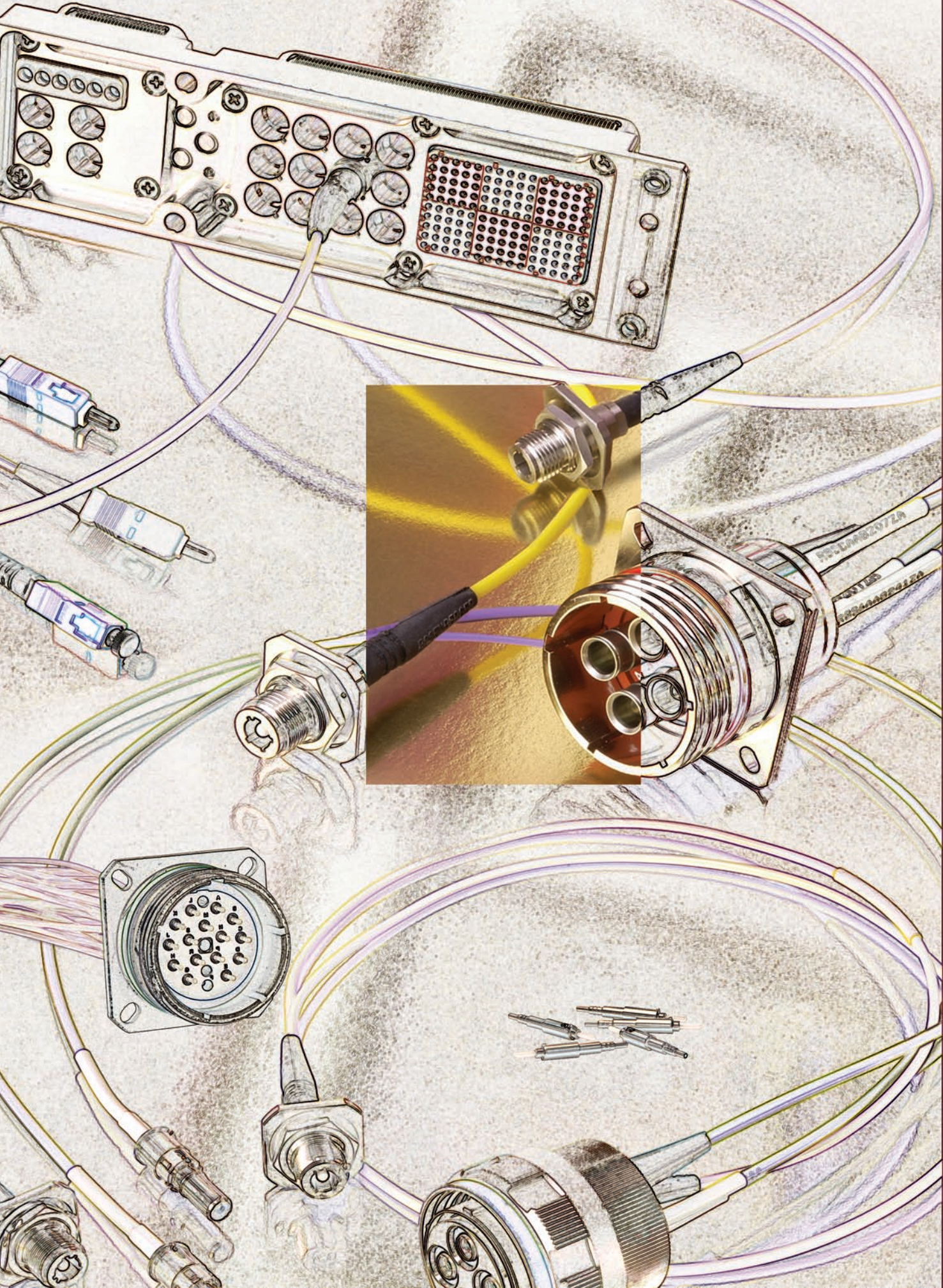


FIBER OPTIC CONNECTORS AND CONTACTS



FIBER OPTIC CONNECTORS AND CONTACTS



Fiber Optic Connectors/Contacts

Overview

Sabritec offers rugged connectors such as MIL-DTL-38999 to house fiber optic contacts in size 5 and 12 expanded beam, size 16 butt-joint, DIN style and ARINC 801 termini. These technologies are capable of supporting wide bandwidth applications. All fiber optic connectors and contacts are offered fully terminated and tested ensuring signal integrity for ruggedized application environments.

When specifying these rugged connectors, Sabritec also offers a complete line of fiber optic connectors to terminate to the other end of the cables. These include Ruggedized Single Channel (RSC), FC, ST, LC Duplex/Simplex, MTP, MT-RJ, and Ruggedized SC connectors. Please consult factory for cabling options.

ARINC 801 Terminus

- Single terminus design for all connector formats
- Pull-proof design (no strain relief backshell needed)
- Optical disconnect style available
- Hermaphroditic design (same contact on both sides of the connector)
- PC ferrule end face
- Polarization key allows APC polish for better return loss performance
- Compatible with multi-mode and single-mode fiber
- Standard 1.25 mm LC ferrule and termination process
- Cable termination identical to LC connector process
- Insertion loss: -0.25dB (typical) mated pair



ARINC 801 TERMINUS
Pg. 91

MIL-DTL-38999
Pg. 93

EXPANDED BEAM
CONTACTS Pg. 93

BUTT-JOINT CONTACTS
Pg. 95

DIN & RUGGEDIZED
SINGLE CHANNEL Pg. 96

Size 5 Expanded Beam Contacts

- Robust pin & socket versions
- Multimode applications 62.5/125 and 50/125 μm
- Available for ARINC or MIL-DTL-38999 applications
- Reduced influence from alignment errors
- Increased protection for fiber
- Reduced influence from dirt and debris
- Simple cleaning
- Insertion loss: -0.8 dB (typical) mated pair



Ruggedized Single Channel Connectors

- Ruggedized construction
- Multimode applications
- Anti-vibration coupling mechanism on plug
- Jam nut receptacle
- 4 Keyway orientation options
- Precision ceramic ferrule
- Fiber end faces accessible for cleaning
- Low insertion loss: -0.4 dB (typical)



Size 12 Expanded Beam Contacts

- Fits standard size 12 contact cavities for MIL-DTL-38999 (dimensionally identical to size 12 electrical contacts per M39029/56-353 and M39029/58-365)
- Multimode applications 50/125 and 62.5/125 μm
- Insertion loss: -1.0 dB (Typical) mated pair
- Increased protection for fiber face
- Reduced influence from dirt, debris and vibration
- Simple cleaning
- Insert arrangements for MIL-DTL-38999 include: 13-2, 15-4, 17-6, 21-11 and 25-19 (other custom arrangements available, consult factory)



Size 16 Butt-Joint Contacts

- Robust pin and socket design
- Singlemode and Multimode applications 62.5/125 and 50/125 μm
- Connector formats for MIL-DTL-38999, ARINC 600
- Excellent optical performance
- Fewer parts, easy termination process
- Physical contact polish provides low insertion loss and low back reflection
- Meets or exceeds all applicable requirements of MIL-T-29504
- Insertion loss: -0.25dB (typical) mated pair



DIN Contacts

- Twist protection pin
- Multimode applications
- Screw lock mechanism
- Low insertion loss: -0.20 dB (typical)



Sabritec provides specialty, enhanced performance connectors and cable assemblies and as such does not currently offer circular, rack and panel, or D-subminiature connectors that are listed on military standard Qualified Products Lists (QPL) per applicable detail specification sheets. Sabritec's connectors are fully interchangeable with applicable QPL products and meet the applicable requirements of all military standards listed in this catalog.



ARINC 801 Terminus

Part Numbering Scheme for ARINC 600 and MIL-DTL-38999

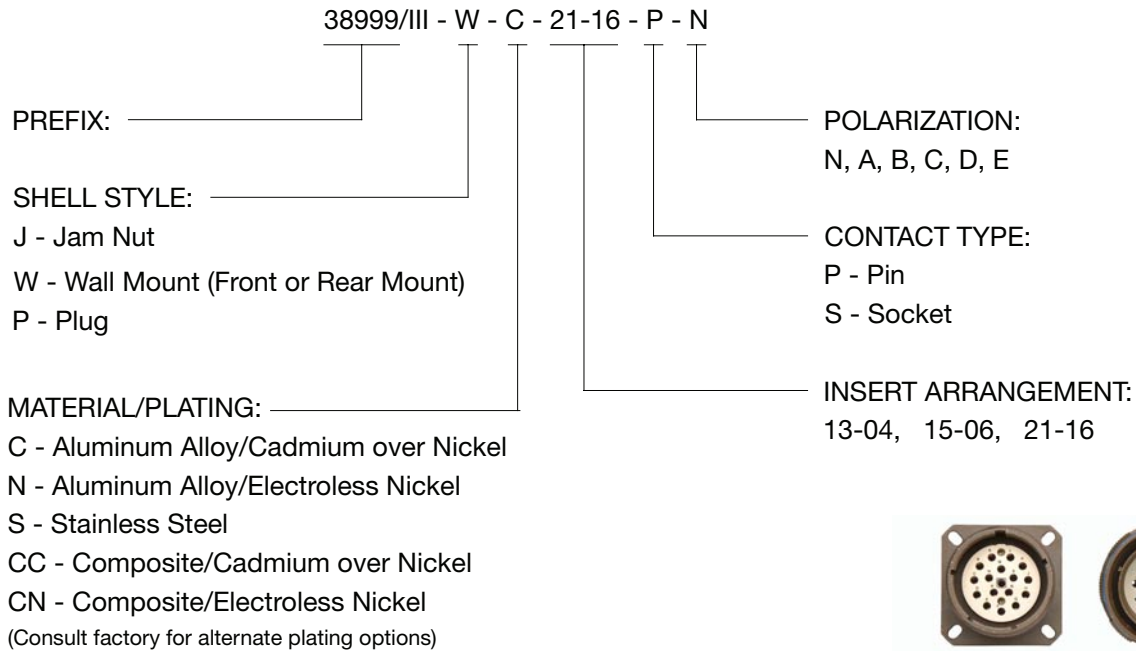
The ARINC 801 fiber optic terminus is the next generation of butt-joint interconnect technology allowing for higher density multichannel connectors to be achieved. With its standard 1.25 mm ferrule and sleeve, the ARINC 801 terminus is designed for both multimode and single-mode applications and is compatible with standard LC termination processes. The terminus is available both as a pull-proof design and a general use design for tight jacketed cable.



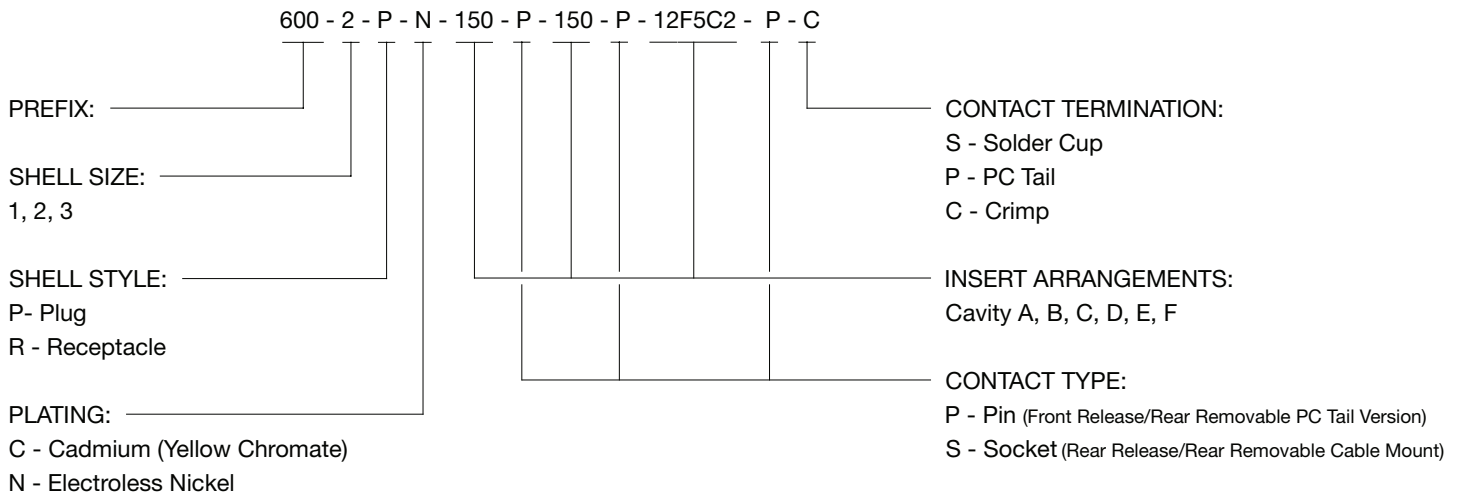
For the pull-proof design, the cable jacket is crimped on an external body and a floating mechanism avoids any loss of performance when pulling on the cable. This feature allows for the use of the connector without a backshell. Standard connector formats include MIL-DTL-38999 Series III type, MIL-DTL-83527 type, ARINC 600 and ARINC 781.

Sabritec has successfully passed qualification testing of its Size 16 ARINC 801 terminus for single and multimode applications. Qualification test results show that Sabritec's ARINC 801 terminus maintains its low loss while being intermateable/interoperable with qualified termini and connectors. For complete qualification test results visit our website.

MIL-DTL-38999 Part Number Description Code for ARINC 801



ARINC 600 Part Number Description Code for ARINC 801



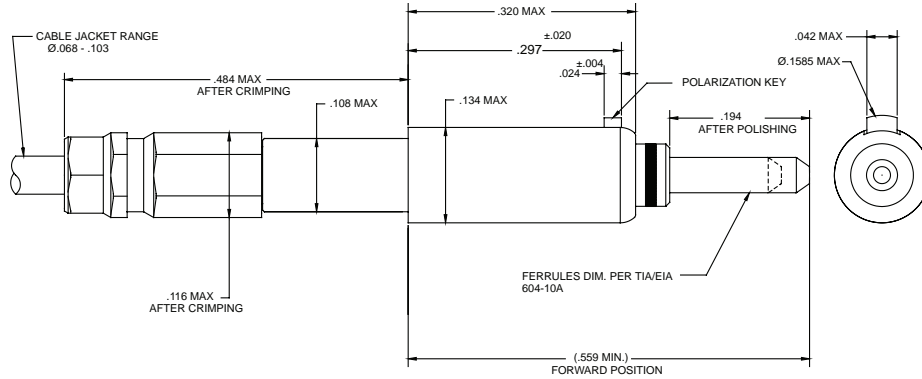
Please consult factory for Cabling Options



ARINC 801 Terminus

Size 16 ARINC 801 Contact/Insert Arrangements

Size 16 ARINC 801 Terminus

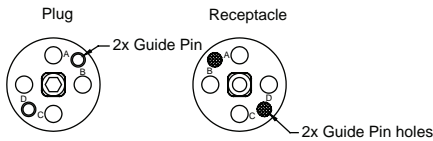


Part Number	Mode	Style	Polish
238500-8000	Multi	Pull Proof Loose Jacket	PC
238500-8001	Multi	Tight Jacket	PC
238500-8002	Single	Pull Proof Loose Jacket	PC
238500-8003	Single	Pull Proof Loose Jacket	APC
238500-8004	Single	Tight Jacket	PC
238500-8005	Single	Tight Jacket	APC

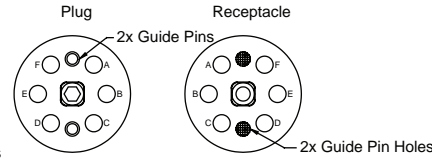


MIL-DTL-38999 Insert Arrangement for ARINC 801

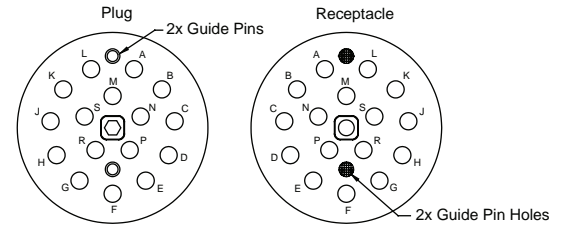
ARRANGEMENT
13-04



ARRANGEMENT
15-06

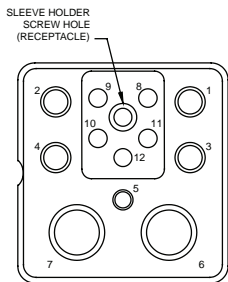


ARRANGEMENT
21-16



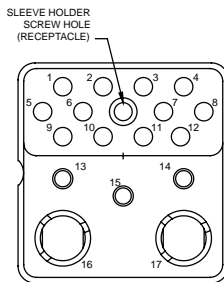
ARINC 600 Insert Arrangement for ARINC 801

ARRANGEMENT
12F5C2



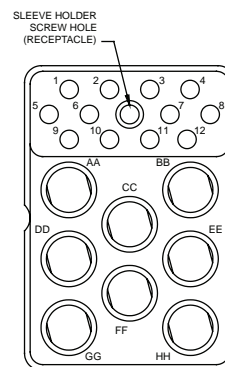
QTY	CONTACT SIZE	CAVITY I.D.
4	12 (ELECTRICAL)	1 THRU 4
1	16 (ELECTRICAL)	5
2	5 (QUADRAX)	6 THRU 7
5	16 (OPTICAL TERMINI)	8 THRU 12

ARRANGEMENT
17F12Q2



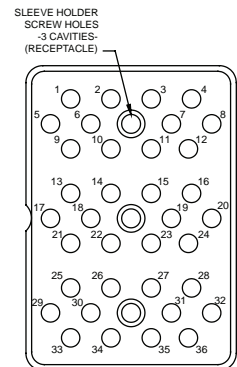
QTY	CONTACT SIZE	CAVITY I.D.
12	16 (OPTICAL TERMINI)	1 THRU 12
3	16 (ELECTRICAL)	13 THRU 15
2	8 (QUADRAX)	16 THRU 17

ARRANGEMENT
20F12T8/20F12Q8



QTY	CONTACT SIZE	CAVITY I.D.
12	16 (OPTICAL TERMINI)	1 THRU 12
8	8 (TWINAX/QUADRAX)	AA THRU HH

ARRANGEMENT
36F36



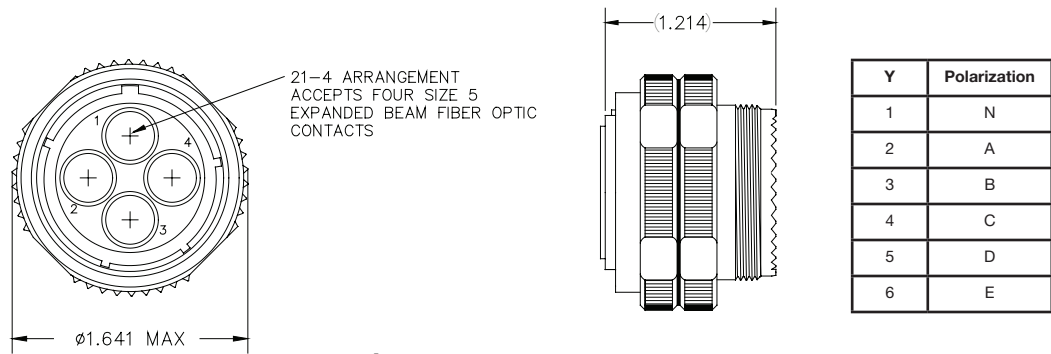
QTY	CONTACT SIZE	CAVITY I.D.
36	16 (OPTICAL TERMINI)	1 THRU 36



MIL-DTL-38999 Fiber Optic Connectors

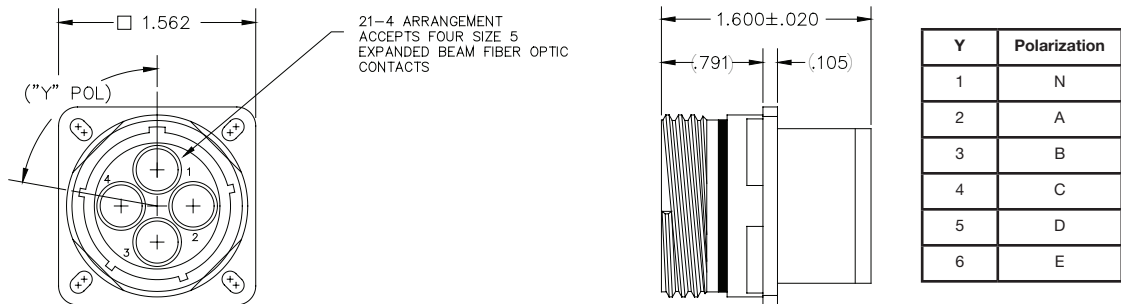
Size 5 Expanded Beam Fiber Optic Insert Cavities

MIL-DTL-38999 Size 21-4 Fiber Optic Plug



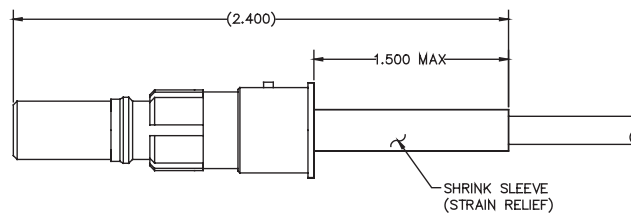
P/N 23640Y-2000

MIL-DTL-38999 Size 21-4 Fiber Optic Receptacle



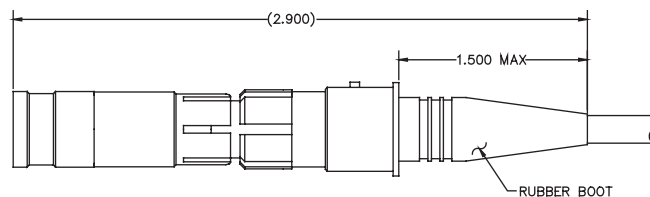
P/N 23640Y-3000

Size 5 Expanded Beam Lens Pin Contact



P/N 239433-8000

Size 5 Expanded Beam Lens Socket Contact



P/N 239333-8000

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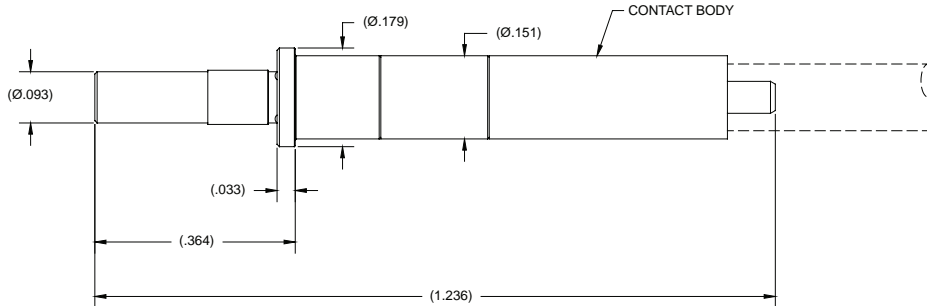
Size 12 Expanded Beam Contacts

Pin and Socket Contacts for MIL-DTL-38999

Sabritec's Expanded Beam Fiber Optic Contact technology is specifically designed to fit into standard size 12 cavities of MIL-DTL-38999 Series I, III and IV connectors. The size 12 contact provides a robust fiber optic interconnection with low susceptibility to contamination and fits a variety of cable types with diameters from 1.6 to 2.2 mm with additional versions available upon request. The contacts are rear release/rear removable with standard size 12 removal tools.

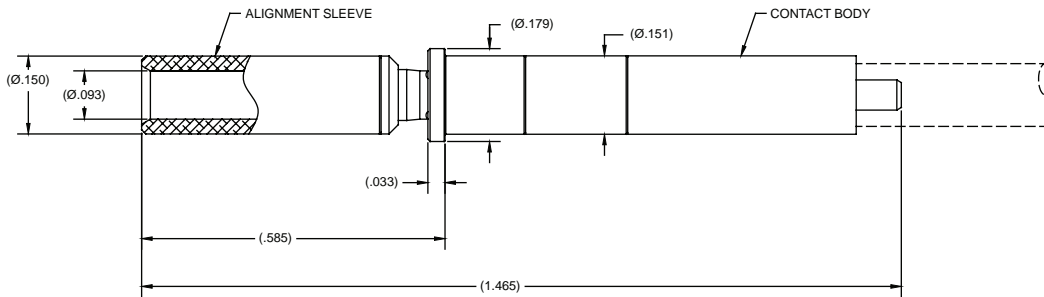


Size 12 Expanded Beam Pin Contact



PN: 238633-8000

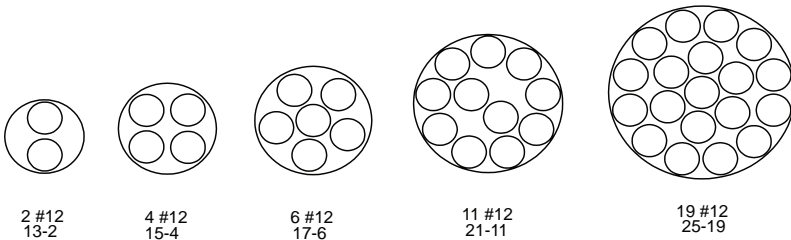
Size 12 Expanded Beam Socket Contact



PN: 238733-8000

Sample Size 12 Insert Arrangements

Standard Insert Arrangements for MIL-STD-1560



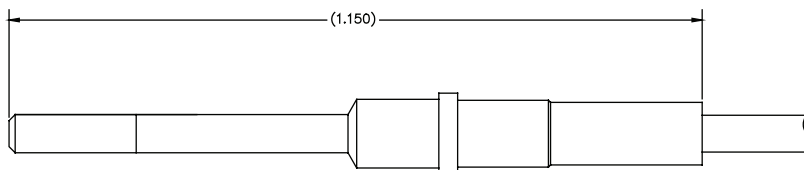
Specifications	
Operating Temperature	-40°C to + 85°C
Fiber Types	Multimode: 50/125 µm 62.5/125 µm
Insertion Loss	1.0 dB (Typical)
Cable Diameter	1.6mm to Ø2.2mm
Ferrules	Zirconia Ceramic
Contact Body	ARCAP
Alignment Sleeve	Stainless Steel



Size 16 Butt-Joint Contacts

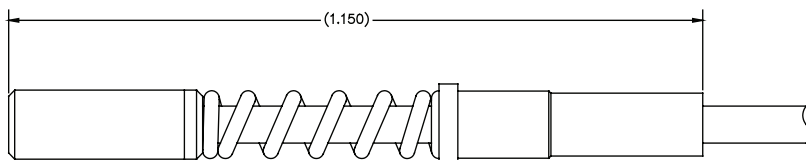
ARINC 404 Size 16 Butt-Joint Contacts

ARINC 404 Size 16 Butt-Joint Pin Contact Conforming to M29504/6



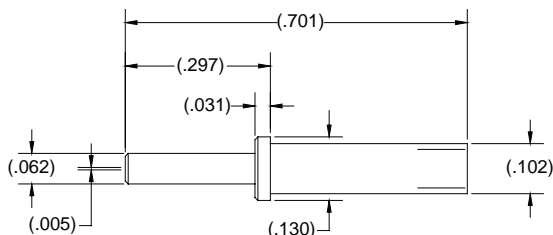
P/N 238533-8000

ARINC 404 Size 16 Butt-Joint Socket Contact Conforming to M29504/7



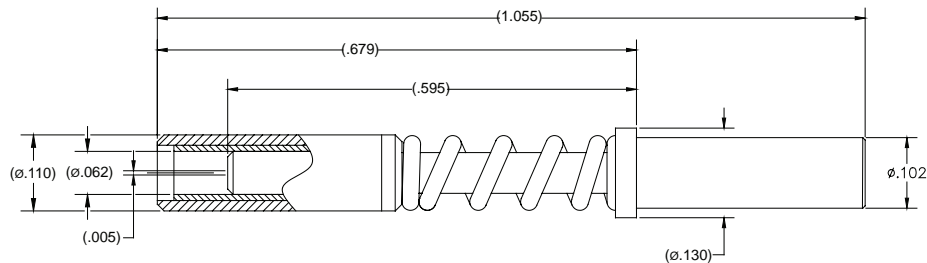
P/N 238433-8000

MIL-DTL-38999 Size 16 Butt-Joint Pin Contact Conforming to M29504/4



P/N 238533-8004

MIL-DTL-38999 Size 16 Butt-Joint Socket Contact Conforming to M29504/5



P/N 238433-8004

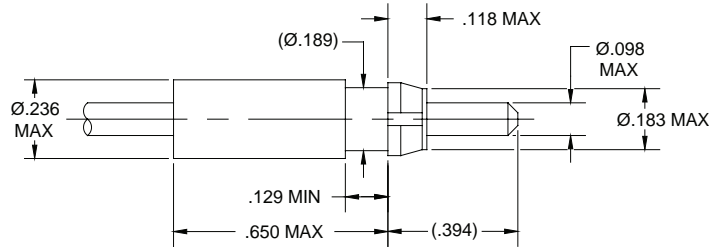
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Fiber Optic Contacts and Connectors

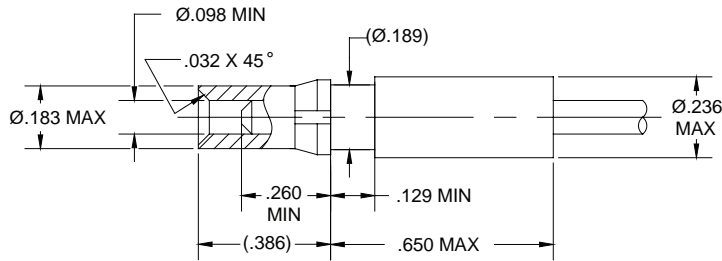
DIN Contacts and Ruggedized Single Channel Connectors

Fiber Optic Pin Contact Per DIN 41626-3



P/N 239933-8000

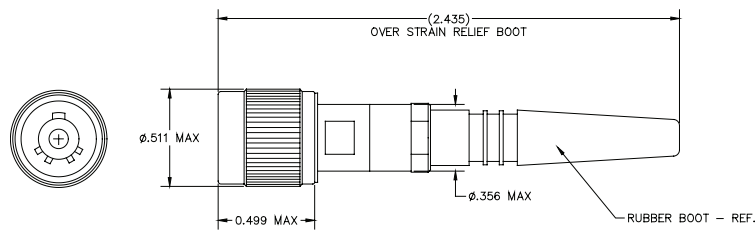
Fiber Optic Socket Contact Per DIN 41626-3



P/N 239933-8004

Fiber Optic Ruggedized Single Channel Plug

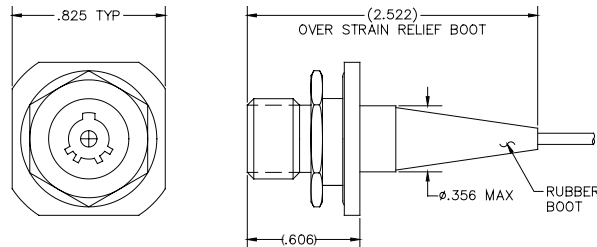
Y	Polarization
1	N
2	A
3	B
4	C
5	D
6	E



P/N 230533-200Y

Fiber Optic Ruggedized Single Channel Jam Nut Receptacle

Y	Polarization
1	N
2	A
3	B
4	C
5	D
6	E



P/N 230633-300Y