



Express 5e

**Cable 200MHz LSZH sheath**  
F/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		5,20
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)		510
Delay skew (max) (ns/100 m)		45
Diameter (mm)		5,2
Weight (kg/km)		35,3
Minimal bending radius (mm)		22
Installation temperature (°C)		-10/+50
Operation temperature (°C)		0/+50

**Construction:**

- Conductor - 24AWG (0,51mm)
- Insulation - polyolefin
- Pair number - 4 pairs twisted together
- Shield - aluminum foil/polyester around pairs
- Grounding - galvanized copper wire  $\phi$  0,4 mm
- Sheath - green LSZH complied to IEC 60332-1

**Applications:**

- 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: F/UTP 4PR 24AWG CAT. 5E 200 MHz
  - Sheath type: LSZH
  - Norms: IEC 60332-1 ISO/IEC 11801 EN 50173
  - Production year: XXXX
  - Identifier: XXXXXX
  - Length mark in meters



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

**XE100.115 FIBRAIN DATA Express F/UTP Cat.5e+ 200 MHz carton 305 m, green LSZH sheath**

**XE100.116** reel of 500 m  
**XE100.117** reel of 1000 m