


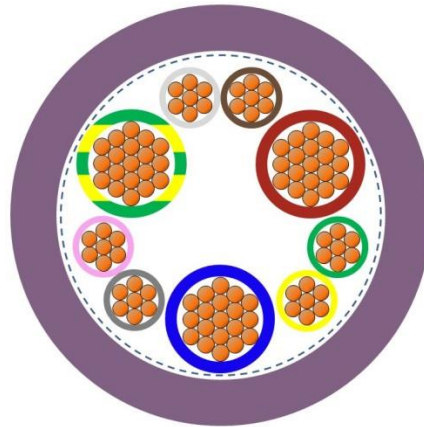
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| 2170208 | DATA SHEET |  |
| valid from: 15.07.2020 | UNITRONIC® BUS IBS P COMBI 3x2x0,22 mm² + 3x1,0 mm² | |

Application

UNITRONIC® BUS P COMBI IBS is a data cable for the field-bus system INTERBUS with integrated power supply. The field-bus cable is designed to the requirements of the bus-system INTERBUS, the transmission characteristics conform to the system and guarantee a high operating security during data transmission.


UNITRONIC® BUS P COMBI IBS is designed for a data transmission rate of 500kBit/s at a length of 400m. The cable is intended for limited flexible use and for permanent installation in dry and damp interiors.

Design



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| Conductor | <p>data pairs: stranded bare copper 0.22 mm² (24 AWG), 7 x 0.2 mm</p> <p>power cores: stranded bare copper 1.0 mm² (18 AWG), 14 x 0.3 mm</p> |
| Insulation | <p>data pairs: PE core Ø: ca. 1.0 mm</p> <p>power cores: PE core Ø: ca. 1.7 mm</p> |
| Core identification code | <p>data pairs: white-brown, green-yellow, grey-pink</p> <p>power cores: red, blue, green/yellow</p> |
| Stranding | data cores twisted to pairs, data pairs stranded together with power cores |
| Screen | wrapping on top |
| Outer sheath | <p>braid of tinned copper wires</p> <p>PUR violet outer Ø: max. 8.0 mm</p> |

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| Creator: KIOS / PDC | Document: DB2170208EN | Page 1 of 2 |
| Released: ALTE / PDC | Version: 05 | |

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Electrical properties at 20°C

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| Conductor resistance | power cores: max. 19.5 Ω/km data cores: max. 87.6 Ω/km |
| Insulation resistance | power cores: min. 5 GΩ x km |
| Mutual capacitance | 800 Hz: max. 60 nF/km |
| Characteristic impedance | 64 kHz: 110 Ω (±20 Ω) >1 MHz: 95 Ω (±15 Ω) |
| Attenuation | 256 kHz: max. 1.0 dB/100m 772 kHz: max. 2.5 dB/100m 1 MHz: max. 2.8 dB/100m 4 MHz: max. 6.9 dB/100m 10 MHz: max. 12.0 dB/100m 16 MHz: max. 15.5 dB/100m 20 MHz: max. 17.2 dB/100m |
| Near-end cross-talk | 772 kHz: min. 61 dB 1 MHz: min. 59 dB 2 MHz: min. 55 dB 4 MHz: min. 50 dB 8 MHz: min. 46 dB 10 MHz: min. 44 dB 16 MHz: min. 41 dB 20 MHz: min. 40 dB |
| Velocity of propagation | 0,66 c |
| Transfer impedance | screen resistance: max. 10 Ω/km transfer impedance: max. 250 mΩ/m (30 MHz) |
| Peak operating voltage | data pair: 250 V (not for power applications) power pair: 450 V (not for power applications) |
| Test voltage | core/core: 1500 V core/screen: 1000 V |

Mechanical and thermal properties

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| Minimum bending radius | fixed: 7.5 x cable Ø flexing: 15 x cable Ø |
| Temperature range | fixed: -30 °C up to +80 °C flexing: -5 °C up to +70 °C |
| Burning load | 0,3 kWh/m |
| Flammability | flame retardant acc. to IEC 60332-1-2 resp. EN 60332-1-2 |
| Halogen free | acc. to VDE 0472-815 |
| Oil resistance | acc. to EN 50363-10-2 |
| General requirements | This cable is conform to EU-Directive 2014/35/EU (Low Voltage Directive) and to EU-Directive 2011/65/EU (RoHS, Restriction of the use of certain hazardous substances). |
| Environmental information | These cables meet the substance-specific requirements of the EU Directive 2011/65/EU (RoHS). |

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| Creator: KIOS / PDC Released: ALTE / PDC | Document: DB2170208EN Version: 05 | Page 2 of 2 |
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