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| 1536 1000 | DATA SHEET |  |
| Valid from: 2023-11-15 | ÖLFLEX® TRAIN 361 1,8kV | |

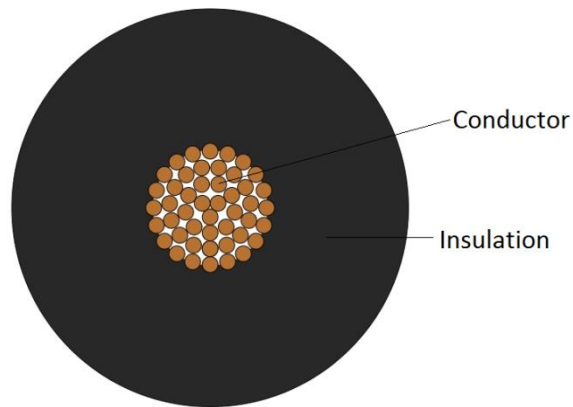
Application

ÖLFLEX® TRAIN 361 are halogen-free, highly flame retardant cables for use in railway vehicles. They are designed for fixed installation and for applications, where limited movement may occur. They are particularly used in areas, where human and animal life as well as valuable property are exposed to high risk of fire hazards. ÖLFLEX® TRAIN 361 are oil-, fuel-, acid- and alkali resistant acc. to EN 50264-3-1.

Application range:

railway vehicles, connecting lamps, heating equipment, switchgear, terminal boxes and power supply

Design



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| Design | acc. to EN 50264-3-1, 1800 V, M |
| Norm references | EN 50264-3-1. Code designation M M = extra low temperature, extra oil and fuel resistant |
| Classification | EN 45545-2: Hazard Level HL1, HL2, HL3 NF F 16-101: Internal Category A1, A2, B External Category A1, A2, B Category C for flame propagation Category F1 for smoke |
| Conductor | fine wire strands of tinned copper acc. to IEC 60228 resp. EN 60228, Class 5 |
| Core isolation | electron beam cross-linked polymer compound EI 109 acc. to EN 50264-1 |
| Core identification | black |

Electrical properties at 20 °C

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| Nominal voltage | U_0 / U : 1.8/3 kV AC |
| Max. permissible operating voltage | U_m : 3.6 kV AC V_0 : 2.7 kV DC |
| Test voltage | 6.5 kV AC; 15 kV DC |

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Mechanical and thermal properties

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|---------------------------|--|
| Min. bending radius | Cable diameter \leq 12.0 mm for cautions bending: 3 x outer diameter (one bend at end of core) fixed installation: 4 x outer diameter occasional flexing: 5 x outer diameter |
| | Cable diameter $>$ 12.0 mm for cautions bending: 4 x outer diameter (one bend at end of core) fixed installation: 5 x outer diameter occasional flexing: 6 x outer diameter |
| Temperature range | fixed installation: -45 °C up to +120°C max. conductor temp. (20.000h) up to +145°C max. conductor temp. (3.000h) |
| | occasional flexing: -35 °C up to +120°C max. conductor temp. (20.000h) |
| | - 50°C acc. to GOST 33326-2015 and GOST 20.57.406-81 (method 203-1 und 205-1) |
| Short circuit temperature | max. +200°C (5s) |

Fire protection acc. to EN 50264-1 / EN 45545-2:

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| Classification | EN 45545-2: Hazard Level HL1, HL2, HL3 |
| Flammability | Flame retardant acc. to IEC 60332-1-2 resp. EN 60332-1-2 |
| | No flame propagation acc. to: \geq 12 mm: IEC 60332-3-24 resp. EN 60332-3-24 $>$ 6 mm and $<$ 12mm: IEC 60332-3-25 resp. EN 60332-3-25 \leq 6 mm: EN 50305 |
| Smoke density | acc. to EN 50264-1, light transmission: min. 70% acc. to IEC 61034-2 resp. EN 61034-2 |
| Halogen-free | acc. to IEC 60754-1 resp. EN 60754-1 (chlorine and bromine) acc. to EN 60684-2 (fluorine) |
| Corrosivity | acc. to EN 50264-1, pH \geq 4.3 and conductivity \leq 10 μ S/mm acc. to IEC 60754-2 resp. EN 60754-2 |
| Toxicity | acc. to EN 50264-1 (\leq 3) acc. to EN 50305 |

Fire protection acc. to NF:

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| Classification | NF F 16-101: Internal Category A1, A2, B External Category A1, A2, B Category C for flame propagation Category F1 for smoke |
| Flammability | acc. to NF C 32-070, Category C1 and C2 |
| Smoke density | acc. to NF X 10-702 |
| Toxicity | acc. to NF X 70-100 |

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Material properties

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| Ozone resistance | acc. to EN 50264-3-1, method B acc. to EN 50305 |
| Mineral oil resistance | acc. to EN 50264-3-1 |
| Fuel resistance | acc. to EN 50264-3-1 |
| Acid and alkali resistance | acc. to EN 50264-3-1 |
| UV resistance | Acc. to EN 50525-1 are cables with black sheath suitable for a permanent outdoor use. |
| Tests | acc. to EN 50264-3-1 |
| Environmental information | These cables meet the substance-specific requirements of the EU Directive 2011/65/EU (RoHS). |

| Art. No. | Conductor cross section [mm ²] | Max. wire ø [mm] | Max. conductor resistance (20°C) [Ohm/km] | Conductor ø reference value [mm] | Core ø [mm] | Fire load reference value [KJ/m] | Weight [kg/km] |
|----------|---|---------------------|--|-------------------------------------|------------------|-------------------------------------|-------------------|
| 15361000 | 1.5 | 0.26 | 13.7 | 1.6 | 5.5 ±0.2 | 536 | 48 |
| 15361001 | 2,5 | 0.26 | 8.21 | 2.0 | 6.0 ±0.2 | 604 | 61 |
| 15361002 | 4 | 0.31 | 5.09 | 2.7 | 6.5 ±0.2 | 680 | 80 |
| 15361003 | 6 | 0.31 | 3.39 | 3.2 | 7.2 ±0.2 | 768 | 105 |
| 15361004 | 10 | 0.41 | 1.95 | 4.2 | 8.1 ±0.2 | 917 | 153 |
| 15361005 | 16 | 0.41 | 1.24 | 5.2 | 9.3 ±0.2 | 1140 | 224 |
| 15361006 | 25 | 0.41 | 0.795 | 6.5 | 10.6 ±0.3 | 1340 | 323 |
| 15361007 | 35 | 0.41 | 0.565 | 7.7 | 11.8 ±0.3 | 1539 | 431 |
| 15361008 | 50 | 0.41 | 0.393 | 9.7 | 13.5 ±0.3 | 1818 | 592 |
| 15361009 | 70 | 0.51 | 0.277 | 11.4 | 15.2 ±0.3 | 2096 | 801 |
| 15361010 | 95 | 0.51 | 0.210 | 13.4 | 17.5 ±0.3 | 2649 | 1076 |
| 15361011 | 120 | 0.51 | 0.164 | 15.0 | 19.0 ±0.3 | 2866 | 1329 |
| 15361012 | 150 | 0.51 | 0.132 | 17.0 | 20.8 ±0.3 | 3143 | 1634 |
| 15361013 | 185 | 0.51 | 0.108 | 18.5 | 22.8 ±0.3 | 3813 | 2011 |
| 15361014 | 240 | 0.51 | 0.0817 | 22.0 | 25.6 ±0.4 | 4317 | 2571 |
| 15361015 | 300 | 0.51 | 0.0654 | 23.2 | 27.8 ±0.4 | 4789 | 3176 |

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