

PRODUCTS SPECIFICATION

TYPE: PLIER TAP CONNECTOR

PART NO. SPTV 05

ISSUED: NOVEMBER 7, 2016

NICHIFU TERMINAL INDUSTRIES CO., LTD.



APPROVED	CHECKED	CHECKED	PREPARED

Y. Yamaguchi M. Nakazato S. Teramoto R. Kuriyama

1. SCOPE This products specification is prepared by NICHIFU TERMINAL INDUSTRIES CO.,LTD. and specified as PLIER TAP CONNECTOR (hereafter to as connector).

2. TYPE AND PART No. Given in Table 1.

Table 1

TYPE	PART NO.	APPLICABLE WIRE SIZE		WIRE OUTSIDE DIAMETER mm	APPLICABLE TOOL
		STRANDED mm ²	AWG		
PLIER TAP CONNECTOR	SPTV 05	0.2~0.5	AWG 24-20	φ1.4~1.8	Commercially available Pliers

3. RATING Given in Table 2.

Table 2

Rated voltage	50 V
Rated current	3 A

4. MATERIAL Given in Table 3.

Table 3

NAME OF PARTS	MATERIAL	Color
Housing	Nylon	Natural
Conductive section	Brass	—

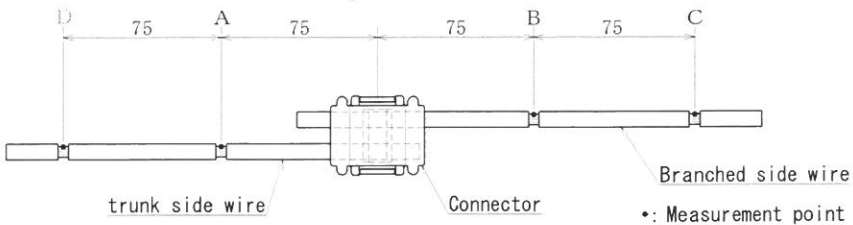
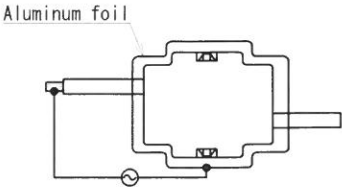
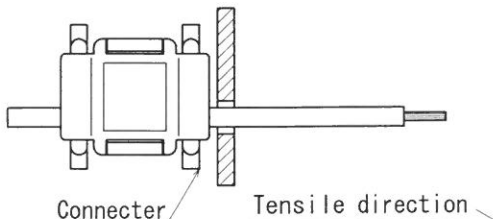
5. PERFORMANCE & TEST

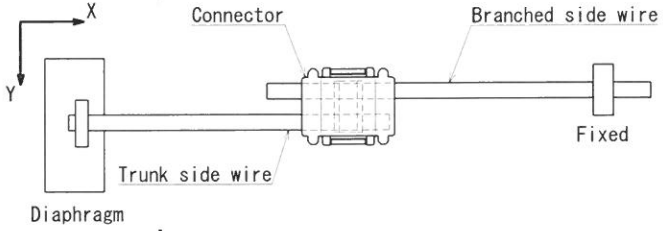
5.1 TEST CONDITION

- (1) Unless otherwise specified, the tests shall be carried out in a room at ordinary temperature ($20\pm 15^{\circ}\text{C}$) and ordinary humidity ($65\pm 20\%$) as specified in JIS Z8703. The test of 6.4 and 6.10 shall be carried out by maintaining the specimens in draft free air at $15\sim 35^{\circ}\text{C}$.
- (2) The test wire is AV wire on trunk side and UL1007 wire on branched side.
- (3) Test current and Pull out test force is given in Table 4.

Table 4

TEST	PERFORMANCE	METHOD
5.2 Appearance	There shall be no defects detrimental to use such as rust, cuts or cracks on the connector.	Visual examination.
5.3 Secureness of Joint	The specimen shall show no cracks on connector.	Visual examination.

TEST	PERFORMANCE	METHOD								
5.4 Electrical Resistance	The electrical resistance of the specimen shall be less than $10\text{m}\Omega$.	<p>As Illustrated in Fig.1, voltage drop is measured between A and B (RAB), when current of 1A is applied.</p> <p>Electrical resistance value is RAB minus voltage drop (between B and C + A and D).</p>  <p style="text-align: center;">figure 1</p>								
5.7 Insulation Resistance	Between connector and ground: $1000\text{M}\Omega$ or more.	<p>Measure the insulation resistance between the connector and the ground by the method shown in the figure 2.</p>  <p style="text-align: center;">figure 2</p>								
5.8 Withstand Voltage	The specimen shall withstand the voltage for 1 minute.	As illustrated in Fig. 2, an AV voltage of 1000V shall be applied for 1 minute.								
5.5 Tensile Strength	<p>There shall be no wire pull out, wire breakage or other defects detrimental to service.</p> <p style="text-align: center;">Table 5</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th>WIRE SIZE mm^2 (AWG)</th> <th>Tensile force N</th> </tr> </thead> <tbody> <tr> <td>0.2 (24)</td> <td>25</td> </tr> <tr> <td>0.3 (22)</td> <td>36</td> </tr> <tr> <td>0.5 (20)</td> <td>58</td> </tr> </tbody> </table>	WIRE SIZE mm^2 (AWG)	Tensile force N	0.2 (24)	25	0.3 (22)	36	0.5 (20)	58	<p>The tensile force at the least specified in Table 5 shall be applied for 10 seconds in figure 3.</p>  <p style="text-align: center;">figure 3</p>
WIRE SIZE mm^2 (AWG)	Tensile force N									
0.2 (24)	25									
0.3 (22)	36									
0.5 (20)	58									
5.8 Moisture resistance	<p>After the test, the following items must be satisfied.</p> <ul style="list-style-type: none"> • Appearance • Insulation Resistance: $100\text{M}\Omega$ or more • Electrical Resistance: $30\text{m}\Omega$ or less 	<p>Continuous exposure in a thermo-hygrostat kept at a temperature of $40\pm 2^\circ\text{C}$ and relative humidity of 90~95% for 72 hours. Allow 1 hour to stand at room temperature, and measure the electric and insulation resistances.</p>								

TEST	PERFORMANCE	METHOD															
5.9 Thermal shock	After the test, the following items must be satisfied. • Appearance • Electrical Resistance:30mΩ or less	After repeating 5 consecutive cycles of Table 6, allow 30 minutes to stand in normal temperature and humidity. Table6 <table border="1"> <thead> <tr> <th></th> <th>Temperature °C</th> <th>Time min</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>-55±3</td> <td>30 or more</td> </tr> <tr> <td>2</td> <td>room temperature</td> <td>5 or less</td> </tr> <tr> <td>3</td> <td>85±2</td> <td>30 or more</td> </tr> <tr> <td>4</td> <td>room temperature</td> <td>5 or less</td> </tr> </tbody> </table>		Temperature °C	Time min	1	-55±3	30 or more	2	room temperature	5 or less	3	85±2	30 or more	4	room temperature	5 or less
	Temperature °C	Time min															
1	-55±3	30 or more															
2	room temperature	5 or less															
3	85±2	30 or more															
4	room temperature	5 or less															
5.10 Heat resistance	After the test, the following items must be satisfied. • Appearance • Electrical Resistance:30mΩ or less	Continue exposure to a humidity chamber kept at a humidity of 80°C±2°C for 72 hours. Allow 30 minutes to stand at room temperature and humidity. Observe the appearance and measure the electric resistance.															
5.11 Vibration fatigue	After the test, the following items must be satisfied. • Appearance • Electrical Resistance:30mΩ or less	Both amplitudes 1.5mm, vibration frequency of 33Hz, vibration direction X and Y axes are performed for 18 hours respectively, by the method shown in figure 4. After standing at room temperature and humidity for 30 minutes, observe the appearance and measure the electric resistance. 															

6. MARKING The following items shall be marked.

6.1 Marking on product

(1) Wire size (AWG), (2) Trade name

6.2 Package In addition to 6.1,

(1) Part No., (2) Quantity, (3) Lot No., (4) Wire outside diameter

7. PACKAGE Given in table 7.

Table 7

PART NO.	Package details	
	Individual package	Inner package
SPTV05	10 pcs/plastic box	100 pcs (10pcs×10box) Cardboard package

*** END OF THIS DOCUMENT ***