



Commercial and military aerospace fiber optic connection system designed for RF-over-fiber, in-flight entertainment, avionics, and other high-speed data networking applications. Utilizing D38999 Series III type connectors, Glenair ARINC 801 features genderless termini, a removable alignment sleeve retainer, and singlemode or multimode 1.25mm termini for low insertion loss performance and flexibility in cable choice.

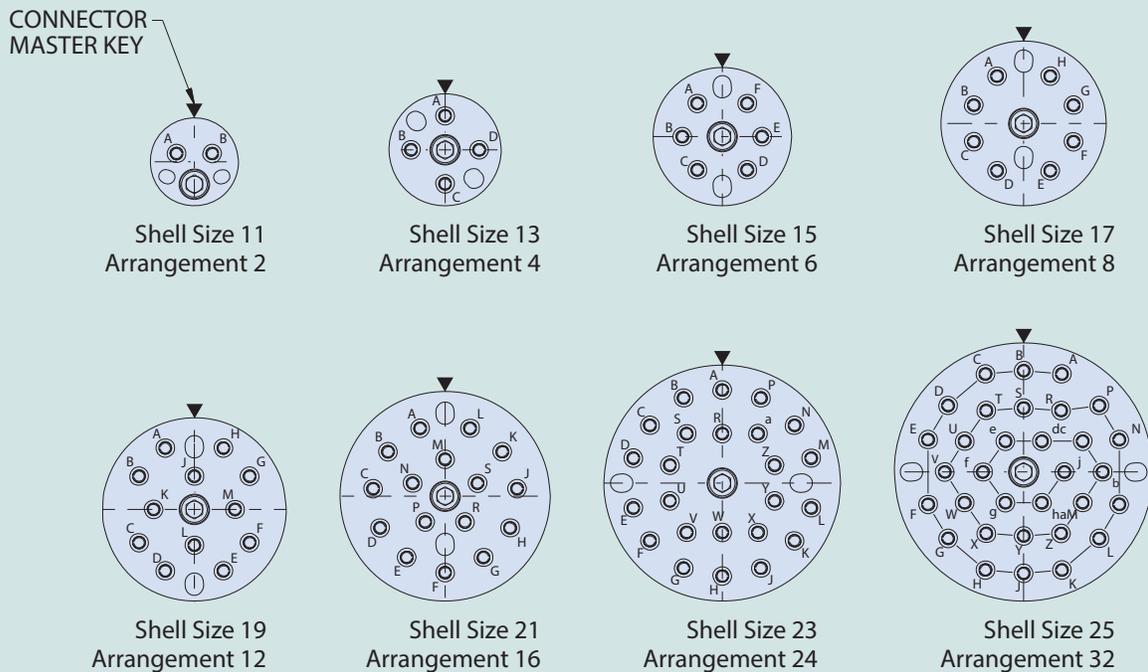
- Genderless terminus design eliminates pin and socket complexity
- Rear-release size #16 termini
- Singlemode and multimode
- Mechanical and environmental performance IAW ARINC 801 standards



Table I: Material and Finish		
Code	Material	Finish Description
M	Aluminum Alloy	Electroless Nickel
MT		Nickel - PTFE, Grey
NF		Cadmium, Olive Drab
ZN		Zinc-Nickel, Olive Drab
ZR		Zinc-Nickel, Black (RoHS)
XM	Composite	Electroless Nickel
XMT		Nickel - PTFE, Grey
XW		Cadmium, Olive Drab
XZN		Zinc-Nickel, Black
ZL	Stainless Steel	Electro-Deposited Nickel
Z1	Steel	Passivate

Series 180-159 ARINC 801 Performance Specifications	
Test Description	Performance Requirements/Specifications
Insertion Loss	Multimode (PC): 0.30 dB typical at 850/1300nm
	Singlemode (UPC): 0.30 dB typical at 1310/1550nm
Return Loss	Multimode (PC): Better than 20 dB
	Singlemode (UPC): Better than 40 dB
Operating Temperature	-55°C to +165°C (cable/epoxy dependent)
Storage Temperature	-40°C to +85°C (cable/epoxy dependent)
Mating Durability	500 cycles, per TIA/EIA-455-21
Vibration	23.1g RMS, 8 hrs/axis, per TIA/EIA-455-11, Test Condition VI-G
Mechanical Shock (half-sine pulse)	300g Peak for 3ms, 3 shocks/axis in each direction, per TIA/EIA-455-14, Test Condition D
Thermal Cycling	-55°C to +125°C, 50 cycles, per TIA/EIA-455-3, Test Condition C-4 (cable/epoxy dependent)
Temperature Life	+125°C for 1000 hrs, per TIA/EIA-455-4 (cable/epoxy dependent)
Humidity, Steady State	+40°C for 240 hrs, 90% RH, per TIA/EIA-455-5, Method A, Test Condition B
Humidity, Temperature Cycling	-25°C to +65°C, 10 cycles for 24 hrs, 90% RH, per TIA/EIA-455-5, Method B7a (cable/epoxy dependent)

FIGURE 1: ARINC 801 INSERT ARRANGEMENTS



MATERIAL/FINISH:

Shells, Barrel, Coupling Nut: See Table I

Inserts: Al Alloy / Anodize

Guide Pins: Stainless Steel / Passivate

Seals: Fluorosilicone

EMI/RFI/Ground Spring (G6 configuration): Copper Alloy / Nickel

MIL-DTL-38999 SERIES III TYPE ARINC 801 Fiber Optic Connectors and Termini

How to order Termini and Plugs



How To Order				
Sample Part Number	181-076	-	P	-126
Fiber Optic termini	Genderless terminus for ARINC 801 connector			
Cable Jacket Diameter	See Table I (previous page)			
Cable Structure	P = Pull-Proof (loose structure cable) N = Non-Pull-Proof (tight structure cable or 900 micron buffer)			
Assembly Dash Number	See Table II			

Table I: Cable Jacket Diameter	
Dash No.	Cable Jacket Diameter
A	900 micron buffer only
-	2.0/1.7mm

Table II: Ceramic Ferrule						
Dash No.	Ø A (microns)	Typ Fiber Type	Typ Fiber Size (microns) Core/Cladding	Ferrule Polish Type	L Inches	Color Band
-1255	125.5	Singlemode	9/125	PC	.196/.192	Blue
-1255A	125.5	Singlemode	9/125	APC	.200/.196	Green
-126S	126.0	Singlemode	9/125	PC	.196/.192	Blue
-126SA	126.0	Singlemode	9/125	APC	.200/.196	Green
-126	126.0	Multimode	50/125, 62.5/125	PC	.196/.192	None

NOTES

Crimp sleeve is packaged loose with terminus assembly. Spares may be ordered separately, consult factory.

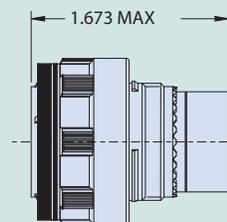
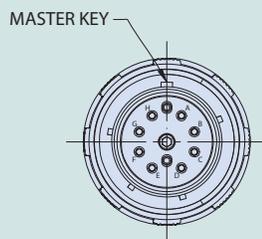
Termini for 900 micron buffer are not provided with crimp sleeves

MATERIAL AND FINISH

Ferrule: Zirconia Ceramic
Terminus Bodies: Brass Alloy/Nickel
Crimp Sleeve: Brass Alloy/Nickel
Spring: Stainless Steel/Passivate



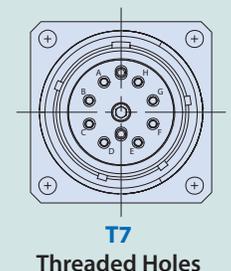
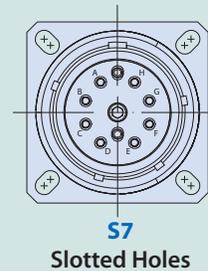
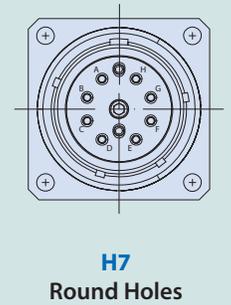
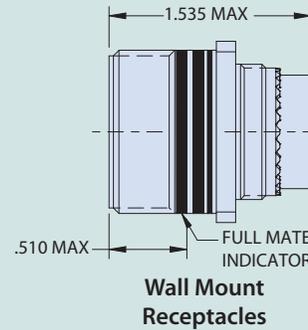
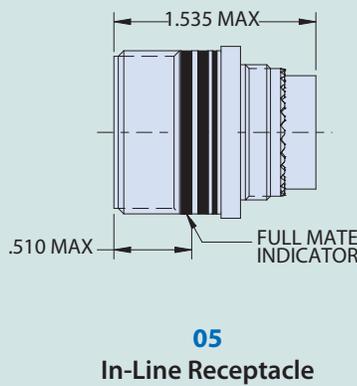
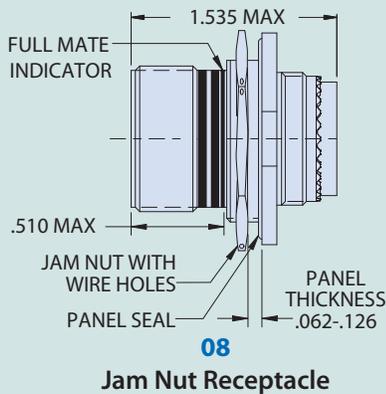
How To Order					
Sample Part Number	180-159	NF	06	-17-8	N
Fiber Optic connector	ARINC 801 connectors, MIL-DTL-38999 Series III Type				
Material/Finish Code	See Table I (previous page)				
Connector Style, Plug	06 = Plug G6 = Plug with EMI/RFI Ground Spring				
Shell Size - Insert Arrangement	See Figure I				
Alternate Key Position	per MIL-DTL-38999 Series III. A, B, C, D, E, N = Normal, omit for universal key				



How to order Receptacles and Alignment Sleeve Retainers



How To Order					
Sample Part Number	180-159	NF	06	-17-8	N
Fiber Optic connector	ARINC 801 connectors, MIL-DTL-38999 Series III Type				
Material/Finish Code	See Table I (previous page)				
Connector Style, Receptacle	08 = Jam Nut Receptacle 05 = In-Line Receptacle H7 = Wall Mount Receptacle with Round Holes (Standard) S7 = Wall Mount Receptacle with Slotted Holes T7 = Wall Mount Receptacle with Threaded Holes				
Shell Size - Insert Arrangement	See Figure I				
Alternate Key Position	per MIL-DTL-38999 Series III. A, B, C, D, E, N = Normal, omit for universal key				



How To Order		
Sample Part Number	180-159ASR	-25-32
Fiber Optic connector	Alignment Sleeve Retainer for 180-159 plug connector	
Shell Size - Insert Arrangement	See Figure I	

NOTES

1. Housing: Al alloy/anodize
2. Misc hardware: stainless steel/passivate
3. Alignment sleeve: zirconia ceramic
4. Alignment sleeve retainer is designed to meet or exceed all mechanical and performance requirements of ARINC 801 specification.
5. Ceramic alignment sleeve replacements may be purchased separately (P/N 181-056-S)