# URSUS® MT FO KN PLUS 3,6/6 ÷ 12/20 kV

## (N)TSKCGEWÖU

Based on DIN VDE 0250 Part 813

1 **PHASE CONDUCTORS**
MATERIAL: tinned copper
CONSTRUCTION: class 5 VDE 0295 (IEC 60228)
INSULATION MATERIAL: 3GI3 quality rubber compound, according to VDE 0207 part 20
SEMICONDUCTIVE LAYERS: semiconductive tape over the conductor and inner and outer semiconductive rubber layer on the insulation

2 **EARTH CONDUCTORS**
MATERIAL: tinned copper
CONSTRUCTION: class 5 VDE 0295 (IEC 60228)
COVERING MATERIAL: semiconductive layer

3 **FIBRE OPTICS**
FIBRE: transmission data kind 50/125 multimode, 62,5/125 multimode, 9/125 singlemode
NOMINAL NUM. APERTURE: 250 µm

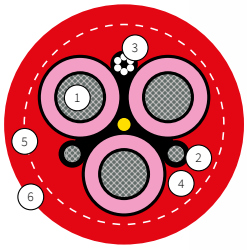
**CENTRAL CRADLE**
MATERIAL: semiconductive compound on Kevlar® element

**CORES ASSEMBLY**
ASSEMBLY: twisted cores with earth conductor split into 2 parts + FO
SEPARATOR ON THE TWISTED ASSEMBLY: semiconductive tape wound on the twisted cores

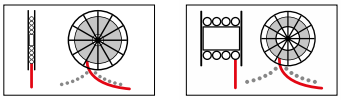
4 **INNER SHEATH**
MATERIAL: Gm1b/5GM5 quality rubber compound, according to VDE 0207 part 21

5 **ANTITWISTING ELEMENT**
MATERIAL: polyester braid between inner and outer sheath

6 **OUTER SHEATH**
MATERIAL: 5GM5 quality rubber compound, according to VDE 0207 part 21
COLOUR: red




**APPLICATION**



Flexible reeling cable with integrated fibre optics wires for high and extreme mechanical stresses, e.g. torsional stress, deflection into different planes and high reeling speed. Also usable for reeling application in underground and opencast mining.



## ELECTRICAL WORKING DATA

| | | | | | |
|---|---|---|---|---|---|
| Nominal rated voltage $U_0$ / U | kV | 3,6/6 | 6/10 | 8,7/15 | 12/20 |
| Test voltage | kV | 11 | 17 | 24 | 29 |
| Max AC voltage | kV | 4,2/7,2 | 6,9/12 | 10,4/18 | 13,9/24 |
| Electrical field control | | Inner and outer semiconductive layers extruded in a single-pass with the insulation | | | |
| Current rating | A | According to VDE 0298 Part 4 | | | |

## THERMAL WORKING DATA

| | | |
|---|---|---|
| Maximum short circuit temperature | °C | 250 |
| Maximum working temp. on the conductor | °C | 90 |
| Minimum ambient temperature | °C | Mobile condition: - 30<br>Static condition: - 50 |

## MECHANICAL WORKING DATA

| | | |
|---|---|---|
| Bending radius | mm | According to VDE 0298 Part 3 |
| Maximum torsional stress | °/m | ± 25 |
| Maximum tensile load | N | See table on pages 48 and 49 |
| Max working speed | m/min | 240 |

## CHEMICAL WORKING DATA

| | |
|---|---|
| Oil resistance | According to IEC 60811-404 |
| Ozone resistance | According to IEC 60811-403 |
| Burning behaviour | According to IEC 60332-1-2 |
| UV resistance | According to ISO 4892-2 |



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| VOLTAGE | CORES X CROSS SECTION | CONDUCTOR Ø | MIN OVERALL Ø | MAX OVERALL Ø | APPROX WEIGHT | MAX TENSILE LOAD |
|---|---|---|---|---|---|---|
| kV | Nr x mm² | mm | mm | mm | kg/km | N |
| 3,6/6 | 3x25 + 2x25/2 + FO | 6,9 | 42,9 | 44,6 | 2930 | 6250 |
| 3,6/6 | 3x35 + 2x25/2 + FO | 7,8 | 46,2 | 47,9 | 3490 | 7150 |
| 3,6/6 | 3x50 + 2x25/2 + FO | 9,3 | 49,4 | 51,2 | 4170 | 8500 |
| 3,6/6 | 3x70 + 2x35/2 + FO | 11,1 | 53,2 | 55,3 | 5190 | 10300 |
| 3,6/6 | 3x95 + 2x50/2 + FO | 12,7 | 59,3 | 61,4 | 6460 | 12550 |
| 3,6/6 | 3x120 + 2x70/2 + FO | 14,5 | 63,1 | 65,5 | 7740 | 14800 |
| 3,6/6 | 3x150 + 2x70/2 + FO | 16,7 | 69,6 | 72,1 | 9340 | 17500 |
| 6/10 | 3x25 + 2x25/2 + FO | 6,9 | 42,9 | 44,6 | 2930 | 6250 |
| 6/10 | 3x35 + 2x25/2 + FO | 7,8 | 46,2 | 47,9 | 3490 | 7150 |
| 6/10 | 3x50 + 2x25/2 + FO | 9,3 | 49,4 | 51,2 | 4170 | 8500 |
| 6/10 | 3x70 + 2x35/2 + FO | 11,1 | 53,2 | 55,3 | 5190 | 10300 |
| 6/10 | 3x95 + 2x50/2 + FO | 12,7 | 59,3 | 61,4 | 6520 | 12550 |
| 6/10 | 3x120 + 2x70/2 + FO | 14,5 | 63,1 | 65,5 | 7800 | 14800 |
| 6/10 | 3x150 + 2x70/2 + FO | 16,7 | 69,6 | 72,1 | 9400 | 17500 |



| VOLTAGE | CORES X CROSS SECTION | CONDUCTOR Ø | MIN OVERALL Ø | MAX OVERALL Ø | APPROX WEIGHT | MAX TENSILE LOAD |
|---|---|---|---|---|---|---|
| kV | Nr x mm² | mm | mm | mm | kg/km | N |
| 8,7/15 | 3x25 + 2x25/2 + FO | 6,9 | 47,7 | 49,4 | 3450 | 6250 |
| 8,7/15 | 3x35 + 2x25/2 + FO | 7,8 | 49,6 | 51,7 | 3900 | 7150 |
| 8,7/15 | 3x50 + 2x25/2 + FO | 9,3 | 52,8 | 54,9 | 4580 | 8500 |
| 8,7/15 | 3x70 + 2x35/2 + FO | 11,1 | 58,5 | 60,6 | 5870 | 10300 |
| 8,7/15 | 3x95 + 2x50/2 + FO | 12,7 | 61,8 | 64,2 | 6820 | 12550 |
| 8,7/15 | 3x120 + 2x70/2 + FO | 14,5 | 67,5 | 69,9 | 8380 | 14800 |
| 12/20 | 3x25 + 2x25/2 + FO | 6,9 | 50,2 | 52,3 | 3730 | 6250 |
| 12/20 | 3x35 + 2x25/2 + FO | 7,8 | 52,3 | 54,4 | 4190 | 7150 |
| 12/20 | 3x50 + 2x25/2 + FO | 9,3 | 57,2 | 59,3 | 5110 | 8500 |
| 12/20 | 3x70 + 2x35/2 + FO | 11,1 | 61 | 63,4 | 6220 | 10300 |
| 12/20 | 3x95 + 2x50/2 + FO | 12,7 | 64,4 | 66,8 | 7190 | 12550 |
| 12/20 | 3x120 + 2x70/2 + FO | 14,5 | 70,1 | 72,6 | 8820 | 14800 |

