

FIBER OPTIC CONNECTORS & CONTACTS





Sabritec's fiber optic connectors offer a highly secure data transmission method with excellent signal quality. Available contacts include size 5 expanded beam, size 16 butt-joint, and DIN style technologies capable of supporting wide bandwidth applications. All fiber optic connectors and contacts are offered fully terminated and tested, ensuring signal integrity for ruggedized environments.

Ruggedized Single Channel Connectors

- Ruggedized construction
- Multimode applications 62.5/125
- 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)



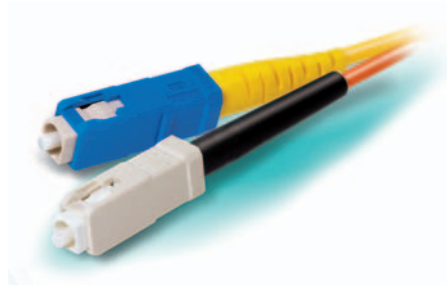
MIL-DTL-38999
Pg. 112

RUGGEDIZED SINGLE CHANNEL
Pg. 112

RUGGEDIZED SC/FC/ST
Pg. 113

SC

- Ruggedized design
- Multimode applications 62.5/125
- Precision ceramic ferrule
- Simple push-pull mating mechanism
- Simple cleaning
- Low insertion loss: -0.4 dB (typical)

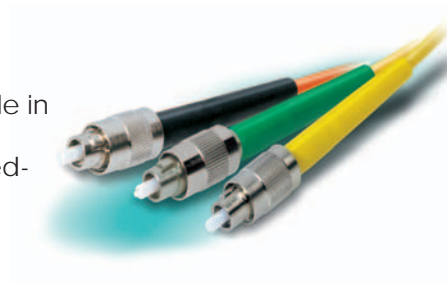


SIZE 5 EXPANDED BEAM
Pg. 114

DIN CONTACTS
Pg. 114

FC Connectors

- Threaded metal coupling ring
- Designed to the NTT-FC standards
- Precision ceramic ferrule; also available in metal ferrule
- Connector mating using bulkhead feed-through adapters
- Low insertion loss: -0.4dB (typical)
- Low cost



SIZE 16 BUTT-JOINT
Pg. 115

LC SIMPLEX/DUPLEX
Pg. 117

MTP CONNECTOR
Pg. 118

ST Connectors

- Rugged metal bayonet coupling ring
- Keyed for repeatable performance
- Precision ceramic ferrule
- Low insertion loss: < 0.5 dB max, < 0.3 dB typical
- Connector mating using bulkhead feed-through adapters
- Low cost



MT-RJ CONNECTOR
Pg. 118

ARINC 801
Pg. 119

DIN Contacts

- Twist protection pin
- Multimode applications (62.5/125)
- Screw lock mechanism
- Low insertion loss: -0.20 dB (typical)



CABLE ORDERING
INFORMATION Pg. 120

Sabritec does not offer standard QPL slash sheet part #'s for multipin circular and rack & panel connectors. Our connectors are fully intermateable and interchangeable with all slash sheet part #'s.



LC-Simplex/Duplex

- Single mode 6/125, 9/125
- Multimode 50/125, 62.5/125
- Pull-proof design
- RJ-45 style latching mechanism
- LC Duplex includes (2) connector bodies + Duplex clip
- Low insertion loss: - 0. 10 dB (typical)
- Low return loss(Singlemode): min. -45 dB



MTP Connector

- High density connection replaces 12 single-fiber connections (SFF)
- Push-pull latch
- Terminates ribbon fibers or ribbonized single fibers
- Keyed to ensure proper orientation
- Multimode applications 50/125 um, 62.5/125 um
- Singlemode applications 9/125 um
- Simple cleaning
- Ideal for high density cabling systems and data center connectivity
- Low insertion loss: - 0.20 dB (typical)
- Low return loss (Singlemode): > -55 dB



MT-RJ Connector

- Small 2 fiber design (conforms to SFF)
- Multimode applications 50/125um, 62.5/125 um
- Singlemode applications 6/125, 9/125um
- Reduces required space by 50% through the network
- RJ-45 latching mechanism
- Low insertion loss:
 - 0.35dB typical MultiMode
 - 0.25dB typical Singlemode
- Low return loss (Singlemode): > -35 dB



Size 16 Butt-Joint Contacts

- Robust pin and socket design
- Multimode applications 62.5/125
- Readily available for ARINC or MIL-DTL-38999 applications (M29504)
- Excellent optical performance
- Fewer parts, easy termination process
- Concave polish provides for excellent mechanical performance
- Physical contact polish provides low insertion loss and low back reflection



Size 5 Expanded Beam Contacts

- Robust pin & socket versions
- Multimode applications 62.5/125
- 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)



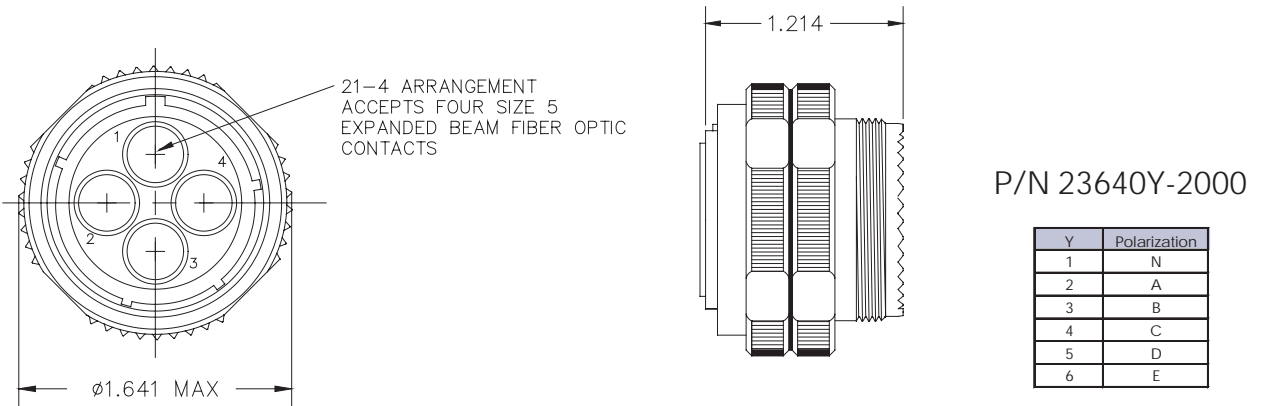
Sabritec does not offer standard QPL slash sheet part #'s for multipin circular and rack & panel connectors. Our connectors are fully intermateable with all slash sheet part #'s.



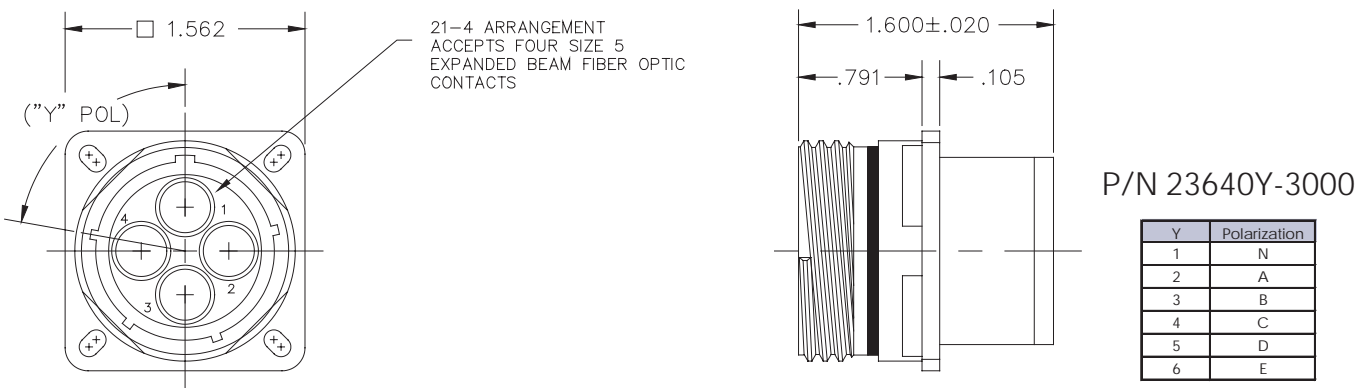
MIL-DTL-38999 FIBER OPTIC CONNECTORS

Size 5 Expanded Beam Fiber Optic Insert Cavities

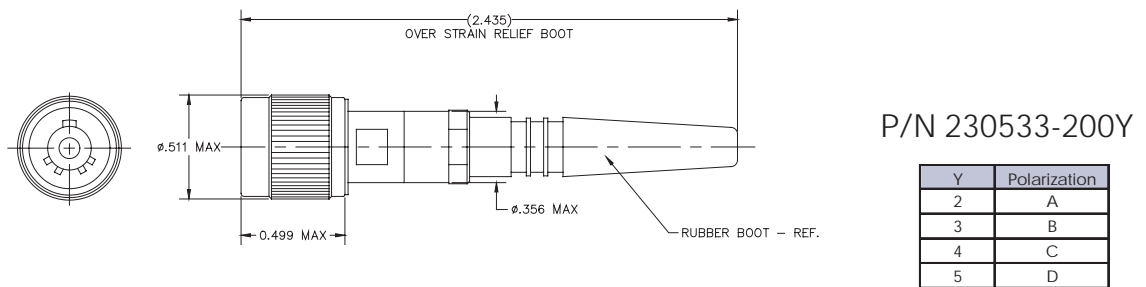
MIL-DTL-38999 Size 21-4 Fiber Optic Plug



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



Fiber Optic Ruggedized Single Channel Plug



See Page 120 for Cable Ordering Information

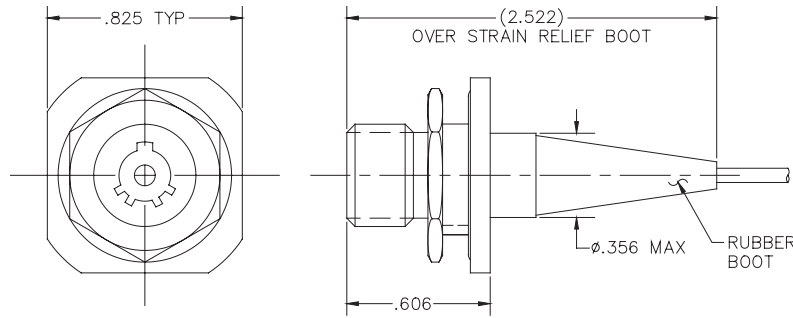




FIBER OPTIC CONNECTORS

Ruggedized SC/FC/ST Connectors Connector

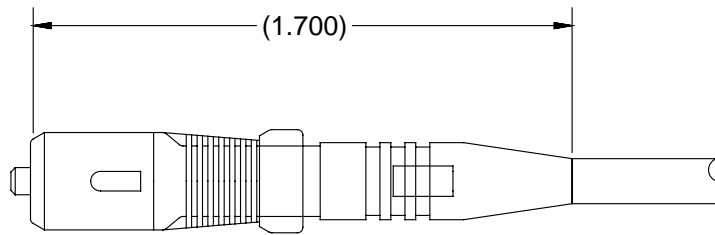
Fiber Optic Ruggedized Single Channel Jam Nut Receptacle



Y	Polarization
2	A
3	B
4	C
5	D

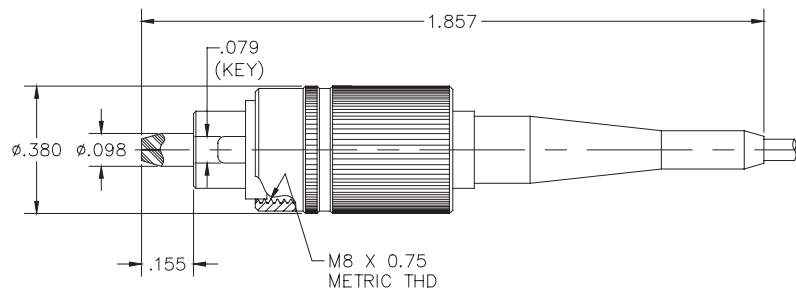
P/N 230633-300Y

Fiber Optic Ruggedized SC Plug



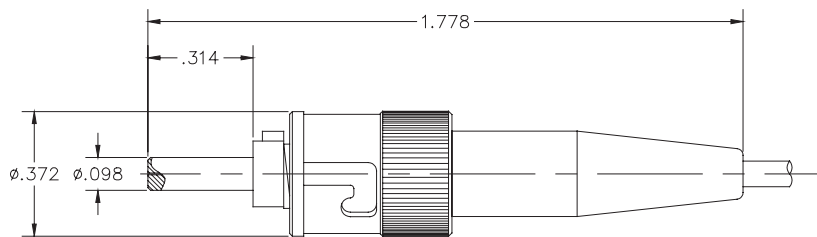
P/N 230533-2036

Fiber Optic FC Plug



P/N 230033-2040

Fiber Optic ST Plug



P/N 230033-2044

See Page 120 for Cable Ordering Information

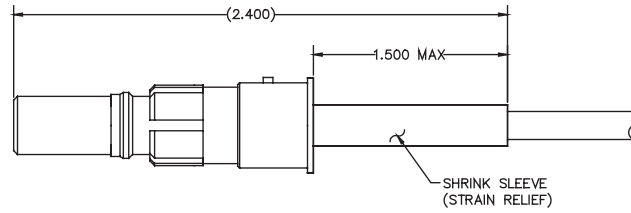




FIBER OPTIC EXPANDED BEAM & DIN CONTACTS

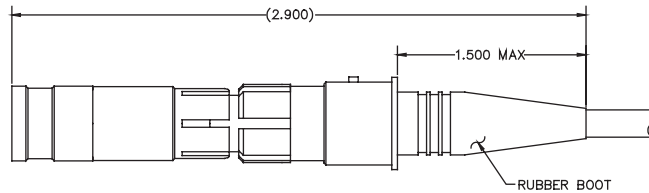
Size 5 Expanded Beam/DIN Contacts Per 41626-3

Size 5 Expanded Beam Lens Pin Contact



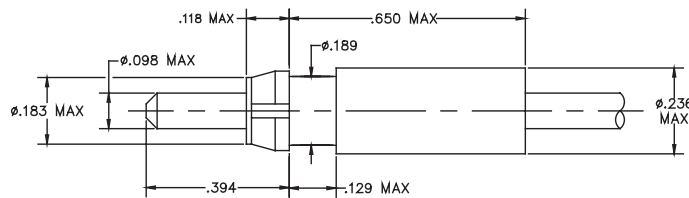
P/N 239433-8000

Size 5 Expanded Beam Lens Socket Contact



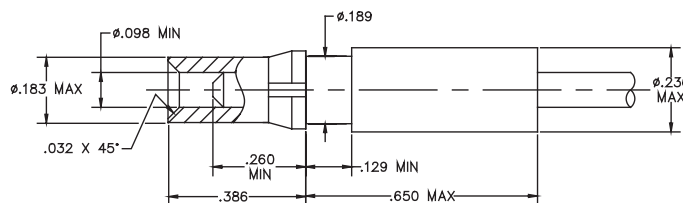
P/N 239333-8000

Fiber Optic Pin Contact Per DIN 41626-3



P/N 239933-8000

Fiber Optic Socket Contact Per DIN 41626-3



P/N 239433-8004

See Page 120 for Cable Ordering Information

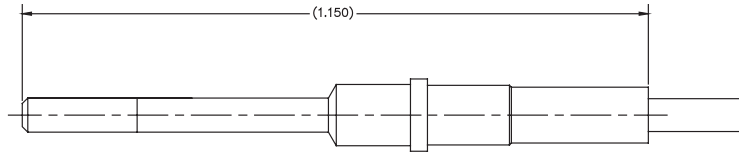




FIBER OPTIC BUTT-JOINT CONTACTS

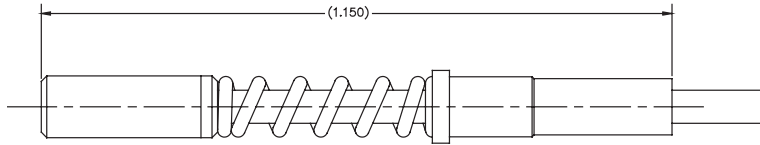
Size 16 Butt-Joint Contacts

Arinc 404 Size 16 Butt-Joint Pin Contact



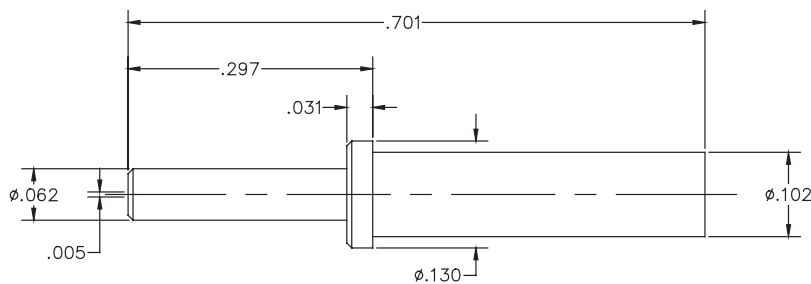
P/N 238533-8000

Arinc 404 Size 16 Butt-Joint Socket Contact



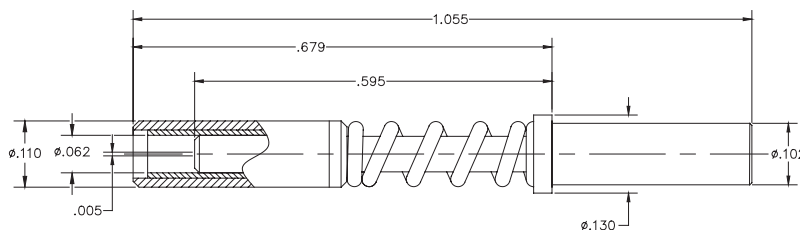
P/N 238433-8000

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

See Page 120 for Cable Ordering Information



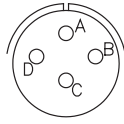


FIBER OPTIC SIZE 16 INSERT ARRANGEMENTS

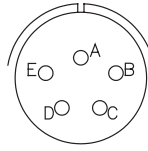
MIL-DTL-38999 Connectors for Butt-Joint Contacts



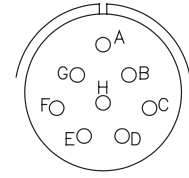
2 #16
Shell Size 11



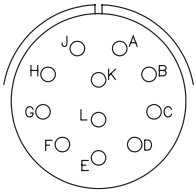
4 #16
Shell Size 13



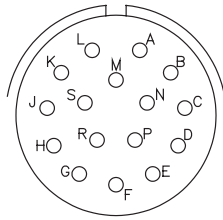
5 #16
Shell Size 15



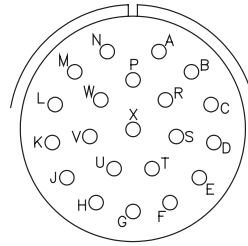
8 #16
Shell Size 17



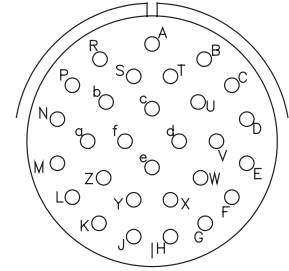
11 #16
Shell Size 19



16 #16
Shell Size 21



21 #16
Shell Size 23



29 #16
Shell Size 25

Note: High tolerance insert arrangements are available with alignment pins. Please consult factory for more information.

Size 16 Butt-Joint Part Number Table

38999 - B - R - C - 25 - P - N

Prefix

Shell Style

J - Jam Nut

B - Box Mount

W - Wall Mount

P - Plug

Mounting

F - Front

R - Rear

Material/Plating

C - Aluminum Alloy/Cadmium Over Nickel

N - Aluminum Alloy/Electroless Nickel

S - Stainless Steel/Electroless Nickel

CC - Composite/Cadmium Over Nickel

CN - Composite/Electroless Nickel

*Consult factory for alternate plating options

Polarization
N, A, B, C, D, E

Contact Type
P - Pin
S - Socket

Insert Arrangement/Shell Size
11, 13, 15, 17, 19, 21, 23, 25

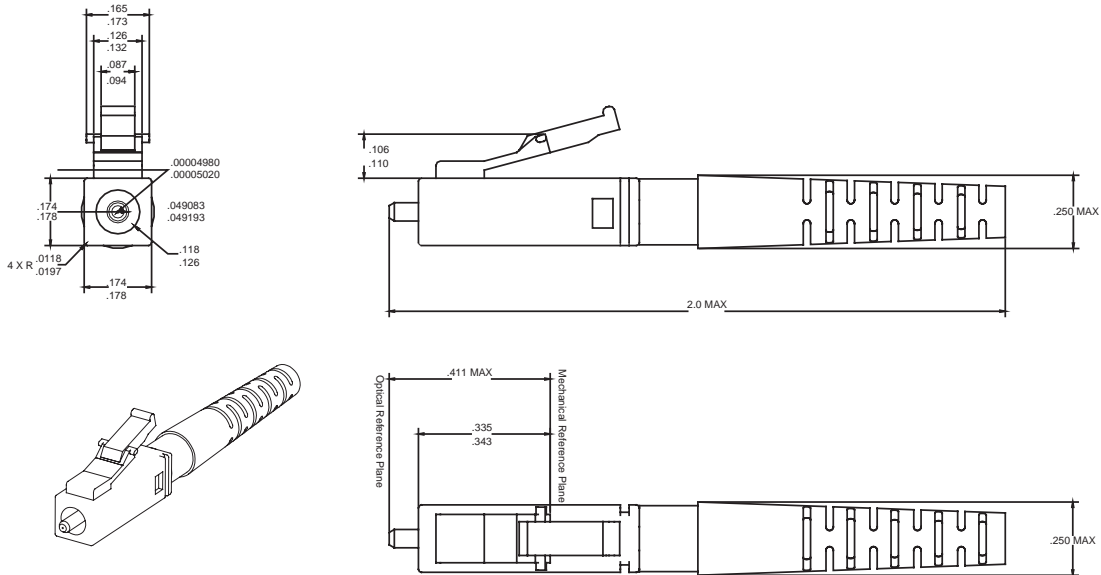




FIBER OPTIC LC CONNECTORS

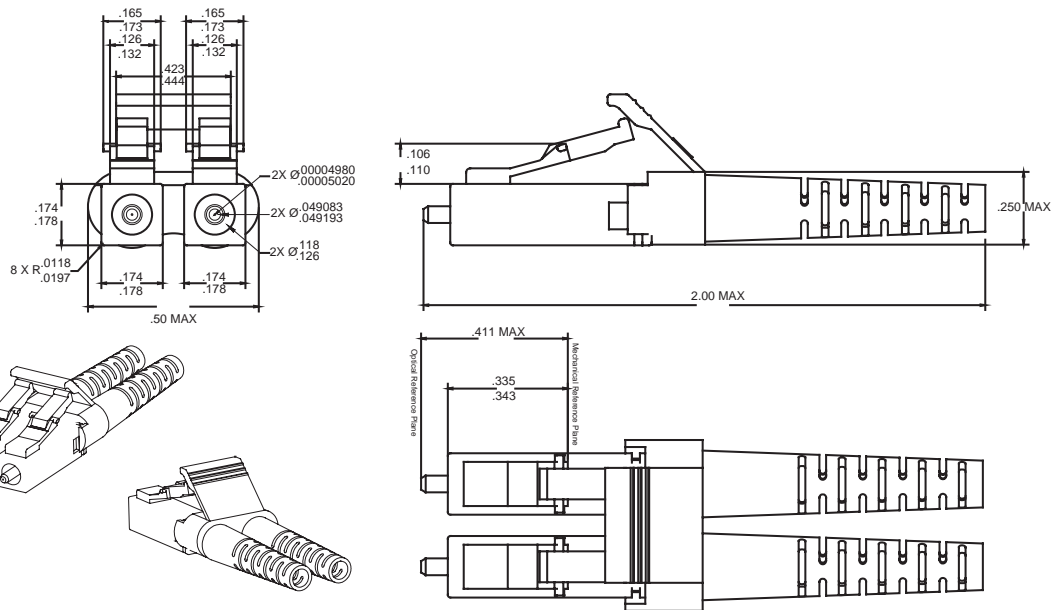
LC Simplex/Duplex Connectors

LC Simplex



Connector P/N: 239033-2000
Adapter P/N: 239033-4000

LC Duplex



Connector P/N: 239033-2001
Adapter P/N: 239033-4001

See Page 120 for Cable Ordering Information

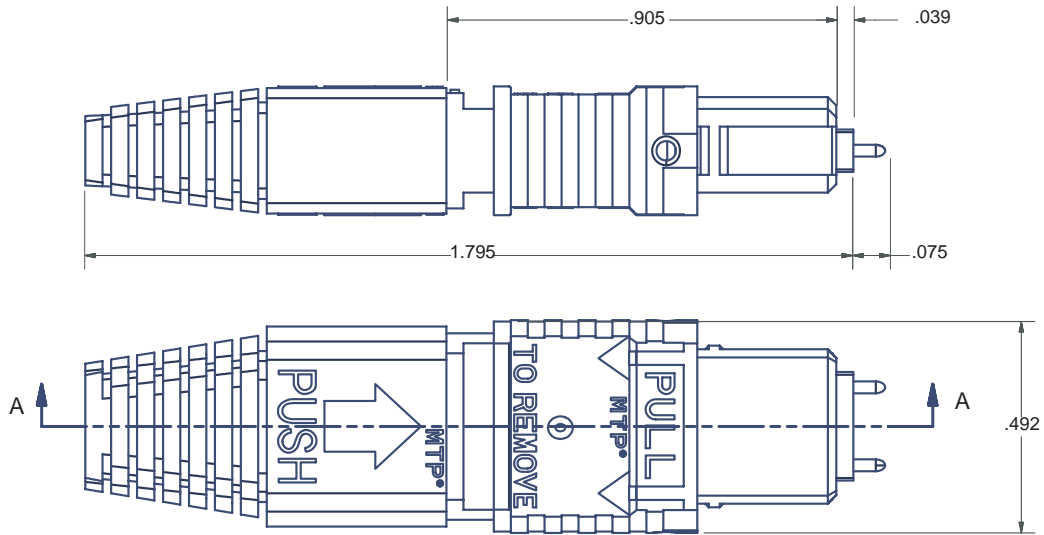




FIBER OPTIC CONNECTORS

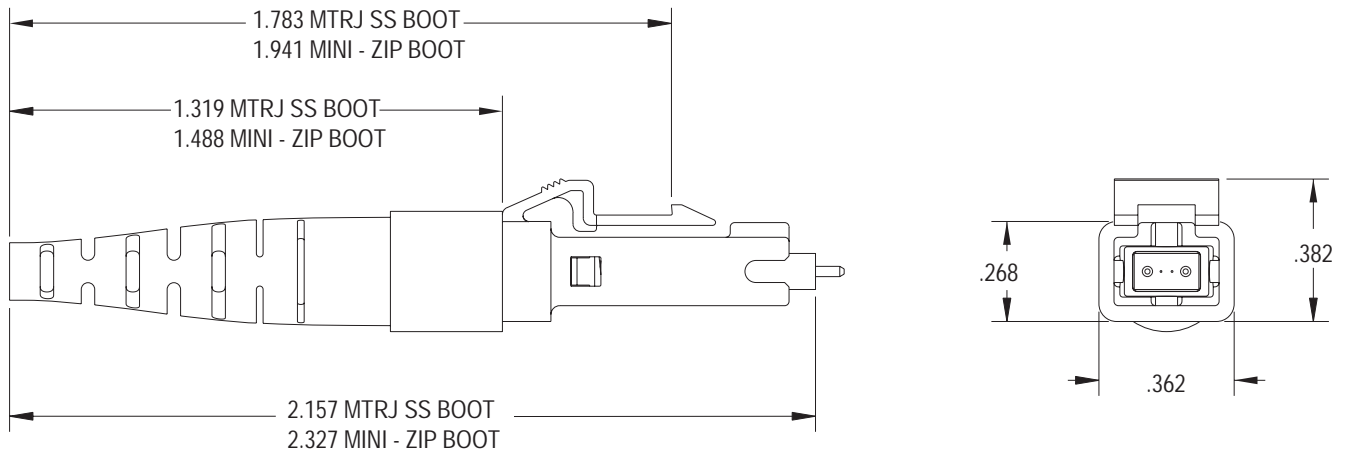
MTP and MT-RJ Connectors

MTP Connector



Plug P/N: 239033-2002 (Shown)
 Receptacle P/N: 239033-3000
 Adapter P/N: 239033-4002

MT-RJ Connector



Plug P/N: 239033-2003 (Shown)
 Receptacle P/N: 239033-3001
 Adapter P/N: 239033-4003

See Page 120 for Cable Ordering Information





The ARINC 801 fiber optic terminus is the next generation of high density, butt joint interconnect technology. 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 as an optical disconnect style. For the pull-proof design, the cable jacket is crimped on the external body and a floating mechanism avoids any loss of performance when pulling on the cable. This feature, only available with a loose tube style cable jacket, allows for the use of the connector without a backshell. Standard connector formats include MIL-DTL-38999, ARINC 600, and EPXA and B.

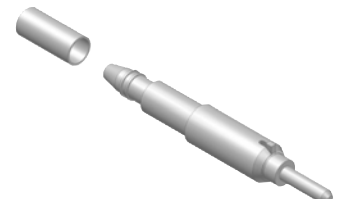


Sabritec's ARINC 801-style fiber optic terminus complies with and exceeds optical insertion loss and back reflection requirements as defined within the specification.

The ARINC 801 interconnect offers the following features to help satisfy your design requirements:

- 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 connector)
- PC or APC ferrule end face
- Compatible with multi-mode and single-mode fiber
- Standard 1.25 mm ferrule and sleeve
- Cable termination identical to LC connector process
- Easy cleaning access to the contact through a removable alignment sleeve holder
- Standard MIL-DTL-38999, size 16 insertion/removal tool

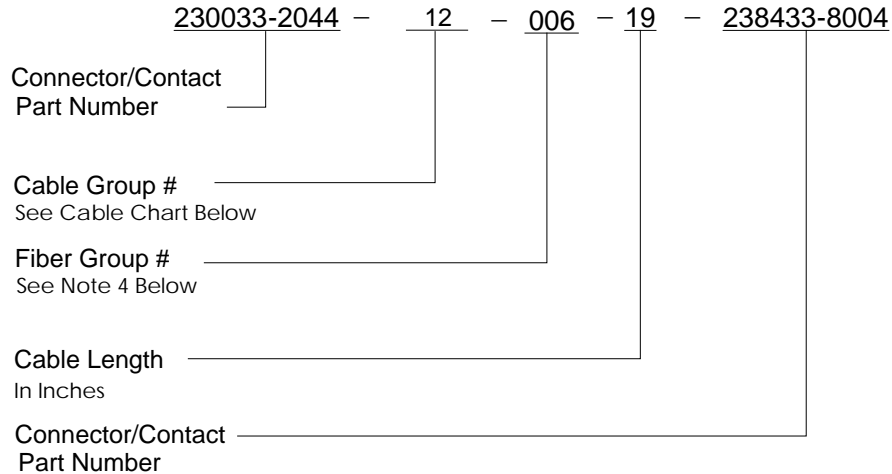
Please contact the factory for more detailed information.



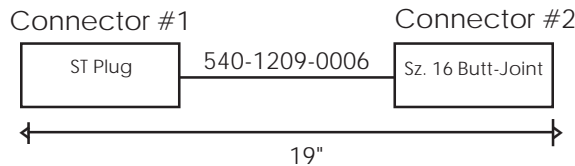


FIBER OPTIC CABLE PART NUMBER TABLE

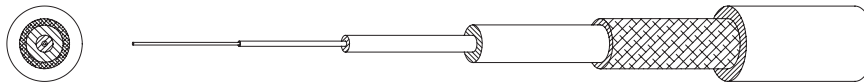
Cable Ordering Information



SAMPLE P/N: 230033-2044/12/238433-8004/19



Please use the request for quote worksheet on page 225 to specify your custom application needs.



Fiber Optic Cables

Cable Group No.	Part Number	Jacket OD	Buffer OD	Jacket Material	Strength Member Material	Buffer Material	Temp Range	Fiber count
12	540-1209-00X ⁴	1.2		ETFE	Kevlar	Expanded PTFE	-55°C to +150°C	1
13	540-1210-00X ^{1,2 & 4}	2	900	FEP	Teflon coated fiber glass	FEP	-65°C to +200°C	1
14	540-1211-00X ⁴	2	900	LSZH ³	Kevlar	LSZH ³		1
15	540-1212-00X ⁴	2.1	900	ETFE or FEP	Teflon coated fiber glass	ETFE or FEP	-55°C to +125°C	1
16	540-1213-00X ⁴	2.5	1200	ETFE	Teflon coated fiber glass	ETFE	-55°C to +150°C	1
17	540-1123-000	2.8	900	ETFE or equiv.	Kevlar	Optional	-40°C to +75°C	1
18	540-1188-000	2.8	900	LSZH ³	Kevlar	LSZH ³	-40°C to +75°C	1
19	540-1215-00X ⁴	2.3X2.6 (2 fibers) 2.3X4.6 (12 fibers)	250	FEP	Kevlar	Expanded PTFE	-55°C to +150°C	2, 4, 8, 12
20	540-1215-00X ⁴	2.3X2.6 (2 fibers) 2.3X4.6 (12 fibers)	250	PVC, flame retardant	Kevlar	Expanded PTFE	-30°C to +85°C	2, 4, 8, 12

** Please consult factory on cable ordering options for Cable Groups 19 and 20.*

Notes:

- This cable is designed for high temperature aircraft and spacecraft applications
- This cable requires a polyimide coating on the fiber and special connector accommodations
- LSZH – Low Smoke, Zero Halogen
- OOX to designate fiber type as follows:
 - 000 designates Corning SMF-28 or equivalent SM fiber
 - 006 designates MIL-PRF-49291/6 fiber, 62.5/126, Graded Index, rad hard, 0.275NA 100KPSI fiber
 - 009 designates OFS 100/140, Graded Index, 0.275NA, 200 KPSI fiber