

**UNITRONIC® LAN 500 S/FTP Cat. 6_A Y
4x2xAWG 23/1**DB2170143
valid from: 21.03.2012**Application**

Data cable for transmission of digital and analog signals up to 500 MHz. The cable is designed for horizontal cabling systems as connection between a floor distribution and the telecommunication outlets (TO's). According to TIA/EIA-568, ISO/IEC 11801 2nd edition, EN 50173, EN 50288-5-1, prEN 50288-10:2010, IEC 61156-5. For application in LANs like IEEE 802.3: 10Base-T, 100Base-T, 1000Base-T, 10GBase-T; FDDI; ISDN; ATM; Cable sharing; PoE suitable.

Design

| | |
|--------------------------|---|
| Conductor | bare copper AWG 23/1, massive |
| Insulation | Skin-Foam-Skin PE, ca. 1.33 mm outer Ø |
| Core identification code | acc. to IEC 708-1 |
| Pair screening | plastic laminated aluminium foil |
| Stranding | 4 pairs, stranded to bundle |
| Screening | braid of copper wire, tinned wire 0,10 mm |
| Outer sheath | PVC, light ivory similar to RAL 1015, outer Ø: ca. 7.3 mm |

Electrical properties at 20° C

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|--------------------------|---------------------------------|
| Resistance (loop) | max. 160 Ω/km, acc. to VDE 0812 |
| Insulation resistance | min. 5 GΩxkm |
| Mutual capacitance | nom. 45 nF/km |
| Characteristic impedance | 100 Ω ±5 Ω (at 100 MHz) |
| Velocity of propagation | ca. 0.79 c |
| Signal propagation time | <425 ns/100m |
| Delay difference | <15 ns/100m |
| Screening attenuation | >60 dB (up to 600 MHz) |
| Test voltage | 700 V (AC) |

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Transmission properties

| f [MHz] | Attenuation nom. [dB/100m] | NEXT nom. [dB] | ACR nom. [dB/100m] | ELFEXT nom. [dB/100m] | RL nom. [dB] |
|---------|-------------------------------|----------------|-----------------------|--------------------------|--------------|
| 1 | 1.9 | 100 | 98 | 95 | 25 |
| 4 | 3.4 | 100 | 97 | 93 | 28 |
| 10 | 5.5 | 100 | 94 | 92 | 30 |
| 16 | 6.9 | 100 | 93 | 90 | 30 |
| 20 | 7.7 | 100 | 92 | 89 | 30 |
| 31,25 | 9.7 | 100 | 90 | 85 | 30 |
| 62,5 | 14.0 | 98 | 84 | 81 | 30 |
| 100 | 17.6 | 95 | 77 | 76 | 30 |
| 155 | 23.0 | 92 | 69 | 72 | 30 |
| 200 | 25.3 | 90 | 65 | 70 | 29 |
| 300 | 31.2 | 87 | 56 | 67 | 27 |
| 400 | 36.3 | 84 | 48 | 63 | 26 |
| 500 | 40.4 | 80 | 40 | 60 | 24 |
| 550 | 44.1 | 77 | 33 | 58 | 23 |

Mechanical and thermal properties

| | |
|-------------------------------|--|
| Minimum bending radius | during installation: 8 x cable Ø static: 4 x cable Ø |
| Permissible temperature range | during installation: 0° C up to +50° C static: -20° C up to +60° C |
| Flame propagation | flame retardant acc. to IEC 60332-1-2 |
| General requirements | Dangerous and forbidden substances acc. to RoHS directive (2002/95/EG) are not allowed to the manufacturing. |