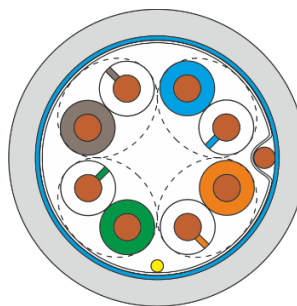


## DESIGN

- 1) Conductor: soft copper wire AWG24 (Ø 0,51 mm)
- 2) Insulation: HDPE, Ø 1,01 mm
- 3) Pair: two conductors twisted together  
Color identification of pairs:  
pair 1: white-blue / blue  
pair 2: white-orange / orange  
pair 3: white-green / green  
pair 4: white-brown / brown
- 4) Core wrapping
- 5) Drain wire Ø 0,4 mm
- 6) Core shield: aluminum polymer foil (metal outside)
- 7) Jacket: LSZH, thickness 0,5 mm, nominal cable Ø 5,8 mm



## APPLICATION

- PBX, V.11, X.21, ISDN, Ethernet (10Base-T), ATM-25/52/155 Mbit/s, 100VG-AnyLAN, Token Ring 16/100 Mbit/s
- Fast Ethernet (100BASE-TX), Gigabit Ethernet (1000BASE-T), 2,5 Gbit/s Ethernet (2.5GBASE-T) and 5 Gbit/s (5GBASE-T)
- PoE, PoE+, PoE++

## INSTALLATION AND OPERATION CONDITIONS

For stationary installation inside buildings, stations, structures and equipment in conditions of high electromagnetic impacts. Operated on frequencies up to 100 MHz

## COMPLIANCE WITH THE REQUIREMENTS

**Cabling:** ISO/IEC 11801-1, EN 50173-1, ANSI/TIA-568.2-D

**Cable:** IEC 61156-5, EN 50288-2-1, ANSI/TIA-568.2-D

**Fire safety:**

- Flame propagation: EN 60332-1-2
- Heat release, Smoke production, Flaming droplets: EN 50399
- Zero halogen, no corrosive gases: IEC 60754-2

**CPR euroclass:** Dca s1 d2 a1

## MECHANICAL CHARACTERISTICS

Temperature range:

- During installation -10 °C ... +60 °C
- After installation -20 °C ... +60 °C

Bending radius:

- During installation ≥ 8 cable diameters
- After installation ≥ 4 cable diameters

Tensile stress: ≤ 85 N

## ELECTRICAL CHARACTERISTICS AT 20 °C, 100 M

| Parameter                                                     | Unit     | Value       |
|---------------------------------------------------------------|----------|-------------|
| Capacitance                                                   | pF/m     | ≤ 56        |
| Direct current resistance                                     | Ohm/80 m | ≤ 9,5       |
| Insulation resistance                                         | GOhm/km  | ≥ 5         |
| Resistance unbalance                                          | %        | 2           |
| NVP                                                           | %        | 68          |
| Propagation delay                                             | ns/100 m | ≤ 534+36/√f |
| Delay skew on the frequency 100 MHz                           | ns/100 m | ≤ 30        |
| Characteristic impedance in the frequency range of: 1-100 MHz | Ohm      | 100±15      |
| Test voltage between cores, (DC, 2 s)                         | kV       | 2,5         |

## TRANSMISSION CHARACTERISTICS AT 20 °C, 100 M

| Frequency, MHz       | 1    | 4    | 10   | 16   | 20   | 31,25 | 62,5 | 100  |
|----------------------|------|------|------|------|------|-------|------|------|
| Attenuation, dB, max | 2,1  | 4,1  | 6,5  | 8,3  | 9,3  | 11,7  | 17,0 | 22,0 |
| NEXT, dB, min        | 65,3 | 56,2 | 50,3 | 47,2 | 45,7 | 42,8  | 38,3 | 35,3 |
| PS NEXT, dB, min     | 62,3 | 53,2 | 47,3 | 44,2 | 42,7 | 39,8  | 35,3 | 32,3 |
| ELFEXT, dB, min      | 64   | 51,9 | 44   | 39,9 | 37,9 | 34,1  | 28   | 24   |
| PS ELFEXT, dB, min   | 61   | 48,9 | 41   | 36,9 | 34,9 | 31,1  | 25   | 21   |
| RL, dB, min          | 20   | 23   | 25   | 25   | 25   | 23,6  | 21,5 | 20,1 |

IEC 61156-5, values lower than 4 MHz are given for information only

## ORDER INFORMATION

| P/N   | Cable name                                        | Standard packing                | Weight, kg/km |
|-------|---------------------------------------------------|---------------------------------|---------------|
| 49269 | KPVng-HFE-VP (100) 4x2x0,51 (F/UTP-cat.5E LSFROH) | Reelex Air™ cardboard box 305 m | 37,4          |