



## MIL CIRCULAR 38999 MT FIBER OPTIC INTERCONNECT FOR VITA87

ENABLES HIGH SPEED AND BANDWIDTH NEEDED IN A SMALLER SPACE FOR NEXT GENERATION RUGGEDIZED SYSTEMS



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# Mil Circular 38999 MT Fiber Optic Interconnect for VITA87



## HIGH DENSITY

- Can accommodate most next-generation high density ports and mating card slots

## EASY

- Standard interconnect system uses 38999 circular backshells

## LOWER COST/MAXIMUM AVAILABILITY

- Advantages of VITA 87 and SOSA standardization efforts versus sole sourced products

## FLEXIBLE

- Can be used with both standard MT and expanded beam / lensed MT

## VERSATILE

- 12 and 24 fiber options available, resulting in potentially the highest density in the industry

## MARKETS

- Aerospace
- Ground Based Systems
- Avionics Systems

## Description

TE Connectivity (TE)'s VITA 87 Mil Circular 38999 Fiber Optic Interconnect product line offers a much higher density Mil Circular fiber optics option that is more aligned with industry architecture needs. These new architectures require considerably higher density to fit into industry standard card slots. These products will also be a part of global VITA and SOSA standards, ensuring supply and enabling customers to confidently design this product into their next generation systems. VITA 87 fills this need and is a significant improvement over previous offerings.

## SPECIFICATIONS

- **Temperature Range:** -40°C to +85°C
- **Mating Durability:** 100 Cycles
- **Random Vibration:** TIA/EIA=455-11
- **Mechanical Shock:** TIA/EIA=455-14

## MATERIALS

- **Retainer Plate:** Aluminum
- **Captive Screws:** Stainless Steel
- **Shell Body:** Aluminum
- **Fiber Insert:** Nickel Silver Copper
- **Insert Retaining Ring:** Stainless Steel
- **Interfacial Seal:** Rubber

## FINISH

- **Retainer Plate:** Chromate Conversion
- **Captive Screws:** Passivated
- **Shell Body:** Chromate Conversion
- **Insert Retaining Ring:** Passivated

## APPLICATIONS

- High density circular mil fiber optics cable assemblies
- High density optical add on / options cards
- High density ruggedized applications in general using Mil std 38999 interface

## STANDARDS

- VITA 87
- SOSA

### Size 11 Plug and Receptacle



Part Description	Size	Keying
11-1 Plug Connector (1 MT)	11-1	N, A, B
11-1 Wall Mount Receptacle	11-1	N, A, B
11-1 Jamnut Receptacle	11-1	N, A, B

### Size 13 Plug and Receptacle



13-2 Plug Connector (2 MT)	13-2	N, A, B
13-2 Wall Mount Receptacle	13-2	N, A, B
13-2 Jamnut Receptacle	13-2	N, A, B

### Size 15 Plug and Receptacle

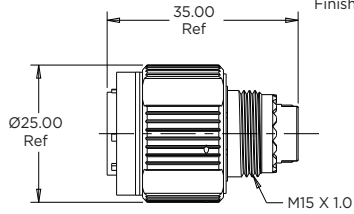
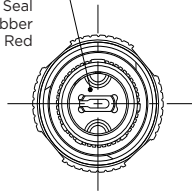


15-4 Plug Connector (4 MT)	15-4	N, A, B
15-4 Wall Mount Receptacle	15-4	N, A, B
15-4 Jamnut Receptacle	15-4	N, A, B



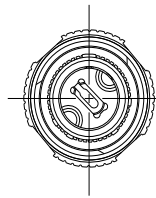
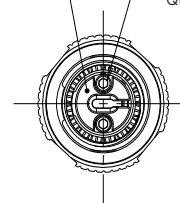
# 38999 Style Plug, Size 11, 1 Cavity

1 Position MT Fiber Insert  
 Material: Nickel Silver Copper  
 Insert Retaining Ring  
 Material: Stainless Steel  
 Finish: Passivated  
 Interfacial Seal  
 Material: Rubber  
 Color: Red

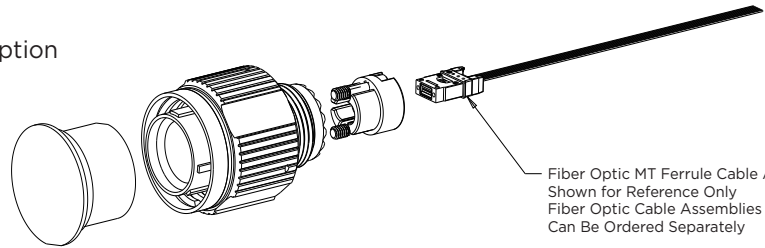


Retainer Plate  
 Material: Aluminum  
 Finish: Chromate Conversion

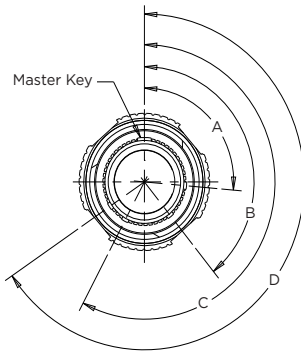
Captive Screws  
 Material: Stainless Steel  
 Finish: Passivated  
 Quantity: 2



45° Insert Option



Fiber Optic MT Ferrule Cable Assembly  
 Shown for Reference Only  
 Fiber Optic Cable Assemblies  
 Can Be Ordered Separately

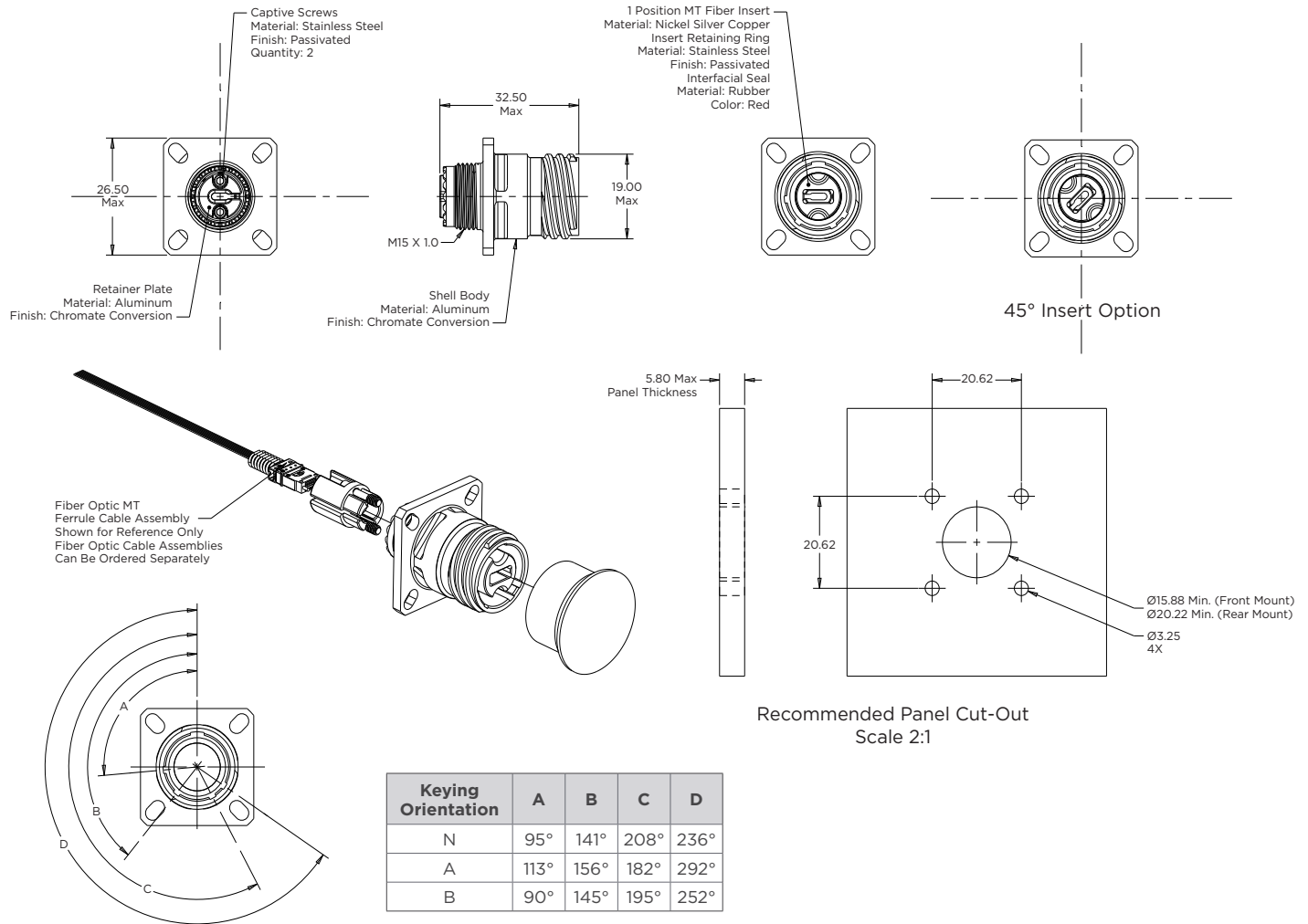


Keying Orientation	A	B	C	D
N	95°	141°	208°	236°
A	113°	156°	182°	292°
B	90°	145°	195°	252°

Assembly Part Number	Description	Finish (Shell and Nut)	Keying Orientation (See Detail)	Insert Orientation
1-2358904-8	Plug Connector Assembly, Size 11	Nickel PTFE	B	45°
1-2358904-7	Plug Connector Assembly, Size 11	Nickel PTFE	B	—
1-2358904-6	Plug Connector Assembly, Size 11	Nickel PTFE	A	45°
1-2358904-5	Plug Connector Assembly, Size 11	Nickel PTFE	A	—
1-2358904-4	Plug Connector Assembly, Size 11	Nickel PTFE	N	45°
1-2358904-3	Plug Connector Assembly, Size 11	Nickel PTFE	N	—
1-2358904-2	Plug Connector Assembly, Size 11	Nickel	B	45°
1-2358904-1	Plug Connector Assembly, Size 11	Nickel	B	—
1-2358904-0	Plug Connector Assembly, Size 11	Olive Drab	B	45°
2358904-9	Plug Connector Assembly, Size 11	Olive Drab	B	—
2358904-8	Plug Connector Assembly, Size 11	Nickel	A	45°
2358904-7	Plug Connector Assembly, Size 11	Nickel	A	—
2358904-6	Plug Connector Assembly, Size 11	Olive Drab	A	45°
2358904-5	Plug Connector Assembly, Size 11	Olive Drab	A	—
2358904-4	Plug Connector Assembly, Size 11	Nickel	N	45°
2358904-3	Plug Connector Assembly, Size 11	Nickel	N	—
2358904-2	Plug Connector Assembly, Size 11	Olive Drab	N	45°
2358904-1	Plug Connector Assembly, Size 11	Olive Drab	N	—



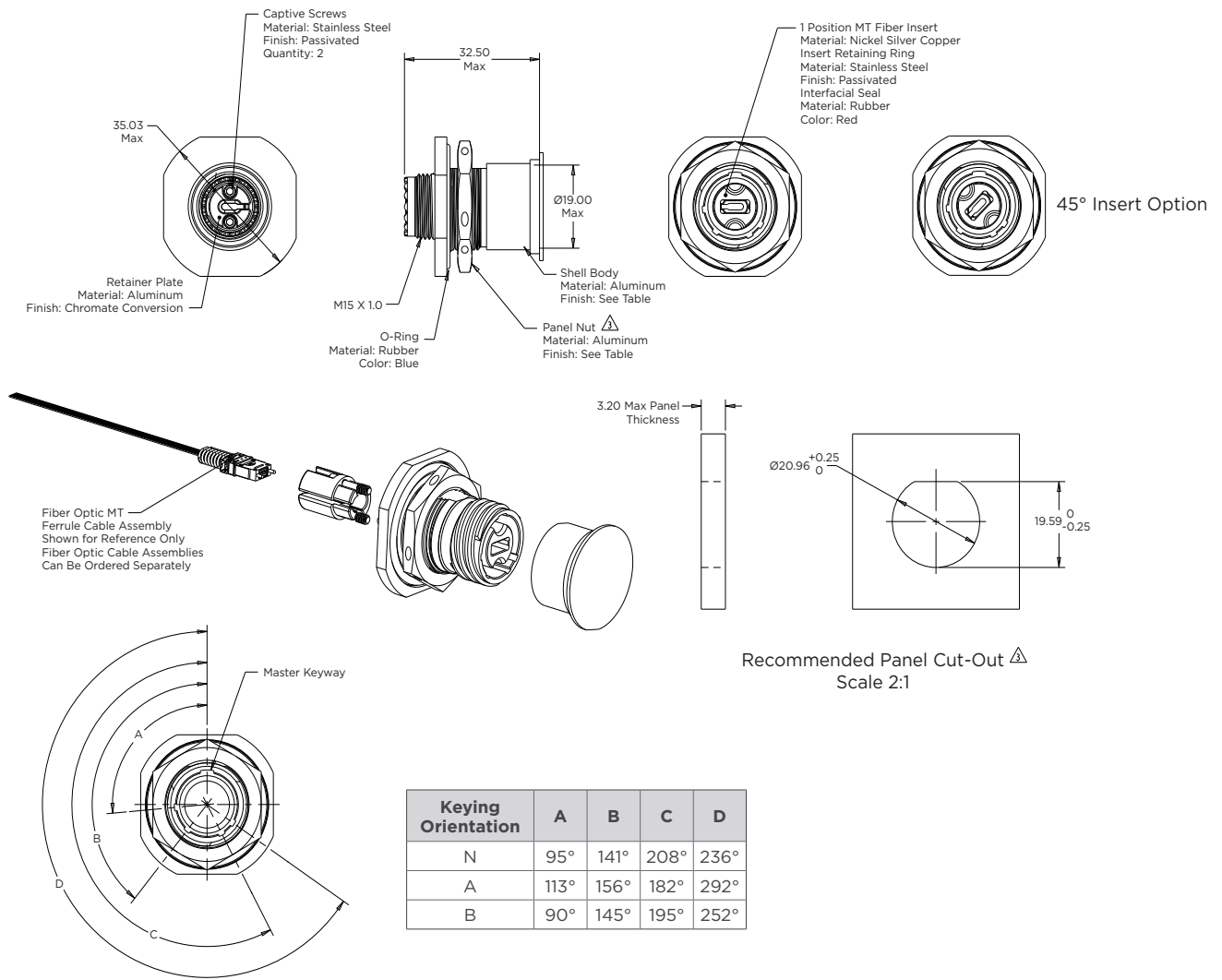
# 38999 Style Flange Mount Receptacle, Size 11, 1 Cavity



Assembly Part Number	Description	Finish (Shell and Nut)	Keying Orientation (See Detail)	Insert Orientation
1-2358902-8	Receptacle Connector Assembly, Size 11	Nickel PTFE	B	45°
1-2358902-7	Receptacle Connector Assembly, Size 11	Nickel PTFE	B	—
1-2358902-6	Receptacle Connector Assembly, Size 11	Nickel PTFE	A	45°
1-2358902-5	Receptacle Connector Assembly, Size 11	Nickel PTFE	A	—
1-2358902-4	Receptacle Connector Assembly, Size 11	Nickel PTFE	N	45°
1-2358902-3	Receptacle Connector Assembly, Size 11	Nickel PTFE	N	—
1-2358902-2	Receptacle Connector Assembly, Size 11	Nickel	B	45°
1-2358902-1	Receptacle Connector Assembly, Size 11	Nickel	B	—
1-2358902-0	Receptacle Connector Assembly, Size 11	Olive Drab	B	45°
2358902-9	Receptacle Connector Assembly, Size 11	Olive Drab	B	—
2358902-8	Receptacle Connector Assembly, Size 11	Nickel	A	45°
2358902-7	Receptacle Connector Assembly, Size 11	Nickel	A	—
2358902-6	Receptacle Connector Assembly, Size 11	Olive Drab	A	45°
2358902-5	Receptacle Connector Assembly, Size 11	Olive Drab	A	—
2358902-4	Receptacle Connector Assembly, Size 11	Nickel	N	45°
2358902-3	Receptacle Connector Assembly, Size 11	Nickel	N	—
2358902-2	Receptacle Connector Assembly, Size 11	Olive Drab	N	45°
2358902-1	Receptacle Connector Assembly, Size 11	Olive Drab	N	—



# 38999 Panel Flange Mount Receptacle, Size 11, 1 Cavity

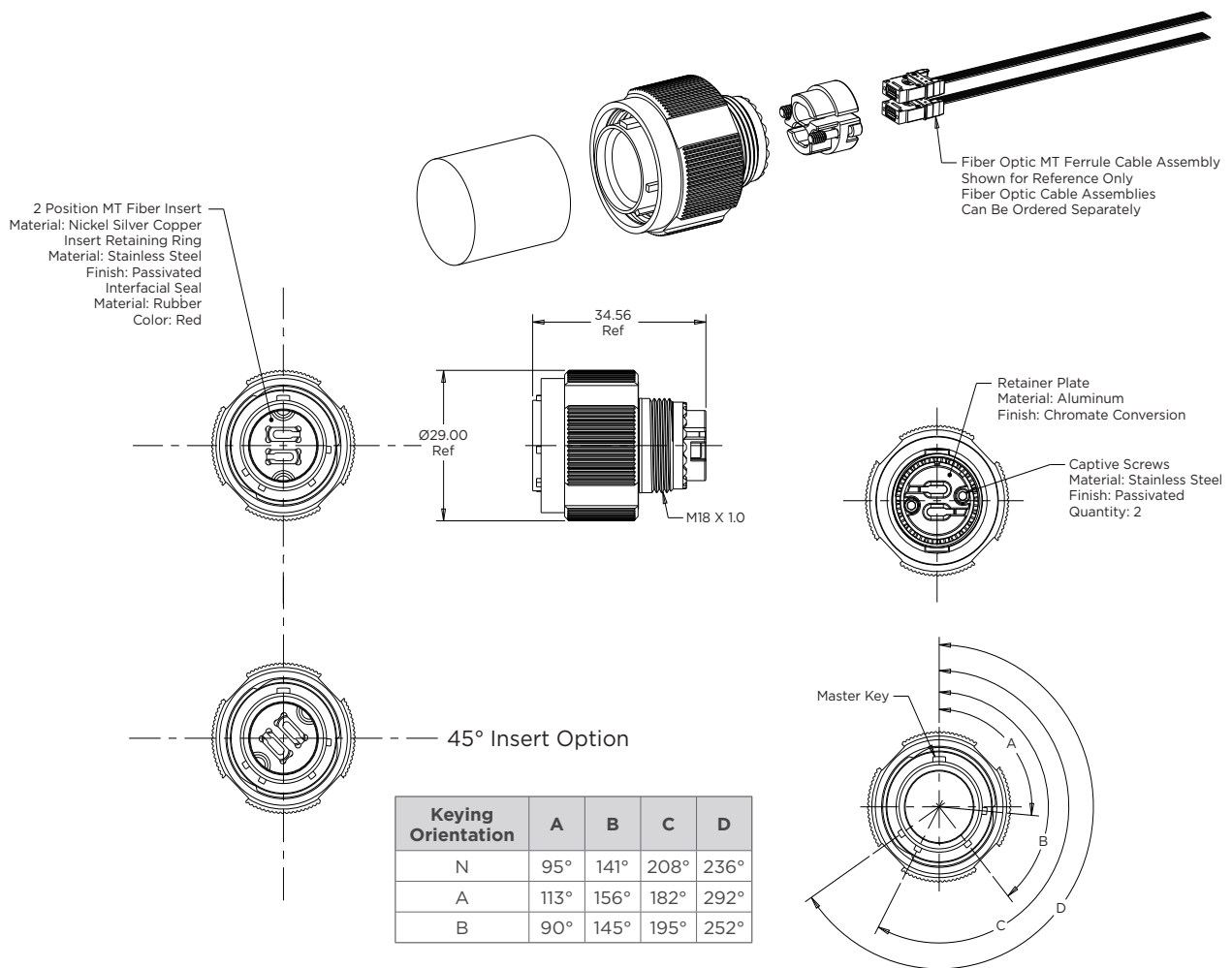


Keying Orientation	A	B	C	D
N	95°	141°	208°	236°
A	113°	156°	182°	292°
B	90°	145°	195°	252°

Assembly Part Number	Description	Finish (Shell and Nut)	Keying Orientation (See Detail)	Insert Orientation
1-2379928-8	Receptacle Connector Assembly, Size 11	Nickel PTFE	B	45°
1-2379928-7	Receptacle Connector Assembly, Size 11	Nickel PTFE	B	—
1-2379928-6	Receptacle Connector Assembly, Size 11	Nickel PTFE	A	45°
1-2379928-5	Receptacle Connector Assembly, Size 11	Nickel PTFE	A	—
1-2379928-4	Receptacle Connector Assembly, Size 11	Nickel PTFE	N	45°
1-2379928-3	Receptacle Connector Assembly, Size 11	Nickel PTFE	N	—
1-2379928-2	Receptacle Connector Assembly, Size 11	Nickel	B	45°
1-2379928-1	Receptacle Connector Assembly, Size 11	Nickel	B	—
1-2379928-0	Receptacle Connector Assembly, Size 11	Olive Drab	B	45°
2379928-9	Receptacle Connector Assembly, Size 11	Olive Drab	B	—
2379928-8	Receptacle Connector Assembly, Size 11	Nickel	A	45°
2379928-7	Receptacle Connector Assembly, Size 11	Nickel	A	—
2379928-6	Receptacle Connector Assembly, Size 11	Olive Drab	A	45°
2379928-5	Receptacle Connector Assembly, Size 11	Olive Drab	A	—
2379928-4	Receptacle Connector Assembly, Size 11	Nickel	N	45°
2379928-3	Receptacle Connector Assembly, Size 11	Nickel	N	—
2379928-2	Receptacle Connector Assembly, Size 11	Olive Drab	N	45°
2379928-1	Receptacle Connector Assembly, Size 11	Olive Drab	N	—



# 38999 Style Plug, Size 13, 2 Cavity

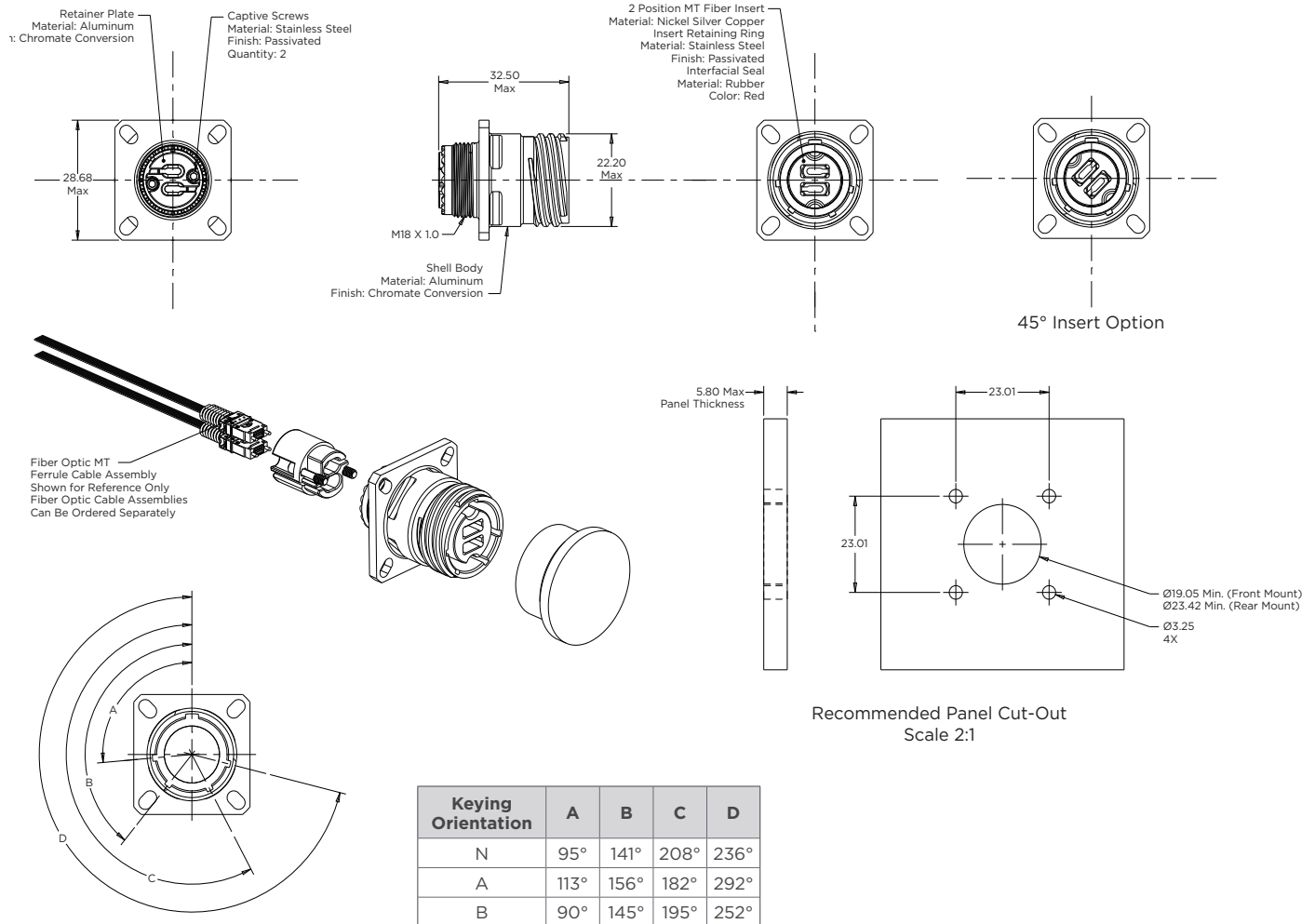


Keying Orientation	A	B	C	D
N	95°	141°	208°	236°
A	113°	156°	182°	292°
B	90°	145°	195°	252°

Assembly Part Number	Description	Finish (Shell and Nut)	Keying Orientation (See Detail)	Insert Orientation
1-2358901-8	Plug Connector Assembly, Size 13	Nickel PTFE	B	45°
1-2358901-7	Plug Connector Assembly, Size 13	Nickel PTFE	B	—
1-2358901-6	Plug Connector Assembly, Size 13	Nickel PTFE	A	45°
1-2358901-5	Plug Connector Assembly, Size 13	Nickel PTFE	A	—
1-2358901-4	Plug Connector Assembly, Size 13	Nickel PTFE	N	45°
1-2358901-3	Plug Connector Assembly, Size 13	Nickel PTFE	N	—
1-2358901-2	Plug Connector Assembly, Size 13	Bright Zinc	B	45°
1-2358901-1	Plug Connector Assembly, Size 13	Bright Zinc	B	—
1-2358901-0	Plug Connector Assembly, Size 13	Olive Drab	B	45°
2358901-9	Plug Connector Assembly, Size 13	Olive Drab	B	—
2358901-8	Plug Connector Assembly, Size 13	Bright Zinc	A	45°
2358901-7	Plug Connector Assembly, Size 13	Bright Zinc	A	—
2358901-6	Plug Connector Assembly, Size 13	Olive Drab	A	45°
2358901-5	Plug Connector Assembly, Size 13	Olive Drab	A	—
2358901-4	Plug Connector Assembly, Size 13	Bright Zinc	N	45°
2358901-3	Plug Connector Assembly, Size 13	Bright Zinc	N	—
2358901-2	Plug Connector Assembly, Size 13	Olive Drab	N	45°
2358901-1	Plug Connector Assembly, Size 13	Olive Drab	N	—



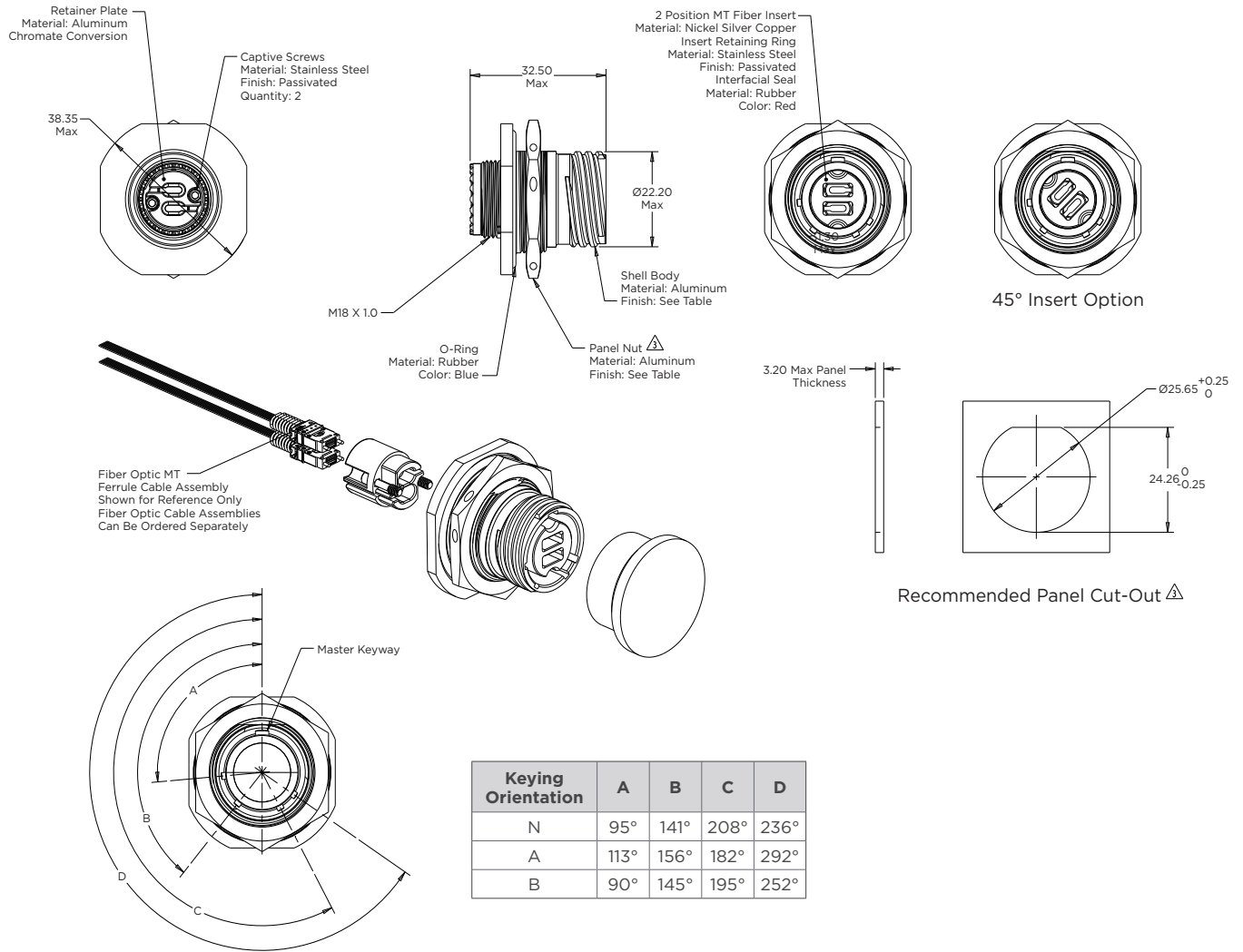
# 38999 Style Flange Mount Receptacle, Size 13, 2 Cavity



Assembly Part Number	Description	Finish (Shell and Nut)	Keying Orientation (See Detail)	Insert Orientation
1-2358900-8	Receptacle Connector Assembly, Size 13	Nickel PTFE	B	45°
1-2358900-7	Receptacle Connector Assembly, Size 13	Nickel PTFE	B	—
1-2358900-6	Receptacle Connector Assembly, Size 13	Nickel PTFE	A	45°
1-2358900-5	Receptacle Connector Assembly, Size 13	Nickel PTFE	A	—
1-2358900-4	Receptacle Connector Assembly, Size 13	Nickel PTFE	N	45°
1-2358900-3	Receptacle Connector Assembly, Size 13	Nickel PTFE	N	—
1-2358900-2	Receptacle Connector Assembly, Size 13	Nickel	B	45°
1-2358900-1	Receptacle Connector Assembly, Size 13	Nickel	B	—
1-2358900-0	Receptacle Connector Assembly, Size 13	Olive Drab	B	45°
2358900-9	Receptacle Connector Assembly, Size 13	Olive Drab	B	—
2358900-8	Receptacle Connector Assembly, Size 13	Nickel	A	45°
2358900-7	Receptacle Connector Assembly, Size 13	Nickel	A	—
2358900-6	Receptacle Connector Assembly, Size 13	Olive Drab	A	45°
2358900-5	Receptacle Connector Assembly, Size 13	Olive Drab	A	—
2358900-4	Receptacle Connector Assembly, Size 13	Nickel	N	45°
2358900-3	Receptacle Connector Assembly, Size 13	Nickel	N	—
2358900-2	Receptacle Connector Assembly, Size 13	Olive Drab	N	45°
2358900-1	Receptacle Connector Assembly, Size 13	Olive Drab	N	—



# 38999 Style Panel Mount Receptacle, Size 13, 2 Cavity



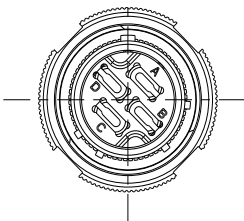
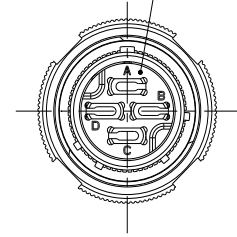
Assembly Part Number	Description	Finish (Shell and Nut)	Keying Orientation (See Detail)	Insert Orientation
1-2379927-8	Plug Connector Assembly, Size 13	Nickel PTFE	B	45°
1-2379927-7	Plug Connector Assembly, Size 13	Nickel PTFE	B	—
1-2379927-6	Plug Connector Assembly, Size 13	Nickel PTFE	A	45°
1-2379927-5	Plug Connector Assembly, Size 13	Nickel PTFE	A	—
1-2379927-4	Plug Connector Assembly, Size 13	Nickel PTFE	N	45°
1-2379927-3	Plug Connector Assembly, Size 13	Nickel PTFE	N	—
1-2379927-2	Plug Connector Assembly, Size 13	Nickel	B	45°
1-2379927-1	Plug Connector Assembly, Size 13	Nickel	B	—
1-2379927-0	Plug Connector Assembly, Size 13	Olive Drab	B	45°
2379927-9	Plug Connector Assembly, Size 13	Olive Drab	B	—
2379927-8	Plug Connector Assembly, Size 13	Nickel	A	45°
2379927-7	Plug Connector Assembly, Size 13	Nickel	A	—
2379927-6	Plug Connector Assembly, Size 13	Olive Drab	A	45°
2379927-5	Plug Connector Assembly, Size 13	Olive Drab	A	—
2379927-4	Plug Connector Assembly, Size 13	Nickel	N	45°
2379927-3	Plug Connector Assembly, Size 13	Nickel	N	—
2379927-2	Plug Connector Assembly, Size 13	Olive Drab	N	45°
2379927-1	Plug Connector Assembly, Size 13	Olive Drab	N	—



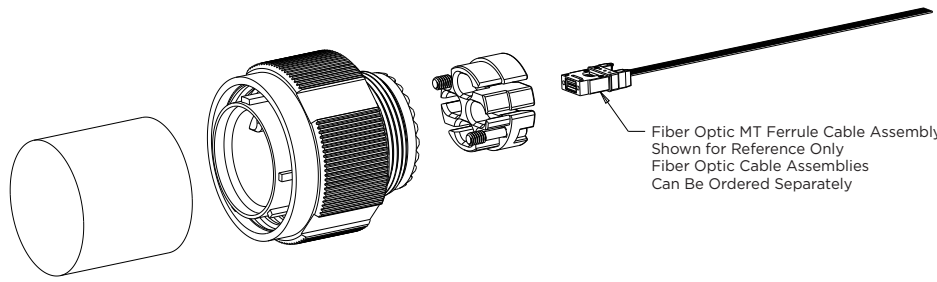


# 38999 Style Plug, Size 15, 4 Cavity

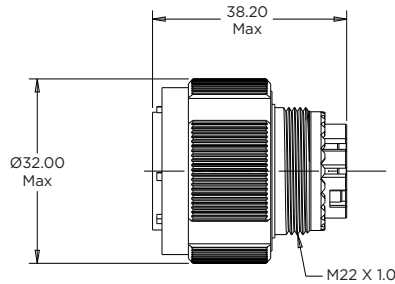
4 Position MT Fiber Insert  
 Material: Nickel Silver Copper  
 Insert Retaining Ring  
 Material: Stainless Steel  
 Finish: Passivated  
 Interfacial Seal  
 Material: Rubber  
 Color: Red



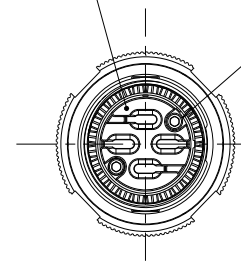
45° Insert Option



Fiber Optic MT Ferrule Cable Assembly  
 Shown for Reference Only  
 Fiber Optic Cable Assemblies  
 Can Be Ordered Separately

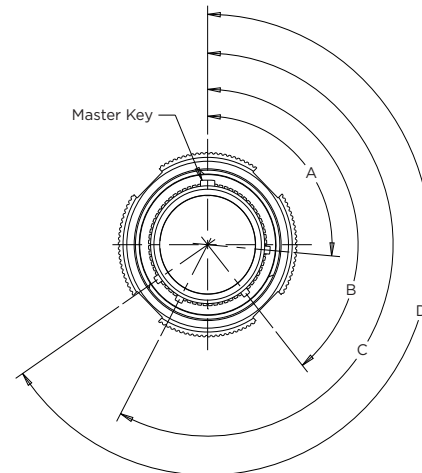


Retainer Plate  
 Material: Aluminum  
 Finish: Chromate Conversion



Captive Screws  
 Material: Stainless Steel  
 Finish: Passivated  
 Quantity: 2

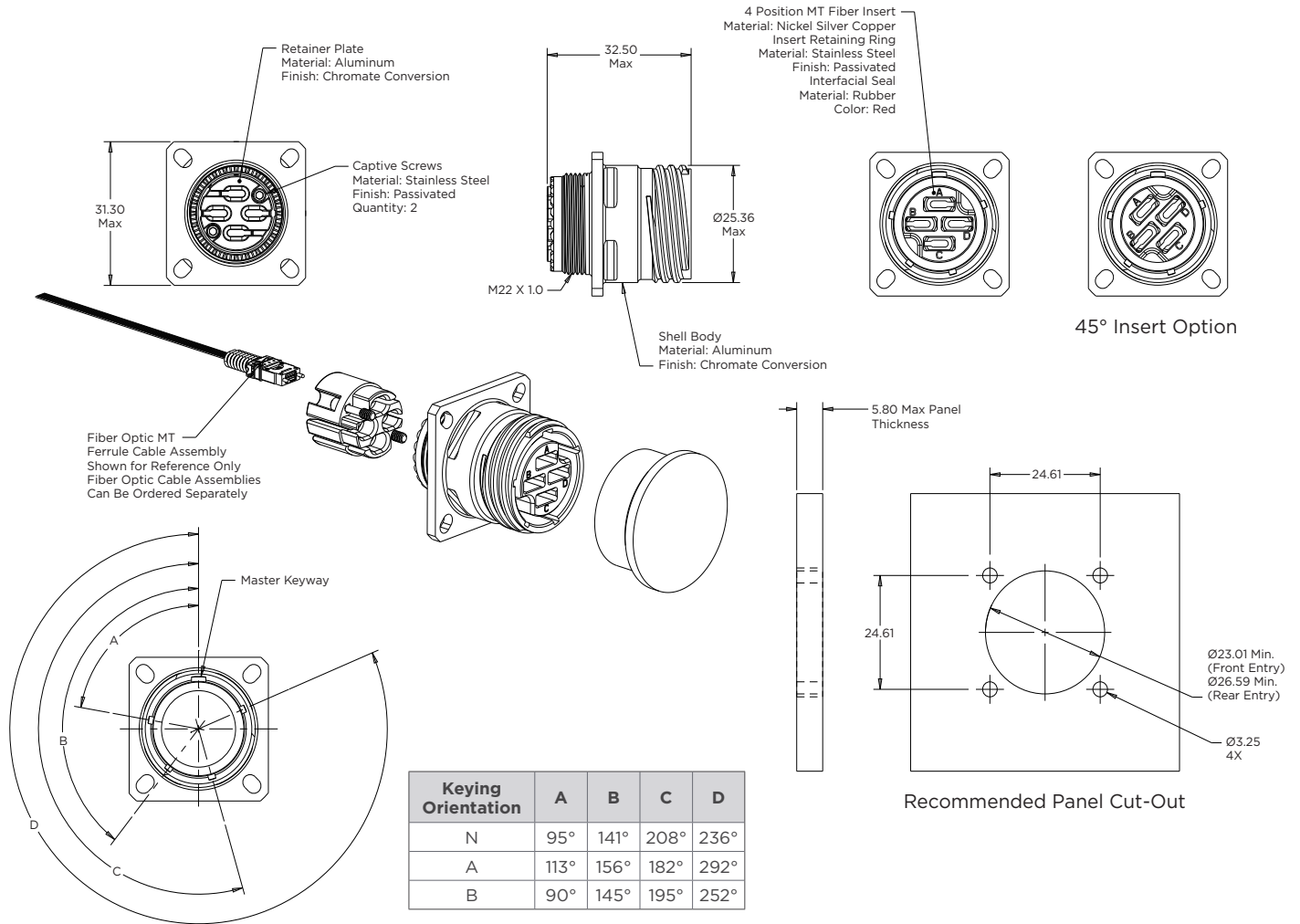
Keying Orientation	A	B	C	D
N	95°	141°	208°	236°
A	113°	156°	182°	292°
B	90°	145°	195°	252°



Assembly Part Number	Description	Finish (Shell and Nut)	Keying Orientation (See Detail)	Insert Orientation
1-2358899-8	Plug Connector Assembly, Size 15	Nickel PTFE	B	45°
1-2358899-7	Plug Connector Assembly, Size 15	Nickel PTFE	B	—
1-2358899-6	Plug Connector Assembly, Size 15	Nickel PTFE	A	45°
1-2358899-5	Plug Connector Assembly, Size 15	Nickel PTFE	A	—
1-2358899-4	Plug Connector Assembly, Size 15	Nickel PTFE	N	45°
1-2358899-3	Plug Connector Assembly, Size 15	Nickel PTFE	N	—
1-2358899-2	Plug Connector Assembly, Size 15	Nickel	B	45°
1-2358899-1	Plug Connector Assembly, Size 15	Nickel	B	—
1-2358899-0	Plug Connector Assembly, Size 15	Olive Drab	B	45°
2358899-9	Plug Connector Assembly, Size 15	Olive Drab	B	—
2358899-8	Plug Connector Assembly, Size 15	Nickel	A	45°
2358899-7	Plug Connector Assembly, Size 15	Nickel	A	—
2358899-6	Plug Connector Assembly, Size 15	Olive Drab	A	45°
2358899-5	Plug Connector Assembly, Size 15	Olive Drab	A	—
2358899-4	Plug Connector Assembly, Size 15	Nickel	N	45°
2358899-3	Plug Connector Assembly, Size 15	Nickel	N	—
2358899-2	Plug Connector Assembly, Size 15	Olive Drab	N	45°
2358899-1	Plug Connector Assembly, Size 15	Olive Drab	N	—



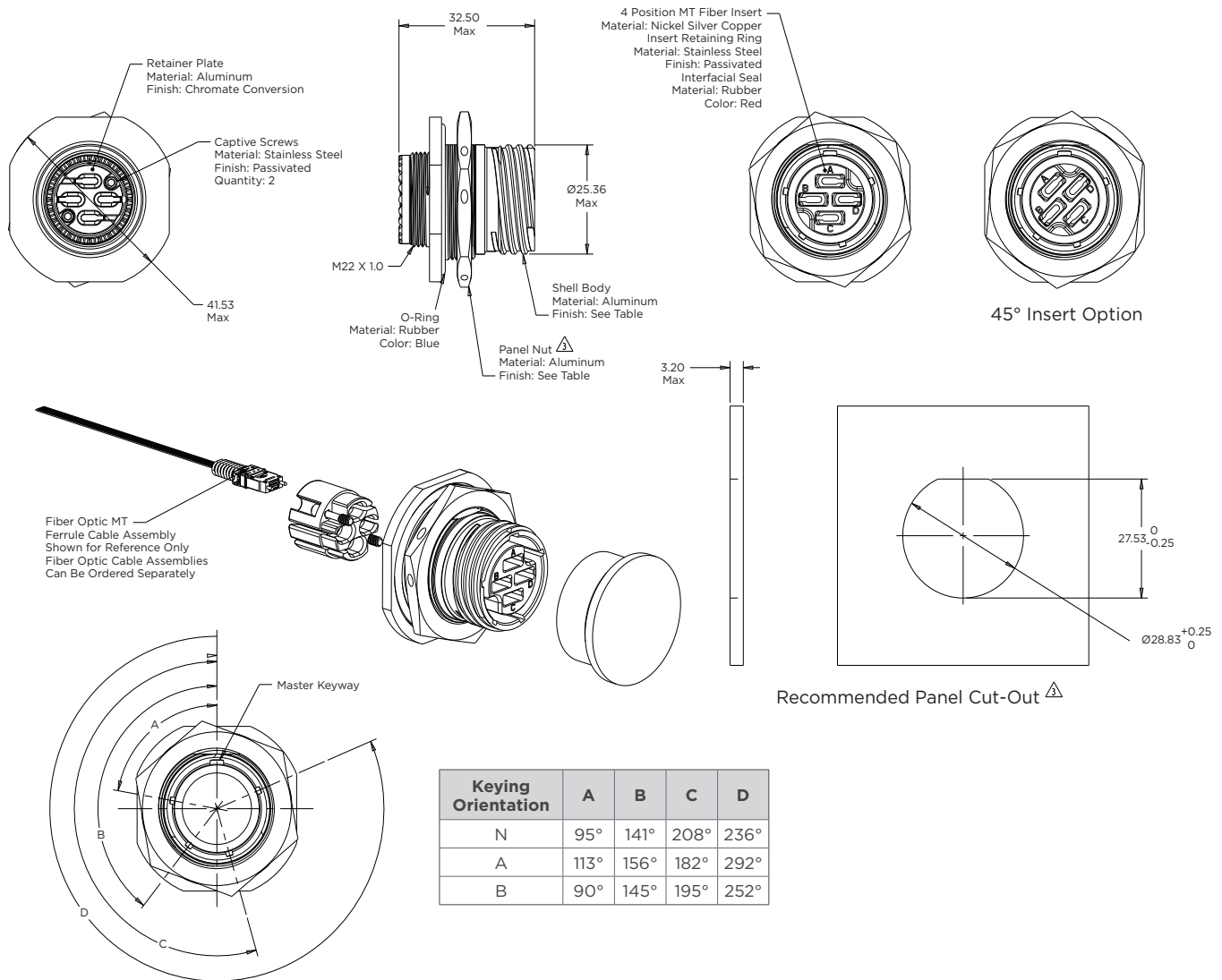
# 38999 Style Flange Mount Receptacle, Size 15, 4 Cavity



Assembly Part Number	Description	Finish (Shell and Nut)	Keying Orientation (See Detail)	Insert Orientation
1-2358897-8	Receptacle Connector Assembly, Size 15	Nickel PTFE	B	45°
1-2358897-7	Receptacle Connector Assembly, Size 15	Nickel PTFE	B	—
1-2358897-6	Receptacle Connector Assembly, Size 15	Nickel PTFE	A	45°
1-2358897-5	Receptacle Connector Assembly, Size 15	Nickel PTFE	A	—
1-2358897-4	Receptacle Connector Assembly, Size 15	Nickel PTFE	N	45°
1-2358897-3	Receptacle Connector Assembly, Size 15	Nickel PTFE	N	—
1-2358897-2	Receptacle Connector Assembly, Size 15	Nickel	B	45°
1-2358897-1	Receptacle Connector Assembly, Size 15	Nickel	B	—
1-2358897-0	Receptacle Connector Assembly, Size 15	Olive Drab	B	45°
2358897-9	Receptacle Connector Assembly, Size 15	Olive Drab	B	—
2358897-8	Receptacle Connector Assembly, Size 15	Nickel	A	45°
2358897-7	Receptacle Connector Assembly, Size 15	Nickel	A	—
2358897-6	Receptacle Connector Assembly, Size 15	Olive Drab	A	45°
2358897-5	Receptacle Connector Assembly, Size 15	Olive Drab	A	—
2358897-4	Receptacle Connector Assembly, Size 15	Nickel	N	45°
2358897-3	Receptacle Connector Assembly, Size 15	Nickel	N	—
2358897-2	Receptacle Connector Assembly, Size 15	Olive Drab	N	45°
2358897-1	Receptacle Connector Assembly, Size 15	Olive Drab	N	—



# 38999 Style Panel Mount Receptacle, Size 15, 4 Cavity



Assembly Part Number	Description	Finish (Shell and Nut)	Keying Orientation (See Detail)	Insert Orientation
1-2379812-8	Receptacle Connector Assembly, Size 15	Nickel PTFE	B	45°
1-2379812-7	Receptacle Connector Assembly, Size 15	Nickel PTFE	B	—
1-2379812-6	Receptacle Connector Assembly, Size 15	Nickel PTFE	A	45°
1-2379812-5	Receptacle Connector Assembly, Size 15	Nickel PTFE	A	—
1-2379812-4	Receptacle Connector Assembly, Size 15	Nickel PTFE	N	45°
1-2379812-3	Receptacle Connector Assembly, Size 15	Nickel PTFE	N	—
1-2379812-2	Receptacle Connector Assembly, Size 15	Nickel	B	45°
1-2379812-1	Receptacle Connector Assembly, Size 15	Nickel	B	—
1-2379812-0	Receptacle Connector Assembly, Size 15	Olive Drab	B	45°
2379812-9	Receptacle Connector Assembly, Size 15	Olive Drab	B	—
2379812-8	Receptacle Connector Assembly, Size 15	Nickel	A	45°
2379812-7	Receptacle Connector Assembly, Size 15	Nickel	A	—
2379812-6	Receptacle Connector Assembly, Size 15	Olive Drab	A	45°
2379812-5	Receptacle Connector Assembly, Size 15	Olive Drab	A	—
2379812-4	Receptacle Connector Assembly, Size 15	Nickel	N	45°
2379812-3	Receptacle Connector Assembly, Size 15	Nickel	N	—
2379812-2	Receptacle Connector Assembly, Size 15	Olive Drab	N	45°
2379812-1	Receptacle Connector Assembly, Size 15	Olive Drab	N	—



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## QUALITY STARTS WITH THE RIGHT APPLICATION TOOLING

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- [Connect with our experts to find the right tool for your application](#)

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