

# EXPANDED BEAM SIZE 5 AND 12

*Multi-Mode and Single-Mode Applications*



Smiths Connectors 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, Smiths Connectors 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.

## Size 12 Expanded Beam Contact

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.

### FEATURES:

- ▶ 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
- ▶ Insertion loss: 1.0 dB (Typical)
- ▶ 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)

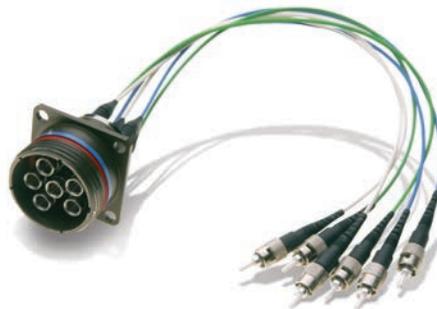
SPECIFICATIONS	
Operating Temperature	-40°C to + 85°C
Fiber Types	Multimode: 50/125 μm 62.5/125 μm
Insertion Loss	1.0 dB (Typical)
Cable Diameter	1.6mm to Ø2.2mm
Ferrules	Zirconia Ceramic
Contact Body	ARCAP
Alignment Sleeve	Stainless Steel



## Size 5 Expanded Beam Contact

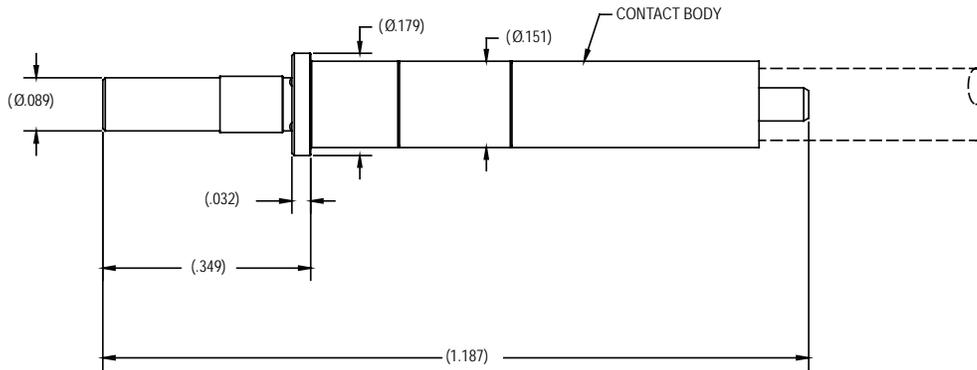
### FEATURES:

- ▶ 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)



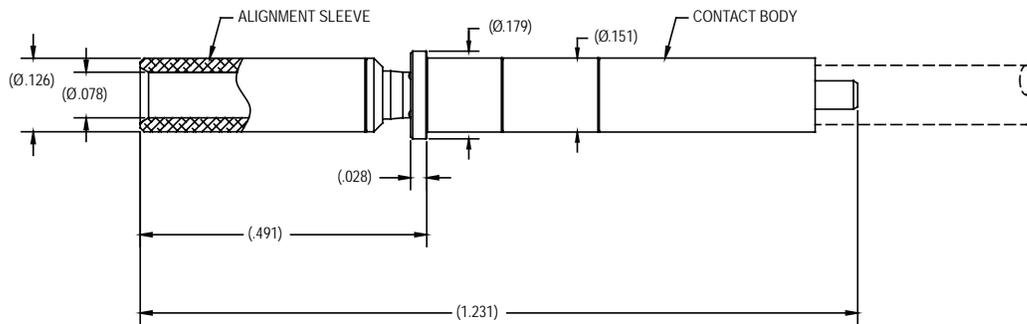
SPECIFICATIONS	
Operating Temperature	-40°C - 85°C
Fiber Types	Multi-Mode
Insertion Loss	-0.8 dB
Cable Diameter	0.9 - 2.2 mm
Ferrules	Ceramic
Connector Body	ARCAP
Alignment Sleeve	Stainless Steel

## ▶ SIZE 12 EXPANDED BEAM PIN CONTACT



PN: 238633-8000

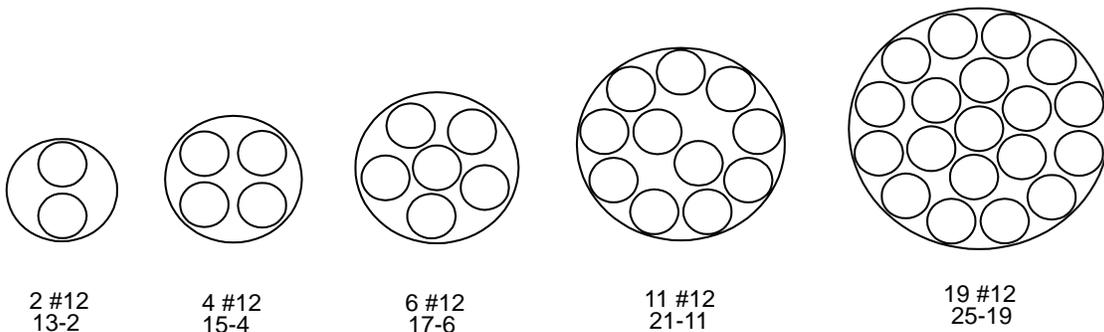
## ▶ SIZE 12 EXPANDED BEAM SOCKET CONTACT



PN: 238733-8000

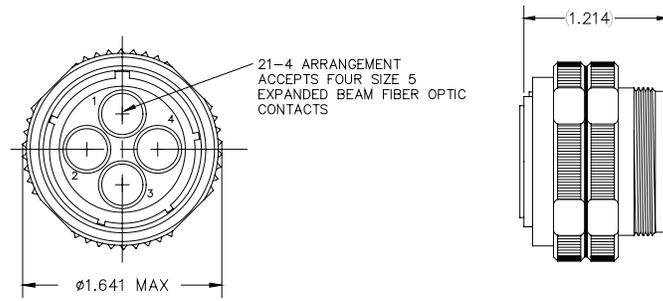
## ▶ SAMPLE SIZE 12 INSERT ARRANGEMENTS

Standard Insert Arrangements for MIL-STD-1560



Consult factory for custom circular and rectangular connector insert arrangements

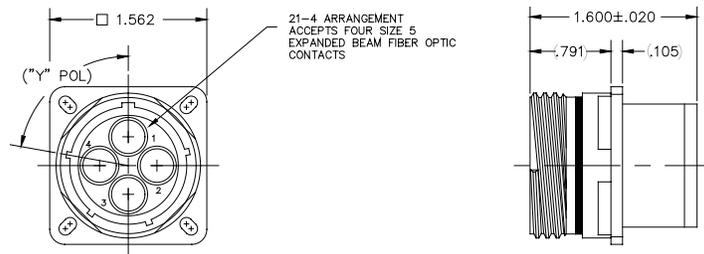
▶ MIL-DTL-38999 SIZE 21-4 FIBER OPTIC PLUG



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

P/N 23640Y-2000

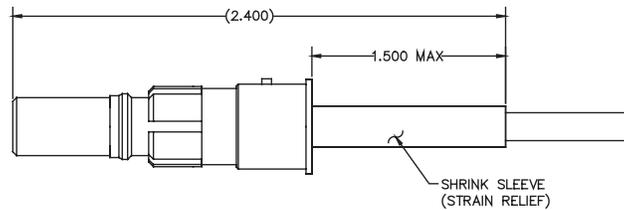
▶ MIL-DTL-38999 SIZE 21-4 FIBER OPTIC RECEPTACLE



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

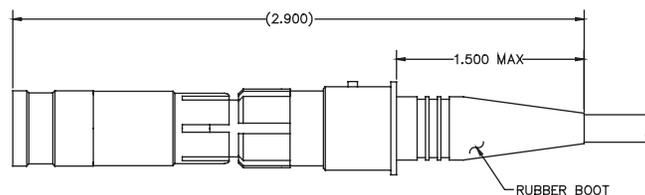
P/N 23640Y-3000

▶ 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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