

## SPECIFICATION AND PERFORMANCE

<b>Series</b>	219	<b>File</b>	219 SERIES_SPEC_1	<b>Date</b>	2023/07/14
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### Scope:

This specification covers the requirements for product performance, test methods and quality assurance provisions of **219 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	Brass, 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	-40°C to +85°C
Storage temperature	-40°C to +85°C
Durability	100 cycles

### ELECTRICAL

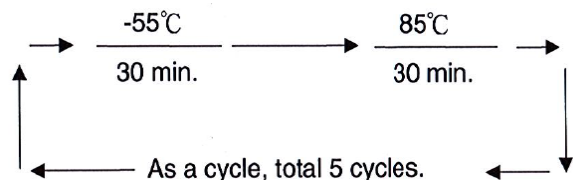
Item	Requirement	Test Condition
Temperature rise test	30°C max. change allowed at rated current	Sample mated, to measure the current when the temperature rise of the terminal within 30°C
Dielectric withstanding voltage	No Breakdown on appearance	IEC 60512, Test 4a Standard atmospheric conditions Mated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

		3 to 4 ways= 1kVAC 5 to 8 ways= 0.65kVAC
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	IPX7	IEC 60529 Sample condition: mated Put the testing sample under water 1m, duration 30 minutes
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



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.