

SPECIFICATION AND PERFORMANCE

Series	221	File	221 SERIES_SPEC_1	Date	2024/11/21
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Scope:

This specification covers the requirements for product performance, test methods and quality assurance provisions of **221 SERIES**

Performance and Descriptions:

The product is designed to meet the electrical, mechanical and environmental performance requirements specification. Unless otherwise specified, all tests are performed at ambient environmental conditions.

RoHS:

All material in according with the RoHS environment related substances list controlled.

MATERIALS

NO.	PART NAME	DESCRIPTION
1	Housing	High Temperature Thermoplastic, UL94V-0, Black
2	Contact	Copper Alloy, Gold under Nickel plating
3	Shell	Brass, Nickel plated
4	Nut	Brass, Nickel plated
5	O-RING	Rubber
6	EPOXY	EF400 A&B

RATING

Rated voltage	Refer to the product drawing
Rated current	Refer to the product drawing
Operating temperature	-20°C to +85°C
Storage temperature	-20°C to +85°C
Durability	100 cycles

ELECTRICAL

Item	Requirement	Test Condition
Temperature rise test	30°C max. change allowed at rated current	Sample mated, to measure the current when the temperature rise of the terminal within 30°C
Dielectric withstanding voltage	No Breakdown on appearance	IEC 60512, Test 4a Standard atmospheric conditions Test voltage 500V



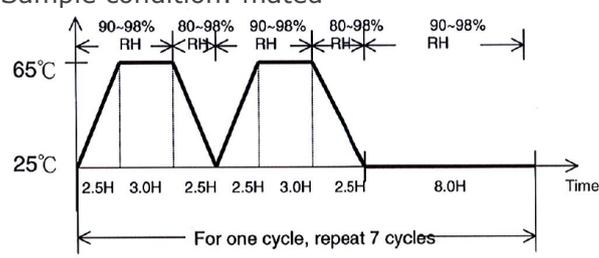
Contact resistance	20mΩ max.	IEC 60512, Test 2a Standard atmospheric conditions
Insulation resistance	100MΩ min.	IEC 60512, Test 3a, Method A Standard atmospheric conditions Test voltage 500V±15VDC

MECHANICAL

Item	Requirement	Test Condition
Durability	100cycles no evidence of physical damage. Contact resistance 20mΩ max	IEC 60512, Test 9a Standard atmospheric conditions Max. speed of operations = 10 mm/s Rest: 30 s, unmated

ENVIRONMENTAL

Item	Requirement	Test Condition
IP degree of protection	IP67	The leak testing is an alternative test to the standard physical IP Code test . The testing process is made through the air leakage equipment, utilizing the difference sizes of molecules between the air and water, the test result can determine whether the products meet the waterproof or dust-proof standard or not. Test pressure: 13kPa Test duration: 10 second No significant change in pressure < 50 Pa
Thermal shock	Finish Contact resistance 20mΩ max Insulation resistance 100MΩ min	Sample condition: mated
Humidity test (Steady state)	Finish Contact resistance 20mΩ max Insulation resistance 100MΩ min	Temperature: 40°C Humidity: 90% R.H. Duration: 96hours

Humidity cycling test	Finish Contact resistance 20mΩ max Insulation resistance 100MΩ min	Sample condition: mated  <p>For one cycle, repeat 7 cycles</p>
Salt spray	Finish Contact resistance 20mΩ max No damage	Sample condition: mated Temperature: 35°C Salt solution concentration: 5% (by weight) pH value(avg.): 6.5~7.2 spray volume(avg.): 1.0~2.0ml/hour duration: 48hours

SOLDER ABILITY

Item	Requirement	Test Condition
Solder ability	95%of immersed area must show no voids, pin holes.	DIP solder tails into the molten solder (held at 230±5°C) up to 0.5mm from the tip of tails for 3±0.5 seconds.