

108-5147

Rev. B1

Product Specification

(製品規格)

“250” Series, Housing Lance Connector

(250 シリーズ・ハウジング・ランス・コネクタ)

Following first 9 pages are English version and last 8 pages are Japanese version. This top sheet is not part of the specification but explains both of English and Japanese versions are available.

このトップシートに続く最初の9ページは英語版で、その後の8ページは日本語版です。このトップシートは、規格には含まれませんが、英語、日本語両方があることを説明しています。

108-5147

NUMBER

Customer Release
AMP SECURITY CLASSIFICATION

108-5147

"250" Series, Housing Lance Connector
Product Specification

1. Scope:

This specification covers product performance requirements and test methods for "250" Series Housing Lance Connectors of the following part numbers,

1.1 Housing:

| Number of Positions | Product Catalog Numbers | |
|---------------------|-------------------------|--------------|
| | Cap Housing | Plug Housing |
| 1 | 172127 | 172128 |
| 2 | 172129 | 172130 |
| 3 | 172131 | 172132 |
| 4 | 172133 | 172134 |
| 6 | 171897 | 171898 |
| 8 | 172135 | 172136 |
| 10 | 172137 | 172138 |

1.2 Contacts:

| Wire Size mm ² | Size (AWG) | Contact Catalog Number | |
|------------------------------|---------------|------------------------|--------|
| | | Receptacle | Tab |
| 2.0 - 3.0 | (14 - 12) | 1376071 | 170341 |
| 0.5 - 2.0 | (20 - 14) | 170342 | 170340 |
| 0.3 - 0.5 | (22 - 20) | 170350 | 170349 |

For terminating small numbers of contact positions, receptacle contacts of the part numbers 170258, 170032 and 170384 are available. These receptacle contacts have insertion/extraction force larger than these listed in this product line.

| | | | | | | | | | |
|-----|--------------------------|----|-----|---------|--------------|----------|--|--|--|
| B1 | Revised FJ00-0730-00 | AY | 2 | 4/20/00 | | | | | |
| B | Revised RFA-1982 | AY | 25 | 3/3/00 | DR | 12-26-00 | | | |
| A2 | REVISED RFA-1892 | | | 10/2 | CHK | 12-26-00 | | | |
| A1 | Paras. (14-12 was 24-22) | | | 9/1 | APP | 12-26-00 | | | |
| A | Revised per RFA-507 | | | 3/1 | | | | | |
| O | Released | | | 2/26/00 | | | | | |
| LTR | REVISION RECORD | DR | CHK | DATE | SHEET 1 OF 9 | | NAME "250" Series, Housing Lance Connector | | |

AMP Tyco Electronics
AMP K.K.

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2. Product Features:

AMP "250" Series, Housing Lance Connector has been designed to provide reliable termination with lowered insertion/extraction force of contacts, and better contact locking in positions by the aid of housing lances featured in the housing cavity. The housing design is compatible to accept contact loading of the conventional types having higher insertion/extraction force to meet the requirements for the purpose of application.

3. Materials:

3.1 Housing:

Housings are made of molded 6/6 Nylon resin

3.2 Contacts:

Contacts are made from brass strip conforming to Copper Alloy 260 of ASTM B 36.

4. Product Design Feature, Construction and Dimensions:

Product design feature, construction and dimensions shall be conforming to the requirements specified in the applicable customer product drawing(s).

4.2 Applicable Wires:

The wires of the following ranges shall be used for terminating contacts.

| Applicable Wire Range | | Contact Part Numbers |
|-----------------------|-----------|-------------------------------|
| mm ² | (AWG) | |
| 0.3 - 0.5 | (22 - 20) | 170349, 170350 170384 |
| 0.5 - 2.0 | (20 - 14) | 170340, 170342, 170032-2 & -5 |
| 2.0 - 3.0 | (14 - 12) | 170341, 1376071, 170258 |

4.3 Temperature Rating:

Temperature rating of the product connector shall be within the range of -30°C to +105°C, which includes temperature rising by operating electric energy in addition to the ambient temperature where the connector is used.

| | | | | |
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5. Performance Requirements:

5.1 Electrical Performance:

| Item | Test Name | Test Method | Specified Requirements: | | | |
|------|---|-------------|---|------------------|----------------------------|-------------------------------|
| 1. | Termination Resistance and Temperature Rising | Para. 6.1 | Wire Size (mm ²) | Test Current (A) | Millivolt Drop (mV) (Max.) | Temperature Rising (°C) (Max) |
| | | | 0.3 | 2 | 6 | 20 |
| | | | 0.5 | 4 | 12 | 20 |
| | | | 0.85 | 7 | 21 | 20 |
| | | | 1.25 | 10 | 30 | 30 |
| | | | 2.0 | 15 | 45 | 30 |
| 3.0 | 20 | 60 | 30 | | | |
| 2. | Insulation Resistance | Para. 6.2 | 100 MΩ Min. | | | |
| 3. | Dielectric Strength | Para. 6.3 | No abnormalities such as corona and flashover shall be evident after testing. | | | |

5.2 Physical Performance:

| Item | Test Name | Test Method | Specified Requirements: | |
|------|--|-------------|---|--------------------|
| 1. | Crimp Tensile Strength | Para. 6.4 | Wire Size (mm ²) | Tensile Strength N |
| | | | 0.3 | 58 |
| | | | 0.5 | 88 |
| | | | 0.85 | 127 |
| | | | 1.25 | 177 |
| | | | 2.0 | 265 |
| 3.0 | 343 | | | |
| 2. | Contact Insertion and Extraction Force | Para. 6.5 | Insertion Force 7.8-2 0N Extraction Force 7.8-2 0N | |
| 3. | Contact Retention Force | Para. 6.6 | 59N Min. | |

| | | | | |
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5.2 Physical Performance (Continued):

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| Item | Test Name | Test Method | Specified Requirements: | | |
|------|---|-------------|---|------------------------|-------------------------|
| | | | Number of Positions | Insertion Force N Max. | Extraction Force N Min. |
| 4. | Connector Insertion and Extraction Force: | Para. 6.7 | | | |
| | | | 1 | 29 | 5 |
| | | | 2 | 29 | 7 |
| | | | 3 | 39 | 13 |
| | | | 4 | 49 | 20 |
| | | | 6 | 98 | 29 |
| | | | 8 | 118 | 39 |
| | | | 10 | 147 | 59 |
| 5. | Vibration Low Frequency: | Para. 6.8 | Connector assembly shall show any abnormalities such as damages and cracks that are detrimental to connector functions. Termination resistance after vibratile conditioning shall be within 10mV/A. | | |

5.3 Environmental Performance:

| Item | Test Name | Test Method | Specified Requirements: |
|------|--------------------------|-------------|---|
| 1. | Humidity: (Steady State) | Para. 6.9 | Termination Resistance: 10 mΩ Max. (Low Level) Insulation Resistance: 100 MΩ Min. Dielectric Strength: No abnormalities shall be evident. |
| 2. | Heat Resistibility | Para. 6.10 | Termination Resistance: 10 mΩ Max. (Low Level) |
| 3. | Cold Resistibility: | Para. 6.11 | Termination Resistance: 10 mΩ Max. (Low Level) |

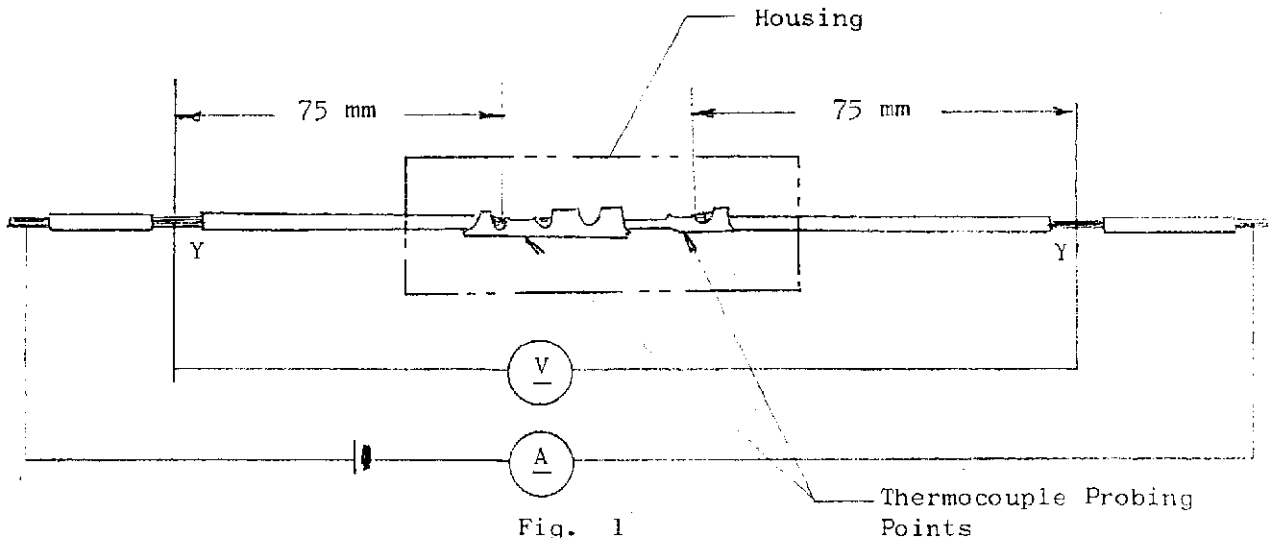
| | | | | |
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6. Test Methods:

6.1 Termination Resistance, Low Level Termination Resistance and Temperature Rising:

Contact-loaded and mated pair of connector assemblies shall be tested for termination resistance including low level test and temperature rising, by applying test current to the circuit as shown in Fig. 1. Measurement shall be done after temperature rising of the current-loaded circuit becomes stabilized, by using the DC voltmeter probing between the points Y and Y'. Termination resistance of wire crimp and frictional contact area is obtained by calculation after deducting the resistance of a 150mm long wire used for termination. The probing point Y is located 75mm apart from the wire crimp where insulation is removed accordingly and soldered to stabilize the measurement reading during the test. The temperature rise of the connected circuit is measured by probing across Y and Y' with the use of thermocouple, and the value obtained from the calculation to deduct ambient temperature from the measurement reading is the amount of temperature rising.

The low level termination resistance is obtained by using test current of 50 mA DC max. at the open circuit voltage of 50 mV DC maximum.



6.2 Insulation Resistance:

Insulation resistance of contact-loaded and mated pair of connectors is tested in accordance with Test Condition B(500V \pm 10%), Test Method 302 of MIL-STD-202, by applying test potential between adjacent contacts and between the contacts and the ground.

| | | | |
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6.3 Dielectric Strength:

Dielectric strength of contact-loaded and mated pair of connector assemblies shall be tested in accordance with the test method specified in Test Method 301 of MIL-STD-202 by applying test potential of 1 KV AC between the adjacent contacts and between the contacts and the ground for 1 minute.

6.4 Crimp Tensile Strength:

Fasten wire-crimped contact to the head of tensile testing machine and apply an axial pull off load to the crimped wire by operating the head to travel with the speed at a rate of 100 mm a minute. The force required to pull-off the wire from the wire crimp shall be measured and recorded.

6.5 Contact Insertion/Extraction Force:

Fasten one of crimped and mated pair of contacts on the head of tensile testing machine, and apply axial load to pull off and push in the contacts to mate and unmate by operating the head to travel with the speed at a rate of 100 mm a minute. The force required to insert and extract the contacts shall be measured and recorded.

6.6 Contact Retention Force:

Fasten contact-loaded housing on the head of tensile testing machine, and apply an axial load to pull off the contact to the crimped wire by operating the head to travel with the speed at a rate of 100 mm a minute. The force required to dislodge the contact from housing cavity shall be measured and recorded.

6.7 Connector Insertion/Extraction Force:

Fasten contact-loaded pair of connector assemblies on the head of tensile testing machine in the manner that they mate and unmate without the locking device set in effect. Insertion and extraction force is measured by operating the head to travel with the speed at a rate of 100mm a minute. The force required to mate and unmate the connectors shall be measured and recorded.

6.8 Vibration (Low Frequency):

Fasten contact-loaded and mated pair of connectors on the vibration testing table in the manner as shown in Fig. 2. Vibratile conditioning is applied to the connectors at 33Hz. with accelerated velocity of 44m/s^2 (4.5G)'s in the directions parallel and vertical to contact mating axis for 200 hours totally with direction changes in turns at every 50 hours of testing.

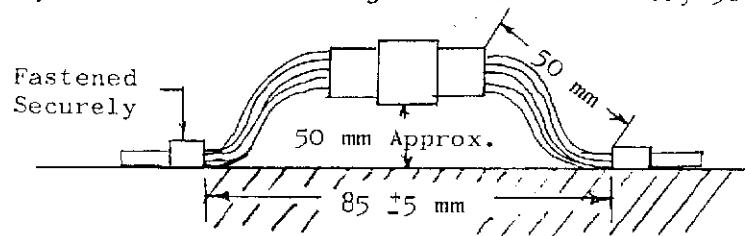


Fig. 2

| | | | |
|---|---|----------|-----|
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6.9 Humidity (Steady State):

Contact-loaded mated pair of connector assemblies are tested by exposing under humidity atmosphere ranging 90 - 95% at the temperature of 60 ±5°C in the test chamber, where they are suspended with consideration to avoid falling of waterdrops over the connector sample for 96 hours. After test duration, sample shall be removed from the test chamber, and after reconditioning in the room temperature, low level termination resistance, insulation resistance and dielectric strength shall be measured and recorded.

6.10 Heat Resistibility:

Contact-loaded and mated pair of connector assemblies shall be tested by exposing under the elevated temperature controlled in the oven at 120 ±3°C for 120 hours. After the test duration, sample shall be reconditioned in the room temperature, and tested for low level termination resistance.

6.11 Cold Resistibility:

Contact-loaded and mated pair of connector assemblies shall be tested by exposing under the chill atmosphere controlled in the test chamber where -50°C is maintained for 120 hours. After completion of test duration, sample connector shall be removed and reconditioned in the room temperature, and measured for low level termination resistance.

| | | | |
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|--|------------------|--------|--|-----------------------------|--------------|---|---|---|---|---|---|---|---|----|----|
| | | | 7. Test Items and Test Sequence: | | | | | | | | | | | | |
| | | | Test Items | Applicable Paragraph Number | Sample Group | | | | | | | | | | |
| | | | | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
| | | | Appearance | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| | | | Termination Resistance(Initial) | 6.1 | 2 | | | | | | | | | | |
| | | | Termination Resistance(Initial) (Low Level) | 6.1 | | | | | | | | | | | |
| | | | Insulation Resistance(Initial) | 6.2 | | 2 | | | | | | | | | |
| | | | Dielectric Strength(Initial) | 6.3 | | | 2 | | | | | | | | |
| | | | Crimp Tensile Strength | 6.4 | | | | 2 | | | | | | | |
| | | | Contact Insertion/Extraction Force | 6.5 | | | | | 2 | | | | | | |
| | | | Contact Retention Force | 6.6 | | | | | | 2 | | | | | |
| | | | Connector Insertion/Extraction Force | 6.7 | | | | | | | 2 | | | | |
| Vibration, Low Frequency | 6.8 | | | | | | | | 2 | | | | | | |
| Humidity | 6.9 | | | | | | | | | 2 | | | | | |
| Heat Resistibility | 6.10 | | | | | | | | | | 2 | | | | |
| Cold Resistibility | 6.11 | | | | | | | | | | | 2 | | | |
| Termination Resistance(Final) | 6.1 | | | | | | | | 3 | | | | | | |
| Termination Resistance(Final) (Low Level) | 6.1 | | | | | | | | | | 3 | 3 | | | |
| Insulation Resistance(Final) | 6.2 | | | | | | | | | 3 | | | | | |
| Dielectric Strength(Final) | 6.3 | | | | | | | | | 4 | | | | | |
| Temperature Rising | 6.1 | 3 | | | | | | | | | | | | | |
| Appearance | | | | | | | | | 4 | 5 | 4 | 4 | | | |

| | | | |
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8. Reference Documents:

The following specifications form part of this specification, to the extent specified herein.

- JIS-C-3406 Low Voltage Wires for Automobiles
- 114-5052 Crimping of "250" Series, Housing Lance Connector Contacts


9. Test Conditions and Test Specimens:

9.1 Unless otherwise specified, all the tests shall be performed under any combination of the following test conditions.

- Temperature: 15 - 35°C
- Relative Humidity: 45 - 75%
- Atmospheric Pressure: 86.7-107KPa (650 - 800mmHg)

9.2 Sample Preparation:

All the samples to be employed for the tests shall be prepared by crimping the wires of applicable sizes specified in this specification, in accordance with the procedure specified in instruction sheets. The crimped contacts shall be conforming to the requirements specified in 114-5052, Application Specification for Crimping of "250" Series, Housing Lance Connector Contacts. No sample shall be reused, unless otherwise specified.

| | | | | |
|--|---|---|------------------------------|-----------|
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社内標準

(技術標準)

管理基準：一般顧客用

タイコエレクトロニクスアンブ機

製品規格

108-5147

250 シリーズ・ハウジング・ランス・コネクタ

1. 適用範囲

本規格は、250 シリーズ・ハウジング・ランス・コネクタのうち以下の型番について規定する。

1.1 ハウジング

| 極数 | キャップハウジング | プラグハウジング |
|----|-----------|----------|
| 1 | 172127 | 172128 |
| 2 | 172129 | 172130 |
| 3 | 172131 | 172132 |
| 4 | 172133 | 172134 |
| 6 | 171897 | 171898 |
| 8 | 172135 | 172136 |
| 10 | 172137 | 172138 |

1.2 コンタクト

| 適用電線範囲 (mm ²) | リセブタクル | タブ |
|---------------------------|---------|--------|
| 2.0 ~ 3.0 | 1376071 | 170341 |
| 0.5 ~ 2.0 | 170342 | 170340 |
| 0.3 ~ 0.5 | 170350 | 170349 |

(注) なお1極用リセブタクルとして以下の型番の製品が用意されています。

リセブタクル； 170258, 170032, 170384 (従来品と同等の挿抜力を有するリセブタクル)

| | | | | | | |
|----|---------|--------------|----------------|-----------------------|----------|-----|
| | | | | 作成： | 分類： | |
| | | | | 製品規格 | | |
| B1 | 改訂 | FJ00-0730-00 | AY 8/2 4/7/80 | 検査： J. Schatz 2/14/81 | | |
| B | 改訂 | RFA-1982 | AY 1/7 1/13/77 | コード： | | 改訂 |
| A1 | REVISED | RFA-1892 | AY 1/13/77 | 108-5147 | | B1 |
| A | 改訂 | RFA-507 | AY 1/13/77 | 承認： | | |
| 0 | 作成 | RFA-488 | AY 1/13/77 | 名称： 250 シリーズ | | |
| 改訂 | 改訂記録 | | 作成 | 検査 | 承認 | 年月日 |
| 昭和 | 年 | 月 | 日 | 制定 | 8 頁中 1 頁 | |

配布

2. 製品の特徴

250 シリーズ・ハウジング・ランス・コネクタは、従来の 250 シリーズ・ラッチ付コネクタに対して以下のような特徴をそなえています。

- (1) ハウジングに端子ロックの為の樹脂ランスを構成し、端子をロックさせる。
- (2) 穴のあいているリセブタクル・コンタクトは低嵌合力タイプであり、又タブ・コンタクトは逆差し防止爪が付いている。

3. 使用材料

3.1 ハウジング

66 ナイロン： 耐熱グレード

3.2 コンタクト

黄銅： ASTM B36 COPPER ALLOY 260 に準拠する黄銅条により製造される。

4. 構造および形状・寸法

4.1 適用電線範囲

| 適用電線範囲 (mm ²) | コンタクト型番 |
|---------------------------|--------------------------------|
| 0.3 ~ 0.5 | 170349, 170350, 170384 |
| 0.5 ~ 2.0 | 170340, 170342, 170032-2 及び -5 |
| 2.0 ~ 3.0 | 170341, 1376071, 170258 |

4.2 形状・寸法

該当図面に合致していること。

4.3 使用温度範囲

-30 °C ~ 105 °C (周囲温度 + 通電による温度上昇)

分類：

製品規格

標準の名称：

250 シリーズ・ハウジング・ランス・コネクタ

標準のコード：

108-5147

改訂

B1

2 頁

8 頁中

5. 性能

5.1 電気的性能

| | 項目 | 試験方法 | 規格値 | | | |
|---|-------------|------|--|-------------------------------|---------------------------------|----------------------------------|
| | | | 電線サイズ (mm ²) | 試験電流 (A) | 電圧降下 (mV)以下 | 温度上昇 (°C)以下 |
| 1 | 総合抵抗および温度上昇 | 6.1 | 0.3 0.5 0.85 1.25 2.0 3.0 | 2 4 7 10 15 20 | 6 12 21 30 45 60 | 20 20 20 30 30 30 |
| 2 | 絶縁抵抗 | 6.2 | 100 MΩ 以上 | | | |
| 3 | 耐電圧 | 6.3 | コロナ放電, フラッシュオーバー等の異常がないこと。 | | | |

5.2 物理的性能

| 1 | 圧着部引張強度 | 6.4 | <table border="1"> <thead> <tr> <th>電線サイズ (mm²)</th> <th>引張強度 N 以上</th> </tr> </thead> <tbody> <tr><td>0.3</td><td>58</td></tr> <tr><td>0.5</td><td>88</td></tr> <tr><td>0.85</td><td>127</td></tr> <tr><td>1.25</td><td>177</td></tr> <tr><td>2.0</td><td>265</td></tr> <tr><td>3.0</td><td>343</td></tr> </tbody> </table> | 電線サイズ (mm ²) | 引張強度 N 以上 | 0.3 | 58 | 0.5 | 88 | 0.85 | 127 | 1.25 | 177 | 2.0 | 265 | 3.0 | 343 | | | | | | | | | | |
|-----------------------------|--------------|-------|---|-----------------------------|--------------|-------|----|-------|------|------|-------|------|-----|-------|-------|-----|-------|-------|---|-------|-------|---|--------|-------|----|--------|-------|
| 電線サイズ (mm ²) | 引張強度 N 以上 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0.3 | 58 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0.5 | 88 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0.85 | 127 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1.25 | 177 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2.0 | 265 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3.0 | 343 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2 | コンタクト挿入引抜力 | 6.5 | 挿入力 7.8-20N 引抜力 7.8-20N | | | | | | | | | | | | | | | | | | | | | | | | |
| 3 | コンタクト保持力 | 6.6 | 59N 以上 | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | コネクタ挿入引抜力 | 6.7 | <table border="1"> <thead> <tr> <th>極数</th> <th>挿入力 N</th> <th>引抜力 N</th> </tr> </thead> <tbody> <tr><td>1</td><td>29 以下</td><td>5 以上</td></tr> <tr><td>2</td><td>29 以下</td><td>7 以上</td></tr> <tr><td>3</td><td>39 以下</td><td>13 以上</td></tr> <tr><td>4</td><td>49 以下</td><td>20 以上</td></tr> <tr><td>6</td><td>98 以下</td><td>29 以上</td></tr> <tr><td>8</td><td>118 以下</td><td>39 以上</td></tr> <tr><td>10</td><td>147 以下</td><td>59 以上</td></tr> </tbody> </table> | 極数 | 挿入力 N | 引抜力 N | 1 | 29 以下 | 5 以上 | 2 | 29 以下 | 7 以上 | 3 | 39 以下 | 13 以上 | 4 | 49 以下 | 20 以上 | 6 | 98 以下 | 29 以上 | 8 | 118 以下 | 39 以上 | 10 | 147 以下 | 59 以上 |
| 極数 | 挿入力 N | 引抜力 N | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 | 29 以下 | 5 以上 | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2 | 29 以下 | 7 以上 | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3 | 39 以下 | 13 以上 | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | 49 以下 | 20 以上 | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6 | 98 以下 | 29 以上 | | | | | | | | | | | | | | | | | | | | | | | | | |
| 8 | 118 以下 | 39 以上 | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10 | 147 以下 | 59 以上 | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5 | 低周波振動 | 6.8 | 振動により, コネクタの破壊のないこと。 および, 試験後の総合抵抗は 10mV/A 以下であること。 | | | | | | | | | | | | | | | | | | | | | | | | |

分類:

製品規格

標準の名称:

250シリーズ・ハウジング・ランス・コネクタ

標準のコード:

108-5147

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5.3 耐環境性能

| | 項目 | 試験方法 | 規格値 |
|---|---------------|------|---|
| 1 | 耐湿性 (定常状態) | 6.9 | ローレベル抵抗 10 mΩ 以下 絶縁抵抗 100 MΩ 以上 耐電圧 異常なきこと。 |
| 2 | 耐熱性 | 6.10 | ローレベル抵抗 10 mΩ 以下 |
| 3 | 耐寒性 | 6.11 | ローレベル抵抗 10 mΩ 以下 |

6. 試験方法

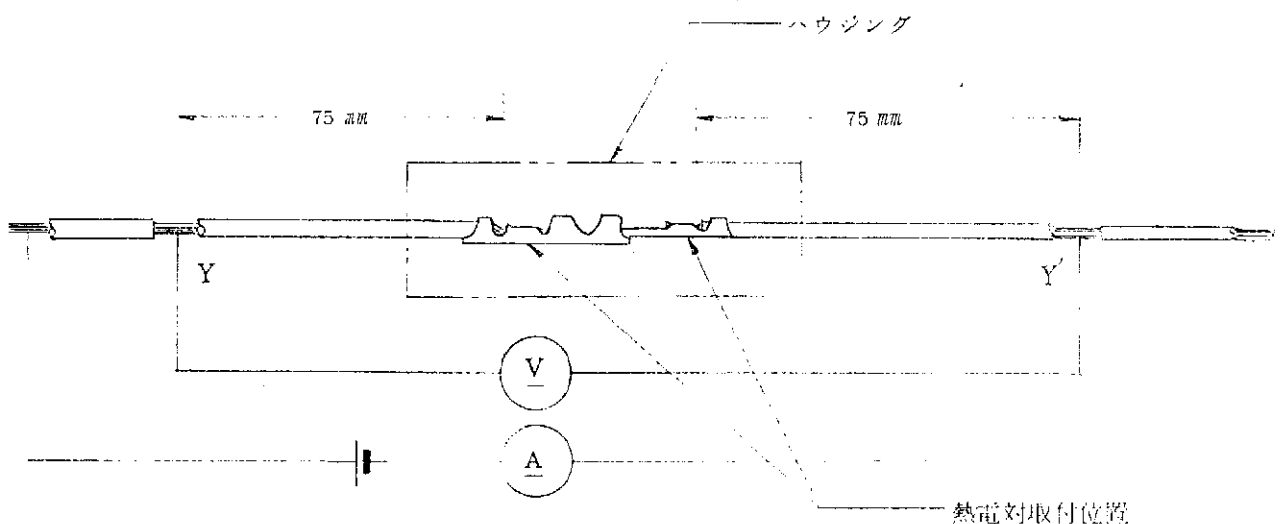
6.1 総合抵抗、ローレベル抵抗及び温度上昇

コネクタを嵌合した状態で規定の電流を第1図のように流す。温度の上昇が安定してから、Y-Y'間を直流電圧計で測定する。コンタクトの圧着部及び嵌合部の総合抵抗は、この測定値から150 mmの電線の抵抗値を差し引いて算出する。

Y, Y'点は圧着部後端から測定して位置を決めるが、その場合に被覆を余分にむきとって、電流密度を一様にするためプローブをあてる電線部分にはんだをもる。

また、温度上昇は図に示すように、圧着部に熱電対を取り付けて測定し、室温を差し引いた値が温度上昇値である。

また、ローレベル抵抗は開放電圧50 mV DC以下、閉路電流50 mA DC以下で行う。



第1図

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6.2 絶縁抵抗

コネクタを嵌合し「MIL-STD-202, 試験法 302, 条件 B (500V ± 10%)」に規定する試験方法により, 隣接するコンタクト相互間およびコンタクトとアース間の絶縁抵抗を測定する。

6.3 耐電圧

コネクタを嵌合し「MIL-STD-202, 試験方法 301」に規定する試験方法により隣接しているコンタクト相互間およびコンタクトとアース間に AC 1KV を 1 分間印加する。

6.4 圧着部引張強度

コンタクトと電線との間に軸方向に 100 mm/min. の速さで荷重を加え, 電線の破断又は圧着部から電線の抜けるときの値を測定する。

6.5 コンタクト挿入引抜力

コンタクトの一方を固定し, 引張試験機にかけて 100 mm/min. の速度で挿入と引抜を行ない測定する。

6.6 コンタクト保持力

ハウジングにコンタクトを組込み, 引張試験機にかけて, コンタクトを 100 mm/min. の速度で引張り, コンタクトがハウジングから引抜ける時の値を測定する。

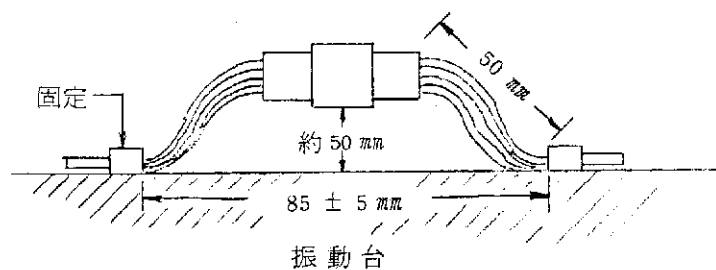
6.7 コネクタ挿入引抜力

コンタクトをハウジングに組込み, 引張試験機にかけて 100 mm/min. の速度で嵌合と離脱を行う。この場合離脱の時, ロッキング・レグは切り取ってロッキング機構が働かないようにして測定する。

6.8 低周波振動

第 2 図のように, コネクタを振動台に取り付け, 下表の加振条件でコンタクトの軸方向および軸と垂直方向に振動させる。

| | | |
|-----|----------------------------|----------------------------|
| 周波数 | 33 Hz | 200 時間 (50 時間ごとに方向を変える) |
| 加速度 | 44 m/s ² (4.5G) | |



第 2 図

6.9 耐 湿 (定常状態)

温度 $60 \pm 5^\circ\text{C}$ ，湿度 90～95% の湿度槽内に，コネクタを落下する水滴が附着しないように吊し，96 時間放置する。その後自然乾燥し，ローレベル抵抗，絶縁抵抗，耐電圧を測定する。

6.10 耐 熱 性

恒温槽内にコネクタを 120 時間放置し，その後取り出して常温に戻るまで放置し，ローレベル抵抗を測定する。なお，温度は $120 \pm 3^\circ\text{C}$ とする。

6.11 耐 寒 性

恒温槽内にコネクタを 120 時間放置し，その後取り出して常温に戻るまで放置し，ローレベル抵抗を測定する。なお，温度は -50°C とする。

| | | | | |
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7. 試験項目及び試験順序

| 試験項目 | 該当試験方法項目 | 試験グループ | | | | | | | | | | | |
|-------------|----------|--------|---|---|---|---|---|---|---|---|---|---|---|
| | | ① | ① | ① | ① | ① | ① | ① | ① | ① | ① | ① | ① |
| 外観 | | | | | | | | | | | | | |
| 総合抵抗(初期) | 6.1 | ② | ↓ | | | | | | | | | | |
| ローレベル抵抗(初期) | 6.1 | | | | | | | | | | | | |
| 絶縁抵抗(初期) | 6.2 | | ② | | | | | | | | | | |
| 耐電圧(初期) | 6.3 | | | ② | | | | | | | | | |
| 圧着部引張強度 | 6.4 | | | | ② | | | | | | | | |
| コンタクト挿入引抜力 | 6.5 | | | | | ② | | | | | | | |
| コンタクト保持力 | 6.6 | | | | | | ② | | | | | | |
| コネクタ挿入引抜力 | 6.7 | | | | | | | ② | | | | | |
| 低周波振動 | 6.8 | | | | | | | | ② | | | | |
| 耐湿性 | 6.9 | | | | | | | | | ② | | | |
| 耐熱性 | 6.10 | | | | | | | | | | ② | | |
| 耐寒性 | 6.11 | | | | | | | | | | | ② | |
| 総合抵抗(終期) | 6.1 | | | | | | | | | ③ | | | |
| ローレベル抵抗(終期) | 6.1 | | | | | | | | | | ③ | ③ | |
| 絶縁抵抗(終期) | 6.2 | | | | | | | | | | ③ | | |
| 耐電圧(終期) | 6.3 | | | | | | | | | | ④ | | |
| 温度上昇 | 6.1 | ③ | | | | | | | | | | | |
| 外観 | | | | | | | | | | ④ | ⑤ | ④ | ④ |

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8. 参 考

(1) 関連規格

JIS-C-3406 自動車用低圧電線

114-5052 取付適用規格 250 シリーズ・リセ及びタブの圧着条件

(2) 試験条件

特に規定する場合を除き、下記の環境条件のもとで性能試験を行うこと。

気 温 15～35℃

湿 度 45～75%

気 圧 86.7-107kPa(650-800mmHg)

(3) 試験試料

性能試験に用いる試料は、規定の適用電線に適合する電線で、114-5052に規定する圧着条件に合格する試料であること。いずれの試料も特に規定しない限り再度試験に用いてはならない。

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