

Product specification

1. Scope

This specification applies to the Nano D series connectors Product, specifying the product's performance indicators, test methods and test requirements.

Applicable Product Models: Nano D(FND/FWND) series

2. Applicable Standards

The following documents form a part of this specification. 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. Parameter Range

Parameter Name	Value & Unit
Rated Current	1.0A [AC(rms)/DC]
Rated Voltage	100V[AC(rms)/DC]

Type	FND	FWND
Operating Temperature Range	-55 °C ~+125 °C	
Applicable Wire Gauge	0.035mm ²	
Applicable PCB Thickness	2.0~3.5mm	/

4. Appearance and Dimensions

4.1 Appearance: Product surface without defect、dirt、crack、and mechanical damage, Contact without rust plating not oxides and not peeled

4.2 Appearance and dimensions shall comply with the requirements of product drawings.

4.3 Exchangeable: Exchangeable with same specification products.

5. Materials

Component		Material Specification	Color
Pulg/Socket	Shell	Aluminium alloy/Nickel Plated	-
	Contact	Copper Alloy /Gold Plated	-
	Insulation	High-temperature plastic/PPS	Natural/Black
WIRE		AFR250-0.035mm ²	White
Screw/Nut		STainless Steel	-

6. Mechanical Performance

Serial No.	Item	Test Method	Technical Requirements
6.1	Appearance	Checking by eye	No mechanical damage、Coating peeling or Deformation
6.2	Random Vibration	Mated connectors subjected to vibration conditions: 10~55~2000Hz, amplitude 0.75mm, 2h per axis, 100mA current applied Power spectral density 0.4G ² /Hz, total acceleration root mean square value 23.1G	Appearance: No damage; Current Discontinuity ≤1μs; Contact Resistance ≤21mΩ
6.3	Shock	Mated connectors shocked 3 times per 6 directions, 100mA current applied; Shock strength 980m/s ² , duration 6ms	Appearance: No damage; Current Discontinuity ≤1μs
6.4	Durability	200 cycles mating and unmating test at the speed 10 cycles per minute	Appearance: No damage; Contact Resistance ≤21mΩ

7. Electrical Performance

Serial No.	Item	Test Method	Technical Requirements
7.1	Contact Resistance	Mate connectors with dry circuit to test Contact Resistance	≤21mΩ
7.2	Insulation Resistance	Apply a voltage of 100V DC between adjacent contacts and between contacts to ground	≥5000MΩ
7.3	Withstand Voltage	Apply a voltage of AC 250 V for 1 minute between adjacent contacts and between contacts to ground, leakage current 1mA	No breakdown and arcing

8. Environmental Performance

Serial No.	Item	Test Method	Technical Requirements
8.1	Heat Resistance	Mate connector exposed to the condition of $125\pm 2^{\circ}\text{C}$ for 96 hours, recovery time 1~2 hours	Appearance: No damage; Contact Resistance $\leq 21\text{m}\Omega$; Insulation Resistance $\geq 5000\text{M}\Omega$; Withstand Voltage $\geq 100\text{V}$
8.2	Cold Resistance	Mated connectors exposed to the condition of $-55\pm 2^{\circ}\text{C}$ for 96 hours, recovery time 1~2 hours	Appearance: No damage; Contact Resistance $\leq 21\text{m}\Omega$; Insulation Resistance $\geq 5000\text{M}\Omega$; Withstand Voltage $\geq 100\text{V}$
8.3	Salt Spray	Sample suspended, $5\pm 1\%$ NaCl mist at $35\pm 2^{\circ}\text{C}$ for 48h, rinsed with distilled water, recovery 1~2h	Appearance: No damage; Slight corrosion on cutting surface of pre-plated profiles acceptable; Contact Resistance $\leq 21\text{m}\Omega$