



# 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
<b>Material and Finish</b>			
<b>Shell/Coupling and Plating</b>	Complete list of options available in the Material and Finish Options portion of this section		
<b>Contacts</b>	PC tails, solder cup, and crimp contacts: copper alloy, gold plated		
<b>RJ45 Insulator</b>	PPS		
<b>Grommet, Peripheral Seal, Interfacial Seal, O-ring</b>	Blended fluorosilicone/silicone elastomer, 30% silicone per ZZ-R-765, 70% fluorosilicone per MIL-R-25988		
<b>Shell Sizes</b>	17 and 19	18	18
<b>Shielding Sleeve</b>	Material: Copper alloy Finish: Nickel		
<b>Electrical Specifications</b>			
<b>Data Rate</b>	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.		
<b>Current Rating</b>	1.5 Amps		
<b>D.W.V.</b>	1000 VDC (700 VAC)		
<b>I.R.</b>	500 Mega ohms @ 500 VDC		
<b>Frequency</b>	100 MHz (Cat 5e), 500 MHz (Cat 6A)		
<b>Wiring</b>	Straight through		
<b>Cabling Length</b>	Up to 100 meters or 100 meters max.		
<b>Shield Continuity</b>	Continuous through coupler or continuous coupler to shell		
<b>Environmental/Mechanical Performance</b>			
<b>Sealing</b>	IP68 mated condition, IP67 unmated condition		
<b>Outgassing</b>	<b>Mod Code 1865</b> meets outgassing requirements per ASTM E 595 and meets NASA level 3 screening for standard reliability <b>Mod Code 928</b> meets outgassing requirements per UL 94 V-0		
<b>Operating Temperature</b>	-40°C to +120°C		
<b>Vibration</b>	20g, 3 Axis, 10 - 2000Hz	15G sine 10Hz - 2000Hz	10G sine 10Hz - 2000Hz
<b>Mechanical Shock</b>	300 g's	50G - 11ms	50G - 11ms
<b>Backshell Interface</b>	MIL-DTL-38999, Designator H	Consult factory	
<b>Mating System</b>	Triple-start stub ACME	Reverse Bayonet	
<b>Mating Cycles</b>	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)
<b>Material and Finish</b>			
<b>Shell/Coupling and Plating</b>	Complete list of options available in the Material and Finish Options portion of this section		
<b>Contacts</b>	PC tails, solder cup, and crimp contacts: copper alloy, gold plated		
<b>RJ45 Insulator</b>	PPS		
<b>Grommet, Peripheral Seal, Interfacial Seal, O-ring</b>	Blended fluorosilicone/silicone elastomer, 30% silicone per ZZ-R-765, 70% fluorosilicone per MIL-R-25988		
<b>Shell Sizes</b>	15 and 17	17 and 19	Series 801 Shell Size 17 & 19 Series 804 Shell Size 15 & 16 Series 805 Shell Size 19 & 21
<b>Shielding Sleeve</b>	Material: Copper alloy Finish: Nickel		
<b>Electrical Specifications</b>			
<b>Data Rate</b>	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.	
<b>Current Rating</b>	1.5 Amps		
<b>D.W.V.</b>	1000 VDC (700 VAC)		
<b>I.R.</b>	500 Mega ohms @ 500 VDC		
<b>Frequency</b>	300 Hz - 3.4 KHZ	100 MHz (Cat 5e), 500 MHz (Cat 6A)	
<b>Wiring</b>	Straight through		
<b>Cabling Length</b>	300 meters	Up to 100 meters or 100 meters max.	
<b>Shield Continuity</b>	Continuous through coupler or continuous coupler to shell		
<b>Environmental/Mechanical Performance</b>			
<b>Sealing</b>	IP68 mated condition, IP67 unmated condition		
<b>Outgassing</b>	<b>Mod Code 1865</b> meets outgassing requirements per ASTM E 595 and meets NASA level 3 screening for standard reliability <b>Mod Code 928</b> meets outgassing requirements per UL 94 V-0		
<b>Operating Temperature</b>	-40°C to +120°C		
<b>Vibration</b>	NA	20g, 3 Axis, 10 - 2000Hz	
<b>Mechanical Shock</b>	NA	300g's	
<b>Backshell Interface</b>	Consult factory	Consult factory	Dependent on Series
<b>Mating System</b>	Threaded	Threaded	801 - Double-Start Stub ACME 804 - Push/Pull 805 - Triple Start
<b>Mating Cycles</b>	100	500	500