

# Rubber insulated wire NSGAFOEU



**Application:** This wire is designed for use in dry rooms, buses and rail-borne vehicles. It is considered to be short circuit-proof and earth leakage-proof when used in switching appliances and distributors of up to 1 kV. It is flame-retardant and resistant to most oils.

## Construction and technical data:

|   |                                |
|---|--------------------------------|
| <b>CPR-classification according to EN 50575:</b>        | Eca                            |
| <b>Standard:</b>  | VDE 0250 T. 602                |
| <b>Conductor material:</b>                              | tinned copper                  |
| <b>Conductor construction:</b>                          | Class 5 = flexible             |
| <b>Insulation:</b>                                      | rubber (EPR) 3GI3              |
| <b>Sheathing material:</b>                              | rubber (CR) 5GM3               |
| <b>Flame-retardant:</b>                                 | VDE 0482-332-1-2/IEC 60332-1-2 |
| <b>UV-resistant:</b>                                    | yes, only black version        |
| <b>Oil-resistant:</b>                                   | yes                            |
| <b>Ozone-resistant:</b>                                 | yes                            |
| <b>Max. temperature at conductor, °C:</b>               | 90 °C                          |
| <b>Max. short circuit temperature at conductor, °C:</b> | 250 °C                         |
| <b>Permitted outer cable temperature, fixed, °C:</b>    | -40 - +80 °C                   |
| <b>Permitted outer cable temperature, moved, °C:</b>    | -25 - +80 °C                   |
| <b>Bending radius, fixed installation:</b>              | 6 x Ø                          |
| <b>Bending radius, moving application:</b>              | 10 x Ø                         |



*The products and information presented here are for technical calculation only. They are subject to technical progress and in no way represent the ability of shipment. Outer diameters are approximately.*

## NSGAFOEU 1.8/3 kV

|  |        |
|--|--------|
| <b>Colour of outer sheath:</b>                                     | black  |
| <b>Nominal voltage U<sub>o</sub>:</b>                              | 1.8 kV |
| <b>Nominal voltage U:</b>  | 3 kV   |
| <b>Maximum permitted operating voltage in three-phase systems:</b> | 3.6 kV |
| <b>Test voltage:</b>   | 6 kV   |

| part no. | part name | DI [mm] | RI [Ohm/km] | I <sub>bl</sub> [A] | I <sub>k</sub> [kA] | Ø [mm] | Ev [kWh/m] | Fzv [N] | Cu [kg/km] | G [kg] |
|----------|-----------|---------|-------------|---------------------|---------------------|--------|------------|---------|------------|--------|
| 050194   | 1X1.5     | 1.8     | 13.7        | 30                  | 0.183               | 5.5    | 0.25       | 23      | 14,4       | 60     |
| 050178   | 1X2.5     | 2.4     | 8.21        | 41                  | 0.305               | 6.2    | 0.28       | 38      | 24         | 70     |
| 050159   | 1X4       | 3       | 5.09        | 55                  | 0.488               | 6.7    | 0.32       | 60      | 38         | 90     |
| 050165   | 1X6       | 3.9     | 3.39        | 70                  | 0.732               | 7.2    | 0.35       | 90      | 58         | 120    |
| 050172   | 1X10      | 5.1     | 1.95        | 98                  | 1.22                | 8.7    | 0.5        | 150     | 96         | 180    |
| 050183   | 1X16      | 6.3     | 1.24        | 132                 | 1.95                | 10     | 0.65       | 240     | 154        | 250    |
| 050184   | 1X25      | 7.8     | 0.795       | 176                 | 3.05                | 12     | 0.9        | 375     | 240        | 390    |
| 050163   | 1X35      | 9.2     | 0.565       | 218                 | 4.27                | 13     | 1          | 525     | 336        | 470    |
| 050164   | 1X50      | 11      | 0.393       | 276                 | 6.1                 | 15     | 1.1        | 750     | 480        | 625    |
| 050182   | 1X70      | 13.1    | 0.277       | 347                 | 8.54                | 17     | 1.3        | 1050    | 672        | 880    |
| 050208   | 1X95      | 15.1    | 0.21        | 416                 | 11.6                | 19.5   | 1.7        | 1425    | 912        | 1190   |
| 050244   | 1X120     | 17      | 0.164       | 488                 | 14.6                | 21     | 1.9        | 1800    | 1152       | 1430   |
| 050241   | 1X150     | 19      | 0.132       | 566                 | 18.3                | 23     | 2.2        | 2250    | 1440       | 1750   |
| 050245   | 1X185     | 21      | 0.108       | 644                 | 22.6                | 26     | 2.6        | 2775    | 1776       | 2160   |
| 050246   | 1X240     | 24      | 0.0817      | 775                 | 29.3                | 28     | 3.1        | 3600    | 2304       | 2640   |
| 050247   | 1X300     | 27      | 0.0654      | 898                 | 33.6                | 31     | 3.6        | 4500    | 2880       | 3178   |
| 050471   | 1X400     | 31      | 0.0486      | 1060                | 48.8                | 40.5   |            | 6000    | 3840       | 4200   |
| 050472   | 1X500     | 35      | 0.0384      | 1250                | 61                  | 42     |            | 7500    | 4800       | 5500   |

## NSGAFOEU 3.6/6 kV

|  |        |
|--|--------|
| <b>Nominal voltage U<sub>o</sub>:</b>                              | 3.6 kV |
| <b>Nominal voltage U:</b>  | 6 kV   |
| <b>Maximum permitted operating voltage in three-phase systems:</b> | 7.2 kV |
| <b>Test voltage:</b>   | 11 kV  |

| part no. | part name                 | DI [mm] | RI [Ohm/km] | I <sub>bl</sub> [A] | I <sub>k</sub> [kA] | Ø [mm] | Fzv [N] | Cu [kg/km] | G [kg] |
|----------|---------------------------|---------|-------------|---------------------|---------------------|--------|---------|------------|--------|
| 052678   | 1X1.5                     | 1.8     | 13.7        | 32                  | 0.183               | 9.5    | 23      | 14,4       | 60     |
| 051585   | 1X2.5                     | 2.4     | 8.21        | 43                  | 0.305               | 10.5   | 38      | 24         | 85     |
| 051586   | 1X4                       | 3       | 5.09        | 56                  | 0.488               | 12     | 60      | 38         | 113    |
| 051587   | 1X6                       | 3.9     | 3.39        | 71                  | 0.732               | 13     | 90      | 58         | 141    |
| 051588   | 1X10                      | 5.1     | 1.95        | 99                  | 1.22                | 14.5   | 150     | 96         | 191    |
| 051589   | 1X16                      | 6.3     | 1.24        | 133                 | 1.96                | 15.5   | 240     | 154        | 282    |
| 051590   | 1X25                      | 7.8     | 0.795       | 174                 | 3.05                | 17.5   | 375     | 240        | 391    |
| 051591   | 1X35                      | 9.2     | 0.565       | 215                 | 4.27                | 19     | 525     | 336        | 500    |
| 051592   | 1X50                      | 11      | 0.393       | 270                 | 6.1                 | 21     | 750     | 480        | 650    |
| 051593   | 1X70                      | 13.1    | 0.277       | 338                 | 8.54                | 23     | 1050    | 672        | 860    |
| 052679   | 1X95                      | 15.1    | 0.21        | 403                 | 11.6                | 26.5   | 1425    | 912        | 1110   |
| 052680   | 1X120                     | 17      | 0.164       | 473                 | 14.6                | 28.8   | 1800    | 1152       | 1390   |
| 052681   | 1X150                     | 19      | 0.132       | 546                 | 18.3                | 30.5   | 2250    | 1440       | 1690   |
| 052682   | 1X185                     | 21      | 0.108       | 622                 | 22.6                | 33     | 2775    | 1776       | 1980   |
| 052157   | 1X240 (with reference to) | 24      | 0.0817      |                     | 29.3                | 30     | 3600    | 2304       | 2549   |
| 052683   | 1X300 (with reference to) | 27      | 0.0654      |                     | 33.6                | 33.4   | 4500    | 2880       | 3170   |
| 051754   | 1X400 (with reference to) | 31      | 0.0486      |                     | 48.8                | 38     | 6000    | 3840       | 4000   |

| part no. | part name                    | DI [mm] | RI [Ohm/km] | Ibl [A] | Ik [kA] | Ø [mm] | Fzv [N] | Cu [kg/km] | G [kg] |
|----------|------------------------------|---------|-------------|---------|---------|--------|---------|------------|--------|
| 052684   | 1X500 (with reference to)    | 35      | 0.0384      |         | 61      | 42.7   | 7500    | 4800       | 5020   |
| 051081   | 1X150 RD (with reference to) | 19      | 0.132       | 546     | 18.3    | 30.5   | 2250    | 1440       | 1690   |
| 050856   | 1X185 RD (with reference to) | 21      | 0.108       | 622     | 22.6    | 27.3   | 2775    | 1776       | 1947   |
| 051478   | 1X240 RD (with reference to) | 24      | 0.0817      |         | 29.3    | 30     | 3600    | 2304       | 2549   |

|     |  |
|-----|--|
| DI  | diameter conductor                     |
| RI  | Conductor resistance                   |
| Ibl | Ampacity in air (30 °C)                |
| Ik  | Short-circuit current (1 s)            |
| Ø   | outer diameter approx.                 |
| Ev  | Combustion heat (fire load)            |
| Fzv | Tensile strength (during installation) |
| Cu  | Copper weight (GER)                    |
| G   | net weight per 1000                    |