

Application

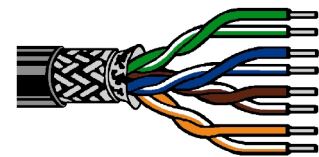
- Horizontal and building backbone cable.
- Support current **Category 5** and **Category 5 enhanced** applications, such as: 10 Base-T, 100 Base-T, 1000 Base-T (Gigabit Ethernet), FDDI, ATM

Standards

- General standards: **ISO/IEC 11801, EN 50173**
- Future standards like: ISO/IEC 11801 2nd edition, EN 50173 2nd edition und prEN 50288-3-1

Construction & Dimensions

- Construction: shielded 4 twisted pairs
- Conductor: solid bare copper
- Conductor diameter: AWG 24 (0,52 mm)
- Conductor insulation material: Polyethylene (PE)
- Diameter over insulation: 1.10 mm ± 0.05 mm
- Drain wire: AWG 26 tinned copper
- Shield: Aluminium/polyester foil & braid (coverage > 40%)
- Jacket material: PVC (Flame retardant)
- Outer diameter: 6.3 mm ± 0.3 mm



Colour code

- Pair 1 White-Blue/Blue
- Pair 2 White-Orange/Orange
- Pair 3 White-Green/Green
- Pair 4 White-Brown/Brown

Electrical characteristics (at 20 °C)

Attenuation

| Frequency | 1 | 4 | 10 | 16 | 20 | 31.25 | 62.5 | 100 | MHz |
|-----------------------|-----|-----|-----|-----|-----|-------|------|------|---------|
| Maximum ¹⁾ | 4.0 | 4.0 | 6.3 | 8.0 | 9.0 | 11.4 | 16.5 | 21.3 | dB/100m |
| Typical | 2.0 | 3.8 | 6.0 | 7.6 | 8.5 | 10.8 | 15.0 | 19.2 | dB/100m |

NEXT

| Frequency | 1 | 4 | 10 | 16 | 20 | 31.25 | 62.5 | 100 | MHz |
|-----------------------|------|------|------|------|------|-------|------|------|-----|
| Minimum ¹⁾ | 60.0 | 56.3 | 50.3 | 47.2 | 45.8 | 42.9 | 38.4 | 35.3 | dB |
| Typical | 70 | 62 | 57 | 54 | 52 | 49 | 45 | 43 | dB |

Power Sum NEXT

| Frequency | 1 | 4 | 10 | 16 | 20 | 31.25 | 62.5 | 100 | MHz |
|-----------------------|------|------|------|------|------|-------|------|------|-----|
| Minimum ¹⁾ | 57.0 | 53.3 | 47.3 | 44.2 | 42.8 | 39.9 | 35.4 | 32.3 | dB |
| Typical | 68 | 60 | 55 | 52 | 50 | 47 | 43 | 41 | dB |

Power Sum ELFEXT

| Frequency | 1 | 4 | 10 | 16 | 20 | 31.25 | 62.5 | 100 | MHz |
|-----------------------|------|------|------|------|------|-------|------|------|-----|
| Minimum ¹⁾ | 60.8 | 48.8 | 40.8 | 36.7 | 34.8 | 30.9 | 24.9 | 20.8 | dB |
| Typical | 73 | 61 | 53 | 47 | 45 | 41 | 37 | 33 | dB |

ACR

| Frequency | 1 | 4 | 10 | 16 | 20 | 31.25 | 62.5 | 100 | MHz |
|-----------------------|------|------|------|------|------|-------|------|------|---------|
| Minimum ¹⁾ | 56.0 | 52.3 | 44.0 | 39.2 | 36.8 | 31.5 | 21.8 | 14.0 | dB/100m |
| Typical | 68.0 | 58.2 | 51.0 | 46.4 | 43.5 | 38.2 | 30.0 | 23.8 | dB/100m |

Power Sum ACR

| Frequency | 1 | 4 | 10 | 16 | 20 | 31.25 | 62.5 | 100 | MHz |
|-----------------------|------|------|------|------|------|-------|------|------|---------|
| Minimum ¹⁾ | 53.0 | 49.3 | 41.0 | 36.2 | 33.8 | 28.5 | 18.8 | 11.0 | dB/100m |
| Typical | 66.0 | 56.2 | 49.0 | 44.4 | 41.5 | 36.2 | 28.0 | 21.8 | dB/100m |

¹⁾: Values according to cable requirements of ISO/IEC 11801 category 5 enhanced



Electrical characteristics (at 20 °C)

| | |
|---|---------------------------|
| Nominal mutual capacitance at 1 kHz | 50 nF/km |
| Maximum conductor DCR | 93,5 Ohm/km |
| NVP - Nominal Velocity of Propagation | 0.70 c |
| SKEW – Propagation delay difference (100 MHz) | typical \leq 15 ns/100m |
| Impedance 1 - 100 MHz | 100 \pm 15 Ohm |

General and environmental characteristics

| | |
|---|---------------|
| Temperature range - operation | -20°C - +60°C |
| Temperature range - installation | +0°C - +50°C |
| Minimum bending radius - operation | 25 mm |
| Minimum bending radius - installation | 50 mm |
| Maximum pulling tension | 80 N |
| Flame retardancy | IEC 332-1 |
| Energy of flame | 525 kJ/m |
| Weight (approx.) | 55 kg/km |
| Maximum operating voltage | 48 V rms |
| Maximum continuous current per conductor (25°C) | 1.4 A |

Ordering information

MARKING

Text on the cable jacket Inkjet printing

**BELDEN 1633E PLUS STP CAT5E 4PR AWG24 ISO/IEC 11801 EN 50173 VERIFIED
100 OHM**

Meter marking: Yes

JACKET COLOUR

| Colour | RAL code | Belden colour code |
|--------|----------|--------------------|
| Grey | RAL 7032 | 3253 |

PACKAGING (PUT UP)

| Belden code | Delivery length | Weight | Remark |
|----------------|-----------------|---------|---------------------|
| 43141 xxxx 240 | 500 m | 27,5 kg | Non returnable reel |
| 43141 xxxx 241 | 1000 m | 55.0 kg | Non returnable reel |

xxxx: Belden colour code