



1P AMPSEAL Coaxial Vertical Back-shells
Specification

1P AMPSEAL Coaxial Vertical Back-shells
产品规范

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1. SCOPE 适用范围

1.1 Content 内容

This specification covers the performance, tests and quality requirements for the unsealed motor-vehicle hybrid connectors with secondary locking device in which 1P AS16 Coaxial Back-shells are used. s.

本规范涵盖了使用 1P AS16 Coaxial Back-shells 的具有非密封混合汽车连接器的性能、测试和质量要求。

1.2 Qualification 鉴定

When tests are performed, the following specifications and standards shall be used. All inspections shall be performed using the applicable inspection plan and product drawing.

本测试规范依照下面的规范及标准执行。所有的检验应依照合适的检验计划及产品图纸执行。

2. APPLICABLE DOCUMENTS 适用文件

2.1 Usable document 使用文件

In the event of conflict between the requirements of this specification and the drawing, the drawing shall take precedent. In the event of conflict between the requirement of this specification and the referenced documents, this specification shall take precedent.

在本规范的要求与图纸发生冲突时，以产品图纸为准。在本规范的要求与参考文件发生冲突时，以本规范为准。

2.2 TE specifications 泰科电子规范

A 109-1: General requirements for Test Specifications / 测试通用规范

B. Customer drawings, Naming and part numbers

2452956 BACK-SHELL KIT, 1 POSTION, AMPSEAL 16

- 2452956-1 AS16 BACKSHELL, 1P, SMOOTH EXIT, NO WIND

- 2452956-2 AS16 BACKSHELL, 1P, NW7.5 EXIT, NO WIND

2452956-3 AS16 BACKSHELL, 1P, SMOOTH EXIT, WINDOW

2452956-4 AS16 BACKSHELL, 1P, NW7.5 EXIT; WINDOW

C. Product specifications. (Reference)

- 108-151043 AMPSEAL 16 Vertical and Right Angle Backshells

D. Application specifications

- 114-160843 APPLICATION SPEC FOR 1 POSTION, AMPSEAL 16 BACK-SHELLS

F. TE Connectivity (TE) Documents

AUT-CN-2300153OR01 : Qualification Test Report (1P AMPSEAL 16 Coaxial Backshells)

2.3 Other specifications 其他规范

- A. USCAR-2 REVISION 6
- B. SAE J2030: Heavy-Duty Electrical Connector Performance Standard
- C. EIA-364:
Electrical Connector/Socket Test Procedures Including Environmental Classifications

3. REQUIREMENT 要求

3.1 Design and Construction 设计和结构

Products must meet the design, construction and physical dimensions specified in the applicable product drawings.

产品必须满足产品图纸上的设计，结构和尺寸要求。

3.2 Material 材料

Description of the material sees the related product drawings.

材料描述见相关产品图纸。

3.3 Test parameters and tolerances 测试参数与公差

Table 1: Test parameters and tolerances

Requirement 要求	Tolerance 公差
Ambient temperature 环境温度	23°C ± 5°C
Relative humidity 相对湿度	45% to 75%
Atmospheric pressure 大气压力	96kPa ± 10kPa

3.4 Ratings 等级



- A. Operating Temperature range: -40 °C to +125°C
工作温度范围: -40 °C to +125°C
- B. Storage Temperature range: -40 °C to +105°C
储存温度范围: -40 °C to +105°C
- C. Rated Voltage: 24V
额定工作电压: 24V
- D. Flammability according UL94: V0
可燃性符合 UL94 V0

3.5 General Performance and Test description 通用性能和试验描述

Unless otherwise specified, all tests shall be performed at ambient environmental conditions.

除非另有规定，所有试验应在环境条件下进行。

3.6 Tests requirement and method summary 测试要求及方法

Test Description	Requirements	Test Procedures
Initial and final examination of product	Meets requirements of product drawing.	SAE J2030 6.1 and 6.27 Visual inspection of product before and after testing for conditions such as cracked plastic, deformation, degradation, or anything that affects performance or serviceability of the product deemed by qualified Engineer.
MECHANICAL		
Adapter Side Load (4 Directions)	>50 Newton's 	No Specification Procedure Secure a connector/backshell assembly in a vice horizontally and apply downward force on the outer most point of the backshell at 25mm/min until 50N is reached. Hold for 5 seconds. Apply in all 4 directions.
Adapter Axial Pull	>75 Newton's 	No Specification Procedure Secure a connector/backshell assembly in a vice vertically and apply pull force on the outer most point of the backshell at 25mm/min until 75N is reached. Hold for 5 seconds.
Thermal Shock	meet visual requirements, show no physical damage	SAE J2030 6.13. Subject specimens to 10 thermal cycles between -40°C and 125°C with 1 hour dwells at temperature extremes.
Connector Drop Test	meet visual requirements, show no physical damage	SAE USCAR 2-2013 5.4.8 1.Divide samples into 6 groups of 3 samples each for testing X, Y, and Z axis orientation. 2.For each group, drop one sample at a time once and only once onto a horizontal concrete surface from a height of at least 1 meter, orienting the samples in six groups corresponding to the six connector "faces" of a rectangular connector. Use one group for each orientation shown.
Temperature Life		EIA-364-17. Subject specimens to 125 ± 3°C for 500 hrs.

3.7 Product Qualification and Requalification Test Sequence

TEST OR EXAMINATION	TEST GROUP(a)				
	1	2	3	4	5
	TEST SEQUENCE(b)				
Initial examination of product	1,3	1,3	1,3	1,3	1,3
Adapter Side Load (4 Directions)	2				
Adapter Axial Pull		2			
Thermal Shock			2		
Connector Drop Test				2	
Temperature Life					2

NOTE:

(a) See paragraph 4.1.A.

(b) Numbers indicate sequence in which tests are performed.

4. QUALITY 质量

4.1 Qualification test 鉴定

Samples must be in accordance with drawings and be taken in a random way in the production in progress.

样件必须与产品图纸一致，并且是生产过程中随机选取的。

4.2 Requalification test 重新鉴定

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

如果产品或者制造过程中有显著影响外观，装配和功能的设变，质保需要协调按照原先工程定义的测试顺序，重新验证全部或者部分测试项目。

4.3 Acceptance 验收

Acceptance is based on verification that the product meets the requirements of section 3.6. 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 resubmitted.

归咎于测试设备，样件安装或者操作员的失误的失效不应判定产品不合格。当产品失效发生时，需要有纠正措施以及重新提交样件进行验证。在重新验证前，需确认已有纠正措施。

4.4 Quality conformance inspection 质量合格检验

The applicable TE Connectivity quality inspection plan will 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

TE Connectivity 的质量检验计划将指定适用的质量标准。尺寸和功能要求，应按照适用的产品图纸和本规范。