



CABLE STRUCTURE

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|----------------------------|--|
| Conductors | Electrolytic, stranded, tinned copper wire DIN VDE 0295 Class 5 |
| Insulation | 3GI3 type EPR Compound |
| Electrical Field Control | Inner and outer semiconductive layer of semiconductive rubber |
| Protective-Earth Conductor | Tinned copper conductor with semiconductive layer |
| Optical Fiber | Fibre core diameter of fiber 9 µm, 62.5 µm or 50 µm; Diameter over cladding 125 µm; Diameter over coating 250 µm; Designs up to 24 fibers available. |
| Fiber Coding | Color coding of the fibers and buffering tube for identification of the fiber type. |
| Fiber Covering | Hollow core with filling compound, basic material ETFE |
| Arrangement Of Fiber Cores | Six cores in one layer and specially laid-up around the central support element. |
| Lay Up | Three main conductors laid-up with two control cores and fiber optic element in the outer interstice |
| Inner Sheath | Special EPR compound better than GM1b type |
| Reinforcement | Embedded braid made of anti torsion synthetic threads |
| Outer Sheath | 5GM5 type elastomer compound, Red |

STANDARDS & MAIN CHARACTERISTICS

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|-----------------------------|--|
| Construction | DIN VDE 0250-813 |
| 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 Conditions Tests | DIN VDE 0472-803, 804 |
| Flame Retardant | VDE 0482-332-1-2, DIN EN 60332-1-2, IEC 60332-1 |
| Oil Resistant | HD/EN/IEC 60811-2-1, DIN VDE 0473-811-2-1 |

OPERATING CHARACTERISTICS

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|--|-----------------------------------|--------|---------|---------|---------|
| Rated Voltage (kV) | 3,6/6 | 6/10 | 8,7/15 | 12/20 | 18/30 |
| Ac Test Voltage (kV) | 11 | 17 | 24 | 29 | 43 |
| Max. Operating Ac Voltage (kV) | 4,2/7,2 | 6,9/12 | 10,4/18 | 13,9/24 | 20,8/36 |
| Max. Operating Dc Voltage (kV) | 5,4/10,8 | 9/18 | 13,5/27 | 18/36 | 27/54 |
| Min Bending Radius | | | | | |
| Current Carrying Capacity | Acc. to DIN VDE 0298 part 3 | | | | |
| Working Temperature | According to DIN VDE 0298, Part 4 | | | | |
| | Fixed -40°C ... +80°C | | | | |
| | Mobile -30°C ... +80°C | | | | |
| Max. Tensile Load Of Cable | 20 N / mm ² | | | | |
| Max. Torsion | ± 25°/m | | | | |
| Travel Speed | up to 200 m/min. horizontal | | | | |
| Minimum Distance For Change Of Direction | 20 X D | | | | |



Ozone Resistant



Cold Resistant



Tear Resistant



Ex-Proof Uv Resistant



Weather Resistant



Moisture Resistant



Ex-Proof

Application

For the connection of electrical equipment, large material handling machines such as excavators, cranes, dumpers in mining and tunnelling applications in combination of power and data transmission. The flexible cable design allows for movement of the equipment during operation. Suitable also as flex MV reeling cable and also for festoon systems, container cranes.

3,6/6 kV

| Cross Section (mm ²) | Overall Diameter Min. - Max. (mm) | Approximate Weight (kg / km) |
|-------------------------------------|---|---------------------------------|
| 3 x 25 + 2 x 25 / 2 + FO | 42.2 - 45.2 | 2660 |
| 3 x 25 + 2 x 50 / 2 + FO | 45.0 - 48.0 | 2990 |
| 3 x 35 + 2 x 25 / 2 + FO | 43.8 - 46.8 | 3050 |
| 3 x 35 + 2 x 50 / 2 + FO | 45.9 - 48.9 | 3400 |
| 3 x 50 + 2 x 25 / 2 + FO | 45.1 - 48.1 | 3540 |
| 3 x 50 + 2 x 50 / 2 + FO | 48.8 - 51.8 | 4070 |
| 3 x 70 + 2 x 35 / 2 + FO | 48.8 - 51.8 | 4480 |
| 3 x 70 + 2 x 50 / 2 + FO | 52.5 - 56.5 | 4840 |
| 3 x 95 + 2 x 50 / 2 + FO | 54.3 - 58.3 | 5800 |
| 3 x 120 + 2 x 70 / 2 + FO | 58.2 - 62.2 | 7010 |
| 3 x 150 + 2 x 70 / 2 + FO | 62.4 - 66.4 | 8210 |
| 3 x 185 + 2 x 95 / 2 + FO | 67.8 - 71.8 | 9920 |
| 3 x 240 + 2 x 120 / 2 + FO | 74.4 - 78.4 | 12530 |
| 3 x 300 + 2 x 150 / 2 + FO | 80.6 - 85.6 | 15330 |

6/10 kV

| Cross Section (mm ²) | Overall Diameter Min. - Max. (mm) | Approximate Weight (kg / km) |
|-------------------------------------|---|---------------------------------|
| 3 x 25 + 2 x 25 / 2 + FO | 42.7 - 45.7 | 2740 |
| 3 x 25 + 2 x 50 / 2 + FO | 46.0 - 49.0 | 2980 |
| 3 x 35 + 2 x 25 / 2 + FO | 45.2 - 48.2 | 3160 |
| 3 x 35 + 2 x 50 / 2 + FO | 47.6 - 50.6 | 3610 |
| 3 x 50 + 2 x 25 / 2 + FO | 46.5 - 49.5 | 3670 |
| 3 x 50 + 2 x 50 / 2 + FO | 50.4 - 53.4 | 4020 |
| 3 x 70 + 2 x 35 / 2 + FO | 50.3 - 53.3 | 4610 |
| 3 x 70 + 2 x 50 / 2 + FO | 53.8 - 56.8 | 5160 |
| 3 x 95 + 2 x 50 / 2 + FO | 55.6 - 59.6 | 5940 |
| 3 x 120 + 2 x 70 / 2 + FO | 60.4 - 63.4 | 7150 |
| 3 x 150 + 2 x 70 / 2 + FO | 65.2 - 69.2 | 8600 |
| 3 x 185 + 2 x 95 / 2 + FO | 69.2 - 73.2 | 10110 |
| 3 x 240 + 2 x 120 / 2 + FO | 77.2 - 81.2 | 12980 |
| 3 x 300 + 2 x 150 / 2 + FO | 81.8 - 86.8 | 15550 |

8,7/15 kV

| Cross Section (mm ²) | Overall Diameter Min. - Max. (mm) | Approximate Weight (kg / km) |
|-------------------------------------|---|---------------------------------|
| 3 x 25 + 2 x 25 / 2 + FO | 46.0 - 49.0 | 3000 |
| 3 x 25 + 2 x 50 / 2 + FO | 47.4 - 51.4 | 3350 |
| 3 x 35 + 2 x 25 / 2 + FO | 46.3 - 49.3 | 3550 |
| 3 x 35 + 2 x 50 / 2 + FO | 50.1 - 53.1 | 3710 |
| 3 x 50 + 2 x 25 / 2 + FO | 50.1 - 53.1 | 4020 |
| 3 x 50 + 2 x 50 / 2 + FO | 53.8 - 57.8 | 4640 |
| 3 x 70 + 2 x 35 / 2 + FO | 54.8 - 58.8 | 5170 |
| 3 x 70 + 2 x 50 / 2 + FO | 54.8 - 58.8 | 5280 |
| 3 x 95 + 2 x 50 / 2 + FO | 59.2 - 63.2 | 6370 |
| 3 x 120 + 2 x 70 / 2 + FO | 64.6 - 68.6 | 7830 |
| 3 x 150 + 2 x 70 / 2 + FO | 68.8 - 72.8 | 9090 |
| 3 x 185 + 2 x 95 / 2 + FO | 72.8 - 76.8 | 10610 |
| 3 x 240 + 2 x 120 / 2 + FO | 79.7 - 84.7 | 13540 |
| 3 x 300 + 2 x 150 / 2 + FO | 87.9 - 92.9 | 16530 |

12/20 kV

| Cross Section (mm ²) | Overall Diameter Min. - Max. (mm) | Approximate Weight (kg / km) |
|-------------------------------------|---|---------------------------------|
| 3 x 25 + 2 x 25 / 2 + FO | 46.5 - 49.5 | 3070 |
| 3 x 25 + 2 x 50 / 2 + FO | 49.5 - 52.5 | 3400 |
| 3 x 35 + 2 x 25 / 2 + FO | 49.3 - 52.3 | 3590 |
| 3 x 35 + 2 x 50 / 2 + FO | 53.1 - 57.1 | 4200 |
| 3 x 50 + 2 x 25 / 2 + FO | 54.1 - 58.1 | 4500 |
| 3 x 50 + 2 x 50 / 2 + FO | 54.1 - 58.1 | 4590 |
| 3 x 70 + 2 x 35 / 2 + FO | 58.0 - 62.0 | 5540 |
| 3 x 70 + 2 x 50 / 2 + FO | 58.0 - 62.0 | 5650 |
| 3 x 95 + 2 x 50 / 2 + FO | 62.4 - 66.4 | 6750 |
| 3 x 120 + 2 x 70 / 2 + FO | 67.7 - 71.7 | 8400 |
| 3 x 150 + 2 x 70 / 2 + FO | 71.9 - 75.9 | 9520 |
| 3 x 185 + 2 x 95 / 2 + FO | 77.3 - 81.3 | 11340 |
| 3 x 240 + 2 x 120 / 2 + FO | 83.8 - 87.8 | 14060 |
| 3 x 300 + 2 x 150 / 2 + FO | 91.0 - 96.0 | 17090 |

