
AMP CO Plus PoE Insert

1. SCOPE

1.1 Content

This specification covers performance, tests and quality requirements for AMP CO PoE Insert. This assembly provides a universal connection interface between premise wiring of an office and the user's network of communications equipment.

1.2 Qualification

When tests are performed on subject product line, procedures specified in Figure 1 shall be used. All inspections shall be performed using applicable inspection plan and product drawing.

2. APPLICABLE DOCUMENTS

The following documents form a part of this specification to the extent specified herein. Unless otherwise specified, the latest edition of the document applies. In the event of conflict between the requirements of this specification and the product drawing, the product drawing shall take precedence. In the event of conflict between the requirements of this specification and the referenced documents, this specification shall take precedence.

2.1 CommScope® Documents

- A. 109-197: AMP Test Specifications vs EIA and IEC Test Methods
- B. 501-93018: Qualification Test Report
- C. C-1711125: Insert dual PoE B->A for PP
- D. C-1711130: Insert ISDN & PoE B->A for PP
- E. C-1711135: Insert dual PoE mode A (may be used as counter part of Insert 1711125; Product Spec. applicable to Insert 1711135 is 108-22148)
- F. C-1711140: Insert ISDN & PoE mode A (may be used as counter part of Insert 1711130; Product Spec. applicable to Insert 1711140 is 108-22148)

2.2 Other Documents

- A. ISO/IEC 11801: Generic Cabling for Customer Premises (2002/E)
- B. EN 50173: Information Technology; Generic Cabling Systems
- C. ANSI/TIA/EIA 568-B.2-1: Commercial Building Telecommunications Cabling Standard
- D. IEC 60512: Basic testing procedures and measuring methods for electromechanical components for electronic equipment, Test Specifications as indicated in Fig. 1
- E. IEC 60068: Basic Environmental testing procedures, Test Spec. as in Fig. 1
- F. IEEE 802.3af: CSMA/CD Access Method and Physical Layer Specifications, Amendment: DTE Power via MDI

3. REQUIREMENTS

3.1 Design and Construction

Product shall be of design, construction and physical dimensions specified on applicable product drawing.

3.2 Materials

Materials shall be as specified on applicable product drawing.

3.3 Ratings

- A. Voltage: 57 V dc max.
- B. Current: 450 mA dc max.
- C. Temperature: -40 to 70 °C

3.4 Performance and Test Description

Product is designed to meet electrical, mechanical and environmental performance requirements specified in Figure 1. Unless otherwise specified, all tests shall be performed at ambient environmental conditions in accordance with 5.3.1. of IEC 60068-1.

3.5 Test Requirements and Procedures Summary

Test Description	Requirement	Procedure
Examination of Product	Meets requirements of product drawing	Visual, dimensional and functional per applicable quality inspection plan
ELECTRICAL		
Input to Output Resistance Conn Hdw configuration	ISDN Jack: Cat 5 limit accord. to ISO/IEC 11801 2 nd Ed. PoE Jack: N/A	IEC 60512-2 Test 2a See Figure 3
Input to Input Resistance Conn Hdw configuration - PoE Jack	$R_{final} - R_{initial} \leq 10\%$ Max. 1.100 mΩ Max. 650 mΩ, measured in the centre tap of the magnetics.	IEC 60512-2 See Figure 4 & 5
Shield Contact Resistance	ISO/IEC 11801 2 nd Ed.	IEC 60512-2 Test 2a
Insulation Resistance Conn Hdw configuration	ISDN Jack & PoE Jack: Cat. 5 limit accord. ISO/IEC 11801 2 nd Ed.	IEC 60512-2, Test 3a Method C
Dielectric Withstanding Voltage Conn Hdw configuration	ISDN Jack & PoE Jack: Cat. 5 limit accord. ISO/IEC 11801 2 nd Ed.	IEC 60512-2, Test 4a See Figure 4 & 5
Current-Carrying Capacity Conn Hdw configuration	ISO/IEC 11801 2 nd Ed.	IEC 60512-3 Test 5b. See Figure 6 350 mA dc. Max. increment of T = 10° C
TRANSMISSION		
Insertion Loss	ISDN Jack: Cat 5 limit accord. ISO/IEC 11801 2 nd Ed. Conn Hdw configuration PoE Jack: Class D limit accord. ISO/IEC 11801 2 nd Ed. Link configuration	IEC 60512-25-2
Near End Crosstalk	ISDN Jack: Cat 5 limit accord. ISO/IEC 11801 2 nd Ed. Conn Hdw configuration PoE Jack: Class D limit accord. ISO/IEC 11801 2 nd Ed. Link configuration	IEC 60512-25-1

Return Loss	ISDN Jack: Cat 5 limit accord. ISO/IEC 11801 2 nd Ed. Conn Hdw configuration PoE Jack: N/A	IEC 60512-25-5
ENVIRONMENTAL		
Stress Relaxation	See Note	IEC 60068-2-2, Test Method 9b. Subject mated samples to temperature life at 70°C for 500 hours.
Corrosion Testing	See Note	IEC 60512-11-7 Test Conditions: SO ₂ 0,5 ppm (Volume) H ₂ S 0,1 ppm (Volume) T= (25 ± 2)°C HR= (75 ± 3) % Test time 4 days

NOTE Shall meet visual requirements, show no physical damage and shall meet requirements of additional tests as specified in Test Sequence in Figure 2.

Figure 1 (End)

3.6 Product Qualification and Requalification Test Sequence

Test or Examination	Test Group (a)					
	1	2	3	4	5	6
	Test Sequence (b)					
Examination of Product	1,8	1,13	1,9			
Input to Output Resistance Conn Hdw configuration	2,6	2,9				
Input to Input Resistance Conn Hdw configuration - PoE Jack	3,7	3,10				
Shield Contact Resistance	4	4				
Insulation resistance Conn Hdw configuration		5,11				
Dielectric Withstanding Volt. Conn Hdw configuration		6,12				
Current-Carrying Capacity Conn Hdw configuration		7				
Insertion Loss			2,8			
Near End Crosstalk			3,7			
Return Loss			4,6			
Stress Relaxation		8	5			
Corrosion Testing	5					

NOTE (a) See Para 4.1.A.
(b) Numbers indicate sequence in which tests are performed.

Figure 2

4. QUALITY ASSURANCE PROVISIONS

4.1 Qualification Testing

A. Sample Selection

Samples shall be prepared in accordance with applicable Instruction Sheets and shall be selected at random from current production. All test groups shall each consist of a minimum of 4 samples.

B. Test Sequence

Qualification inspection shall be verified by testing samples as specified in Figure 2.

4.2 Requalification Testing

If changes significantly affecting form, fit or function are made to the product or manufacturing process, product assurance shall coordinate requalification testing, consisting of all or part of the original testing sequence as determined by development / product, quality and reliability engineering.

4.3 Acceptance

Acceptance is based in verification that the product meets the requirements of Figure 1. Failures attributed to equipment, test setup or operator deficiencies shall not disqualify the product. When product failure occurs, corrective action shall be taken and samples resubmitted for qualification. Testing to confirm corrective action is required before resubmittal.

4.4 Quality Conformance Inspection

Applicable CommScope quality inspection plan will specify the sampling acceptable quality level to be used. Dimensional and functional requirements shall be in accordance with applicable product drawing and this specification.

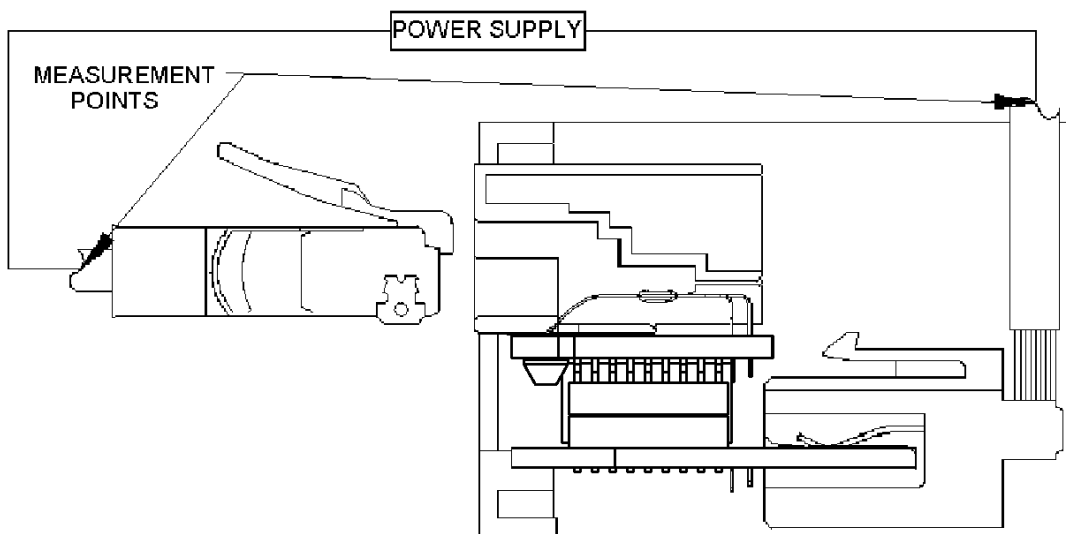
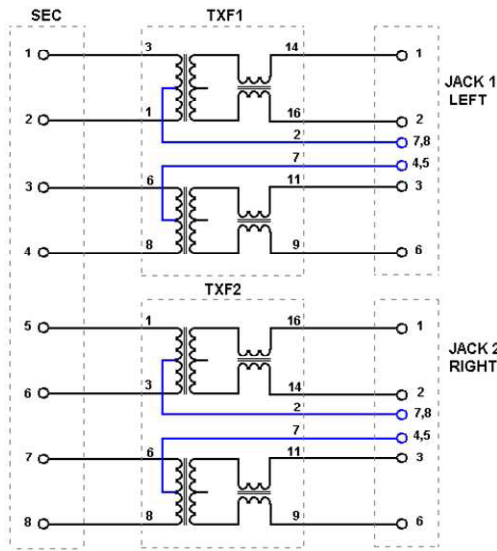
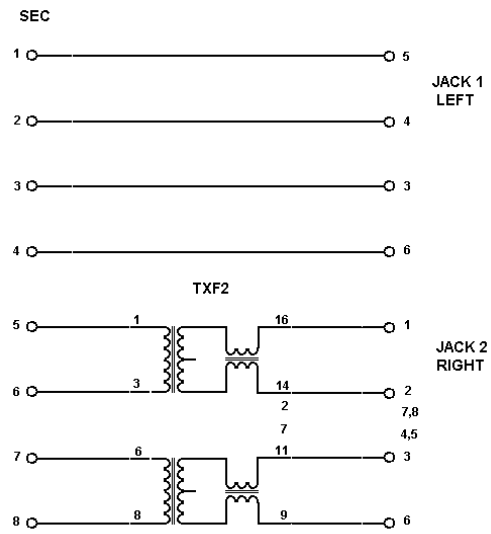


Figure 3



Dual PoE-PoE
Figure 4



ISDN-PoE
Figure 5

Input-Input Resistance, measured between the indicated wires; see Figures 4 & 5

- | | | | |
|-----------------|----------------|--------------|---------------|
| * SEC 1 - SEC 2 | * SEC 1 - JL 7 | SEC 5 - JR 7 | * JL 1 - JL 2 |
| * SEC 3 - SEC 4 | * SEC 2 - JL 8 | SEC 6 - JR 8 | * JL 3 - JL 6 |
| SEC 5 - SEC 6 | * SEC 3 - JL 4 | SEC 7 - JR 4 | JR 1 - JR 2 |
| SEC 7 - SEC 8 | * SEC 4 - JL 5 | SEC 8 - JR 5 | JR 3 - JR 6 |

Insulation Resistance + Dielectric Withstanding Voltage, measured between the wires grouped as follows; see Figures 4 & 5

- * SEC 1 + * SEC 2 + SEC 5 + SEC 6 ----- * SEC 3 + * SEC 4 + SEC 7 + SEC 8
- * JL 1 + JL 2 ----- JL 3 + JL 6
- JR 1 + JR 2 ----- JR 3 + JR 6
- * JL 1 + JL 2 + JL 3 + JL 6 ----- JR 1 + JR 2 + JR 3 + JR 6
- ** JL 3 + JL 5 ----- JL 4 + JL 6

NOTES

- SEC means Shielded Edge Connector
- JL means Jack Left
- JR means Jack Right
- * combination not applicable on ISDN-PoE
- ** combination only applicable on ISDN-PoE

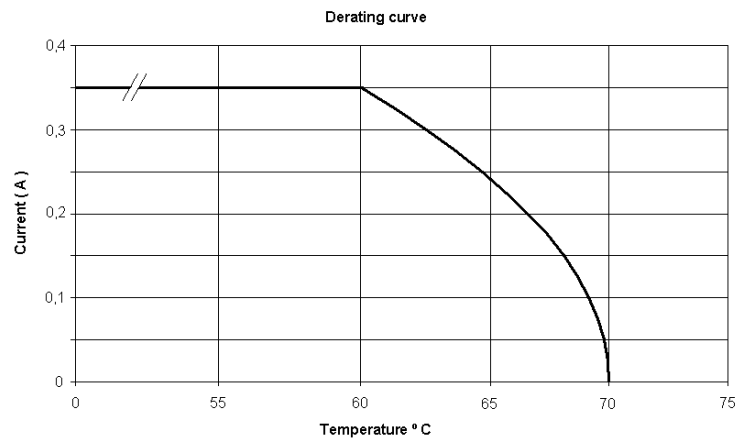


Figure 6