

Product Specification [产品规格书]:	Document No	PS-HRS-3025-03
Subject [主题]: 3.00mm Pitch HRS-3025 Series Connector Specification	Date Issued	2012/09/08
	Date Revised	2020/03/12
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This specification is referred to the 3.00mm series wire to wire connector

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【1.适用范围 Scope】

此种规格包括 3.00mm Pitch HRS-3025 Series 连接器规格说明.

This Specification Covers the 3.00mm Pitch HRS-3025 Series Connector Specification.

【2.规格与料号 Spec and Part number】

规格内容 Specification	产品料号 Production No.
端子/Terminal	HRS-3025TF-PSN-B HRS-3025TM-PSN
胶壳/Housing	HRS-3025HM-2xXX-N0BBR01F HRS-3025HF-2xXX-N0BBR01F

【3.材质与表面处理 Disposal of Material and surface】

规格内容 Specification	材 质 Materials	表面处理 Disposal of Surface
端子/Terminal	磷铜 (C5191) /Phosphor Bronze	Nickel Plated: 50u" Min Tin Plated: 100u" Min
胶壳/Housing	PA66	UL94V-0

(上述参数请以工程图为准/Please Refer to the Project drawing for the above Specification)

【4. 额定等级 Ratings and applicable wires】

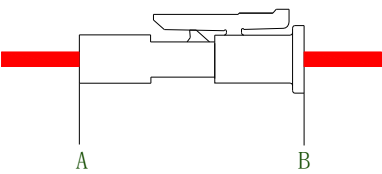
项 目【Item】	规 格【Standard】	
额定电压 Rated Voltage (Max.)	250V	
额定电流 Rated Current (Max.)	5A	
使用温度范围 Ambient temperature Range	-40°C~+105°C	
适用线径 Applicable wire insulation AWG(mm ²)	AWG#20~22 (0.50~0.35mm ²)	Insulation 绝缘 O.D. 1.85mm (Max.)

【 *升温时含端子.Including terminal temperature rise. 】

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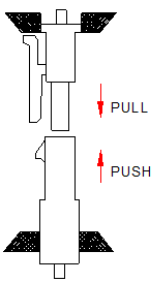
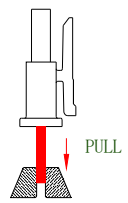
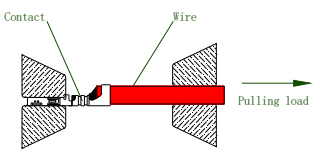
【5.性能 PERFORMANCE】

5-1. 电气的性能 Electrical Performance.

项目 【Item】		条件 【Test Condition】	规格 【Requirement】
5-1-1	接触阻抗 Contact Resistance	公母配合,开放电压 20mV 以下,电流 10mA 检测连接器 A~B 区. Mate connectors, measure by dry circuit, 20mV MAX, 10mA. (Based upon EIA-364-06A).	Initial: 10 milliohms Max. After Test: 20 milliohms Max.
			
5-1-2	绝缘阻抗 Insulation Resistance	公母配合,在相邻端子,端子与地片之间,使用 500V 的直流电,检测连接器. Mate connectors, apply 500V DC between adjacent terminal or ground. (Based upon EIA-364-21B / MIL-STD-202 Method 302 Cond.B)	1000 Megohms Min.
5-1-3	耐电压 Dielectric Strength	公母配合,在相邻端子,端子与地片之间,使用 1000V 的交流电 1 分锺,检测连接器. Mate connectors, apply 1000V AC for 1 minute between adjacent terminal or ground. (Based upon EIA-364-20A / MIL-STD-202 Method 301)	外观无损伤, 无打火花 No Breakdown and Flashover
5-1-4	铆线后端子接触阻抗 Contact resistance on crimped portion	铆线后之端子,开放电压 20mV 以下,电流 10mA 检测连接器. Crimp the applicable wire on to the terminal measure by dry circuit 20mV MAX, 10mA.	10 milliohms Max.

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5-2. 机械的性能 Mechanical Performance.

项目 【Item】		条件 【Test Condition】	规格 【Requirement】		
5-2-1	插拔力 Insertion & withdraw Force	以每分钟 $50\pm3\text{mm}$ 的速率插入和拔出。 Insert and withdraw Connectors at the speed rate of $50\pm3\text{mm/minute}$.	参照第 6 项 Refer to paragraph 6		
					
5-2-2	端子保持力 Terminal/ Housing Retention Force	以每分钟 $50\pm3\text{mm}$ 的速率,将端子从 Housing 内轴向拔出的力量。 Apply axial pull out force at the speed rate of $50\pm3\text{mm/minute}$ on the terminal assembled in the housing.	24.5N {2.5kgf} Min.		
					
5-2-3	端子插入力 Terminal Insertion Force	铆线后之端子插入 Housing 所需最大力量。 Insert the crimped terminal into the housing.	14.7N {1.5kgf} Max.		
5-2-4	端子压着强度 (Crimped contact)	固定铆线后的端子, 使电线与端子分离时所需的最小力量。 Fix the crimped terminal, apply axial pull out force on the wire. (Do not crimp insulation part).	AWG(mm ²)	AWG #20 (0.50mm ²)	AWG #22 (0.35mm ²)
			Spec Min. N.	60N (85N) a)	50N (75N) a)
			a) If for production reasons, the conductor pull-out strength is measured with insulation crimp, the values in parentheses apply. (Refer to VW60330)		

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5-3. 环境性能及其它 **Environmental Performance and Others.**

项目 【Item】		条件 【Test Condition】	规格 【Requirement】	
5-3-1	重复插拔 Repeated Insertion/ Withdrawal	以每分钟不超过 10 次的速率,将公母插拔 30 次. When mated up to 30 cycles repeatedly by the rate of 10 cycles per minute.	接触阻抗 Contact Resistance	20 milliohms Max.
5-3-2	温升测试 Temperature Rise	公母连接器配合后, 加载额定电流直到温度上升到稳定状态, 然后再测量温升 (EIA364-70,Method 1) Mating connectors shall be energized at rating current until thermal stability is achieved, and then measured the temperature rise. (EIA364-70,Method 1)	温升测试 Temperature rise	30°C Max.
5-3-3	振动测试 Vibration test	振幅: 1.5mm P-P 时间: 20~200~20 Hz in 3minute 持续时间: 每轴向 3 小时 加速度: 44m/S ² 开放电压: 20mV 以下 开放电流: 10mA 以下 Amplitude: 1.5mm P-P Sweep time: 20~200~20 Hz in 3 minute Duration: 3 hours in each X.Y.Z axials. (Based upon EIA-364-28B/MIL-STD-202 Method 213B Cond.A)	外观 Appearance	无异状 No Damage
			接触阻抗 Contact Resistance	20 milliohms Max.
			瞬断 Discontinuity	1 micro-second Max.
			电压降落 Voltage Drop	20mV/A Max
5-3-4	冲击测试 Shock test	在 X.Y.Z 上 6 个方向上,以 981m/s ² (100G 的力量)冲击下各 3 回. 作用时间: 6ms 981m/s ² {100G}, 3 strokes in each X.Y.Z. axes. Operation time:6ms (Based upon EIA-364-27B/MIL-STD-202 Method 213B Cond. A)	外观 Appearance	无异状 No Damage
			接触阻抗 Contact Resistance	20 milliohms Max.
			瞬断 Discontinuity	1 micro-second Max.

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项目 【Item】		条件 【Test Condition】	规格 【Requirement】	
5-3-5	耐热性 Heat Resistance	105±2°C,96 hours. (Based upon MIL-STD-202 Method 108A Cond.A)	外观 Appearance	无异状 No Damage
			接触阻抗 Contact Resistance	20 milliohms Max.
5-3-6	耐寒性 Cold Resistance	-40±3°C,96 hours. (Based upon EIA-364-105)	外观 Appearance	无异状 No Damage
			接触阻抗 Contact Resistance	20 milliohms Max.
5-3-7	耐湿性 Humidity	温度: 40±2°C 湿度: 90~95%(RH) 持续时间: 96 hours Temperature: 40±2°C Relative Humidity: 90~95% Duration: 96 hours (Based upon EIA-364-31A/MIL-STD-202 Method 103B Cond.B)	外观 Appearance	无异状 No Damage
			接触阻抗 Contact Resistance	20 milliohms Max.
			耐电压 Dielectric Strength	Must meet 5-1-3
			绝缘阻抗 Insulation Resistance	500 Megohms Min.
5-3-8	温度变化 Temperature Cycling	从-40°C持续 30 分钟升至+105°C持续 30 分钟,循环 5 次. 5 cycles of: a) -40°C 30 minutes. b) +105°C 30 minutes. (Based upon EIA-364-32B)	外观 Appearance	无异状 No Damage
			接触阻抗 Contact Resistance	20 milliohms Max.
5-3-9	盐水喷雾 Salt Spray	在温度 35±2°C,盐水浓度 5±1%下,盐水喷雾 48±1 小时. 48±1 hours exposure to a salt spray from the 5±1% solution at 35±2°C. (Based upon EIA-364-26A/MIL-STD-202 Method 101D Cond.B). 注: 此项测试只针对先冲后镀端子	外观 Appearance	无异状 No Damage
			接触阻抗 Contact Resistance	20 milliohms Max.

【6.综合插入力及拔出力 INSERTION/WITHDRAWAL FORCE】 <Connector mating force>

WRITTEN BY: <u>Alan qin</u>	APPROVED BY: <u>Robing</u>	Sheet: 6 of 7
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PIN 数 No. of CKT	初次插入力(最大值) First Insertion (kgf Max.)	30 次拔出力(最小值) 30 th Withdrawal (kgf Min.)	PIN 数 No. of CKT	初次插入力(最大值) First Insertion (kgf Max.)	30 次拔出力(最小值) 30 th Withdrawal (kgf Min.)
双排 (DOUBLE ROW)					
2*01	0.8	0.12	2*07	5.6	0.84
2*02	1.6	0.24	2*08	6.4	0.96
2*03	2.4	0.36	2*09	7.2	1.08
2*04	3.2	0.48	2*10	8.0	1.20
2*05	4.0	0.60	2*11	8.8	1.32
2*06	4.8	0.72	2*12	9.6	1.44
注：以上插拔次数为 30 次 Note: Insertion and Withdrawal for 30Cycles					