

SPECIFICATION AND PERFORMANCE

Series	216A-XXFF2	File	216A-XXFF2_SPEC	Date	2025/12/30
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Scope:

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

Part Name	Description
216A-04FF2	M12 A-Code Plug for Cable, 4Pin Female Pins for Field Installable
216A-05FF2	M12 A-Code Plug for Cable, 5Pin Female Pins for Field Installable
216A-08FF2	M12 A-Code Plug for Cable, 8Pin Female Pins for Field Installable
216A-12FF2	M12 A-Code Plug for Cable, 12Pin Female Pins for Field Installable

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	CONN. HOUSING	PBT or NYLON 66, UL94-V0 black
	CONN. CONTACT	Brass, G/F plated over nickel
	CONN. SHELL 1&2	Brass, nickel plated over all
	CONN. ORING	Silicone black
	CONN. LOCKING	Stainless steel
2	ORING	NBR, black
3	SHIELD	NBR, black
4	BODY	Zinc alloy
5	GLAND	Silicone black
6	GLAND CAGE	POM white
7	GLAND NUT	Zinc alloy

RATING	
Rated Current	4 PIN 250V, 5 PIN 60V, 8 PIN 30V, 12 PIN 60V
Rated Voltage	4 PIN 4A, 5 PIN 4A, 8 PIN 2A, 12 PIN 1.5A
Operating Temperature	-25~+85°C
Storage Temperature	-25~+85°C
Durability	100

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 evidence of flash over or insulation shall take place. Current leakage: 1mA max.	IEC 60512, Test 4a Standard atmospheric conditions Mated connectors 2 to 4 ways= 1.4kVAC 5 to 6 ways= 1kVAC 6 to 8 ways=0.65kVAC 9 to 17 ways=0.5kVAC
Contact resistance	15mΩ 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	100 cycles no evidence of physical damage. Contact resistance 15mΩ 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 15mΩ max Insulation resistance 100MΩ min	Sample condition: mated Temperature Range: -55 to 85°C No. of Cycles: 5 cycles for 30 minutes (EIA364-32)

Humidity test	Finish	Temperature: 40°C
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(Steady state)	Contact resistance 15mΩ max	Humidity: 90% R.H. Duration: 96hours
Humidity cycling test	Insulation resistance 100MΩ min	Sample condition: mated Temperature : 65±2°C Relative humidity : 90~95% Duration : 96 hours
Heat		Sample condition: mated Temperature: 85°C Duration: 96hours
Cold		Sample condition: mated Temperature: -40°C Duration: 96hours
Salt spray	Finish Contact resistance 15mΩ 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.