Glenair®

SERIES 151

MINIATURE MIL-DTL-55116 TYPE

AUDIO FREQUENCY CONNECTORS

FEBRUARY 2012

SERIES 151

MINIATURE MIL-DTL-55116 TYPE AUDIO FREQUENCY CONNECTORS

HIGH RELIABILITY PERFORMANCE FOR MISSION-CRITICAL COMMUNICATION SYSTEMS

The MIL-DTL-55116 audio frequency connector has been used in tactical radio systems for generations. Now, this reliable, field-cleanable interconnect has been specified for use in the Joint Tactical Radio System—the next generation voice and data radio for U.S. military field operations, ensuring its continued use and service to soldiers, sailors and airmen. The Glenair MIL-DTL-55116 Type connector is manufactured in our Glenale, California factory with materials and processes guaranteed to result in the best performing and most reliable connector system available. Best of all, these products—from crimp and solder termination cable plugs, to ruggedized and sealed receptacles are in-stock and available for immediate, same-day shipment.

Glenair®

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Series 151 Miniature MIL-DTL-55116 Type Audio Frequency Connectors
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SERIES 151 MINIATURE MIL-DTL-55116 TYPE CONNECTOR PRODUCT SELECTION GUIDE

Series 151 Miniature MIL-DTL-55116 Type Audio Frequency Connectors
Performance Specifications

Test Description	Performance Requirements/Specifications	Procedure Per MIL-DTL-55116 Or Other Standard
Dielectric withstanding voltage	No arcing or dielectric breakdown. Sea level: 500 V RMS between each contact, remaining contacts connected together, and to the shell. One minute dwell. High altitude: barometric pressure 3.4 in of mercury, 300 V RMS applied as described above.	4.7.1
Insulation resistance	Not less than 1000 megohms (not less than 100 megohms for unmated connectors following the immersion test). Measured between each contact, remaining contacts connected together, and to the shell.	4.7.2
Contact resistance	Terminal-to-terminal resistance of mated connector contacts shall not exceed 0.050 ohms.	4.7.3
Contact depression	Force required to depress contacts .080 inches from the normal plane of the contact face: *Individual contacts: 1.25 lbs. – 1.75 lbs.* *5 contacts: 6.25 lbs. – 8.75 lbs.* *6 contacts: 7.5 lbs. – 10.5 lbs.*	4.8.1
Air pressure	No evidence of leakage through the connector under 2.5 psi applied to contact face and rear of the plug or receptacle	4.8.2
Mating durability	3000 cycles with no mechanical damage. Dielectric, contact resistance and air pressure requirements as described above shall be met after 3000 mating cycles.	4.8.3
Contact retention	Individual contacts capable of withstanding at least 10 pounds axial load applied uniformly at one pound per second.	4.8.4
Compression	No distortion or damage that would affect form, fit, or function at 500 pounds applied to axis.	4.8.6
Pull test	Connectors shall withstand an abrupt axial force of 40 lbs. applied to the shell, and 25 lbs. applied to the cable with no visible damage, and lock and unlock without difficulty.	4.8.7
Bounce	Test on package testing table, operating at 284±2 rpm for 3 hours, circular-synchronous motion in a vertical plane with a one in dia. orbital displacement. Connectors show no evidence of cracking, breaking, or loosening. Connectors will meet electrical and leakage requirements following test.	4.9.1

Test Description	Performance Requirements/Specifications	Procedure Per MIL-DTL-55116 Or Other Standard
Vibration	Plugs and receptacles mounted to vibration table, subjected to a simple harmonic motion with amplitude of 0.03 inch (0.06 maximum), frequency varied uniformly from 10-55 Hz., entire range traversed in approximately one minute, for two hours in each of three perpendicular directions. No evidence of cracking, breaking or loosening of parts, and the plug shall not become disengaged from the receptacle.	4.9.2 and MIL-STD-202G, method 201A
Drop	Connectors dropped six times at random from a height of six feet to two inch fir floor backed with concrete or rigid steel frame shall show no degradation in performance, no physical damage that would affect mateability, and no loose parts. Following the test, connectors shall meet electrical and air leakage requirements described above.	4.9.3
Temperature cycling	-55°C to +85°C, 5 cycles. Connectors are capable of mating and unmating during fifth cycle, and meet electrical and air leakage requirements described above.	MIL-STD-202, method 107, test condition A
Salt spray	48 hours, 5% solution, 35°C min. No evidence of base metal corrosion.	MIL-STD-202, method 101E, test condition B
Humidity	50% mated and 50% unmated, cycled between 25°C at 80% relative humidity and 65°C at 50% relative humidity. Ramp time = 0.5 hr. Dwell time = 1.0 hr., 24 cycles. Following test, connectors meet electrical and air leakage requirements described above.	4.9.6 and EIA-364-31, method IV (step 7a not required)
Water immersion	Plugs assembled to test cables and each other, and to receptacles, immersed in tap water to a depth of six feet for 48 hours. No evidence of leakage into the body of unmated connectors or into the body or contact-face area of mated connectors.	4.9.7

Materials and Finishes

Shells and Jam Nuts: Stainless steel/passivated
Inserts: Diallylphthalate resin type SDG-F
Loading Sleeve: Nylon 6/6, white
Seals: Ethylene propylene rubber
Strain Relief Spring: Steel corrosion resistant wire/chemical blackening
Contacts: Copper alloy/gold plate

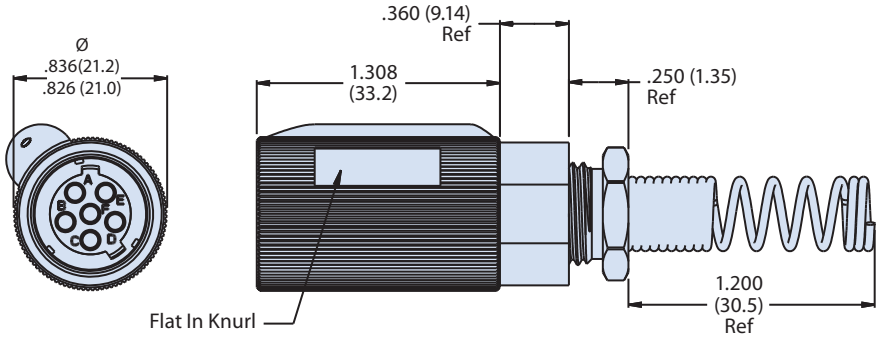
Notes

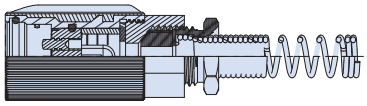
Assembly to be identified with Glenair's name, part number and date code space permitting.
Contact arrangement shown is for 6 pin arrangement, Center pin is removed for 5 pin arrangement.
Designed to meet interface configurations and IAW specifications of MIL-DTL-55116 TypeC.

151-001 • M55116/1 – /4
U-229 • MIL-DTL-55116 Type Audio Plugs
Field Serviceable with Wire Strain Relief

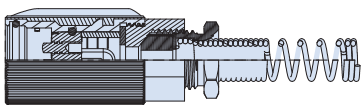
MIL-DTL-55116 type audio plug, field serviceable with wire strain relief

These Series 151 MIL-DTL-55116 Type audio plugs are designed for high-reliability, severe environment radio communications equipment. They are available in both 5 pin and 6 pin configurations, with either crimp sleeve or solder cup pogo pin terminals. All feature versatile wire strain relief to protect cable conductors from damage. Shells are made of passivated stainless steel, contacts are gold plated copper alloy. Plug connector contacts are sealed in the unmated condition.

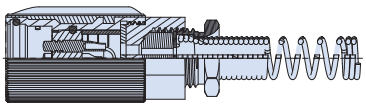




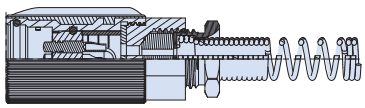
U-229 Plug, 5 Crimp Contacts



U-229 Plug, 6 Crimp Contacts



U-229 Plug, 5 Solder Cup Contacts

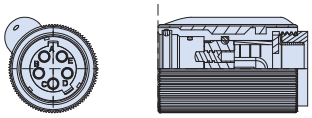


U-229 Plug, 6 Solder Cup Contacts

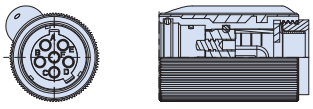
No. of Contacts	Contact Type	Ø Cable ± .010	MIL SPEC Part Number	Glenair Part Number	Mates With
5	Crimp	.165	M55116/1-1	151-001-1-1	151-003-1 151-004-1 151-004-3
		.228	M55116/1-2	151-001-1-2	
		.250	M55116/1-3	151-001-1-3	
		.290	M55116/1-4	151-001-1-4	
		.320	M55116/1-5	151-001-1-5	
6	Crimp	.165	M55116/2-1	151-001-2-1	151-003-2 151-004-2 151-004-4
		.228	M55116/2-2	151-001-2-2	
		.250	M55116/2-3	151-001-2-3	
		.290	M55116/2-4	151-001-2-4	
		.320	M55116/2-5	151-001-2-5	
5	Solder Cup	.165	M55116/3-1	151-001-3-1	151-003-1 151-004-1 151-004-3
		.228	M55116/3-2	151-001-3-2	
		.250	M55116/3-3	151-001-3-3	
		.290	M55116/3-4	151-001-3-4	
		.320	M55116/3-5	151-001-3-5	
6	Solder Cup	.165	M55116/4-1	151-001-4-1	151-003-2 151-004-2 151-004-4
		.228	M55116/4-2	151-001-4-2	
		.250	M55116/4-3	151-001-4-3	
		.290	M55116/4-4	151-001-4-4	
		.320	M55116/4-5	151-001-4-5	

MIL-DTL-55116 type molded audio plug

These Series 151 MIL-DTL-55116 Type molded audio plugs are designed for overmolding in cable cordsets for high-reliability, severe environment radio communications equipment, and are not field-serviceable. They are available in 5 pin and 6 pin configurations, with crimp sleeve or solder cup pogo pin terminals. Shells are made of passivated stainless steel, contacts are gold plated copper alloy. Plug connector contacts are sealed in the unmated condition.

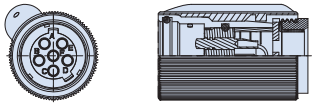


**U-182 Plug,
5 Crimp Contacts**

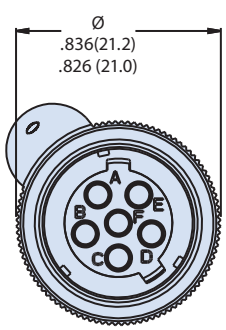


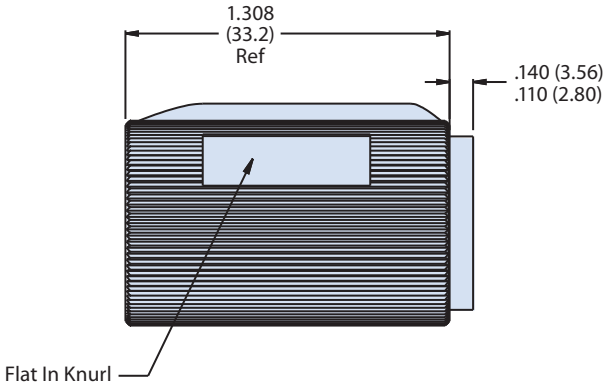
**U-182 Plug,
6 Crimp Contacts**

**U-182 Plug,
5 Solder Cup
Contacts**



**U-182 Plug,
6 Solder Cup
Contacts**



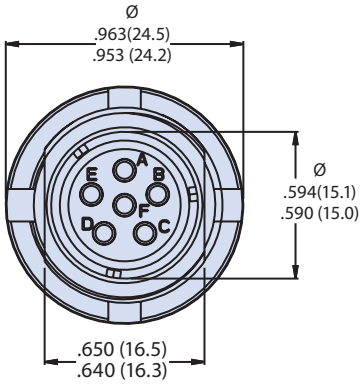


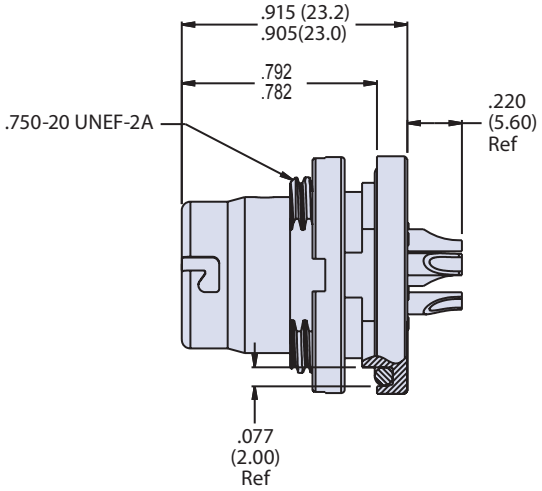
No. of Contacts	Contact Type	Ø Cable ± .010	MIL SPEC Part Number	Glenair Part Number	Mates With
5	Crimp	.165	M55116/5-1	151-002-1-1	151-003-1 151-004-1 151-004-3
		.228	M55116/5-2	151-002-1-2	
		.250	M55116/5-3	151-002-1-3	
		.290	M55116/5-4	151-002-1-4	
		.320	M55116/5-5	151-002-1-5	
6	Crimp	.165	M55116/6-1	151-002-2-1	151-003-2 151-004-2 151-004-4
		.228	M55116/6-2	151-002-2-2	
		.250	M55116/6-3	151-002-2-3	
		.290	M55116/6-4	151-002-2-4	
		.320	M55116/6-5	151-002-2-5	
5	Solder Cup	.165	M55116/7-1	151-002-3-1	151-003-1 151-004-1 151-004-3
		.228	M55116/7-2	151-002-3-2	
		.250	M55116/7-3	151-002-3-3	
		.290	M55116/7-4	151-002-3-4	
		.320	M55116/7-5	151-002-3-5	
6	Solder Cup	.165	M55116/8-1	151-002-4-1	151-003-2 151-004-2 151-004-4
		.228	M55116/8-2	151-002-4-2	
		.250	M55116/8-3	151-002-4-3	
		.290	M55116/8-4	151-002-4-4	
		.320	M55116/8-5	151-002-4-5	

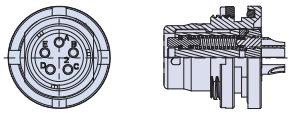
151-003 • M55116/9 – /10
U-183 • MIL-DTL-55116 Type Jam Nut Receptacle

MIL-DTL-55116 type audio receptacle, jam nut panel mount

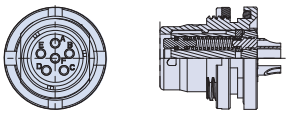
These Series 151 MIL-DTL-55116 Type panel mount jam nut receptacles are designed for high-reliability, severe environment communications equipment. They are available in either a 5 pin or 6 pin configuration. Receptacles are equipped with solder cup spring terminals and a jam nut for panel mounting. Shells and nuts are made of passivated stainless steel, contacts are gold plated copper alloy. Receptacle connector contacts are sealed in the unmated condition.



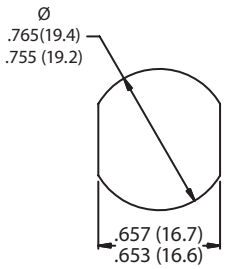




U-183 Jam Nut Receptacle,
5 Solder Cup Contacts



U-183 Jam Nut Receptacle,
6 Solder Cup Contacts

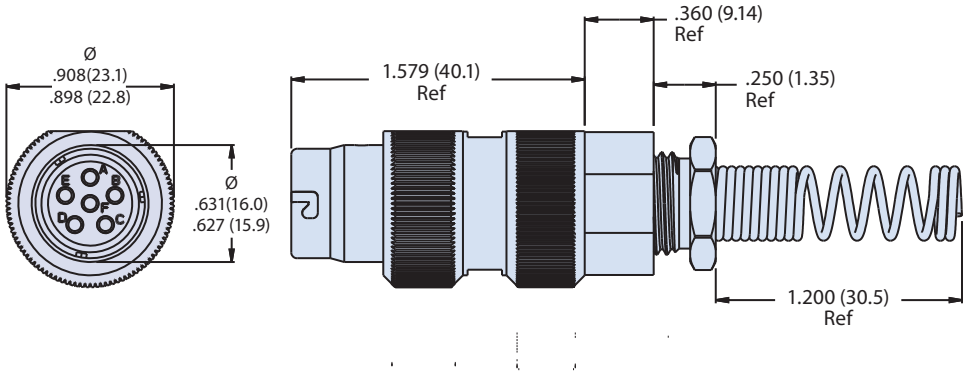


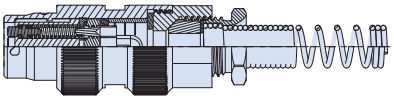
Recommended Panel
Hole

No. of Contacts	Contact Type	MIL SPEC Part Number	Glenair Part Number	Mates With
5	Solder Cup	M55116/9-0	151-003-1	151-001-1 151-001-3 151-002-1 151-002-3
6	Solder Cup	M55116/10-0	151-003-2	151-001-2 151-001-4 151-002-2 151-002-4

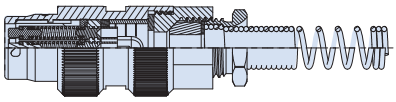
MIL-DTL-38999 type in-line audio receptacle with wire strain relief

These Series 151 MIL-DTL-38999 Type in-line audio receptacle are designed for high-reliability tactical communications equipment. They are available in both 5 pin and 6 pin configurations, with either crimp sleeve or solder cup pogo pin terminals. All feature wire strain relief to protect cable conductors from damage. Shells are made of passivated stainless steel, contacts are gold plated copper alloy. Receptacle connector contacts are sealed in the unmated condition.

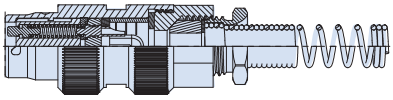




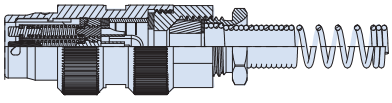
U-228 Receptacle, 5 Crimp Contacts



U-228 Receptacle, 6 Crimp Contacts



U-228 Receptacle, 5 Solder Cup Contacts



U-228 Receptacle, 6 Solder Cup Contacts

No. of Contacts	Contact Type	Ø Cable ± .010	MIL SPEC Part Number	Glenair Part Number	Mates With
5	Crimp	.165	M55116/11-1	151-004-1-1	151-001-1 151-001-3 151-002-1 151-002-3
		.228	M55116/11-2	151-004-1-2	
		.250	M55116/11-3	151-004-1-3	
		.290	M55116/11-4	151-004-1-4	
		.320	M55116/11-5	151-004-1-5	
6	Crimp	.165	M55116/12-1	151-004-2-1	151-001-2 151-001-4 151-002-2 151-002-4
		.228	M55116/12-2	151-004-2-2	
		.250	M55116/12-3	151-004-2-3	
		.290	M55116/12-4	151-004-2-4	
		.320	M55116/12-5	151-004-2-5	
5	Solder Cup	.165	M55116/13-1	151-004-3-1	151-001-1 151-001-3 151-002-1 151-002-3
		.228	M55116/13-2	151-004-3-2	
		.250	M55116/13-3	151-004-3-3	
		.290	M55116/13-4	151-004-3-4	
		.320	M55116/13-5	151-004-3-5	
6	Solder Cup	.165	M55116/14-1	151-004-4-1	151-001-2 151-001-4 151-002-2 151-002-4
		.228	M55116/14-2	151-004-4-2	
		.250	M55116/14-3	151-004-4-3	
		.290	M55116/14-4	151-004-4-4	
		.320	M55116/14-5	151-004-4-5	

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