TEBAOFLEX CABLE

DATA SHEET

Mining&Industrialcable

(N)3GHSSHCH

Flexible power cable for mining and tunneling applications



APPLICATION

Used for the connection of mobile operating equipment in mines and underground excavations with hazardous environments, and for stationary operation such as high-voltage transformers in mining and tunneling.

CABLE STRUCTURE

Component	Description
Conductors	Flexible electrolytic copper wire, DIN VDE 0295 class 5
Main core insulation	3GI3 type EPR compound
Pilot control cores	3GI3 type EPR compound
Protective conductor	Plain copper wires or copper wire braiding laid concentrically around each main core
Electrical field control	Extruded inner and outer semiconductive rubber layers
Core identification	Main cores natural; pilot cores black and number coded
Lay up	Three main conductors laid up with three pilot control cores in the outer interstice
Inner sheath	Special halogen-free and flame-retardant HFFR compound
Monitoring conductor	Semiconductive tape with overall concentric copper wires and synthetic tape
Armour	Galvanized steel wire braiding, minimum coverage 75%
Outer sheath	Special halogen-free and flame-retardant HFFR compound, red or black

CHARACTERISTICS

- Ozone resistant.
- Cold resistant.
- Tear resistant.
- UV resistant.
- Weather resistant.
- Moisture resistant.
- REACH compliant.
- Halogen-free and flame-retardant sheath system.

OPERATING CHARACTERISTICS

Parameter	Value
Rated voltage	3.6/6 kV, 6/10 kV, 8.7/15 kV, 12/20 kV, 18/30 kV
AC test voltage	11 kV, 17 kV, 24 kV, 29 kV, 43 kV
Max. operating voltage AC	4.2/7.2 kV, 6.9/12 kV, 10.4/18 kV, 13.9/24 kV, 20.8/36 kV
Max. operating voltage DC	5.4/10.8 kV, 9/18 kV, 13.5/27 kV, 18/36 kV, 27/54 kV
Min. bending radius	According to DIN VDE 0298 part 3
Current carrying capacity	According to DIN VDE 0298 part 4
Working temperature, fixed	-40 °C to +80 °C
Working temperature, mobile	+5 °C to +80 °C

PRODUCTION AND TEST STANDARDS

Parameter	Value
Construction	DIN VDE 0250-605 and IEC 60502-2
General requirements	DIN VDE 0250-1
Guide to use	DIN VDE 0298-3
Electrical tests	DIN VDE 0472-501, 503, 508
Non-electrical tests	DIN VDE 0472-401, 402, 602, 303, 615
Under fire tests	DIN VDE 0472-803, 804
Flame retardant	VDE 0482-332-1-2, DIN EN 60332-1-2, IEC 60332-1

TECHNICAL DATA

DIMENSIONS AND ELECTRICAL CHARACTERISTICS

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

Voltage	Cross section mm2	Overall diameter min - max mm	Conductor resistance at 20 °C Ω/km	Approx. weight kg/km
3.6/6 kV				
3.6/6 kV	3 x 25 + 3 x 16/3E + 3 x 2.5 ST + ÜL	47.0 - 51.0	0.780	3600
3.6/6 kV	3 x 35 + 3 x 16/3E + 3 x 2.5 ST + ÜL	49.0 - 54.0	0.554	4170
3.6/6 kV	3 x 50 + 3 x 25/3E + 3 x 2.5 ST + ÜL	52.0 - 57.8	0.386	4850
3.6/6 kV	3 x 70 + 3 x 35/3E + 3 x 2.5 ST + ÜL	56.1 - 61.2	0.272	5900
3.6/6 kV	3 x 95 + 3 x 50/3E + 3 x 2.5 ST + ÜL	60.3 - 66.2	0.206	5900
3.6/6 kV	3 x 120 + 3 x 70/3E + 3 x 2.5 ST + ÜL	63.8 - 70.2	0.161	8620
3.6/6 kV	3 x 150 + 3 x 70/3E + 3 x 2.5 ST + ÜL	66.0 - 72.0	0.129	9860
3.6/6 kV	3 x 185 + 3 x 95/3E + 3 x 2.5 ST + ÜL	70.0 - 74.0	0.106	11300
6/10 kV				
6/10 kV	3 x 25 + 3 x 16/3E + 3 x 2.5 ST + ÜL	54.0 - 57.0	0.780	4200
6/10 kV	3 x 35 + 3 x 16/3E + 3 x 2.5 ST + ÜL	57.1 - 60.2	0.554	4650
6/10 kV	3 x 50 + 3 x 25/3E + 3 x 2.5 ST + ÜL	60.4 - 63.6	0.386	5380
6/10 kV	3 x 70 + 3 x 35/3E + 3 x 2.5 ST + ÜL	65.2 - 68.8	0.272	6450
6/10 kV	3 x 95 + 3 x 50/3E + 3 x 2.5 ST + ÜL	68.0 - 71.9	0.206	7700
6/10 kV	3 x 120 + 3 x 70/3E + 3 x 2.5 ST + ÜL	70.1 - 76.1	0.161	9260
6/10 kV	3 x 150 + 3 x 70/3E + 3 x 2.5 ST + ÜL	73.0 - 78.0	0.129	10840
6/10 kV	3 x 185 + 3 x 95/3E + 3 x 2.5 ST + ÜL	74.0 - 79.2	0.106	12400
8.7/15 kV				
8.7/15 kV	3 x 25 + 3 x 16/3E + 3 x 2.5 ST + ÜL	54.2 - 58.0	0.780	4530
8.7/15 kV	3 x 35 + 3 x 16/3E + 3 x 2.5 ST + ÜL	55.0 - 60.0	0.554	5100
8.7/15 kV	3 x 50 + 3 x 25/3E + 3 x 2.5 ST + ÜL	58.0 - 61.0	0.386	5840
8.7/15 kV	3 x 70 + 3 x 35/3E + 3 x 2.5 ST + ÜL	65.2 - 67.0	0.272	7840
8.7/15 kV	3 x 95 + 3 x 50/3E + 3 x 2.5 ST + ÜL	66.0 - 69.0	0.206	9120
12/20 kV				
12/20 kV	3 x 25 + 3 x 16/3E + 3 x 2.5 ST + ÜL	54.4 - 58.2	0.780	4920
12/20 kV	3 x 35 + 3 x 16/3E + 3 x 2.5 ST + ÜL	55.4 - 60.0	0.554	5400
12/20 kV	3 x 50 + 3 x 25/3E + 3 x 2.5 ST + ÜL	58.0 - 61.0	0.386	6200
12/20 kV	3 x 70 + 3 x 35/3E + 3 x 2.5 ST + ÜL	65.2 - 67.0	0.272	7320
12/20 kV	3 x 95 + 3 x 50/3E + 3 x 2.5 ST + ÜL	66.0 - 69.0	0.206	8630
12/20 kV	3 x 120 + 3 x 70/3E + 3 x 2.5 ST + ÜL	68.7 - 74.0	0.161	9260
12/20 kV	3 x 150 + 3 x 70/3E + 3 x 2.5 ST + ÜL	74.0 - 78.0	0.129	10460
12/20 kV	3 x 185 + 3 x 95/3E + 3 x 2.5 ST + ÜL	78.0 - 82.0	0.106	11870

RATINGS

- Rated voltages shown include 3.6/6 kV, 6/10 kV, 8.7/15 kV and 12/20 kV dimensional ranges.
- Working temperature: fixed -40 °C to +80 °C; mobile +5 °C to +80 °C.
- Minimum bending radius and current carrying capacity according to DIN VDE 0298.
- Maximum tensile load: 15 N/mm2.
- Max. torsion: 25 deg/m; travel speed: max. 30 m/min.
- Minimum distance for direction change: 20 x D.

CERTIFICATIONS