



RJ45 ETHERNET, USB, HDMI, AND DISPLAY PORT Introduction and Technical Reference



Performance specifications for Cat 5e and 6A connectors

A

RJ45 Cat 5e and Cat 6A Performance Specifications			
Property	MIL-DTL-38999 Series III Type	Series ITS 5015 Intermountable	Series IPT MIL-DTL-26482 Type
Material and Finish			
Shell/Coupling and Plating	Complete list of options available in the Material and Finish Options portion of this section		
Contacts	PC tails, solder cup, and crimp contacts: copper alloy, gold plated		
RJ45 Insulator	PPS		
Grommet, Peripheral Seal, Interfacial Seal, O-ring	Blended fluorosilicone/silicone elastomer, 30% silicone per ZZ-R-765, 70% fluorosilicone per MIL-R-25988		
Shell Sizes	17 and 19	18	18
Shielding Sleeve	Material: Copper alloy Finish: Nickel		
Electrical Specifications			
Data Rate	Cat 5e, up to one Gigabit per second (Gbps) at 100 MHz up to 100 meters / 328 feet. Cat 6A, up to 10 Gigabit per second (10 Gbps) at 500 MHz up to 100 meters / 328 feet.		
Current Rating	1.5 Amps		
D.W.V.	1000 VDC (700 VAC)		
I.R.	500 Mega ohms @ 500 VDC		
Frequency	100 MHz (Cat 5e), 500 MHz (Cat 6A)		
Wiring	Straight through		
Cabling Length	Up to 100 meters or 100 meters max.		
Shield Continuity	Continuous through coupler or continuous coupler to shell		
Environmental/Mechanical Performance			
Sealing	IP68 mated condition, IP67 unmated condition		
Outgassing	Mod Code 186S meets outgassing requirements per ASTM E 595 and meets NASA level 3 screening for standard reliability Mod Code 928 meets outgassing requirements per UL 94 V-0		
Operating Temperature	-40°C to +120°C		
Vibration	20g, 3 Axis, 10 - 2000Hz	15G sine 10Hz - 2000Hz	10G sine 10Hz - 2000Hz
Mechanical Shock	300 g's	50G - 11ms	50G - 11ms
Backshell Interface	MIL-DTL-38999, Designator H	Consult factory	
Mating System	Triple-start stub ACME	Reverse Bayonet	
Mating Cycles	500		



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RJ12 and RJ45 Cat 5e and Cat 6a Performance Specifications

Property	MIL-DTL-28840 Type (RJ12)	MIL-DTL-28840 Type (RJ45)	Series 801, 804 and 805 Mighty Mouse (RJ45)
Material and Finish			
Shell/Coupling and Plating	Complete list of options available in the Material and Finish Options portion of this section		
Contacts	PC tails, solder cup, and crimp contacts: copper alloy, gold plated		
RJ45 Insulator	PPS		
Grommet, Peripheral Seal, Interfacial Seal, O-ring	Blended fluorosilicone/silicone elastomer, 30% silicone per ZZ-R-765, 70% fluorosilicone per MIL-R-25988		
Shell Sizes	15 and 17	17 and 19	Series 801 Shell Size 17 & 19 Series 804 Shell Size 15 & 16 Series 805 Shell Size 19 & 21
Shielding Sleeve	Material: Copper alloy Finish: Nickel		
Electrical Specifications			
Data Rate	NA	Cat 5e, up to one Gigabit per second (Gbps) at 100 MHz up to 100 meters / 328 feet. Cat 6A, up to 10 Gigabit per second (10 Gbps) at 500 MHz up to 100 meters / 328 feet.	
Current Rating	1.5 Amps		
D.W.V.	1000 VDC (700 VAC)		
I.R.	500 Mega ohms @ 500 VDC		
Frequency	300 Hz - 3.4 KHZ	100 MHz (Cat 5e), 500 MHz (Cat 6A)	
Wiring	Straight through		
Cabling Length	300 meters	Up to 100 meters or 100 meters max.	
Shield Continuity	Continuous through coupler or continuous coupler to shell		
Environmental/Mechanical Performance			
Sealing	IP68 mated condition, IP67 unmated condition		
Outgassing	Mod Code 186S meets outgassing requirements per ASTM E 595 and meets NASA level 3 screening for standard reliability Mod Code 928 meets outgassing requirements per UL 94 V-0		
Operating Temperature	-40°C to +120°C		
Vibration	NA	20g, 3 Axis, 10 - 2000Hz	
Mechanical Shock	NA	300g's	
Backshell Interface	Consult factory	Consult factory	Dependent on Series
Mating System	Threaded	Threaded	801 - Double-Start Stub ACME 804 - Push/Pull 805 - Triple Start
Mating Cycles	100	500	500