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| 15382040 | DATA SHEET |  |
| Valid from: 10.12.2018 | ÖLFLEX® TRAIN HT 150 FF 1,8kV | |

Application

ÖLFLEX® TRAIN HT 150 FF 1,8kV are single core silicone rubber insulated high temperature cables for railway rolling stock, having special fire performance.

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 HT 150 FF 1,8kV are ozone-, oil-, acid and alkali-resistant according to EN 50382-2.

Application range:

Railway vehicles: Wiring of control cabinets, distributors, converters, motors and batteries

Design

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| Design/type-standard | according to EN 50382-2, 1800V, code designation FF FF = low temperature resistant, oil-resistant |
| Classification | EN 45545-2: Hazard Level HL1, HL2, HL3 |
| Conductor | fine wire strands of tinned copper acc. to IEC/EN 60228 resp. VDE 0295, Class 5 |
| Separator | semi-conductive tape, black |
| Core insulation | silicone compound type EI 111 according to EN 50382-2 |
| Core identification | white |
| Sheath | silicone compound type EM 107 according to EN 50382-2, black |

Electrical properties

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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 | core / core: 6,5 kV AC; 15 kV DC |

Mechanical and thermal properties

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| Min. bending radius | fixed installation: 3 x cable diameter occasional flexing: 5 x cable diameter |
| Temperature range | -40 °C to +150 °C max. conductor temperature |
| Short circuit temperature | max. +250 °C (5s) |

Fire protection according to EN 50382-2 / EN 45545:

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|------------------------------|--|-------------------------------------|
| Classification | EN 45545-2: Hazard Level HL1, HL2, HL3 | |
| Flammability | acc. to | EN 60332-1-2 resp. VDE 0482-332-1-2 |
| No flame propagation acc. to | ≥ 12 mm: | EN 60332-3-24 / VDE 0482-332-3-24 |
| | > 6 mm and < 12mm: | EN 60332-3-25 / VDE 0482-332-3-25 |

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| Smoke density | acc. to EN 50382-1, light transmission: min. 70% acc. to IEC/EN 61034-2 |
| Halogen-free | acc. to IEC/EN 60754-1 (chlorine and bromine) acc. to EN 60684-2 (fluorine) |
| Corrosivity | acc. to EN 50382-1: pH ≥ 4.3 and conductivity ≤ 10µS/mm acc. to IEC/EN 60754-2 |
| Toxicity | acc. to EN 50382-1 (≤ 3) acc. to EN 50305 |

Material properties

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|----------------------------|-----------------------------------|
| Ozone resistance | acc. to EN 50382-2 / EN 50305 |
| Mineral oil resistance | acc. to EN 50382-2 / EN 60811-2-1 |
| Acid and alkali resistance | acc. to EN 50382-2 / EN 60811-2-1 |
| Tests | acc. to EN 50382-2 |

| Article number | Conductor cross section [mm ²] | Max. wire ø [mm] | Max. DC conductor resistance (20°C) [Ohm/km] | Conductor ø reference value [mm] | Outer ø min. - max. [mm] | Weight [kg/km] |
|----------------|---|---------------------|---|-------------------------------------|-----------------------------|-------------------|
| 15382040 | 1,5 | 0,26 | 13,7 | 1,5 | 6,8 - 7,9 | 63 |
| 15382041 | 2,5 | 0,26 | 8,21 | 2,0 | 7,2 - 8,4 | 76 |
| 15382042 | 4 | 0,31 | 5,09 | 2,5 | 7,7 - 9,0 | 93 |
| 15382043 | 6 | 0,31 | 3,39 | 3,0 | 8,2 - 9,6 | 115 |
| 15382044 | 10 | 0,41 | 1,95 | 3,9 | 9,4 - 11,0 | 168 |
| 15382045 | 16 | 0,41 | 1,24 | 5,0 | 10,5 - 12,2 | 236 |
| 15382046 | 25 | 0,41 | 0,795 | 6,4 | 12,3 - 14,4 | 339 |
| 15382047 | 35 | 0,41 | 0,565 | 7,7 | 13,6 - 15,9 | 432 |
| 15382048 | 50 | 0,41 | 0,393 | 9,2 | 15,0 - 17,5 | 583 |
| 15382049 | 70 | 0,51 | 0,277 | 11,0 | 16,8 - 19,7 | 780 |
| 15382050 | 95 | 0,51 | 0,210 | 12,5 | 19,0 - 22,2 | 1039 |
| 15382051 | 120 | 0,51 | 0,164 | 14,2 | 20,8 - 24,3 | 1276 |
| 15382052 | 150 | 0,51 | 0,132 | 15,8 | 22,3 - 26,1 | 1539 |
| 15382053 | 185 | 0,51 | 0,108 | 17,5 | 24,5 - 28,6 | 1871 |
| 15382054 | 240 | 0,51 | 0,0817 | 20,1 | 27,1 - 31,7 | 2417 |
| 15382055 | 300 | 0,51 | 0,0654 | 22,5 | 29,5 - 34,6 | 2760 |
| 15382056 | 400 | 0,51 | 0,0486 | 25,8 | 33,2 - 38,9 | 3620 |

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