1. Scope

This specification outlines the performance, testing, and quality requirements for RJ45 Modular Plug connectors.

Applicable Product Models:FMP20 series.

2. Applicable documents

The following documents form a part of this specification to the extent specified herein. Unless otherwise specified, the latest edition of the document applies. In the event of conflict between the requirements of this specification and the product drawing, the product drawing shall take precedence. In the event of conflict between the requirements of this specification and the referenced documents, this specification shall take precedence.

3. Ordering information

Refer to the drawing.

4. Connector dimensions

Refer to the drawing.

5. Material

Housing： Thermoplastic (UL94V-0)

Terminal: Copper Alloy

Plating: Selective gold plated on contact area and matte tin plated on tails area

Shield Cover:Copper alloy/Nickel plating

6. Rating

Operating voltage(Max.):125V DC

Current rating(Max.) :1.5A allowable current to be applied

Temperature range-operating: -40°C -- +85°C

7. Performance

Serial Number	Test item	Procedure	Requirement
1	Examination Of Product	Visual inspection.	Meets requirements of product Drawing. No physical damage.
		Electrical Requirement	
2	Contact Resistance	In an environment with an ambient temperature of 23 ±2°C and a relative humidity of 65±5%,contact resistance between the plug and socket. (IEC-60603-7)	Contact Resistance：20mΩ Max.
3	Insulation Resistance	Under an ambient temperature of 23±2°C and a relative humidity of 65±5%, apply 500V DC between adjacent pins for 1 minute. (IEC-60603-7)	500 MΩ min. Initial
4	Dielectric withstanding Voltage	Under an ambient temperature of 23±2°C, apply 1000V AC between adjacent pins for 1 minute. (IEC-60603-7)	No Breakdown
		Mechanical Requirement	
5	Mating and Unmating force	Pair the samples and press down the latching mechanism at a maximum speed of 10 mm/s. Each test cycle consists of one insertion and one removal action, with 50 total cycles required. (IEC60603-7)	Both insertion and removal forces must be within the 30N range.

6	Durability	Pair the samples and perform 750 insertion/removal cycles at an operating speed of 100 mm/min. (IEC-60603-7)	Appearance: Nodamage
7	Contact spring compression test	Conduct a cyclic compression test on the spring contact using a specialized fixture. Apply 20 cycles per minute, ensuring full engagement of the locking mechanism to the crystal head’ s base surface, with a total of 750 cycles. (IEC60603-7)	Appearance: Nodamage

Environment Performance AND Others

8	Cyclic Thermal-Humidity Test	The temperature is cooled down to -40℃ within 1.5 hours, maintained at -40℃ for 2.5 hours, then raised to 85℃ within 1.5 hours, and held at 85℃ for 2.5 hours. This cycle is repeated for a total duration of 72 hours. (IEC60603-7)	No cracks, deformation, shrinkage, or other defects.
9	Salt Spray	The samples were subjected to a salt spray test in a test chamber maintained at 35°C±2°C, where they were exposed to a sodium chloride (NaCl) solution with a concentration of (5±0.5)% and a pH range of 6.5 to 7.2, delivered through a spray apparatus over a 24-hour duration. (GB/T 2423.17-2008)	Appearance: Nodamage