

YUEQING HONGYI ELECTRONICS CO., LTD
乐清市宏一电子有限公司

SPECIFICATION FOR APPROVAL
承认书

CUSTOMER 客户名称	
DESCRIPRION 产品名称	DJ7-1.5 系列连接器
ITEM NO 编 号	HY-C60001 (C17)
DATE 日 期	2024-7-26

CUSTOMER ACKNOWLEDGEMENT SEAL

客户承认印签

(APPROVAL) 核准	(ENGINEERING) 工程	(PURCHASE) 采购	(QUALITY) 品质
承认结果: <input type="checkbox"/> 通过 <input type="checkbox"/> 不通过 <input type="checkbox"/> 重新送样			

IS09001

IS014001

IS045001

IATF16949 体系认证

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PRODUCT SPECIFICATION

产品规范

1、Scope

适用范围

This specification includes the following specifications, including the specification of 6.00mm pitch DJ7-1.5 series connector

本规范包括下列此种规格包括 6.00mm Pitch DJ7-1.5 系列连接器规格说明

2、Appearance and Dimension

外观及尺寸

2.1 Appearance:Product surface without defect、dirt、crack、and mechanical damang,Contactwithout rust,plating not oxidized and not peeled.

产品表面不应有对制品有害的缺陷、污垢、裂痕及机械损伤；接触件无锈蚀、镀层氧化脱落等现象

2.2 Dimension:According to drawings

外形尺寸：依照附图

3、Disposal of Material and surface

材料与表面处理

Specification 规格内容	Material 材质	Finish 表面处理	Environmental protection grade 环保等级
Terminal 端子(公、母)	Brass 黄铜 厚 0.30mm	Tin Plating:2.5-5 μ m 镀锡: 2.5-5 μ m	RoHS2.0
Housing 母壳	Plastic 塑壳	PA66 UL94V-0 Color: Black 颜色: 黑色	
	Lock 锁片	PA66 UL94V-0 Color: Red 颜色: 红色	
Housing 公壳	Plastic 塑壳	PA66 UL94V-0 Color: Black 颜色: 黑色	
	Waterproof ring 防水圈	Silica gel UL94V-0 Color: Yelloe 颜色: 黄色	
	Lock 锁片	PA66 UL94V-0 Color: Red 颜色: 红色	

4、Ratings and applicable wires

额定等级

Item 项目	Standard 规格
Rated Voltage 额定电压	24V AC/DC
Rated Current 额定电流	14A AC/DC
Ambient temperature Range 使用温度范围	-40℃- +125℃
Applicable wire insulation 适用线径	AWG16#-22#

5、Electrical Performance

电气性能

N0. 序号	Ltem 项目	Test mode 试验方法	Requirement 技术要求
5.1	ContactResistance 接触电阻	Male female cooperation, open voltage less than 20mV, current 10mA detection connector at both ends 公母配合, 开放电压20mV 以下, 电流10mA 检测连接器连接器两端	Initial:10mΩ Max 初始: 10mΩ Max After Test: 20mΩ Max 试验后: 20mΩ Max
5.2	withstandvoltage 耐电压	Mate connectors, apply 1500V AC for 1 minute between adjacent terminal or ground 公母配合, 在相邻端子, 端子与地片之间, 使用1500V 的交流电1 分钟, 检测连接器	No Breakdown and Flashover 外观无损伤, 无打火花
5.3	InsulationResistance 绝缘电阻	Mate connectors, apply 500V DC between adjacent terminal or ground 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	200MΩ Min

6、机械性能

Mechanical Performance

NO. 序号	Ltem 项目	Test mode 试验方法		Requirement 技术要求
6.1	Terminal crimping wire strength 端子压接导线强度	Fix the crimped terminal, apply axial pull out force on thewire	AWG#16 wire AWG#16 导线	155N Min
			AWG#18 wire AWG#18 导线	115N Min
		固定铆线后的端子, 使电线与端 子分离时所需的最小力量	AWG#20 wire AWG#20 导线	70N Min
			AWG#22 wire AWG#22 导线	60N Min
6.2	Terminal retention force in the shell 外壳中端子保持力	Apply axial pull out force at the speed rate of $25.4 \pm 3\text{mm}/\text{minute}$ on the terminal assembled in the Housing 以每分 $25.4 \pm 3\text{mm}$ 的速率, 将端子从Housing 内轴 向拔出力		Per contact: 70N Min 单一接触点: 70N Min
6.3	Connector mating force 连接器配合力	Load and insert at a rate of $25.4 \pm 3\text{mm}$ per minute 以每分 $25.4 \pm 3\text{mm}$ 的速率加载插入		70N Max
6.4	Connector unmating force 连接器脱开力	Load and pull out at a rate of $25.4 \pm 3\text{mm}$ per minute 以每分 $25.4 \pm 3\text{mm}$ 的速率加载拔出		50N Min

7、Endurance Characteristics:

环境性能

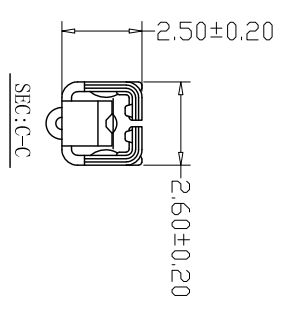
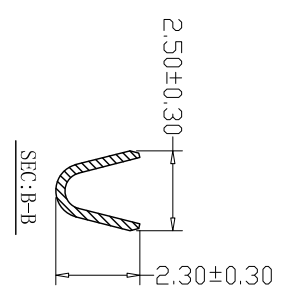
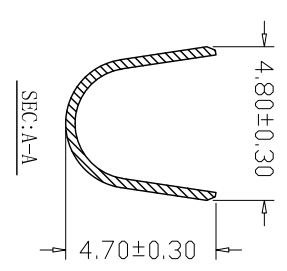
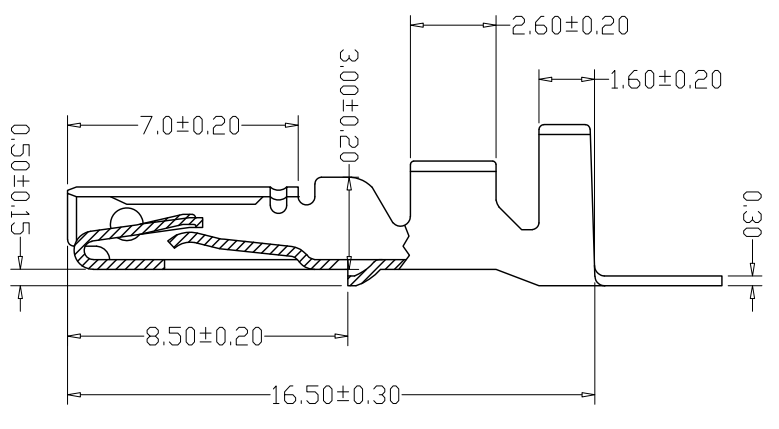
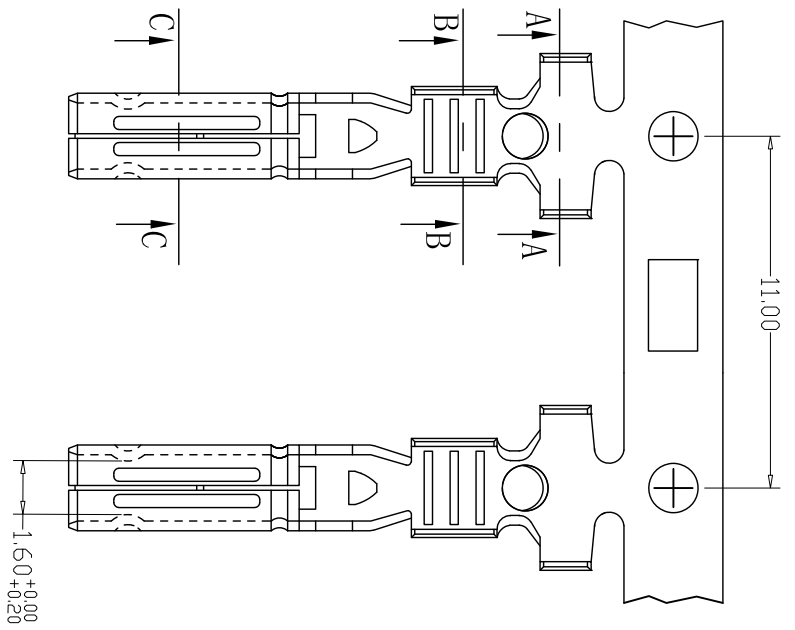
NO. 序号	Ltem 项目	Test mode 试验方法	Requirement 技术要求	
7.1	Repeated Insertion/ Withdrawal 重复插拔	When mated up to 10 cycles repeatedly by the rate of 10 cycles per minute 以每分钟不超过 10 次的速率, 将公母插拔 10 次	Contact Resistance 接触电阻	20 mΩ Max
7.2	High temperature resistant current load 耐高温电流负载	The mating connector is placed at a temperature of 80 ° C for 5 hours, and the maximum current of all contacts is 14A (1.5 square millimeters of wire) 配对连接器在 80° C 的温度下放置 5 小时, 所有触点的最大电流为 14A(1.5 平方毫米的电线)	Temperature increase 温度升高	Contact body and shell : 50°C Max 接触体与外壳: 50°C Max
7.3	Current overload 电流过载	Cooperate with the connector for 500 cycles, with a current of 21A (1.5 square millimeter wire) Each cycle is as follows: -45 minute current on -15 minute current shutdown 配合连接器 500 次循环, 电流为 21A(1.5 平方毫米的电线) 每个周期如下: -45 分钟电流开启 -15 分钟电流关闭	Temperature increase 温度升高	Contact body and shell : 60°C Max 接触体与外壳: 60°C Max
7.4	Vibration test 振动测试	Amplitude: 1.5mm P-P Frequency: 10~500~10 HZ minute Duration: 2 hours in each X.Y.Z axials 振幅: 1.5mm P-P 频率: 10~500~10 HZ minute 持续时间: 每轴向 2 小时	Appearance 外观	No damage 无异常
			Contact Resistance 接触电阻	20mΩ Max
			Discontinuity 瞬断	1 micro- second Max.
			Terminal retention force in the shell 外壳中端子保持力	Per contact: 70N Min 单一接触点: 70N Min

NO. 序号	Item 项目	Test mode 试验方法	Requirement 技术要求	
7.5	Ageing Resistance 耐老化	125±2℃,100 h	Appearance 外观	No damage 无异常
			Contact Resistance 接触电阻	20mΩ Max
			Terminal retention force in the shell 外壳中端子保持力	Per contact: 70N Min 单一接触点: 70N Min
7.6	Thermal cycle 热循环	<p>the mating connector should meet the following conditions: -14 cycles 1. -40 °C for 2 hours 2. +125 °C for 2 hours 3. +23 °C 4h (maximum time to change conditions: 3 minutes) Exposed for 24 hours at+40 °C and 95% relative humidity -10 pairing operations</p> <p>配合连接器应满足以下条件: -14个循环 1、-40℃2h 2、+125℃2h 3、+23℃4h(改变条件的最长时间: 3分钟) 在+40℃和95%相对湿度下暴露24h -10次配对操作</p>	Appearance 外观	No damage 无异常
			Contact Resistance 接触电阻	20mΩ Max
			Terminal retention force in the shell 外壳中端子保持力	Per contact: 70N Min 单一接触点: 70N Min
7.7	Salt spray 盐雾	<p>24±1 hours exposure to a salt spray from the 5±1% solution at 96±2℃</p> <p>在温度35±2℃, 盐水浓度5±1%下, 盐水喷雾96±1 小时</p>	Appearance 外观	No damage 无异常
			Contact Resistance 接触电阻	20mΩ Max

NO. 序号	Ltem 项目	Test mode 试验方法	Requirement 技术要求	
7.8	Water resistance: Static immersion 耐水性: 静态浸没	1. Bake in an oven at+125 °C for 30 minutes 2. Immerse in water containing 5% sodium chloride at a pressure of 0.01 bar and a temperature of 23 °C for 30 minutes	Visual inspection 目视检查	No leakage 无泄露
		1、在+125℃的烤箱中烘烤 30 分钟 2、在 0.01bar 的压力和 23℃的温度中浸没, 含有 5%氯化钠的水中 30 分钟	InsulationResistan ce 绝缘电阻	200MΩ Min
7.9	Water resistance: IP X6K 耐水性: IP X6K	According to ISO 20653 testing, the paired connector is fully loaded with terminals for a duration of 3 minutes, and the water spray parameters are as follows Nozzle: Diameter 6.3mm Pressure: 1000kpa	Visual inspection 目视检查	No leakage 无泄露
		根据 ISO 20653 进行测试, 配对连接器完全装载端子持续时间 3 分钟, 用于喷水参数如下 喷嘴: 直径 6.3mm 压力: 1000kpa	InsulationResistan ce 绝缘电阻	200MΩ Min
7.10	Chemical resistance 耐化学性	Immerse the mating connector in the following environment for 3 minutes: +50 °C brake fluid +Antifreeze at 23 °C The temperature of the transmission and engine oil is 100 °C +Gasoline at 23 °C +Diesel fuel at 23 °C +Car window cleaner at 23 °C	Appearance 外观	No damage 无异常
		将配对连接器浸入以下环境中 3 分钟: +50℃的制动液 +23℃下的防冻液 变速箱和发动机机油温度为 100℃ +23℃的汽油 +23℃的柴油 +23℃下的车窗清洁剂	Contact Resistance 接触电阻	20mΩ Max
			Terminal retention force in the shell 外壳中端子保持力	Per contact: 70N Min 单一接触点: 70N Min

NO. 序号	Item 项目	Test mode 试验方法	Requirement 技术要求	
7.11	Ozone resistant gas 耐臭氧气体	Expose the mating connector to an atmosphere of 50 °C and 0.5ppM ozone for 70 hours 将配对连接器在 50°C, 0.5ppM 臭氧的大气中暴露 70h	Appearance 外观	No damage 无异常
			Terminal retention force in the shell 外壳中端子保持力	Per contact: 70N Min 单一接触点: 70N Min

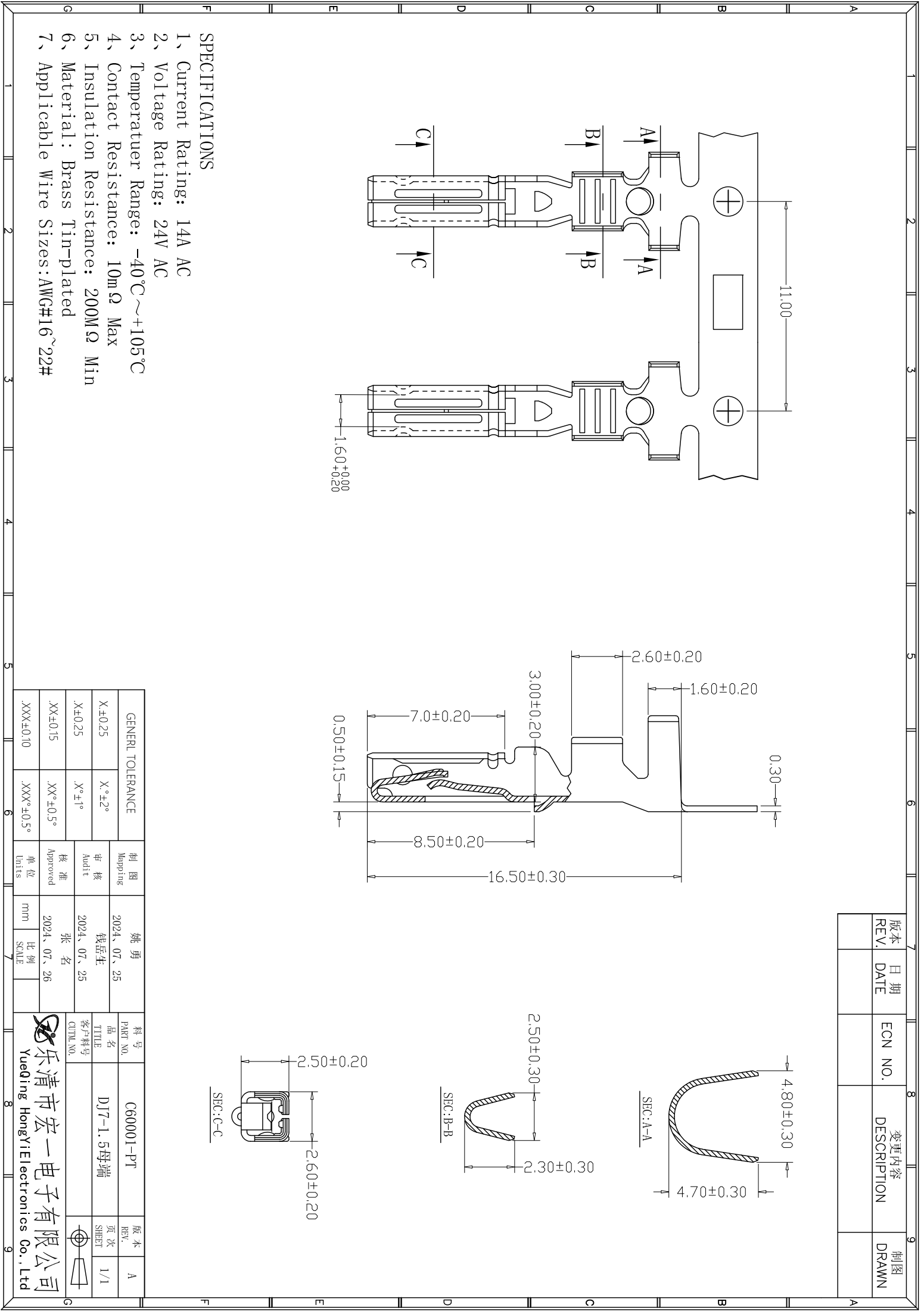
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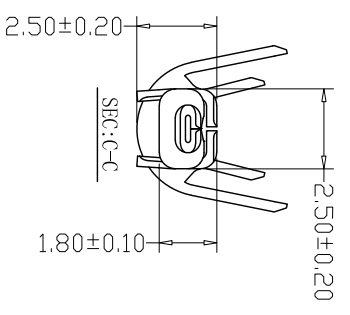
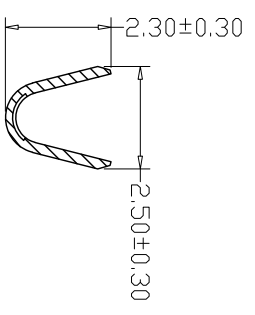
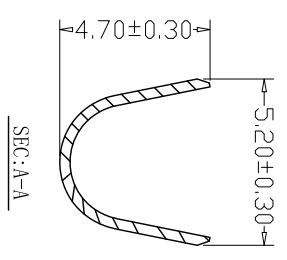
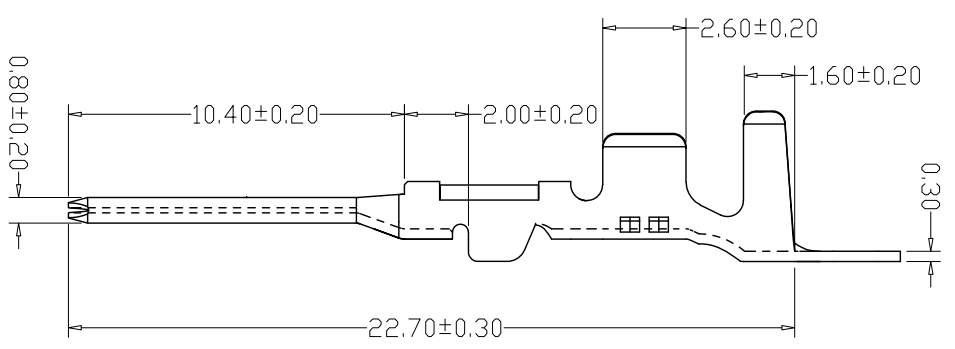
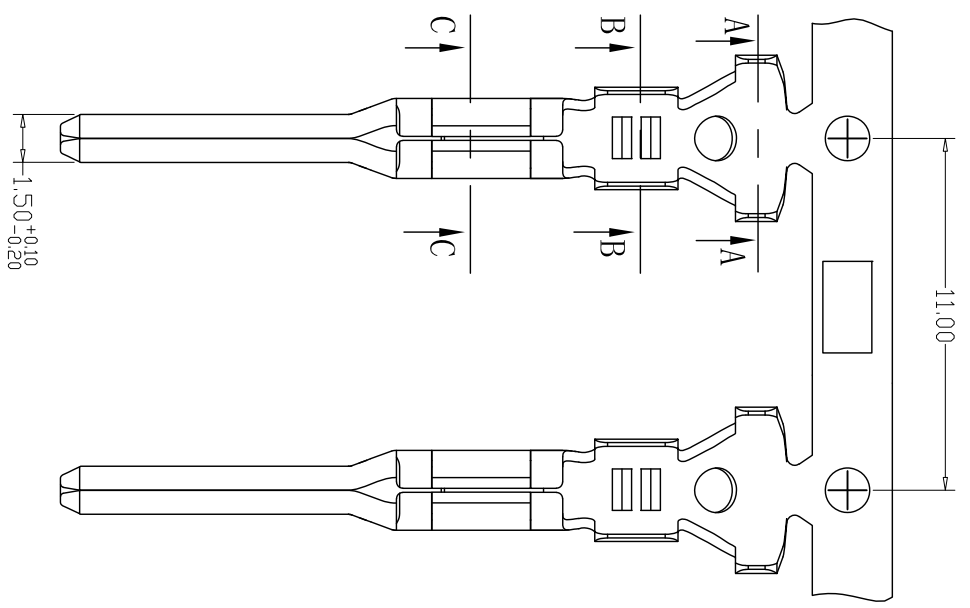
SPECIFICATIONS

- Current Rating: 14A AC
- Voltage Rating: 24V AC
- Temperature Range: -40°C~+105°C
- Contact Resistance: 10mΩ Max
- Insulation Resistance: 200MΩ Min
- Material: Brass Tin-plated
- Applicable Wire Sizes:AWG#16~22#

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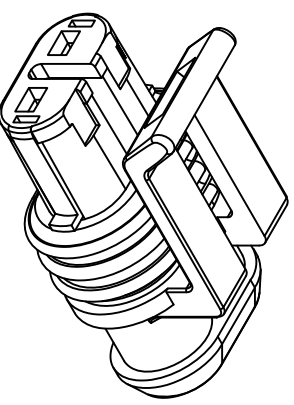
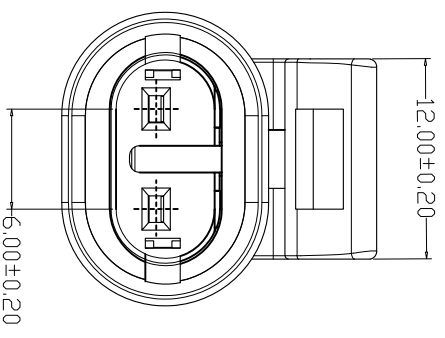
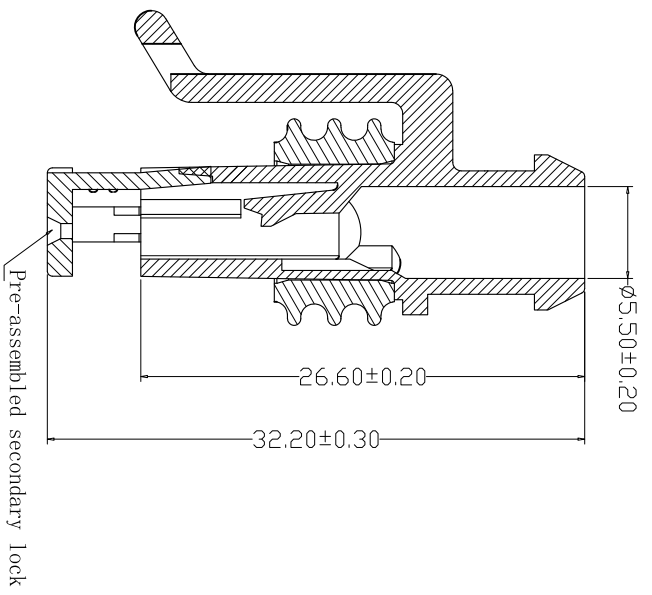
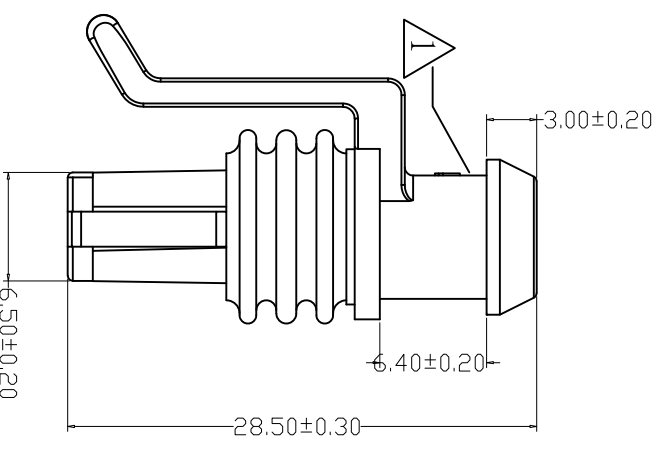
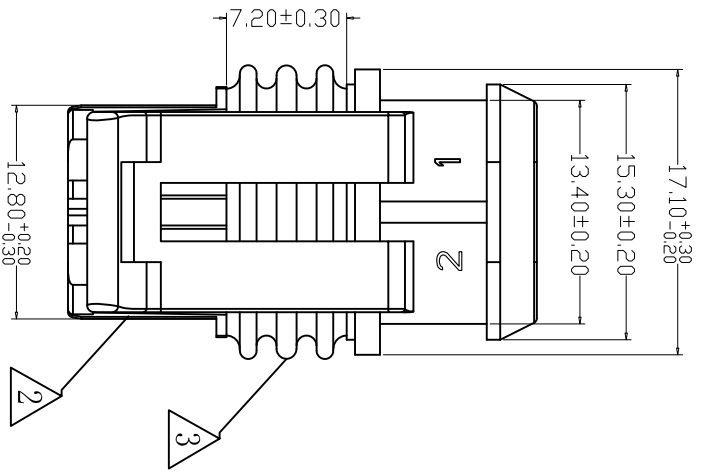
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XX ± 0.15	XX° ± 0.5°	单位 Units	2024. 07. 26	比例 SCALE			
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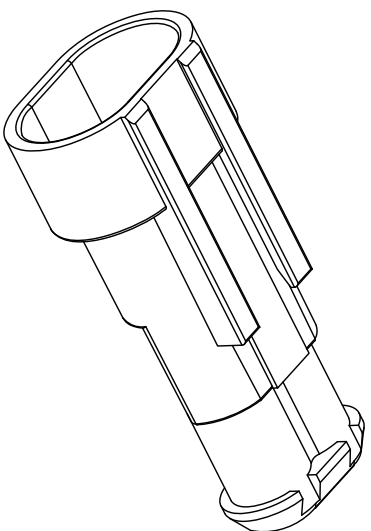
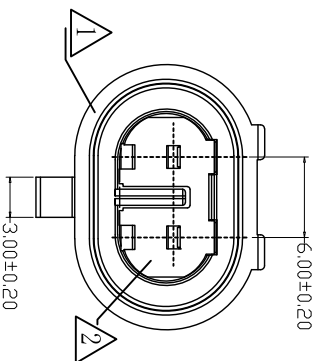
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- 6、Material:

- △Housings PA66 Black, UL94V-0
- △Lock PA66 Red, UL94V-0
- △Waterproof cover Yellow UL94V-0

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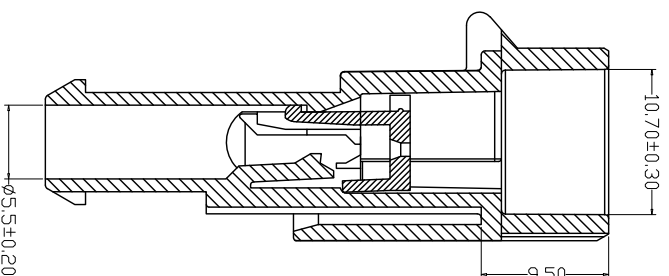
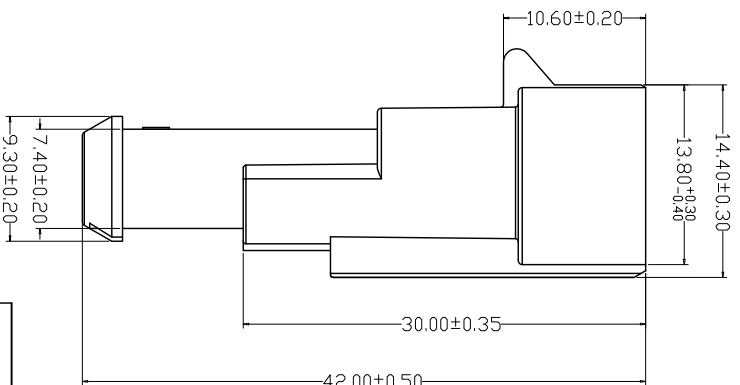
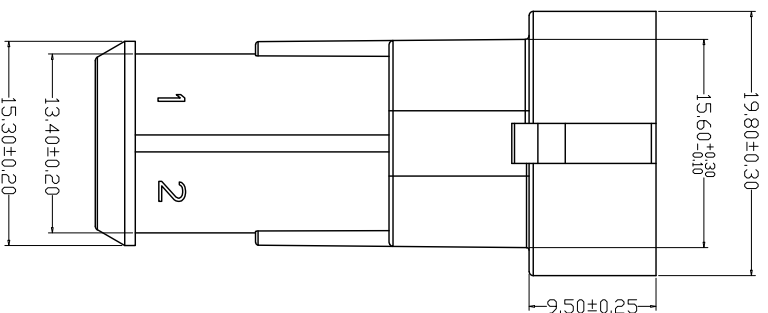
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