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## NETCONNECT\* SL Series Category 6 Jacks

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### DESIGN OBJECTIVES

The product described in this document has not been fully tested to ensure conformance to the requirements outlined below. Therefore Tyco Electronics makes no representation or warranty, express or implied, that the product will comply with these requirements. Further, Tyco Electronics may change these requirements based on the results of additional testing and evaluation. Contact Tyco Electronics Engineering for further details.

#### 1. SCOPE

##### 1.1. Content

This specification covers transmission performance requirements for NETCONNECT\* Category 6 shielded and unshielded SL Series 110 jacks. These assemblies are designed for installation into various outlet plates, surface mount boxes, panels, and other similar type fittings. Jacks incorporate IDC terminals for terminating both shielded or unshielded twisted pair communications cable. Jacks will accommodate 22 - 24 AWG solid and 24 AWG stranded conductors. The maximum conductor insulation diameter is 1.27 mm [.050 in].

##### 1.2. Qualification

When tests are performed on the subject product line, procedures specified in Figure 1 shall be used. All inspections shall be performed using the 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. Tyco Electronics Document

501-TBD: Qualification Test Report (NETCONNECT\* SL Series Category 6 Jacks)

##### 2.2. Industrial Standards

- TIA/EIA-568-B.2: Commercial Building Telecommunications Cabling Standard Part 2: Balanced Twisted-Pair Cabling Components
- TIA/EIA-568-B.2-1: Transmission Performance Specifications for 4Pair Category 6 Cabling

##### 2.3. Reference Documents

- 108-1990: Product Specification (NETCONNECT\* SL Series Jacks and Category 6 Plugs)
- 114-13035: Application Specification (8 Position Category 6 Modular Plug Connectors)
- 408-8417: Instruction Sheet (SL Series 110 Connect Modular Jacks)
- 408-8602: Instruction Sheet (Shielded SL Series 110 Connect Modular Jacks)

#### 3. REQUIREMENTS

##### 3.1. Design and Construction

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

PRELIMINARY

3.2. Materials

Materials used in the construction of this product shall be as specified on the applicable customer drawing.

3.3. Performance and Test Description

Product is designed to meet the electrical, mechanical and environmental performance requirements specified in Figure 1. Unless otherwise specified, all tests shall be performed at ambient environmental conditions.

3.4. 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.
<b>TRANSMISSION</b>		
Near end crosstalk (NEXT).	TIA/EIA-568-B.2-1	TIA/EIA-568-B.2-1
Return loss.	TIA/EIA-568-B.2-1	TIA/EIA-568-B.2-1
Insertion loss.	TIA/EIA-568-B.2-1	TIA/EIA-568-B.2-1
Far end crosstalk (FEXT).	TIA/EIA-568-B.2-1	TIA/EIA-568-B.2-1
Longitudinal conversion loss (LCL).	TIA/EIA-568-B.2-1	TIA/EIA-568-B.2-1
Transfer impedance.	TIA/EIA-568-B.2	TIA/EIA-568-B.2

**NOTE** Shall meet visual requirements, show no physical damage, and meet requirements of additional tests as specified in the Product Qualification and Requalification Test Sequence shown in Figure 2.

Figure 1 (end)

3.5. Product Qualification and Requalification Test Sequence

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Test or Examination	Test Group (a)	
	1	2
Test Sequence (b)		
Examination of product	1	1
NEXT	2	2
Return loss	3	3
Insertion loss	4	4
FEXT	5	5
(LCL)	6	6
Transfer impedance		7

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

Figure 2

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#### 4. QUALITY ASSURANCE PROVISIONS

##### 4.1. Qualification Testing

###### A. Specimen Selection

Plugs and jacks shall be prepared in accordance with applicable Instruction Sheet and shall be selected at random from current production. Test groups 1 and 2 shall each consist of 5 specimens (plug and jack). Test plugs per TIA/EIA-568-B.2 shall be used.

###### B. Test Sequence

Qualification inspection shall be verified by testing specimens 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 or controlling industry specification, 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 on verification that the product meets the requirements of Figure 1. Failures attributed to equipment, test setup or operator deficiencies shall not disqualify the product. If 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

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

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