 33.0 ± 1.5 | 0.4 | 31.7 | 2.2 | 39.5 ± 2.5 | 3500 | 2424 |
| 1 | 240 | 25 | 19.1 | 4.5 | 1.2 | 35.0 ± 1.5 | 0.4 | 36.2 | 2.3 | 42.0 ±2.5 | 4300 | 2996 |
| 1 | 300 | 29 | 21.5 | 4.5 | 1.2 | 37.5 ±1.5 | 0.4 | 40.7 | 2.4 | 44.5 ± 2.5 | 5000 | 3612 |
| 1 | 400 | 30 | 25.6 | 4.5 | 1.5 | 42 ± 2.0 | 0.4 | 49.8 | 2.6 | 49.5 ± 2.5 | 6250 | 4772 |
| | | | | | | | | | | | | |
| 3 | 25 | 35 | 6.5 | 4.5 | 1.4 | 46.5 ± 2.0 | 0.5 | 35 | 2.7 | 55 ± 3.0 | 4800 | 1864 |
| 3 | 35 | 35 | 7.4 | 4.5 | 1.6 | 49.0 ± 2.0 | 0.5 | 49.5 | 2.8 | 57.5 ± 3.0 | 5400 | 2152 |
| 3 | 50 | 40 | 8.8 | 4.5 | 1.6 | 52.0 ± 2.0 | 0.5 | 56.5 | 2.9 | 61.0 ± 3.0 | 6100 | 2667 |
| 3 | 70 | 40 | 10.3 | 4.5 | 1.6 | 55.5 ± 2.5 | 0.5 | 56.5 | 3.1 | 64.5 ± 3.0 | 7250 | 3344 |
| 3 | 95 | 55 | 12.1 | 4.5 | 1.6 | 59 ± 2.5 | 0.5 | 70.7 | 3.2 | 68.5 ± 3.0 | 8500 | 3998 |
| 3 | 120 | 60 | 13.6 | 4.5 | 1.6 | 62.5 ± 2.5 | 0.5 | 84.8 | 3.4 | 72 ± 3.5 | 9750 | 5166 |
| 3 | 150 | 80 | 15.1 | 4.5 | 1.8 | 66.0 ± 2.5 | 0.6 | 112 | 3.5 | 76.0 ± 3.5 | 11150 | 6321 |
| 3 | 185 | 95 | 16.8 | 4.5 | 1.8 | 69.5 ± 2.5 | 0.6 | 122.1 | 3.7 | 80.0 ± 4.0 | 13200 | 7606 |
| 3 | 240 | 95 | 19.1 | 4.5 | 1.8 | 74.5 ± 3.0 | 0.6 | 122.1 | 3.9 | 85.5 ± 4.0 | 15650 | 9114 |
| 3 | 300 | 95 | 21.5 | 4.5 | 1.8 | 80.0 ± 3.0 | 0.6 | 122.1 | 4.0 | 91.0 ± 4.0 | 17800 | 10420 |
| | | | | | | | | | | | | |

## Ordering information

| New Part number | Old Part number | Description | Sheath Colour | Stock item | EAN No. DNK | EL No. |
|---|---|---|---|---|---|---|
| | | | | | | |
| | 804501 | RFOU 8.7/15KV 1X 25/20mm² P4/P11 | RED | - | 7021528045017 | - |
| | 804502 | RFOU 8.7/15KV 1X 35/20mm² P4/P11 | RED | - | 7021528045024 | - |
| | 804503 | RFOU 8.7/15KV 1X 50/20mm² P4/P11 | RED | - | 7021528045031 | - |
| | 804504 | RFOU 8.7/15KV 1X 70/20mm² P4/P11 | RED | - | 7021528045048 | - |
| | 804505 | RFOU 8.7/15KV 1X 95/20mm² P4/P11 | RED | - | 7021528045055 | - |
| | 804506 | RFOU 8.7/15KV 1X 120/20mm² P4/P11 | RED | - | 7021528045062 | - |
| | 804507 | RFOU 8.7/15KV 1X150/20 P4/P11 | RED | - | 7021528045079 | - |
| | 804508 | RFOU 8.7/15KV 1X 185/20mm² P4/P11 | RED | - | 7021528045086 | - |
| | 804509 | RFOU 8.7/15KV 1X 240/25mm² P4/P11 | RED | - | 7021528045093 | - |
| 20076154 | | RFOU 8.7/15KV 1X 300/29mm² P4/P11 | RED | - | 7021528045109 | - |
| | 804511 | RFOU 8.7/15KV 1X 400/30mm² P4/P11 | RED | - | 7021528045116 | - |
| | | | | | | |
| | 804521 | RFOU 8.7/15KV 3X 25/35mm² P4/P11 | RED | - | 7021528045215 | - |
| | 804522 | RFOU 8.7/15KV 3X 35/35mm² P4/P11 | RED | - | 7021528045222 | - |

**Subject to change without prior notice**

# FlexFlame RFOU 8,7/15(17,5)kV P4/P11 Power cable

| New Part number | Old Part number | Description | Sheath Colour | Stock item | EAN No. DNK | EL No. |
|---|---|---|---|---|---|---|
| | 804523 | RFOU 8.7/15KV 3X 50/40mm² P4/P11 | RED | - | 7021528045239 | - |
| | 804524 | RFOU 8.7/15KV 3X 70/40mm² P4/P11 | RED | - | 7021528045246 | - |
| | 804525 | RFOU 8.7/15KV 3X 95/55mm² P4/P11 | RED | - | 7021528045253 | - |
| | 804526 | RFOU 8.7/15KV 3X 120/60mm² P4/P11 | RED | - | 7021528045260 | - |
| | 804527 | RFOU 8.7/15KV 3X 150/80mm² P4/P11 | RED | - | 7021528045277 | - |
| | 804528 | RFOU 8.7/15KV 3X 185/95mm² P4/P11 | RED | - | 7021528045284 | - |
| | 804529 | RFOU 8.7/15KV 3X 240/95mm² P4/P11 | RED | - | 7021528045291 | - |
| | 804530 | RFOU 8.7/15KV 3X 300/95mm² P4/P11 | RED | - | 7021528045307 | - |
| | | | | | | |

## Electrical values power cables

| Number of elements | Cross section core, mm² | Electrical Cross section braid, mm² | 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 | 25 | 20 | STCC | 0.734 | 0.936 | 0.151 | 0.181 | 210 | 127 | 3500 |
| 1 | 35 | 20 | STCC | 0.529 | 0.675 | 0.145 | 0.174 | 230 | 157 | 4900 |
| 1 | 50 | 20 | STCC | 0.391 | 0.499 | 0.137 | 0.165 | 250 | 196 | 7000 |
| 1 | 70 | 20 | STCC | 0.270 | 0.344 | 0.130 | 0.156 | 280 | 242 | 9800 |
| 1 | 95 | 20 | STCC | 0.195 | 0.249 | 0.125 | 0.150 | 310 | 293 | 13300 |
| 1 | 120 | 20 | STCC | 0.154 | 0.196 | 0.120 | 0.144 | 340 | 339 | 16800 |
| 1 | 150 | 20 | STCC | 0.126 | 0.161 | 0.116 | 0.140 | 370 | 389 | 21000 |
| 1 | 185 | 20 | STCC | 0.100 | 0.128 | 0.113 | 0.135 | 400 | 444 | 25900 |
| 1 | 240 | 25 | STCC | 0.0762 | 0.0972 | 0.109 | 0.130 | 440 | 522 | 33600 |
| 1 | 300 | 29 | STCC | 0.0607 | 0.0774 | 0.105 | 0.126 | 480 | 601 | 42000 |
| 1 | 400 | 30 | STCC | 0.047 | 0.059 | 0.101 | 0.121 | 550 | 690 dc / 670 ac | 56000 |
| | | | | | | | | | | |
| 3 | 25 | 35 | STCC | 0.734 | 0.936 | 0.127 | 0.152 | 210 | 89 | 3500 |
| 3 | 35 | 35 | STCC | 0.529 | 0.675 | 0.122 | 0.146 | 230 | 110 | 4900 |
| 3 | 50 | 40 | STCC | 0.391 | 0.499 | 0.115 | 0.138 | 250 | 137 | 7000 |
| 3 | 70 | 40 | STCC | 0.270 | 0.344 | 0.109 | 0.131 | 280 | 169 | 9800 |
| 3 | 95 | 55 | STCC | 0.195 | 0.249 | 0.104 | 0.125 | 310 | 205 | 13300 |
| 3 | 120 | 60 | STCC | 0.154 | 0.196 | 0.100 | 0.121 | 340 | 237 | 16800 |
| 3 | 150 | 80 | STCC | 0.126 | 0.161 | 0.097 | 0.117 | 370 | 272 | 21000 |
| 3 | 185 | 95 | STCC | 0.100 | 0.128 | 0.097 | 0.117 | 400 | 311 | 25900 |
| 3 | 240 | 95 | STCC | 0.0762 | 0.0972 | 0.091 | 0.109 | 440 | 365 | 33600 |
| 3 | 300 | 95 | STCC | 0.0607 | 0.0774 | 0.088 | 0.106 | 480 | 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 /mm² | -20°C |