



PRODUCT SPECIFICATION



LANGUAGE

JAPANESE
ENGLISH

【4. 性能 PERFORMANCE】

4-1. 電気的性能 Electrical Performance

項 目 Item		条 件 Test Condition	規 格 Requirement
4-1-1	接触抵抗 Contact Resistance	コネクタを嵌合させ、開放電圧 20mV 以下、短絡電流 10mA 以下にて測定する。 (JIS C5402 5.4) Mate connectors, measure by dry circuit, 20mV MAX., 10mA MAX. (JIS C5402 5.4)	20 milliohms maximum
4-1-2	絶縁抵抗 Insulation Resistance	コネクタを嵌合させ、隣接するターミナル間に AC500V を印加し測定する。 (JIS C5402 5.2 / MIL-STD-202 試験法 302) Mate connectors, apply 500V AC between adjacent terminal. (JIS C5402 5.2 / MIL-STD-202 Method 302)	1000 Megaohms minimum
4-1-3	耐電圧 Dielectric Strength	コネクタを嵌合させ、隣接するターミナル間に、AC500V (実効値) を 1 分間 印加する。 「漏洩電流1mA 以下」 (JIS C5402 5.1 / MIL-STD-202 試験法 301) Mate connectors, apply 750V AC for 1 minute between adjacent terminal. 「Current leakage 1mA maximum」 (JIS C5402 5.1 / MIL-STD-202 Method 301)	異状なきこと No Breakdown
4-1-4	圧接部接触抵抗 Contact Resistnce on I.D.T. Portion	ターミナルに適合電線を圧接接続し、開放電圧 20mV 以下、短絡電流 10mA にて測定する。 I.D.T. the applicable wire on to the terminal, measure by dry circuit, 20mV MAX., 10mA.	10 milliohms maximum

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1.25mm PITCH WIRE TO BOARD CONN.

製品仕様書THIS DOCUMENT CONTAINS INFORMATION THAT IS PROPRIETARY TO
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4-2. 機械的性能 Mechanical Performance

項 目 Item		条 件 Test Condition			規 格 Requirement
4-2-1	挿入力及び抜去力 Insertion / Withdrawal force	毎分 25 ± 3 mmの速さで挿入、抜去を行う。 Insert and withdraw connectors, at a rate of 25±3 mm per minute.			第 6 項参照 Refer to paragraph 6
4-2-2	圧接部引張り強度 I.D.T. pull out force	圧接されたターミナルを治具に固定し、電線を軸方向に毎分 25 ± 3 mmの速さで引っ張る。 (JIS C5402 6.8)	軸方向 Axial direction	AWG#26	14.7 N minimum
				AWG#28	11.8 N minimum
				UL3619 (ハロゲンフリー電線) AWG#26	14.7 N minimum
		Fix the I.D.T terminal, apply axial pull out force on the speed rate of 25±3 mm/minute. (JIS C5402 6.8)	垂直方向 Vertical direction	AWG#26	9.8 N minimum
				AWG#28	8 N minimum
				UL3619 (ハロゲンフリー電線) AWG#26	7.8 N minimum
4-2-3	ピン保持力 Pin Retention Force	毎分 25±3 mmの速さでピンを軸方向に押す。 Apply axial push force at the speed rate of 25±3 mm per minute.			9.8 N minimum

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4-3. その他 Environmental Performance and Others

項 目 Item		条 件 Test Condition	規 格 Requirement	
4-3-1	繰り返し挿抜 Repeated Mate/Un-mate	1 分間 10 回以下の速さで挿入、抜去を 30 回繰り返す。 (イジェクターを外した状態にて) When mate and un-mated up to 30 cycles repeatedly at a rate of 10 cycles per minute. (Removed ejector)	接触抵抗 Contact Resistance	40 milliohms maximum
4-3-2	温度上昇 Temperature Rise	コネクタを嵌合させ、最大許容電流を通電しコネクタの温度上昇分を測定する。 (UL 498) Mate connector and measure the temperature rise of contact when the maximum AC rated current is passed. (UL 498)	温度上昇 Temperature Rise	30 °C maximum
4-3-3	耐振動性 Vibration Exposure	DC 1mA 通電状態にて、嵌合軸を含む互いに垂直な 3 方向に掃引割合 毎分10~55~10 Hz/分、全振幅 1.5mm の振動を各 2 時間加える。 (MIL-STD-202試験法 201) Mate connectors and subject to the following vibration conditions, for a period of 2 hours in each of 3 mutually perpendicular axes, passing DC 1 mA during the test. Amplitude : 1.5 mm P-P Frequency : 10-55-10 Hz in 1 minute. Duration : 2 hours in each of X-, Y-, Z-axes. (MIL-STD-202, Method 201)	外観 Appearance	異常なきこと No Damage
			接触抵抗 Contact Resistance	40 milliohms maximum
			瞬断 Discontinuity	1 microsec. maximum

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Environmental Performance and Others (Continued)

項 目 Item		条 件 Test Condition	規 格 Requirement	
4-3-4	耐衝撃性 Mechanical shock	DC 1mA 通電状態にて、嵌合軸を含む互いに垂直な 6方向に 490 m/s^2 (50G) の衝撃を 各3回加える。 (JIS C60068-2-27/MIL-STD-202 試験法 213) Mate connectors and subject to the following shock conditions. 3 times of shocks shall be applied for each 6 directions along 3 mutually perpendicular axes, passing DC 1 mA current during the test. (Total of 18 shocks) Test pulse : Half Sine Peak value : 490 m/s^2 (50 G) Duration : 11 ms (JIS C60068-2-27/MIL-STD-202 Method 213)	外観 Appearance	異常なきこと No Damage
			接触抵抗 Contact Resistance	40 milliohms maximum
			瞬断 Discontinuity	1 microsec. maximum
4-3-5	耐熱性 Heat Resistance	コネクタを嵌合させ、 $105 \pm 2^\circ \text{C}$ の雰囲気中に 96時間 放置後取り出し、1~2時間 室温に放置する。 (JIS C60068-2-2/MIL-STD-202 試験法 108) Mate connectors and expose to $105 \pm 2^\circ \text{C}$ for 96 hours. Upon completion of the exposure period, the test specimens shall be conditioned at ambient room conditions for 1 to 2 hours, after which the specified measurements shall be performed. (JIS C60068-2-2/MIL-STD-202 Method 108)	外観 Appearance	異常なきこと No Damage
			接触抵抗 Contact Resistance	40 milliohms maximum

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項 目 Item		条 件 Test Condition	規 格 Requirement	
4-3-6	耐 寒 性 Cold Resistance	コネクタを嵌合させ、 $-40\pm 3^{\circ}\text{C}$ の雰囲気中に 96 時間放置後取り出し、1~2 時間室温に放置する。 (JIS C60068-2-1) Mate connectors and expose to $-40\pm 3^{\circ}\text{C}$ for 96 hours. Upon completion of the exposure period, the test specimens shall be conditioned at ambient room conditions for 1 to 2 hours, after which the specified measurements shall be performed. (JIS C60068-2-1)	外 観 Appearance	異常なきこと No Damage
			接触抵抗 Contact Resistance	40 milliohms maximum
4-3-7	耐 湿 性 Humidity Exposure	コネクタを嵌合させ、 $60\pm 2^{\circ}\text{C}$ 、相対湿度 90~95%の雰囲気中に96時間放置後取り出し、1~2時間室温に放置する。 (JIS C60068-2-3/MIL-STD-202 試験法 103) Mate connectors and expose to $60\pm 2^{\circ}\text{C}$, relative humidity 90 to 95% for 96 hours. Upon completion of the exposure period, the test specimens shall be conditioned at ambient room conditions for 1 to 2 hours, after which the specified measurements shall be performed. (JIS C60068-2-3/MIL-STD-202 Method 103)	外 観 Appearance	異常なきこと No Damage
			接触抵抗 Contact Resistance	40 milliohms maximum
			耐電圧 Dielectric Strength	4-1-3項満足のこと Must meet 4-1-3
			絶縁抵抗 Insulation Resistance	100 Megaohms minimum
4-3-8	温度サイクル Temperature Cycling	コネクタを嵌合させ、 $-55\pm 3^{\circ}\text{C}$ に30分、 $+105\pm 2^{\circ}\text{C}$ に 30 分、これを 1 サイクルとし、5サイクル繰り返す。但し、温度移行時間は 5 分以内とする。試験後 1~2 時間室温に放置する。 (JIS C0025) Mate connectors and subject to the following conditions for 5 cycles. Upon completion of the exposure period, the specimens shall be conditioned at ambient room conditions for 1 to 2 hours, after which the specified measurements shall be performed. 1 cycle a) $-55\pm 2^{\circ}\text{C}$. . . 30 minutes b) $+105\pm 2^{\circ}\text{C}$. . . 30 minutes Transit time shall be within 5 minutes. (JIS C0025)	外 観 Appearance	異常なきこと No Damage
			接触抵抗 Contact Resistance	40 milliohms maximum

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項 目 Item		条 件 Test Condition	規 格 Requirement	
4-3-9	塩水噴霧 Salt Spray Exposure	コネクタを嵌合させ、 $35\pm 2^{\circ}\text{C}$ にて $5\pm 1\%$ 重量比の塩水を 48 ± 4 時間噴霧し、試験後常温で水洗いした後、室温で乾燥させる。 (JIS C60068-2-11/MIL-STD-202 試験法 101) Mate connectors and expose to the following salt mist conditions. Upon completion of the exposure period, salt deposits shall be removed by a gentle wash or dip in running water, after which the specified measurements shall be performed. NaCl solution Concentration : $5\pm 1\%$ Spray time : 48 ± 4 hours Ambient temperature : $35\pm 2^{\circ}\text{C}$ (JIS C60068-2-11/MIL-STD-202 Method 101)	外観 Appearance	異常なきこと No Damage
			接触抵抗 Contact Resistance	40 milliohms maximum
4-3-10	亜硫酸ガス SO_2 Gas	コネクタを嵌合させ、 $40\pm 2^{\circ}\text{C}$ にて 50 ± 5 ppm の亜硫酸ガス中に、24時間放置する。 Mate connectors and expose to 50 ± 5 ppm SO_2 Gas, ambient temperature $40\pm 2^{\circ}\text{C}$ for 24 hours.	外観 Appearance	異常なきこと No Damage
			接触抵抗 Contact Resistance	40 milliohms maximum
4-3-11	半田付け性 Solderability	ターミナルをフラックスに浸し、本体の取り付け基準面より1.2 mm 迄 $245\pm 3^{\circ}\text{C}$ 半田に 3 ± 0.5 秒浸す。 Dip solder tails in flux then immerse in solder bath at $245\pm 3^{\circ}\text{C}$ up to 0.8 mm from the bottom of the housing for 3 ± 0.5 sec.	濡れ性 Solder Wetting	浸漬面積の90% 以上 90% of immersed area must show no voids, pin holes

() : 参考規格

Reference Standard

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項 目 Item		条 件 Test Condition	規 格 Requirement	
4-3-12	半田耐熱性 Resistance to Soldering Heat	<u>ディップ時 Solder bath method</u> ターミナルを本体の取り付け基準面より 1.2mmまで、 $260\pm5^{\circ}\text{C}$ の半田に 5 ± 0.5 秒浸す。 Dip soldertails into the molten solder <held at $260\pm5^{\circ}\text{C}$ > up to 1.2 mm from the bottom of the housing. The dwell time shall be 5 ± 0.5 sec.	外 観 Appearance	端子ガタ、割れ等 異常なきこと No Damage
		<u>手半田時 Soldering iron method</u> コテ先温度を $380\pm10^{\circ}\text{C}$ に設定した半田ゴテ を、コネクタの端子部に3～4秒間当てて加熱す る。 この際コネクタに機械的ストレスの加わらない よう留意する。 Apply a $380\pm10^{\circ}\text{C}$ of soldering iron to solder tails for 3～4 seconds. However, without too much pressure to the connector.		

【5. 外観形状、寸法及び材質 PRODUCT SHAPE, DIMENSIONS AND MATERIALS】

図面参照 Refer to the drawing.

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【 6. 挿入力及び抜去力 INSERTION AND WITHDRAWAL FORCE 】

極数 No. of CKT.	単位 Unit	挿入力（最大値） Insertion force (MAX.)			抜去力（最小値） Withdrawal force (MIN.)					
					ポジティブロックタイプ* ² Positive lock type			フリクションロックタイプ Friction lock type		
		初回 1 st.	6 回目 6 th.	30 回目 30 th.	初回 1 st.	6 回目 6 th.	30 回目 30 th.	初回 1 st.	6 回目 6 th.	30 回目 30 th.
2	N	27.4	25.4	25.4	0.3	0.3	0.3	2.9	2.5	2.2
3	N	30.4	28.4	28.4	0.45	0.45	0.45	3.5	2.8	2.5
4	N	33.4	31.4	31.4	0.6	0.6	0.6	4.1	3.1	2.8
5	N	36.4	34.4	34.4	0.75	0.75	0.75	4.7	3.4	3.1
6	N	39.4	37.4	37.4	0.9	0.9	0.9	5.3	3.7	3.4
7	N	42.4	40.4	40.4	1.05	1.05	1.05	5.9	4	3.7
8	N	45.4	43.4	43.4	1.2	1.2	1.2	6.5	4.3	4
9	N	48.4	46.4	46.4	1.35	1.35	1.35	7.1	4.6	4.3
10	N	51.4	49.4	49.4	1.5	1.5	1.5	7.7	4.9	4.6
11	N	54.4	52.4	52.4	1.65	1.65	1.65	8.3	5.2	4.9
12	N	57.4	55.4	55.4	1.8	1.8	1.8	8.9	5.5	5.2
13	N	60.4	58.4	58.4	1.95	1.95	1.95	9.5	5.8	5.5
14	N	63.4	61.4	61.4	2.1	2.1	2.1	10.1	6.1	5.8
15	N	66.4	64.4	64.4	2.25	2.25	2.25	10.7	6.4	6.1
16	N	69.4	67.4	67.4	2.4	2.4	2.4	11.3	6.7	6.4
17	N	72.4	70.4	70.4	2.55	2.55	2.55	11.9	7	6.7
18	N	75.4	73.4	73.4	2.7	2.7	2.7	12.5	7.3	7
19	N	78.4	76.4	76.4	2.85	2.85	2.85	13.1	7.6	7.3
20	N	81.4	79.4	79.4	3	3	3	13.7	7.9	7.6

*2: ポジティブロックを解除して測定。

Released a positive lock, and measure.

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