M55116 AUDIO & M55116 AUDIO TYPE CONNECTORS

TECHNICAL SPECIFICATIONS	
Shell:	Stainless Steel, 303, Passivated
Mating:	Bayonet Coupling
Mating Cycles:	3,000
Temperature:	-55°C to +85°C
Insert Material:	Thermoset Plastic
Contacts:	Gold-plated Brass / Silver-plated BeCu (Springs)
Current Rating:	0.5 amperes
Voltage Rating:	60V max
Contact Depression:	1.25-1.75 lbs per contact
Contact Resistance:	.050 Ω max
Insulation Resistance:	1000 megaohms min, except for connectors unmated after immersion test shall not be less than 100 megaohms
Dielectric Withstanding Voltage; Sea Level:	500V RMS
Water Immersion:	6 feet of water up to 48 hours (mated & unmated)

Amphenol Nexus Technologies manufactures the complete line of qualified MIL-DTL-55116 audio connectors which are used throughout military and commercial radio systems and intercom systems for ground, vehicle, airborne, and naval communications.

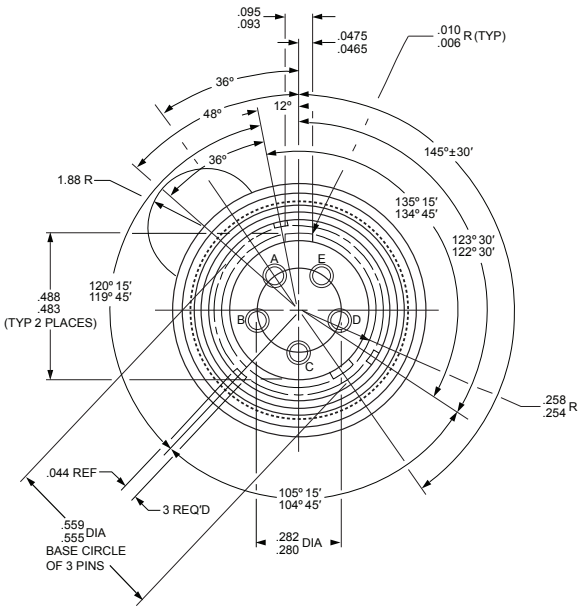
This connector series encompasses waterproof, polarized plugs and receptacles for use in audio frequency circuits at 60 volts maximum potential and 0.5 amperes maximum current. Connectors utilize either crimp sleeve or solder cup contacts. The rigid contacts in the plug connector mate with the pogo-pin, or spring loaded, contacts in the receptacle. In-line plugs and receptacles come with a wire strain relief. Receptacles are also available in panel-mount.

In addition to the standard versions, Amphenol Nexus Technologies also designs and builds a wide variety of custom M55116-type connectors with options such as: PCB contacts, unique shell geometries, grounded and shielded connectors, and right-angle plug connectors. We also designed a complete miniaturized line of M55116 style connectors, the TAC Series, that meets the same performance requirements as the standard connectors in less than half the size and weight.

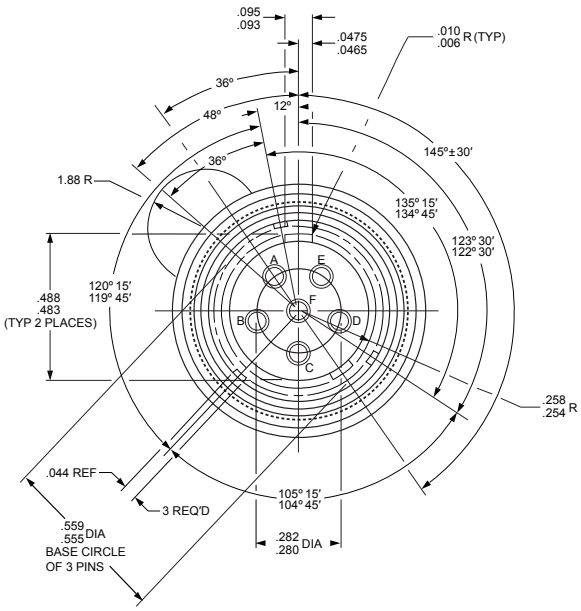
Amphenol Nexus Technologies specializes in designing and manufacturing high quality audio-style connectors, electro-mechanical devices, low voltage connectors, push button switches, and more. We have over 50 years of solving unique customer needs quickly. As part of the Amphenol Military & Aerospace group, we can collaborate to provide unmatched product and technological solutions for any system need.

M55116 MILITARY & COMMERCIAL CONNECTORS:

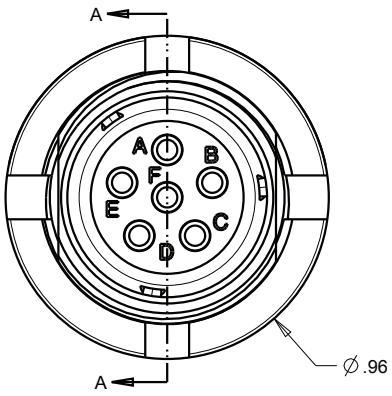
5-pin Insert Layout :

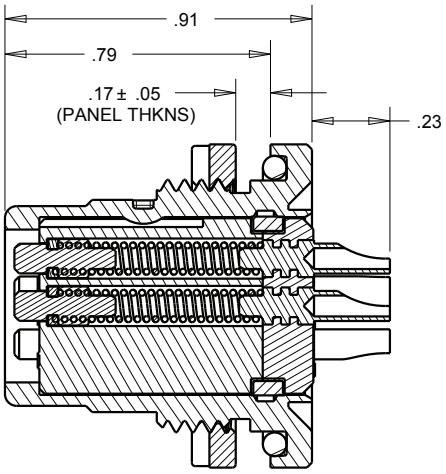


6-pin Insert Layout :



Panel Mount Receptacle Drawing :

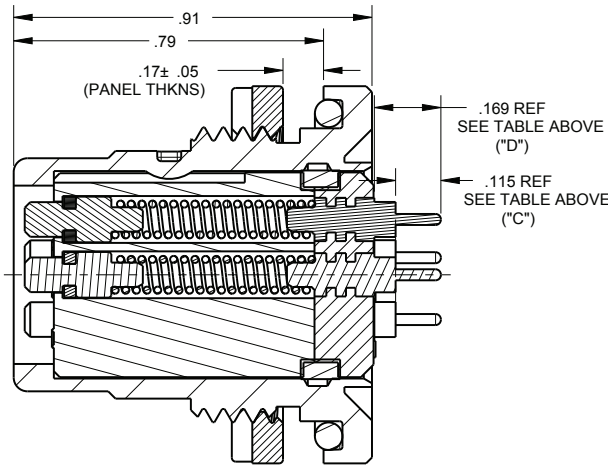




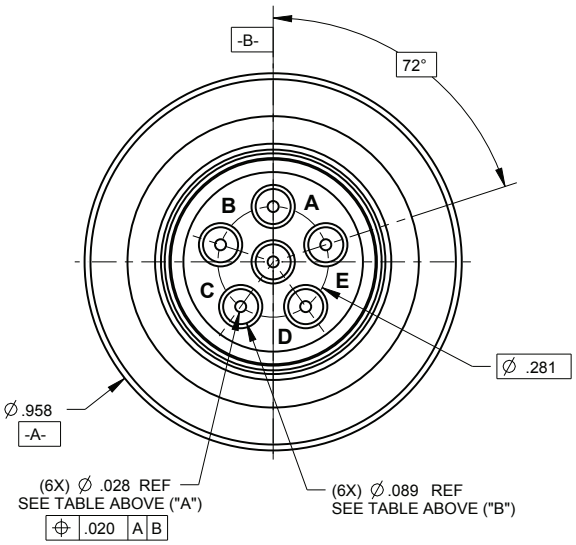
SECTION A-A
SCALE 3.000

M55116 MILITARY & COMMERCIAL CONNECTORS:

PCB CONTACT OPTIONS				
PART #	Ø "A" ± .002	Ø "B"	"C"	"D"
AJ-146RMPC/1	.040	.089	.115	.169
AJ-146RMPC/2	.040	—	—	.437
AJ-146RMPC/3	.028	.089	.188	.590
AJ-146RMPC/4	.028	.089	.125	.194
AJ-146RMPC/5	.028	.089	.218	.257
AJ-146RMPC/6	.040	—	—	.110
AJ-146RMPC/7	.028	.089	.150	.437
AJ-146RMPC/8	.030	—	—	.120
AJ-146RMPC/9	.028	.089	.140	.390
AJ-146RMPC/10	.040	—	—	.744
AJ-146RMPC/11	.030	—	—	.594
AJ-146RMPC/13	.040	—	—	.900

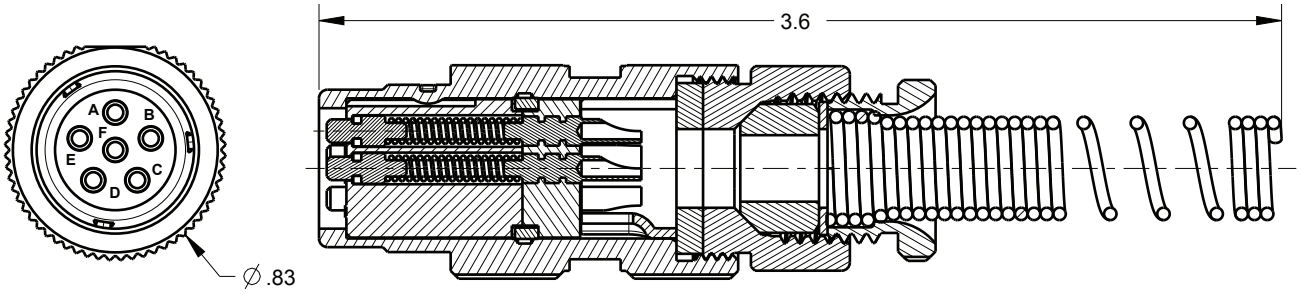


SECTION Z-Z
SCALE 4.000

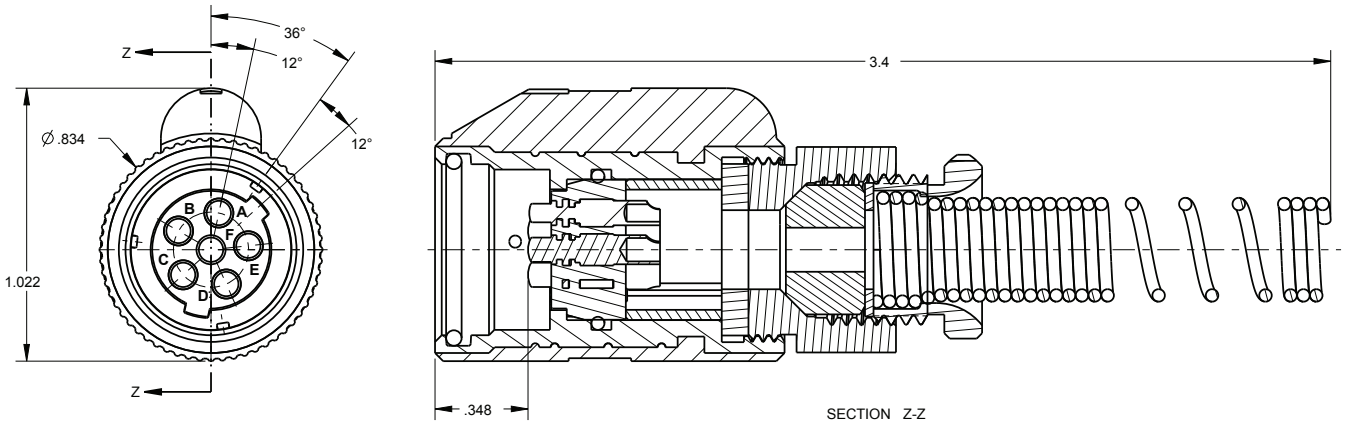


M55116 MILITARY & COMMERCIAL CONNECTORS:

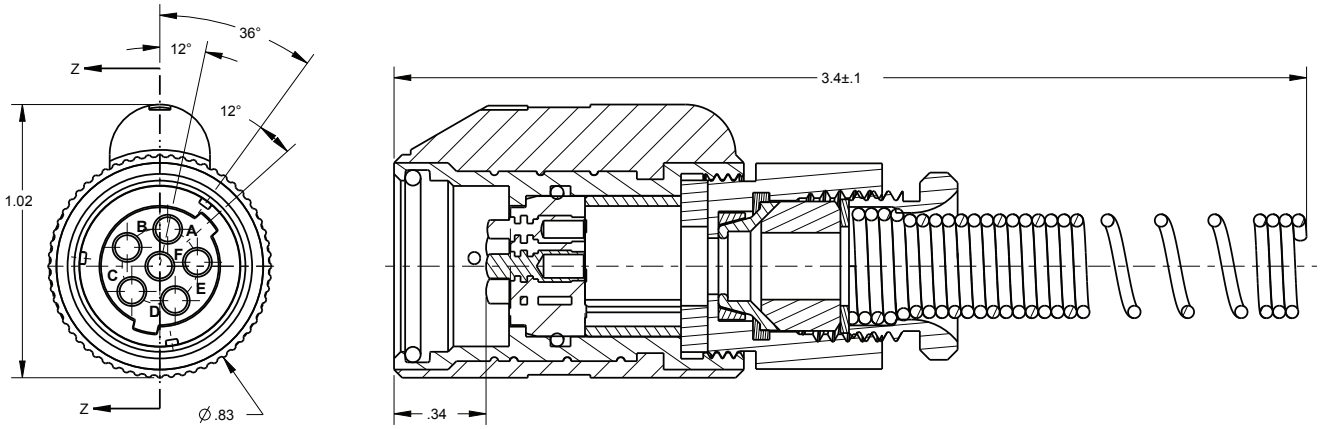
In-Line Receptacle Drawing :



Standard Plug Drawing :



Shielded Plug Drawing :



HOW TO ORDER:

Two Step Process Example :

1.	2.
Connector List	Cable Dimensions for Strain Relief
AP-125	X

1. Connector List

Nexus Part Number	Mil-Spec Designation	Connector Type	Number of Contacts	Contact Type	Strain Relief
AP-125	M55116/1	Plug	5	Crimp	Wire
AP-126	M55116/2	Plug	6	Crimp	Wire
AP-145	M55116/3	Plug	5	Solder	Wire
AP-146	M55116/4	Plug	6	Solder	Wire
AP-155	M55116/5	Plug	5	Crimp	Molded
AP-156	M55116/6	Plug	6	Crimp	Molded
AP-165	M55116/7	Plug	5	Solder	Molded
AP-166	M55116/8	Plug	6	Solder	Molded
AJ-145	M55116/9	Receptacle	5	Solder Cup Spring	Panel Mount
AJ-146	M55116/10	Receptacle	6	Solder Cup Spring	Panel Mount
AJ-155	M55116/11	Receptacle	5	Crimp Sleeve Spring	Wire
AJ-156	M55116/12	Receptacle	6	Crimp Sleeve Spring	Wire
AJ-165	M55116/13	Receptacle	5	Solder Cup Spring	Wire
AJ-166	M55116/14	Receptacle	6	Solder Cup Spring	Wire
AP-105	U-182B/U	Plug	5	Crimp	Molded
AP-106		Plug	6	Crimp	Molded
AP-115	U-229B/U	Plug	5	Crimp	Wire
AP-116		Plug	6	Crimp	Wire
AP-135		Shielded Plug	5	Crimp	Wire
AP-136		Shielded Plug	6	Crimp	Wire
AP-175		Shielded Plug	5	Solder	Wire
AP-176		Shielded Plug	6	Solder	Wire

2. Cable Dimensions for Strain Relief

Dash Number	Mil-Spec Designation
-0	N/A (for Panel-Mount Receptacles Only
-1	.165 +/- .010
-2	.228 +/- .010
-3	.250 +/- .010
-4	.290 +/- .010
-5	.325 +/- .010

55116 Mating Chart :

		JACKS					
		M55116/9 AJ-145	M55116/10 AJ-146	M55116/11 AJ-155	M55116/12 AJ-156	M55116/13 AJ-165	M55116/14 AJ-166
PLUGS	M55116/1 AP-125	X		X		X	
	M55116/2 AP-126		X		X		X
	M55116/3 AP-145	X		X		X	
	M55116/4 AP-146		X		X		X
	M55116/5 AP-155	X		X		X	
	M55116/6 AP-156		X		X		X
	M55116/7 AP-165	X		X		X	
	M55116/8 AP-166		X		X		X
	AP-105	X		X		X	
	AP-106		X		X		X
	AP-115	X		X		X	
	AP-116		X		X		X
	AP-135	X		X		X	
	AP-136		X		X		X
	AP-175	X		X		X	
	AP-176		X		X		X
	AP-186		X		X		X

M55116 TYPE RIGHT-ANGLE PLUG CONNECTORS

AP-RA Series Connectors

With space at a premium in today's military vehicles and systems, Amphenol NEXUS Technologies has met that demand with its new Right-Angle M55116-Type Plug Connectors.

Amphenol NEXUS technologies has re-designed our in-line 5-and 6-conductor shielded plugs to have a 90° back-end to redirect the wires for space-saving purposes. Additionally, the cable location can then be indexed 180°.

FEATURES:

- 90° back-end to redirect the cables which saves almost 2 inches from the standard straight audio plug.
- Connector can be indexed, or clocked, in 13 different locations within a 180° spectrum to accommodate any system configuration.
- Molded-in pin contacts with standard solder cup or crimp-style terminals.
- Contacts provide self-cleaning feature and eliminate issues with pin/socket open contacts.
- Multiple wire strain reliefs accommodates .165 to .325 cable diameters.

OPTIONS:

- 5- or 6- contacts available, either solder or crimp versions.
- Wire strain relief can be supplied for larger/smaller size cable diameters.
- Over-molded versions are available.

HOW TO ORDER:

Contact Amphenol NEXUS Technologies for pricing, availability, or other technical questions

1. Base Part Number	2. Contact Type	3. Number of Pins	4. Right Angle Designation	5. Other Options
AP-	13	6	RA-	OM

2. Contact Type

Designates	
13	Crimp
17	Solder

3. Number of Pins

Designates	
5	5 Pins
6	6 Pins

5. Other Options

Designates			
1	.165 Strain Relief	4	.290 Strain Relief
2	.228 Strain Relief	5	.325 Strain Relief
3	.250 Strain Relief	OM	Over-molded version

Amphenol NEXUS Technologies

TAC CONNECTORS

Miniature M55116-Type Connectors

AVAILABLE PART NUMBERS:	
Part Number	Connector Style
MAP-56-30	6-Conductor Plug
MAP-57-30	7-Conductor Plug
MAP-56-50	6-Conductor Plug (for Overmolding)
MAP-57-50	7-Conductor Plug (for Overmolding)
MAJ-16-00	6-Conductor Panel Mount Jack
MAJ-17-00	7-Conductor Panel Mount Jack
MAJ-56-30	6-Conductor In-Line Jack
MAJ-57-30	7-Conductor In-Line Jack
MAP-60-50	10-Conductor Plug (for Overmolding)
MAP-60-00	10-Conductor Panel-Mount Plug
MAJ-60-50	7-Conductor In-Line Jack (for Overmolding)
MAJ-60-00	10-Conductor Panel-Mount Jack

New military and commercial applications are demanding a reduction in connector size and weight without a loss of performance. Amphenol NEXUS Technologies has met that demand with its new Miniature M55116-Type TAC Connectors for soldier worn applications, radio systems, and ruggedized communications systems.

TAC Connectors are designed and manufactured to the exacting specifications of MIL-DTL-55116 requirements at half the size of the standard connectors.

Amphenol NEXUS Technologies TAC Connectors are the ideal choice to reduce size and weight and still maintain many of the same performance benefits wherever a M55116 connector is needed on a newly designed system.

FEATURES:

- Both plug and receptacle are 50% smaller than the standard M55116 connectors. (M55116/4 and M55116/10 as a comparison)
- Standard plugs have rigid contacts; jacks have spring-loaded contacts
- Molded-in spring loaded contacts provide self-cleaning feature and eliminate issues with pin/socket open contacts.
- Standard wire strain relief accommodates .125 and .250 cable diameter.

OPTIONS:

- Shell Styles
  - In-Line Plug
  - Panel-Mount Plug
  - In-Line Jack
  - Panel Mount Jack
- Number of Contacts
  - 6-pin
  - 7-pin
  - 10-pin
- In-Line Rear Accessories
  - Wire Strain Relief
  - Over-Molded
- Contact Types
  - Solder Cup
  - PCB

Contact Amphenol NEXUS Technologies for pricing, availability, or other technical questions

AMPHENOL NEXUS TECHNOLOGIES OVERVIEW

SCOPE:
We specialize in designing and manufacturing high quality audio-style connectors, electro-mechanical devices, low voltage connectors, push button switches, and more.

LEGACY:
We have over 50 years of solving unique customer needs quickly. Most of our product lines were born out of rapidly designing the right solution for a customer issue.

LOOKING AHEAD:
As part of the Amphenol Military and Aerospace group, we can collaborate to provide unmatched product and technological solutions for any system need.

PRODUCTS :

TELEPHONE PLUGS AND JACKS

MICROPHONE PLUGS AND JACKS

WATERPROOF BREAKAWAY CONNECTORS

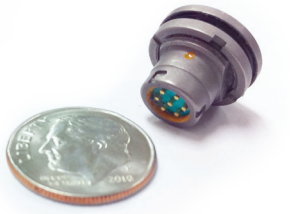
M55116-TYPE CONNECTORS

PUSH BUTTON SWITCHES

- MILS-S-8805/3

OTHER CUSTOM DESIGNS: Specialized Missile Launch connectors, Downhole Rotatable Connectors for Oil/Gas drilling operations, and many others.

TECHNOLOGIES :



DECREASED CONNECTOR SIZE

DURABILITY/ENVIRONMENTALLY SEALED

MULTIPLE CONTACT OPTIONS

- Pogo-pin Contacts
- Wiping Action Contacts
- Insulation-piercing Contacts
  (For toolless termination)

VARIOUS MATING STYLES

- Push/Pull, Quick Disconnect
- Blindmate
- Bayonet Coupling

SPECIAL FEATURES: Shielded and grounded versions of most connectors available. Higher level builds, such as filter connectors, cable assemblies, and flex assemblies also available when collaborating with Amphenol sister Divisions.

MARKETS SERVED :

Amphenol Nexus Technologies proudly serves the following markets:

C4 Systems • Soldier Systems • Military Vehicles • Commercial Aerospace • Missiles/ Ordnance • Naval • Commercial/ Industrial • Telecommunications Simulation Controls • Medical Products • Auto/Powerboat Racing • Many Others

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