DDCP-Link
Application Note

Defined Disconnect CP-Link – Effective protection for mobile devices

Telegärtner’s Defined Disconnect CP-Link is a piece of connecting hardware which is installed between the outlet or the electronic device and the patch cord. It opens automatically at a tensile load over 20 N and protects stationary and mobile devices. CP stands for Consolidation Point and describes the connection between female connector, cabling and plug. According ANSI/TIA/EIA-568-C.2 (Commercial Building Telecommunication Cabling standard) and ISO/IEC 11801 (Information technology – Generic cabling for customer premises) a consolidation point is described as the connection between horizontal cables extending from building and furniture pathways.

Everybody knows the problem: Mobile devices are moved or stationary equipment is relocated over a larger distance than originally intended while the patch cord is still plugged in. Should the equipment be moved too far, the jacks get damaged, causing long outages and high costs. Very often people get hurt as well, raising concerns about accident prevention.

The DDCP-Link effectively protects mobile diagnostic equipment. In hospitals, in the automotive industry, in garages, shipyards, meeting rooms and in production plants – mobile IP devices are used nearly everywhere: diagnostic, ultrasound, mobile x-ray units, testers, service and diagnostic equipment for automotive, air and space and marine applications; ad hoc installations for TV and radio transmissions as well as for trade fairs, schools and universities; investigation and security equipment, appliances for event management, catering, service points... And in most cases, wireless connections just don’t make sense and don’t deliver the required bandwith.

The maximum tensile load of 20 N is well below the specification of the IEC 60603-7 standard for RJ45 connectors. Should this value be exceeded, the plug of the patch cord slides out of the DDCP’s jack like a skier’s foot out of a well-adjusted ski binding that opens automatically and quickly in a case of emergency. This makes sure that the connection between patch cord and DDCP-Link always disconnects first.

Damaged latch protection of patch cord as a result of for getting to disconnect the patch cord
However, the insertion and retention force of the DDCP-Link is high enough to prevent the link from being disconnected unintentionally. The latch protection of the DDCP’s plug is an additional safety feature. The integrated cable pigtail of the DDCP-Link also works reliably when critical shear and lateral forces occur. Devices can be moved in any direction, even along walls.

With plug and jack meeting the specifications of the IEC 60603-7-51 standard and an integrated, stranded Cat.7 S/FTP cable pigtail, the DDCP-Link offers full 10 gigabit performance over the entire frequency range of 500 MHz. Thanks to its fully-shielded construction and the large temperature range from -40 °C until 70 °C, the DDCP-Link can be used in the harsh environment of garages and for mobile services and diagnostic equipment. Recognized by the light blue color (“Telegärtner blue”) of the rubberized ABS plastic, the DDCP-Link reflects Telegärtner’s standards of high quality.

It can be used with power over Ethernet (PoE) according to IEEE 802.3af as well as PoE+ according to IEEE 802.3at with up to 600 mA. With its special design, the small pins of the DDCP-Link remain undamaged should the plug be released while the equipment is still running: When disconnecting, the spark occurs at a part of the pin which is not used for data transmission. Because of this, the cord can be released more than 750 times with PoE+ running at full load and the jack still offers full 10 Gbps performance covered by Telegärtner’s extended warranty.

In addition to its technical benefits, the DDCP-Link is a very economical solution: The DDCP-Link can be easily integrated even into existing links just by plugging one end of the patch cord in the DDCP-Link. Customers don’t have to call a network specialist to implement this simple and cost-effective solution.

The Defined Disconnect CP-Link can be ordered at Telegärtner’s sales channel.