



**APPLICATION :**

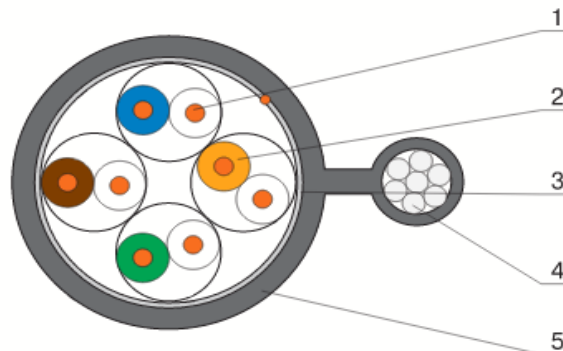
PBX, V.11, X.21, ISDN, Ethernet (10Base-T), ATM-25/52/155 Mbit/s, 100VG-AnyLAN, Fast Ethernet (100BASE-TX), Token Ring 16/100 Mbit/s, Gigabit Ethernet (1000BASE-T), Firewire 100 Mbit/s

**COMPLIANCE WITH THE REQUIREMENTS**

ISO/IEC 11801:2002EN 50173-1:2002ANSI/TIA/EIA-568-B.2-2001 IEC 61156-5:2002TU U 31.3-05758730-020-200

**DESIGN**

- 1) Conductor: soft copper wire  
Diameter: 0.51 mm (24 AWG)
- 2) Insulation: polyethylene  
Conductor diameter: 1.07 mm  
Pair: two conductors twisted together  
Colour identification of pairs:  
pair 1: white-blue / blue  
pair 2: white-orange / orange  
pair 3: white-green / green  
pair 4: white-brown / brown  
Core: 4 pairs twisted together with a string
- 3) Pair shield: aluminum polymer foil (metal inside).  
Copper tinned contact wire  $\varnothing$  0.4 mm is applied longitudinally under the shield.
- 4) Strength member: steel rope  
Diameter: 1.5 mm
- 5) Sheath: UV-stabilized polyethylene  
Sheath colour: black  
Maximum cable dimensions: 7.4x12.9 mm



## CABLES FOR INDOOR INSTALLATION INSTALLATION AND OPERATION CONDITIONS

For suspension on overhead communication lines. Operation in conditions of heightened electromagnetic impacts on frequencies up to 100 MHz

### ELECTRICAL CHARACTERISTICS AT 20 °C

Direct current resistance  $\leq 96$  Ohm/km  
Insulation resistance  $\geq 5$  Gohm/km  
Capacitance  $\leq 56$  pF/m  
Signal propagation velocity  $\geq 0.68$  s  
Propagation delay  $\leq 534+36/\sqrt{f}$  ns/100 m

### MECHANICAL CHARACTERISTICS

Temperature range: During installation  $-15$  °C ...  $+60$  °C After installation  $-50$  °C ...  $+60$  °C  
Bending radius: During installation  $\geq 10$  cable diameters After installation  $\geq 4$  cable diameters  
Tensile stress  $\leq 1,2$  kN

### MARKING

OPTRO-NET <year of production> FTP outdoor CAT.5e 100 MHz 4Pr AWG24 NVP 68% ISO/IEC 11801 100 OHM K-29 <metric mark>

### SIGNAL TRANSMISSION PERFORMANCE AT 20 °C

Frequency (MHz)	Attenuation (dB/100 m)		NEXT (dB)		PS-NEXT (dB)		EL-FEXT (dB)		PS-ELFEXT (dB/100 m)		RL (dB)	
	max.*	nom.	min.*	nom.	min.*	nom.	min.*	nom.	min.*	nom.	min.*	nom.
1**	2,1	1,9	65,3	78,0	62,3	75,0	64,0	70,0	61,0	67,0	20,0	25,00
4	4,1	3,8	56,3	76,0	53,3	73,0	52,0	58,0	49,0	55,0	23,0	30,00
10	6,5	6,0	50,3	74,0	47,3	71,0	44,0	52,0	41,0	49,0	25,0	37,00
16	8,3	7,7	47,2	70,0	44,2	67,0	39,9	48,0	36,9	45,0	25,0	34,00
20	9,3	8,6	45,8	69,0	42,8	66,0	38,0	46,0	35,0	43,0	25,0	34,00
31,25	11,7	10,9	42,9	63,0	39,9	60,0	34,1	40,0	31,1	37,0	23,6	33,00
62,50	17,0	15,8	38,4	60,0	35,4	57,0	28,1	36,0	25,1	33,0	21,5	28,00
100	22,0	20,5	35,3	58,0	32,3	55,0	24,0	32,0	21,0	29,0	20,1	24,00

\*IEC 61156-5:2002

\*\*Values lower than 4 MHz are given for information only

### ORDER INFORMATION

Code	Cable type	Sheath	Packing	Weight, kg/km
49312	FTP cat.5e (100) 4x2x0,51	PE	Coil 500 m	64,2