



**Cable 200 MHz LSZH sheath**  
U/UTP cat. 5e+

FIBRAIN DATA cabling Express series is fully complied to requirements of category 5e (class D) according to the norm ISO/IEC 11801 2nd edition: 2002. Moreover all channel's components are complied to Directive ROHS 2002/95/WE

**Electrical and construction parameters**

| Parameter  |              |                |
|--|--------------|----------------|
| Resistance (max) Ohm/100 m(328 ft) @ 20 °C             |              | 8,90           |
| Mutual capacitance (max) nF/100 m(328 ft) @ 1 kHz      |              | 5,60           |
| Nominal velocity of propagation NVP (% speed of light) |              | 68             |
| Impedence characteristic (Ohm)                         |              | (min-max)      |
| values at:   | 772 kHz      | 87-117         |
|  | 1,0-200 MHz  | 85-115         |
| Return loss (RL) dB (min)                              |              |                |
| values at:   | 1,0 - 10 MHz | 20+5 log(f)    |
|  | 10 - 20 MHz  | 25             |
|  | 20 - 100 MHz | 25-7 log(f/20) |
| Propagation delay (max) (ns @ 10 MHz)                  |              | 540            |
| Delay skew (max) (ns/100 m)                            |              | 45             |
| Diameter (mm)  |              | 5,2            |
| Weight (kg/km)   |              | 32             |
| Minimal bending radius (mm)                            |              | 21             |
| Installation temperature (°C)                          |              | -20/+50        |
| Operation temperature (°C)                             |              | -10/+60        |
| Calorific value (MJ/m)                                 |              | 0,324          |

**Application:**

- 10BASE-T (IEEE 802.3)
- 4/16 Mbps Token Ring (IEEE 802.5)
- 100BASE-VG-AnyLAN
- 100 Mbps TP-PMD (ANSI X3T9.5)
- 100BASE-T (IEEE 802.3)
- 55/155 Mbps ATM
- 1000BASE-T (Gigabit Ethernet)

**Norms:**

- LSZH: EN 61034, EN 50267-2-1
- EN 60332-1, EN 60332-3-24
- ANSI/TIA/EIA 568-C.2 (Cat. 5e)
- ISO/IEC 11801
- IEC 61156-5
- EN 50173, EN 50288

**Cable marking:**

Every cable meter is marked as follow:

- **Brand:** FIBRAIN DATA
- **Cable type:** U/UTP 4PR 24AWG CAT.5E 200 MHz
- **Jacket type:** LSZH
- **Norms:** IEC 60332-1 ISO/IEC 11801 EN 50173
- **Production year:** XXXX
- **Identification:** XXXXXX
- **Length mark in meters**

**Construction:**

- Conductor - 24AWG (0,51 mm)
- Insulation- polyolefin
- Pair number- 4 pairs twisted
- Outer jacket - LSZH green color according to IEC 60332-1



| Frequency MHz: | Attenuation Max dB/100 m: | NEXT dB/100 m(min): | PS-NEXT dB/100 m(min): | ACR-F dB/100 m(min): | PS-ACR-F dB/100 m(min): |
|----------------|---------------------------|---------------------|------------------------|----------------------|-------------------------|
| 0,772          | 1,8                       | 72,0                | 69,0                   | 68,2                 | 65,2                    |
| 1              | 2,1                       | 70,3                | 67,3                   | 66,0                 | 53,0                    |
| 4              | 4,0                       | 61,3                | 58,3                   | 54,0                 | 51,0                    |
| 8              | 5,6                       | 56,8                | 53,8                   | 47,9                 | 44,9                    |
| 10             | 6,2                       | 55,3                | 52,3                   | 46,0                 | 43,0                    |
| 16             | 7,9                       | 52,2                | 49,2                   | 41,9                 | 38,9                    |
| 31,25          | 11,2                      | 47,9                | 44,9                   | 36,1                 | 33,1                    |
| 62,5           | 16,2                      | 43,4                | 40,4                   | 30,1                 | 27,1                    |
| 100            | 20,9                      | 40,3                | 37,3                   | 26,0                 | 23,0                    |
| 155            | 26,7                      | 37,4                | 34,4                   | 22,2                 | 19,2                    |
| 200            | 30,8                      | 35,8                | 32,8                   | 20,0                 | 17,0                    |

**XE100.105** FIBRAIN DATA Express U/UTP Kat.5e+ 200 MHz box 305 m, sheath type LSZH green color

**XE100.106** drum 500 m.

**XE100.107** drum 1000 m.