

# UFP8

## Application Note

### UFP8 - Field installable RJ45 plug instead of wall outlets



Telegärtner's UFP8 is an unshielded, field installable Cat.6<sub>A</sub> RJ45 plug for data rates up to 10 Gbps. Using this plug the horizontal cable can be connected directly to any stationary IP device without the need for outlets and patch cords.



UFP8 at work – the horizontal cable is connected directly to the IP camera, eliminating the need for outlets and patch cords

In many applications there is simply not enough space for an outlet or it is just not wanted for aesthetic reasons.

Telegärtner's UFP8 plug solves this problem elegantly, because it can be simply attached directly to the horizontal cable. Thus the IP device can be connected to the horizontal cable without the need for outlets and patch cords. This offers a lot of benefits for a huge variety of applications: IP cameras, time recording terminals and sensors on a building's facade can be connected safely and reliably to the network; it also applies for touch screens, cameras and wireless LAN access points blending into contemporary lobbies in hotels and company headquarters. As an additional safety feature, direct connections make sure that devices don't get unplugged by unauthorized people in shops, banks or public buildings. Micro switches in cable raceways and LED lighting in office buildings can be connected cost-effectively to the network, omitting the need for outlets and patch cords. And in the rough environment of industrial plants or outside plant applications, bringing the cable into the protective housing with dust and water tight cable entries is a huge benefit especially for machine controls, production lines, wireless installations and control units of solar power plants.

Ordinary RJ45 plugs can't do the job. They are designed for small, flexible cords; the wire diameters of the horizontal cable are too large for them.

Connecting the UFP8 to the horizontal cable is easy; there is no need for special tools:



Installation of UFP8

Telegärtner's UFP8 is designed for highest data rates: Its performance specifications exceed the ISO/IEC 11801:2010 Cat. 6A and support any current copper Ethernet from 10 Mbps up to 10 Gbps. It also supports IEEE 802.3af Power over Ethernet (PoE) and IEEE 802.3at PoE+ which imposingly demonstrates Telegärtner's high quality: In PoE+ applications, up to 600 mA can run over the small contacts of an RJ45 plug. When plugged-out with the application still running, these contacts can be seriously damaged. The special design of Telegärtner's UFP8 is such that the disconnection spark appears in a part of the connector which is not used for data transmission.

With its standardized plug interface according to EN 60603-7-41, Telegärtner's UFP8 can be used for any IP device with an RJ45 jack. It is suitable for use with solid as well as stranded wires. In order to cover a large number of wire gauges, there are two versions available:

Version	Solid conductor diameter	Stranded conductor diameter	Wire diameter
for smaller diameters	0.51 to 0.57 mm AWG 24/1 to 23/1	0.46 to 0.65 mm AWG 27/7 to 23/7	0.85 to 1.1 mm
for larger diameters	0.57 to 0.64 mm AWG 23/1 to 22/1	0.65 to 0.76 mm AWG 23/7 to 22/7	1.1. to 1.6 mm

The four-chamber wire manager ensures a quick and trouble-free wire separation. When ordering, please choose between termination method T568A or T568B, as they need different wire managers. And should anything go wrong connecting the wires: Telegärtner's UFP8 wire manager can be reconnected up to four times. Besides wire managers can be bought as replacements.

Decades of experience in both, data networking and industrial applications, enable Telegärtner to combine the two of them in a very elegant and efficient way. With the UFP8 you get a robust, field-installable RJ45 connector which can be directly attached on the horizontal cable quickly and simply without the need for special tools.



## UFP8 by Telegärtner: simple and straight-forward

### Benefits

- suitable for solid and stranded wire
- conductor diameter
  - solid AWG24/1 - 22/1 (0.51 - 0.64 mm)
  - stranded AWG27/7 - 22/7 (0.46 - 0.76 mm)
- adjustable strain relief
- outer cable diameter 5.5 to 8.5 mm
- supports data rates from 10 Mbps to 10 Gbps
- suitable for Power over Ethernet (PoE and PoE+)
- backwards compatible with existing RJ45 jacks
- optional IP68 housing
- no need for special tools
- no need for special training
- easy retrofit with existing equipment and cabling