# TENAX-SAS (N)TSCGEWOEU 3,6/6KV

## MV cable for trailing applications cold flexible to -50°C



As power supply cable to large mobile equipment in mines. Trailing cable for use with shovels and draglines in trailing and reeling applications. The outer sheath is extremly robust and tough against abrasion and tearing, fully flexible operation down to -50°C,

## STANDARDS / APPROVALS

| | |
|---|---|
| **Based on DIN VDE 0250-813** | General |
| **GOST -R/-K/-B Fire Certificate of Russian Federation** | Certifications / Approvals |
| **DIN EN 60228/ IEC 60228 / VDE 0295** | Conductor |
| **DIN VDE 0207-21** | Compound |
| **DIN EN 60332-1-2 / IEC 60332-1-2** | Fire performance |
| **DIN VDE 0298-4** | Electrical parameters |
| **DIN EN 60811-404 / IEC 60811-404** | Chemical behaviour |

## CABLE DESIGN

| | |
|---|---|
| Conductor | Finely stranded copper, tinned, class 5<br>PE: Finely stranded copper, tinned, class 5 with semi conductive special rubber compound |
| Inner semi-conducting layer | Yes |
| - | Semi-conductive EPR |
| Core insulation material | EPR rubber |
| - | Special compound 3GI3 |
| Outer semi-conducting layer | Yes |
| - | Semi-conductive NBR easy-strip |
| Pilot conductor | Copper, tinned cl.5; EPR-insulation |
| Core arrangement | Cores laid up around conductive central support element with aramid rope in the centre |
| Material inner sheath | EPR rubber |
| - | Special compound 5GM3 |
| Material outer sheath | Rubber |
| - | Special compound > 5GM3 |

## ELECTRICAL PARAMETERS

| | |
|---|---|
| Rated voltage U0/U (Um) | 3.6/6 (7.2) kV |
| Test voltage [kV] | 11 |
| Nominal voltage U [V] | 6,000 |

FEICHUN SPECIAL CABLES
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## THERMAL PARAMETERS

| | |
|---|---|
| Max. conductor temperature [°C] | 90 |
| Max. conductor temperature at short circuit [°C] | 250 |
| Ambient temperature fix installation (min) [°C] | -50 |
| Ambient temperature fix installation (max) [°C] | 80 |
| Ambient temperature flexible installation (min) [°C] | -50 |
| Ambient temperature flexible installation (max) [°C] | 60 |

## CHEMICAL PARAMETERS

| | |
|---|---|
| Flame retardant | In accordance with EN/IEC 60332-1-2 |
| Oil resistant | Yes |
| Ozone resistance | Yes |
| Resistant to UV | Yes |

## MECHANICAL PARAMETERS

| | |
|---|---|
| Torsional stress +/- [°/m] | 100 |
| Permanent tensile strength (rule) | 25 N/mm² |
| Bending radius (rule) | Acc. to VDE 0298-3:<br>6 X D fixed installation<br>10 X D flexible operation<br>20 X D min distance with S-type directional changes |

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## CABLE PROPERTIES

| Basic construction | | Diameter conductor [mm] | Cable diameter (min) [mm] | Cable diameter (max) [mm] | Cable weight [kg/km] |
|---|---|---|---|---|---|
| 3x16+2x10+1x10 | | 5 | 41 | 45 | 2,270 |
| 3x16+2x16+1x16 | | 5 | 40.5 | 44.5 | 2,469 |
| 3x25+2x16+1x16 | | 6.2 | 43.5 | 47.5 | 2,790 |
| 3x35+2x25+1x25 | | 7.5 | 46.5 | 50 | 3,580 |
| 3x50+2x25+1x25 | | 9 | 49.5 | 54 | 3,900 |
| 3x70+2x25+1x25 | | 10.6 | 55 | 59.5 | 5,020 |
| 3x95+2x25+1x16 | | 12.6 | 58.5 | 63 | 5,860 |
| 3X95+3X50/3 | | 12.6 | 58.5 | 63 | 5,800 |
| 3x120+2x35+1x16 | | 14.8 | 65.5 | 70 | 7,410 |
| 3x150+2x35+1x16 | | 16 | 69.8 | 73.4 | 8,456 |
| 3x185+2x50+1x16 | | 17.7 | 72.7 | 77.2 | 9,955 |
| 3x240+2x70+1x16 | | 20.3 | 80.1 | 84.6 | 12,618 |
| 3x300+2x95+1x16 | | 31.3 | 84 | 89 | 15,075 |



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## CABLE PROPERTIES ELECTRIC / MECHANICAL

| Basic construction | | Max. tensile strength [N] | Nominal operation capacitance [nF/km] | Operation self inductance [mH/km] | Conductor resistance at 20° C [Ohm/km] | Current carrying capacity [A] |
|---|---|---|---|---|---|---|
| 3x16+2x10+1x10 | | 1,200 | 200 | 0.39 | 1.24 | 99 |
| 3x16+2x16+1x16 | | 1,200 | 200 | 0.39 | 1.24 | 99 |
| 3x25+2x16+1x16 | | 1,875 | 230 | 0.36 | 0.795 | 131 |
| 3x35+2x25+1x25 | | 2,625 | 260 | 0.34 | 0.565 | 162 |
| 3x50+2x25+1x25 | | 3,750 | 290 | 0.32 | 0.393 | 202 |
| 3x70+2x25+1x25 | | 5,250 | 340 | 0.3 | 0.277 | 250 |
| 3x95+2x25+1x16 | | 7,125 | 370 | 0.29 | 0.21 | 301 |
| 3X95+3X50/3 | | 7,125 | 370 | 0.29 | 0.21 | 301 |
| 3x120+2x35+1x16 | | 9,000 | 410 | 0.28 | 0.164 | 352 |
| 3x150+2x35+1x16 | | 11,250 | 440 | 0.27 | 0.132 | 404 |
| 3x185+2x50+1x16 | | 13,875 | 480 | 0.27 | 0.108 | 461 |
| 3x240+2x70+1x16 | | 18,000 | 540 | 0.26 | 0.0817 | 540 |
| 3x300+2x95+1x16 | | 22,500 | 780 | 0.24 | 0.0654 | 620 |

Current carrying capacity acc. VDE 0298-4, Tab. 15, on a surface at 30°C ambient temperature.

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