

cannon

MKJ Warrior Series Connectors Catalog



ITT

ITT Cannon MKJ Series QUALIFIED to US Nett Warrior

Per NWPAN-WP spec document produced by Product Manager Ground Soldier Systems, System Engineering Integrated Product Team

ITT Cannon's MKJ Warrior Series offers a reliable interconnect solution that enable critical communication, navigation and USB data/power for modern soldier applications. Derived from Cannon's robust MKJ Connector Family, the MKJ Warrior Series provides a robust breakaway coupling system, per the US Nett Warrior specification and qualified to US Nett Warrior and European GOSSRA / NATO STANAG 4695 standard.



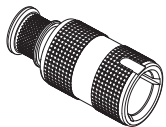
Features & Benefits

- Nett Warrior, GOSSRA and NATO STANAG 4695 Standard qualified.
- Robust push-pull breakaway coupling.
- "First-Mate-Last-Break" contact for hot-swap USB requirement.
- Black-Zinc Nickel finish with selective electroless nickel plating for enhanced shell-to-shell and shell-to-braid conductivity.
- Contact Types: Rear Crimp, Solder Cup, PCB Mount.
- Contacts: Standard (5-amp) or High-Power (8+amp), 2,000 minimum mating cycle durability.
- 6- or 7-pin layouts available.

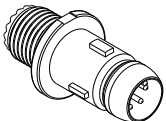
Applications



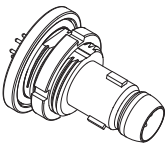
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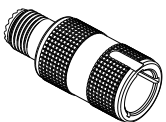
- Net Warrior Qualified ITT Cannon Part Numbers _____ **Page 4**



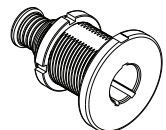
- In-line Plug _____ **Page 6**
Breakaway Coupling | Banded and Accessory Thread
First Mate Last Break (FMLB) Contacts



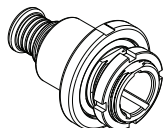
- Jam Nut Plug | Rear Mount PCB _____ **Page 7**
PC Tail and Solder Cup
First Mate Last Break (FMLB) Contacts



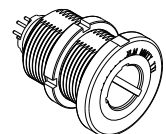
- In-line Receptacle _____ **Page 9**
Breakaway Coupling | Banded and Accessory Thread



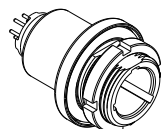
- Jam Nut Receptacle | Front Mount _____ **Page 10**
Banded and Accessory Thread



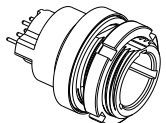
- Jam Nut Receptacle | Rear Mount _____ **Page 11**
Banded and Accessory Thread



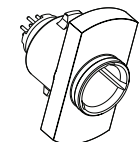
- Jam Nut Receptacle | Front Mount PCB _____ **Page 12**
PC Tail and Solder Cup



- Jam Nut Receptacle | Rear Mount PCB _____ **Page 13**
PC Tail and Solder Cup



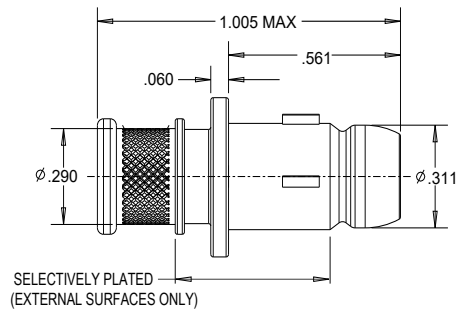
- Low Profile Jam Nut Receptacle _____ **Page 14**
Rear Mount PCB | PC Tail



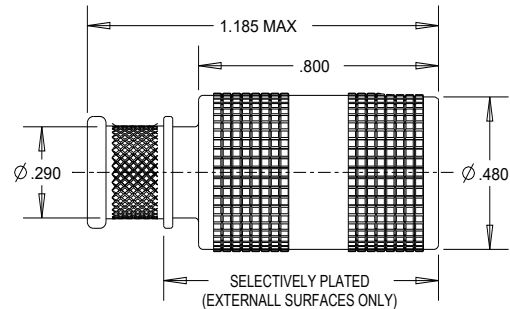
- Flange Mount Battery Receptacle _____ **Page 15**

Nett Warrior Qualified ITT Cannon Part Numbers

MKJ Warrior Series Qualified to Nett Warrior per NWPAN-WP spec document produced by Product Manager Ground Soldier Systems, System Engineering Integrated Product Team.



**In-line Plug banded with Crimp Contacts
Breakaway Coupling - Selectively Plated**



**In-line Receptacle banded with Crimp Contacts
Breakaway Coupling - Selectively Plated**

In-line Plug ITT Cannon Part number	Equivalent Part Numbers
MKJ4A6Z6-6PC-K140	NSN: 5935-01-659-5575 8070-1676-06ZNU6-6PY 2226910-1

In-line Receptacle ITT Cannon Part Number	Equivalent Part Numbers
MKJ4A1Z6-6SC-K140	NSN: 5935-01-659-4090 8070-1675-01ZNU6-6SY 2226920-1

ITT Cannon Qualification Test Sequence

Test Method	Description	Test Group				
		1	2	3	4	5
4.1	Visual Inspection	P	P	P	P	P
4.7	Basic Functional Test	P	P	P	P	P
4.2	Electrical Continuity	P	P	P	P	P
4.5	Breakaway Force	P				
4.8	Altitude		P			
4.9	High Temperature			P		
4.7	Basic Functional Test			P		
4.10	Low Temperature			P		
4.11	Solar Radiation					P
4.7	Basic Functional Test					P
4.12	Humidity				P	
4.7	Basic Functional Test				P	
4.13	Snow and Ice					P
4.7	Basic Functional Test					P
4.14	Salt Atmosphere	P				
4.7	Basic Functional Test	P				
4.16	Vibration		P			
4.7	Basic Functional Test		P			
4.15	Shock		P			
4.7	Basic Functional Test		P			
4.17	Sand and Dust					P
4.18	Rain and Water			P		
4.7	Basic Functional Test			P		P
4.6	Strength (Cable Retention)				P	
4.7	Basic Functional Test				P	

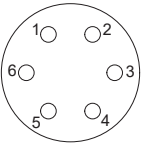
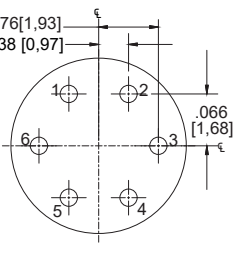
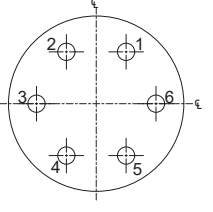
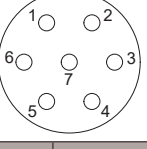
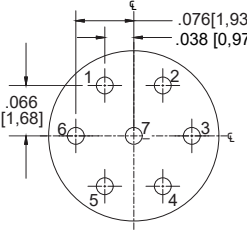
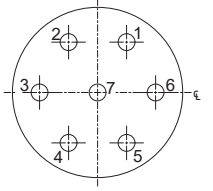
P= Pass



Dimensions shown in inches
Specifications and dimensions subject to change

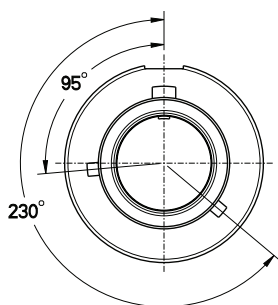
Contact Arrangements

Face View of Pin Insulators (Socket layouts reversed)

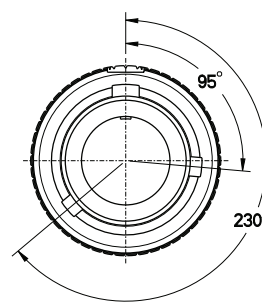
Layout		Pin	Socket
			
Layout	6-6		
Contact QTY	6		
Contact Size	23		
			
Layout	6-7		
Contact QTY	7		
Contact Size	23		

Note: High Power 8+ Amp contacts are in cavities 1, 2 and 3.

Clocking



Plug Key Clocking



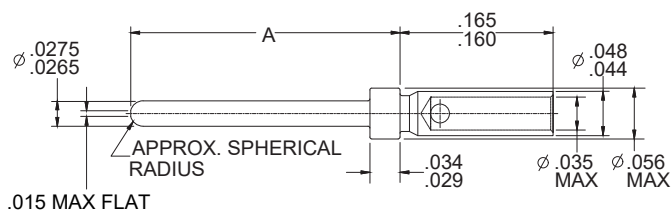
Receptacle Key Clocking

Contacts

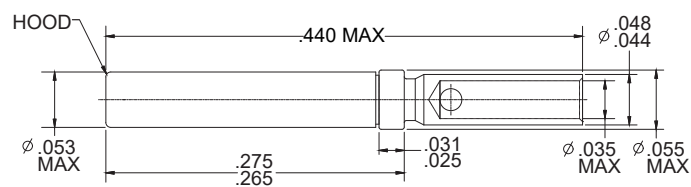
Type	Gender	Size	Part Number	Dim "A"	Contact Area Plating	Wire Size
Crimp	Pin	23	030-9649-000	.283 - .289	50 Micro Inches Gold over Nickel	#22-28 AWG Wire
Crimp	Pin FMLB*	23	030-9649-011	.323 - .327	50 Micro Inches Gold over Nickel	#22-28 AWG Wire
Crimp	Pin	23	030-9649-100	.283 - .289	50 Micro Inches Gold over Nickel	#26-30 AWG Wire
Crimp	Socket	23	031-9750-040	N/A	50 Micro Inches Gold over Nickel	#22-28 AWG Wire

Non-removable solder cup and PC tail contacts are supplied with the connectors.
Crimp contacts are supplied with the connector, but not installed. Bulk crimp contacts can be ordered separately.

*First-Mate-Last-Break crimp contact.

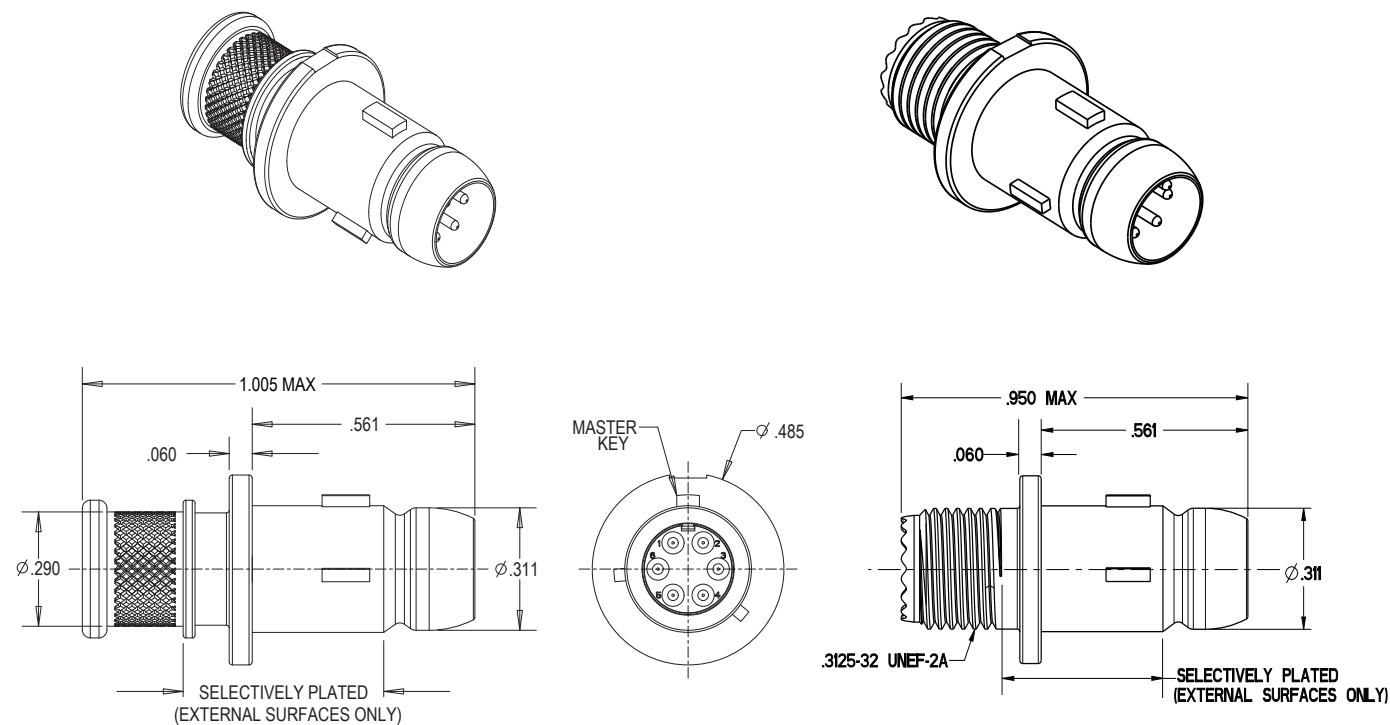


Pin: 030-9649-000/-011/-100



Socket: 031-9750-040 with Stainless Steel Hood

MKJ Warrior Series In-Line Plug



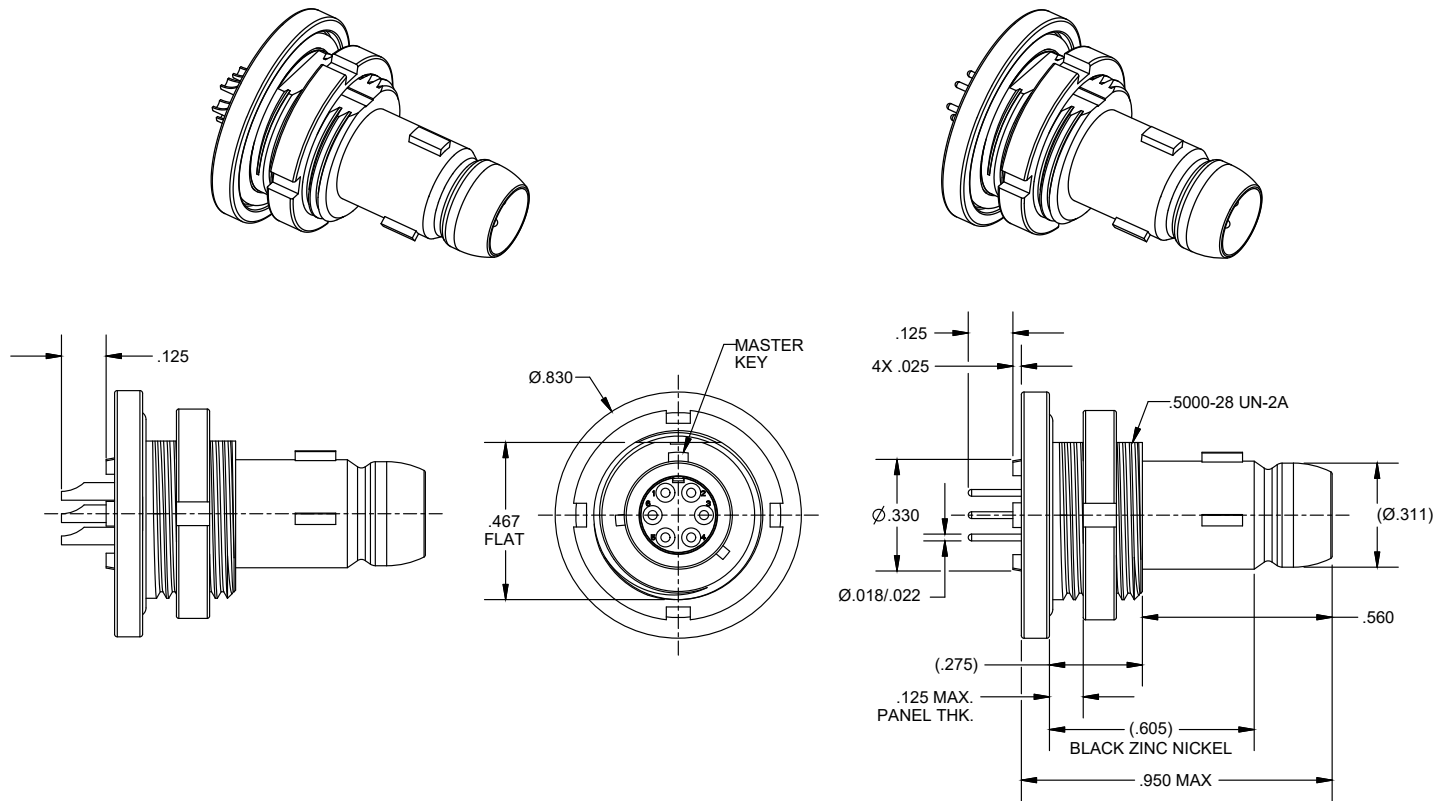
In-line Plug Banded with Crimp Contacts
Breakaway Coupling

In-line Plug Accessory Thread with Crimp Contacts
Breakaway Coupling

In-Line Plug Part Numbers				
Termination	Type	6 Contact Part Number	7 Contact Part Number	Plating
Crimp	Banded	MKJ4A6Z6-6PC-F261	MKJ4A6Z6-7PC-F261	Black Zinc Nickel
Solder	Banded	MKJ4A6Z6-6EC-F261	MKJ4A6Z6-7EC-F261	
Crimp	Banded	MKJ4A6Z6-6PC-K140	MKJ4A6Z6-7PC-K140	Selectively Plated Black Zinc Nickel
Solder	Banded	MKJ4A6Z6-6EC-K140	MKJ4A6Z6-7EC-K140	
Crimp	Accessory Thread	MKJ4B6Z6-6PC-F261	MKJ4B6Z6-7PC-F261	Black Zinc Nickel
Solder	Accessory Thread	MKJ4B6Z6-6EC-F261	MKJ4B6Z6-7EC-F261	
Crimp	Accessory Thread	MKJ4B6Z6-6PC-K140	MKJ4B6Z6-7PC-K140	Selectively Plated Black Zinc Nickel
Solder	Accessory Thread	MKJ4B6Z6-6EC-K140	MKJ4B6Z6-7EC-K140	

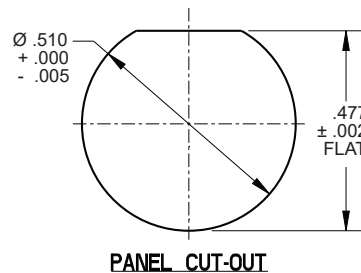
7-way connectors are not part of the GOSSRA and NATO STANAG 4695 Standard, therefore not currently listed on specification

MKJ Warrior Jam Nut Plug - Rear Mount PCB



Jam Nut Plug Rear Mount - Solder Cup

Jam Nut Plug Rear Mount - PC Tail

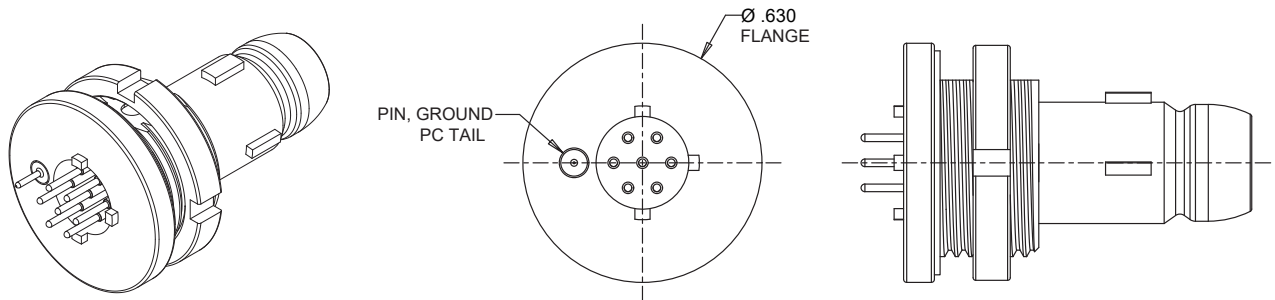


Jam Nut Plug Rear Mount Part Numbers

Termination	Type	6 Contact Part Number	7 Contact Part Number	Plating
PC Tail	Rear Mount	MKJ4C9Z6-6GC-K140	MKJ4C9Z6-7GC-K140	Selectively Plated Black Zinc Nickel
PC Tail	Rear Mount	MKJ4C9Z6-6GC-F261	MKJ4C9Z6-7GC-F261	Black Zinc Nickel
Solder Cup	Rear Mount	MKJ4C9Z6-6EC-K140	MKJ4C9Z6-7EC-K140	Selectively Plated Black Zinc Nickel
Solder Cup	Rear Mount	MKJ4C9Z6-6EC-F261	MKJ4C9Z6-7EC-F261	Black Zinc Nickel

7-way connectors are not part of the GOSSRA and NATO STANAG 4695 Standard, therefore not currently listed on specification

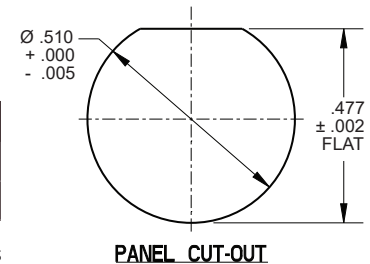
MKJ Warrior Jam Nut Plug - Rear Mount PC Tail with Ground Pin



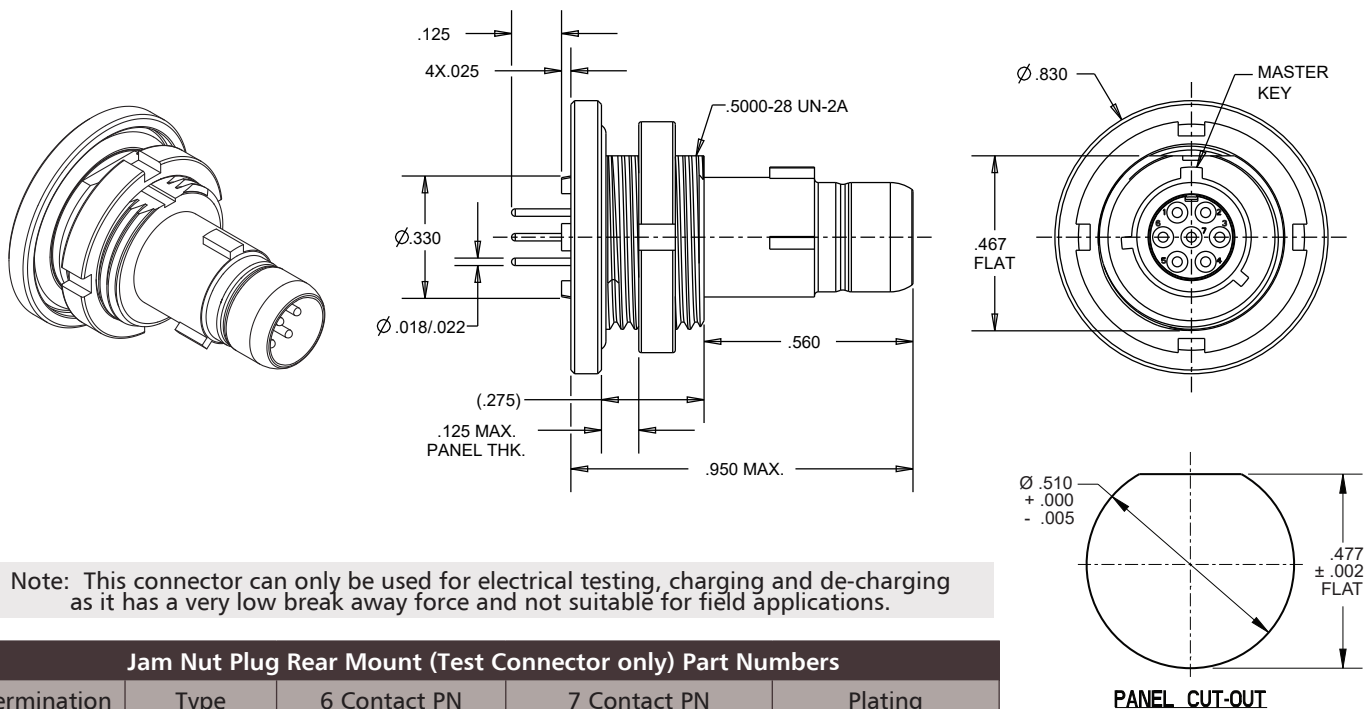
Reduced flange Jam Nut Plug with optional Ground Pin.

Jam Nut Plug Rear Mount Part Numbers				
Termination	Type	6 Contact PN	7 Contact PN	Plating
PC Tail	Rear Mount	*	MKJ4C9-155900-145	Electroless Nickel*

*Consult Factory for 6 part number availability and for additional plating options



MKJ Warrior Jam Nut Plug - Rear Mount PC Tail with Low Breakaway Force (Test Connector only)

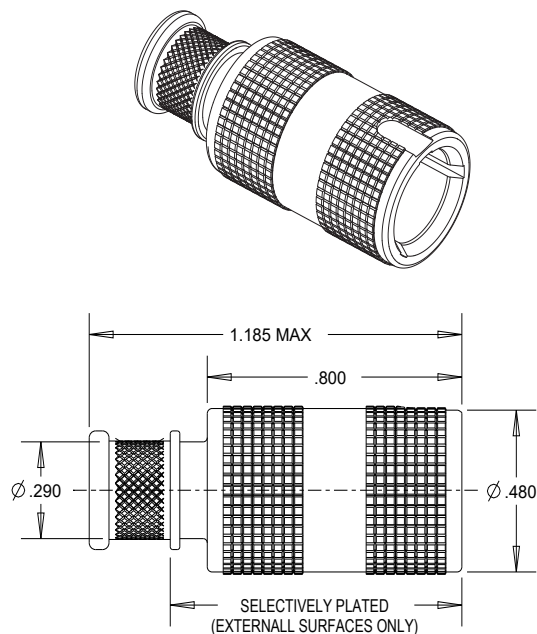


Note: This connector can only be used for electrical testing, charging and de-charging as it has a very low break away force and not suitable for field applications.

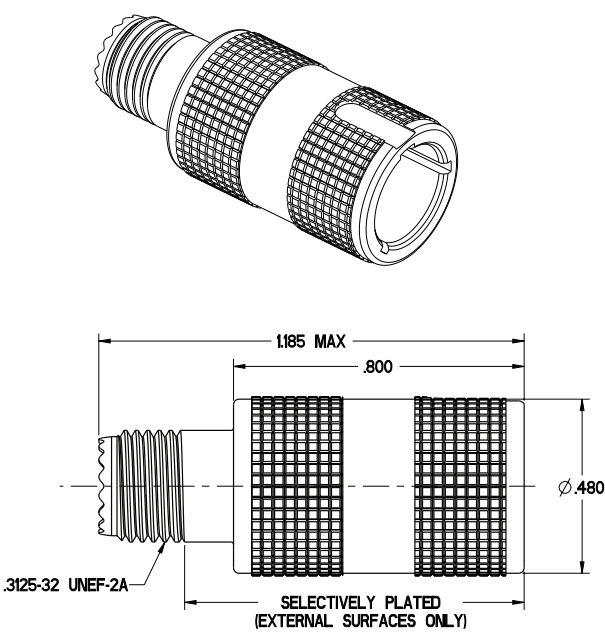
Jam Nut Plug Rear Mount (Test Connector only) Part Numbers				
Termination	Type	6 Contact PN	7 Contact PN	Plating
PC Tail	Rear Mount	*	MKJ4C9-155900-131	Electroless Nickel*

*Consult Factory for 6 part number availability and for additional plating options

MKJ Warrior Series In-Line Receptacle



In-line Receptacle, Banded with Crimp Contacts Breakaway Coupling

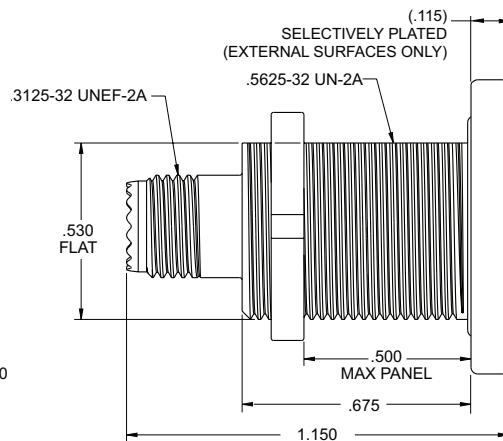
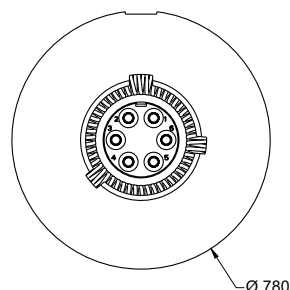
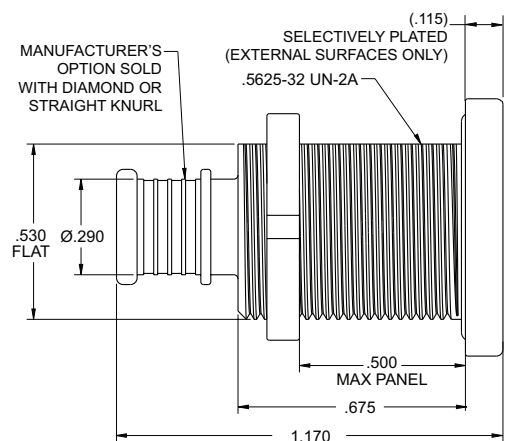
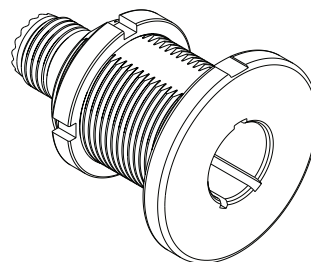
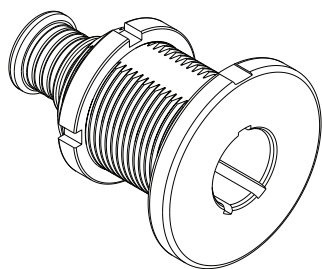


In-line Receptacle, Accessory Thread Crimp Contacts Breakaway Coupling

In-Line Receptacle Part Numbers					
Termination	Type	6 Contact Part Number	7 Contact Part Number	High-Power 7 Contact Part Number	Plating
Crimp	Banded	MKJ4A1Z6-6SC-F261	MKJ4A1Z6-7SC-F261	MKJ4A1Z6-7SC-F305	Black Zinc Nickel
Solder	Banded	MKJ4A1Z6-6FC-F261	MKJ4A1Z6-7FC-F261	MKJ4A1Z6-7FC-F305	
Crimp	Banded	MKJ4A1Z6-6SC-K140	MKJ4A1Z6-7SC-K140	MKJ4A1Z6-7SC-K144	Selectively Plated Black Zinc Nickel
Solder	Banded	MKJ4A1Z6-6FC-K140	MKJ4A1Z6-7FC-K140	MKJ4A1Z6-7FC-K144	
Crimp	Accessory Thread	MKJ4B1Z6-6SC-F261	MKJ4B1Z6-7SC-F261	MKJ4B1Z6-7SC-F305	Black Zinc Nickel
Solder	Accessory Thread	MKJ4B1Z6-6FC-F261	MKJ4B1Z6-7FC-F261	MKJ4B1Z6-7FC-F305	
Crimp	Accessory Thread	MKJ4B1Z6-6SC-K140	MKJ4B1Z6-7SC-K140	MKJ4B1Z6-7SC-K144	Selectively Plated Black Zinc Nickel
Solder	Accessory Thread	MKJ4B1Z6-6FC-K140	MKJ4B1Z6-7FC-K140	MKJ4B1Z6-7FC-K144	

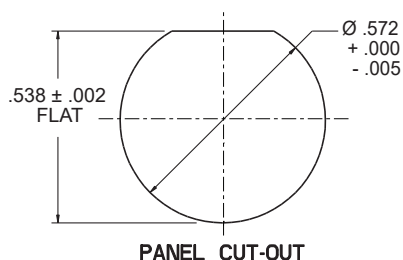
7-way connectors are not part of the GOSSRA and NATO STANAG 4695 Standard, therefore not currently listed on specification

MKJ Warrior Series Jam Nut Receptacle - Front Mount



Jam Nut Receptacle Front Mount - Banded

Jam Nut Receptacle Front Mount - Accessory Thread

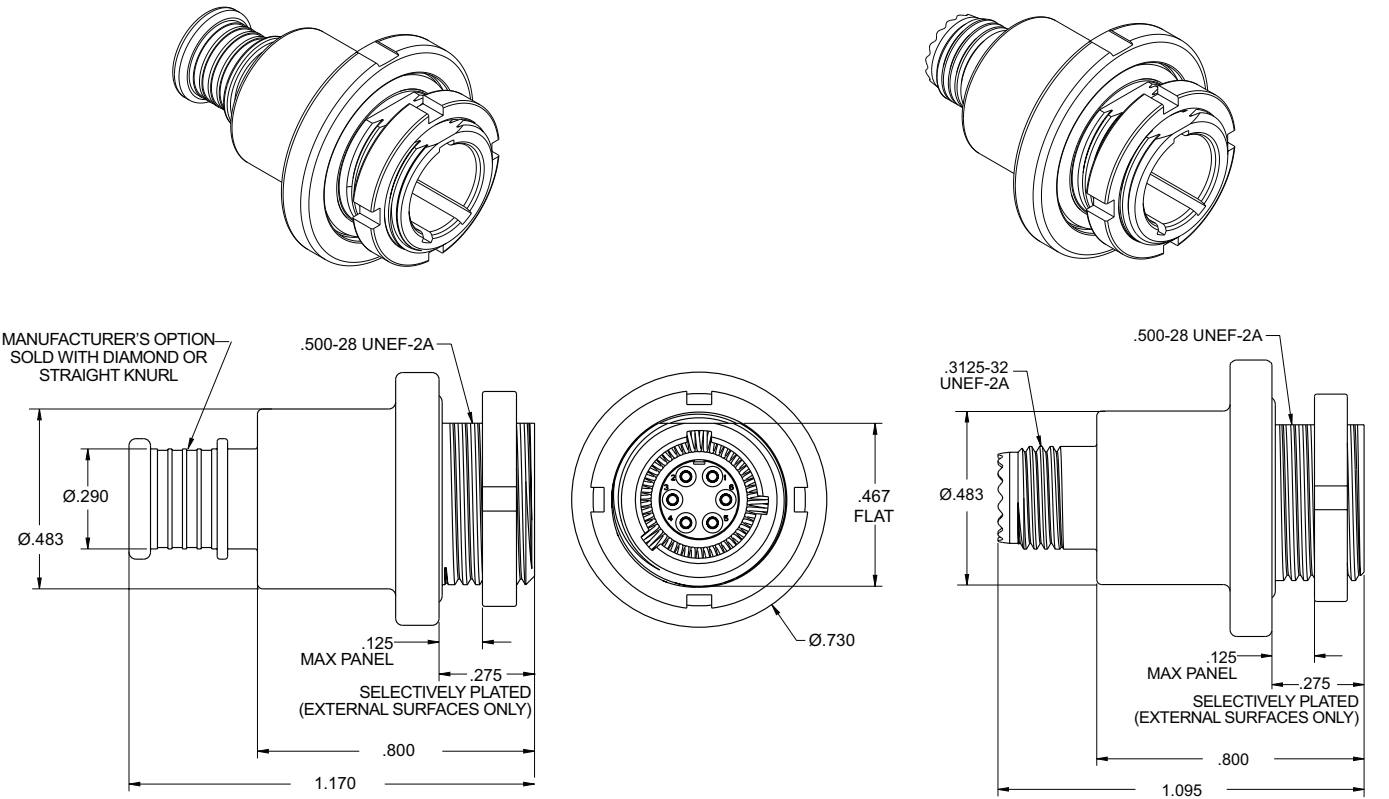


Jam Nut Receptacle Front Mount Part Numbers

Termination	Type	6 Contact Part Number	7 Contact Part Number	High-Power 7 Contact Part Number	Plating
Crimp	Banded	MKJ4A8Z6-6SC-F261	MKJ4A8Z6-7SC-F261	MKJ4A8Z6-7SC-F305	Black Zinc Nickel
Solder	Banded	MKJ4A8Z6-6FC-F261	MKJ4A8Z6-7FC-F261	MKJ4A8Z6-7FC-F305	
Crimp	Banded	MKJ4A8Z6-6SC-K140	MKJ4A8Z6-7SC-K140	MKJ4A8Z6-7SC-K144	Selectively Plated Black Zinc Nickel
Solder	Banded	MKJ4A8Z6-6FC-K140	MKJ4A8Z6-7FC-K140	MKJ4A8Z6-7FC-K144	
Crimp	Accessory Thread	MKJ4B8Z6-6SC-F261	MKJ4B8Z6-7SC-F261	MKJ4B8Z6-7SC-F305	Black Zinc Nickel
Solder	Accessory Thread	MKJ4B8Z6-6FC-F261	MKJ4B8Z6-7FC-F261	MKJ4B8Z6-7FC-F305	
Crimp	Accessory Thread	MKJ4B8Z6-6SC-K140	MKJ4B8Z6-7SC-K140	MKJ4B8Z6-7SC-K144	Selectively Plated Black Zinc Nickel
Solder	Accessory Thread	MKJ4B8Z6-6FC-K140	MKJ4B8Z6-7FC-K140	MKJ4B8Z6-7FC-K144	

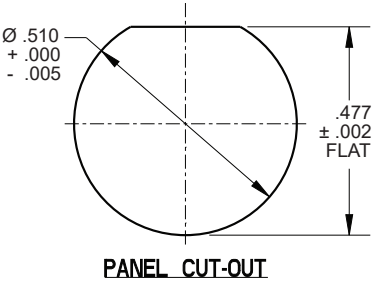
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MKJ Warrior Series Jam Nut Receptacle - Rear Mount



Jam Nut Receptacle Rear Mount - Banded

Jam Nut Receptacle Rear Mount - Accessory Thread

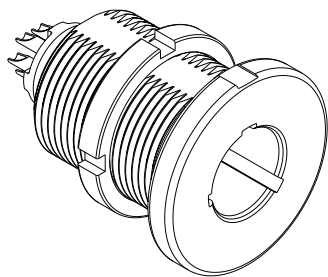


Jam Nut Receptacle Rear Mount Part Numbers					
Termination	Type	6 Contact Part Number	7 Contact Part Number	High-Power 7 Contact Part Number	Plating
Crimp	Banded	MKJ4A7Z6-6SC-F261	MKJ4A7Z6-7SC-F261	MKJ4A7Z6-7SC-F305	Black Zinc Nickel
Solder	Banded	MKJ4A7Z6-6FC-F261	MKJ4A7Z6-7FC-F261	MKJ4A7Z6-7FC-F305	
Crimp	Banded	MKJ4A7Z6-6SC-K140	MKJ4A7Z6-7SC-K140	MKJ4A7Z6-7SC-K144	Selectively Plated Black Zinc Nickel
Solder	Banded	MKJ4A7Z6-6FC-K140	MKJ4A7Z6-7FC-K140	MKJ4A7Z6-7FC-K144	
Crimp	Accessory Thread	MKJ4B7Z6-6SC-F261	MKJ4B7Z6-7SC-F261	MKJ4B7Z6-7SC-F305	Black Zinc Nickel
Solder	Accessory Thread	MKJ4B7Z6-6FC-F261	MKJ4B7Z6-7FC-F261	MKJ4B7Z6-7FC-F305	
Crimp	Accessory Thread	MKJ4B7Z6-6SC-K140	MKJ4B7Z6-7SC-K140	MKJ4B7Z6-7SC-K144	Selectively Plated Black Zinc Nickel
Solder	Accessory Thread	MKJ4B7Z6-6FC-K140	MKJ4B7Z6-7FC-K140	MKJ4B7Z6-7FC-K144	

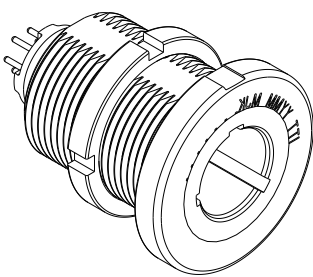
7-way connectors are not part of the GOSSRA and NATO STANAG 4695 Standard, therefore not currently listed on specification



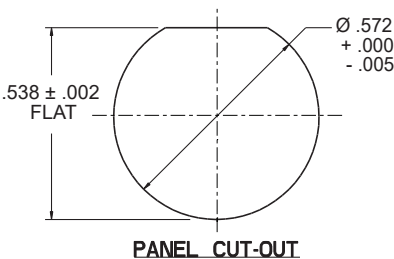
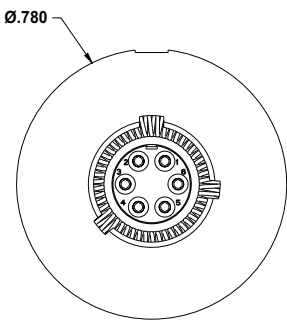
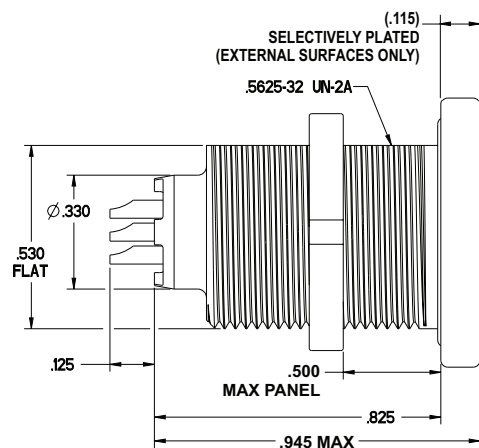
MKJ Warrior Series Jam Nut Receptacle - Front Mount PCB



Jam Nut Receptacle Front Mount - Solder Cup



Jam Nut Receptacle Front Mount - PC Tail*

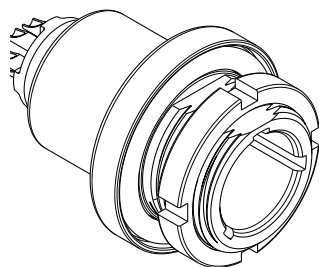


Jam Nut Receptacle Front Mount - Solder Cup

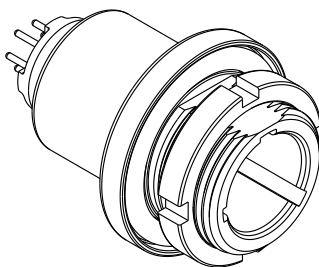
Jam Nut Receptacle Front Mount Part Numbers					
Termination	Mounting	6 Contact Part Number	7 Contact Part Number	High-Power 7 Contact Part Number	Plating
PC-Tail	Front Mount	MKJ4C8Z6-6HC-F261	MKJ4C8Z6-7HC-F261	MKJ4C8Z6-7HC-F305	Black Zinc Nickel
PC-Tail	Front Mount	MKJ4C8Z6-6HC-K140	MKJ4C8Z6-7HC-K140	MKJ4C8Z6-7HC-K144	Selectively Plated Black Zinc Nickel
Solder Cup	Front Mount	MKJ4C8Z6-6FC-F261	MKJ4C8Z6-7FC-F261	MKJ4C8Z6-7FC-F305	Black Zinc Nickel
Solder Cup	Front Mount	MKJ4C8Z6-6FC-K140	MKJ4C8Z6-7FC-K140	MKJ4C8Z6-7FC-K144	Selectively Plated Black Zinc Nickel

*PC-Tail contacts extend .125 beyond shell, rear. Consult Factory for additional configurations
7-way connectors are not part of the GOSSRA and NATO STANAG 4695 Standard, therefore not currently listed on specification

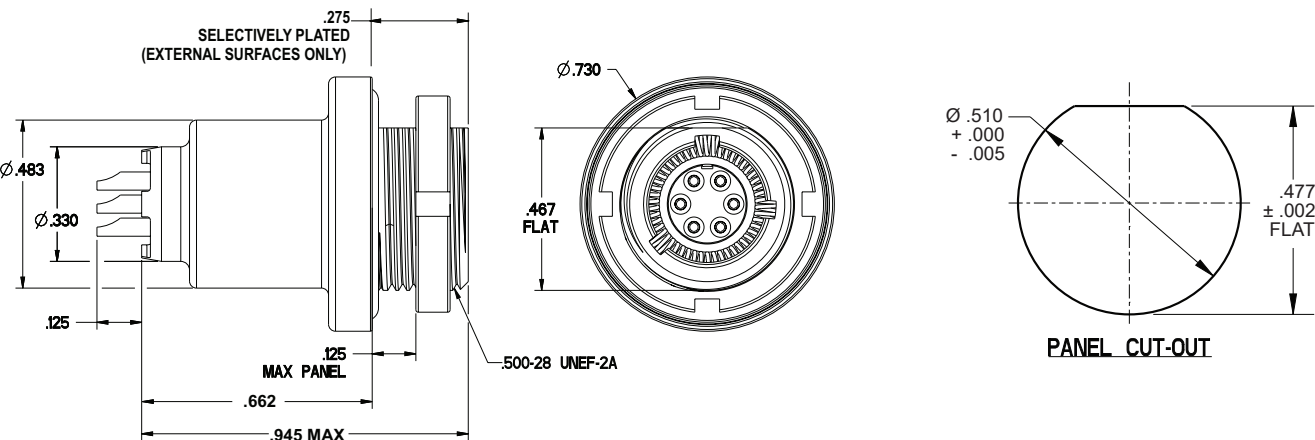
MKJ Warrior Series Jam Nut Receptacle - Rear Mount PCB



Jam Nut Receptacle Rear Mount - Solder Cup



Jam Nut Receptacle Rear Mount - PC Tail*

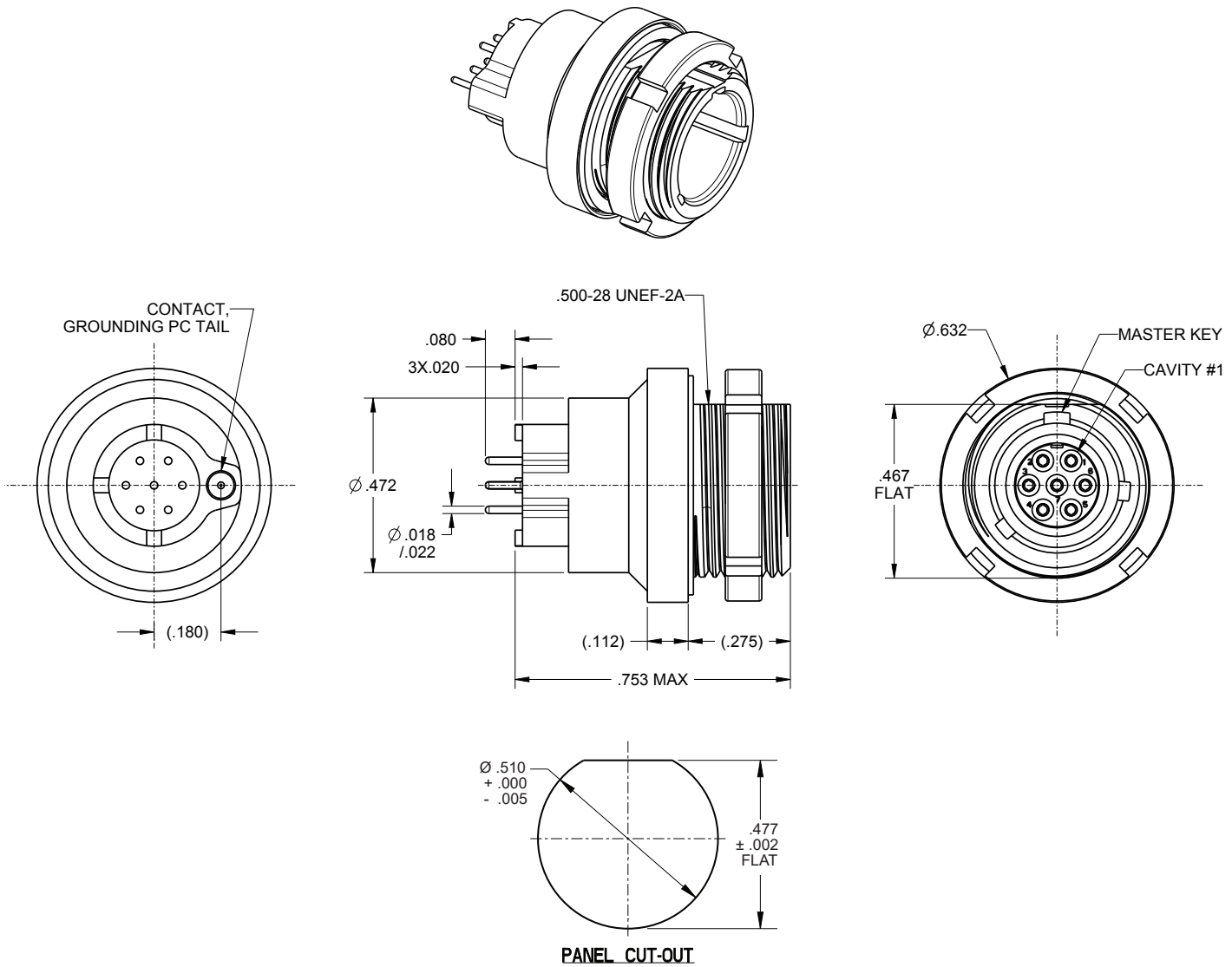


Jam Nut Receptacle Rear Mount - Solder Cup

Jam Nut Receptacle Rear Mount Part Numbers					
Termination	Mounting	7 Contact Part Number	7 Contact Part Number	High-Power 7 Contact Part Number	Plating
PC-Tail	Rear Mount	MKJ4C7Z6-6HC-F261	MKJ4C7Z6-7HC-F261	MKJ4C7Z6-7HC-F305	Black Zinc Nickel
PC-Tail	Rear Mount	MKJ4C7Z6-6HC-K140	MKJ4C7Z6-7HC-K140	MKJ4C7Z6-7HC-K144	Selectively Plated Black Zinc Nickel
Solder Cup	Rear Mount	MKJ4C7Z6-6FC-F261	MKJ4C7Z6-7FC-F261	MKJ4C7Z6-7FC-F305	Black Zinc Nickel
Solder Cup	Rear Mount	MKJ4C7Z6-6FC-K140	MKJ4C7Z6-7FC-K140	MKJ4C7Z6-7FC-K144	Selectively Plated Black Zinc Nickel

*PC-Tail contacts extend .125 beyond shell, rear. Consult Factory for additional configurations
 7-way connectors are not part of the GOSSRA and NATO STANAG 4695 Standard, therefore not currently listed on specification

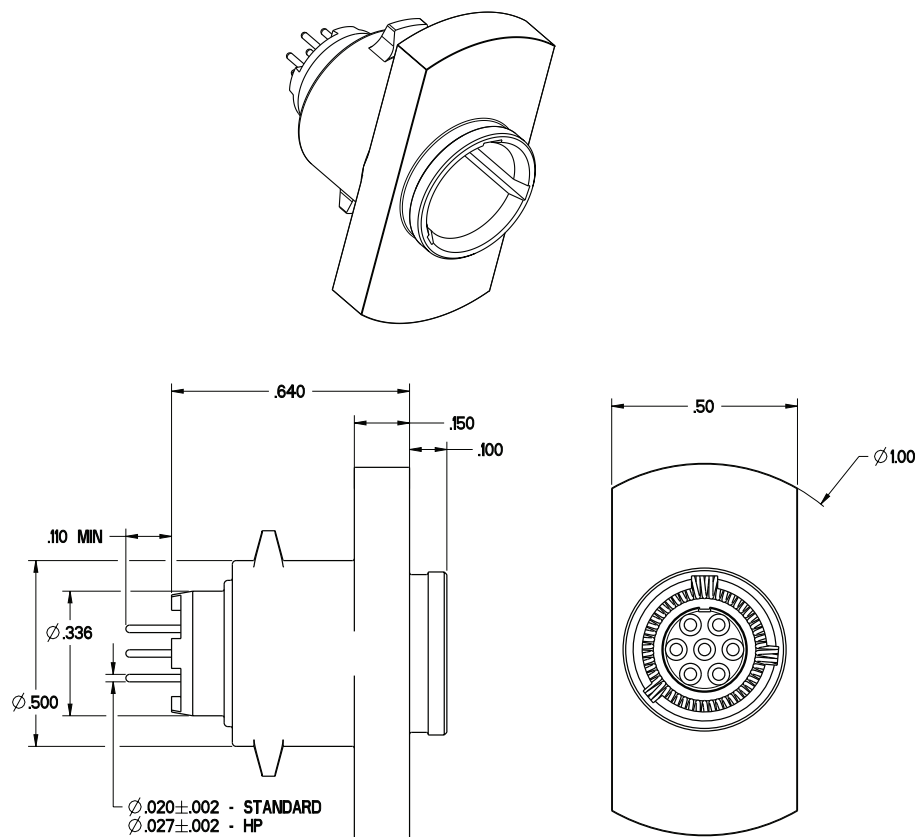
MKJ Warrior Series Low Profile Jam Nut Receptacle - Rear Mount PCB - PC Tail



Low Profile Jam Nut Receptacle Rear Mount Part Numbers				
Termination	Mounting	6 Contact Part Number	7 Contact Part Number	Plating
PC Tail	Rear Mount	*	MKJ4C7-155900-144	Electroless Nickel

*Consult Factory for 6 Contact Part Number availability.

MKJ Warrior Series Flange Mount Battery Receptacle



Flange Mount Battery Receptacle Part Numbers					
Termination	Type	6 Contact Part Number	7 Contact Part Number	High-Power 7 Contact Part Number	Plating
PC Tail	Flange	MKJ4C2-155900-70	MKJ4C2-155900-14	Consult factory for various CWB High-Power connector part numbers	Black Zinc Nickel

For custom flange, alternate plating and grounded pin options, please contact the factory

MKJ Warrior Series - Accessories

Crimp Tooling



Contact Crimp Tool - 995-0002-293



Locator Standard - 995-0002-297
Locator for FMLB Pin - 995-0002-304

Additional Tooling

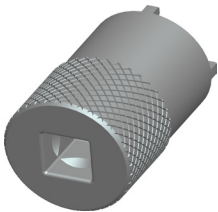
Tooling Type	Part Number
Insertion/Extraction Tool	980-1020-000
Hand Banding Tool	995-0002-298
Hand Banding Tool	995-0002-306
1/8" Bands (100 pk)	995-0002-299



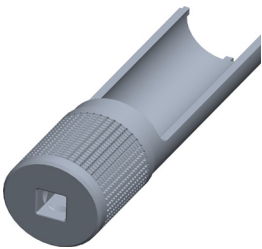
Hand Banding Tool - 995-0002-298
1/8" Bands - 995-0002-299



Hand Banding Tool - 995-0002-306



Spanner (Rear Mount) - 317-2187-011



Spanner (Front Mount) - 317-2187-031

MKJ Warrior Series - Accessories

Disposable Dust Caps



Disposable Dust Cover for Receptacle
980-9500-321



Disposable Dust Cover for Plug
980-9500-402

Rubber Dust Caps



Rubber Dust Cap for Receptacle



Rubber Dust Cap for Plug

Rubber Dust Caps - Part Number Configurator

1 - Product	2 - Cap Gender	3 - Material and Finish Class	4 - Attachment Style	5 - ITT Shell Size	6 - Termination Code	7 - Attachmnet Lenght (in)
MKJDC4	P	R	G	6	01	4

1 - Product		6 - Termination Code (Ring Inner Diameter)		7 - Attachment Length in inches	
MKJDC4	MKJ4 Breakaway / Quick Disconnect Coupling			Leave blank for Attachment Style N	
2 - Cap Gender		External Log Attachment		4	4 inches
P	Cap for Plug Connector	K	Slipknot	5	5 inches
R	Cap for Receptacle Connector	01	0.126" ID	6	6 inches
3 - Material and Finish Class		02	0.145" ID	9	9 inches (Slipknot)
R	Rubber / No Finish	04	0.188" ID		
4 - Attachment Style		06	0.197" ID		
G	Nylon Rope, Black	Banded or Rear Connector Attachment			
N	No Attachment	20	0.315" ID		
5 - ITT Shell Style		24	0.385" ID		
6		28	0.445" ID		

Specifications

Contact Engagement and Separation	Per SAE AS39029, Table 9 for applicable values
Contact Retention	Size 23 Contacts – 6 lbs; Minimum axial load force shall not displace contacts more than .012 inches
Breakaway Force	10 +/- 3 lbs of tension before breaking connection
Mechanical Shock	300g, Peak, 3ms, 1/2-sine shock pulse. No electrical discontinuity > 1 μ s Random Vibration No electrical discontinuity > 1 μ s, 37g Peak Sinusoidal Vibration No electrical discontinuity > 1 μ s, 30g Peak
Random Vibration	No electrical discontinuity > 1 μ s, 37g Peak
Sinusoidal Vibration	No electrical discontinuity > 1 μ s, 30g Peak
Reflectance	Exposed Portions of connectors shall not expose shiny, reflective surfaces
Color	Exposed portions of connector shall be black
Chemical Safety	Materials shall not create a toxic health hazard
Marking	Each connector shall include clearly readable part number manufacturer information
Durability	2000 Mating cycles
Wire Accommodation	#22 - #28 AWG
Materials	Shells - Aluminum Alloy with Selective Plating or all Black Zinc Nickel.
	Insulators - Thermoplastic
	Seals - Fluorosilicone
	Contacts - Copper Alloy with gold over nickel plating

Environmental Specifications

Temperature	Operating -55°C to +150°C / Non-Operating +200°C
Humidity	Operate w/100% humidity
Snow and Ice	Connector shall operation in snow and ice
Salt Atmosphere	Connector shall operate in and when stored in a salt fog atmosphere without protective covers - 48 hrs
Solar Radiation	Connector shall not be damaged by extended exposure to sunlight
Mud, Sand & Dirt	The connector shall function when exposed to mud, sand and dirt
Rain and Water	The connector shall remain functional during driving rain
Sand & Dust	The connector shall not suffer greater than cosmetic deterioration due to blowing sand and dust
Water Immersion	1 meter for 1 hour (mated) Water block sealed 1 x 10 ⁻⁴ cc/seconds @ 1 atm for all solder cup and PC tail version
Fluid immersion	"Unmated connectors immersed in various fuels and oils shall have no damage detrimental to the operation of the connector components"
Fungus	Connector materials shall be fungus inert
Altitude Immersion	40,000 ft, no evidence of moisture or damage that is detrimental to the operation of the connector components Shall meet DWV.

Electrical Specifications

Current Rating	5 Amps Max Standard Contact / 8+ Amps Max High Power Contact (in development)
DWV, At Sea Level	500 VAC RMS
Insulation Resistance	> 5,000 MΩ with 500 VDC
Low Level Contact Resistance	Per SAE AS39029, Table 4 for applicable values
Contact Resistance	8 mΩ Maximum mV, maximum
Max Voltage Drop	Less than 85 mV with contacts in the mated position and an applied load of 3amps at 16VDC
Altitude	Sea level to 32,000 feet
EMI/EMC	The connector shall be sufficient to assure full functionality on the date and power connectors when exposed to conditions of 50 Volts/meter across a span of 2-10,000 MHz.
Shell to shell	<0.05 Ohms

Additional Test Standards

- EIA-364-03 Altitude Immersion
- EIA-364-06 Contact Resistance
- EIA-364-09 Durability
- EIA-364-10 Fluid Immersion
- EIA-364-13 Mating & Un-mating Forces
- EIA-364-18 Visual and Mechanical Inspection
- EIA-364-20 Dielectric Withstanding Voltage, DWV, Sea Level
- EIA-364-21 Insulation Resistance
- EIA-364-23 Low Level Contact Resistance
- EIA-364-26, Cond. B Salt Spray
- EIA-364-27, Cond. D, Table I Mechanical Shock
- EIA-364-28, Cond. V Random Vibration
- EIA-364-29 Contact Retention
- EIA-364-31, Method IV Humidity
- EIA-364-32 Temperature Cycling (Thermal Shock)
- EIA-364-32, Cond. IV Thermal Shock
- EIA-364-35 Insert Retention
- EIA-364-37, Method A Contact Engagement and Separation
- EIA-364-70, Method 1 Current Capacity
- EIA-364-83 Shell to Shell Conductivity
- IEC 60529 Water Tightness
- MIL-STD-202 Method 204, Cond. G Sinusoidal Vibration
- MIL-STD-202-301 Dielectric Withstanding Voltage, DWV
- MIL-STD-810, Method 512.4 Sand and Dust
- MIL-STD-810, Method 518.5 Fungus
- MIL-STD-810H Method 509.7 Salt Fog
- MIL-STD-810H Method 514.8 Procedure I Vibration
- MIL-STD-810H Method 516.8 Procedure I Mechanical Shock

Cables to Outfit Your MKJ Connector

Value-Added Cabling Solutions from ITT Cannon

Let ITT Cannon complete your solution with our custom cable products. A complement to the reduction in size of the connectors is the reduction in weight and thickness in cabling. Choose from several available options to help customize your application. Improving on our high reliability connectors, we offer over molds that are suitable for military requirements in harsh environments.



Note: Polyurethane jacketed round cables and silicon jacket high-flex flat cables with overmolds.

Braiding

- EMI shielded metal to light weight, textile braiding for abrasion protection

Overmolding

- Injection molding with polyurethane, Santoprene, and polyimide
- Transfer molding with Cannon's Super Jacketing System (SJS Series), Viton, Neoprene, EPDM, and alternative molding compounds
- Low pressure and prototype molding including M24041, poly urethane, Polyimide, and custom compounds

Shrink Boots

- Customized solution for all connector-to-cable transition type including straight, 90 and 45 degree.

Backshells

- Integration of commercial and MIL-Spec backshell and molding adapters

Cable Jacket

- Blown-on jacketing for multi leg cables using SJS jacket, Viton Neoprene, EPDM, and various other tubing jackets
- RONDENT proof extruded jackets using SJS jacket, poly urethane, Santoprene and Neoprene.
- Textile braids and heat shrink jackets

Integrated Assembly

- Integrated connector and cabling into box system
- Ribbon cable assembly
- Cable/Wire harnesses in boxes or as an LRU
- Machined & integrated high volume Die Cast housing



MKJ Series Overview

Up to 71% weight and 52% size reduction in an industry-leading quick disconnect*

ITT Cannon continues its tradition of innovation with the MKJ line of miniature circular connectors. Bringing together a unique combination of design, functionality and flexibility, Cannon's MKJ Series offers proven, reliable and cost-effective interconnect solutions that enable critical communication, navigation and high speed data transmission—at half the size and weight of traditional ones. Choose from UNC thread, double start, triple start, bayonet, breakaway and clip lock latching coupling methods in a cost-efficient, lightweight and highly engineered design.



MKJ0 UNC Thread



MKJ1 Double Start



MKJ3 Bayonet



MKJ4 Breakaway



MKJ Warrior



MKJ5 Triple Start



MKJ Clip Lock

Key Features

- Versatile and proven for use in military, industrial and medical applications where safety and reliability are critical
- A number of connectors in the MKJ Series offer up to 2,000 mating cycles, making them the perfect solution for ruggedized computers and hand-held communications equipment
- Multiple coupling mechanisms enable connectivity for navigation and telemetry applications
- Plugs and receptacles are environmentally sealed for use in the harshest environments
- Teflon nickel, black zinc nickel and olive drab cadmium plating maintain robust reliability for 500 hours of salt spray
- RoHS Compliant plating and part numbers available
- Qualified to GOSSRA and design per Nett Warrior

Connect with your ITT Cannon
representative today or visit us at
www.ittcannon.com

Connect with the experts.

Whether communicating with our soldiers in the field or
powering critical equipment, ITT Cannon connects when it matters most.



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