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| DATA SHEET | 2170223 |
| UNITRONIC® BUS Yv L2/FIP 1 x 2 x 0,64 | valid from : 08.07.2004 |

Application

UNITRONIC® BUS Yv L2/F.I.P. is a data cable for the SIEMENS field-net Sinec L2 DP (to DIN 19245 part 3 and EN 50170), for fieldbus system F.I.P.(Factory Instrumentation Protocol) as well as for high performance data networks with 150 Ohms nominal impedance. The cable is designed for the system-defined transmission rates of 1.5 Mbit/s, 2.5 Mbit/s and 12 Mbit/s, the transmission characteristics conform to the system and guarantee a high operating security during data transmission.

Due to it's double screening it is suitable for installation in electromagnetically demanding areas. The cable is intended for limited flexible use and for permanent installation inside and outside as well as for underground burial. The outer sheath is unaffected by atmospheric UV-radiation at above-ground installation.

Design

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| Conductor | single wire of bare copper, 0.64mm Ø (22AWG) |
| Insulation | foam-skin PE (02YS); core diameter approx 2.5mm |
| Coding | cores red and green |
| Twisting | 2 cores together with 2 fillers (core-filler-core-filler) |
| Wrapping | mylar wrap |
| Screening | aluminum-mylar tape wrap, metal-side outwards on top a tinned-copper wire braid |
| Sheath | PVC, YM1 to VDE 0207, part 5; black, flame retardant, outer diameter max. 7.8 mm |
| Weight | approx 112 kg/km net |
| Marking on the sheath: | |

LAPP KABEL STUTTGART UNITRONIC® BUS Yv L2/FIP 1 x 2 x 0,64 ART. 2170223

Electrical properties s at 20°C

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| Loop resistance | | max. Ω/km | 115 |
| Screen resistance | | max. Ω/km | 10 |
| Insulation resistance | | min. GΩxkm | 5 |
| Mutual capacitance | at 800 Hz | nom. nF/km | 30 |
| Impedance | at 9.6 kHz | Ω | 270 ± 27 |
| | at 38.4 kHz | Ω | 185 ± 18.5 |
| | at 3 to 20 MHz | Ω | 150 ± 15 |
| | Line attenuation | at 9.6 kHz | max. dB/100 m |
| | at 38.4 kHz | max. dB/100 m | 0.4 |
| | at 4 MHz | max. dB/100 m | 2.2 |
| | at 16 MHz | max. dB/100 m | 4.2 |
| Transfer impedance | at 20 MHz | max. mΩ/m | 10 |
| Nominal velocity of propagation | | nom. | 0.81c |
| Peak operation voltage (not for purposes of power/high voltage current) | | V | 250 |
| Test voltage | core/core, core/screen | U _{eff} V | 1500 |

Mechanical and thermal characteristics

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| Minimum bend radius | single bending | mm | 70 |
| | multiple bending | mm | 150 |
| Permissible pulling force | | N | 100 |
| Permissible temperature range | static | °C | - 40 up to + 80 |
| | flexible | °C | - 5 up to + 50 |
| Burning load | | kWh/m | approx.0.377 |
| Flammability | flame retardant to VDE 0482, part 265-2-1 / IEC 60 332-1 | | |

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| elaborated by: TE-K: N. Ensslen | Document: DB2170223_2EN | page 1 of 1 |
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