



TEBAOFLEX CABLE

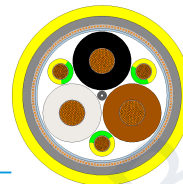
## DATA SHEET

Mining&Industrialcable

# (N)SSHCOEU

0.6/1 kV cable for variable frequency converter

UNDERGROUND | CABLES FOR SEMI-FIXED INSTALLATION



### APPLICATION

Suitable for fixed installation and flexible operation as motor power supply cable for frequency converter controlled drives in mining, construction sites and similar applications with heavy mechanical stresses.

### CABLE DESIGN

| Component           | Description                                                                                   |
|---------------------|-----------------------------------------------------------------------------------------------|
| Conductor           | Finely stranded tinned copper conductor, class 5 according to DIN EN 60228                    |
| Insulation          | EPR compound, type 3GI3                                                                       |
| Core identification | Natural coloring with black figures                                                           |
| Core arrangement    | Three power cores laid up with protective earth conductors split into three outer interstices |
| Screen              | EMC optimized concentric braid of tinned copper wires                                         |
| Inner sheath        | Vulcanized EPR rubber compound, type GM1B                                                     |
| Outer sheath        | Synthetic elastomer compound e.g. CR, compound type 5GM5, yellow                              |

### CHARACTERISTICS

- Suitable for fixed installation and flexible operation as motor power supply cable.
- Designed for frequency converter controlled drives in mining and construction applications.
- Suitable for heavy mechanical stresses and material handling equipment.
- Can be applied in water up to 40 °C, approximately up to 10 m depth.

### OPERATING CHARACTERISTICS

| Parameter                    | Value                                                                                                      |
|------------------------------|------------------------------------------------------------------------------------------------------------|
| Standard                     | Based on DIN VDE 0250 part 812                                                                             |
| Certifications / approvals   | MSHA ; EAC certificate                                                                                     |
| Rated voltage                | $U_0/U = 0.6/1$ kV, also permitted for $U_0/U = 640/1140$ V                                                |
| Max. operating voltage AC    | 0.7/1.2 kV                                                                                                 |
| Max. operating voltage DC    | 0.9/1.8 kV                                                                                                 |
| AC test voltage - main cores | 5 kV, 5 min.                                                                                               |
| Fire performance             | IEC 60332-1-2                                                                                              |
| Oil resistance               | IEC 60811-404                                                                                              |
| Weather resistance           | Outdoor and indoor use, resistant to ozone and moisture                                                    |
| Thermal ratings              | Conductor 90 °C; short circuit 250 °C                                                                      |
| Ambient temperature          | Fixed -40 °C to +90 °C; fully flexible -25 °C to +90 °C                                                    |
| Mechanical ratings           | Tensile load 15 N/mm <sup>2</sup> ; torsional stress +/- 25 °/m; bending radii acc. to DIN VDE 0298 part 3 |

# TECHNICAL DATA

## DIMENSIONS AND ELECTRICAL CHARACTERISTICS

Values are technical parameters only. Cable dimensions may vary due to manufacturing tolerances.

| Cross-section mm2   | Conductor diameter max mm | OD min mm | OD max mm | Weight kg/km | Tensile force N | Resistance at 20 °C Ω/km | Capacitance µF/km | Inductance mH/km | Current capacity A | Short circuit kA |
|---------------------|---------------------------|-----------|-----------|--------------|-----------------|--------------------------|-------------------|------------------|--------------------|------------------|
| 3 x 16 + 3 x 2.5    | 5.4                       | 24.4      | 27.4      | 1190         | 720             | 1.24                     | 0.42              | 0.26             | 99                 | 2.29             |
| 3 x 25 + 3 x 4      | 6.3                       | 28.2      | 31.2      | 1680         | 1125            | 0.795                    | 0.42              | 0.26             | 131                | 3.58             |
| 3 x 35 + 3 x 16/3   | 7.5                       | 30.5      | 33.5      | 2000         | 1575            | 0.565                    | 0.49              | 0.25             | 162                | 5.01             |
| 3 x 50 + 3 x 25/3   | 8.9                       | 36.0      | 39.0      | 2820         | 2250            | 0.393                    | 0.51              | 0.25             | 202                | 7.15             |
| 3 x 70 + 3 x 35/3   | 10.6                      | 41.2      | 44.2      | 3800         | 3150            | 0.277                    | 0.59              | 0.24             | 250                | 10.01            |
| 3 x 95 + 3 x 50/3   | 12.1                      | 45.7      | 48.7      | 4760         | 4275            | 0.210                    | 0.60              | 0.24             | 301                | 13.59            |
| 3 x 120 + 3 x 70/3  | 14.1                      | 48.7      | 52.7      | 5890         | 5400            | 0.164                    | 0.69              | 0.23             | 352                | 17.16            |
| 3 x 150 + 3 x 70/3  | 16.0                      | 55.7      | 59.7      | 7230         | 6750            | 0.132                    | 0.70              | 0.23             | 404                | 21.45            |
| 3 x 185 + 3 x 95/3  | 17.8                      | 60.4      | 64.4      | 8640         | 8325            | 0.108                    | 0.71              | 0.23             | 461                | 26.46            |
| 3 x 240 + 3 x 120/3 | 20.2                      | 68.2      | 72.2      | 11100        | 10800           | 0.0817                   | 0.73              | 0.23             | 540                | 34.32            |

### NOTES

- Current carrying capacity values are nominal for rubber cables laid on a surface at 30 °C ambient temperature.
- For derating factors, refer to the applicable technical appendix and VDE 0298-4 table 15.
- Values are technical parameters only and may vary due to manufacturing tolerances.

### CERTIFICATIONS



TEBAOFLEX CABLE