

## Standards for copper data cables

### Areas of application of the standards

Cabling standardisation comes from two main organisations:

ISO/IEC defines standards that are applicable world wide.

In Europe, an additional organisation called CENELEC defines specifications which support safety guidelines on behalf of the European Union and the EFTA. Thus, the European Standard EN is the principal reference standard in most European countries.

The cabling system standards are defined in the standards ISO/IEC 11801 and EN 50173-1.

These standards also describe the basic requirements for data cables. Due to these requirements the different cable specifications were worked out and defined in the following documents.

### Standards for symmetrical data cables

In Europe, the following international standards are for information only.

#### INTERNATIONAL STANDARDS

ISO/IEC 11801  
is valid worldwide



<b>ISO/IEC 11801</b>	Information technology and application-independent wiring systems
<b>IEC 61156</b>	Multiconductor and symmetrical pair-/star quad twisted cable for the digital communication transmission
	IEC 61156-1: Subject basic specification
	IEC 61156-2: Frame specification for floor cable
	IEC 61156-3: Frame specification for equipment connection cable
	IEC 61156-4: Frame specification for distribution cables
	IEC 61156-5: Frame specification for data cables up to 1000 MHz
	IEC 61156-6: Frame specification for equipment connection cable up to 1000 MHz
	IEC 61156-7: Frame specification for Backbone cable up to 1200 MHz

These international documents specify the data cables of the categories 3, 5, 6, 6<sub>A</sub>, 7 and 7<sub>A</sub> for patch and connecting cables, for installation cables and backbone cables.

#### EUROPEAN STANDARDS



EN 50173  
is the European standard

<b>50173 series 2011</b>	Information technology: Generic cabling
	Part 1: General requirements      Part 4: Homes
	Part 2: Office premises            Part 5: Data centres
	Part 3: Industrial premises        Part 6: Distributed building services
<b>50174 series</b>	Information technology: Cabling installation
	Part 1: Specification and quality assurance
	Part 2: Installation planning and practices inside buildings
	Part 3: Installation planning and practices outside buildings
<b>EN 50310</b>	Application of equipotential bonding and earthing in buildings with information technology equipment
<b>EN 50288</b>	Multiconductor metallic data and control cables for an analogue and digital transmission
<b>EN 50288-1</b>	Subject basic specifications
<b>EN 50288-2-1</b>	Frame specification for shielded cables for the horizontal and backbone area up to 100 MHz (Cat.5)
<b>EN 50288-2-2</b>	Frame specification for shielded equipment and connecting cables up to 100 MHz (Cat.5)
<b>EN 50288-3-1</b>	Frame specification for unshielded cables for horizontal and backbone area up to 100 MHz (Cat.5)
<b>EN 50288-3-2</b>	Frame specification for unshielded equipment and connecting cables up to 100 MHz (Cat.5)
<b>EN 50288-4-1</b>	Frame specification for shielded cables for horizontal and backbone area up to 600 MHz (Cat.7)
<b>EN 50288-4-2</b>	Frame specification for shielded equipment and connecting cables up to 600 MHz (Cat.7)
<b>EN 50288-5-1</b>	Frame specification for shielded cables for horizontal and backbone area up to 250 MHz (Cat.6)
<b>EN 50288-5-2</b>	Frame specification for shielded equipment and connecting cables up to 250 MHz (Cat.6)
<b>EN 50288-6-1</b>	Frame specification for unshielded cables for horizontal and backbone area up to 250 MHz (Cat.6)
<b>EN 50288-6-2</b>	Frame specification for unshielded equipment and connecting cables up to 250 MHz (Cat.6)
<b>EN 50288-9-1</b>	Frame specification for shielded cables for horizontal and backbone area up to 1000 MHz (Cat.7 <sub>A</sub> )
<b>EN 50288-10-1</b>	Frame specification for shielded cables for horizontal and backbone area up to 500 MHz (Cat.6 <sub>A</sub> )
<b>EN 55022</b>	EMC standards for office surroundings