



## RJ45 female connector UTP Cat 6 for data cables

RJ45 UTP Cat 6 female connector, reusable and easy to connect. Assembly using a specific tool is recommended to guarantee a perfect finish.

Recommended for PoE and PoE+.

|                     |               |
|---------------------|---------------|
| <b>Ref.</b>         | 209907        |
| <b>Logical ref.</b> | CAT6B-US      |
| <b>EAN13</b>        | 8424450282465 |

### Other features

|                        |                        |
|------------------------|------------------------|
| <b>Colour</b>          | Black                  |
| <b>Supply method</b>   | Plastic box (15 units) |
| <b>Connection type</b> | Female                 |

### Packaging info

|                    |         |
|--------------------|---------|
| <b>Plastic box</b> | 15 pcs. |
|--------------------|---------|

### Physical data

|                            |                      |
|----------------------------|----------------------|
| <b>Net weight</b>          | 6.00 g               |
| <b>Gross volume</b>        | 0.03 dm <sup>3</sup> |
| <b>Gross weight</b>        | 9.00 g               |
| <b>Width</b>               | 22.00 mm             |
| <b>Height</b>              | 30.00 mm             |
| <b>Depth</b>               | 16.00 mm             |
| <b>Main product weight</b> | 6.00 g               |

### Highlights

- Self-crimpable connector, although the use of a termination and cutting tool is recommended to optimize connections (ref.209811)
- Reusable: can be removed and reinstalled without deteriorating or losing functionality
- Technically compatible with PoE/PoE+/PoE++ (Power over Ethernet) technology, allowing the

cable to power network devices

- Multiple-connection guaranteed without losses
- Compatible with Cat 6 or below
- Front (180°) or angled (90°) cable input
- Connection table (A or B) on the connector
- 50 microns gold-plated pins

## Discover

### What is the RJ45?

The RJ45 is a connector commonly used in structured cable networks. With up to 8 connection pins, it is adequate both for data networks (8 pairs), as well as telephone networks (2 pairs). It is usually used in networks compliant with standards TIA/EIA-568-B.

### Compatibility of RJ45 connectors with Televes data cables:

| Reference         |               | CAT 6  |        |      |        |        |        |        | CAT 6A |        |        |        | CAT 7  | CAT 7A |
|-------------------|---------------|--------|--------|------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
|                   |               | 212201 | 212330 | 2123 | 212302 | 212305 | 212310 | 212101 | 219302 | 219312 | 219322 | 219332 | 219102 | 219202 |
| Female connectors | 209901/209907 | OK     | OK     | OK   | OK     | OK     | OK     | X      | X      | X      | X      | X      | X      | X      |
|                   | 209905        | OK     | OK     | OK   | OK     | OK     | OK     | X      | X      | X      | X      | X      | X      | X      |
|                   | 209921/209925 | OK     | OK     | OK   | OK     | OK     | OK     | X      | X      | OK     | X      | OK     | X      | X      |
|                   | 209926        | OK     | OK     | OK   | OK     | OK     | OK     | X      | X      | OK     | X      | OK     | X      | X      |
|                   | 209903        | OK*    | OK*    | OK*  | OK*    | OK*    | OK*    | OK     | X      | X      | X      | X      | X      | X      |
|                   | 209923        | OK*    | OK*    | OK*  | OK*    | OK*    | OK*    | OK     | OK     | OK*    | OK     | OK*    | **     | **     |
|                   | 209929/209501 | OK*    | OK*    | OK*  | OK*    | OK*    | OK*    | OK     | OK     | OK*    | OK     | OK*    | **     | **     |
| Male connectors   | 209902        | OK     | OK     | OK   | OK     | OK     | OK     | X      | X      | X      | X      | X      | X      | X      |
|                   | 209961/209962 | OK     | OK     | OK   | OK     | OK     | OK     | X      | X      | X      | X      | X      | X      | X      |
|                   | 209904        | OK*    | OK*    | OK*  | OK*    | OK*    | OK*    | OK     | X      | X      | X      | X      | X      | X      |
|                   | 209906        | OK     | OK     | OK   | OK     | OK     | OK     | X      | X      | X      | X      | X      | X      | X      |
|                   | 209965/209966 | OK     | OK     | OK   | OK     | OK     | OK     | X      | X      | X      | X      | X      | X      | X      |
|                   | 209922        | OK*    | OK*    | OK*  | OK*    | OK*    | OK*    | X      | X      | OK     | X      | OK     | X      | X      |
|                   | 209924        | OK*    | OK*    | OK*  | OK*    | OK*    | OK*    | OK*    | OK     | OK*    | OK     | OK     | **     | **     |

OK Compatible

OK\* Compatible, but there are better choices

X Incompatible

\*\* Mechanical compatibility

## What is the PoE technology?

PoE (Power over Ethernet) technology enables the simultaneous transmission of power and data over the same Ethernet network cable, eliminating the need for separate power supplies. Currently, there are three main standards: IEEE 802.3af (PoE), IEEE 802.3at (PoE+), and IEEE 802.3bt (PoE++/4PPoE). The latter defines two additional types (Type 3 and Type 4) with higher power levels, making four PoE levels in total.

The three aspects that differentiate the different types of PoE are:

- Maximum PSE (Power Sourcing Equipment) Power: Indicates the maximum amount of electrical power that can be supplied by an equipment over the Ethernet cable.
- Power for the PD (Powered Device): This is the electrical power that can be received by the device powered by the cable.
- Number of Twisted Pairs Used: Refers to how many twisted pairs in the Ethernet cable are used to deliver electrical power.

| Standard            | Type of PoE |       | Maximum PSE Power | Power for the PD | No. of Pairs Used |
|---------------------|-------------|-------|-------------------|------------------|-------------------|
| <b>IEEE 802.3af</b> | Type 1      | PoE   | 15.4W             | 12.95W           | 2                 |
| <b>IEEE 802.3at</b> | Type 2      | PoE+  | 30W               | 25.5W            | 2                 |
| <b>IEEE 802.3bt</b> | Type 3      | PoE++ | 60W               | 51W              | 4                 |
|                     | Type 4      | 4PPoE | 90-100W           | 71W              | 4                 |

Recommended uses according to PoE type:

- Type 1: IP phones, basic IP cameras, low-demand Wi-Fi access points, sensors or simple IoT devices.
- Type 2: Dual band Wi-Fi access points, IP motion cameras (PTZ), IP video phones, alarm systems.
- Type 3: Wi-Fi 6 / Wi-Fi 6E access points, heated PTZ cameras, multimedia terminals, video conferencing equipment.
- Type 4: Monitors or touch screens, desktops, high-performance network equipment.

Devices compatible with a specific type of PoE can also be powered using a higher type, which provides

greater versatility and scalability in installations.

The recommended data cables and connectors for Types 3 and 4 are CAT6A and above with shielding. This recommendation is based on their better ability to dissipate the heat generated during the transmission of electrical power.

CAT6A UTP cables and connectors are technically compatible with PoE++ technology, but they may present limitations over distances greater than 55 m. Since they lack shielding, thermal dissipation is less efficient, which can cause voltage drops along the run and affect the proper operation of the powered device. This also happens with CAT5e and CAT6; they are compatible with PoE++ but not recommended for distances over 55 m.

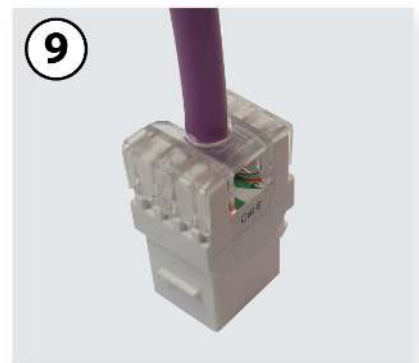
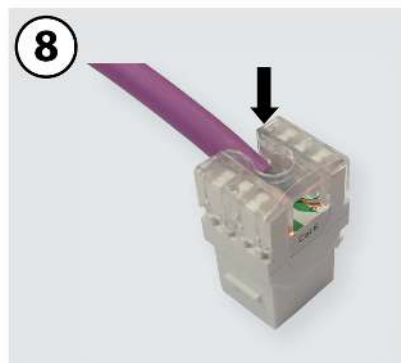
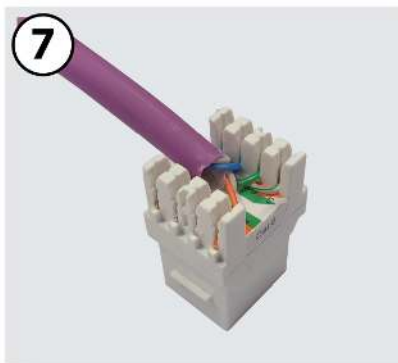
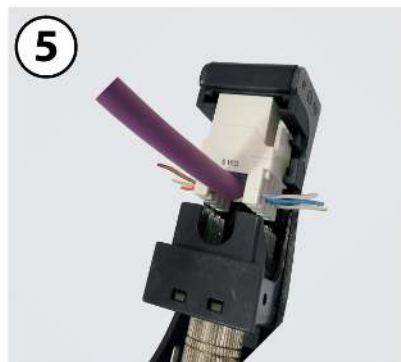
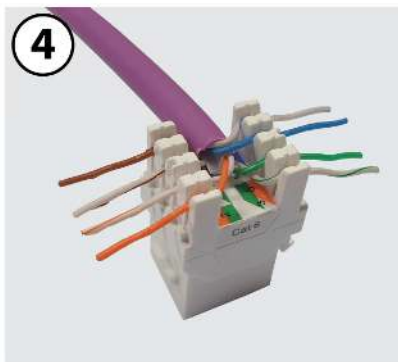
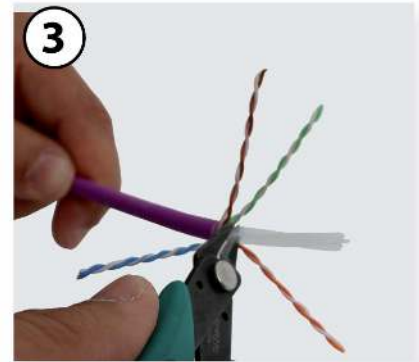
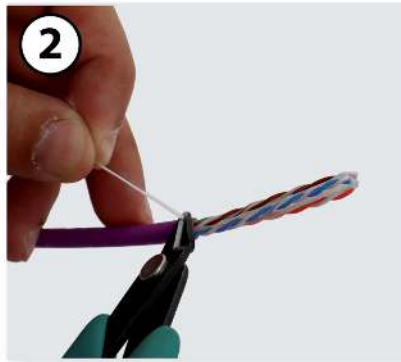
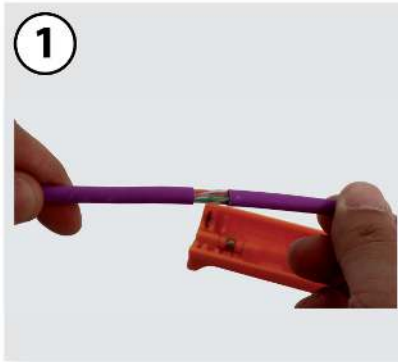
Main advantages of PoE technology in installations:

- Quick and cost-effective installation by using the same cable for power and data transmission.
- Greater installation flexibility as there is no need to rely on auxiliary power sockets.
- More efficient management and optimised maintenance thanks to the monitoring and administration of the power supply of all equipment from a single point.
- Cost reduction by avoiding electrical conduits and external power supplies.
- Increased safety by minimising electrical risks in the installation, thanks to the use of low voltage.

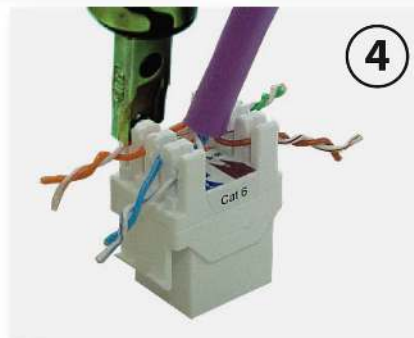
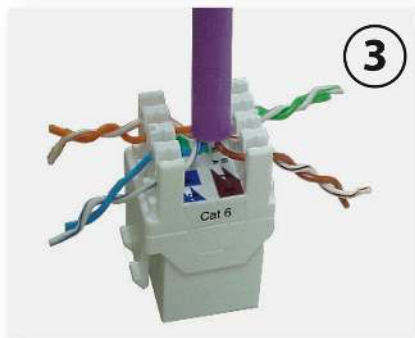
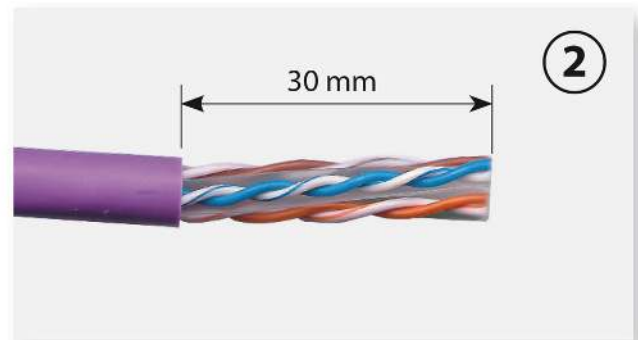
## Mounting details

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### Assembly with tool



**Assembly without tool**



Technical specifications : Ref. 209907

|                                 |     |             |
|---------------------------------|-----|-------------|
| Data connector model            |     | Female      |
| Data connector type             |     | RJ45        |
| Categorie                       |     | Cat 6       |
| Voltage max.                    | Vac | 150         |
| Max. current                    | A   | 1.5         |
| Contact resistance              | mΩ  | 20          |
| Insulation resistance           | MΩ  | 500         |
| Dielectric strength (60Hz/1min) | Vac | 1000        |
| Conductor type AWG              |     | 26 ... 23   |
| Special tool required           |     | Recommended |
| Durability (connection cycles)  |     | 1500        |
| Reusable                        |     | Yes         |
| Cable output                    |     | 90°-180°    |