1. Scope

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

Applicable Product Models:FMP19 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

6. Accommodated P.C.B layout

Refer to the drawing.

7. Rating

Operating voltage(Max.):125V DC

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

Temperature range-operating: -10°C -- +60°C

8. Performance

Serial Number	Test item	Procedure	Requirement
1	Examination Of Product	Visual inspection. (EIA-364-18)	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	For mated connectors, the terminals shall be isolated from other terminals and capable of withstanding 500 V DC for 60 seconds. (IEC-60603-7)	500 MΩ min. Initial
4	Dielectric withstanding Voltage	Between terminals of mated connectors, the leakage current under 1000 V DC shall not exceed 5 mA.All terminals of the contact elements shall withstand 1000 V DC against the shielded housing for 60 seconds. (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 20N range.

6	Connector Mating Pull Force Test	Mount the specimen in the test fixture with the wire harness oriented downward.Apply a 50N weight at the tail end along the axial position of the harness.Hold the applied force for 1 minute.After removing the applied force, conduct a visual inspection per IEC 60512. （IEC60603-7、IEC60512)	No separation or detachment of the specimen was observed during the test process. The locking mechanism operates normally, with no damage or looseness observed in the connection device parts.
7	Durability	Pair the samples and perform 750 insertion/removal cycles at an operating speed of 100 mm/min. (IEC-60512-9-1)	Appearance: Nodamage Contact Resistance：200mΩ Max.
8	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

9	Aging Test	Place the test samples in a high-temperature test chamber at 70℃ and continuously store them at this temperature for 500 hours. After completing the test, remove the samples from the chamber. Allow them to recover to normal operating conditions by storing at room temperature for 2 hours. (IEC60603-7)	Appearance: Nodamage
10	Cyclic Thermal-Humidity Test	21 cycles, alternating between low temperature 25°C and high temperature 60°C.Within the low-temperature phase, the temperature is further reduced to -10°C as a sub-cycle.Maintained at 93% relative humidity throughout the entire test.Half of the samples are kept in the mated condition，The other half remain in the unmated condition。 Laboratory Environmental Conditions: Temperature: 15°C to 35°C. Humidity: 25% RH to 85% RH. (IEC60603-7)	Appearance: Nodamage Contact Resistance：20mΩ Max.
11	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 48-hour duration. (GB/T 10125-2021)	Appearance: Nodamage