PRODUCT SPECIFICATION

【1. SCOPE】
This specification covers the 4.8mm PITCH WIRE TO WIRE CONNECTOR series.

【2. PRODUCT NAME AND PART NUMBER】

Product Name	Part Number
Female Terminal (AWG #18～24)	5005T,TL
Female Terminal (AWG #24～28)	5009T,TL
Male Terminal (AWG #18～24)	5006T,TL
Male Terminal (AWG #24～28)	5008T,TL
Receptacle Housing	5025-NR1
Plug Housing (With Mounting Ears)	5025-NP
Plug Housing (Without Mounting Ears)	5025-NP1

N: Number of Circuits
Refer to the attached drawing.

【3. RATINGS AND APPLICABLE WIRES】

Item	Standard		
Rated Voltage (MAX.)	250V	〔 AC (rms) / DC 〕	
Rated Current (MAX.)*1 and Applicable wires	5205T,TL / 5206T,TL	5A	Insulation O.D.: φ3.4mm MAX.
	5005T,TL / 5006T,TL	5A	Insulation O.D.: φ3.0mm MAX.
	5008T,TL / 5009T,TL	3A	Insulation O.D.: φ2.4mm MAX.
Ambient Temperature Range	-40°C ～ +105°C*2		

*1 : When used maximum size wire.
*2 : Including terminal temperature rise.

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【4. PERFORMANCE】

4-1. Electrical Performance:

Item		Test Condition	Requirement
4-1-1	Contact resistance	Mate connectors measure by dry circuit, 20mV max., 10mA.	10mΩ MAX.
4-1-2	Insulation Resistance	Mate connectors, apply 500V DC between adjacent terminal or ground	1000MΩ MIN.
4-1-3	Dielectric Strength	Mate connectors, apply 1500V AC for 1 minute between adjacent terminal or ground	No breakdown
4-1-4	Contact Resistance on Crimped Portion	Crimp the applicable wire on to the terminal, measure by dry circuit, 20mV MAX., 10mA.	5mΩ MAX.

4-2. Mechanical Performance:

Item		Test Condition	Requirement	
4-2-1	Insertion and Withdrawal Force	Insert and withdraw connectors at the speed rate of 25±3mm/minute	Refer to paragraph 6	
4-2-2	Crimping Pull Out Force	Fix the crimped terminal, apply axial pull out force on the wire at the speed rate of 25±3mm/minute	AWG #14	10.0 Kgf MIN.
			AWG #16	10.0 Kgf MIN.
			AWG #18	10.0 Kgf MIN.
			AWG #20	6.8 Kgf MIN.
			AWG #22	5.5 Kgf MIN.
			AWG #24	3.6 Kgf MIN.
			AWG #26	2.7 Kgf MIN.
			AWG #28	1.4 Kgf MIN.
4-2-3	Terminal Insertion Force	Insert the crimped terminal into the housing	2.0 Kgf MAX.	
4-2-4	Terminal/ Housing Retention Force	Apply axial pull out force at the speed rate of 25± 3mm/minute on the terminal assembled in the housing	7.0 Kgf MIN.	

4-3. ENVIRONMENTAL PERFORMANCE AND OTHERS

Item		Test Condition	Requirement	
4-3-1	Repeated Insertion/ Withdrawal	When mated up to 30 cycles repeatedly by the rate of 10 cycles per minuite	Contact Resistance	20mΩ MAX.
4-3-2	Temperature Rise	Carrying rated current load		30°C MAX.
4-3-3	Vibration	Amplitude: 1.5mm P-P Sweep time: 10-55-10 Hz in 1 minute Duration: 2 hours in each X.Y.Z. axes	Appearance	No Damage
			Contact Resistance	20mΩ MAX.
			Dis-continuity	1μ sec. MAX.
4-3-4	Shock	50G, 3 strokes in each X.Y.Z. axes	Appearance	No Damage
			Contact Resistance	20mΩ MAX.
			Dis-continuity	1μ sec. MAX.
4-3-5	Heat Resistance	105±2°C, 96 hours	Appearance	No Damage
			Contact Resistance	20mΩ MAX.
4-3-6	Cold Resistance	-40±3°C, 96 hours	Appearance	No Damage
			Contact Resistance	20mΩ MAX.
4-3-7	Humidity	Temperature: 60±2°C Relative Humidity: 90~95% Duration: 96 hours	Appearance	No Damage
			Contact Resistance	20mΩ MAX.
			Dielectric Strength	Must meet 4-1-3
			Insulation Resistance	100MΩ MIN.
4-3-8	Temperature Cycling	5 cycles: a) - 55°C 30 MIN. b) +105°C 30 MIN.	Appearance	No Damage
			Contact Resistance	20mΩ MAX.

Item		Test Condition	Requirement	
4-3-9	Salt Spray	48 hours exposure to a salt spray from the 5% solution at 35°C	Appearance	No Damage
			Contact Resistance	20mΩ MAX.
4-3-10	SO_2 Gas	24 hours exposure to 50 ppm. SO_2 gas at 40°C	Appearance	No Damage
			Contact Resistance	20mΩ MAX.

【5. PRODUCT SHAPE, DIMENSIONS AND MATERIALS】
Refer to the attached drawing.

【6: INSERTION/WITHDRAWAL FORCE】

(kgf)

CKT SIZE	Insertion (MAX.)			Withdrawal (MIN.)		
	Initial	6th.	30th.	Initial	6th.	30th.
2	4.0	3.6	2.8	0.30	0.20	0.20
3	6.0	5.4	4.2	0.45	0.30	0.30
4	8.0	7.2	5.6	0.60	0.40	0.40
6	12.0	10.8	8.4	0.90	0.60	0.60
9	18.0	16.2	12.6	1.35	0.90	0.90
12	24.0	21.6	16.8	1.80	1.20	1.20
15	30.0	27.0	21.0	2.25	1.50	1.50

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