

Data Transmission Connectors under Electrical Load (PoE+)

1. PURPOSE

Testing was performed on Data Transmission Connectors related to IEC 60603-7-1 (i.e. RJ45) and related to IEC 61076-3-104, to determine conformance according to IEC 60512-99-001 (Ed. 1.0) - Connectors Under Electrical Load.

2. ABSTRACT OF THE STANDARD

IEC 60512-99-001:2012 used for the assessment of connectors within the scope of SC 48B that are used in twisted pair communication cabling with remote power, such as ISO/IEC 11801 Class D, or better, balanced cabling in support of IEEE Std 802.3at - 2009 (latest edition for PoE+ at time of testing). The purpose of this standard is to detail a test schedule to determine the ability of connectors to withstand a minimal number of engagements and separations when an electrical current is being passed through the connector in accordance with IEC 60512-9-3.

3. SCOPE

This report covers the connectors for data transmission used in twisted pair communication cabling with remote power, submitted to mechanical test, electrical load (before and after “flowing mixed gas corrosion” testing) and manufactured by TE Connectivity. The testing was performed, on analysed connectors, during Sept. – Oct. 2013 and Nov. 2014.

4. CONCLUSION

Tested samples meet the mechanical, electrical and environmental performance requirements of applicable CommScope Production Specifications as well as the requirements of IEC 60512-99-001 (Ed. 1.0) in support of IEEE Std 802.3at – 2009.

5. PRODUCT DESCRIPTION

The connectors for data transmission are used to provide a universal connection interface between premise cabling and the user’s network of communications equipment.

6. TEST SAMPLES

Tested samples were randomly selected from production lots. Following part numbers were used for testing purposes:

Connector Style	Part Number (or * Catalog Number -if any-)	General product description
RJ45	1375191-x / 1375190-x / 1933455-x / 1375189-x	Cat. 5e Jack
RJ45	1375055-x / 1375187-x / 1499925-x / 1933748-x / 1933749-x / 1375188-x	Cat. 6 Jack
RJ45	336511-x / 336545-x	Side and Angled Entry Jack Shielded for Cat.6 Applications
RJ45	1711160-x / 1711342-x / 1711295-x / 1711343-x	AMP-TWIST 6S SL Jack
RJ45	2153000-1 / 2153001-1	AMP-TWIST 6AS Stnd SL Jack
RJ45	1711592-1 / 1711716-1	AMP-TWIST6AS SL Jack
RJ45	1711998-x / 1711999-x	AMP-TWIST 6S Basic SL Jack
RJ45	1711895-x / 1711919-x	AMP-TWIST EAS Basic SL Jack
Non RJ45	1711441-1 / 1711437-1	AMP-TWIST 7AS SL
RJ45	300001743975 / 300001743978	Q- Jack Cat.6A
RJ45	(*) 6830 1 811-xx/ 6830 1 885-xx/ 6830 1 810-xx/ 6830 1 800-xx/ 6830 1 830-xx/ 6830 1 835-xx	KM8 Jack Series
RJ45	2153354-x	Cat 6A Shld E Series

7. REVISION HISTORY

- Updated to CommScope format.