Glenair®

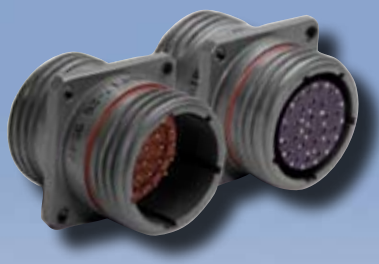
# Series 79 Micro-Crimp Connectors and Cables

*The Micro-D Connector with Crimp Contacts: Power, Signal and Coax*

United States ▪ United Kingdom ▪ Germany ▪ France ▪ Nordic ▪ Italy ▪ Spain ▪ Japan

# 1000 Hour Grey™

## The Advanced Formula Ni-PTFE Plating Process for EMC Applications



### *New Cadmium Free RoHS Compliant Plating Process Breaks 1000 Hour Corrosion Protection Barrier!*

*The MIL-DTL-38999 Rev. L detail specification establishes several new cadmium-free conductive plating options including high-performance nickel-fluorocarbon polymer. The Glenair advanced formula* **1000 Hour Grey™** *plating process (Ni-PTFE) meets all D38999 performance requirements including a shell-to-shell conductivity maximum 2.5 millivolt drop potential.*

**1000 Hour Grey™** *delivers outstanding performance in a broad range of land, sea, air and space interconnect applications. The non-reflective, non-magnetic, gun-metal gray surface finish is an ideal choice for tactical military systems with extraordinary corrosion protection and EMC requirements.*

## *Advanced Durability, Lubricity Plus Outstanding Temperature Resistance!*

*The mechanical, electrical and environmental performance of* **1000 Hour Grey™** *is truly outstanding, far surpassing that of other metal alloy/fluorocarbon polymer plating solutions:*

- 1000+ Hrs. Salt Spray
- Max 2.5 Millivolt Drop Potential
- -65°C to 175°C Temp. Rating
- 336+ Hrs. Sulfur Dioxide Resistance
- Non-Magnetic
- Cadmium Free
- Low Coefficient of Friction
- Hexavalent Chromium Free
- Potassium Formate Resistant
- Low Shell-to-Shell Resistance
- Adheres to Composite Plastic
- 500+ Mating Cycles
- Low Outgassing
- Available Now!

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**Glenair, Inc.**

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# The world's broadest selection of interconnect products–in stock and ready for immediate same-day shipment

**Available now: Glenair's Interconnect Product Guide CD,** featuring our entire library of Glenair catalogs and data sheets.


**In addition to over a dozen product line catalogs, the CD includes a powerful part number development program that takes all the pain and confusion out of ordering interconnect components. An easy-to-use inventory search program provides ready access to 60,000 MIL-STD and commercial part numbers.**

## Glenair's World of Interconnect Solutions

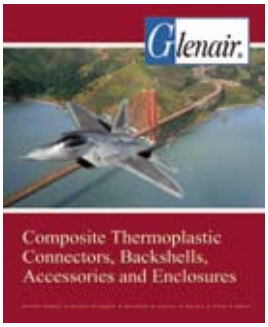
A complete overview of Glenair's innovative range of interconnect products and services, including Military Standard and commercial equivalent connectors and accessories.


## Micro-D Twistpin Connectors and Accessories

Glenair offers both Military Standard 83513 Micro-D connectors as well as COTS selections, backshells, mounting hardware and more. Our TwistPin contact provides superior performance.


## Composite Thermoplastic Interconnect Solutions

Glenair is the world's leading manufacturer of composite interconnect solutions. We are the 'go-to' supplier for advanced composite technologies for commerical and military interconnect applications.




## EMI/EMP Filter Connectors

MIL-DTL-38999 type EMI/EMP filter connectors, as well as other Military Standard and commercial electromagnetic shielding technologies. Also includes Glenair Series 80 "Mighty Mouse" filter products.


## Miliary Standard Connector Accessories

If the MS connector accessory you need isn't in here – it doesn't exist. Search this easy-to-use catalog by accessory type or Mil-Spec slash number, then place your order against Glenair's 60,000 part number same-day inventory.


## Fiber Optic Interconnect Solutions

Tactical fiber optic connectors, cables, and termini for airframe, shipboard, and military ground vehicles. Catalog features Glenair's innovative high-density (GHD) connector system for reduced size and weight applications.


## Series 80 "Mighty Mouse" Connectors and Cables

Glenair's revolutionary connector series that reduces interconnect system size and weight by 50% compared to standard MIL-DTL-38999 connectors. Now used on hundreds of mission-critical military and commercial applications.


**Visit us at www.glenair.com and use the literature order form for immediate catalog fulfillment**

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# A World of Interconnect Solutions


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# Series 79 Micro-Crimp
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Series 79



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Rev. 01-AUG-2008

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# Series 79 Micro-Crimp
# Introduction to the Micro-Crimp Series 79 Connector

## About the Series 79 Micro-Crimp Connector

Meet the newest member of Glenair's Micro-D family, the Series 79 Micro-Crimp. The Micro-Crimp connector features crimp, rear-release size #23 contacts on .075 inch (1.9 mm) spacing, as well as size #12 and #16 power and coaxial crimp contacts in a range of hybrid layouts. Available in 29 insert arrangements, the Micro-Crimp provides a wide selection of arrangements for data and power transmission.

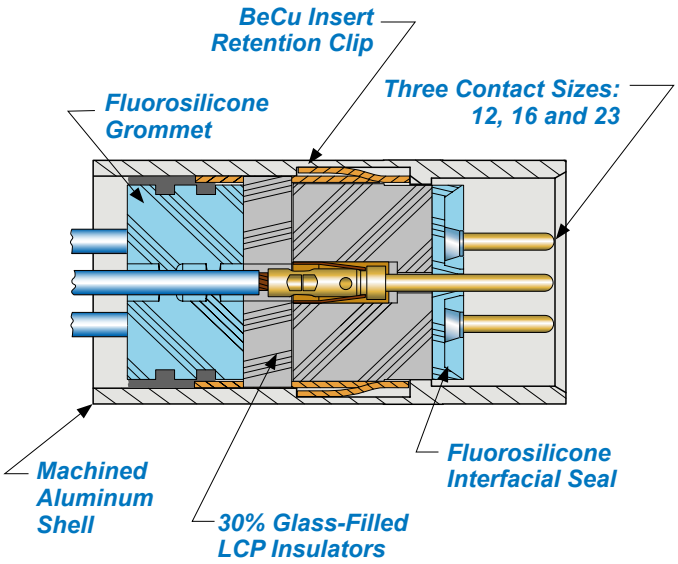
Today's defense/aerospace systems require advanced levels of environmental protection, electromagnetic shielding and size/weight reduction. The Series 79 was developed to meet these needs. Panel mounted connectors feature conductive sealing gaskets. Right angle printed circuit board connectors have an EMI shroud to prevent electromagnetic interference. Wire sealing grommets and interfacial seals protect circuits from moisture and contamination.

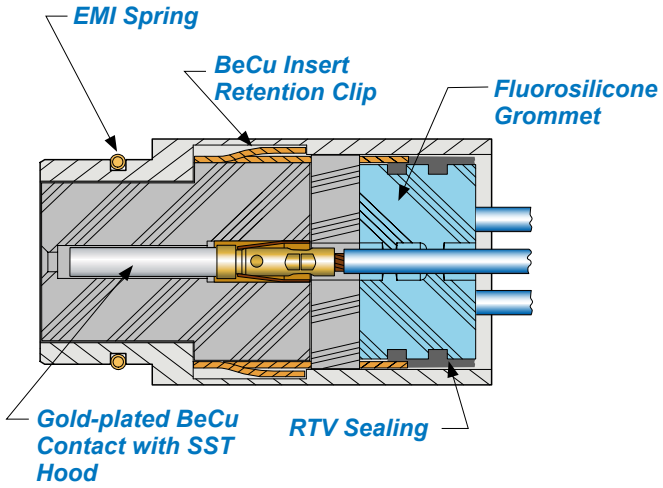
*Cable Plug With Socket Contacts*

*Cable Receptacle With Pin Contacts*

*Panel Mount Right Angle PCB Plug with EMI Shroud*

*Panel Mount Receptacle with Straight PC Tails*

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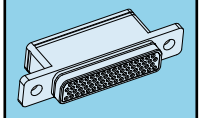
# Series 79 Micro-Crimp Connector Selection Guide

## Plug Connectors (Socket Contacts)

### Crimp Termination
For Attaching Wire or Cable

**Standard Cable**



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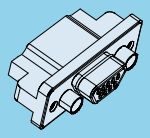
**Rear Panel Mount**



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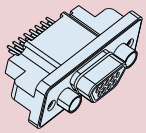
### Printed Circuit Board
For Rear Panel Mounting

**Straight PCB**



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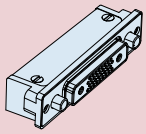
**Right Angle PCB**



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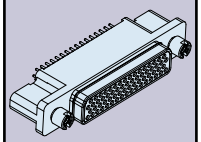
### Printed Circuit Board
Free-Standing

**Straight PCB**



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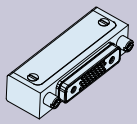
**Right Angle PCB**



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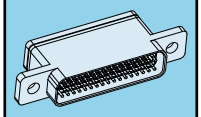
## Receptacle Connectors (Pin Contacts)

### Crimp Termination
For Attaching Wire or Cable

**Standard Cable**



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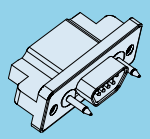
**Rear Panel Mount**



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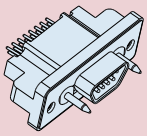
### Printed Circuit Board
For Rear Panel Mounting

**Straight PCB**



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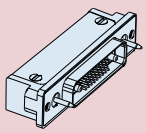
**Right Angle PCB**



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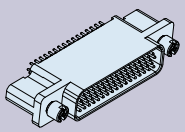
### Printed Circuit Board
Free-Standing

**Straight PCB**



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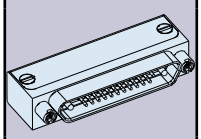
**Right Angle PCB**



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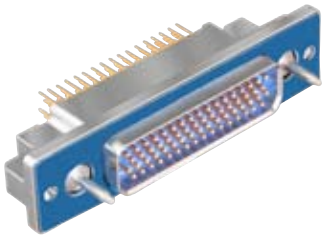
# Series 79 Micro-Crimp
# Introduction to the Micro-Crimp Series 79 Connector

## Product Showcase

***Series 79 with size #12 power pins for up to 23 amp current capacity.***

### Micro-Crimp Combo Layouts

Twenty-nine contact arrangements are available with size #23 contacts for signal and data, size #16 contacts for up to 13 amps power, or size #12 contacts for up to 23 amp capacity. All 29 arrangements are available with crimp pins or with printed circuit tails.



***790-028PH-66 with stainless steel guide pins for blind mate applications.***

### Guide Pins for Blind Mating

Series 79 panel connectors can be configured with guiding hardware for module-to-chassis applications.

***Gold-plated M39029 size #12 and #16 contacts for high current capacity.***

### Snap-In Power Pins

Series 79 connectors accept standard M39029 contacts. These crimp contacts are plated with 50 microinches gold over nickel underplating.

### Pneumatic Contacts

Snap these "gas" contacts into any size #12 contact cavity. Attach standard tubing to the contact. These stainless steel contacts are removable.

***Size #12 pneumatic contacts withstand up to 100 PSI air pressure for pitot tube applications.***

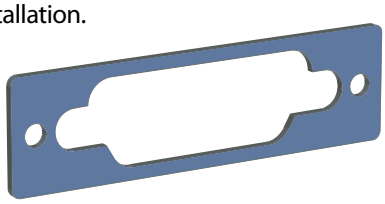
### Shielded Panel Mount Connectors

Avoid EMI problems "inside-the-box" with optional EMI adapters. These adapters attach to standard panel mount crimp-type versions.

***Panel mount connectors with optional EMI adapter.***

### Conductive Panel Gaskets

Panel mount connectors are supplied with conductive fluorosilicone gaskets for sealing to bulkheads. These gaskets provide an easy way to assure a watertight installation.



***Watertight EMI gaskets are supplied with all panel mount Micro-Crimp connectors.***

***Low profile EMI adapters for cable braid termination with Glenair's BAND-IT® straps.***

### EMI Backshell Adapters

These two-piece adapters fit into a groove on Micro-Crimp cable connectors. Attach to connector with screws (provided). Elliptical banding platform provides ample room for large wire bundles.

***Right angle PCB connectors for thru-hole termination***

### Right Angle PCB Header

Available in panel mount (shown) or free-standing versions, these connectors feature an EMI shroud and threaded board mounting holes.

***Rugged overmolded cordsets available for all sizes of Micro-Crimp connectors.***

### Overmolded Cordsets

Contact Glenair for standard and custom cable assemblies.

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## MICRO-CRIMP CONTACTS AND TOOLS

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*Coaxial Contacts*
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*Pneumatic Contacts*
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*Crimp Tools*
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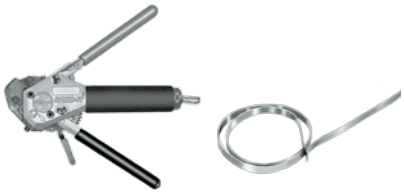
*Insertion/Extraction Tools*
*B-10*



*BAND-IT® Tool and Bands*
*B-11*

## About Mil Spec Contacts For Series 79 Micro-Crimp Connectors

***Aerospace Standard AS39029*** (SAE) defines the design, dimensions and performance of contacts used in aerospace grade electrical connectors. The "***general specification"*** covers a variety of contacts including thermocouple, hermetic, coaxial and triaxial types.

The ***"slash sheets"*** contain dimensions and other information for specific types of contacts. For example, pin contacts used in MIL-C-38999 connectors are specified in AS39029/58.

Each contact is assigned a ***Basic Identification Number (BIN)***, a non-significant three digit code corresponding to the color code on the contacts.

A ***Qualified Products List (QPL)*** identifies those manufacturers whose products have been verified to meet all requirements.

***Series 79 Size #23 contacts*** conform to the AS39029 requirements, but are not covered by a slash sheet. Size #16 and size #12 contacts are standard "QPL" contacts used in MIL-DTL-38999 connectors.

***Coaxial contacts*** are covered by ***AS39029.*** These contacts are not recommended for high frequency applications. Note 6.1.2 states "Type D contacts are coaxial contacts...to shield the circuit from unwanted interference (RFI and EMI). These contacts are not impedance (matched) and, therefore, are not recommended for RF use." Matched impedance 50 ohm coaxial contacts are available but are not directly covered by the AS39029 specification.

## About Mil Spec Crimp Tools

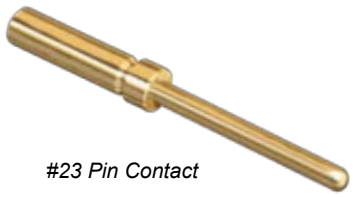
Series 79 Micro-Crimp signal, power and coaxial contacts are crimped to wire using mil spec crimpers. ***Military Specification MIL-DTL-22520*** provides the aerospace/defense industry with a common set of rugged, reliable hand crimp tools. This specification controls the voltage drop and tensile strength of crimp terminations.

***Before ordering, check to see if you might already have these tools!*** We have listed the military part number and the Daniels part number. Daniels Manufacturing Corporation is the leading manufacturer of these tools. The size 23 positioner part number 809-005 is not a standard tool. Chances are, you will need this positioner.

***Calibration:*** gage pins are available for checking crimp tool calibration. Tools should be checked periodically. If a tool needs calibration, the mil spec requires calibration to be performed by the manufacturer or a certified ANSI-Z540.1 agency. Gaging and calibration information is supplied in the box with the tool.

Dimensions in inches (millimeters) and are subject to change without notice.

# Size #23 Beryllium Copper Crimp Contacts



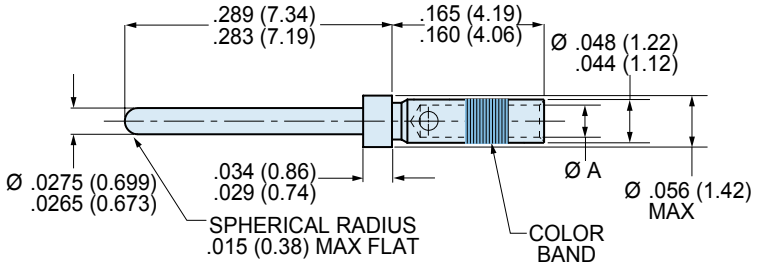
*#23 Pin Contact*

*#23 Socket Contact*

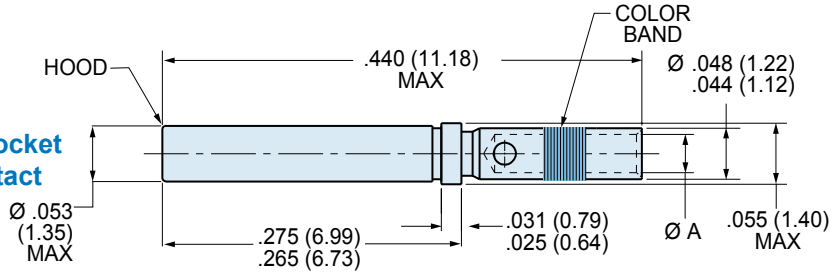
Standard size #23 contacts accept #22 to #28 AWG wire. Choose "small bore" versions for #26 to #30 AWG wire. For thermocouple applications, specify alumel or chromel contacts. Contacts are bulk packaged. Terminate with standard M22520 crimper with special positioner.

| Contact Type | Wire Size | Material | Part Number | Ø A In. | Ø A mm. | Color Band | Tool Code |
|---|---|---|---|---|---|---|---|
| Pin | #22 – #28 | BeCu | **809-001** | .0335-.0355 | 0.851-0.902 | None | A, C |
| Pin | #26 – #30 | BeCu | **809-042** | .0229-.0245 | 0.582-0.622 | Blue | A, D |
| Pin | #22 – #28 | Alumel | **809-065A** | .0335-.0355 | 0.851-0.902 | None | A, C |
| Pin | #22 – #28 | Chromel | **809-065C** | .0335-.0355 | 0.851-0.902 | None | A, C |
| Socket | #22 – #28 | BeCu | **809-002** | .0335-.0355 | 0.851-0.902 | None | A, C |
| Socket | #26 – #30 | BeCu | **809-043** | .0229-.0245 | 0.582-0.622 | Blue | A, D |
| Socket | #22 – #28 | Alumel | **809-066A** | .0335-.0355 | 0.851-0.902 | None | A, C |
| Socket | #22 – #28 | Chromel | **809-066C** | .0335-.0355 | 0.851-0.902 | None | A, C |

**#23 Pin Contact**




**#23 Socket Contact**




## CRIMP TENSILE STRENGTH

Values are in pounds and are minimums.

| Wire Gage | Silver or Tin Coated Copper Wire | Nickel Coated Copper Wire |
|---|---|---|
| #22 | 12 | 8 |
| #24 | 8 | 6 |
| #26 | 5 | 3 |
| #28 | 3 | 2 |
| #30 | 1.5 | 1.5 |

## Material and Finish

Beryllium copper alloy per ASTM B196 or B197, 50 microinches gold plated per ASTM B488 Type 3 Code C
Class 1,27 over nickel plate per QQ-N-290 Class 2, 50-100 microinches.
Thermocouple contacts: alumel or chromel alloy, unplated, per ANSI 96.1
Socket contact hood: stainless steel, passivated per AMS-QQ-P-35.

## Specifications

Current Rating: 5 Amps maximum
Voltage Drop (at 5 Amps and 25° C): 70 millivolts maximum
Temperature Range: -65° to + 200° C
Socket Contact Minimum Separation Force: 0.5 ounces

## Crimp Tools and Insertion/Removal Tools

Crimper: 809-015
Positioner: 809-005 (standard). Use P/N 809-057 for small bore contacts 809-065 and 809-066
Standard Insertion/Removal Tool: 809-088

Dimensions in inches (millimeters) and are subject to change without notice.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# How To Terminate, Install and Remove Size #23 Contacts

**1** ***Set Up Crimp Tool.*** Install proper positioner into crimp tool. The label on the positioner shows the proper tool setting for each wire size. Turn the adjustment wheel to the correct setting.

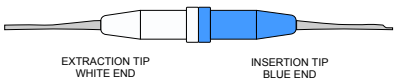
**2** ***Strip Wire.*** Remove wire insulation, taking care to avoid nicking or cutting wire strands. Strip wire to length shown.

**3** ***Insert wire*** into contact. The wire should be visible in the inspection hole.

**4** Insert contact into crimp tool as shown. Make sure that the contact is fully inserted into the tool. Squeeze handle completely. The ratchet mechanism will not allow a partial crimp. Release handle and remove contact.

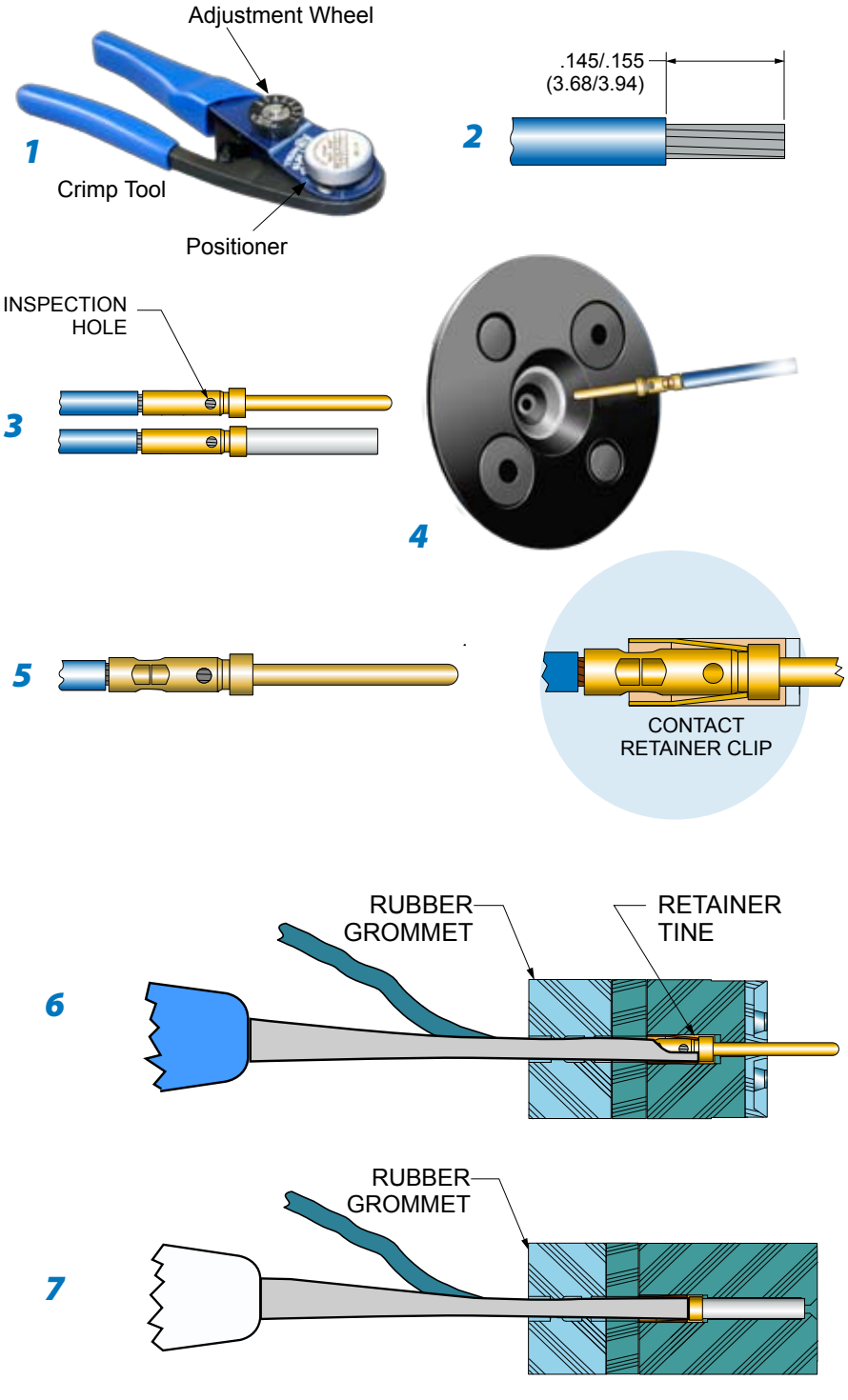
**5** ***Inspect crimped contact.*** Wire should be fully inserted and the crimp should be uniform in appearance.

Insertion/Extraction Tool 809-088



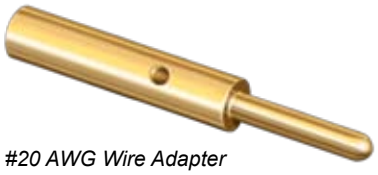

**6** ***Install contact into connector.*** Push the contact through the rear grommet until the contact locks into place. This can usually be done by hand without the need for a tool. If the wire gage is #26 or smaller, a tool is helpful. There are two techniques for installing contacts with a tool. One method is to push the contact in by hand, then use the tool to finish the insertion. The other method is to position the insertion tip against the contact shoulder, then insert the contact. Use insertion/extraction tool 809-088 to install contacts. Slide the wire into the groove on the blue end of the tool. Slide the tool tip up the contact until it touches the contact shoulder. **USE CARE TO AVOID DAMAGING THE CONNECTOR.**

**7** ***Contact Extraction.*** Use tool 809-088. The white end is used for contact extraction. First, push the wire into the groove of the metal tip. Slide the tip of the tool into the connector. Push the tool into the connector cavity until the tip bottoms in the connector. Avoid wiggling or rocking the tip. This may damage the cavity. A straight push is best. Pinch the wire between your finger and the white plastic grip and slide the tool and contact out of the connector. **Wire insulation diameter greater than 0.045 inches (1.14mm) is too large to work properly with the extraction tool. connector damage is possible.**




Dimensions in inches (millimeters) and are subject to change without notice.

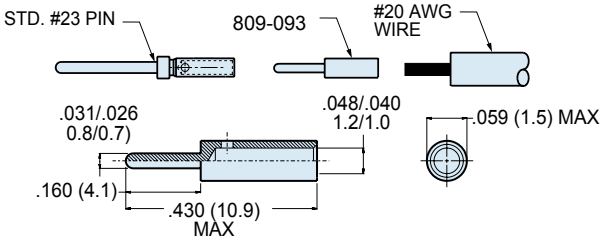
## Adapter for Crimping #20 AWG Wire to Size #23 Series 79 Contacts



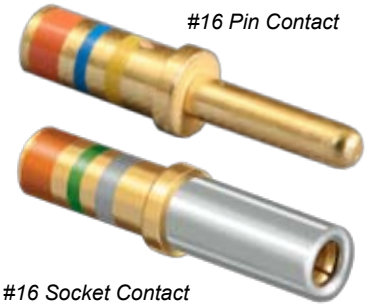
*#20 AWG Wire Adapter*

Size #22 AWG wire is the largest wire size that fits standard size 23 contacts. Use this adapter to attach larger #20 gage wire. First, crimp wire to adapter, then crimp the adapter into the size #23 contact. Adapters are made of tellurium copper alloy #1452, and are gold plated. Crimp with M22520/1-01 tool and 809-138 (Daniels TH653) positioner. These adapters cannot be removed from connectors.

| Adapter Size | Wire Size | Part Number | Tool Code |
|---|---|---|---|
| #22-20 | #20 | 809-093 | I, K |




## Size #16 Power Contacts, Crimp Termination

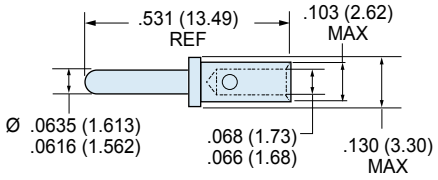


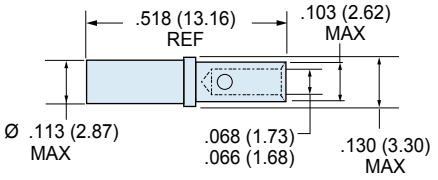
*#16 Pin Contact*

*#16 Socket Contact*

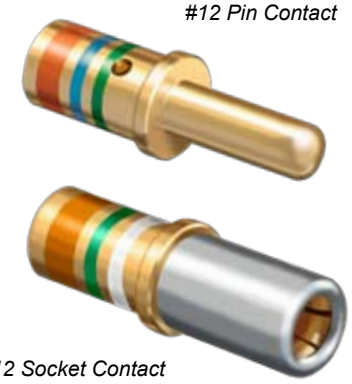
Standard size #16 contacts accept #16 to #20 AWG wire. At rated test current of 13 amps, the maximum voltage drop is 74 millivolts. Contacts are gold-plated copper alloy. Socket contacts feature stainless steel hoods to protect against probe damage. Approved to SAE-AMS-39029. Contacts are bulk packaged. Terminate with M22520/1-01 crimper and M22520/1-04 positioner.

| Contact Type | Wire Size | Part Number | Military Part Number | Color Band 1st | 2nd | 3rd | Tool Code |
|---|---|---|---|---|---|---|---|
| Pin | #16 – #20 | 809-110 | M39029/58-364 | Orange | Blue | Yellow | I, J |
| Socket | #16 – #20 | 809-111 | M39029/57-358 | Orange | Green | Gray | I, J |




## Size #12 Power Contacts, Crimp Termination

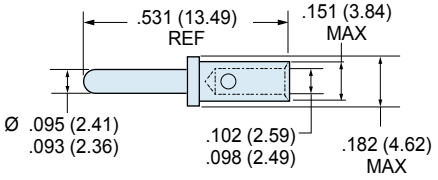


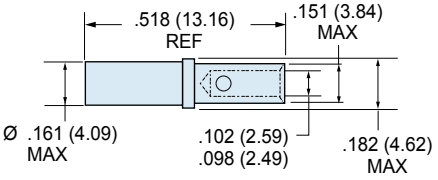
*#12 Pin Contact*

*#12 Socket Contact*

Standard size #12 contacts accept #12 to #14 AWG wire. At rated test current of 23 amps, the maximum voltage drop is 63 millivolts. Contacts are gold-plated copper alloy. Socket contacts feature stainless steel hoods to protect against probe damage. Approved to SAE AS39029. Contacts are bulk packaged. Terminate with M22520/1-01 crimper and M22520/1-04 positioner.

| Contact Type | Wire Size | Part Number | Military Part Number | Color Band 1st | 2nd | 3rd | Tool Code |
|---|---|---|---|---|---|---|---|
| Pin | #12 – #14 | 809-112 | M39029/58-365 | Orange | Blue | Green | I, J |
| Socket | #12 – #14 | 809-113 | M39029/57-359 | Orange | Green | White | I, J |




Dimensions in inches (millimeters) and are subject to change without notice.



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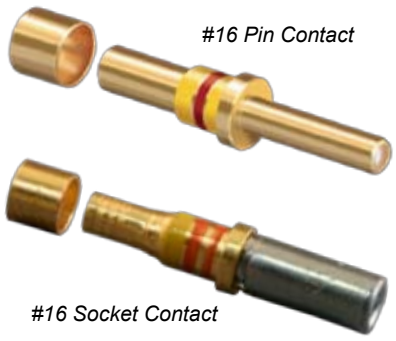
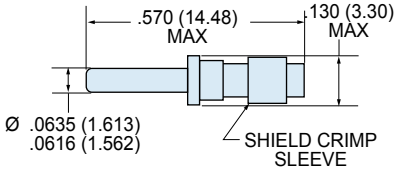
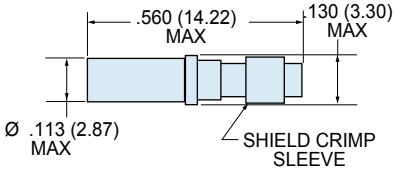
## Size #16 Coaxial Contacts, Crimp Termination



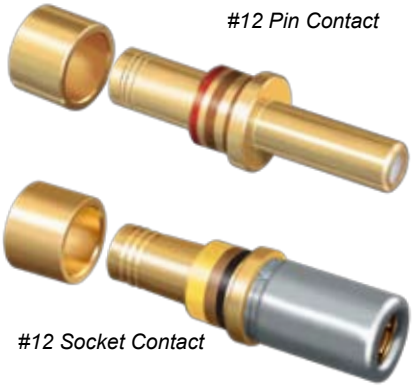

These #16 contacts accept 50 ohm and 75 ohm coaxial cable. Inner contact is rated at 1 amp, the outer contact 12 amps. DWV voltage rating is 800 Vac rms sea level, 250 Vac at 50,000 feet. Contacts are packaged individually and are unassembled with instruction sheet. One contact consists of outer contact , fluorocarbon dielectric, inner contact and shield crimp sleeve. Inner and outer contacts are gold-plated copper alloy. Approved to SAE AS39029. VSWR rating 1.5:1 maximum up to 700 MHz. 5000 megohm insulation resistance.

| Type | Cable Size | Part Number | Military Part Number | Color Band 1st | 2nd | 3rd | Tool Code |
|---|---|---|---|---|---|---|---|
| Pin | RG174, RG316, RG179 | 809-114 | M39029/76-424 | Yellow | Red | Yellow | A, E, L, M |
| Pin | RG178 | 809-115 | M39029/76-425 | Yellow | Red | Green | A, E, L, M |
| Socket | RG174, RG316, RG179 | 809-116 | M39029/78-432 | Yellow | Orange | Red | A, E, L, M |
| Socket | RG178 | 809-117 | M39029/78-433 | Yellow | Orange | Orange | A, E, L, M |



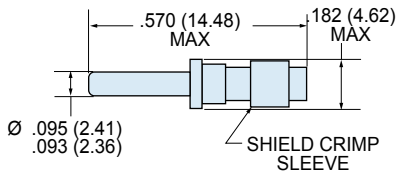



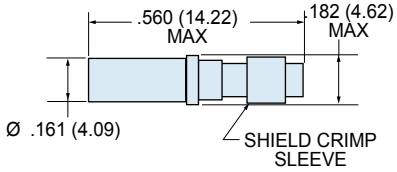

## Size #12 Coaxial Contacts, Crimp Termination




These #12 contacts accept 50 ohm and 75 ohm coaxial cable. Inner contact is rated at 1 amp, the outer contact 12 amps. DWV voltage rating is 1000 Vac rms sea level, 250 Vac at 50,000 feet. Contacts are packaged individually and shipped unassembled with instruction sheet. One contact consists of outer contact , fluorocarbon dielectric, inner contact and shield crimp sleeve. Inner and outer contacts are gold-plated copper alloy. Approved to SAE AS39029. VSWR rating 1.5:1 maximum up to 700 MHz. 5000 megohm insulation resistance.

| Type | Cable Size | Part Number | Military Part Number | Color Band 1st | 2nd | 3rd | Tool Code |
|---|---|---|---|---|---|---|---|
| Pin | RG174, RG316, RG179 | 809-118 | M39029/28-211 | Red | Brown | Brown | A, G, N, O |
| Pin | RG180 | 809-119 | M39029/28-409 | Yellow | Black | White | A, G, N, O |
| Socket | RG174, RG316, RG179 | 809-120 | M39029/27-210 | Red | Brown | Black | A, G, N, O |
| Socket | RG180 | 809-121 | M39029/27-402 | Yellow | Black | Red | A, G, N, O |




Dimensions in inches (millimeters) and are subject to change without notice.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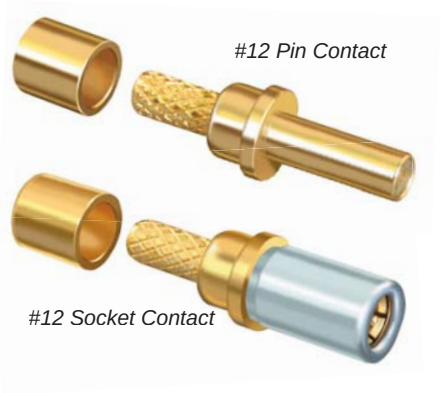
# Size #12, 50 Ohm Matched Impedance Coaxial Contacts




These contacts offer improved frequency response compared to standard coaxial contacts above. VSWR is 1.32:1 at 3GHz . Nominal impedance is 50 ohms. Insertion loss at 3GHz is 0.20 dB maximum. Inner contact is rated at 1 amp, the outer contact 12 amps. DWV voltage rating is 1000 Vac rms sea level, 250 Vac at 50,000 feet. Contacts are packaged individually and shipped unassembled with instruction sheet. One contact consists of outer contact , fluorocarbon dielectric, inner contact and shield crimp sleeve. Inner and outer contacts are gold-plated copper alloy. 5000 megohm insulation resistance. Terminate crimp type coaxial center contact with hand tool 809-128 (Daniels MH992). Terminate cable braid to contact with 809-129 (Daniels HX4) parallel action crimp tool and 809-120 (Daniels Y196) hex die.

| Contact Type | Cable Type | Part Number | Termination | Fig. | Tool Code |
|---|---|---|---|---|---|
| Pin | RG178 | **809-123** | Crimp | 1 | B, F, P, Q |
| Pin | M17/113-RG316 | **852-016-01** | Crimp | 1 | B, H, P, Q |
| Pin | M17/152-00001(RG316DS) | **852-016-02** | Crimp | 1 | B, H, P, Q |
| Pin | TFLEX-405 | **852-018** | Solder | 2 | (No Tool) |
| Socket | RG178 | **809-122** | Crimp | 3 | B, F, P, Q |
| Socket | M17/113-RG316 | **852-015-01** | Crimp | 3 | B, H, P, Q |
| Socket | M17/152-00001(RG316DS) | **852-015-02** | Crimp | 3 | B, H, P, Q |
| Socket | TFLEX-405 | **852-017** | Solder | 4 | (No Tool) |

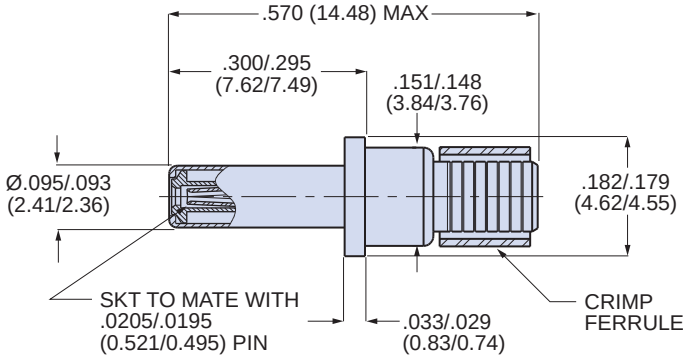



Figure 1

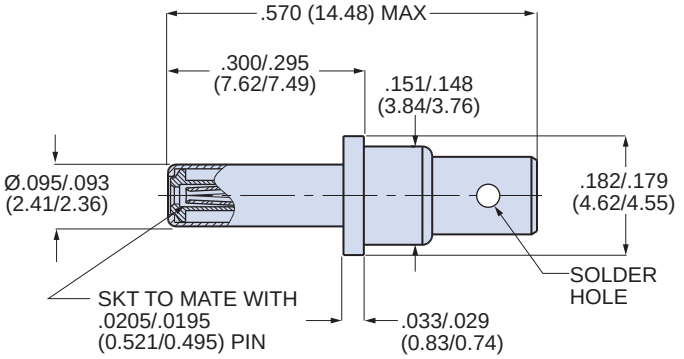



Figure 2

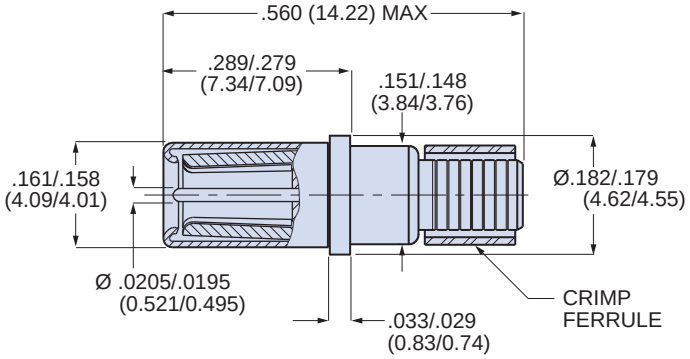



Figure 3

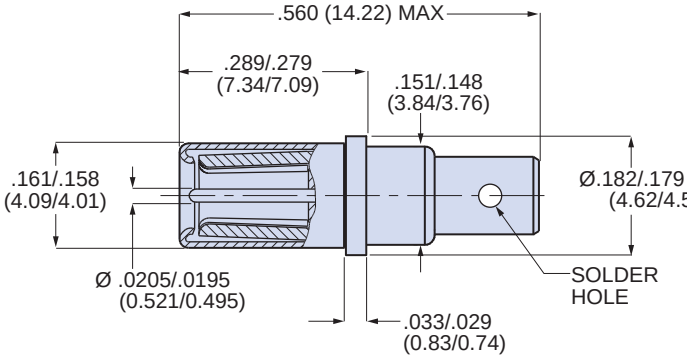



Figure 4

Dimensions in inches (millimeters) and are subject to change without notice.



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## Size #12 Pneumatic Contacts

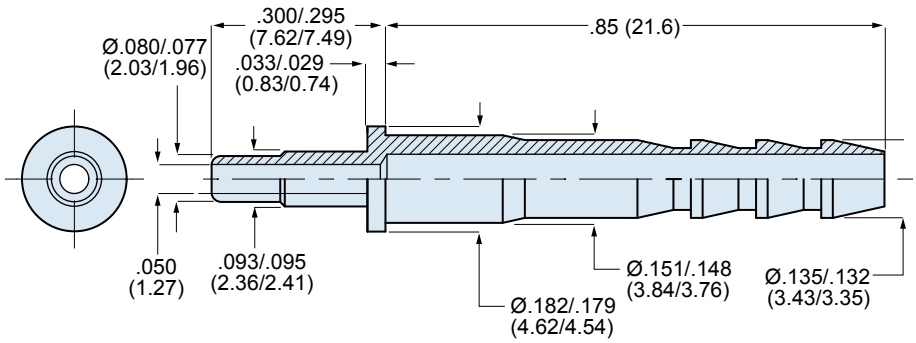
*#12 Pin Contact*

*#12 Socket Contact*

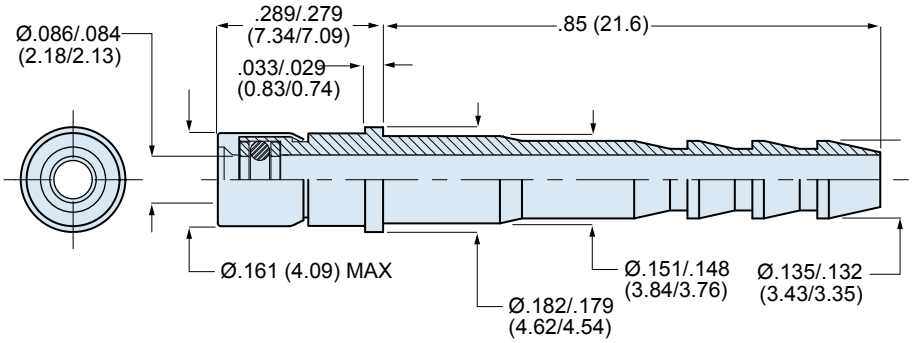
*Blind mate panel mount connector with pneumatic size #12 contacts*

Stainless steel pneumatic contacts attach to 3/32 inch (2.38) diameter tubing. Socket contact has o-ring and PTFE backup washers. Contacts snap into size #12 connector cavities. Ideal for pitot tube connections, these pneumatic contacts are rated for 100 PSI maximum air pressure. No installation tool is required. Remove contacts with plastic extraction tool 809-132.

| Contact Type | Tube I.D. | Part Number |
|---|---|---|
| Pin | .094 (2.38) | 857-011 |
| Socket | .094 (2.38) | 857-010 |




**857-011 Pin Contact**




**857-010 Socket Contact**

### Material and Finish

Body and Cap: stainless steel, passivated
O-ring: fluorosilicone
Washers: PTFE

Dimensions in inches (millimeters) and are subject to change without notice.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## Miniature Adjustable Crimp Tools


These crimp tools perform precision eight indent crimps for gas-tight wire terminations and excellent tensile strength. Adjustment wheel has 8 settings. Ratchet mechanism prevents improper crimps. Use with bayonet-type positioners. Check calibration with M22520/3 gages. Length is 6.75 inches, weight is approx. 10 oz.

**A** Standard M22520/2-01 crimper. Use with standard size #23 "Mighty Mouse" contacts and with M39029/76 and /78 coaxial center contacts. Requires positioner, ordered separately.

**B** Special MH992 crimper used with 50 ohm matched impedance coaxial inner contacts. Requires positioner, ordered separately.

| Figure | Part Number | Military Part Number | Daniels Part Number | Tool Code |
|---|---|---|---|---|
| A | 809-015 | M22520/2-01 | AFM8 | A |
| B | 809-128 | (none) | MH992 | B |

## Positioners For Use With Miniature Adjustable Crimp Tools


These bayonet-type positioners hold contacts at correct height for crimping with M22520/2 type miniature step adjustable tools, above. Face plate shows correct tool settings.

**C** Positioner for standard size #23 contacts. #22-#28 AWG. Use with 809-015 crimp tool.

**D** Positioner for small bore size #23 contacts. #26-#30 AWG. Use with 809-015 crimp tool.

**E** Positioner for M39029/76 and 78 coaxial inner contact. Use with 809-015 crimp tool.

**F** Positioner for matched impedance #12 coaxial inner contact. Use with 809-128 crimp tool.

**G** Positioner for M39029/27 and 28 #12 coaxial inner contact. Use with 809-015 crimp tool.

**H** Positioner for matched impedance #12 coaxial inner contact. Use with 809-128 crimp tool.

| Figure | Part Number | Military Part Number | Daniels Part Number | Tool Code |
|---|---|---|---|---|
| C | 809-005 | (none) | K1461 | C |
| D | 809-057 | (none) | (none) | D |
| E | 809-125 | M22520/2-35 | K532-1 | E |
| F | 809-124 | (none) | K1360 | F |
| G | 809-135 | M22520/2-34 | K323 | G |
| H | 859-006 | (none) | K1721 | H |

## Crimp Tool And Positioner For #12 and #16 Power Contacts and 809-093 Adapters


**I** Crimp tool for use with size #16 and #12 power pins. 9.75 inches OAL, 1.25 pounds. Use with M39029/57 and /58 contacts and 809-093 adapters.

**J** Positioner for use with size #12 and #16 Power contacts.

**K** Positioner for use with 809-093 adapters.

| Figure | Part Number | Military Part Number | Daniels Part Number | Tool Code |
|---|---|---|---|---|
| I | 809-136 | M22520/1-01 | AF8 | I |
| J | 809-137 | M22520/1-04 | TH163 | J |
| K | 809-138 | (none) | TH653 | K |

Dimensions in inches (millimeters) and are subject to change without notice.


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## Crimp Tool And Positioner For #16 Coaxial Outer Contact


For crimping size #16 shield sleeves. These mil spec approved tools feature a ratchet mechanism to prevent damage from overcrimping. Check calibration with M22520/3 gage.

**L** Crimp tool for use with size #16 coaxial contacts. Blue handles. 9.75 inches OAL, 1.25 pounds.

**M** Positioner for use with size #16 coaxial contacts. Use with 809-127 (M22520/4-01) crimp tool.

| Figure | Part Number | Military Part Number | Daniels Part Number | Tool Code |
|---|---|---|---|---|
| L | 809-127 | M22520/4-01 | GS100-1 | L |
| M | 809-126 | M22520/4-02 | GP295 | M |

## Crimp Tool And Positioner For #12 Coaxial Outer Contact

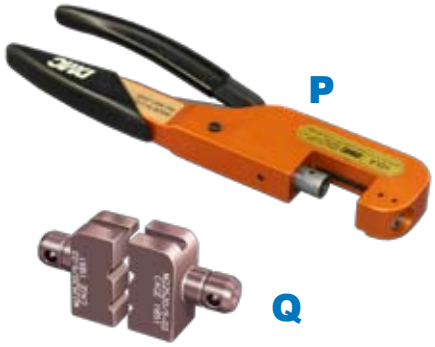

For crimping size #12 shield sleeves. These mil spec approved tools feature a ratchet mechanism to prevent damage from overcrimping. Check calibration with M22520/3 gage.

**N** Crimp tool for use with size #12 coaxial contacts. Black handles. 9.75 inches OAL, 1.25 pounds.

**O** Positioner for use with size #12 coaxial contacts. Use with 809-133 (M22520/31-01) crimp tool.

| Figure | Part Number | Military Part Number | Daniels Part Number | Tool Code |
|---|---|---|---|---|
| N | 809-133 | M22520/31-01 | GS200-1 | N |
| O | 809-134 | M22520/31-02 | G2P330 | O |

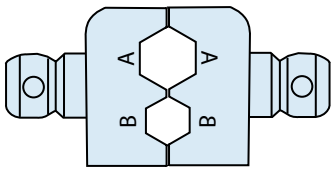
## Parallel Action Crimp Tool and Hex Die Set for 50 Ohm Matched Impedance #12 Coax




**P** Parallel action tool for use with hex crimp dies. 11 inches OAL, 2.0 pounds. Anodized aluminum frame, steel mechanism, plastic handles. Includes tool for die set removal. Accepts all M22520/5 die sets.

**Q** Die set for terminating coaxial shield to outer contact. Use with size #12 matched impedance M39029/102 and 103 type coaxial contacts. Set consists of upper and lower halves. Made of hardened steel with black oxide finish. Approximately 2 inches in length, assembled. Die set has two closures per illustration.

| Figure | Part Number | Military Part Number | Daniels Part Number | Tool Code |
|---|---|---|---|---|
| P | 809-129 | M22520/5-01 | HX4 | P |
| Q | 809-130 | M22520/5-03 | Y196 | Q |




A .128 (3.25) HEX
B .105 (2.67) HEX

Dimensions in inches (millimeters) and are subject to change without notice.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## Contact Insertion and Removal Tools





**1** Insertion/Extraction Tool for #23 Contacts. This economical tool features molded plastic grips and sturdy stainless steel tips.

**2** Insertion Tool for #23 Contacts. This tool features anodized aluminum handle and stainless steel insertion tip.

**3** Insertion/Extraction Tool for #16 Contacts. Use with size #16 coaxial or power contacts. Economical molded plastic. White extraction tip, blue insertion tip.

**4** Insertion/Extraction Tool for #12 Contacts. Use with size #12 coaxial or power contacts. Economical molded plastic. White extraction tip, yellow insertion tip.

| Figure | Size | Type | Part Number | Military Part Number | Daniels Part Number |
|---|---|---|---|---|---|
| 1 | #23 | Insertion/Extraction | 809-088 | (None) | (None) |
| 2 | #23 | Insertion Only | 809-013 | (None) | DAK225-22 |
| 3 | #16 | Insertion/Extraction | 809-131 | M81969/14-03 | (None) |
| 4 | #12 | Insertion/extraction | 809-132 | M81969/14-04 | (None) |

## Contact Retention Tester for Size #23 Contacts


Check for properly seated contacts with this spring-loaded tester. Apply the tool tip to the mating end of a contact. Push on the handle until the spring compresses to the recommended force. A visual indicator shows full compression. The contact is properly retained if it is not displaced.

The adjustable handle should be set to 3.2 pounds (14.2 N). The pin tip is used with #23 pin contacts. The socket tip is used with #23 socket contacts.

Order the complete kit, or order the tips and handle separately.

| Figure | Description | Part Number | Daniels Part Number |
|---|---|---|---|
| 1 | Handle | 809-107-1 | HT250-2 |
| 2 | Pin Tip | 809-107-2 | 68-023-01 |
| | Socket Tip (not shown) | 809-107-3 | 67-023-01 |
| | Complete Kit | 809-107-4 | (None) |

Dimensions in inches (millimeters) and are subject to change without notice.

# *BAND-IT*® SHIELD TERMINATION SYSTEM

## Fast, Cost-Effective Shield Termination

Attach cable braid shields to EMI backshells with ***BAND-IT***® stainless steel straps. The ***BAND-IT***® system offers fast termination and the flexibility to handle different diameters with the same band.

## IMPORTANT NOTE: ALWAYS DOUBLE-WRAP BANDS!

Contact Glenair or visit our website (glenair.com) to view our complete line of ***BAND-IT***® products, including pneumatic tools for high production and calibration kits.

## Micro Band Tool

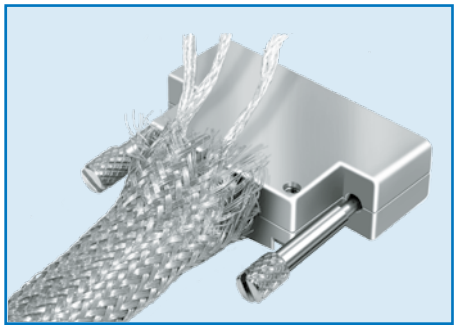
Part Number **600-061**

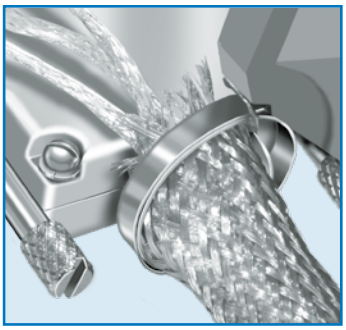
## Standard Band Tool

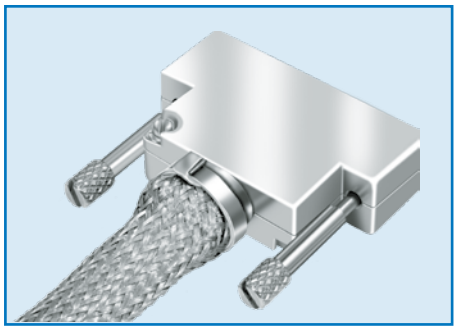
Part Number **600-058**
1.18 lbs.
6.75 Inches (172mm.) Length

## HOW TO ORDER BANDS

| Band Type | Width | | Length | | Part Number | | Use With Tool | Accomodates Dia. | |
|---|---|---|---|---|---|---|---|---|---|
| | In. | mm. | In. | mm. | Uncoiled | Coiled | | In. | mm. |
| Micro Band, Standard Length | .120 | 3.05 | 8.125 | 206.38 | 600-057 | 600-057-1 | 600-061 | .88 | 22.35 |
| Micro Band, Extended Length | .120 | 3.05 | 14.25 | 361.95 | 600-083 | 600-083-1 | 600-061 | 1.88 | 47.75 |
| Standard Band, Standard Length | .240 | 6.10 | 14.256 | 362.10 | 600-052 | 600-052-1 | 600-058 | 1.80 | 45.72 |
| Standard Band, Extended Length | .240 | 6.10 | 18.00 | 457.20 | 600-090 | 600-090-1 | 600-058 | 2.50 | 63.50 |







## Step One
## Cable Prep

Lay individual shields over the band platform. Pull overall braid shield over the band platform so that all braid strands will be captured by the band.

## Step Two
## Install Band

Wrap the band through the buckle twice. Insert the free end into the banding tool in the direction shown on the tool. Squeeze the short grey handle to insert the band. Slide the band onto the cable. Close the black handle repeatedly until the handle no longer opens. Close the long grey handle until the tool cuts the band. Remove the excess strap from the tool by closing the small grey handle.

## Step Three
## Trim Braid

It's a snap! Just trim the excess braid and you're done.

Dimensions in inches (millimeters) and are subject to change without notice.

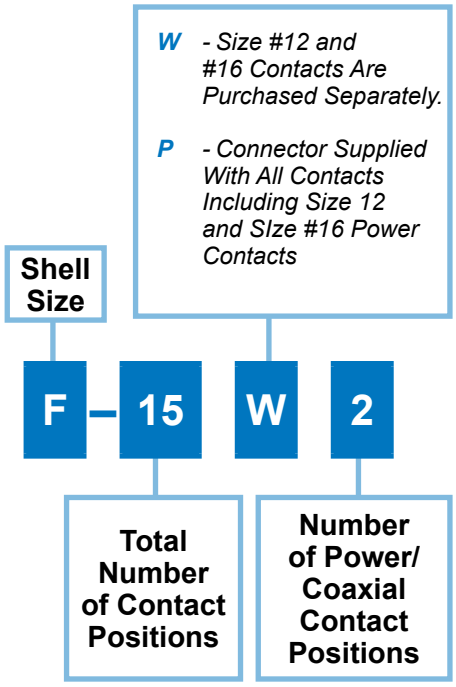
## How To Order Connectors for use with Coaxial or Pneumatic Contacts

Coaxial and pneumatic contacts are ordered separately. Series 79 connectors can be ordered without size #16 or #12 power contacts. Change the “P” in the contact arrangement (11***P***2, for example) to “W” (11***W***2). An 11P2 connector is packaged with nine size #23 signal contacts and two size #16 power contacts. An 11W2 is supplied with nine size #23 contacts only.

## Contact Arrangement Nomenclature Explained

C

The first letter represents the shell size. The number following the shell size represents the total number of contacts. If the insert arrangement is a mixed layout with signal contacts and coaxial/power contacts, the letter "W" specifies the connector to be furnished with signal contacts only (coax/power contacts purchased separately), and the letter "P" specifies the connector to be furnished with both signal and power contacts.




**Micro-Crimp Insert Arrangements**

| Shell Size | Contact Arrangement | Contact Quantity #23 | #16 | #12 |
|---|---|---|---|---|
| A | A-5 | 5 | — | — |
| B | B-2P2 | — | 2 | — |
| | B-9 | 9 | — | — |
| C | C-13 | 13 | — | — |
| D | D-15 | 15 | — | — |
| | D-3P3 | — | 3 | — |
| | D-7P2 | 5 | 2 | — |
| E | E-11P2 | 9 | 2 | — |
| | E-19 | 19 | — | — |
| | E-7P3 | 4 | 3 | — |
| F | F-15P2 | 13 | 2 | — |
| | F-23 | 23 | — | — |
| | F-5P5 | — | 5 | — |
| G | G-33 | 33 | — | —— |
| H | H-10P4 | 6 | — | 4 |
| | H-29P7 | 22 | 7 | — |
| | H-36P2 | 34 | — | 2 |
| | H-54P2 | 52 | 2 | — |
| | H-5P5 | — | — | 5 |
| | H-66 | 66 | — | — |
| J | J-17P4 | 13 | 4 | — |
| | J-25P2 | 23 | 2 | — |
| | J-33 | 33 | — | — |
| | J-7P7 | — | 7 | — |
| K | K-27P4 | 23 | 4 | — |
| | K-35P2 | 33 | 2 | — |
| | K-43 | 43 | — | — |
| | K-9P9 | — | 9 | — |
| L | L-6P6 | — | — | 6 |

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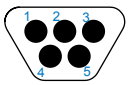
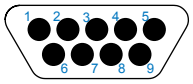
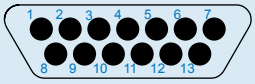
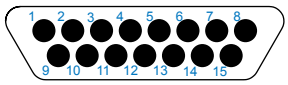
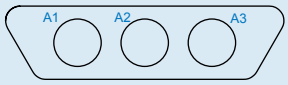
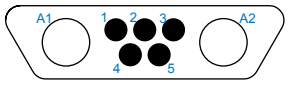
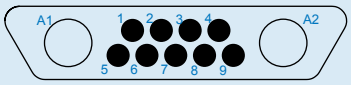
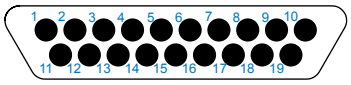
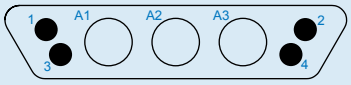
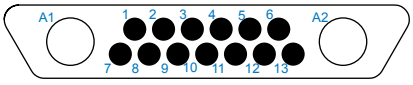
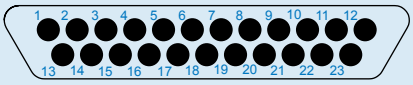
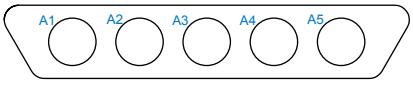
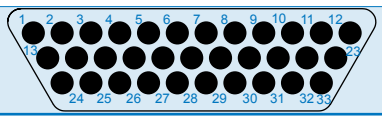
## MICRO-CRIMP INSERT ARRANGEMENTS

| Shell Size | Contact Arr. | No. of Contacts and Contact Size | Mating Face Pin Connector (Socket Numbers are Reversed) |
|---|---|---|---|
| A | A-5 | 5 #23 CONTACTS |  |
| B | B-2P2<br>B-2W2 | 2 #16 CONTACTS |  |
| B | B-9 | 9 #23 CONTACTS |  |
| C | C-13 | 13 #23 CONTACTS |  |
| D | D-15 | 15 #23 CONTACTS |  |
| D | D-3P3<br>D-3W3 | 3 #16 CONTACTS |  |
| D | D-7P2<br>D-7W2 | 5 #23 CONTACTS<br>2 #16 CONTACTS |  |
| E | E-11P2<br>E-11W2 | 9 #23 CONTACTS<br>2 #16 CONTACTS |  |
| E | E-19 | 19 #23 CONTACTS |  |
| E | E-7P3 | 4 #23 CONTACTS<br>3 #16 CONTACTS |  |
| F | F-15P2<br>F-15W2 | 13 #23 CONTACTS<br>2 #16 CONTACTS |  |
| F | F-23 | 23 #23 CONTACTS |  |
| F | F-5P5<br>F-5W5 | 5 #16 CONTACTS |  |
| G | G-33 | 33 #23 CONTACTS |  |

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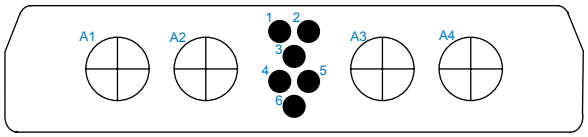
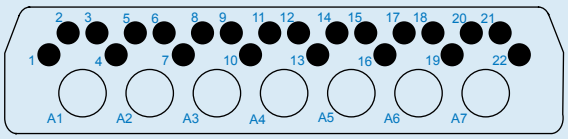
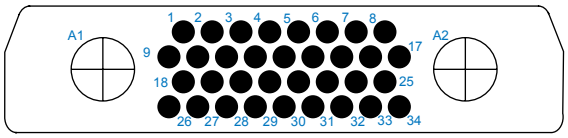
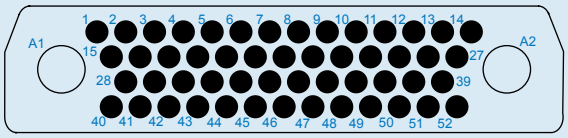
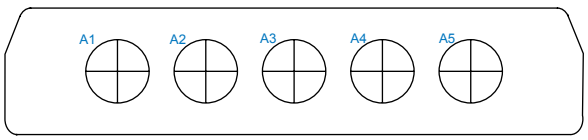
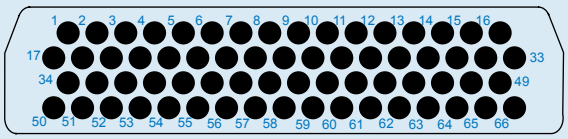
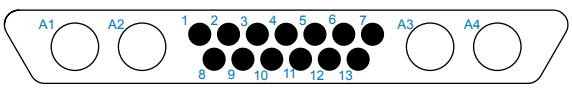
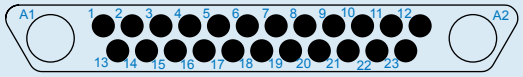
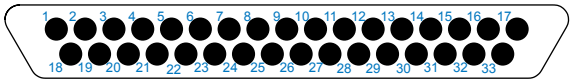
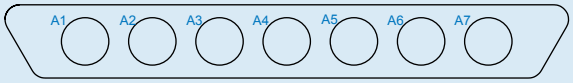
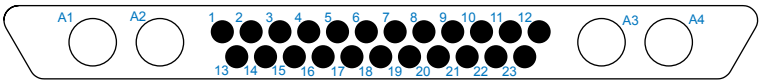
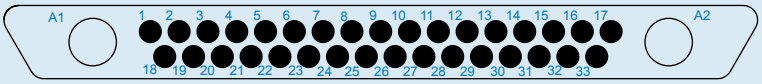
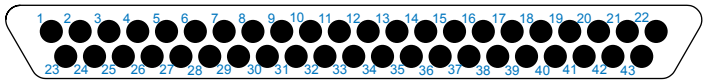
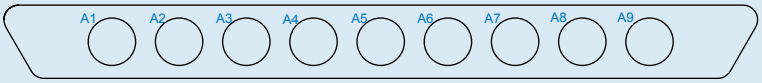
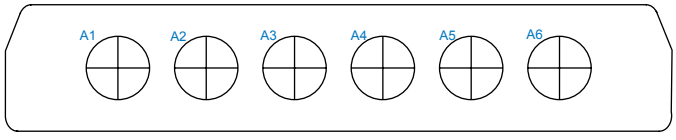
C

## MICRO-CRIMP INSERT ARRANGEMENTS

| Shell Size | Contact Arr. | No. of Contacts and Contact Size | Mating Face Pin Connector (Socket Numbers are Reversed) |
|---|---|---|---|
| H | H-10P4<br>H-10W4 | 6 #23 CONTACTS<br>4 #12 CONTACTS |  |
| H | H-29P7 | 22 #23 CONTACTS<br>7 #16 CONTACTS |  |
| H | H-36P2<br>H-36W2 | 34 #23 CONTACTS<br>2 #12 CONTACTS |  |
| H | H-54P2<br>H-54W2 | 52 #23 CONTACTS<br>2 #16 CONTACTS |  |
| H | H-5P5<br>H-5W5 | 5 #12 CONTACTS |  |
| H | H-66 | 66 #23 CONTACTS |  |
| J | J-17P4<br>J-17W4 | 13 #23 CONTACTS<br>4 #16 CONTACTS |  |

Dimensions in inches (millimeters) and are subject to change without notice.

## MICRO-CRIMP INSERT ARRANGEMENTS

| Shell Size | Contact Arr. | No. of Contacts and Contact Size | Mating Face Pin Connector (Socket Numbers are Reversed) |
|---|---|---|---|
| J | J-25P2<br>J-25W2 | 23 #23 CONTACTS<br>2 #16 CONTACTS |  |
| J | J-33 | 33 #23 CONTACTS |  |
| J | J-7P7<br>J-7W7 | 7 #16 CONTACTS |  |
| K | K-27P4<br>K-27W4 | 23 #23 CONTACTS<br>4 #16 CONTACTS |  |
| K | K-35P2<br>K-35W2 | 33 #23 CONTACTS<br>2 #16 CONTACTS |  |
| K | K-43 | 43 #23 CONTACTS |  |
| K | K-9P9<br>K-9W9 | 9 #16 CONTACTS |  |
| L | L-6P6<br>L-6W6 | 6 #12 CONTACTS |  |

Dimensions in inches (millimeters) and are subject to change without notice.

## MATERIALS AND FINISHES

| | |
|---|---|
| Size #23 contacts | Beryllium copper alloy, plated gold over nickel |
| Size #16 and #12 contacts | Copper alloy |
| Insulators | Liquid crystal polymer, 30% glass-reinforced |
| Shell | Aluminum alloy. See ordering info for finish options |
| Interfacial seal and grommet | Fluorosilicone |
| Contact and insert retention clips | Beryllium copper, heat-treated, unplated |
| Jackposts and guide pins | Stainless steel, passivated |
| EMI Shroud for right angle PCB | Aluminum alloy |
| Trays for right angle PCB | Thermoplastic |
| Spring, EMI (plug) | Stainless steel or beryllium copper alloy, gold plated |



## BASIC SPECIFICATIONS

| | |
|---|---|
| Current rating | Contact size #23 5 Amps, size #16 13 Amps, size #12 23 Amps maximum |
| Voltage rating (DWV) | Contact size #23 500 VAC rms. Size #16 and #12 1800 VAC rms. Sea level. |
| Insulation resistance | 5000 megohms minimum |
| Operating temperature | -65° C. to +150° C. |
| Contact resistance | 5 milliohms maximum |
| Water ingress protection | IP67 |
| Shielding effectiveness | 55 dB attenuation from 100 MHz to 1000MHz. |

## DETAILED PERFORMANCE SPECIFICATIONS

| DESCRIPTION | REQUIREMENT | PROCEDURE |
|---|---|---|
| Contact Resistance | SAE AS39029 Table V<br>**Max Wire Size** / **Test Current** / **Voltage Drop**<br>12 / 23 / 42<br>14 / 17 / 40<br>16 / 13 / 49<br>20 / 7.5 / 55<br>22 / 5 / 73<br>24 / 3 / 45<br>26 / 2 / 52<br>28 / 1.5 / 54 | EIA-364-06<br>IEC 60512-2-1<br>Test current in amperes. Voltage drop in millivolts. Silver-coated copper wire, +25°C. |
| Low Level Contact Resistance | **Wire Size** / **Max. Milliohms**<br>16 / 5<br>20 / 9<br>22 / 15<br>24 / 20<br>26 / 31<br>28 / 50 | EIA-364-23<br>100 milliamperes maximum and 20 millivolts maximum open circuit voltage |
| Insulation Resistance | 5000 megohms minimum | EIA-364-21<br>IEC-60512-3-1<br>500 volts DC ± 50 volts. Test between adjacent contacts and contacts to shell. |

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## DETAILED PERFORMANCE SPECIFICATIONS

| DESCRIPTION | REQUIREMENT | PROCEDURE |
|---|---|---|
| Dielectric Withstanding Voltage | No breakdown or flashover | EIA-364-20<br>IEC-60512-4-1<br>Sea level AC rms 50 or 60 Hz. One minute dwell.<br>#23 contacts 500 volts<br>#16 contacts 1800 volts<br>#12 contacts 1800 volts |
| Current Carrying Capacity | **Contact Size** / **Max Current**<br>12 — 23<br>16 — 13<br>23 — 5 | EIA-364-70 Method 1<br>IEC-60512-5 Test 9b |
| Shell-to-shell Resistance (connectors with ground springs) | 2.5 millivolt drop maximum | EIA-364-83<br>IEC-60512-2-6<br>Electroless nickel plated connectors. |
| Shielding Effectiveness | 60 dB attenuation minimum from 100MHz to 10GHz | EIA-364-66<br>IEC-60512-23-3 |
| Water Immersion | No evidence of water penetration into mated connectors. No evidence of water penetration into an unmated panel mounted PCB receptacle. ≥ 100 MΩ insulation resistance. | MIL-STD-810F Method 512.4<br>1 meter immersion<br>1 hour |
| Ingress Protection | IP67 rating | IEC-60529 |
| Vibration, Sine | No discontinuity of greater than 1 microseconds, no cracking, breaking or loosening of parts, plug shall not become disengaged from receptacle. Connectors shall meet electrical requirements after vibration test. | EIA-364-28 Test Condition IV<br>IEC-60512-6-4<br>100 milliamp test current<br>10- 2,000 Hz<br>20 g, 196 m/s$^2$ |
| Vibration, Random | No discontinuity of greater than 1 microseconds, no cracking, breaking or loosening of parts, plug shall not become disengaged from receptacle. Connectors shall meet electrical requirements after vibration test. | EIA-364-28 Test Condition VI Letter J<br>IEC-60512-6-4<br>100 milliamp test current<br>50- 2,000 Hz<br>43.92 g rms |

C

Dimensions in inches (millimeters) and are subject to change without notice.

## DETAILED PERFORMANCE SPECIFICATIONS

| DESCRIPTION | REQUIREMENT | PROCEDURE |
|---|---|---|
| Mechanical Shock | No discontinuity of greater than 1 microsecond, no cracking, breaking or loosening of parts, plug shall not become disengaged from receptacle. Connectors shall meet electrical requirements after shock test. | EIA-364-27 Condition D<br>IEC-60512-6-3<br>3 shocks X 3 axes X 2 directions = 18 shocks 2941 $m/s^2$ (300 g's), 3 ms, half-sine |
| Thermal Shock | No mechanical damage or loosening of parts. Following thermal shock, connector shall meet contact resistance, DWV, insulation resistance and shell-to-shell resistance requirements. | EIA-364-32 Test Condition IV<br>IEC-60512-11-4<br>5 cycles consisting of -65° C 30 minutes, +25° C 5 minutes max., +150° C 30 minutes, +25° C 5 minutes max. |
| Humidity, Cyclic (Damp Heat, Cyclic) (Moisture Resistance) | No deterioration which will adversely affect the connector. 100 megohms minimum insulation resistance during the final cycle. Following the recovery period, connectors shall meet contact resistance, shell-to-shell resistance and DWV requirements. | EIA-364-31 Condition B Method III<br>IEC-60512-11-12<br>80-98% RH<br>10 cycles (10 days)<br>+25° C to +65° C<br>Step 7b vibration deleted.<br>24 hour recovery period. |
| 21 Day Humidity (Damp heat, Long Term) | No deterioration which will adversely affect the connector. Following the drying period, connectors shall meet 100 megohms minimum, contact resistance, shell-to-shell resistance, DWV, mating and unmating requirements. | EIA-364-31 Condition C Method II<br>IEC-60512-11-3 Severity C<br>90-95% RH<br>40° C<br>Apply 100 volts DC during test. 4 hours drying time at ambient temperature prior to final measurements. |
| Mechanical Durability, at Ambient Temperature | No deterioration which will adversely affect the connector after 2000 cycles of mating and unmating. Connectors shall meet contact resistance, insulation resistance, shell-to-shell resistance, DWV, and mating and unmating force. | EIA-364-09<br>IEC-60512-5 Test 9a |
| Corrosion (Salt Mist) | No exposure of base metal. Connectors shall meet DWV and contact resistance requirements following the test. | EIA-364-26<br>IEC 60512-11-6<br>5% salt solution<br>35° C<br>Unmated connectors<br>Code MT: Ni-PTFE 500 hours<br>Code M: electroless nickel 48 hours<br>Code NF: Cadmium 500 hours<br>Code ZNU: Black zinc nickel 500 hours |

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## DETAILED PERFORMANCE SPECIFICATIONS

| DESCRIPTION | REQUIREMENT | PROCEDURE |
|---|---|---|
| Solderability, PC Tail Contacts | 95% solder coverage. Smooth, bright and even finish. | EIA-364-52 Category 3<br>IEC-60512-12-1<br>IEC-68-2-20 Test Ta, method 1<br>8 hours steam aging prior to test<br>245° C<br>4-5 sec. dwell<br>10X magnification |
| Resistance To Soldering Heat | No damage to connector. Connectors shall meet insulation resistance and waterproof sealing requirements. | EIA-364-56<br>IEC-60512-12-5 Test 12e<br>260° C, 10 seconds (PC tail) |
| Impact, Cable Connectors | No impairment of function. Connector shall meet contact resistance, insulation resistance and waterproof sealing. | EIA-364-42<br>IEC-60512-5 test 7b<br>1 meter<br>8 drops |
| Fluid Immersion | No damage from immersion in various fuels and oils. Connector shall meet mating/unmating force and dielectric withstanding voltage. | EIA-364-10 |
| Altitude Immersion | No evidence of moisture on connector interface or contacts. Connector shall meet dielectric withstanding voltage. | EIA-364-03<br>Wired connectors with supplemental potting. |
| Contact Retention | **Contact Size** / **Min. Pounds** / **Min. Newtons**<br>23 / 6 / 27<br>20 / 15 / 67<br>16 / 25 / 111<br>12 / 25 / 111 | EIA-364-29 |
| Contact Separation Force | **Contact Size** / **Min. Ounces** / **Min. Newtons**<br>23 / 0.5 / 0.14<br>20 / 0.7 / 0.19<br>16 / 2.0 / 0.56<br>12 / 3.0 / 0.83 | SAE AS39029 |
| Mating and Unmating Force | Maximum mating/unmating force: (6 pounds) + (# of size 23 contacts X .40) + (# of size 12 or #16 contacts X 1.8) | EIA-364-13 |
| Residual Magnetism | 2 μ maximum. | EIA-364-54 |

C

Dimensions in inches (millimeters) and are subject to change without notice.


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## About Series 79 Micro-Crimp Shell Plating Options

Micro-D connector shells are made of aluminum alloy and are coated to improve corrosion resistance. Electroless nickel plating is used for instrumentation, avionics and space applications where corrosion protection is not critical. Cadmium plating provides superior corrosion protection, but the United States Department of Defence (DOD)has mandated the elimination of cadmium from DOD weapons systems because of toxicity concerns. The European Union has also restricted the use of cadmium on electronics equipment (RoHS).

Glenair's ***1000 Hour Grey***™ nickel-PTFE plating meets the need for a high-performance cadmium replacement with excellent corrosion resistance, durability and excellent conductivity. In this catalog you will find three standard shell coatings: electroless nickel, Nickel-PTFE and black zinc-nickel. The table below shows additional plating options that are also available on any Series 79 Micro-Crimp connector.

C

### MICRO-CRIMP SHELL PLATING CODES

| Shell Plating | Plating Code | Salt Fog* (Hours) | Cadmium Free | Hexavalent Chromium Free | Conductivity | Compatible with EMI Spring | Typical Applications |
|---|---|---|---|---|---|---|---|
| **Electroless Nickel** | **M** | 48 | Yes | Yes | Excellent | Yes | Space vehicles, missiles, avionics, unmanned vehicles, instrumentation |
| **Nickel-PTFE** | **MT** | 500 | Yes | Yes | Excellent | Yes | Harsh environment, soldier systems, communications equipment |
| **Zinc-Nickel** with Olive-Drab Chromate | **ZN** | 500 | Yes | No | Good | No | Harsh environment, soldier systems, unmanned and manned vehicles |
| **Zinc-Nickel** with Black Chromate | **ZNU** | 500 | Yes | No | Good | No | Harsh environment, soldier systems, unmanned and manned vehicles |
| **Cadmium** with Olive-Drab Chromate | **N** | 500 | No | No | Excellent | No | Harsh environment, military equipment |
| **Cadmium** with Yellow Chromate | **J** | 500 | No | No | Excellent | No | General purpose military equipment |
| **Black Anodize** | **C** | 336 | Yes | Yes | Non-Conductive | N/A | Applications where EMI shielding is not required |
| **Gold** | **Z2** | 48 | Yes | Yes | Excellent | Yes | Space |
| **Chem Film** | **E** | 48 | Yes | No | Excellent | Yes | Avionics |

* Salt spray test in accordance with ASTM B117

Dimensions in inches (millimeters) and are subject to change without notice.


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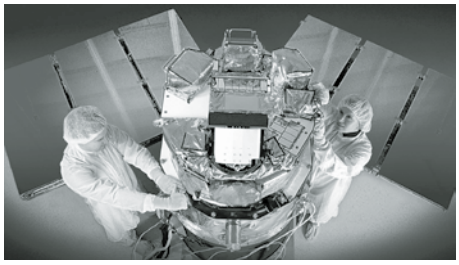
## Series 79 Micro-Crimp Connectors for Space Flight



Micro-D connectors are a popular choice for space flight. Their small size and reduced weight, combined with excellent shock and vibration performance, has led to their widespread use on space vehicles. The Micro-Crimp connector brings the benefits of a crimp, rear-release contact system to the Glenair Micro-D family. Connectors can be terminated onto complicated, multi-branch wiring harnesses without splicing or soldering.

### Five things you should know about Series 79 connectors for space flight

**1 Material Selection:** What materials are approved for space-grade connectors? What materials are prohibited? Does the Series 79 connector contain space-approved materials?

**2 Outgassing:** What is outgassing, why is it important, and how does it affect connector selection? Is special processing required to meet outgassing requirements?

**3 Screening:** What is NASA screening and what level of screening is required?

**4 Magnetic permeability:** Are nonmagnetic connectors required?

**5 Cryogenic exposure:** Are these connectors suitable for -200° C. exposure?

## HOW TO ORDER SPACE GRADE SERIES 79 CONNECTORS

### Step 1: Find a Standard Part Number

Electroless nickel plated shells are preferred for space flight. Cadmium plating is prohibited.

### Step 2: Select a NASA Screening Level

The term “Screening Level” refers to the final inspection procedure.
Level 1 for mission-critical highest reliability
Level 2 for high reliability
Level 3 for standard reliability

### Step 3: Choose Outgassing Processing

A detailed explanation of outgassing is on the following pages. The fluorosilicone rubber seals commonly used on aerospace-grade connectors such as MIL-DTL-38999 and Series 79 connectors, along with certain bonding agents and inks, do not meet NASA outgassing requirements unless the connector is specially processed. Glenair outgassing tests have shown oven baking or thermal vacuum outgassing processing are sufficient to reduce outgassing levels to NASA standards. Oven baking is more economical than thermal vacuum outgassing.

### Step 4: Select the Mod 429 Code that Matches the Desired Level of Screening and Outgassing

Use the following table to choose the right modification code. Add the mod code to the connector part number. Example: 790-024PC-13ML-***429C***

## NASA SCREENING LEVELS AND MODIFICATION CODES

| NASA Screening Level | Special Screening Only | Special Screening Plus Outgassing Processing | |
|---|---|---|---|
| | | **8 Hour Oven Bake** 400° F. | **Thermal Vacuum Outgassing** 24 hrs. 125° C. |
| Level 1 Highest Reliability | Mod 429B | Mod 429J | Mod 429C |
| Level 2 High Reliability | Mod 429 | Mod 429K | Mod 429A |
| Level 3 Standard Reliability | (Use standard part number) | Mod 186 | Mod 186M |

Dimensions in inches (millimeters) and are subject to change without notice.

# Series 79 Micro-Crimp Connectors for Space Flight

**1 Material Selection**: What materials are approved for space flight? What materials are restricted? How to choose the right materials for Series 79 Micro-Crimp connectors.

## What materials are approved for space flight?

Section C2 “Connectors and Contacts” of NASA EEE-INST-002 provides guidelines for materials used in connectors for space flight applications. Aluminum is a preferred material for connector components, and electroless nickel is the preferred finish. Beryllium copper is a preferred material for contacts. 50 microinch minimum gold plating is the preferred contact finish. LCP is a preferred material for dielectric insulating materials.

## What materials are prohibited?

100% tin plating shall not be used. Pure tin can grow “whiskers” which can lead to catastrophic electrical short circuits. Silver plating is prohibited because of corrosion concerns. Cadmium is prohibited because it is unstable in vacuum environments.

## Specifying Series 79 connectors for space flight

Standard Series 79 connectors meet NASA guidelines for material selection. Specify “M” for aluminum shells with electroless nickel finish. The table below lists Series 79 materials.

**SERIES 79 CONNECTOR MATERIALS APPROVED FOR SPACE FLIGHT**

| Component | Material | Notes |
|---|---|---|
| Shells | Aluminum alloy 6061 per ASTM B211, electroless nickel plated | Approved for Space Flight |
| Rigid Insulators | Glass-filled liquid crystal polymer (LCP) in accordance with MIL-M-24519, Type GLP-30F | Approved for Space Flight |
| Retention Clips | Beryllium copper, heat-treated, unplated | Approved for Space Flight |
| Grommet, Interfacial Seal | Blended fluorosilicone/silicone elastomer, 30% silicone per ZZ-R-765, 70% fluorosilicone per MIL-R-25988 | Requires outgassing processing |
| Pin Contact | Beryllium copper alloy per ASTM B197, 50 microinches gold plated per ASTM B488 Type 3 Code C Class 1,27 over nickel plate per QQ-N-290 Class 2, 50-100 microinches | Approved for Space Flight |
| Socket Contact | Beryllium copper alloy per ASTM B197, 50 microinches gold plated per ASTM B488 Type 3 Code C Class 1,27 over nickel plate per QQ-N-290 Class 2, 50-100 microinches. | Approved for Space Flight |
| Socket Contact Hood | Stainless steel, passivated per AMS-QQ-P-35 | Approved for Space Flight |
| Adhesives | RTV and epoxies (see following table for outgassing info) | Requires outgassing processing |
| Potting Compound, PCB and Solder Cup Versions | Environmental and Hermetic Connectors: Stycast 2651/Catalyst 9 epoxy encapsulant. Filter Connectors: Stycast 2850FT/Catalyst 11 thermally conductive epoxy encapsulant. | Approved for Space Flight |

# Series 79 Micro-Crimp Connectors for Space Flight

**2 Outgassing:** What is outgassing and how does it affect connector selection? Is special processing required to meet outgassing requirements?

## What is outgassing?

Plastic and rubber materials give off gaseous molecules. For example, the smell inside a new car is caused by polymer outgassing. Heat and vacuum increase the rate of diffusion. In a spacecraft the gases coming off polymers can contaminate optical surfaces and instruments. The result is degraded performance.

## How is outgassing measured?

The space industry has adopted a standardized test procedure, ***ASTM E 595***, to evaluate out-gassing properties of polymers. Small samples of material are heated to 125° C. at a vacuum of 5 X $10^{-5}$ torr for 24 hours.

Then the sample is weighed to calculate the ***Total Mass Loss*** (TML). The TML cannot exceed 1.00% of the total initial mass. During the test, outgassed matter condenses on a cooled collector plate. The quantity of outgassed matter is caluclated to determine the ***Collected Volatile Condensable Material*** (CVCM). The CVCM cannot exceed 0.10% of the original specimen mass.

## Is special outgassing processing necessary on Series 79 connectors?

NASA states “A bakeout for outgassing control is driven by the application and may be required where tight contamination control must be maintained.” NASA generally recommends that connectors undergo outgassing processing. This processing can be performed by Glenair; however, some customers prefer to fabricate higher level subassemblies before outgassing processing is performed.

## Outgassing At-a-Glance

1 Fluorosilicone rubber components such as o-rings, grommets and seals exceed NASA outgassing limits.

2 NASA recommends outgassing processing to reduce outgassing to acceptable levels.

3 An inexpensive oven bakeout has better results than the more costly thermal vacuum outgassing. The higher temperature of the oven bakeout is more effective at removing volatile materials. However, both methods assure compliance with outgassing limits.

4 Glenair Mod 429 codes provide an easy ordering solution, whatever the outgassing option.

C

## OUTGASSING PROPERTIES OF MATERIALS USED IN SERIES 79 CONNECTORS

| Component | Material | TML % | TCVML % | Test Reference |
|---|---|---|---|---|
| Front and Rear Insulator, right angle PCB Trays | Liquid Crystal Polymer Vectra C130 | 0.03 | 0.0 | NASA Test # GSC17478 |
| Rear Grommet Interfacial Seal | Blended flourosilicone/silicone elastomer, 30% silicone per ZZ-R-765, 70% flourosilicone per MIL-R-25988 | 0.48 | 0.14 | Glenair testing conducted at NuSil Technology 02/27/2001 |
| Front-To-Rear Insulator Bonding Material | Eccobond 104 A/B | 0.52 | 0.08 | Emerson & Cuming Data Sheet |
| Insulator-to-Rubber Bonding Material | DC3145 RTV, per MIL-A-46146 | 1.74 | 0.90 | NASA Test GSFC0191 |
| PCB Trays (Machined Ultem) | Polyetherimide, Ultem 2300 | 0.43 | 0.01 | NASA Test GSC19820 |
| White Epoxy Ink for Silkscreening | Markem 7224 White | 0.49 | 0.03 | NASA Test #GSC19899 |
| Potting Compound, PC Tail Connectors | Hysol C9-4215 | 0.48 | 0.01 | Glenair Test |
| Panel Gasket | Silver-filled Fruorosilicone, Cho-Seal 1287 | 0.63 | 0.03 | NASA test GSC15165 |

# Series 79 Micro-Crimp Connectors for Space Flight

**3 Screening**: What is NASA screening and what level of screening is required?

## What is NASA screening?

NASA specification EEE-INST-002 provides instructions on selecting, screening and qualifying parts for use on NASA GSFC space flight projects. Table 2C in the NASA specification contains inspection instructions for MIL-DTL-83513 Micro-D connectors. Series 79 connectors are similar to M83513 connectors, so Table 2C applies by similarity to Series 79 connectors.

## What screening level is required?

NASA defines three levels of screening: level 1 for highest reliability, level 2 for high reliability, and level 3 for standard reliability. Level 3 equates to standard lot acceptance inspection. Levels 1 and 2 call for additional testing.

## What about qualification requirements?

Projects using connectors covered by military specifications are typically able to waive qualification testing. The Series 79 connector is not covered by a military specification. Projects considering using the Series 79 for space flight should obtain guidance from the overseeing space agency regarding the suitability of this connector and any testing that might be recommended.

### NASA EEE-INST-002 SCREENING REQUIREMENTS

| Inspection/ Test | NASA Level 1 | NASA Level 2 |
|---|---|---|
| Visual Inspection | 100% | 100% |
| Mechanical | 2 pcs. | 2 pcs. |
| Voltage (DWV) | 2 pcs. | 2 pcs. |
| Insulation Resistance | 2 pcs. | 2 pcs. |
| Mating and Unmating Force | 2 pcs. | N/A |
| Contact Engagement and Separation Force | 2 pcs. | N/A |
| Air leakage (Hermetic connectors only) | 100% | 100% |
| Solderability/Resistance to Soldering Heat | 2 pcs. | N/A |

1. NASA screening requirements from Table 2 of EEE-INST-002 Screening Requirements.

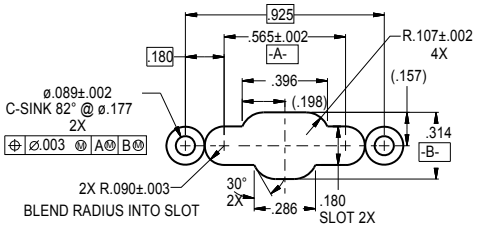
**4 Magnetic permeability**: Are nonmagnetic connectors required?

Spacecraft designers generally avoid the use of ferromagnetic materials, which can become magnetized and can interfere with sensitive instruments. Series 79 environmental connectors have a maximum permeability of 2 mu.

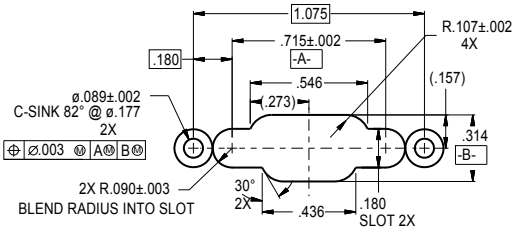
**5 Cryogenic exposure**: Space programs sometimes need cryogenic connectors capable of withstanding temperatures as low as -270° C. Can Series 79 connectors operate satisfactorily at this temperature?

Series 79 connectors are rated to -65° C. Glenair does not have data to validate these connectors for cryogenic applications. EEE-INST-002 states "... experience has proven it is possible for (non-certified) connector types to be used successfully at cryogenic temperatures. It is recommended that connector samples should be subjected to five cycles of cryogenic temperature...(followed by examination for cracks and DWV)".

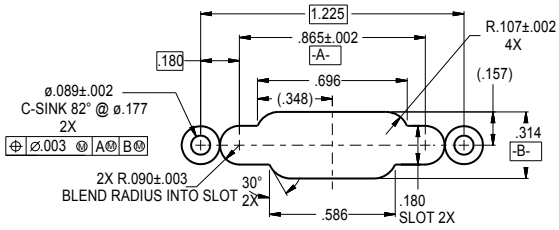
## RECOMMENDED PANEL CUTOUTS



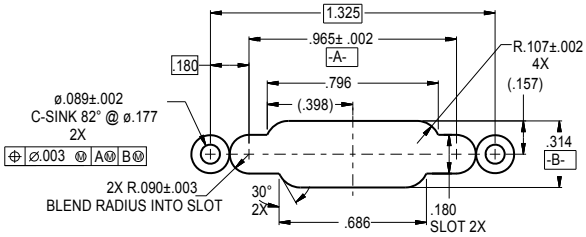

**Shell Size A**



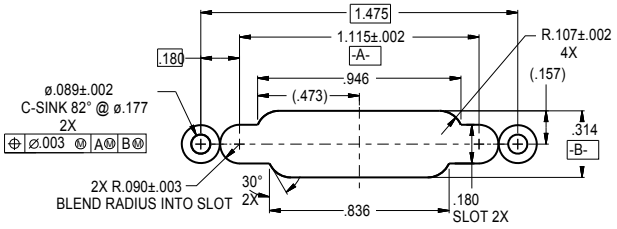

**Shell Size B**



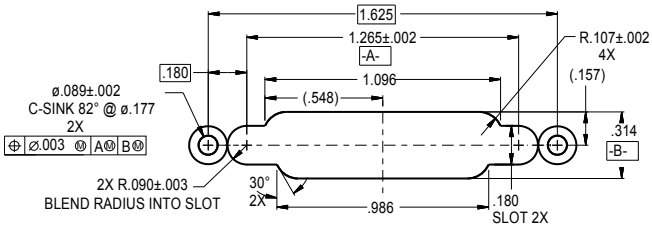

**Shell Size C**



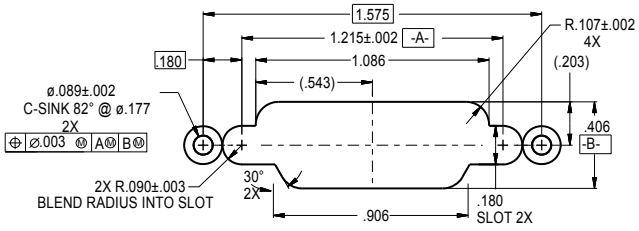

**Shell Size D**




**Shell Size E**




**Shell Size F**




**Shell Size G**

Dimensions in inches (millimeters) and are subject to change without notice.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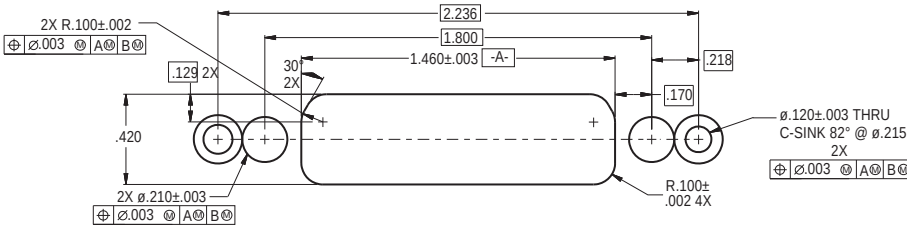
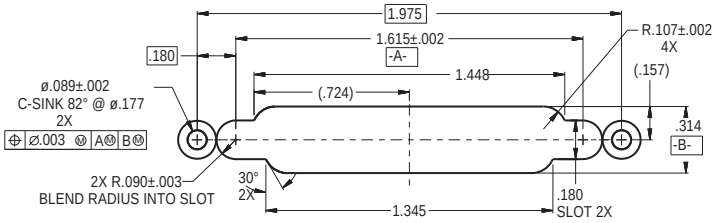
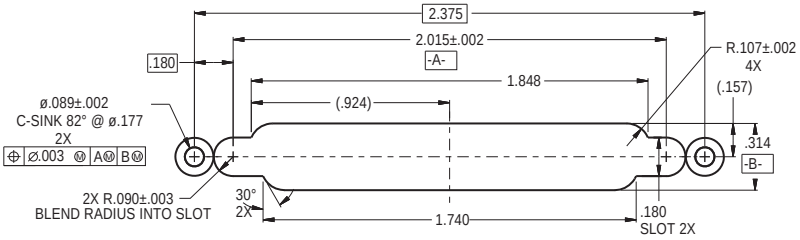
## RECOMMENDED PANEL CUTOUTS



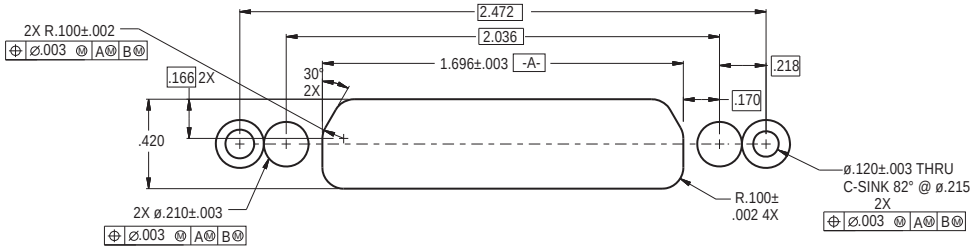

### Shell Size H




### Shell Size J




### Shell Size K




### Shell Size L

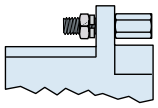
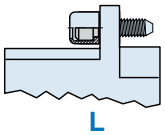
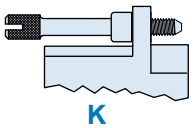
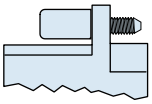
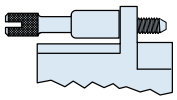
Dimensions in inches (millimeters) and are subject to change without notice.

## CABLE RECEPTACLES WITH PIN CONTACTS, CRIMP TERMINATION, 790-024P

Rugged, lightweight 790-024P connectors feature machined aluminum shells, fluorosilicone face seals and wire grommets for environmental protection. Contacts are rear-release snap-in crimp type. Connectors are supplied with crimp contacts packaged separately. Size #23 signal pins accept up to #22 AWG wire. Size #16 contacts accept #16-18 AWG wire. Size #12 contacts accept #12-14 AWG wire. Size 12 and 16 cavities also accept coaxial contacts purchased separately. Connector shell features a groove for attachment of a low-profile EMI backshell adapter 799-015, ordered separately.

## HOW TO ORDER

**Sample Part Number**

| 790-024P | C-13 | M | P |
|---|---|---|---|
| **Base Part Number** | **Shell Size - Insert Arr.** | **Shell Finish** | **Hardware Option** |
| **790-024P**<br>Cable Receptacle with Pin Contacts | See Table 1 for Available Insert Arrangements<br>. To order a connector without size #16 or #12 power pins, substitute "W" instead of "P" in the insert arrangement.<br>Example:<br>***36P2*** is supplied with 2 power pins.<br>***36W2*** is supplied less the power pins.<br>See Section B for coaxial contacts purchased separately. | **M**<br>Electroless Nickel<br>*general purpose applications*<br>**MT**<br>Nickel-PTFE<br>*1000 Hour Grey™ maximum corrosion protection and durability (non-reflective grey)*<br>**ZNU**<br>Zinc-Nickel with Black Chromate<br>*tactical applications (non-reflective black)*<br>Additional shell finishes are listed on page C-9. |  <br>**N**<br>Thru-Hole<br>No Hardware<br>  <br>**P**<br>Female Jackpost<br>  <br>**L**<br>Low-Profile Captivated Jackscrew, Hex Head<br>  <br>**K**<br>Slot-Head Extended Jackscrew<br>  <br>**S**<br>Low-Profile Captivated Screwlock, Hex Head<br>  <br>**T**<br>Slot-Head Extended Captivated Screwlock |

## SPECIFICATIONS

| | |
|---|---|
| Current Rating | #23 5 AMPS, #16 13 A., #12 23 A. |
| Dielectric Withstanding Voltage | #23 500 VAC RMS, #12 and #16 1800 VAC RMS |
| Insulation Resistance | 5000 megohms minimum |
| Operating Temperature | -65° C. to +150° C. |
| Shock | 300 g. |
| Vibration | 37 g. |

## MATERIALS AND FINISHES

| | |
|---|---|
| Shell | Aluminum alloy |
| Contacts | Copper alloy, 50 microinches gold plated |
| Insulators | Liquid crystal polymer (LCP) |
| Retention Clips | Beryllium copper alloy |
| Interfacial Seal, Grommet | Flourosilicone rubber |
| Hardware | 300 series stainless steel |

Dimensions in inches (millimeters) and are subject to change without notice.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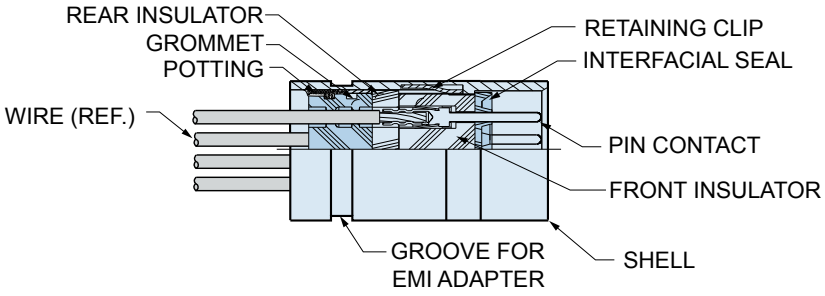
Glenair®

# Series 79 Micro-Crimp
# Section D: Cable Connectors, Crimp Termination

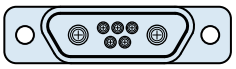
## Table 1 Contact Arrangements

| Layout | Contact Quantity #23 | #16 | #12 | Face View |
|---|---|---|---|---|
| A-5 | 5 | | | |
| B-2P2 | | 2 | | |
| B-9 | 9 | | | |
| C-13 | 13 | | | |
| D-15 | 15 | | | |
| D-3P3 | | 3 | | |
| D-7P2 | 5 | 2 | | |
| E-11P2 | 9 | 2 | | |
| E-19 | 19 | | | |
| E-7P3 | 4 | 3 | | |
| F-15P2 | 13 | 2 | | |
| F-23 | 23 | | | |
| F-5P5 | | 5 | | |
| G-33 | 33 | | | |
| H-10P4 | 6 | | 4 | |
| H-29P7 | 22 | 7 | | |
| H-36P2 | 34 | | 2 | |
| H-54P2 | 52 | 2 | | |
| H-5P5 | | | 5 | |
| H-66 | 66 | | | |
| J-17P4 | 13 | 4 | | |
| J-25P2 | 23 | 2 | | |
| J-33 | 33 | | | |
| J-7P7 | | 7 | | |
| K-27P4 | 23 | 4 | | |
| K-35P2 | 33 | 2 | | |
| K-43 | 43 | | | |
| K-9P9 | | 9 | | |
| L-6P6 | | | 6 | |

## CROSS-SECTIONAL VIEW OF 790-024P

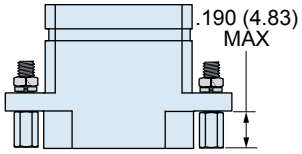



## TABLE 2 HARDWARE OPTION



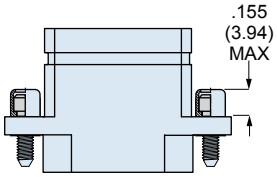
### N
### No Mating Hardware

Connector is supplied with thru-holes. Shell sizes H and L are .148" (3.76) diameter, other shell sizes are .092" (2.34) diameter. Accepts standard Micro-D M83513 hardware.



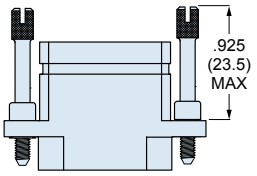

### P
### Jackposts

Connector is supplied with removable jackposts. Shell sizes H and L have #4-40 UNC thread, other sizes have #2-56 thread. Stainless steel. Conforms to M83513/05.



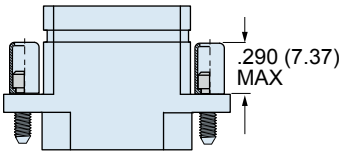

### L
### Hex Head Jackscrews

Connector is supplied with stainless steel non-removable low profile jackscrews. Shell sizes H and L have #4-40 UNC thread, other sizes have #2-56 thread.



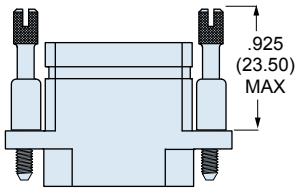

### K
### Extended Jackscrews

Connector is supplied with stainless steel slot head non-removable jackscrews. Shell sizes H and L have #4-40 UNC thread, other sizes have #2-56 thread.




### S
### Hex Head Screwlocks

Connector is supplied with stainless steel non-removable low profile screwlocks. Shell sizes H and L have #4-40 UNC thread, other sizes have #2-56 thread. Screwlocks allow the connector to be mated before the screws are fastened.




### T
### Extended Screwlocks

Connector is supplied with stainless steel non-removable slot head screwlocks. Shell sizes H and L have #4-40 UNC thread, other sizes have #2-56 thread. Screwlocks allow the connector to be mated before the screws are fastened.

Dimensions in inches (millimeters) and are subject to change without notice.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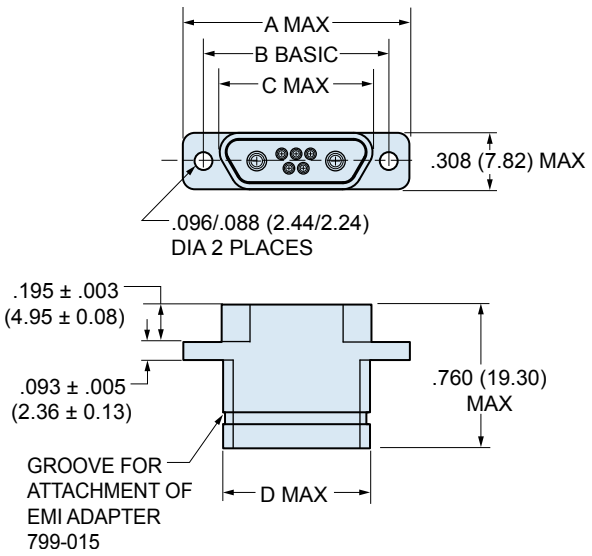
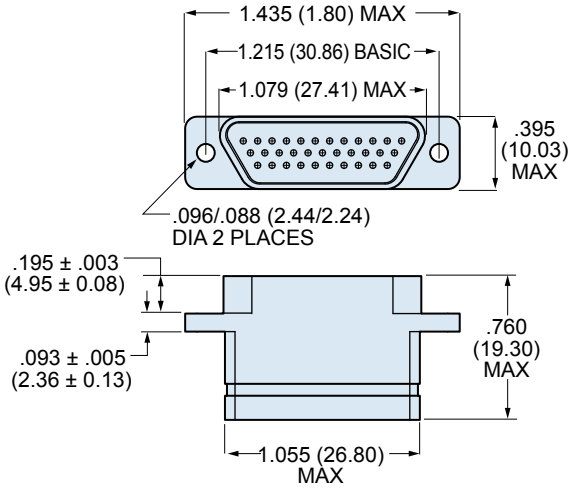
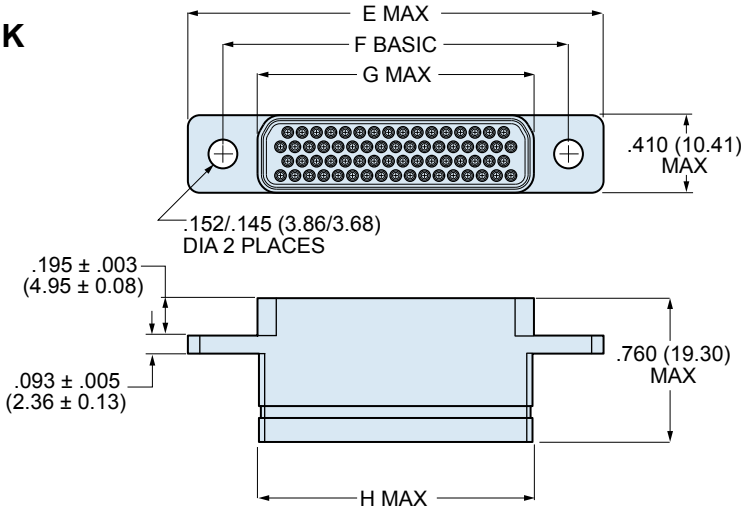
## 790-024P DIMENSIONS




**SHELL SIZES A, B, C, D, E, F, J, K**




**SHELL SIZE G**




**SHELL SIZE H AND L**

### 790-024P DIMENSIONS

| Shell Size | A Max. | | B Basic | | C Max. | | D Max. | | E Max. | | F Basic | | G Max. | | H Max. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | In. | mm. | In . | mm. | In. | mm. | In. | mm. | In. | mm. | In. | mm. | In. | mm. | In. | mm. |
| A | .785 | 19.94 | .565 | 14.35 | .400 | 10.16 | .390 | 9.91 | — | — | — | — | — | — | — | — |
| B | .935 | 23.75 | .715 | 18.16 | .551 | 14.00 | .540 | 13.72 | — | — | — | — | — | — | — | — |
| C | 1.085 | 27.65 | .865 | 21.97 | .701 | 17.81 | .690 | 17.53 | — | — | — | — | — | — | — | — |
| D | 1.185 | 30.10 | .965 | 24.51 | .801 | 20.35 | .790 | 20.07 | — | — | — | — | — | — | — | — |
| E | 1.335 | 33.91 | 1.115 | 28.32 | .951 | 24.16 | .940 | 23.88 | — | — | — | — | — | — | — | — |
| F | 1.485 | 37.72 | 1.265 | 32.13 | 1.101 | 27.96 | 1.090 | 27.69 | — | — | — | — | — | — | — | — |
| H | — | — | — | — | — | — | — | — | 2.175 | 55.25 | 1.800 | 45.72 | 1.450 | 36.83 | 1.440 | 36.58 |
| J | 1.845 | 46.86 | 1.615 | 41.02 | 1.460 | 37.08 | 1.450 | 36.83 | — | — | — | — | — | — | — | — |
| K | 2.240 | 56.90 | 2.015 | 51.18 | 1.860 | 47.24 | 1.840 | 46.74 | — | — | — | — | — | — | — | — |
| L | — | — | — | — | — | — | — | — | 2.420 | 61.47 | 2.036 | 51.71 | 1.686 | 42.82 | 1.675 | 42.55 |

Dimensions in inches (millimeters) and are subject to change without notice.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Glenair®

# Series 79 Micro-Crimp
# Section D: Cable Connectors, Crimp Termination

## CABLE PLUGS WITH SOCKET CONTACTS, CRIMP TERMINATION, 790-025S

790-025S connectors feature machined aluminum shells and wire grommets for environmental protection. Contacts are rear-release snap-in crimp type. Connectors are supplied with crimp contacts packaged separately. Size #23 signal pins accept up to #22 AWG wire. Size #16 contacts accept #16-18 AWG wire. Size #12 contacts accept #12-14 AWG wire. Size 12 and 16 cavities also accept coaxial contacts purchased separately. Connector shell features a groove for attachment of a low-profile EMI adapter 799-015, ordered separately.

## HOW TO ORDER

**Sample Part Number**

| 790-025S | H-5P5 | E | M | S |
|---|---|---|---|---|
| **Part Number** | **Shell Size - Insert Arr.** | **EMI Spring** | **Shell Finish** | **Hardware Option** |

**790-025S**
Cable Plug With Socket Contacts

See Table 1 for Available Insert Arrangements

To order a connector without size #16 or #12 power pins, substitute "W" instead of "P" in the insert arrangement.

Example:

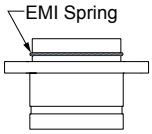
***36P2*** is supplied with 2 power pins.

***36W2*** is supplied less the power pins.

See Section B for coaxial contacts purchased separately.

**E**
EMI Spring

**N**
No Spring



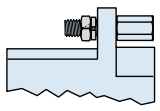

**M**
Electroless Nickel
*general purpose applications*

**MT**
Nickel-PTFE
*1000 Hour Grey™ maximum corrosion protection and durability (non-reflective grey)*

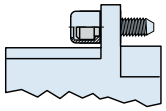
**ZNU**
Zinc-Nickel with Black Chromate
*tactical applications (non-reflective black)*

Additional shell finishes are listed on page C-9.

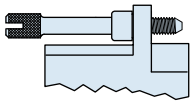
**N**
Thru-Hole
No Hardware



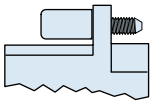
**P**
Female Jackpost



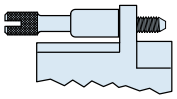
**L**
Low-Profile Captivated Jackscrew, Hex Head



**K**
Slot-Head Extended Jackscrew



**S**
Low-Profile Captivated Screwlock, Hex Head



**T**
Slot-Head Extended Captivated Screwlock

## SPECIFICATIONS

| | |
|---|---|
| Current Rating | #23 5 AMPS, #16 13 A., #12 23 A. |
| Dielectric Withstanding Voltage | #23 500 VAC RMS, #12 and #16 1800 VAC RMS |
| Insulation Resistance | 5000 megohms minimum |
| Operating Temperature | -65° C. to +150° C. |
| Shock | 300 g. |
| Vibration | 37 g. |

## MATERIALS AND FINISHES

| | |
|---|---|
| Shell | Aluminum alloy |
| Contacts | Copper alloy, 50 microinches gold plated, stainless steel hood |
| Insulators | Liquid crystal polymer (LCP) |
| Retention Clips | Beryllium copper alloy |
| Grommet | Flourosilicone rubber |
| Hardware | 300 series stainless steel |

Dimensions in inches (millimeters) and are subject to change without notice.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GLENAIR, INC. • 1211 AIR WAY • GLENDALE, CA 91201-2497 • 818-247-6000 • FAX 818-500-9912
www.glenair.com
E-Mail: sales@glenair.com

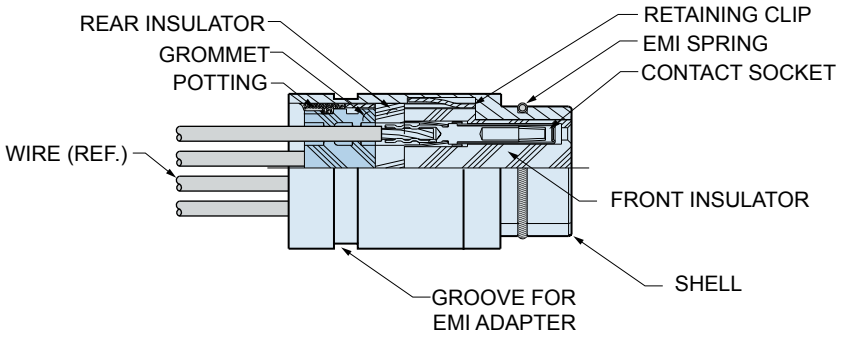


Rev. 01-AUG-2008

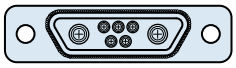
## Table 1 Contact Arrangements

| Layout | Contact Quantity #23 | #16 | #12 | Face View |
|---|---|---|---|---|
| A-5 | 5 | | | |
| B-2P2 | | 2 | | |
| B-9 | 9 | | | |
| C-13 | 13 | | | |
| D-15 | 15 | | | |
| D-3P3 | | 3 | | |
| D-7P2 | 5 | 2 | | |
| E-11P2 | 9 | 2 | | |
| E-19 | 19 | | | |
| E-7P3 | 4 | 3 | | |
| F-15P2 | 13 | 2 | | |
| F-23 | 23 | | | |
| F-5P5 | | 5 | | |
| G-33 | 33 | | | |
| H-10P4 | 6 | | 4 | |
| H-29P7 | 22 | 7 | | |
| H-36P2 | 34 | | 2 | |
| H-54P2 | 52 | 2 | | |
| H-5P5 | | | 5 | |
| H-66 | 66 | | | |
| J-17P4 | 13 | 4 | | |
| J-25P2 | 23 | 2 | | |
| J-33 | 33 | | | |
| J-7P7 | | 7 | | |
| K-27P4 | 23 | 4 | | |
| K-35P2 | 33 | 2 | | |
| K-43 | 43 | | | |
| K-9P9 | | 9 | | |
| L-6P6 | | | 6 | |

## CROSS-SECTIONAL VIEW OF 790-025S

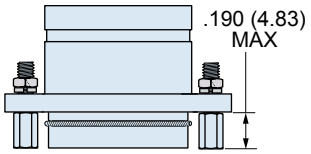



## TABLE 2 HARDWARE OPTION



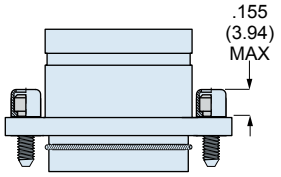
### N
### No Mating Hardware

Connector is supplied with thru-holes. Shell sizes H and L are .148" (3.76) diameter, other shell sizes are .092" (2.34) diameter. Accepts standard Micro-D M83513 hardware.



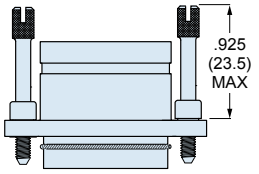

### P
### Jackposts

Connector is supplied with removable jackposts. Shell sizes H and L have #4-40 UNC thread, other sizes have #2-56 thread. Stainless steel. Conforms to M83513/05.



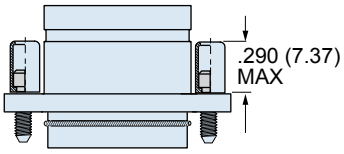

### L
### Hex Head Jackscrews

Connector is supplied with stainless steel non-removable low profile jackscrews. Shell sizes H and L have #4-40 UNC thread, other sizes have #2-56 thread.



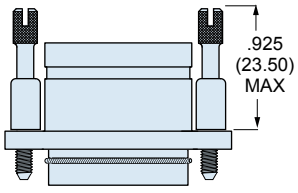

### K
### Extended Jackscrews

Connector is supplied with stainless steel slot head non-removable jackscrews. Shell sizes H and L have #4-40 UNC thread, other sizes have #2-56 thread.




### S
### Hex Head Screwlocks

Connector is supplied with stainless steel non-removable low profile screwlocks. Shell sizes H and L have #4-40 UNC thread, other sizes have #2-56 thread. Screwlocks allow the connector to be mated before the screws are fastened.



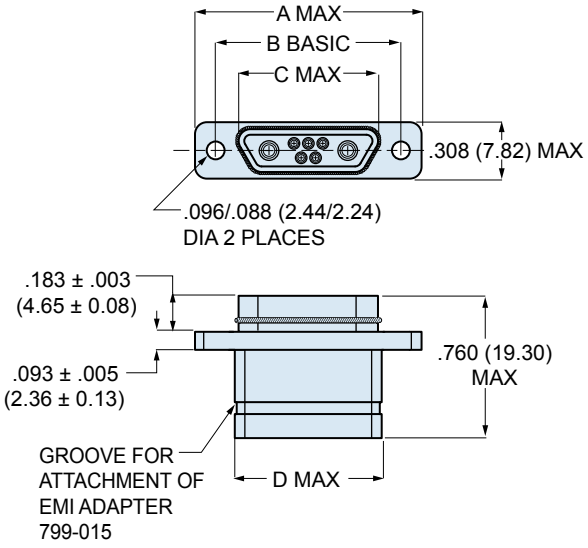

### T
### Extended Screwlocks

Connector is supplied with stainless steel non-removable slot head screwlocks. Shell sizes H and L have #4-40 UNC thread, other sizes have #2-56 thread. Screwlocks allow the connector to be mated before the screws are fastened.

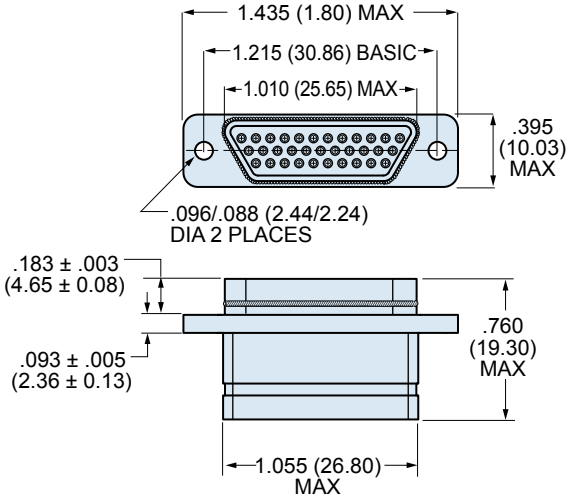
D

Dimensions in inches (millimeters) and are subject to change without notice.

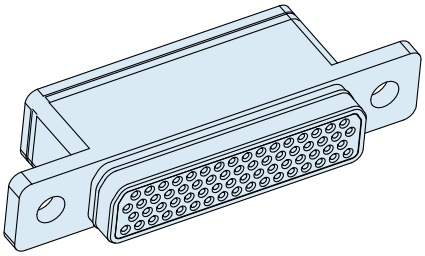
## 790-025S DIMENSIONS

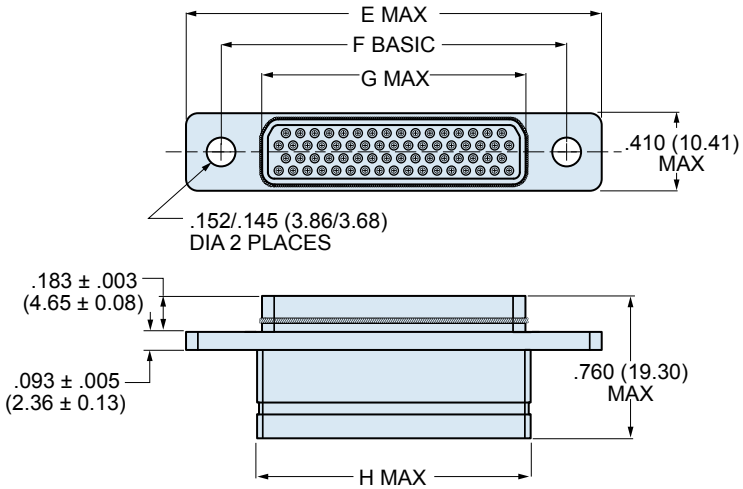



### SHELL SIZES A, B, C, D, E, F, J, K




### SHELL SIZE G






### SHELL SIZE H AND L

| 790-025S DIMENSIONS | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Shell Size | A Max. | | B Basic | | C Max. | | D Max. | | E Max. | | F Basic | | G Max. | | H Max. | |
| | In. | mm. | In . | mm. | In. | mm. | In. | mm. | In. | mm. | In. | mm. | In. | mm. | In. | mm. |
| A | .785 | 19.94 | .565 | 14.35 | .335 | 8.51 | .390 | 9.91 | — | — | — | — | — | — | — | — |
| B | .935 | 23.75 | .715 | 18.16 | .485 | 12.32 | .540 | 13.72 | — | — | — | — | — | — | — | — |
| C | 1.085 | 27.65 | .865 | 21.97 | .635 | 16.13 | .690 | 17.53 | — | — | — | — | — | — | — | — |
| D | 1.185 | 30.10 | .965 | 24.51 | .735 | 18.67 | .790 | 20.07 | — | — | — | — | — | — | — | — |
| E | 1.335 | 33.91 | 1.115 | 28.32 | .885 | 22.48 | .940 | 23.88 | — | — | — | — | — | — | — | — |
| F | 1.485 | 37.72 | 1.265 | 32.13 | 1.035 | 26.29 | 1.090 | 27.69 | — | — | — | — | — | — | — | — |
| H | — | — | — | — | — | — | — | — | 2.175 | 55.25 | 1.800 | 45.72 | 1.385 | 35.18 | 1.440 | 36.58 |
| J | 1.845 | 46.86 | 1.615 | 41.02 | 1.390 | 35.61 | 1.450 | 36.83 | — | — | — | — | — | — | — | — |
| K | 2.240 | 56.90 | 2.015 | 51.18 | 1.795 | 45.59 | 1.840 | 46.74 | — | — | — | — | — | — | — | — |
| L | — | — | — | — | — | — | — | — | 2.420 | 61.47 | 2.036 | 51.71 | 1.623 | 41.22 | 1.675 | 42.55 |

Dimensions in inches (millimeters) and are subject to change without notice.



CAGE Code 06324

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## PANEL RECEPTACLES WITH PIN CONTACTS, CRIMP TERMINATION, 790-026P

790-026P connectors are designed for rear-panel mounting and are supplied with conductive panel gaskets. These connectors feature machined aluminum shells, fluorosilicone face seals and wire grommets for environmental protection. Contacts are rear-release snap-in crimp type. Connectors are supplied with crimp contacts packaged separately. Size #23 signal pins accept up to #22 AWG wire. Size #16 contacts accept #16-18 AWG wire. Size #12 contacts accept #12-14 AWG wire. Size 12 and 16 cavities also accept coaxial contacts purchased separately. Attach optional shielding adapters (799-016) for EMI protection.

## HOW TO ORDER

**Sample Part Number**

| 790-026P | L-6P6 | MT | G |
|---|---|---|---|
| **Part Number** | **Shell Size - Insert Arr.** | **Shell Finish** | **Hardware Option** |

**790-026P**
Rear Panel Mounted Receptacle with Pin Contacts

See Table 1 for Available Insert Arrangements

To order a connector without size #16 or #12 power pins, substitute "W" instead of "P" in the insert arrangement.

Example:

***36P2*** is supplied with 2 power pins.

***36W2*** is supplied less the power pins.

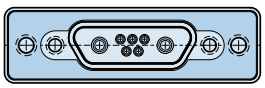
See Section B for coaxial contacts purchased separately.

**M**
Electroless Nickel
*general purpose applications*

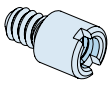
**MT**
Nickel-PTFE
*1000 Hour Grey™ maximum corrosion protection and durability (non-reflective grey)*

**ZNU**
Zinc-Nickel with Black Chromate
*tactical applications (non-reflective black)*

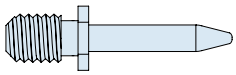
Additional shell finishes are listed on page C-9.



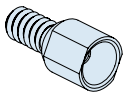
**N**
No Hardware



**P**
Female Jackpost



**G**
Guide Pin



**S**
Female Guide Socket

## SPECIFICATIONS

| | |
|---|---|
| Current Rating | #23 5 AMPS, #16 13 A., #12 23 A. |
| Dielectric Withstanding Voltage | #23 500 VAC RMS, #12 and #16 1800 VAC RMS |
| Insulation Resistance | 5000 megohms minimum |
| Operating Temperature | -65° C. to +150° C. |
| Shock | 300 g. |
| Vibration | 37 g. |

## MATERIALS AND FINISHES

| | |
|---|---|
| Shell | Aluminum alloy |
| Contacts | Copper alloy, 50 microinches gold plated |
| Insulators | Liquid crystal polymer (LCP) |
| Retention Clips | Beryllium copper alloy |
| Interfacial Seal, Grommet | Flourosilicone rubber |
| Hardware | 300 series stainless steel |
| Panel Gasket | Fluorosilicone, conductive |

Dimensions in inches (millimeters) and are subject to change without notice.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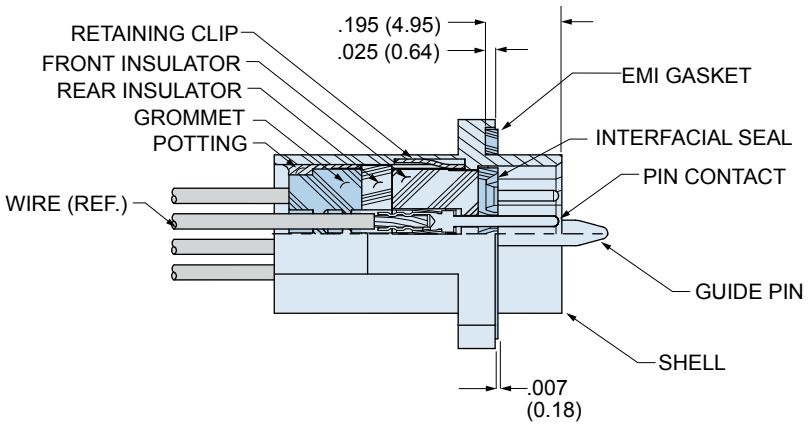
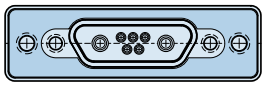
## Table 1 Contact Arrangements

| Layout | Contact Quantity #23 | #16 | #12 | Face View |
|---|---|---|---|---|
| A-5 | 5 | | | |
| B-2P2 | | 2 | | |
| B-9 | 9 | | | |
| C-13 | 13 | | | |
| D-15 | 15 | | | |
| D-3P3 | | 3 | | |
| D-7P2 | 5 | 2 | | |
| E-11P2 | 9 | 2 | | |
| E-19 | 19 | | | |
| E-7P3 | 4 | 3 | | |
| F-15P2 | 13 | 2 | | |
| F-23 | 23 | | | |
| F-5P5 | | 5 | | |
| G-33 | 33 | | | |
| H-10P4 | 6 | | 4 | |
| H-29P7 | 22 | 7 | | |
| H-36P2 | 34 | | 2 | |
| H-54P2 | 52 | 2 | | |
| H-5P5 | | | 5 | |
| H-66 | 66 | | | |
| J-17P4 | 13 | 4 | | |
| J-25P2 | 23 | 2 | | |
| J-33 | 33 | | | |
| J-7P7 | | 7 | | |
| K-27P4 | 23 | 4 | | |
| K-35P2 | 33 | 2 | | |
| K-43 | 43 | | | |
| K-9P9 | | 9 | | |
| L-6P6 | | | 6 | |

## CROSS-SECTIONAL VIEW OF 790-026P

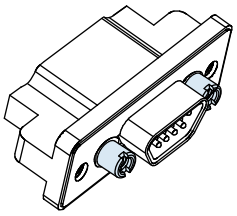



## TABLE 2 HARDWARE OPTION



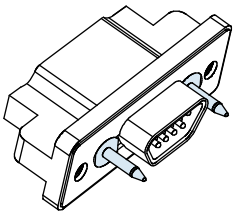
### N
### No Mating Hardware

Connector is supplied with threaded holes. Shell sizes H and L have #6-32 threads, other sizes have #4-40 threads. Thread depth is .150" (3.8).



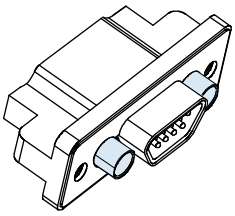
### P
### Jackposts

Connector is supplied with non-removable stainless steel jackposts. Shell sizes H and L have #4-40 UNC thread, other sizes have #2-56 thread. Stainless steel.



### G
### Guide Pins

Connector is supplied with stainless steel non-removable guide pins. Mates with type "S" guide sockets on corresponding plug connector.



### S
### Guide Sockets

Connector is supplied with stainless steel non-removable bushings. Mates with type "G" guide pins on corresponding plug connector.

Dimensions in inches (millimeters) and are subject to change without notice.



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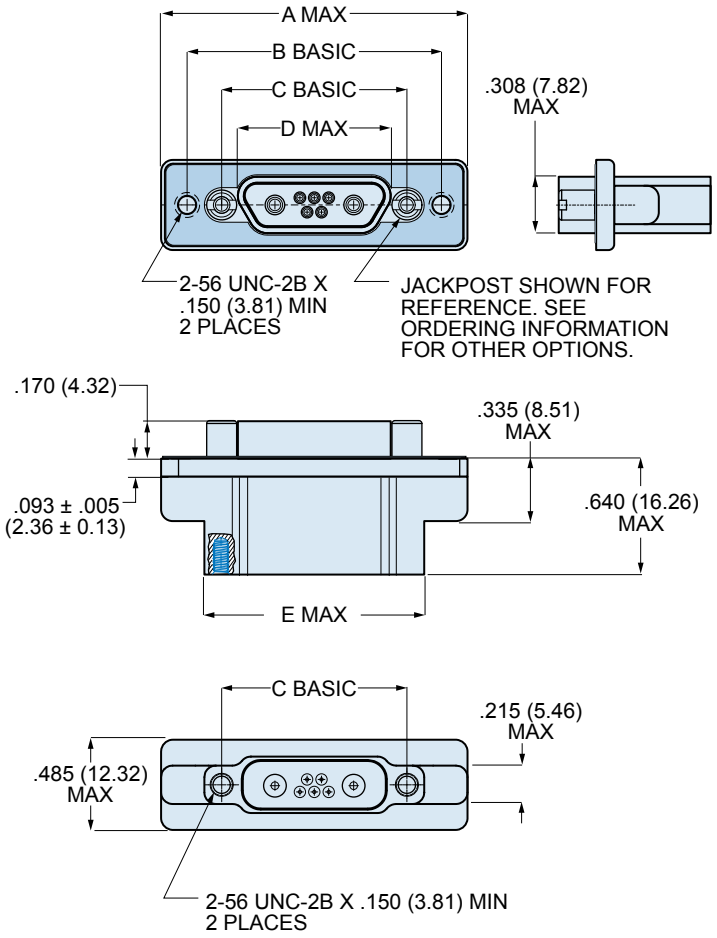
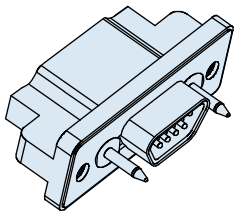
## 790-026P SHELL SIZE A,B,C,D,E,F,J,K DIMENSIONS




### BLIND MATE



SHELL SIZES A, B, C, D, E, F, G, J, K
+/- .030 (0.76) ALLOWABLE
MISALIGNMENT FROM CENTERLINE

E

### 790-026P Dimensions for Size A-F, J and K

| Shell Size | A Max. | | B Basic | | C Basic | | D Max. | | E Max. | |
|---|---|---|---|---|---|---|---|---|---|---|
| | In. | mm. | In. | mm. | In. | mm. | In. | mm. | In. | mm. |
| A | 1.211 | 30.76 | .925 | 23.50 | .565 | 14.35 | .401 | 10.19 | .760 | 19.30 |
| B | 1.361 | 34.57 | 1.075 | 27.31 | .715 | 18.16 | .551 | 14.00 | .910 | 21.11 |
| C | 1.511 | 38.38 | 1.225 | 31.12 | .865 | 21.97 | .701 | 17.81 | 1.060 | 26.92 |
| D | 1.611 | 40.92 | 1.325 | 33.66 | .965 | 24.51 | .801 | 20.35 | 1.160 | 29.46 |
| E | 1.761 | 44.73 | 1.475 | 37.47 | 1.115 | 28.32 | .951 | 24.16 | 1.310 | 33.27 |
| F | 1.911 | 48.54 | 1.625 | 41.28 | 1.265 | 32.13 | 1.101 | 27.96 | 1.460 | 37.08 |
| J | 2.261 | 57.43 | 1.975 | 50.17 | 1.615 | 41.02 | 1.456 | 36.98 | 1.810 | 45.97 |
| K | 2.661 | 67.59 | 2.375 | 60.33 | 2.015 | 51.18 | 1.860 | 47.24 | 2.210 | 56.13 |

Dimensions in inches (millimeters) and are subject to change without notice.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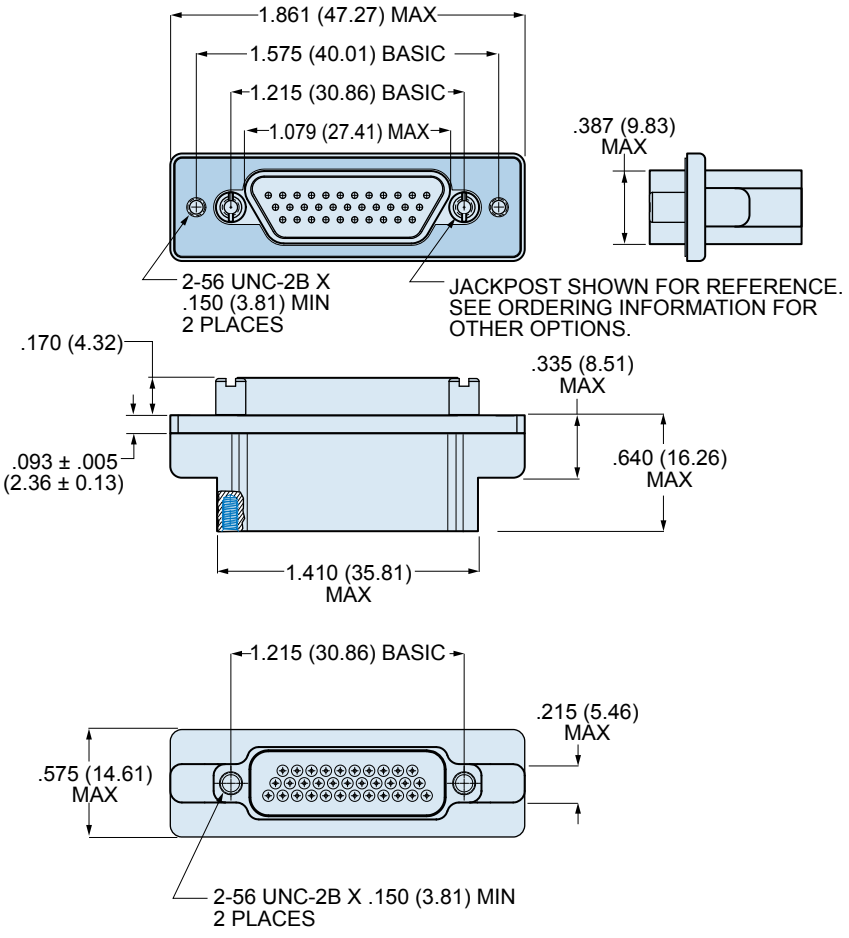
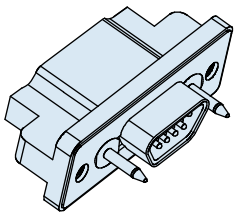
## 790-026P SHELL SIZE G DIMENSIONS



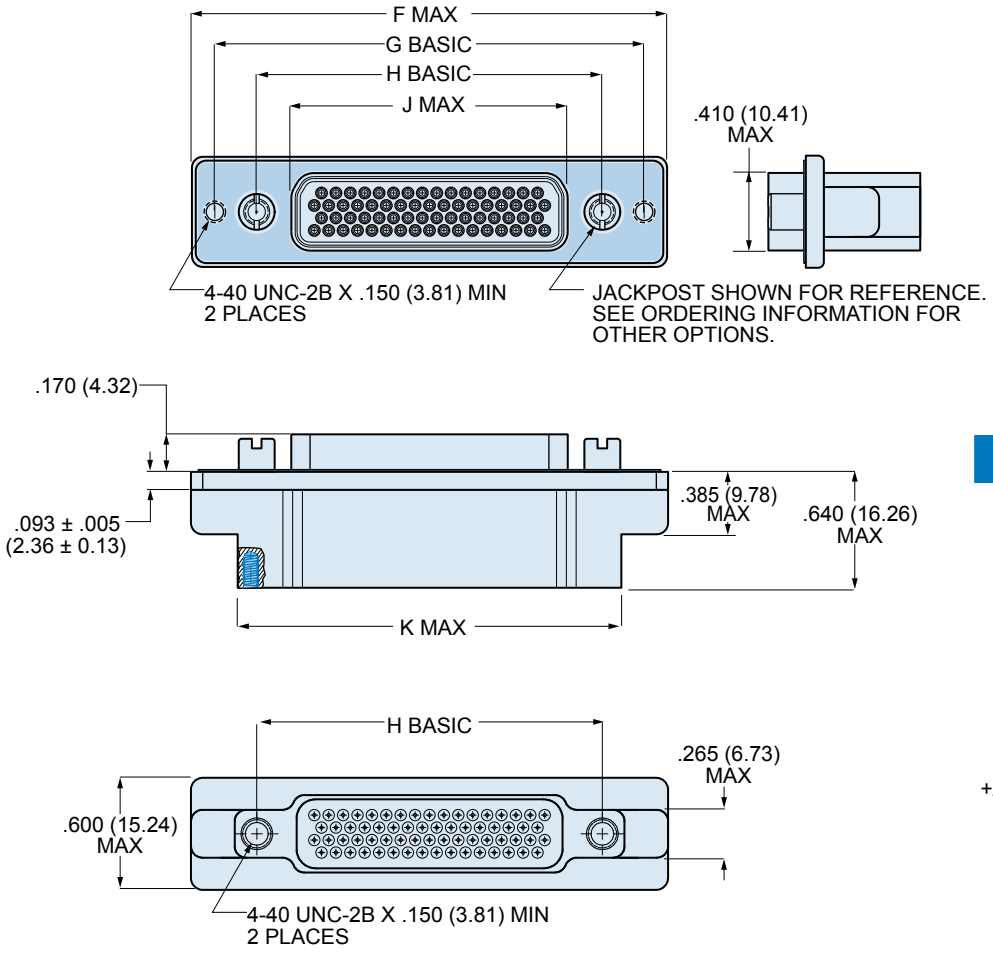

### BLIND MATE



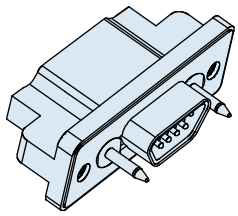
SHELL SIZES A, B, C, D, E, F, G, J, K
+/- .030 (0.76) ALLOWABLE
MISALIGNMENT FROM CENTERLINE

E

## 790-026P SHELL SIZE H AND L DIMENSIONS




### BLIND MATE



SHELL SIZES H, L
+/- .040 (1.02) ALLOWABLE MISALIGNMENT
FROM CENTERLINE

### 790-026P SIZE H & L DIMENSIONS

| Shell Size | F Max. | | G Basic | | H Basic | | J Max. | | K Max. | |
|---|---|---|---|---|---|---|---|---|---|---|
| | In. | mm. | In. | mm. | In. | mm. | In. | mm. | In. | mm. |
| H | 2.500 | 63.50 | 2.236 | 56.79 | 1.800 | 45.72 | 1.450 | 36.83 | 2.045 | 51.94 |
| L | 2.736 | 69.49 | 2.472 | 62.79 | 2.036 | 51.71 | 1.686 | 42.82 | 2.281 | 57.94 |

Dimensions in inches (millimeters) and are subject to change without notice.


CAGE Code 06324
Printed in U.S.A.

Glenair®

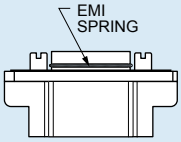
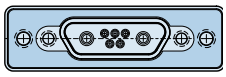
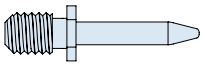
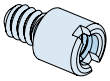
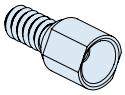
# Series 79 Micro-Crimp
# Section E: Panel Mount Connectors, Crimp Termination

## PANEL PLUGS WITH SOCKET CONTACTS, CRIMP TERMINATION, 790-027S

790-027S connectors are designed for rear-panel mounting and are supplied with conductive panel gaskets. These connectors feature machined aluminum shells and wire grommets for environmental protection. Contacts are rear-release snap-in crimp type. Connectors are supplied with crimp contacts packaged separately. Size #23 signal pins accept up to #22 AWG wire. Size #16 contacts accept #16-18 AWG wire. Size #12 contacts accept #12-14 AWG wire. Size 12 and 16 cavities also accept coaxial contacts purchased separately. Attach optional shielding adapters (799-016) for EMI protection.

## HOW TO ORDER

**Sample Part Number**

| 790-027S | H-66 | M | E | P |
|---|---|---|---|---|
| **Part Number** | **Shell Size - Insert Arr.** | **Shell Finish** | **EMI Spring** | **Hardware Option** |
| **790-027S**<br>Rear Panel Mounted Plug with Socket Contacts | See Table 1 for Available Insert Arrangements<br><br>To order a connector without size #16 or #12 power pins, substitute "W" instead of "P" in the insert arrangement.<br><br>Example:<br><br>***36P2*** is supplied with 2 power pins.<br><br>***36W2*** is supplied less the power pins.<br><br>See Section B for coaxial contacts purchased separately. | **M**<br>Electroless Nickel<br>*general purpose applications*<br><br>**MT**<br>Nickel-PTFE<br>*1000 Hour Grey™ maximum corrosion protection and durability (non-reflective grey)*<br><br>**ZNU**<br>Zinc-Nickel with Black Chromate<br>*tactical applications (non-reflective black)*<br><br>Additional shell finishes are listed on page C-9. | **E**<br>EMI Spring<br><br>**N**<br>No Spring<br><br>  <br> |  <br>**N**<br>No Hardware<br><br>  <br>**G**<br>Guide Pin<br><br>  <br>**P**<br>Female Jackpost<br><br>  <br>**S**<br>Female Guide Socket |

## SPECIFICATIONS

| | |
|---|---|
| Current Rating | #23 5 AMPS, #16 13 A., #12 23 A. |
| Dielectric Withstanding Voltage | #23 500 VAC RMS, #12 and #16 1800 VAC RMS |
| Insulation Resistance | 5000 megohms minimum |
| Operating Temperature | -65° C. to +150° C. |
| Shock | 300 g. |
| Vibration | 37 g. |

## MATERIALS AND FINISHES

| | |
|---|---|
| Shell | Aluminum alloy |
| Contacts | Copper alloy, 50 microinches gold plated, stainless steel hood |
| Insulators | Liquid crystal polymer (LCP) |
| Retention Clips | Beryllium copper alloy |
| Grommet | Flourosilicone rubber |
| Hardware | 300 series stainless steel |
| Panel Gasket | Fluorosilicone, conductive |

Dimensions in inches (millimeters) and are subject to change without notice.



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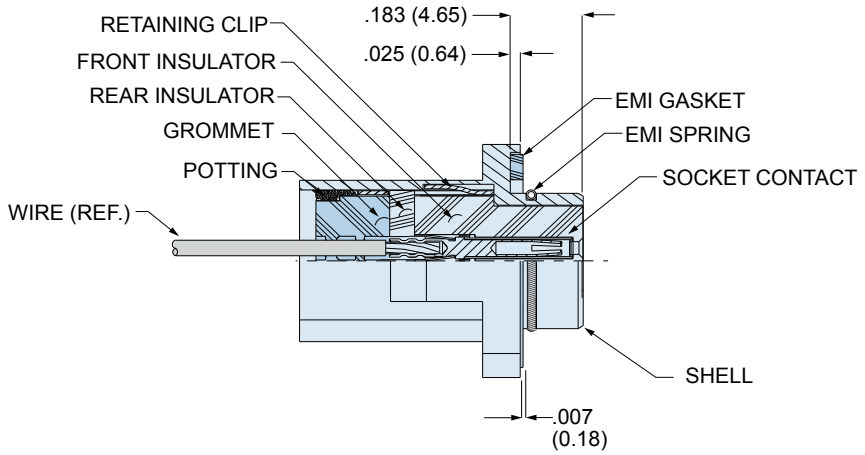
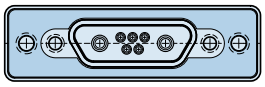
## Table 1 Contact Arrangements

| Layout | Contact Quantity #23 | #16 | #12 | Face View |
|---|---|---|---|---|
| A-5 | 5 | | | |
| B-2P2 | | 2 | | |
| B-9 | 9 | | | |
| C-13 | 13 | | | |
| D-15 | 15 | | | |
| D-3P3 | | 3 | | |
| D-7P2 | 5 | 2 | | |
| E-11P2 | 9 | 2 | | |
| E-19 | 19 | | | |
| E-7P3 | 4 | 3 | | |
| F-15P2 | 13 | 2 | | |
| F-23 | 23 | | | |
| F-5P5 | | 5 | | |
| G-33 | 33 | | | |
| H-10P4 | 6 | | 4 | |
| H-29P7 | 22 | 7 | | |
| H-36P2 | 34 | | 2 | |
| H-54P2 | 52 | 2 | | |
| H-5P5 | | | 5 | |
| H-66 | 66 | | | |
| J-17P4 | 13 | 4 | | |
| J-25P2 | 23 | 2 | | |
| J-33 | 33 | | | |
| J-7P7 | | 7 | | |
| K-27P4 | 23 | 4 | | |
| K-35P2 | 33 | 2 | | |
| K-43 | 43 | | | |
| K-9P9 | | 9 | | |
| L-6P6 | | | 6 | |

## CROSS-SECTIONAL VIEW OF 790-027S

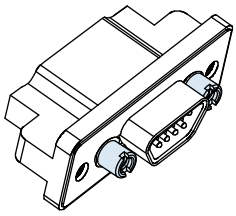



## TABLE 2 HARDWARE OPTION



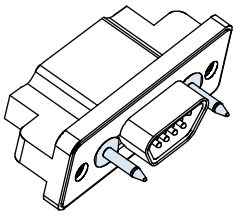
### N
### No Mating Hardware

Connector is supplied with threaded holes. Shell sizes H and L have #6-32 threads, other sizes have #4-40 threads. Thread depth is .150" (3.8).



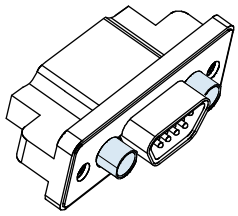
### P
### Jackposts

Connector is supplied with non-removable stainless steel jackposts. Shell sizes H and L have #4-40 UNC thread, other sizes have #2-56 thread. Stainless steel.



### G
### Guide Pins

Connector is supplied with stainless steel non-removable guide pins. Mates with type "S" guide sockets on corresponding receptacle connector.



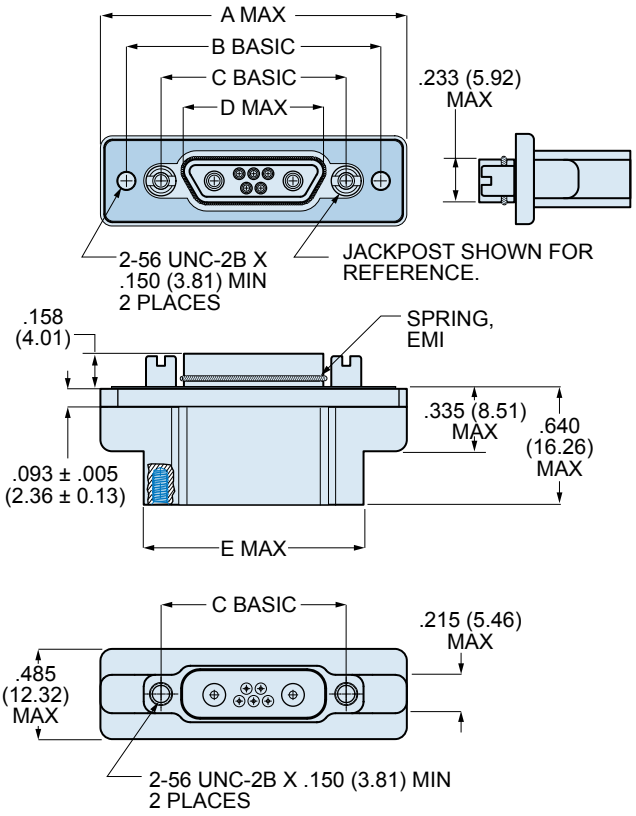
### S
### Guide Sockets

Connector is supplied with stainless steel non-removable bushings. Mates with type "G" guide pins on corresponding receptacle connector.

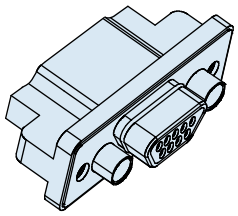
E

Dimensions in inches (millimeters) and are subject to change without notice.

## 790-027S SHELL SIZE A,B,C,D,E,F,J,K DIMENSIONS




### BLIND MATE



SHELL SIZES A, B, C, D, E, F, G, J, K
+/- .030 (0.76) ALLOWABLE
MISALIGNMENT FROM CENTERLINE

E

### 790-027S SIZE A-F, J, K DIMENSIONS

| Shell Size | A Max. | | B Basic | | C Basic | | D Max. | | E Max. | |
|---|---|---|---|---|---|---|---|---|---|---|
| | In. | mm. | In . | mm. | In. | mm. | In. | mm. | In. | mm. |
| A | 1.211 | 30.76 | .925 | 23.50 | .565 | 14.35 | .335 | 8.51 | .760 | 19.30 |
| B | 1.361 | 34.57 | 1.075 | 27.31 | .715 | 18.16 | .485 | 12.32 | .910 | 21.11 |
| C | 1.511 | 38.38 | 1.225 | 31.12 | .865 | 21.97 | .635 | 16.13 | 1.060 | 26.92 |
| D | 1.611 | 40.92 | 1.325 | 33.66 | .965 | 24.51 | .735 | 18.67 | 1.160 | 29.46 |
| E | 1.761 | 44.73 | 1.475 | 37.47 | 1.115 | 28.32 | .885 | 22.48 | 1.310 | 33.27 |
| F | 1.911 | 48.54 | 1.625 | 41.28 | 1.265 | 32.13 | 1.035 | 26.29 | 1.460 | 37.08 |
| J | 2.261 | 57.43 | 1.975 | 50.17 | 1.615 | 41.02 | 1.390 | 35.31 | 1.810 | 45.97 |
| K | 2.661 | 67.59 | 2.375 | 60.33 | 2.015 | 51.18 | 1.795 | 45.59 | 2.210 | 56.13 |

Dimensions in inches (millimeters) and are subject to change without notice.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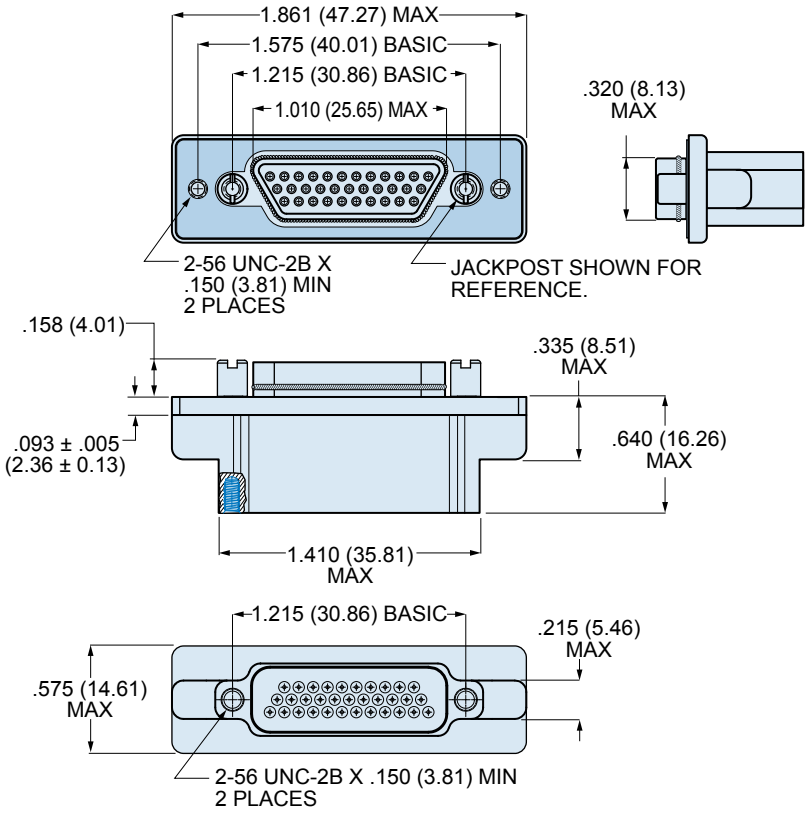
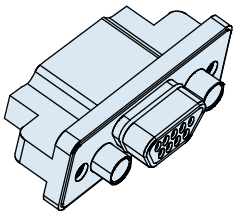
## 790-027S SHELL SIZE G DIMENSIONS




## BLIND MATE



SHELL SIZES A, B, C, D, E, F, G, J, K
+/- .030 (0.76) ALLOWABLE
MISALIGNMENT FROM CENTERLINE

E

Dimensions in inches (millimeters) and are subject to change without notice.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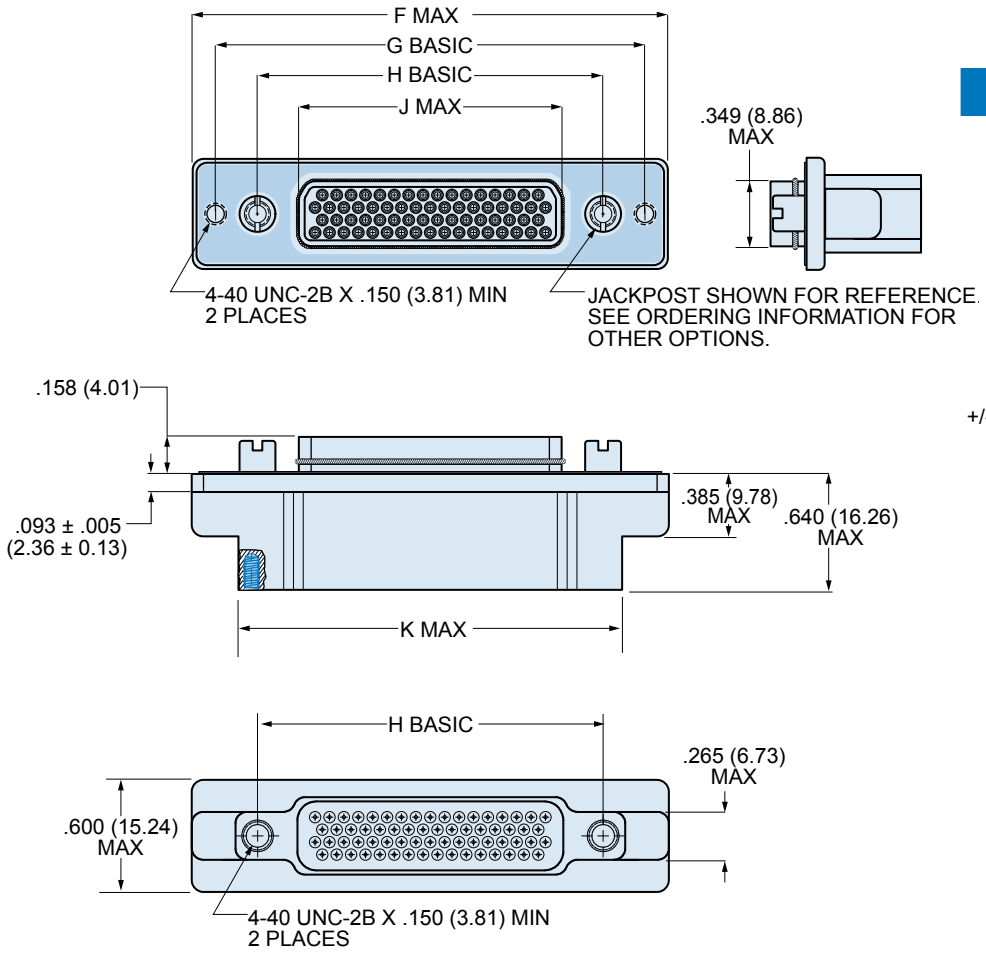
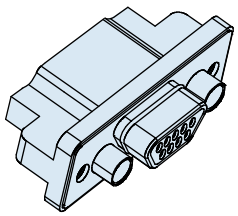
## 790-027S SHELL SIZE H AND L DIMENSIONS




### BLIND MATE



SHELL SIZES H, L
+/- .040 (1.02) ALLOWABLE MISALIGNMENT
FROM CENTERLINE

### 790-027S SIZE H & L DIMENSIONS

| Shell Size | F Max. | | G Basic | | H Basic | | J Max. | | K Max. | |
|---|---|---|---|---|---|---|---|---|---|---|
| | In. | mm. | In. | mm. | In. | mm. | In. | mm. | In. | mm. |
| H | 2.500 | 63.50 | 2.236 | 56.79 | 1.800 | 45.72 | 1.385 | 35.18 | 2.045 | 51.94 |
| L | 2.736 | 69.49 | 2.472 | 62.79 | 2.036 | 51.71 | 1.623 | 41.22 | 2.281 | 57.94 |

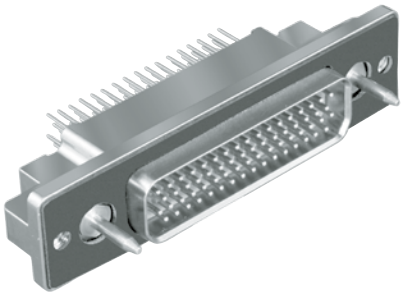
Dimensions in inches (millimeters) and are subject to change without notice.



CAGE Code 06324

Printed in U.S.A.

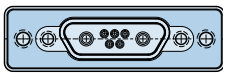
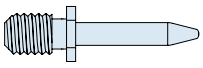
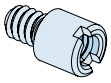
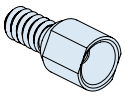
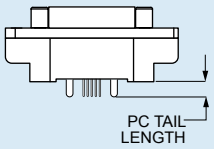
# PANEL RECEPTACLES WITH PIN CONTACTS, STRAIGHT PCB TERMINATION, 790-028P



790-028P connectors are designed for rear-panel mounting and are supplied with conductive panel gaskets. These connectors feature machined aluminum shells, fluorosilicone face seals and straight printed circuit board contacts. Contacts are epoxy-encapsulated and are non-removable. Contacts are gold plated. Connector shells provide blind threaded holes for attaching to panel and to printed circuit board. Available in 29 different insert arrangements, these connectors feature size #23 contacts for signal and data. For higher current applications, size #16 contacts provide up to 13 amps and size #12 contacts handle up to 23 amps.

## HOW TO ORDER

**Sample Part Number**

| 790-028P | J-25P2 | M | P | A |
|---|---|---|---|---|
| **Part Number** | **Shell Size - Insert Arr.** | **Shell Finish** | **Hardware Option** | **PC Tail Length** |
| **790-028P**<br>Rear Panel Mounted Receptacle with PC Tail Pin Contacts for Termination to Backplanes or Flexible Circuits | See Table 1 for Available Insert Arrangements | **M**<br>Electroless Nickel<br>*general purpose applications*<br><br>**MT**<br>Nickel-PTFE<br>*1000 Hour Grey™*<br>*maximum corrosion protection and durability*<br>*(non-reflective grey)*<br><br>**ZNU**<br>Zinc-Nickel with Black Chromate<br>*tactical applications*<br>*(non-reflective black)*<br><br>Additional shell finishes are listed on page C-9. |  <br>**N**<br>No Hardware<br><br>  <br>**G**<br>Guide Pin<br><br>  <br>**P**<br>Female Jackpost<br><br>  <br>**S**<br>Female Guide Socket | **A**<br>.125 Inch (3.2 mm.)<br><br>**B**<br>.250 inch (6.4 mm.)<br><br>  |

## SPECIFICATIONS

| | |
|---|---|
| Current Rating | #23 5 AMPS, #16 13 A., #12 23 A. |
| Dielectric Withstanding Voltage | #23 500 VAC RMS, #12 and #16 1800 VAC RMS |
| Insulation Resistance | 5000 megohms minimum |
| Operating Temperature | -65° C. to +150° C. |
| Shock | 300 g. |
| Vibration | 37 g. |

## MATERIALS AND FINISHES

| | |
|---|---|
| Shell | Aluminum alloy |
| Contacts | Copper alloy, 50 microinches gold plated |
| Insulators | Liquid crystal polymer (LCP) |
| Retention Clips | Beryllium copper alloy |
| Interfacial Seal | Flourosilicone rubber |
| Hardware | 300 series stainless steel |
| Panel Gasket | Fluorosilicone, conductive |
| Encapsulant | Epoxy |

Dimensions in inches (millimeters) and are subject to change without notice.


CAGE Code 06324
Printed in U.S.A.

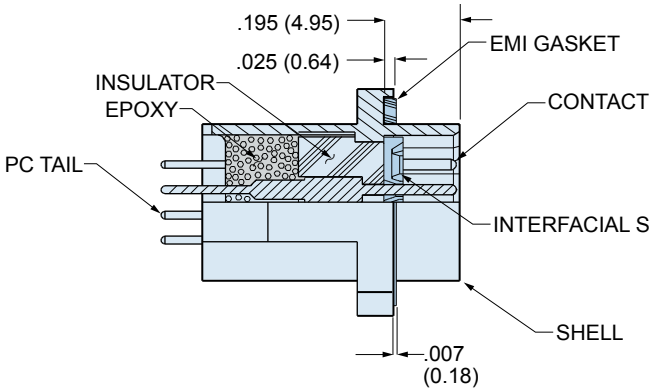
Glenair®

# Series 79 Micro-Crimp
# Section F: Straight Printed Circuit Board Connectors

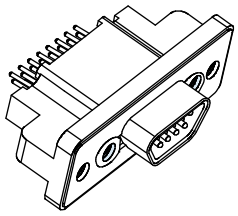
## Table 1 Contact Arrangements

| Layout | Contact Quantity #23 | #16 | #12 | Face View |
|---|---|---|---|---|
| A-5 | 5 | | | |
| B-2P2 | | 2 | | |
| B-9 | 9 | | | |
| C-13 | 13 | | | |
| D-15 | 15 | | | |
| D-3P3 | | 3 | | |
| D-7P2 | 5 | 2 | | |
| E-11P2 | 9 | 2 | | |
| E-19 | 19 | | | |
| E-7P3 | 4 | 3 | | |
| F-15P2 | 13 | 2 | | |
| F-23 | 23 | | | |
| F-5P5 | | 5 | | |
| G-33 | 33 | | | |
| H-10P4 | 6 | | 4 | |
| H-29P7 | 22 | 7 | | |
| H-36P2 | 34 | | 2 | |
| H-54P2 | 52 | 2 | | |
| H-5P5 | | | 5 | |
| H-66 | 66 | | | |
| J-17P4 | 13 | 4 | | |
| J-25P2 | 23 | 2 | | |
| J-33 | 33 | | | |
| J-7P7 | | 7 | | |
| K-27P4 | 23 | 4 | | |
| K-35P2 | 33 | 2 | | |
| K-43 | 43 | | | |
| K-9P9 | | 9 | | |
| L-6P6 | | | 6 | |

## CROSS-SECTIONAL VIEW OF 790-028P



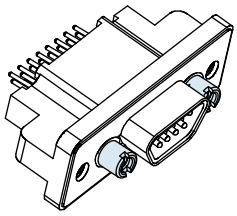

## TABLE 2 HARDWARE OPTION



**N**

### No Mating Hardware

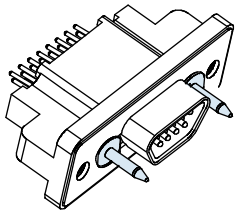
Connector is supplied with threaded holes. Shell sizes H and L have #6-32 threads, other sizes have #4-40 threads. Thread depth is .150" (3.8).



**P**

### Jackposts

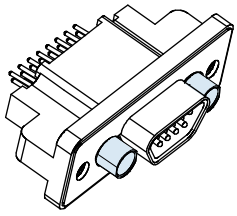
Connector is supplied with non-removable stainless steel jackposts. Shell sizes H and L have #4-40 UNC thread, other sizes have #2-56 thread.



**G**

### Guide Pins

Connector is supplied with stainless steel non-removable guide pins. Mates with type "S" guide sockets on corresponding plug connector.



**S**

### Guide Sockets

Connector is supplied with stainless steel non-removable bushings. Mates with type "G" guide pins on corresponding plug connector.

F

Dimensions in inches (millimeters) and are subject to change without notice.



CAGE Code 06324

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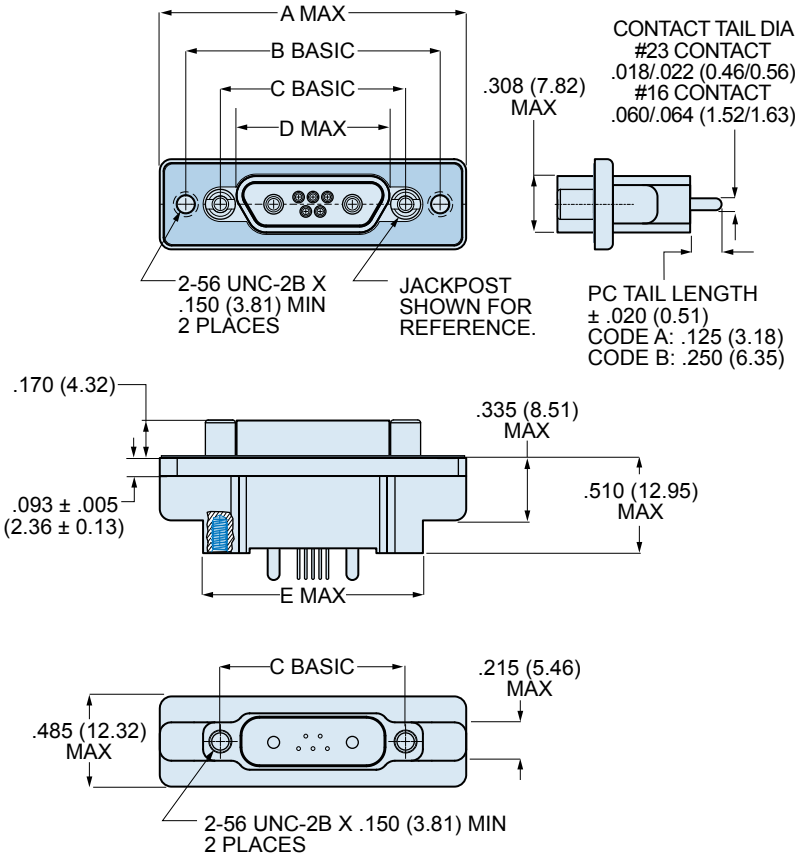
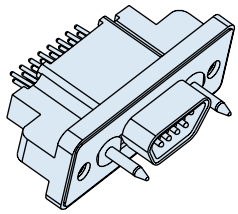
## 790-028P SHELL SIZE A,B,C,D,E,F,J,K DIMENSIONS




### BLIND MATE



SHELL SIZES A, B, C, D, E, F, G, J, K
+/- .030 (0.76) ALLOWABLE MISALIGNMENT FROM CENTERLINE

### 790-028P DIMENSIONS FOR SIZE A-F, J AND K

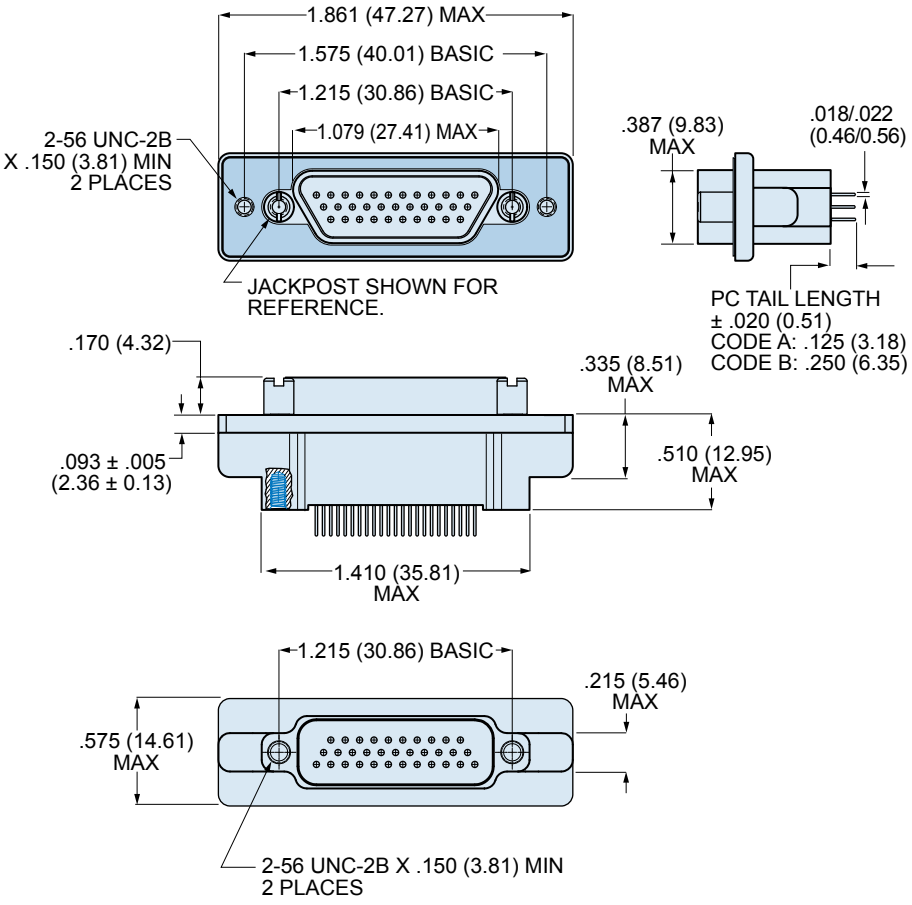
| Shell Size | A Max. | | B Basic | | C Basic | | D Max. | | E Max. | |
|---|---|---|---|---|---|---|---|---|---|---|
| | In. | mm. | In. | mm. | In. | mm. | In. | mm. | In. | mm. |
| A | 1.211 | 30.76 | .925 | 23.50 | .565 | 14.35 | .401 | 10.19 | .760 | 19.30 |
| B | 1.361 | 34.57 | 1.075 | 27.31 | .715 | 18.16 | .551 | 14.00 | .910 | 21.11 |
| C | 1.511 | 38.38 | 1.225 | 31.12 | .865 | 21.97 | .701 | 17.81 | 1.060 | 26.92 |
| D | 1.611 | 40.92 | 1.325 | 33.66 | .965 | 24.51 | .801 | 20.35 | 1.160 | 29.46 |
| E | 1.761 | 44.73 | 1.475 | 37.47 | 1.115 | 28.32 | .951 | 24.16 | 1.310 | 33.27 |
| F | 1.911 | 48.54 | 1.625 | 41.28 | 1.265 | 32.13 | 1.101 | 27.96 | 1.460 | 37.08 |
| J | 2.261 | 57.43 | 1.975 | 50.17 | 1.615 | 41.02 | 1.456 | 36.98 | 1.810 | 45.97 |
| K | 2.661 | 67.59 | 2.375 | 60.33 | 2.015 | 51.18 | 1.860 | 47.24 | 2.210 | 56.13 |

F

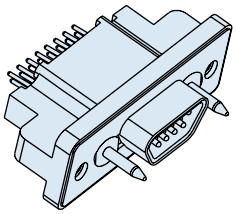
Dimensions in inches (millimeters) and are subject to change without notice.


CAGE Code 06324
Printed in U.S.A.

## 790-028P SHELL SIZE G DIMENSIONS




### BLIND MATE



SHELL SIZES A, B, C, D, E, F, G, J, K
+/- .030 (0.76) ALLOWABLE MISALIGNMENT
FROM CENTERLINE

F

Dimensions in inches (millimeters) and are subject to change without notice.



CAGE Code 06324

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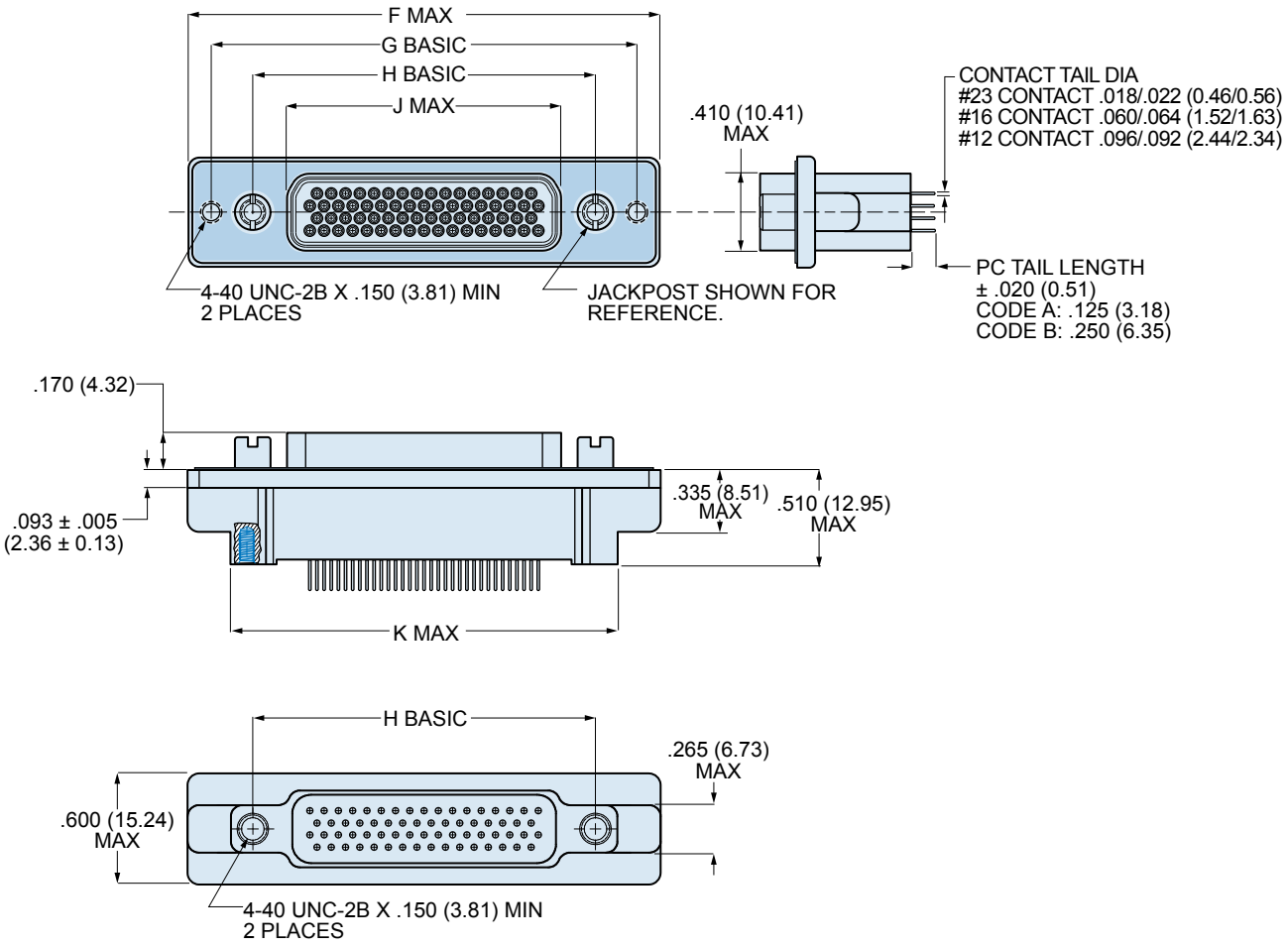
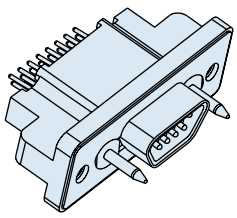
## 790-028P SHELL SIZE H, L DIMENSIONS




## 790-028P SIZE H & L DIMENSIONS

| Shell Size | F Max. | | G Basic | | H Basic | | J Max. | | K Max. | |
|---|---|---|---|---|---|---|---|---|---|---|
| | In. | mm. | In. | mm. | In. | mm. | In. | mm. | In. | mm. |
| H | 2.500 | 63.50 | 2.236 | 56.79 | 1.800 | 45.72 | 1.450 | 36.83 | 2.045 | 51.94 |
| L | 2.736 | 69.49 | 2.472 | 62.79 | 2.036 | 51.71 | 1.686 | 42.82 | 2.281 | 57.94 |

## BLIND MATE



SHELL SIZES H, L
+/- .040 (1.02) ALLOWABLE MISALIGNMENT
FROM CENTERLINE

F

Dimensions in inches (millimeters) and are subject to change without notice.



CAGE Code 06324

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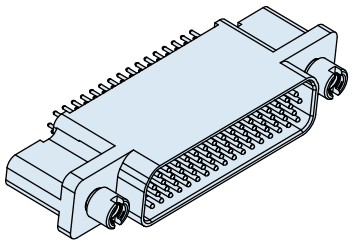
Glenair®

# Series 79 Micro-Crimp
# Section F: Straight Printed Circuit Board Connectors

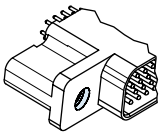
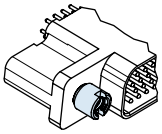
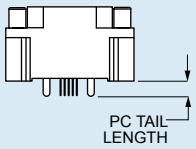
## RECEPTACLES WITH PIN CONTACTS, STRAIGHT PCB TERMINATION, 790-043P



790-043P connectors feature thru-hole termination to rigid or flexible circuits. These free-standing vertical mount headers mate with 790-025S cable connectors. 29 contact arrangements include size #16 and #12 power contacts for maximum design flexibility. Contacts are epoxy encapsulated and are non-removable. Fluorosilicone face seal provides watertight sealing when mated. One-piece machined aluminum shell has threaded holes for board attachment.

## HOW TO ORDER

**Sample Part Number**

| 790-043P | K-9P9 | M | P | A |
|---|---|---|---|---|
| **Part Number** | **Shell Size - Insert Arr.** | **Shell Finish** | **Hardware Option** | **PC Tail Length** |
| **790-043P**<br>Receptacle with Straight PC Tail Pin Contacts for Termination to Backplanes or Flexible Circuits | See Table 1 for Available Insert Arrangements | **M**<br>Electroless Nickel<br>*general purpose applications*<br><br>**MT**<br>Nickel-PTFE<br>*1000 Hour Grey™*<br>*maximum corrosion protection and durability*<br>*(non-reflective grey)*<br><br>**ZNU**<br>Zinc-Nickel with Black Chromate<br>*tactical applications*<br>*(non-reflective black)*<br><br>Additional shell finishes are listed on page C-9. |  <br>**N**<br>No Hardware<br><br>  <br>**P**<br>Female Jackpost | **A**<br>.125 Inch (3.2 mm.)<br><br>**B**<br>.250 inch (6.4 mm.)<br><br>  |

## SPECIFICATIONS

| | |
|---|---|
| Current Rating | #23 5 AMPS, #16 13 A., #12 23 A. |
| Dielectric Withstanding Voltage | #23 500 VAC RMS, #12 and #16 1800 VAC RMS |
| Insulation Resistance | 5000 megohms minimum |
| Operating Temperature | -65° C. to +150° C. |
| Shock | 300 g. |
| Vibration | 37 g. |

## MATERIALS AND FINISHES

| | |
|---|---|
| Shell | Aluminum alloy |
| Contacts | Copper alloy, 50 microinches gold plated |
| Insulators | Liquid crystal polymer (LCP) |
| Interfacial Seal | Flourosilicone rubber |
| Jackpost | 300 series stainless steel |
| Encapsulant | Epoxy |

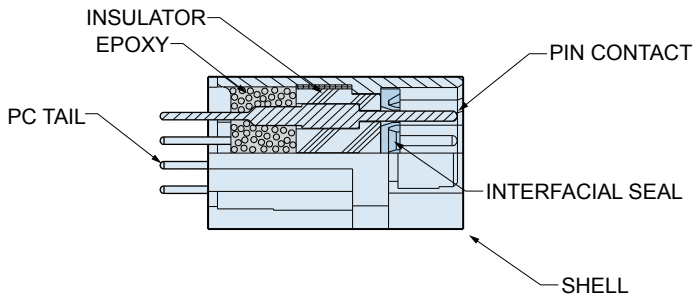
Dimensions in inches (millimeters) and are subject to change without notice.


CAGE Code 06324
Printed in U.S.A.

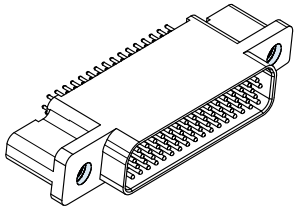
## Table 1 Contact Arrangements

| Layout | Contact Quantity #23 | #16 | #12 | Face View |
|---|---|---|---|---|
| A-5 | 5 | | | |
| B-2P2 | | 2 | | |
| B-9 | 9 | | | |
| C-13 | 13 | | | |
| D-15 | 15 | | | |
| D-3P3 | | 3 | | |
| D-7P2 | 5 | 2 | | |
| E-11P2 | 9 | 2 | | |
| E-19 | 19 | | | |
| E-7P3 | 4 | 3 | | |
| F-15P2 | 13 | 2 | | |
| F-23 | 23 | | | |
| F-5P5 | | 5 | | |
| G-33 | 33 | | | |
| H-10P4 | 6 | | 4 | |
| H-29P7 | 22 | 7 | | |
| H-36P2 | 34 | | 2 | |
| H-54P2 | 52 | 2 | | |
| H-5P5 | | | 5 | |
| H-66 | 66 | | | |
| J-17P4 | 13 | 4 | | |
| J-25P2 | 23 | 2 | | |
| J-33 | 33 | | | |
| J-7P7 | | 7 | | |
| K-27P4 | 23 | 4 | | |
| K-35P2 | 33 | 2 | | |
| K-43 | 43 | | | |
| K-9P9 | | 9 | | |
| L-6P6 | | | 6 | |

## CROSS-SECTIONAL VIEW OF 790-043P



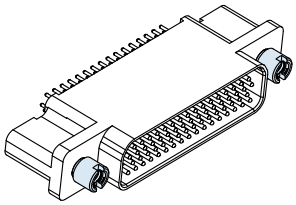

## TABLE 2 HARDWARE OPTION



**N**

### No Mating Hardware

Connector is supplied with threaded holes. Shell sizes H and L have #6-32 threads, other sizes have #4-40 threads. Thread depth is .150" (3.8).



**P**

### Jackposts

Connector is supplied with non-removable stainless steel jackposts. Shell sizes H and L have #4-40 UNC thread, other sizes have #2-56 thread.

F

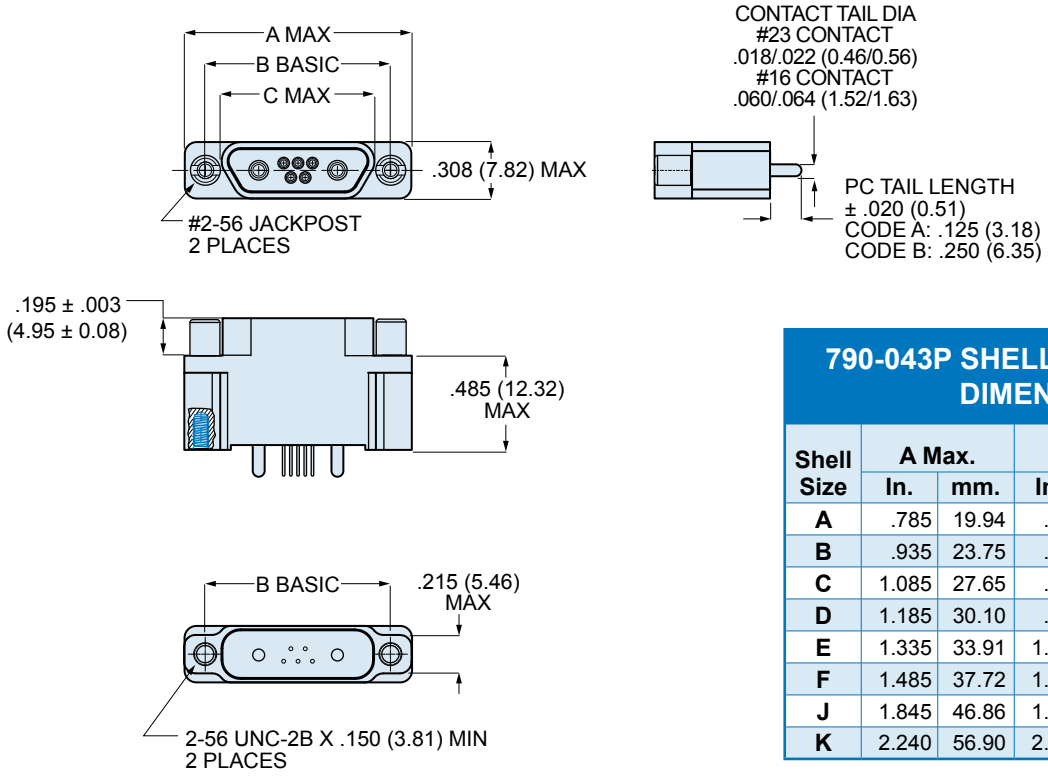
Dimensions in inches (millimeters) and are subject to change without notice.



CAGE Code 06324

Printed in U.S.A.

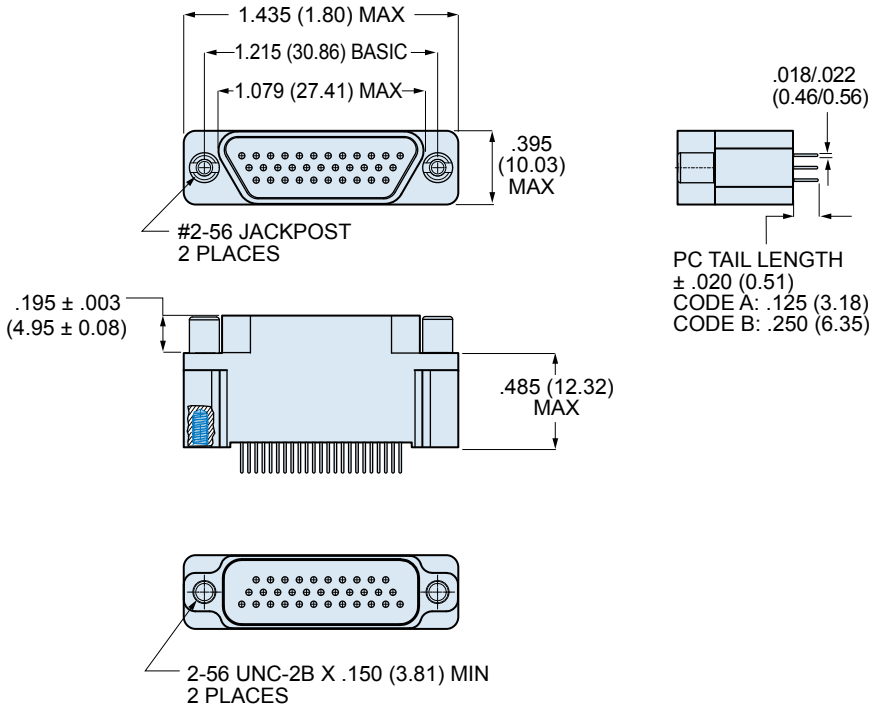
## 790-043P SHELL SIZE A-G, J & K DIMENSIONS




### 790-043P SHELL SIZE A-K, J & K DIMENSIONS

| Shell Size | A Max. | | B Basic | | C Max. | |
|---|---|---|---|---|---|---|
| | In. | mm. | In . | mm. | In. | mm. |
| A | .785 | 19.94 | .565 | 14.35 | .400 | 10.16 |
| B | .935 | 23.75 | .715 | 18.16 | .551 | 14.00 |
| C | 1.085 | 27.65 | .865 | 21.97 | .701 | 17.81 |
| D | 1.185 | 30.10 | .965 | 24.51 | .801 | 20.35 |
| E | 1.335 | 33.91 | 1.115 | 28.32 | .951 | 24.16 |
| F | 1.485 | 37.72 | 1.265 | 32.13 | 1.101 | 27.96 |
| J | 1.845 | 46.86 | 1.615 | 41.02 | 1.460 | 37.08 |
| K | 2.240 | 56.90 | 2.015 | 51.18 | 1.860 | 47.24 |

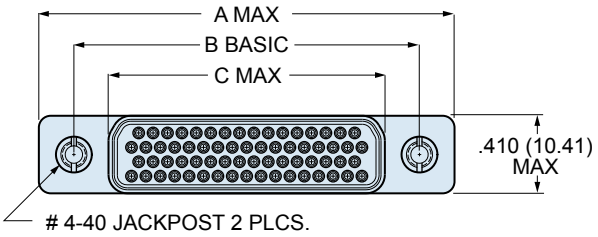
## 790-043P SHELL SIZE G DIMENSIONS

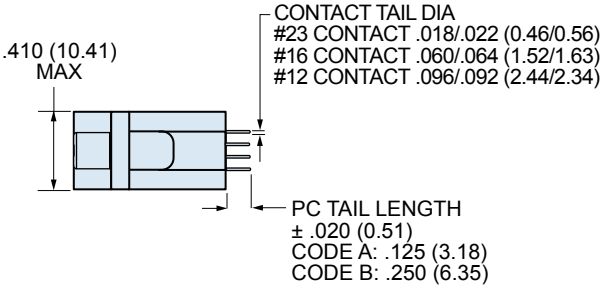


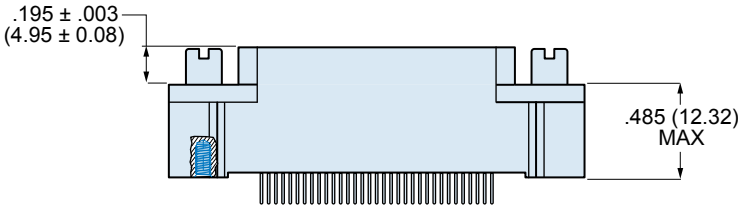

Dimensions in inches (millimeters) and are subject to change without notice.

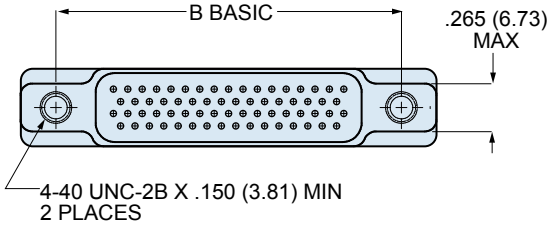

CAGE Code 06324
Printed in U.S.A.

## 790-043P SHELL SIZE H & L DIMENSIONS




**790-043P DIMENSIONS
SHELL SIZE H & L**

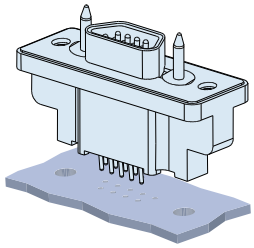
| Shell Size | A Max. | | B Basic | | C Max. | |
|---|---|---|---|---|---|---|
| | In. | mm. | In. | mm. | In. | mm. |
| H | 2.175 | 55.25 | 1.800 | 45.72 | 1.450 | 36.83 |
| L | 2.420 | 61.47 | 2.036 | 51.71 | 1.686 | 42.82 |

F

Dimensions in inches (millimeters) and are subject to change without notice.


CAGE Code 06324
Printed in U.S.A.

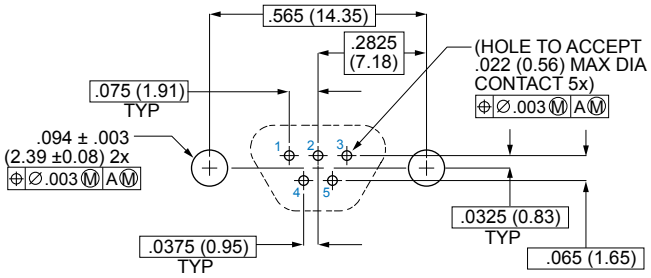
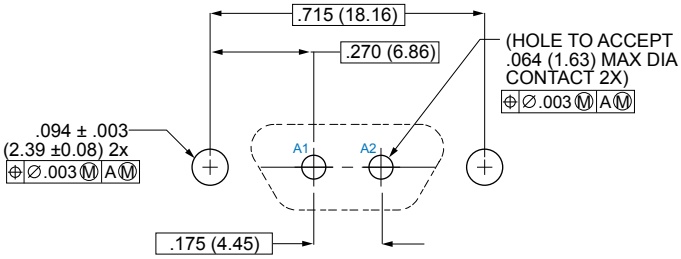
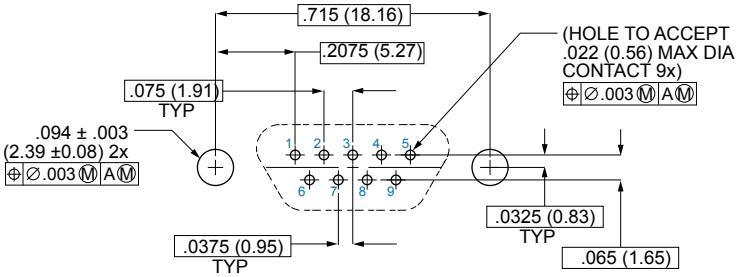
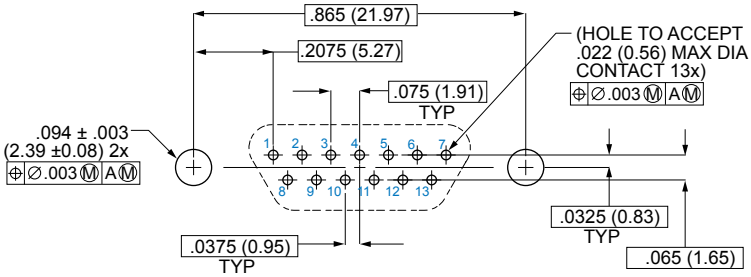
# PCB Hole Patterns for 790-028P and 790-043P Receptacles



This section contains printed circuit board footprints for vertical mounted Series 79 receptacles. The contact identification numbers are shown for the connector mounting side of the PC board. Contact tails are gold over nickel plated.

| PC Tail Diameter | | |
|---|---|---|
| Contact Size | Ø Diameter In. | mm. |
| #23 | .018-.022 | 0.46-0.56 |
| #16 | .060-.064 | 1.52-1.63 |
| #12 | .092-.096 | 2.34-2.44 |

## 790-028P PRINTED CIRCUIT BOARD PATTERNS

| Insert Arr. | Component Mounting Side of PCB |
|---|---|
| A-5 |  |
| B-2P2 |  |
| B-9 |  |
| C-13 |  |









Dimensions in inches (millimeters) and are subject to change without notice.



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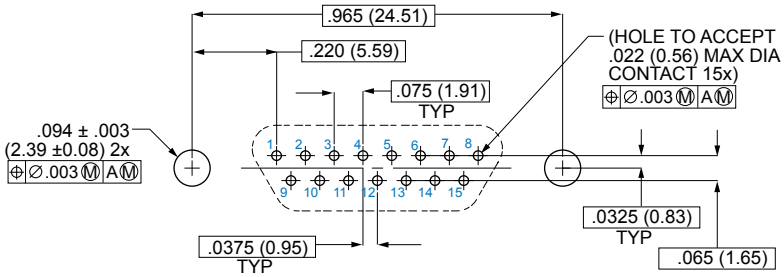
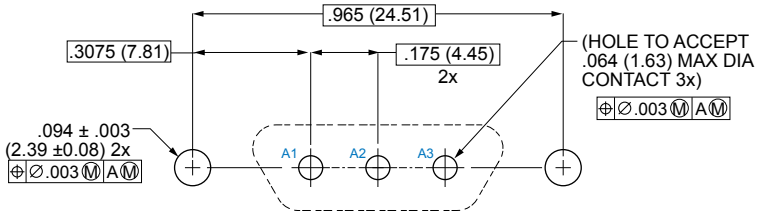
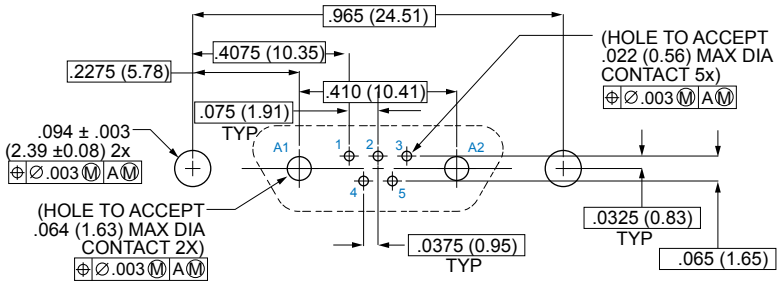
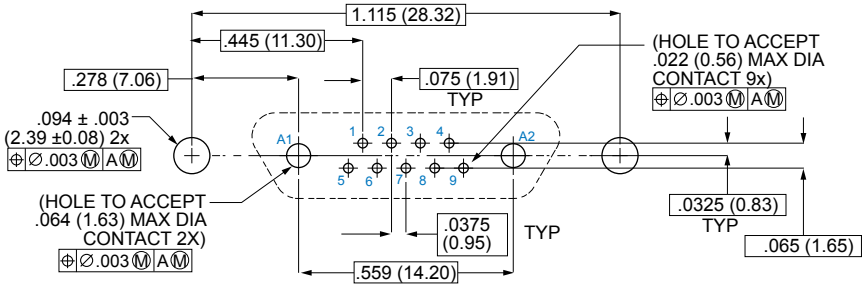
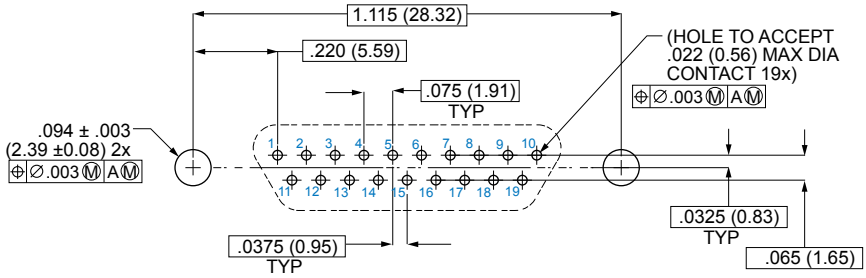
## 790-028P PRINTED CIRCUIT BOARD PATTERNS

| Insert Arr. | Component Mounting Side of PCB |
|---|---|
| D-15 |  |
| D-3P3 |  |
| D-7P2 |  |
| E-11P2 |  |
| E-19 |  |



F

Dimensions in inches (millimeters) and are subject to change without notice.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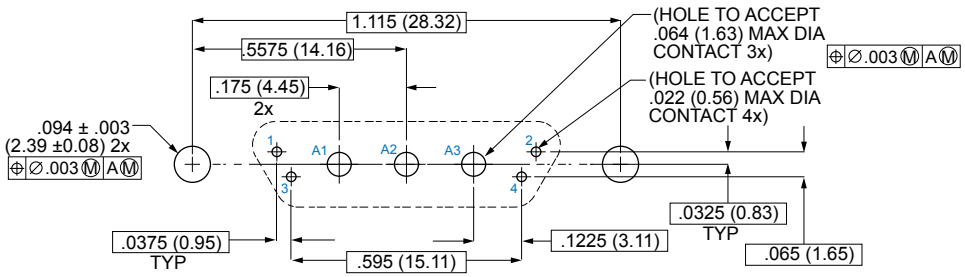
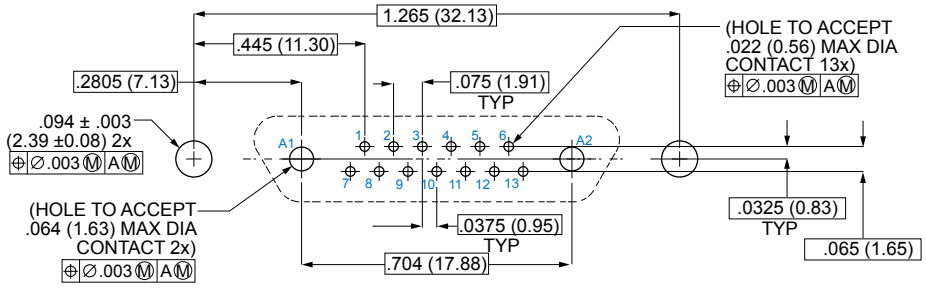
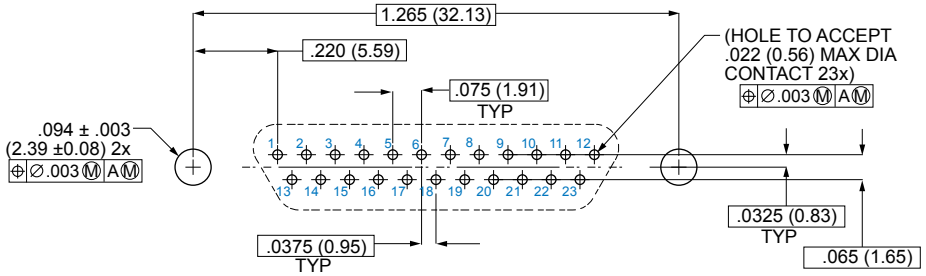
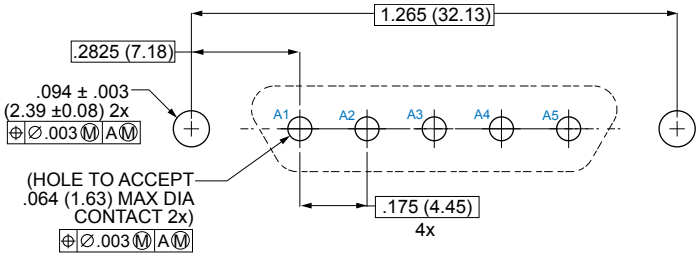
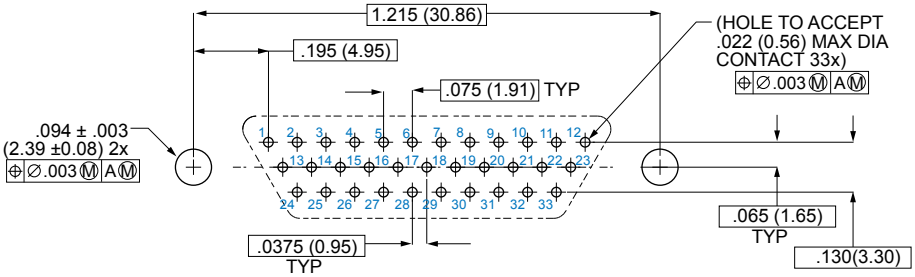
## 790-028P PRINTED CIRCUIT BOARD PATTERNS

| Insert Arr. | Component Mounting Side of PCB |
|---|---|
| E-7P3 |  |
| F-15P2 |  |
| F-23 |  |
| F-5P5 |  |
| G-33 |  |



Dimensions in inches (millimeters) and are subject to change without notice.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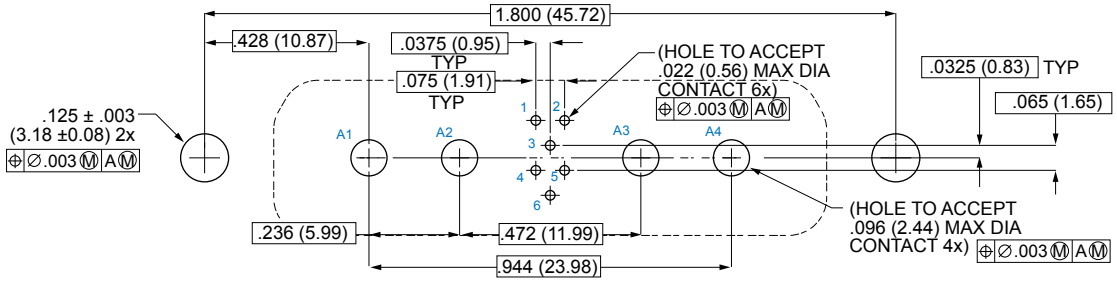
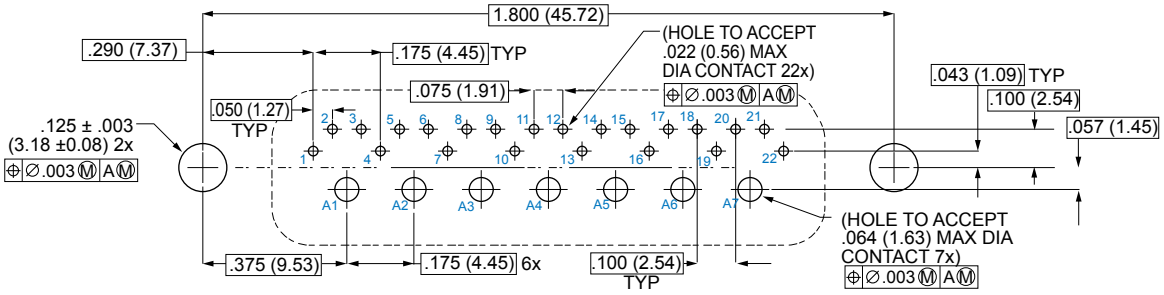
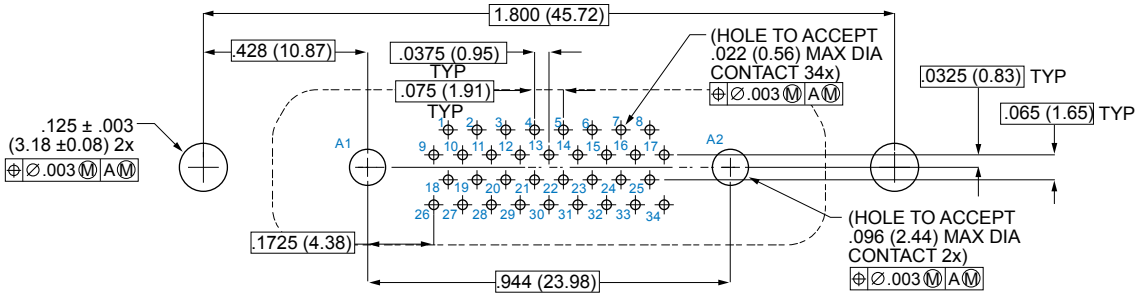
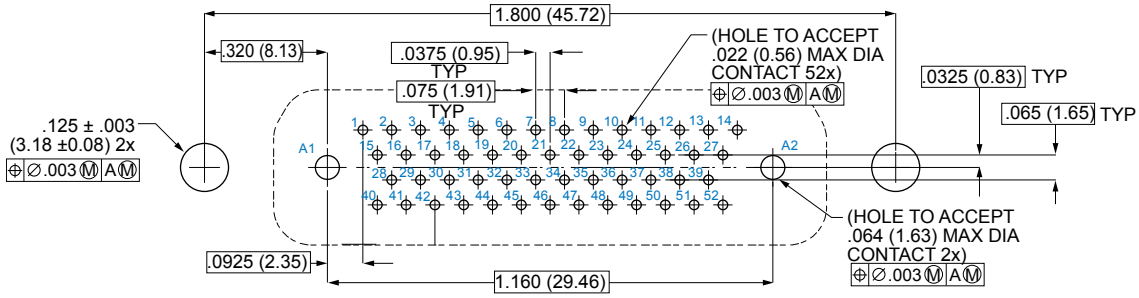
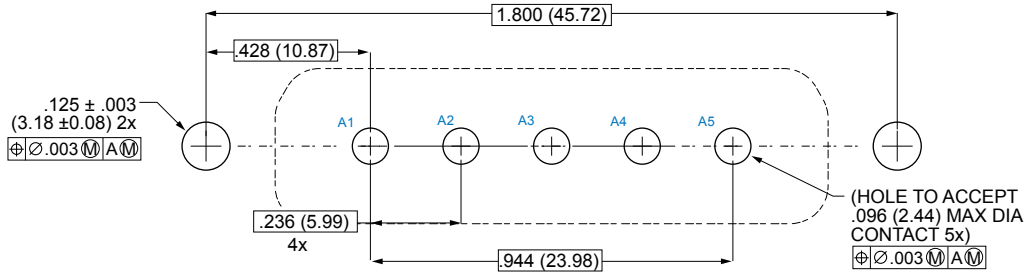
## 790-028P PRINTED CIRCUIT BOARD PATTERNS

| Insert Arr. | Component Mounting Side of PCB |
|---|---|
| H-10P4 |  |
| H-29P7 |  |
| H-36P2 |  |
| H-54P2 |  |
| H-5P5 |  |



Dimensions in inches (millimeters) and are subject to change without notice.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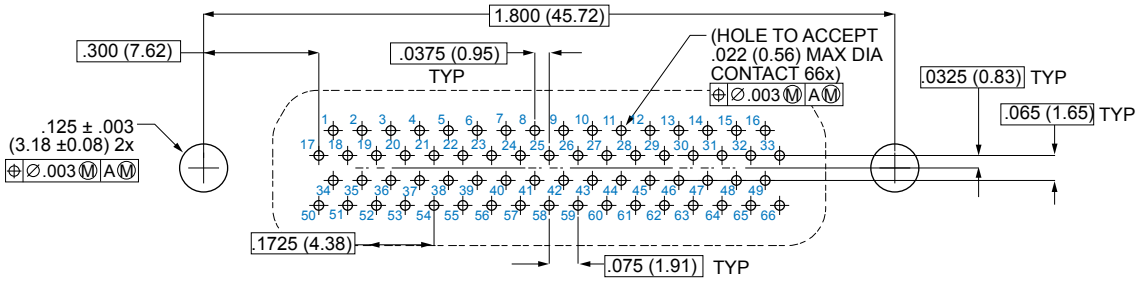
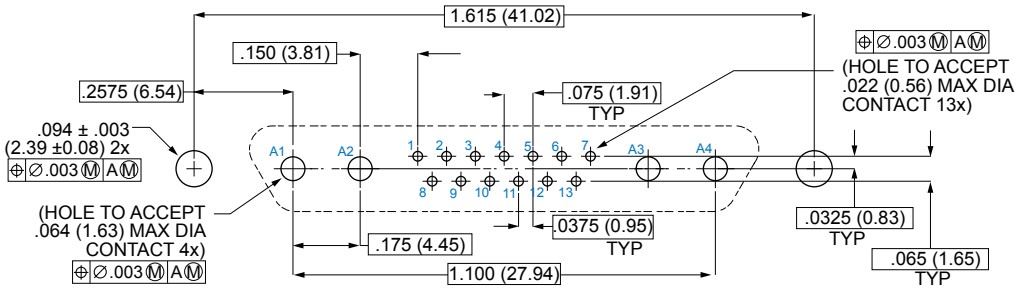
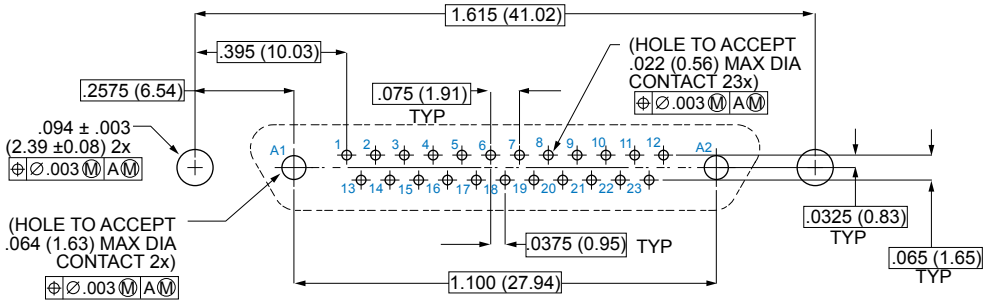
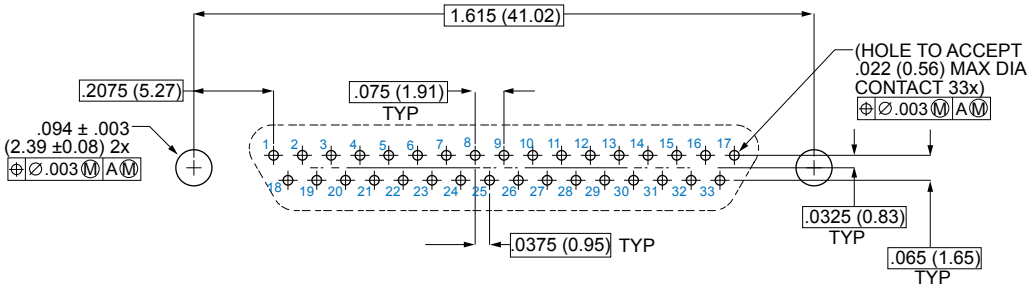
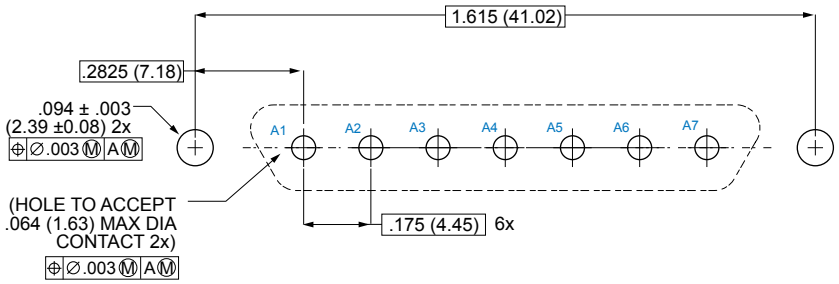
## 790-028P PRINTED CIRCUIT BOARD PATTERNS

| Insert Arr. | Component Mounting Side of PCB |
|---|---|
| H-66 |  |
| J-17P4 |  |
| J-25P2 |  |
| J-33 |  |
| J-7P7 |  |



Dimensions in inches (millimeters) and are subject to change without notice.



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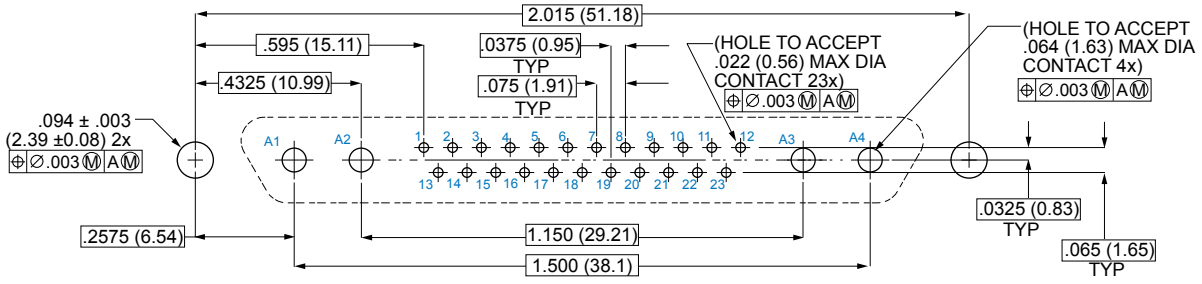
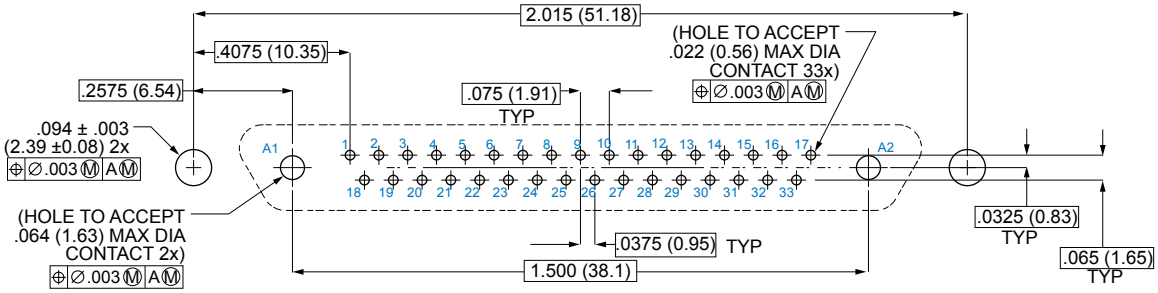
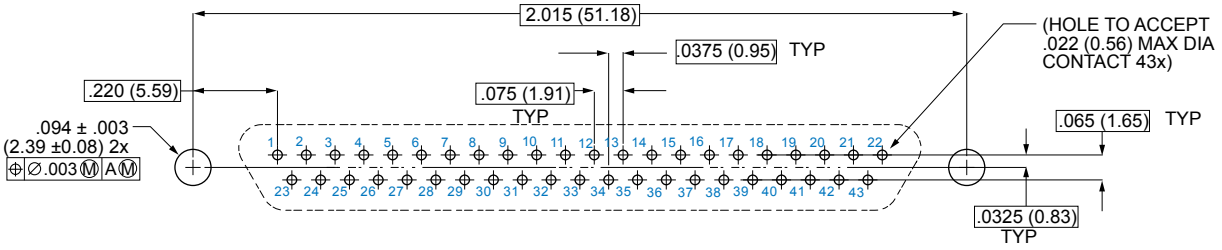
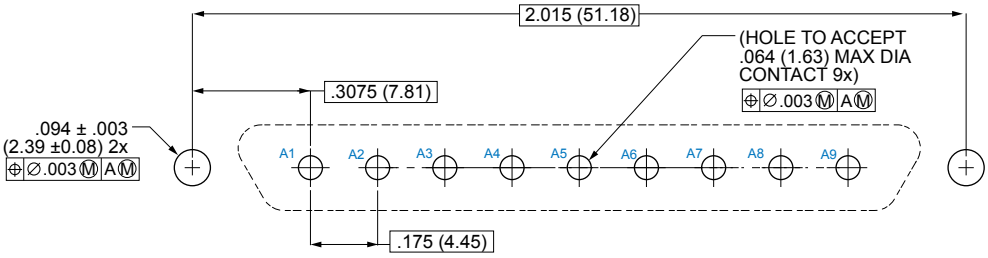
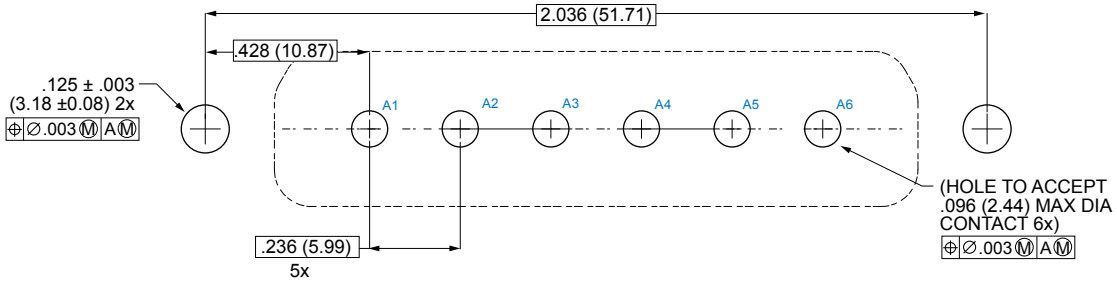
## 790-028P PRINTED CIRCUIT BOARD PATTERNS

| Insert Arr. | Component Mounting Side of PCB |
|---|---|
| K-27P4 |  |
| K-35P2 |  |
| K-43 |  |
| K-9P9 |  |
| L-6P6 |  |



Dimensions in inches (millimeters) and are subject to change without notice.


CAGE Code 06324
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Glenair®

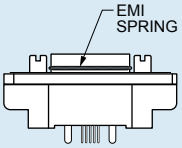
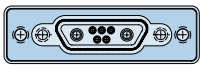
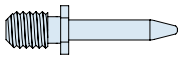
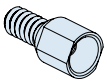
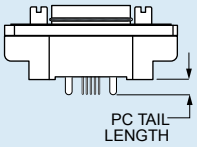
# Series 79 Micro-Crimp
# Section F: Straight Printed Circuit Board Connectors

## PANEL PLUGS WITH SOCKET CONTACTS, STRAIGHT PCB TERMINATION, 790-029S

Lightweight, rugged vertical mount headers feature gold-plated PC tail contacts for thru-hole printed circuit board termination. 790-029S connectors are designed for rear-panel mounting and are supplied with conductive panel gaskets. Contacts are permanently installed and are sealed with epoxy. Shells are aluminum alloy. Threaded board mounting holes and integral standoffs simplify installation. Available in 29 different contact arrangements, these connectors feature size #23 signal contacts along with #16 and #12 power contacts for up to 23 amps current rating. Optional EMI spring improves shell-to-shell conductivity and shielding performance. Stainless steel jackposts are non-removable.

## HOW TO ORDER

**Sample Part Number**

| 790-029S | K-43 | M | E | P | B |
|---|---|---|---|---|---|
| **Part Number** | **Shell Size - Insert Arr.** | **Shell Finish** | **EMI Spring** | **Hardware Option** | **PC Tail Length** |
| **790-029S**<br>Rear Panel Mounted Plug with Straight PC Tail Contacts for Termination to Backplanes or Flexible Circuits | See Table 1 for Available Insert Arrangements | **M**<br>Electroless Nickel<br>*general purpose applications*<br>**MT**<br>Nickel-PTFE<br>*1000 Hour Grey™ maximum corrosion protection and durability (non-reflective grey)*<br>**ZNU**<br>Zinc-Nickel with Black Chromate<br>*tactical applications (non-reflective black)*<br>Additional shell finishes are listed on page C-9. | **E**<br>EMI Spring<br>**N**<br>No Spring<br>  |  <br>**N**<br>No Hardware<br>  <br>**G**<br>Guide Pin<br>  <br>**P**<br>Female Jackpost<br>  <br>**S**<br>Female Guide Socket | **A**<br>.125 Inch (3.2 mm.)<br>**B**<br>.250 inch (6.4 mm.)<br>  |

## SPECIFICATIONS

| | |
|---|---|
| Current Rating | #23 5 AMPS, #16 13 A., #12 23 A. |
| Dielectric Withstanding Voltage | #23 500 VAC RMS, #12 and #16 1800 VAC RMS |
| Insulation Resistance | 5000 megohms minimum |
| Operating Temperature | -65° C. to +150° C. |
| Shock | 300 g. |
| Vibration | 37 g. |

## MATERIALS AND FINISHES

| | |
|---|---|
| Shell | Aluminum alloy |
| Contacts | Copper alloy, 50 microinches gold plated, with stainless steel hoods |
| Insulator | Liquid crystal polymer (LCP) |
| Hardware | 300 series stainless steel |
| Panel Gasket | Fluorosilicone, conductive |
| Encapsulant | Epoxy |

Dimensions in inches (millimeters) and are subject to change without notice.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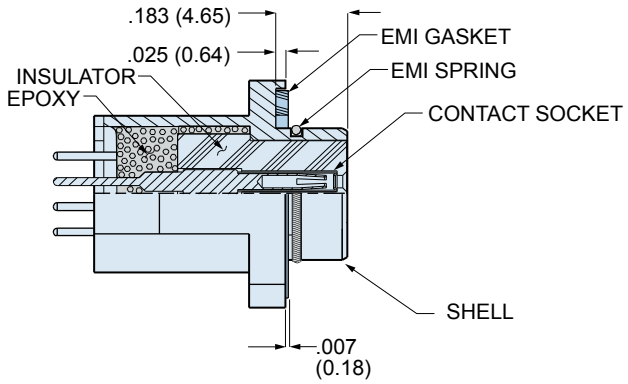
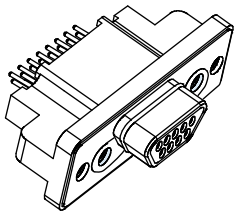
## Table 1 Contact Arrangements

| Layout | Contact Quantity #23 | #16 | #12 | Face View |
|---|---|---|---|---|
| A-5 | 5 | | | |
| B-2P2 | | 2 | | |
| B-9 | 9 | | | |
| C-13 | 13 | | | |
| D-15 | 15 | | | |
| D-3P3 | | 3 | | |
| D-7P2 | 5 | 2 | | |
| E-11P2 | 9 | 2 | | |
| E-19 | 19 | | | |
| E-7P3 | 4 | 3 | | |
| F-15P2 | 13 | 2 | | |
| F-23 | 23 | | | |
| F-5P5 | | 5 | | |
| G-33 | 33 | | | |
| H-10P4 | 6 | | 4 | |
| H-29P7 | 22 | 7 | | |
| H-36P2 | 34 | | 2 | |
| H-54P2 | 52 | 2 | | |
| H-5P5 | | | 5 | |
| H-66 | 66 | | | |
| J-17P4 | 13 | 4 | | |
| J-25P2 | 23 | 2 | | |
| J-33 | 33 | | | |
| J-7P7 | | 7 | | |
| K-27P4 | 23 | 4 | | |
| K-35P2 | 33 | 2 | | |
| K-43 | 43 | | | |
| K-9P9 | | 9 | | |
| L-6P6 | | | 6 | |

## CROSS-SECTIONAL VIEW OF 790-029S



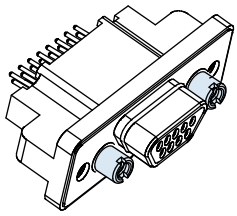

## TABLE 2 HARDWARE OPTION



**N**

### No Mating Hardware

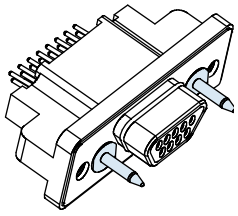
Connector is supplied with threaded holes. Shell sizes H and L have #6-32 threads, other sizes have #4-40 threads. Thread depth is .150" (3.8).



**P**

### Jackposts

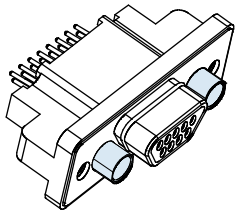
Connector is supplied with non-removable stainless steel jackposts. Shell sizes H and L have #4-40 UNC thread, other sizes have #2-56 thread.



**G**

### Guide Pins

Connector is supplied with stainless steel non-removable guide pins. Mates with type "S" guide sockets on corresponding receptacle connector.



**S**

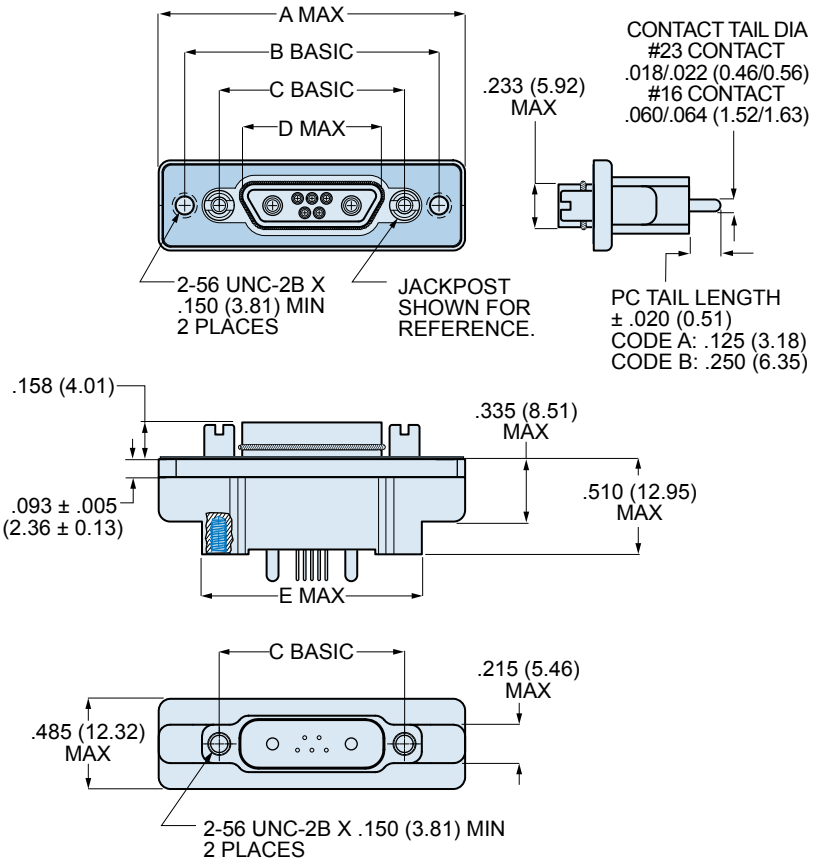
### Guide Sockets

Connector is supplied with stainless steel non-removable bushings. Mates with type "G" guide pins on corresponding receptacle connector.

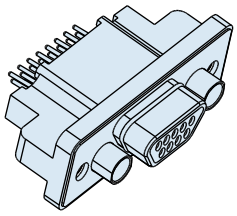
F

Dimensions in inches (millimeters) and are subject to change without notice.

## 790-029S SHELL SIZE A,B,C,D,E,F,J,K DIMENSIONS




### BLIND MATE



SHELL SIZES A, B, C, D, E, F, G, J, K
+/- .030 (0.76) ALLOWABLE
MISALIGNMENT FROM CENTERLINE

### 790-029S SIZE A-F, J, K DIMENSIONS

| Shell Size | A Max. | | B Basic | | C Basic | | D Max. | | E Max. | |
|---|---|---|---|---|---|---|---|---|---|---|
| | In. | mm. | In . | mm. | In. | mm. | In. | mm. | In. | mm. |
| A | 1.211 | 30.76 | .925 | 23.50 | .565 | 14.35 | .335 | 8.51 | .760 | 19.30 |
| B | 1.361 | 34.57 | 1.075 | 27.31 | .715 | 18.16 | .485 | 12.32 | .910 | 21.11 |
| C | 1.511 | 38.38 | 1.225 | 31.12 | .865 | 21.97 | .635 | 16.13 | 1.060 | 26.92 |
| D | 1.611 | 40.92 | 1.325 | 33.66 | .965 | 24.51 | .735 | 18.67 | 1.160 | 29.46 |
| E | 1.761 | 44.73 | 1.475 | 37.47 | 1.115 | 28.32 | .885 | 22.48 | 1.310 | 33.27 |
| F | 1.911 | 48.54 | 1.625 | 41.28 | 1.265 | 32.13 | 1.035 | 26.29 | 1.460 | 37.08 |
| J | 2.261 | 57.43 | 1.975 | 50.17 | 1.615 | 41.02 | 1.390 | 35.31 | 1.810 | 45.97 |
| K | 2.661 | 67.59 | 2.375 | 60.33 | 2.015 | 51.18 | 1.795 | 45.59 | 2.210 | 56.13 |



Dimensions in inches (millimeters) and are subject to change without notice.



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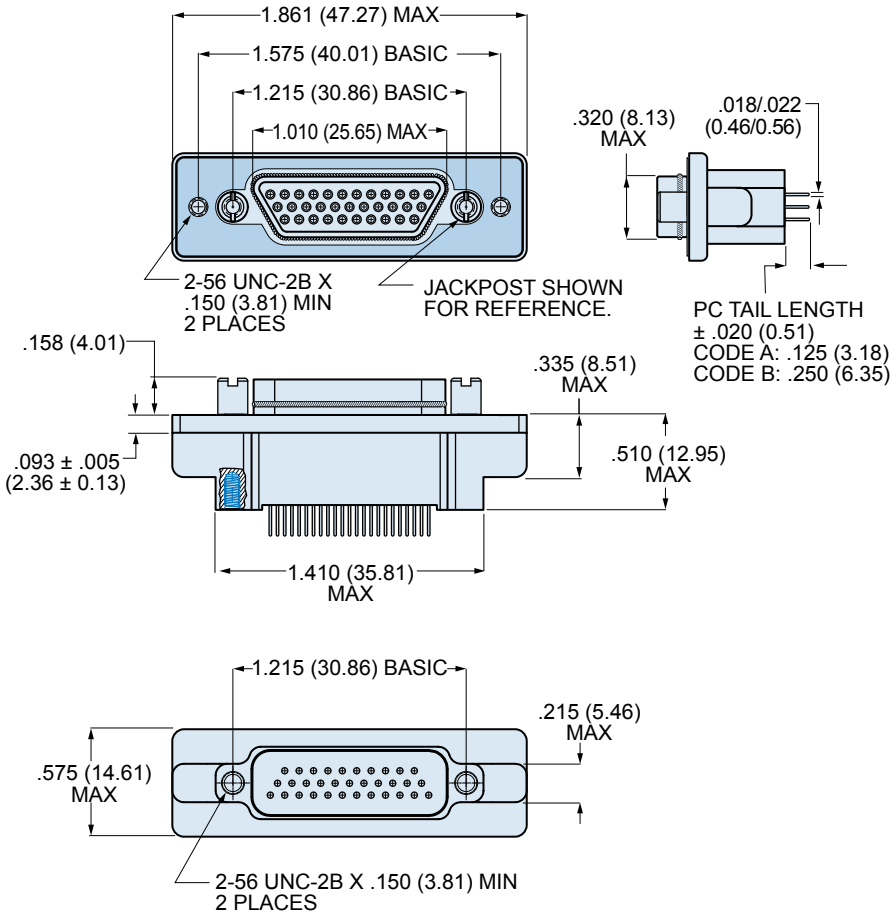
www.glenair.com



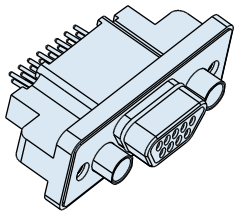
E-Mail: sales@glenair.com

Rev. 01-AUG-2008

## 790-029S SHELL SIZE G DIMENSIONS




### BLIND MATE



SHELL SIZES A, B, C, D, E, F, G, J, K
+/- .030 (0.76) ALLOWABLE
MISALIGNMENT FROM CENTERLINE

F

Dimensions in inches (millimeters) and are subject to change without notice.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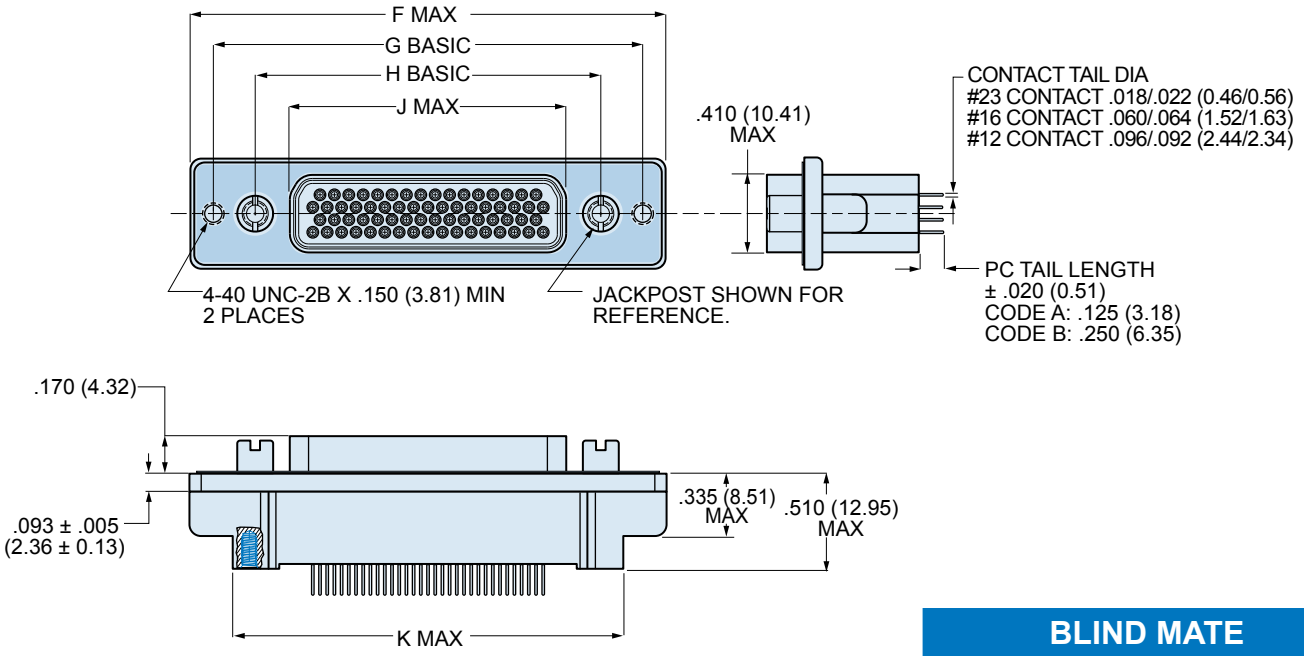
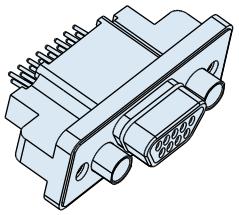
# Series 79 Micro-Crimp
# Section F: Straight Printed Circuit Board Connectors

## 790-029S SHELL SIZE H AND L DIMENSIONS




## BLIND MATE



SHELL SIZES H, L
+/- .040 (1.02) ALLOWABLE MISALIGNMENT
FROM CENTERLINE

## 790-029S SIZE H & L DIMENSIONS

| Shell Size | F Max. | | G Basic | | H Basic | | J Max. | | K Max. | |
|---|---|---|---|---|---|---|---|---|---|---|
| | In. | mm. | In. | mm. | In. | mm. | In. | mm. | In. | mm. |
| H | 2.500 | 63.50 | 2.236 | 56.79 | 1.800 | 45.72 | 1.385 | 35.18 | 2.045 | 51.94 |
| L | 2.736 | 69.49 | 2.472 | 62.79 | 2.036 | 51.71 | 1.623 | 41.22 | 2.281 | 57.94 |

Dimensions in inches (millimeters) and are subject to change without notice.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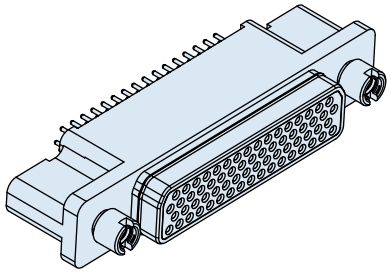
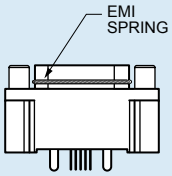
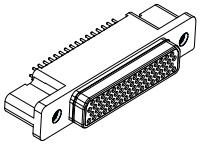
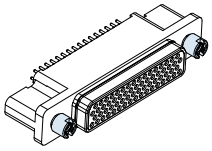
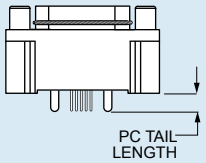
## PLUGS WITH SOCKET CONTACTS, STRAIGHT PCB TERMINATION, 790-044S



Free-standing, rugged vertical mount headers feature gold-plated PC tail contacts for thru-hole printed circuit board termination. Contacts are permanently installed and are sealed with epoxy. Shells are aluminum alloy. Threaded board mounting holes and integral standoffs simplify installation. Available in 29 different contact arrangements, these connectors feature size #23 signal contacts along with #16 and #12 power contacts for up to 23 amps current rating. Optional EMI spring improves shell-to-shell conductivity and shielding performance. Stainless steel jackposts are non-removable.

## HOW TO ORDER

**Sample Part Number**

| 790-044S | D-15 | MT | E | P | B |
|---|---|---|---|---|---|
| **Part Number** | **Shell Size - Insert Arr.** | **Shell Finish** | **EMI Spring** | **Hardware Option** | **PC Tail Length** |
| **790-044S**<br>Plug with Straight Thru-Hole PC Tail Contacts for Termination to Backplanes or Flexible Circuits | See Table 1 for Available Insert Arrangements | **M**<br>Electroless Nickel<br>*general purpose applications*<br>**MT**<br>Nickel-PTFE<br>*1000 Hour Grey™ maximum corrosion protection and durability (non-reflective grey)*<br>**ZNU**<br>Zinc-Nickel with Black Chromate<br>*tactical applications (non-reflective black)*<br>Additional shell finishes are listed on page C-9. | **E**<br>EMI Spring<br>**N**<br>No Spring<br>  |  <br>**N**<br>No Hardware<br>  <br>**P**<br>Female Jackpost | **A**<br>.125 Inch (3.2 mm.)<br>**B**<br>.250 inch (6.4 mm.)<br>  |

F

## SPECIFICATIONS

| | |
|---|---|
| Current Rating | #23 5 AMPS, #16 13 A., #12 23 A. |
| Dielectric Withstanding Voltage | #23 500 VAC RMS, #12 and #16 1800 VAC RMS |
| Insulation Resistance | 5000 megohms minimum |
| Operating Temperature | -65° C. to +150° C. |
| Shock | 300 g. |
| Vibration | 37 g. |

## MATERIALS AND FINISHES

| | |
|---|---|
| Shell | Aluminum alloy |
| Contacts | Copper alloy, 50 microinches gold plated, stainless steel hood |
| Insulator | Liquid crystal polymer (LCP) |
| Jackposts | 300 series stainless steel |
| Encapsulant | Epoxy |

Dimensions in inches (millimeters) and are subject to change without notice.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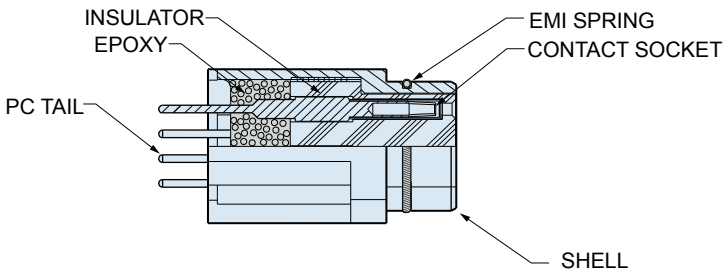
# Series 79 Micro-Crimp
# Section F: Straight Printed Circuit Board Connectors

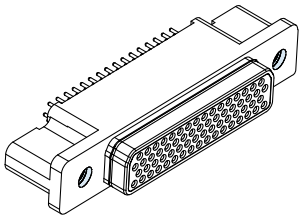
## Table 1 Contact Arrangements

| Layout | Contact Quantity #23 | #16 | #12 | Face View |
|---|---|---|---|---|
| A-5 | 5 | | | |
| B-2P2 | | 2 | | |
| B-9 | 9 | | | |
| C-13 | 13 | | | |
| D-15 | 15 | | | |
| D-3P3 | | 3 | | |
| D-7P2 | 5 | 2 | | |
| E-11P2 | 9 | 2 | | |
| E-19 | 19 | | | |
| E-7P3 | 4 | 3 | | |
| F-15P2 | 13 | 2 | | |
| F-23 | 23 | | | |
| F-5P5 | | 5 | | |
| G-33 | 33 | | | |
| H-10P4 | 6 | | 4 | |
| H-29P7 | 22 | 7 | | |
| H-36P2 | 34 | | 2 | |
| H-54P2 | 52 | 2 | | |
| H-5P5 | | | 5 | |
| H-66 | 66 | | | |
| J-17P4 | 13 | 4 | | |
| J-25P2 | 23 | 2 | | |
| J-33 | 33 | | | |
| J-7P7 | | 7 | | |
| K-27P4 | 23 | 4 | | |
| K-35P2 | 33 | 2 | | |
| K-43 | 43 | | | |
| K-9P9 | | 9 | | |
| L-6P6 | | | 6 | |

## CROSS-SECTIONAL VIEW OF 790-044S



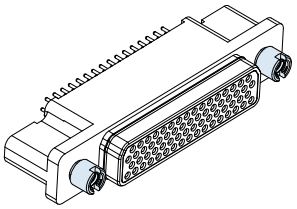

## TABLE 2 HARDWARE OPTION



**N**

### No Mating Hardware

Connector is supplied with threaded holes. Shell sizes H and L have #6-32 threads, other sizes have #4-40 threads. Thread depth is .150" (3.8).



**P**

### Jackposts

Connector is supplied with non-removable stainless steel jackposts. Shell sizes H and L have #4-40 UNC thread, other sizes have #2-56 thread.



Dimensions in inches (millimeters) and are subject to change without notice.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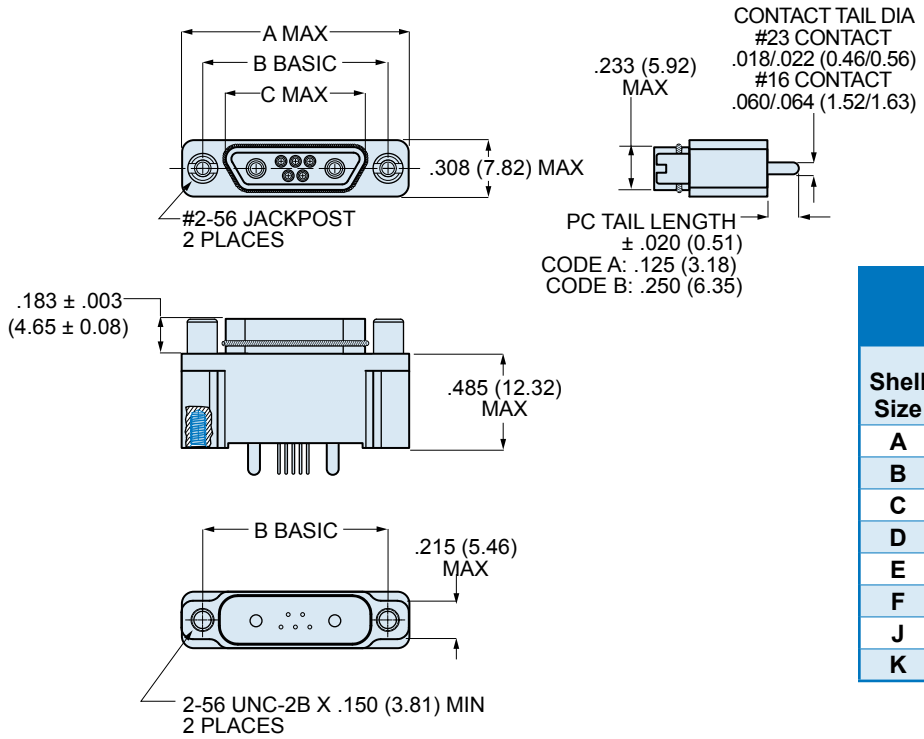
www.glenair.com
E-Mail: sales@glenair.com

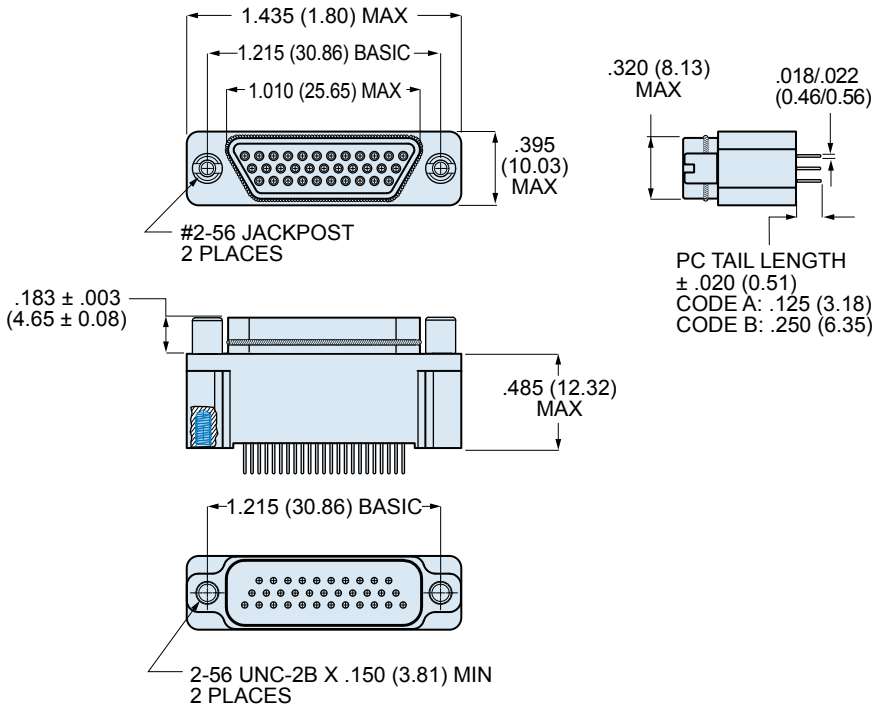
## 790-044S SHELL SIZE A,B,C,D,E,F,J,K DIMENSIONS




**790-044S DIMENSIONS SHELL SIZE A-G, J,K**

| Shell Size | A Max. | | B Basic | | C Max. | |
|---|---|---|---|---|---|---|
| | In. | mm. | In . | mm. | In. | mm. |
| A | .785 | 19.94 | .565 | 14.35 | .335 | 8.51 |
| B | .935 | 23.75 | .715 | 18.16 | .485 | 12.32 |
| C | 1.085 | 27.65 | .865 | 21.97 | .635 | 16.13 |
| D | 1.185 | 30.10 | .965 | 24.51 | .735 | 18.67 |
| E | 1.335 | 33.91 | 1.115 | 28.32 | .885 | 22.48 |
| F | 1.485 | 37.72 | 1.265 | 32.13 | 1.035 | 26.29 |
| J | 1.845 | 46.86 | 1.615 | 41.02 | 1.390 | 35.61 |
| K | 2.240 | 56.90 | 2.015 | 51.18 | 1.795 | 45.59 |

## 790-044S SHELL SIZE G DIMENSIONS




F

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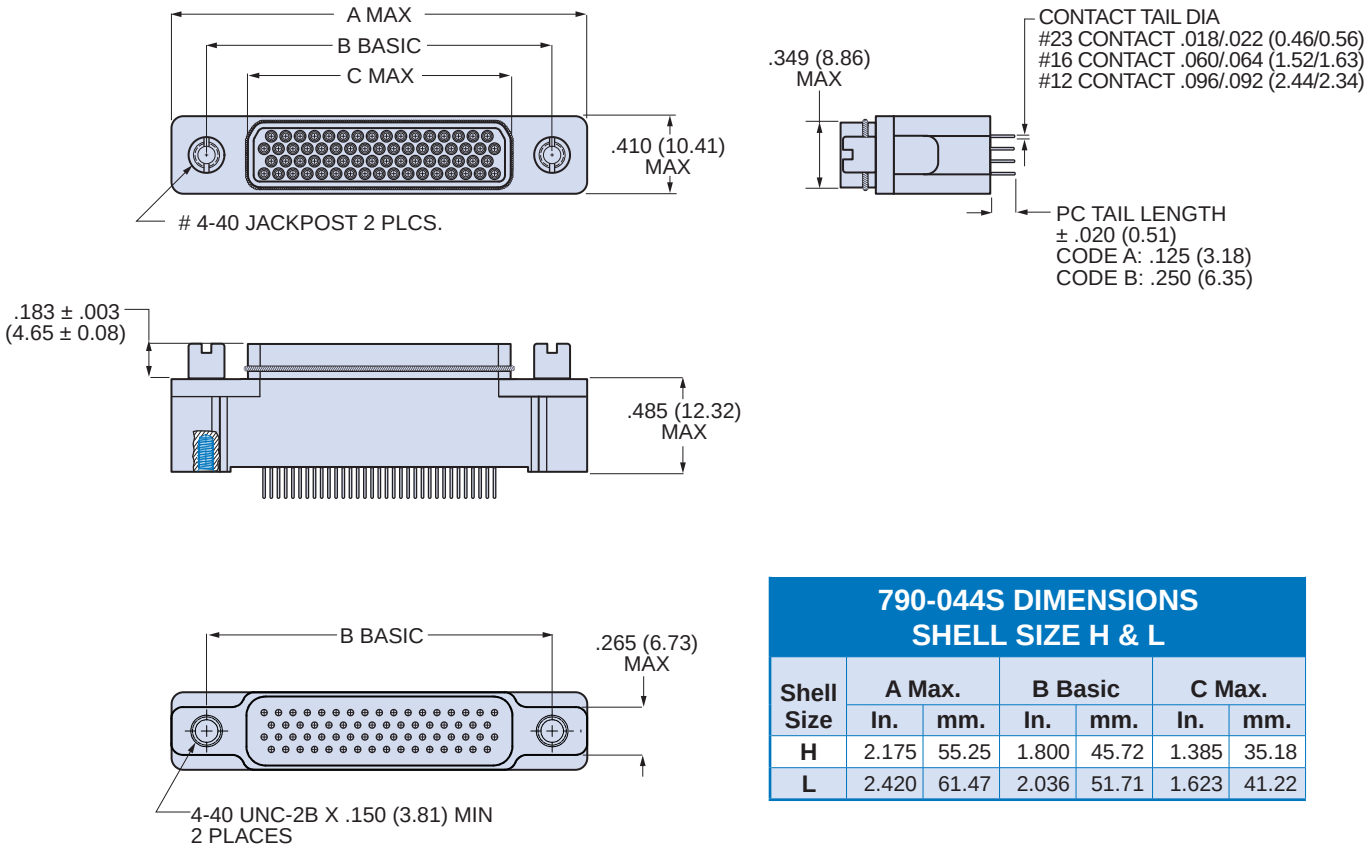
## 790-044S SHELL SIZE H & L DIMENSIONS




**790-044S DIMENSIONS SHELL SIZE H & L**

| Shell Size | A Max. | | B Basic | | C Max. | |
|---|---|---|---|---|---|---|
| | In. | mm. | In. | mm. | In. | mm. |
| H | 2.175 | 55.25 | 1.800 | 45.72 | 1.385 | 35.18 |
| L | 2.420 | 61.47 | 2.036 | 51.71 | 1.623 | 41.22 |

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Dimensions in inches (millimeters) and are subject to change without notice.



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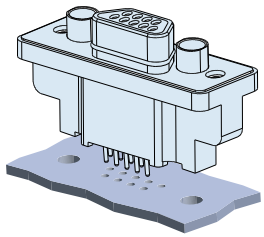
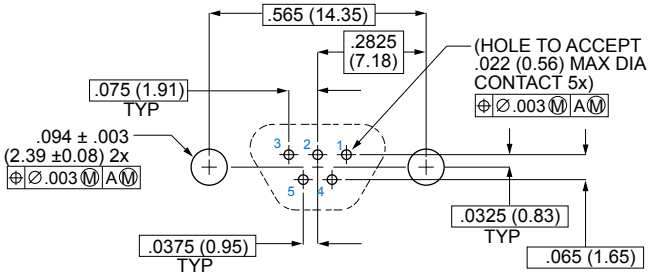
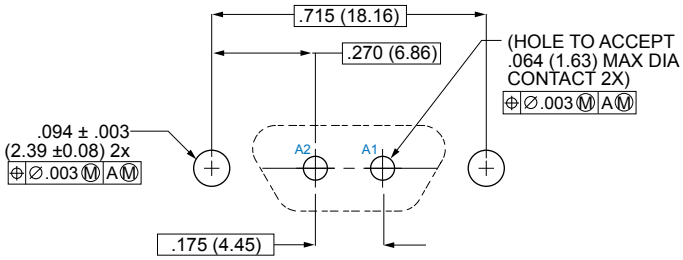
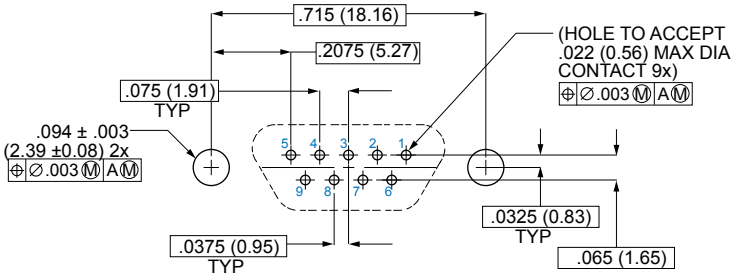
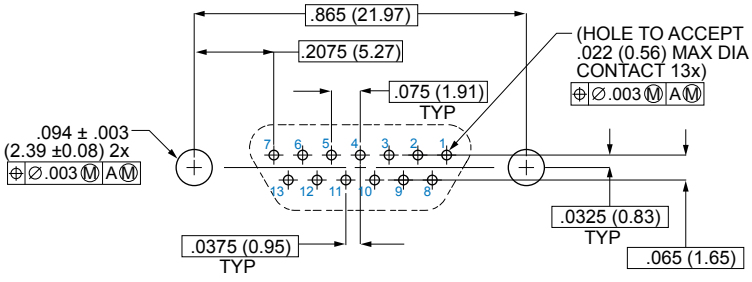
# PCB Hole Patterns for 790-029S and 790-044S Plugs



This section contains printed circuit board footprints for vertical mounted Series 79 plugs. The contact identification numbers are shown for the connector mounting side of the PC board. Contact tails are gold over nickel plated.

| Contact Size | PC Tail Diameter Ø Diameter In. | mm. |
|---|---|---|
| #23 | .018-.022 | 0.46-0.56 |
| #16 | .060-.064 | 1.52-1.63 |
| #12 | .092-.096 | 2.34-2.44 |

## 790-029S AND 790-044S PRINTED CIRCUIT BOARD PATTERNS

| Insert Arr. | Component Mounting Side of PCB |
|---|---|
| A-5 |  |
| B-2P2 |  |
| B-9 |  |
| C-13 |  |



F

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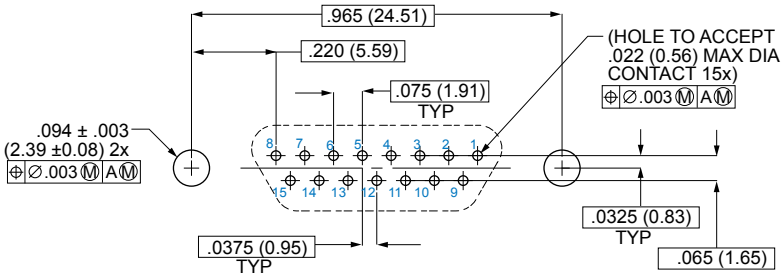
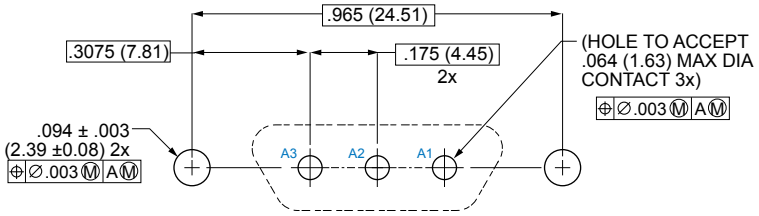
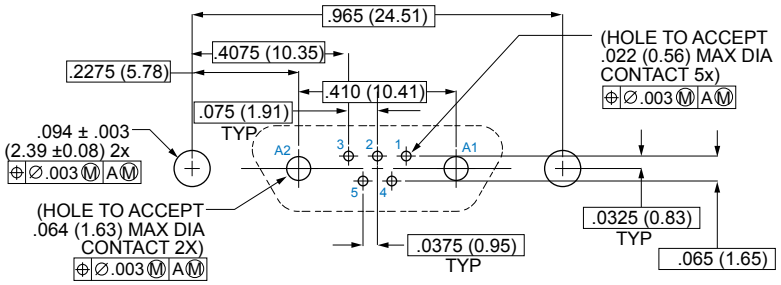
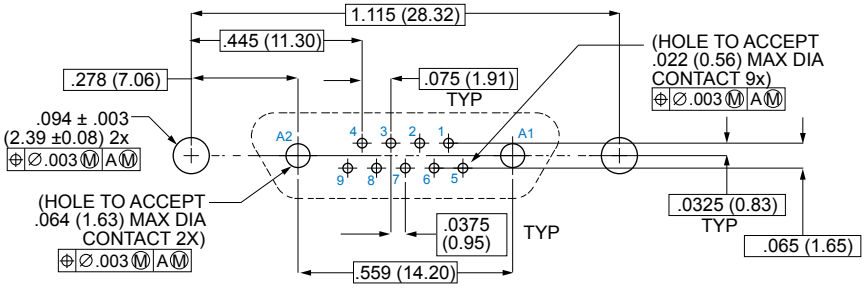
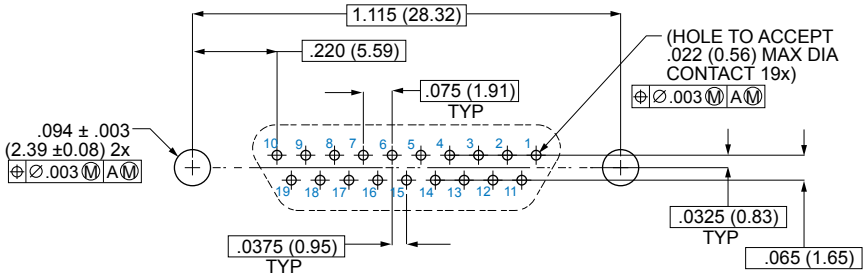
## 790-029S AND 790-044S PRINTED CIRCUIT BOARD PATTERNS

| Insert Arr. | Component Mounting Side of PCB |
|---|---|
| D-15 |  |
| D-3P3 |  |
| D-7P2 |  |
| E-11P2 |  |
| E-19 |  |



Dimensions in inches (millimeters) and are subject to change without notice.



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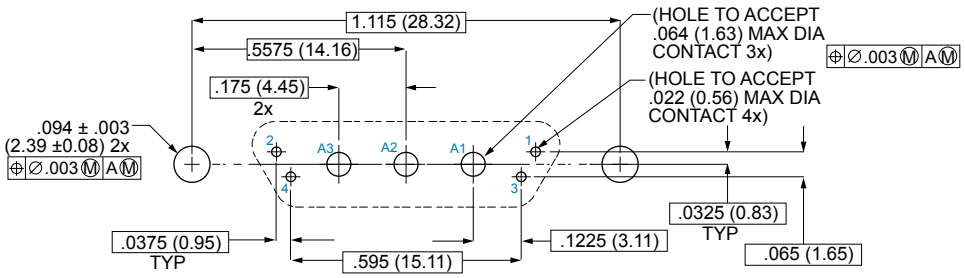
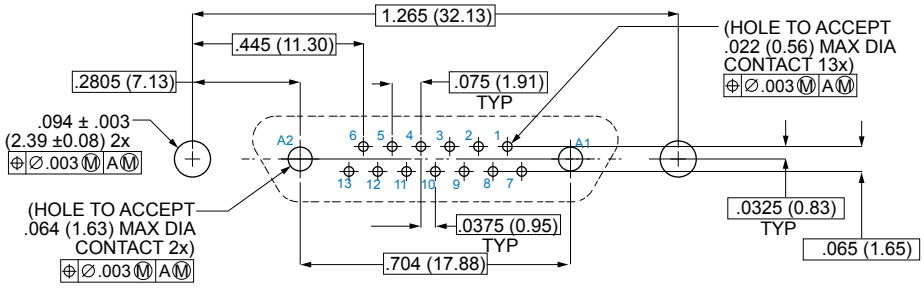
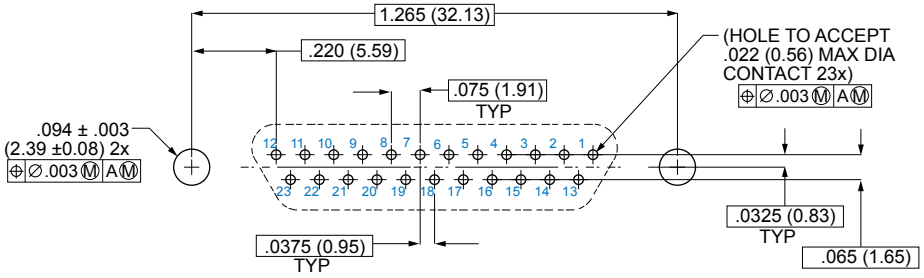
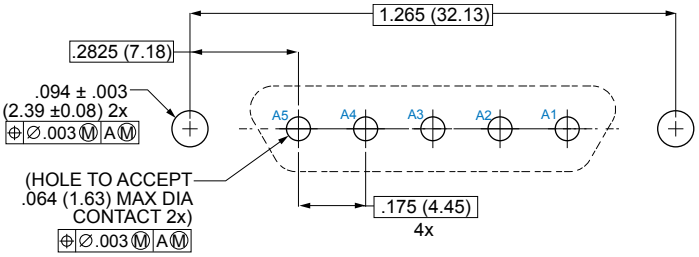
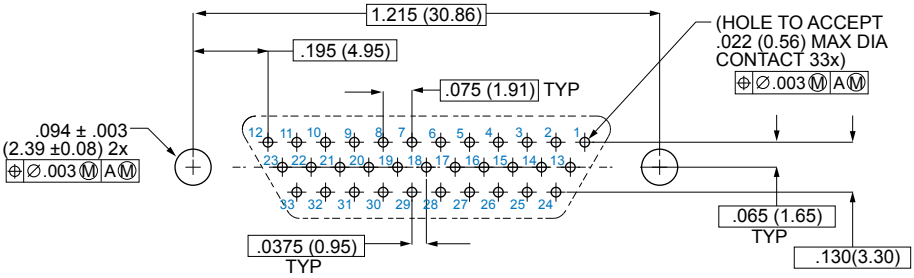
## 790-029S AND 790-044S PRINTED CIRCUIT BOARD PATTERNS

| Insert Arr. | Component Mounting Side of PCB |
|---|---|
| E-7P3 |  |
| F-15P2 |  |
| F-23 |  |
| F-5P5 |  |
| G-33 |  |



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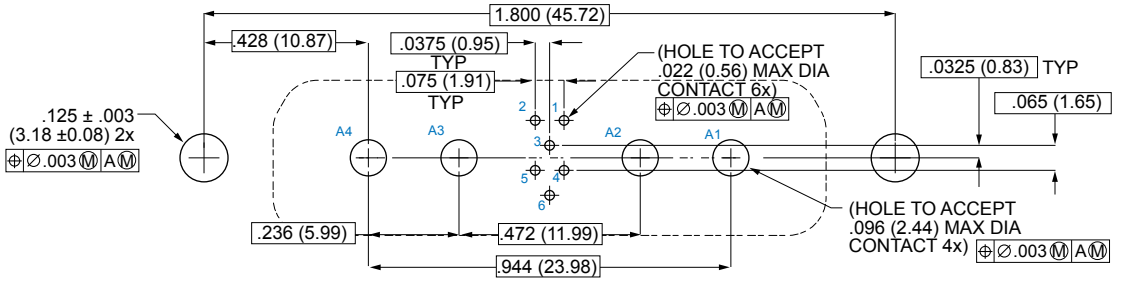
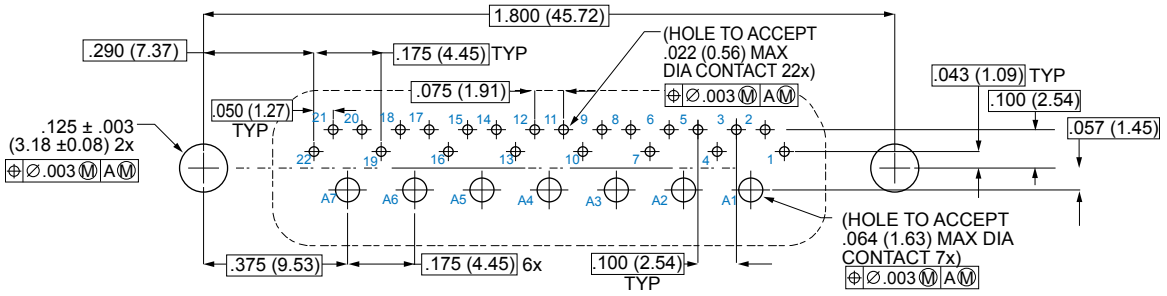
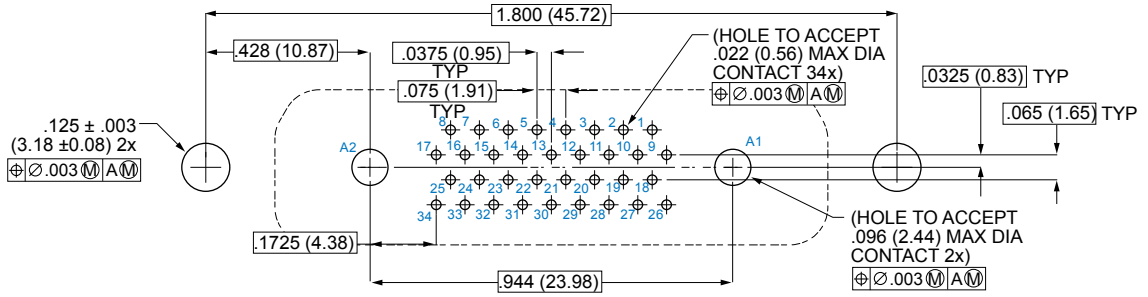
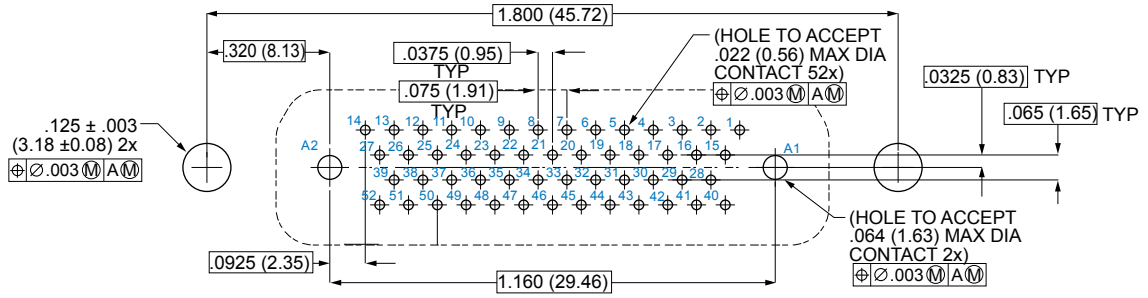
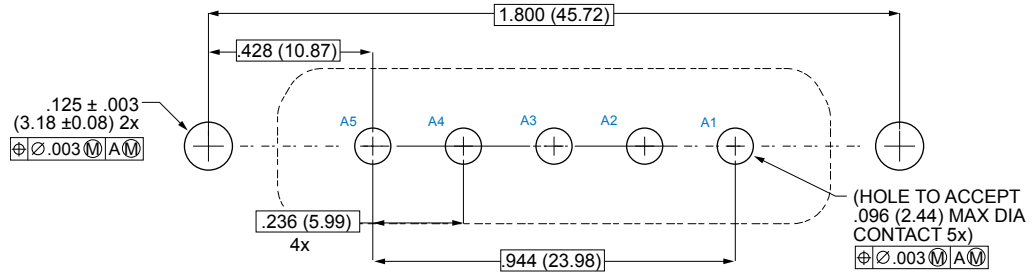
## 790-029S AND 790-044S PRINTED CIRCUIT BOARD PATTERNS

| Insert Arr. | Component Mounting Side of PCB |
|---|---|
| H-10P4 |  |
| H-29P7 |  |
| H-36P2 |  |
| H-54P2 |  |
| H-5P5 |  |











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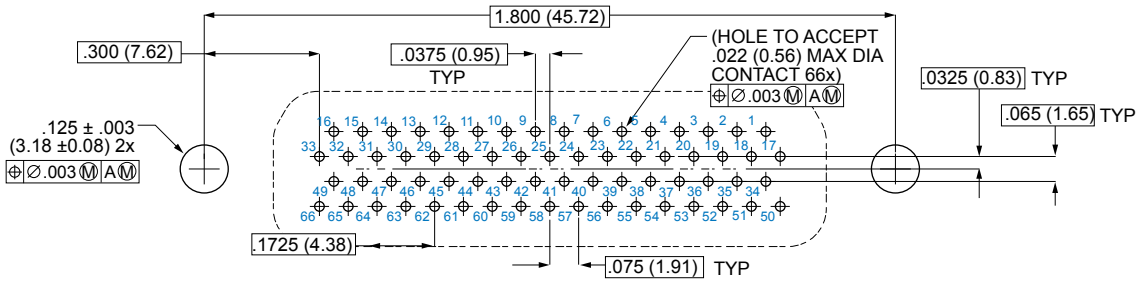
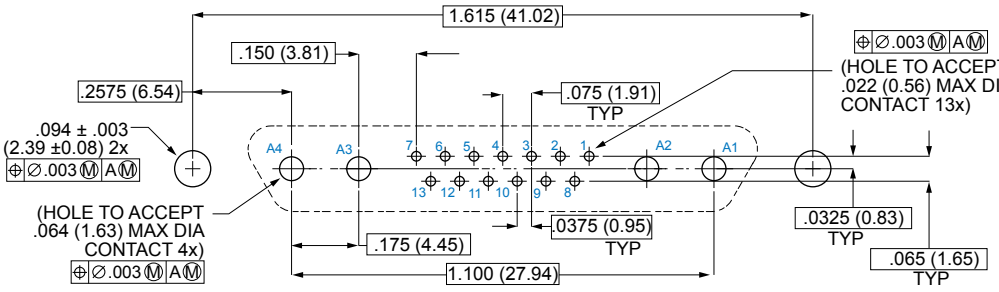
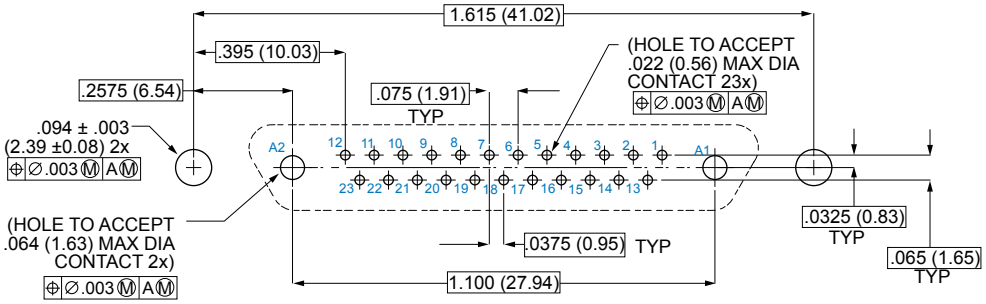
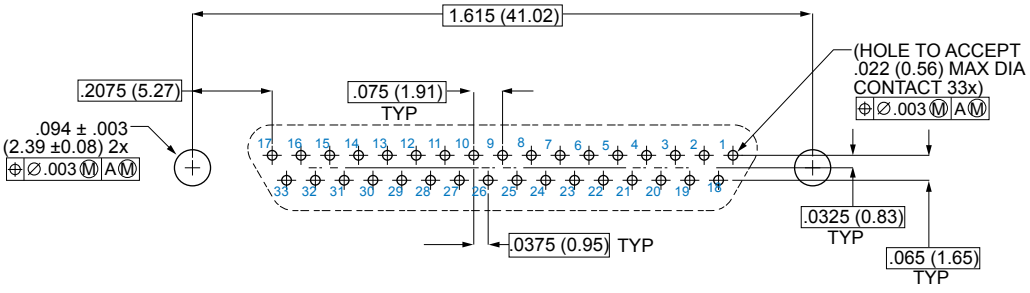
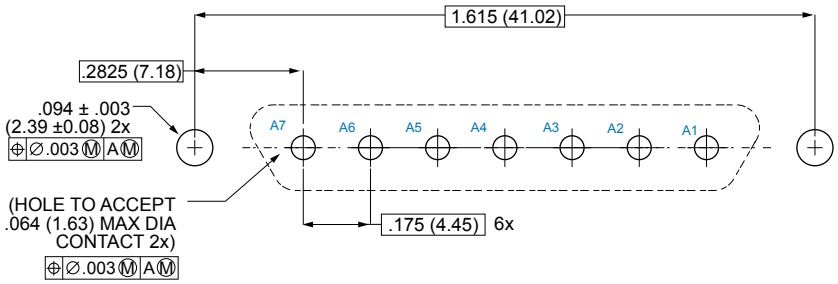
## 790-029S AND 790-044S PRINTED CIRCUIT BOARD PATTERNS

| Insert Arr. | Component Mounting Side of PCB |
|---|---|
| H-66 |  |
| J-17P4 |  |
| J-25P2 |  |
| J-33 |  |
| J-7P7 |  |



Dimensions in inches (millimeters) and are subject to change without notice.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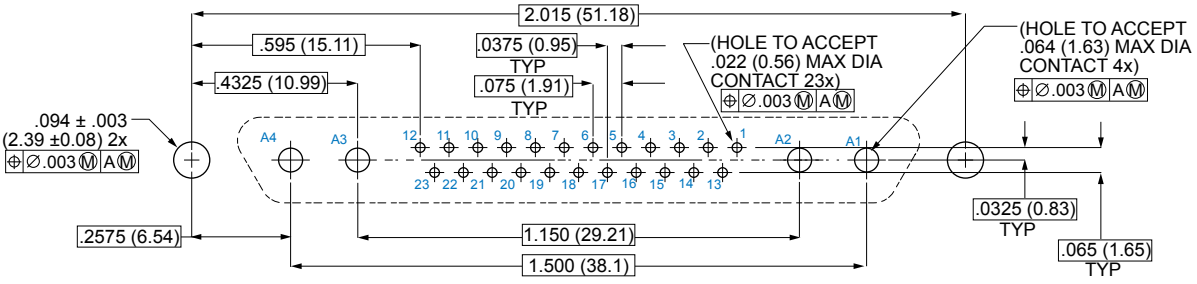
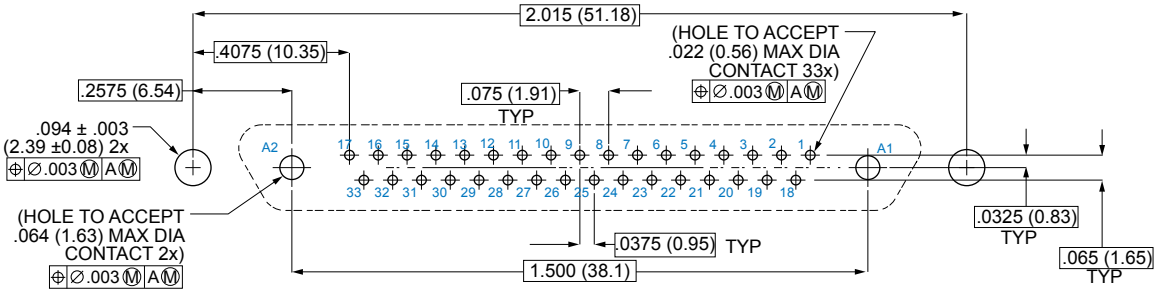
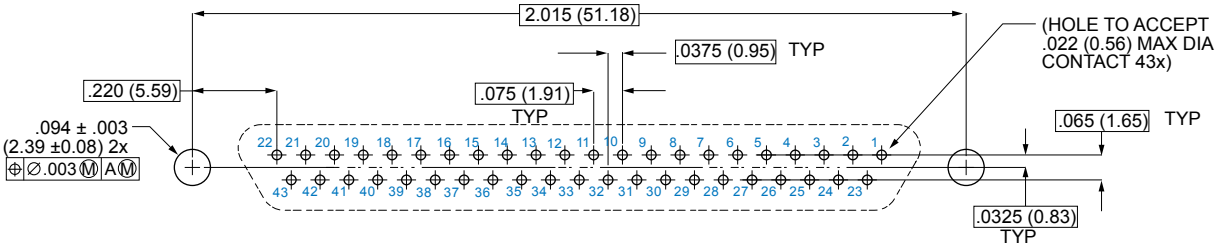
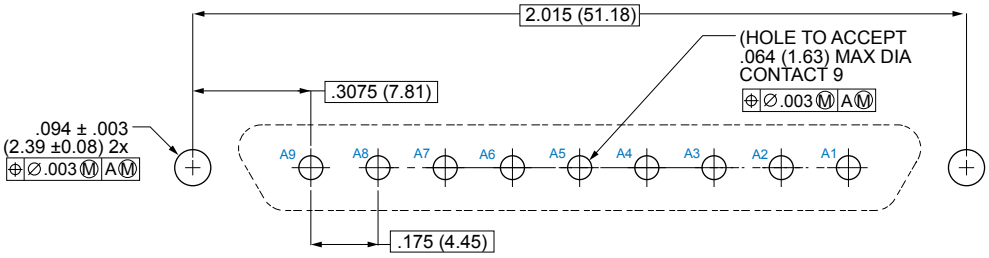
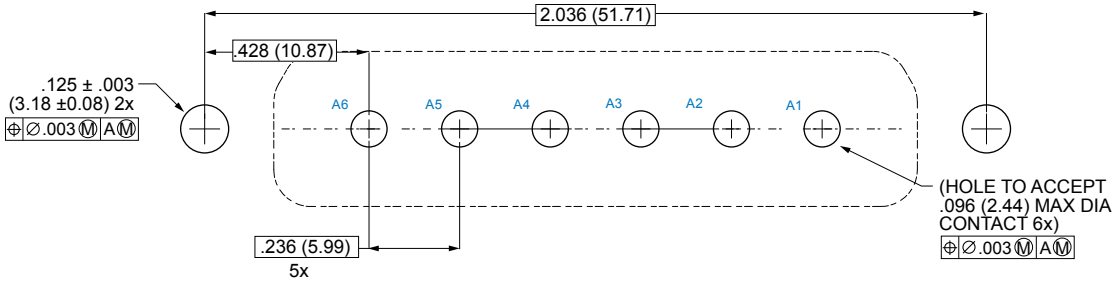
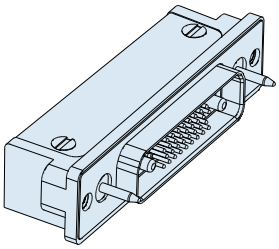
## 790-029S AND 790-044S PRINTED CIRCUIT BOARD PATTERNS

| Insert Arr. | Component Mounting Side of PCB |
|---|---|
| K-27P4 |  |
| K-35P2 |  |
| K-43 |  |
| K-9P9 |  |
| L-6P6 |  |

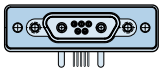
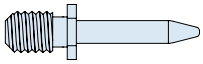
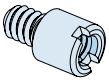
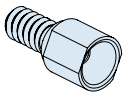
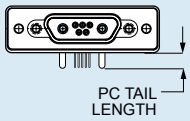
## PANEL RECEPTACLES WITH PIN CONTACTS, RIGHT ANGLE PCB TERMINATION, 790-036P



Lightweight, rugged right angle headers feature gold-plated contacts for thru-hole printed circuit board termination. 790-036P connectors are designed for rear-panel mounting and are supplied with conductive panel gaskets. Contacts are permanently installed and are sealed with epoxy. Shells are aluminum alloy. Threaded board mounting holes and integral standoffs simplify installation. EMI shroud improves EMI performance. Fluorosilicone face seal provides watertight interface. Available in 29 different contact arrangements, these connectors feature size #23 signal contacts along with #16 and #12 power contacts for up to 23 amps current rating.

## HOW TO ORDER

**Sample Part Number**

| 790-036P | D-7P2 | MT | P | A |
|---|---|---|---|---|
| **Part Number** | **Shell Size - Insert Arr.** | **Shell Finish** | **Hardware Option** | **PC Tail Length** |
| **790-036P**<br>Rear-Panel Mounted Receptacle with 90° PC Tail Pin Contacts for Termination to Backplanes or Flexible Circuits | See Table 1 for Available Insert Arrangements | **M**<br>Electroless Nickel<br>*general purpose applications*<br>**MT**<br>Nickel-PTFE<br>*1000 Hour Grey™ maximum corrosion protection and durability (non-reflective grey)*<br>**ZNU**<br>Zinc-Nickel with Black Chromate<br>*tactical applications (non-reflective black)*<br>Additional shell finishes are listed on page C-9. |  <br>**N**<br>No Hardware<br>  <br>**G**<br>Guide Pin<br>  <br>**P**<br>Female Jackpost<br>  <br>**S**<br>Female Guide Socket | **A**<br>.125 Inch (3.2 mm.)<br>**B**<br>.250 inch (6.4 mm.)<br>  |

## SPECIFICATIONS

| | |
|---|---|
| Current Rating | #23 5 AMPS, #16 13 A., #12 23 A. |
| Dielectric Withstanding Voltage | #23 500 VAC RMS, #12 and #16 1800 VAC RMS |
| Insulation Resistance | 5000 megohms minimum |
| Operating Temperature | -65° C. to +150° C. |
| Shock | 300 g. |
| Vibration | 37 g. |

## MATERIALS AND FINISHES

| | |
|---|---|
| Shell | Aluminum alloy |
| Contacts | Copper alloy, 50 microinches gold plated |
| Insulator | Liquid crystal polymer (LCP) |
| Interfacial Seal | Flourosilicone rubber |
| Hardware | 300 series stainless steel |
| Panel Gasket | Fluorosilicone, conductive |
| Encapsulant | Epoxy |

Dimensions in inches (millimeters) and are subject to change without notice.



CAGE Code 06324

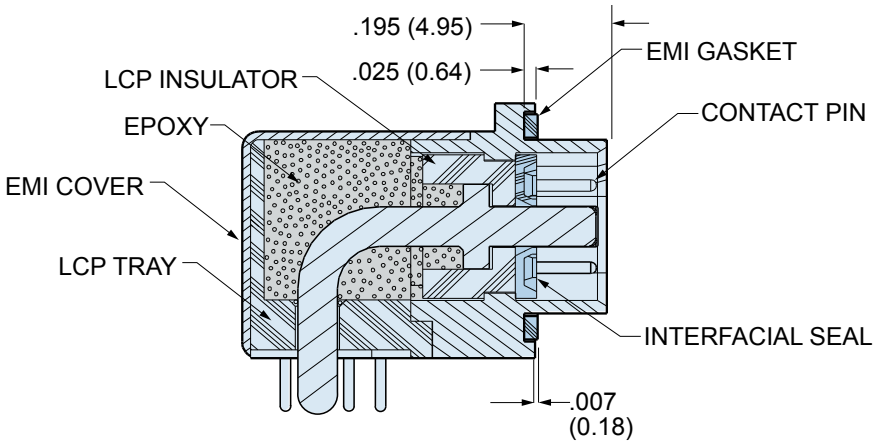
Printed in U.S.A.

# Series 79 Micro-Crimp
# Section G: Right Angle Printed Circuit Board Connectors

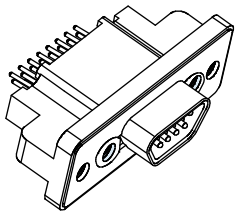
## Table 1
## Contact Arrangements

| Layout | Contact Quantity #23 | #16 | #12 | Face View |
|---|---|---|---|---|
| A-5 | 5 | | | |
| B-2P2 | | 2 | | |
| B-9 | 9 | | | |
| C-13 | 13 | | | |
| D-15 | 15 | | | |
| D-3P3 | | 3 | | |
| D-7P2 | 5 | 2 | | |
| E-11P2 | 9 | 2 | | |
| E-19 | 19 | | | |
| E-7P3 | 4 | 3 | | |
| F-15P2 | 13 | 2 | | |
| F-23 | 23 | | | |
| F-5P5 | | 5 | | |
| G-33 | 33 | | | |
| H-10P4 | 6 | | 4 | |
| H-29P7 | 22 | 7 | | |
| H-36P2 | 34 | | 2 | |
| H-54P2 | 52 | 2 | | |
| H-5P5 | | | 5 | |
| H-66 | 66 | | | |
| J-17P4 | 13 | 4 | | |
| J-25P2 | 23 | 2 | | |
| J-33 | 33 | | | |
| J-7P7 | | 7 | | |
| K-27P4 | 23 | 4 | | |
| K-35P2 | 33 | 2 | | |
| K-43 | 43 | | | |
| K-9P9 | | 9 | | |
| L-6P6 | | | 6 | |

## CROSS-SECTIONAL VIEW OF 790-036P



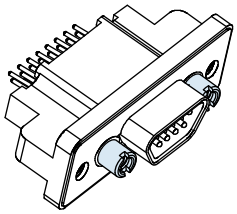

## TABLE 2
## HARDWARE OPTION



**N**

**No Mating Hardware**

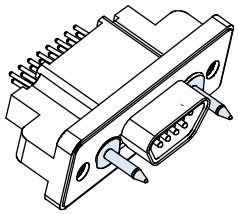
Connector is supplied with blind, tapped holes. Shell sizes H and L have 6-32 UNC-2B thread, other sizes are #4-40. Minimum thread depth is .150" (3.81).



**P**

**Jackposts**

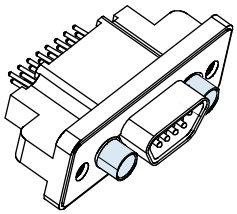
Connector is supplied with non-removable jackposts. Shell sizes H and L have #4-40 UNC-2B thread, other sizes have #2-56 thread.



**G**

**Male Guide Pins**

Connector is supplied with stainless steel guide pins to mate with code S guide sockets. Pins are non-removable.



**S**

**Female Guide Sockets**

Connector is supplied with stainless steel guide sockets to mate with code G guide pins. Sockets are non-removable.



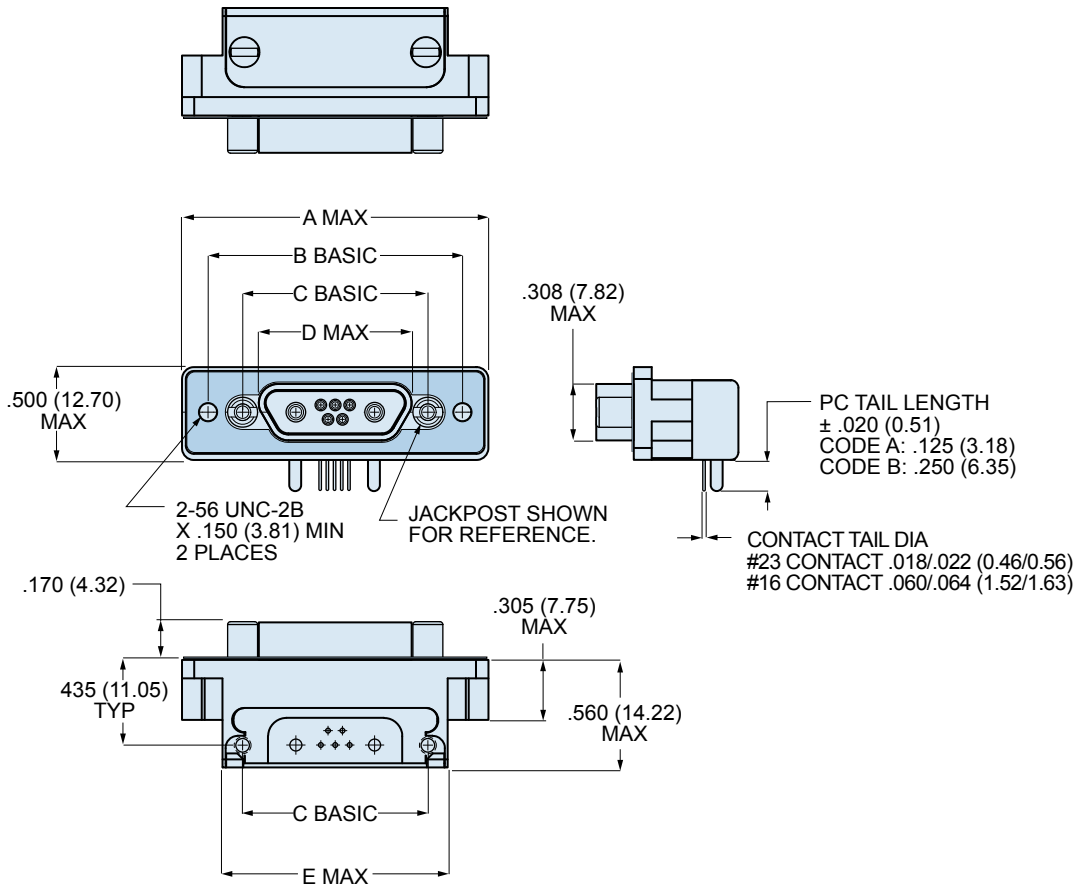
Dimensions in inches (millimeters) and are subject to change without notice.



CAGE Code 06324

Printed in U.S.A.

## 790-036P DIMENSIONS: SHELL SIZES A-F, J, AND K




### 790-036P SHELL SIZES A-F, J AND K

| Shell Size | A Max. | | B Basic | | C Basic | | D Max. | | E Max. | |
|---|---|---|---|---|---|---|---|---|---|---|
| | In. | mm. | In. | mm. | In. | mm. | In. | mm. | In. | mm. |
| A | 1.211 | 30.76 | .925 | 23.50 | .565 | 14.35 | .401 | 10.19 | .760 | 19.30 |
| B | 1.361 | 34.57 | 1.075 | 27.31 | .715 | 18.16 | .551 | 14.00 | .910 | 21.11 |
| C | 1.511 | 38.38 | 1.225 | 31.12 | .865 | 21.97 | .701 | 17.81 | 1.060 | 26.92 |
| D | 1.611 | 40.92 | 1.325 | 33.66 | .965 | 24.51 | .801 | 20.35 | 1.160 | 29.46 |
| E | 1.761 | 44.73 | 1.475 | 37.47 | 1.115 | 28.32 | .951 | 24.16 | 1.310 | 33.27 |
| F | 1.911 | 48.54 | 1.625 | 41.28 | 1.265 | 32.13 | 1.101 | 27.96 | 1.460 | 37.08 |
| J | 2.261 | 57.43 | 1.975 | 50.17 | 1.615 | 41.02 | 1.456 | 36.98 | 1.810 | 45.97 |
| K | 2.661 | 67.59 | 2.375 | 60.33 | 2.015 | 51.18 | 1.860 | 47.24 | 2.210 | 56.13 |



Dimensions in inches (millimeters) and are subject to change without notice.



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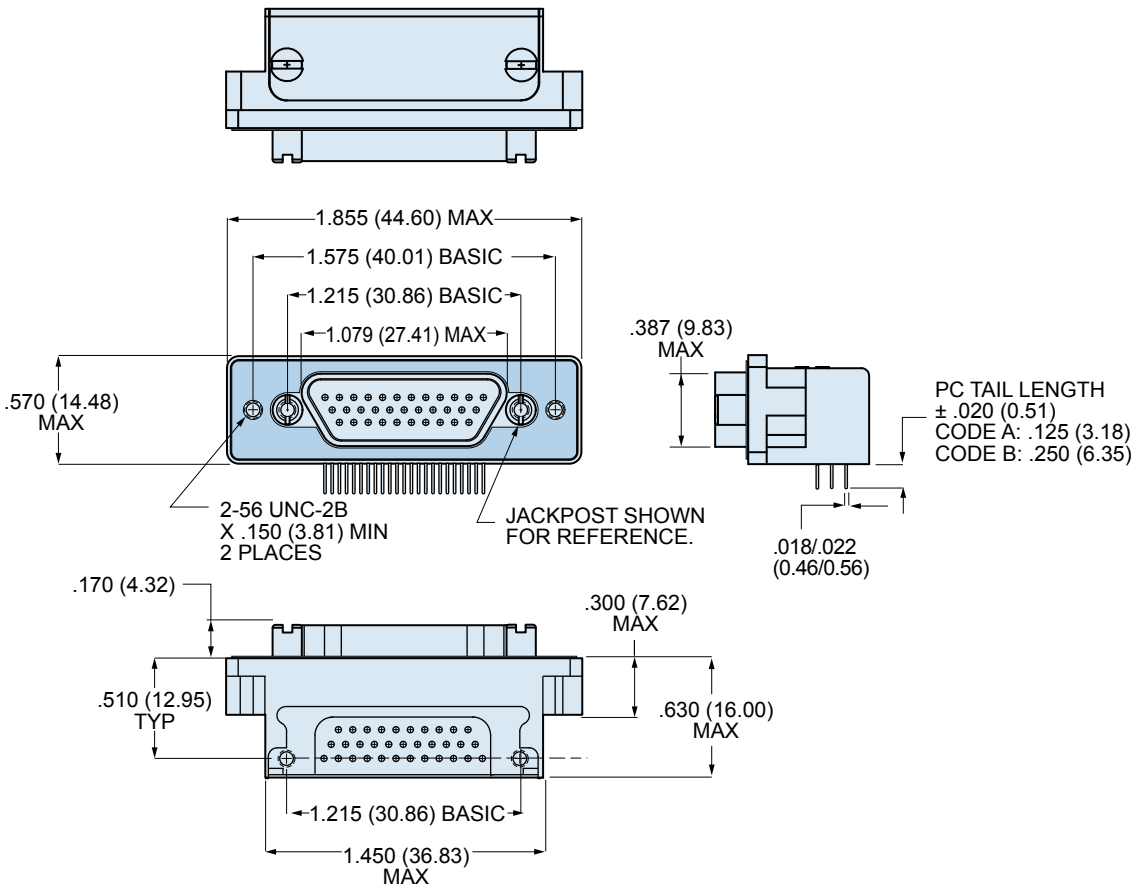
## 790-036P DIMENSIONS: SHELL SIZE G




G

Dimensions in inches (millimeters) and are subject to change without notice.



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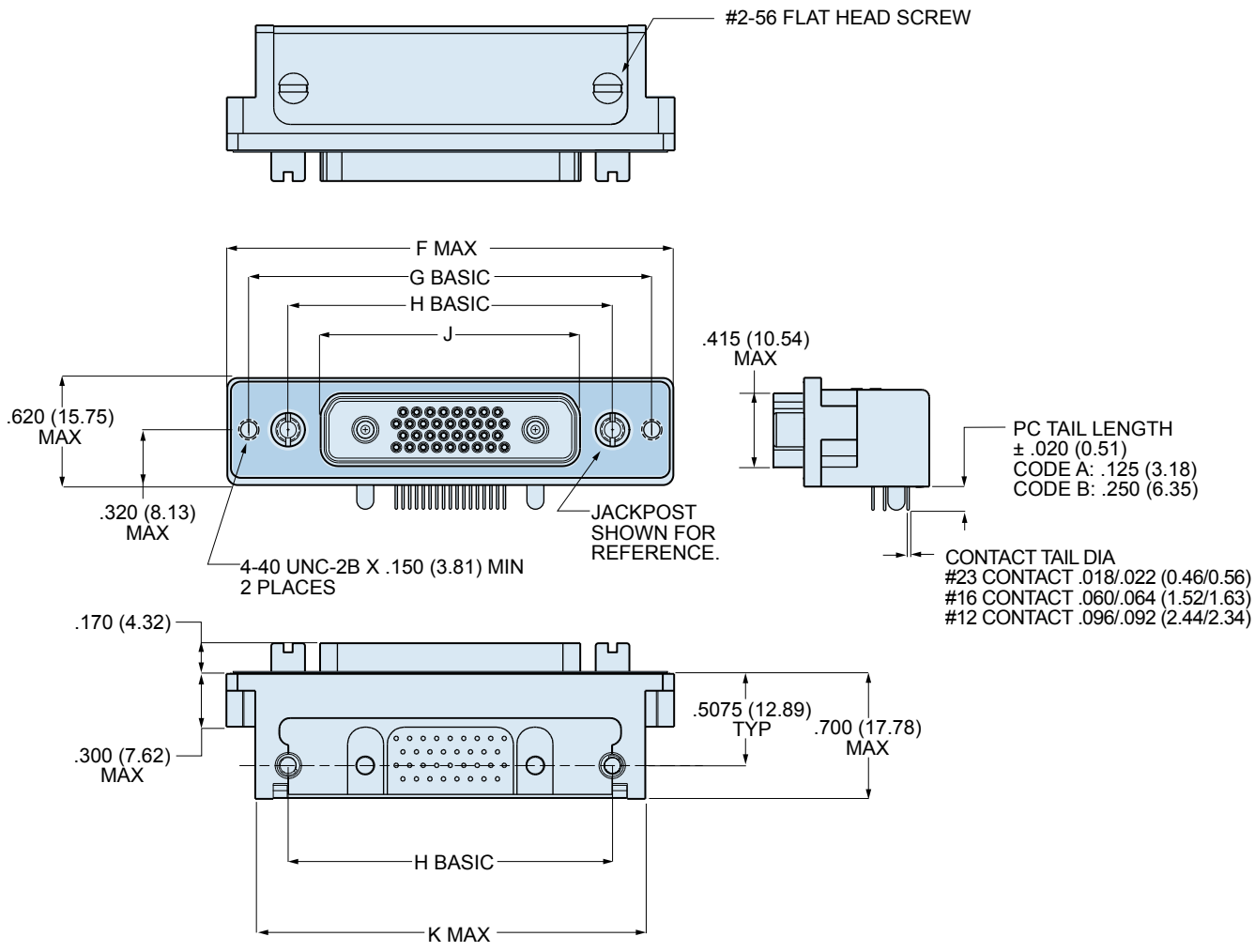
Printed in U.S.A.

## 790-036P DIMENSIONS: SHELL SIZE H AND L




### 790-036P SHELL SIZES H AND L

| Shell Size | F Max. | | G Basic | | H Basic | | J Max. | | K Max. | |
|---|---|---|---|---|---|---|---|---|---|---|
| | In. | mm. | In . | mm. | In. | mm. | In. | mm. | In. | mm. |
| H | 2.500 | 63.50 | 2.236 | 56.79 | 1.800 | 45.72 | 1.450 | 36.83 | 2.045 | 51.94 |
| L | 2.736 | 69.49 | 2.472 | 62.79 | 2.036 | 51.71 | 1.686 | 42.82 | 2.281 | 57.94 |

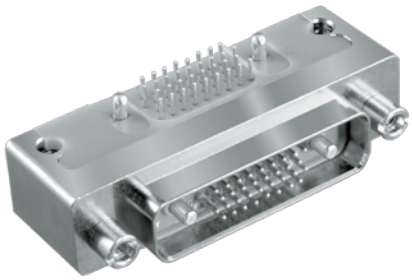
G

Dimensions in inches (millimeters) and are subject to change without notice.


CAGE Code 06324
Printed in U.S.A.

# Series 79 Micro-Crimp
# Section G: Right Angle Printed Circuit Board Connectors

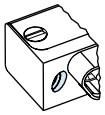
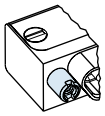
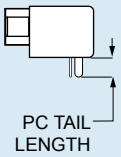
## RECEPTACLES WITH PIN CONTACTS, RIGHT ANGLE PCB TERMINATION, 790-041P



Lightweight, rugged right angle headers feature gold-plated contacts for thru-hole printed circuit board termination. 790-041P connectors are free-standing (not for panel mounting) and mate to 790-025S cable plugs. Contacts are permanently installed and are sealed with epoxy. Shells are aluminum alloy. Threaded board mounting holes and integral standoffs simplify installation. EMI shroud improves EMI performance. Fluorosilicone face seal provides watertight interface. Available in 29 different contact arrangements, these connectors feature size #23 signal contacts along with #16 and #12 power contacts for up to 23 amps current rating.

## HOW TO ORDER

**Sample Part Number**

| 790-041P | J-25P2 | M | P | A |
|---|---|---|---|---|
| **Part Number** | **Shell Size - Insert Arr.** | **Shell Finish** | **Hardware Option** | **PC Tail Length** |
| **790-041P**<br>Header Receptacle with 90° PC Tail Pin Contacts for Termination to Backplanes or Flexible Circuits | See Table 1 for Available Insert Arrangements | **M**<br>Electroless Nickel<br>*general purpose applications*<br><br>**MT**<br>Nickel-PTFE<br>*1000 Hour Grey™*<br>*maximum corrosion protection and durability*<br>*(non-reflective grey)*<br><br>**ZNU**<br>Zinc-Nickel with Black Chromate<br>*tactical applications*<br>*(non-reflective black)*<br><br>Additional shell finishes are listed on page C-9. |  <br>**N**<br>No Hardware<br><br>  <br>**P**<br>Female Jackpost | **A**<br>.125 Inch (3.2 mm.)<br>**B**<br>.250 inch (6.4 mm.)<br>  |

## SPECIFICATIONS

| | |
|---|---|
| Current Rating | #23 5 AMPS, #16 13 A., #12 23 A. |
| Dielectric Withstanding Voltage | #23 500 VAC RMS, #12 and #16 1800 VAC RMS |
| Insulation Resistance | 5000 megohms minimum |
| Operating Temperature | -65° C. to +150° C. |
| Shock | 300 g. |
| Vibration | 37 g. |

## MATERIALS AND FINISHES

| | |
|---|---|
| Shell | Aluminum alloy |
| Contacts | Copper alloy, 50 microinches gold plated |
| Insulator | Liquid crystal polymer (LCP) |
| EMI Shroud | Aluminum alloy |
| Interfacial Seal | Flourosilicone rubber |
| Jackposts | 300 series stainless steel |
| Tray | Thermoplastic |
| Encapsulant | Epoxy |

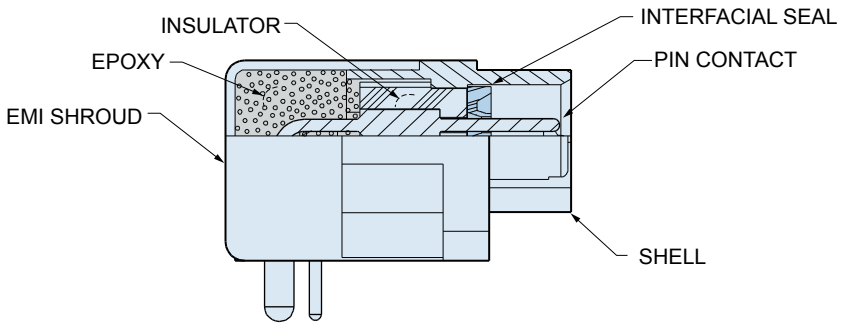
Dimensions in inches (millimeters) and are subject to change without notice.


CAGE Code 06324
Printed in U.S.A.

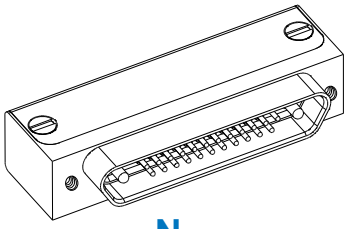
## Table 1 Contact Arrangements

| Layout | Contact Quantity #23 | #16 | #12 | Face View |
|---|---|---|---|---|
| A-5 | 5 | | | |
| B-2P2 | | 2 | | |
| B-9 | 9 | | | |
| C-13 | 13 | | | |
| D-15 | 15 | | | |
| D-3P3 | | 3 | | |
| D-7P2 | 5 | 2 | | |
| E-11P2 | 9 | 2 | | |
| E-19 | 19 | | | |
| E-7P3 | 4 | 3 | | |
| F-15P2 | 13 | 2 | | |
| F-23 | 23 | | | |
| F-5P5 | | 5 | | |
| G-33 | 33 | | | |
| H-10P4 | 6 | | 4 | |
| H-29P7 | 22 | 7 | | |
| H-36P2 | 34 | | 2 | |
| H-54P2 | 52 | 2 | | |
| H-5P5 | | | 5 | |
| H-66 | 66 | | | |
| J-17P4 | 13 | 4 | | |
| J-25P2 | 23 | 2 | | |
| J-33 | 33 | | | |
| J-7P7 | | 7 | | |
| K-27P4 | 23 | 4 | | |
| K-35P2 | 33 | 2 | | |
| K-43 | 43 | | | |
| K-9P9 | | 9 | | |
| L-6P6 | | | 6 | |

## CROSS-SECTIONAL VIEW OF 790-041P



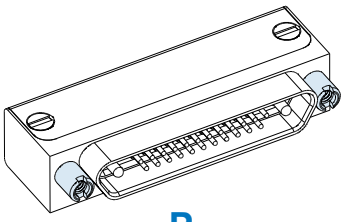

## TABLE 2 HARDWARE OPTION



**N**

### No Mating Hardware

Connector is supplied with threaded holes. Shell sizes H and L have #6-32 threads, other sizes have #4-40 threads. Thread depth is .150" (3.8).



**P**

### Jackposts

Connector is supplied with non-removable stainless steel jackposts. Shell sizes H and L have #4-40 UNC thread, other sizes have #2-56 thread.

G

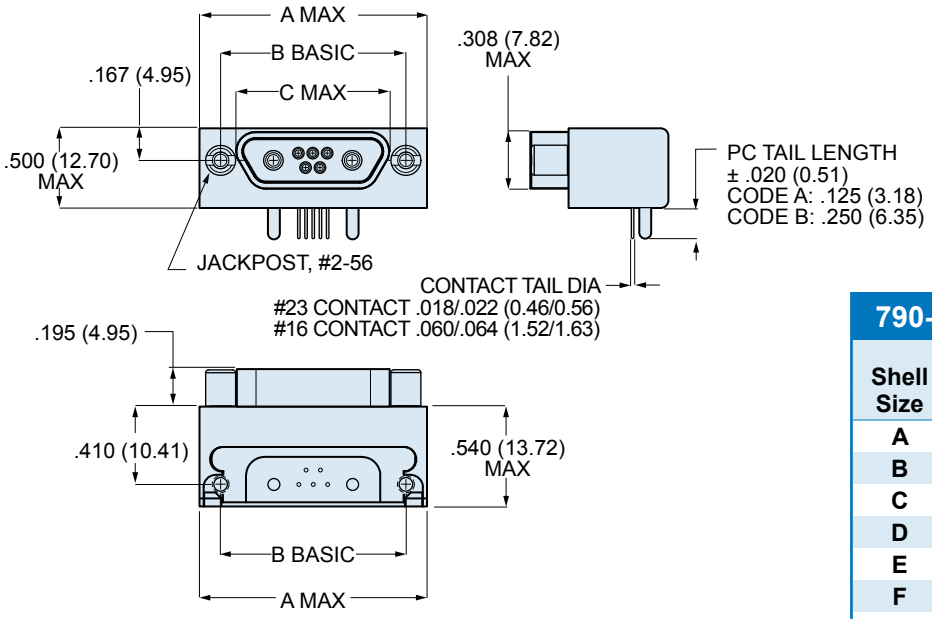
Dimensions in inches (millimeters) and are subject to change without notice.



CAGE Code 06324

Printed in U.S.A.

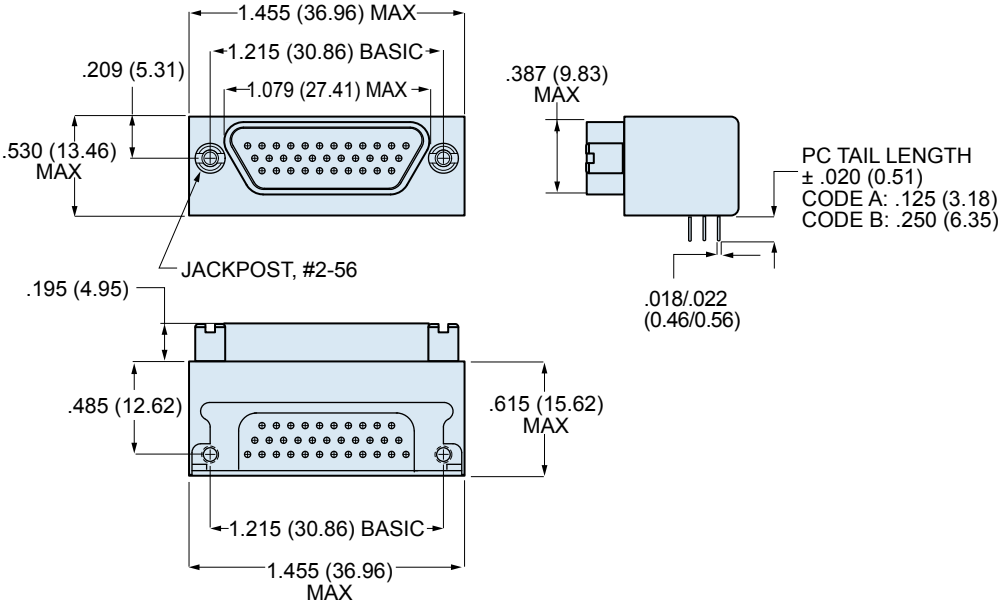
## 790-041P DIMENSIONS: SHELL SIZES A-F, J, AND K




**790-041P SHELL SIZES A-F, J AND K**

| Shell Size | A Max. | | B Basic | | C Max. | |
|---|---|---|---|---|---|---|
| | In. | mm. | In. | mm. | In. | mm. |
| A | .805 | 20.45 | .565 | 14.35 | .401 | 10.19 |
| B | .955 | 24.26 | .715 | 18.16 | .551 | 14.00 |
| C | 1.105 | 28.07 | .865 | 21.97 | .701 | 17.81 |
| D | 1.205 | 30.61 | .965 | 24.51 | .801 | 20.35 |
| E | 1.355 | 34.42 | 1.115 | 28.32 | .951 | 24.16 |
| F | 1.505 | 38.23 | 1.265 | 32.13 | 1.101 | 27.96 |
| J | 1.855 | 47.12 | 1.615 | 41.02 | 1.456 | 36.98 |
| K | 2.255 | 57.28 | 2.015 | 51.18 | 1.860 | 47.24 |

## 790-041P DIMENSIONS: SHELL SIZE G




G

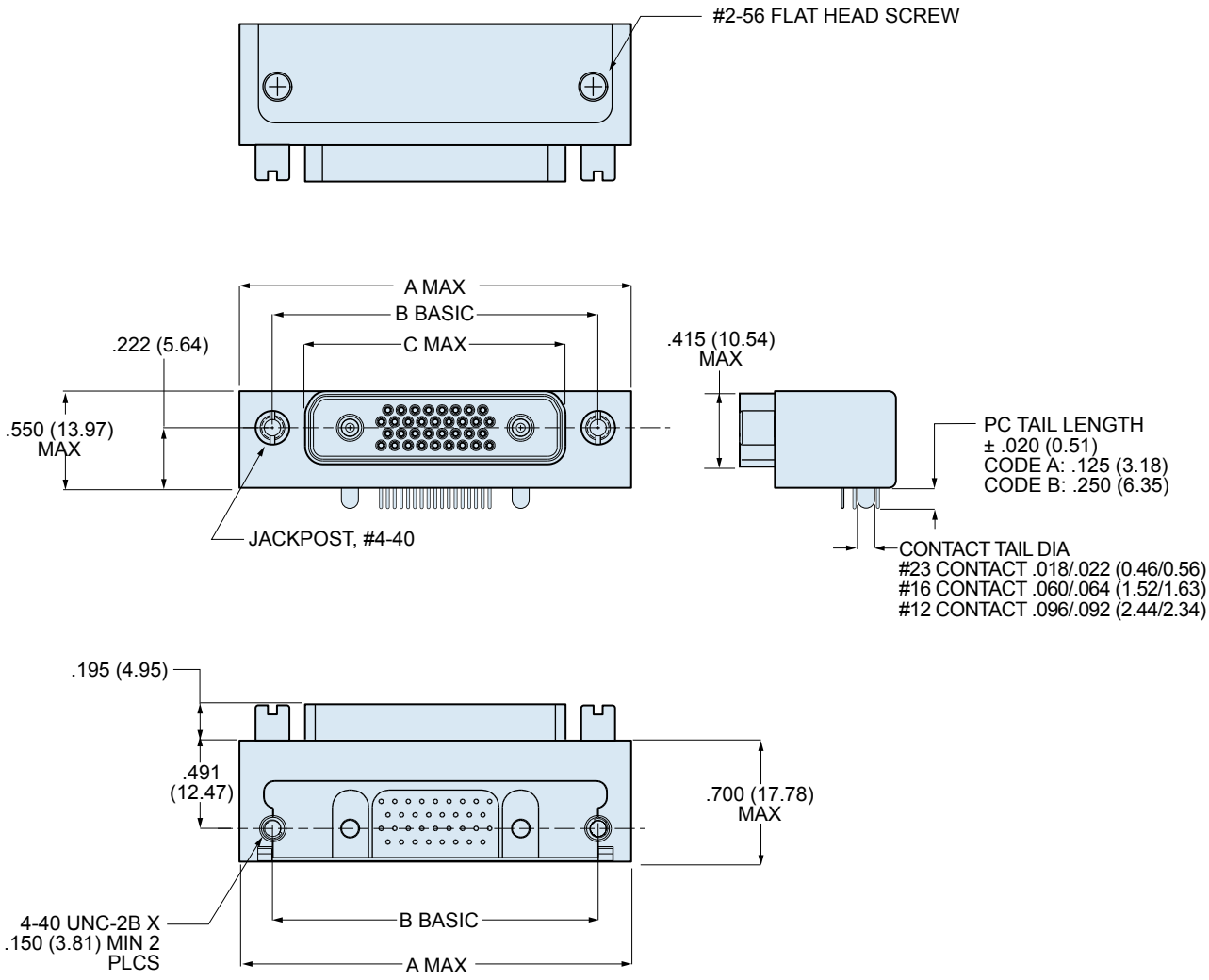
Dimensions in inches (millimeters) and are subject to change without notice.



CAGE Code 06324

Printed in U.S.A.

## 790-041P DIMENSIONS: SHELL SIZES H & L




### 790-041P SHELL SIZES H AND L

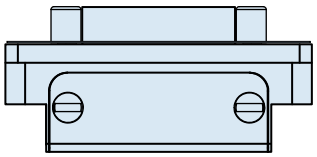
| Shell Size | A Max. | | B Basic | | C Max. | |
|---|---|---|---|---|---|---|
| | In. | mm. | In. | mm. | In. | mm. |
| H | 2.185 | 55.50 | 1.800 | 45.72 | 1.450 | 36.83 |
| L | 2.430 | 61.72 | 2.036 | 51.71 | 1.686 | 42.82 |

Dimensions in inches (millimeters) and are subject to change without notice.


CAGE Code 06324
Printed in U.S.A.

## PCB Hole Patterns for 790-036P and 790-041P Receptacles

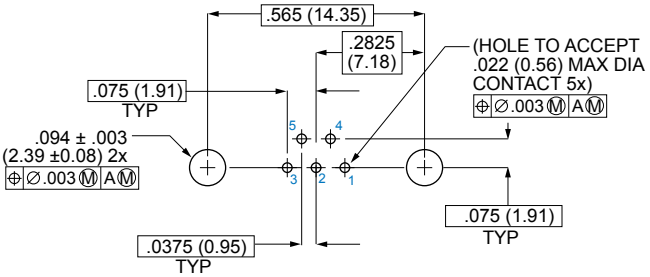
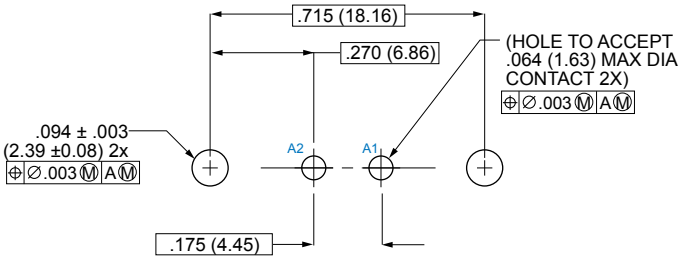
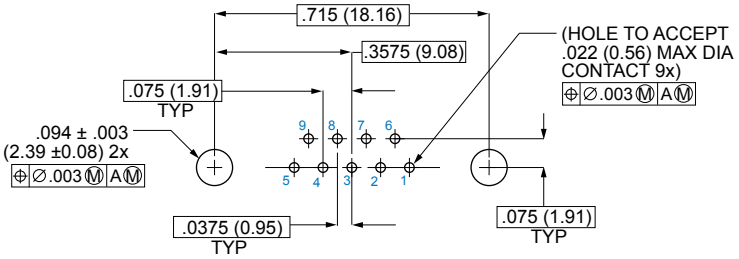
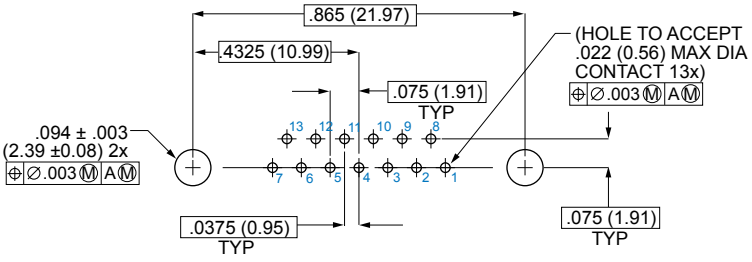
This section contains printed circuit board footprints for right angle Series 79 receptacles. The contact identification numbers are shown for the connector mounting side of the PC board. Contact tails are gold over nickel plated.



CONNECTOR ORIENTATION

| Contact Size | PC Tail Diameter Ø Diameter In. | mm. |
|---|---|---|
| #23 | .018-.022 | 0.46-0.56 |
| #16 | .060-.064 | 1.52-1.63 |
| #12 | .092-.096 | 2.34-2.44 |

### 790-036P AND 790-041P PRINTED CIRCUIT BOARD PATTERNS

| Insert Arr. | Component Mounting Side of PCB<br>Mating Face of Connector is Toward Top of Page |
|---|---|
| A-5 |  |
| B-2P2 |  |
| B-9 |  |
| C-13 |  |



Dimensions in inches (millimeters) and are subject to change without notice.



CAGE Code 06324

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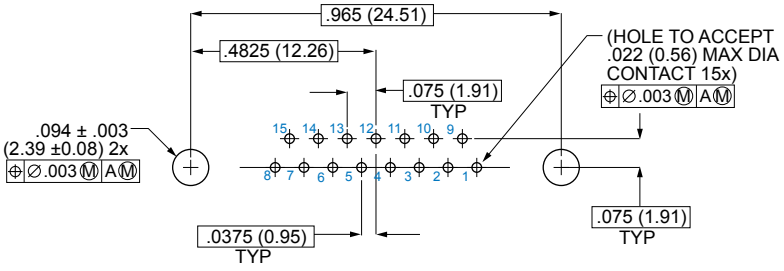
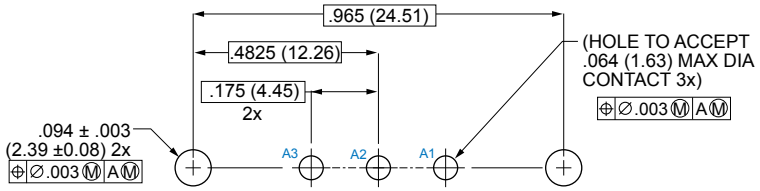
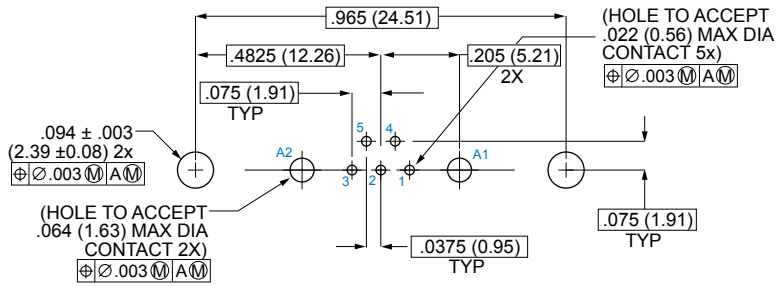
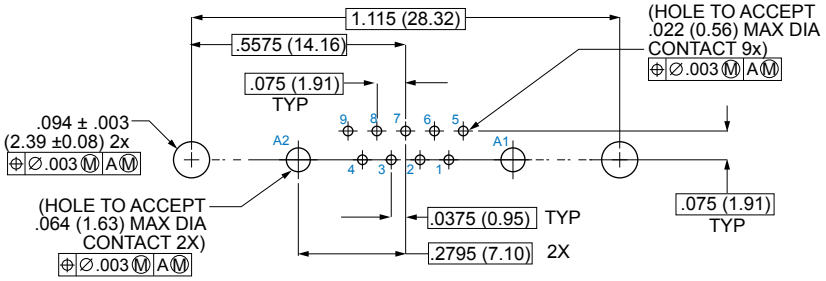
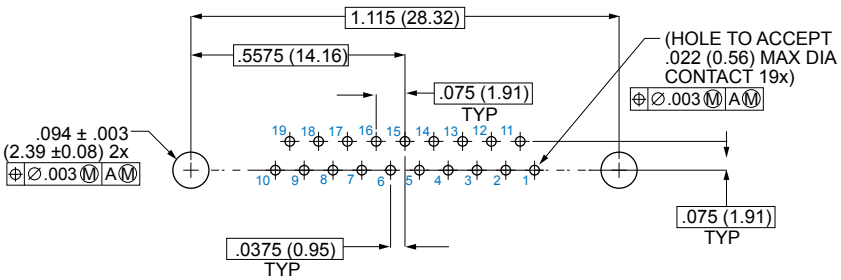
## 790-036P AND 790-041P PRINTED CIRCUIT BOARD PATTERNS

| Insert Arr. | Component Mounting Side of PCB<br>Mating Face of Connector is Toward Top of Page |
|---|---|
| D-15 |  |
| D-3P3 |  |
| D-7P2 |  |
| E-11P2 |  |
| E-19 |  |

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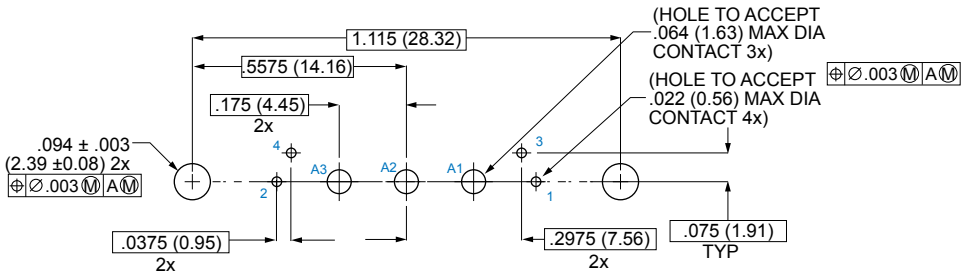
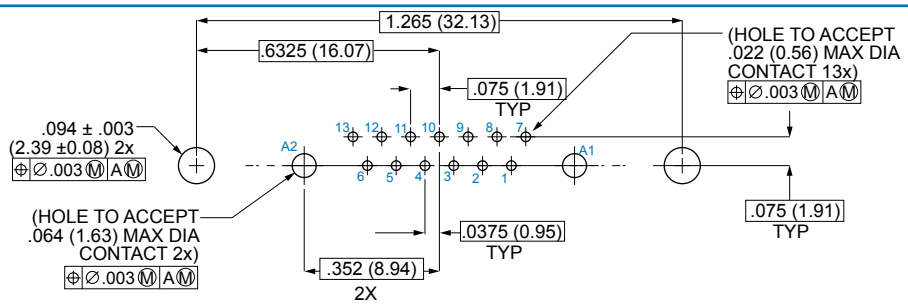
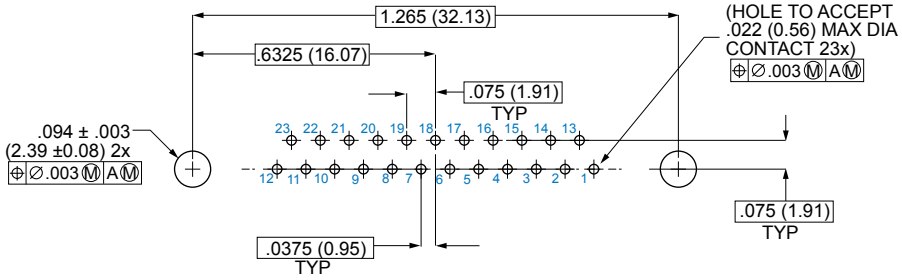
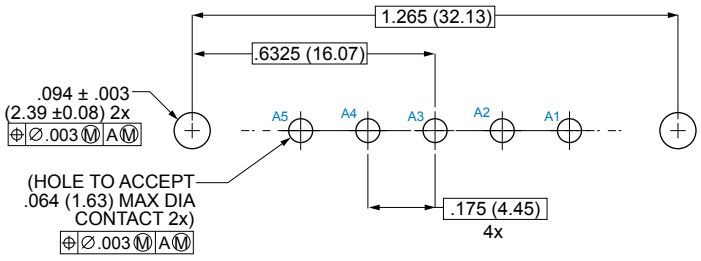
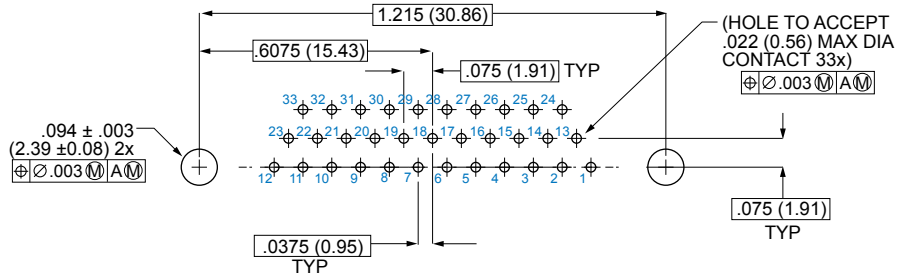
## 790-036P AND 790-041P PRINTED CIRCUIT BOARD PATTERNS

| Insert Arr. | Component Mounting Side of PCB<br>Mating Face of Connector is Toward Top of Page |
|---|---|
| E-7P3 |  |
| F-15P2 |  |
| F-23 |  |
| F-5P5 |  |
| G-33 |  |

Dimensions in inches (millimeters) and are subject to change without notice.



CAGE Code 06324

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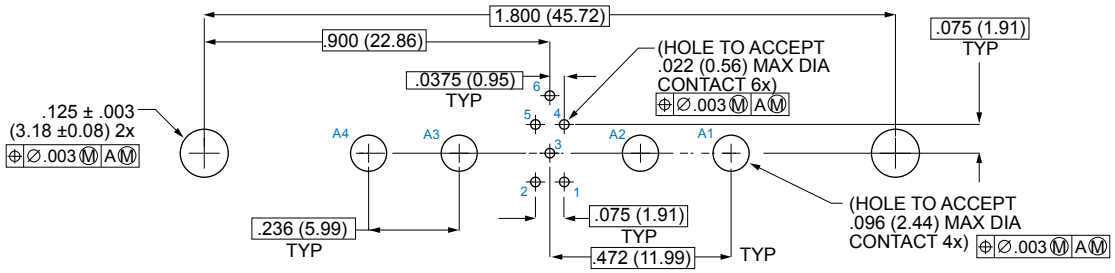
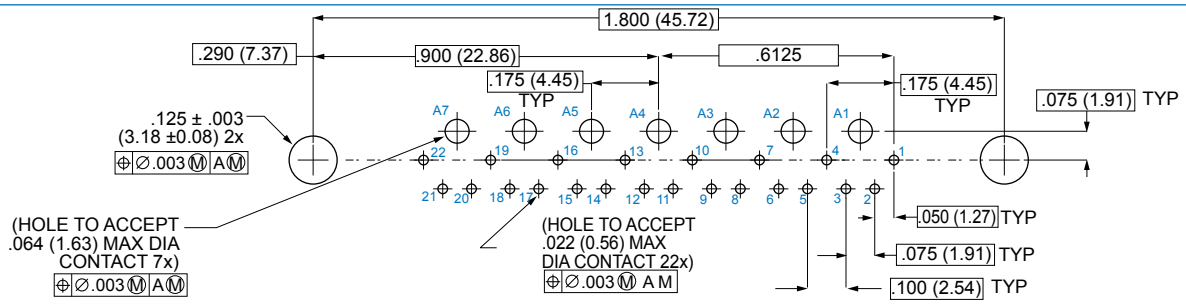
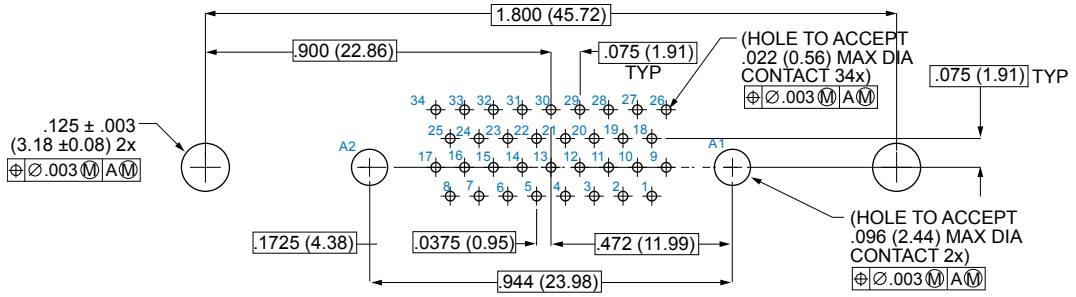
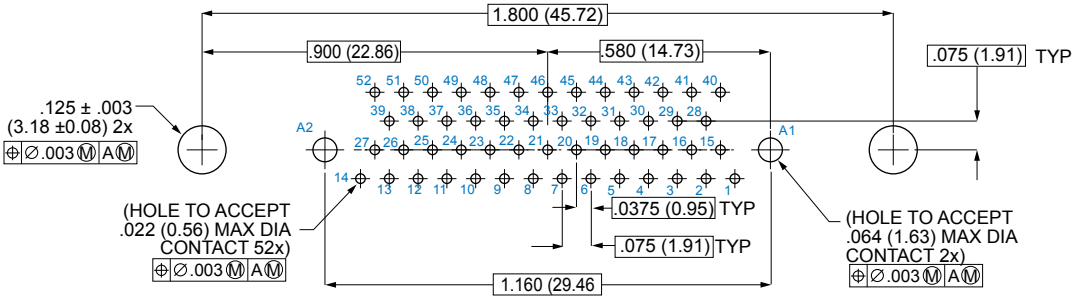
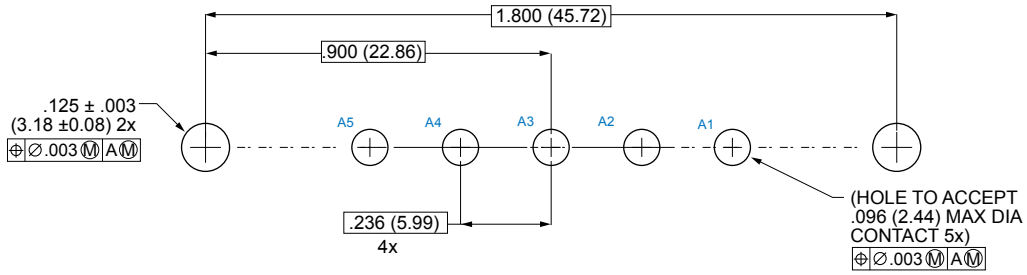
## 790-036P AND 790-041P PRINTED CIRCUIT BOARD PATTERNS

| Insert Arr. | Component Mounting Side of PCB<br>Mating Face of Connector is Toward Top of Page |
|---|---|
| H-10P4 |  |
| H-29P7 |  |
| H-36P2 |  |
| H-54P2 |  |
| H-5P5 |  |

Dimensions in inches (millimeters) and are subject to change without notice.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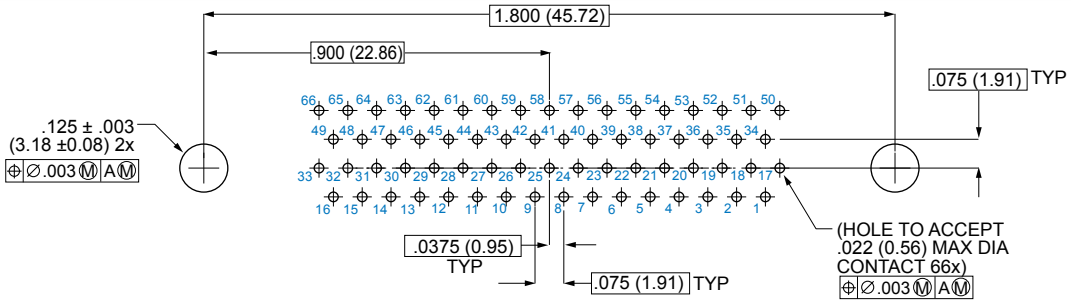
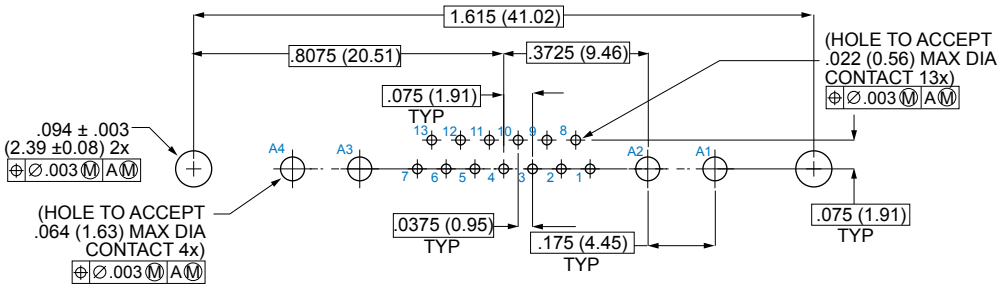
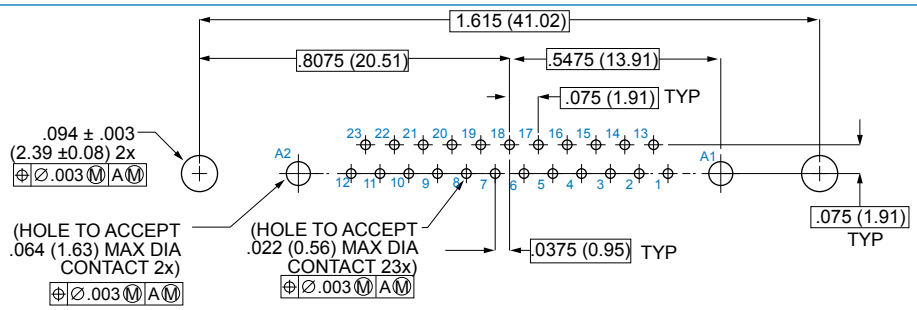
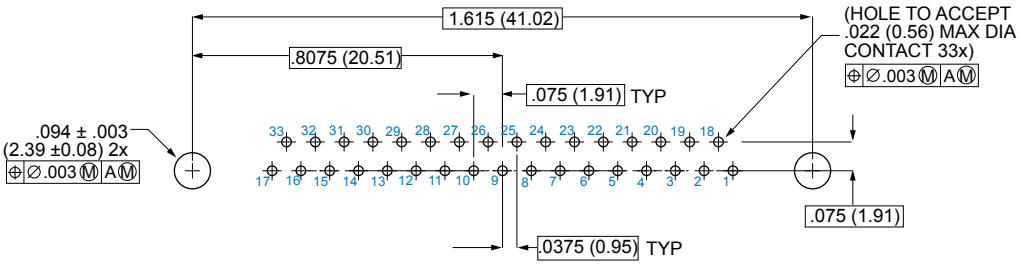
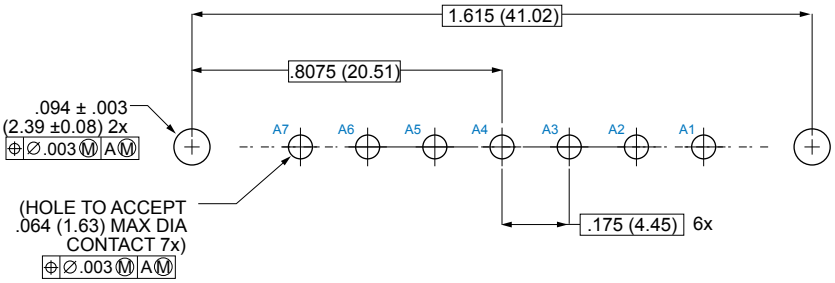
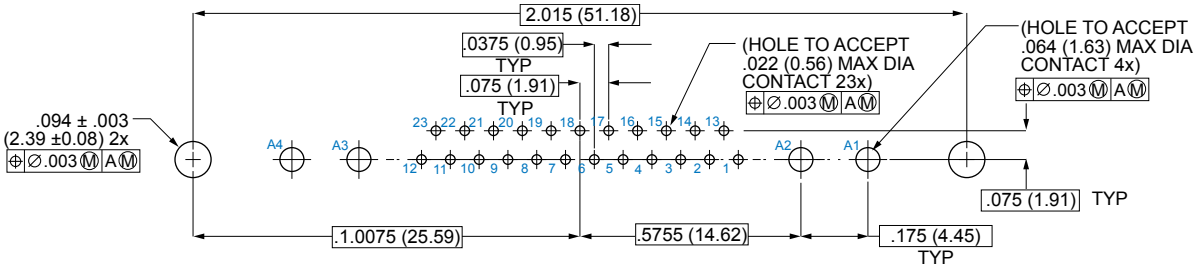
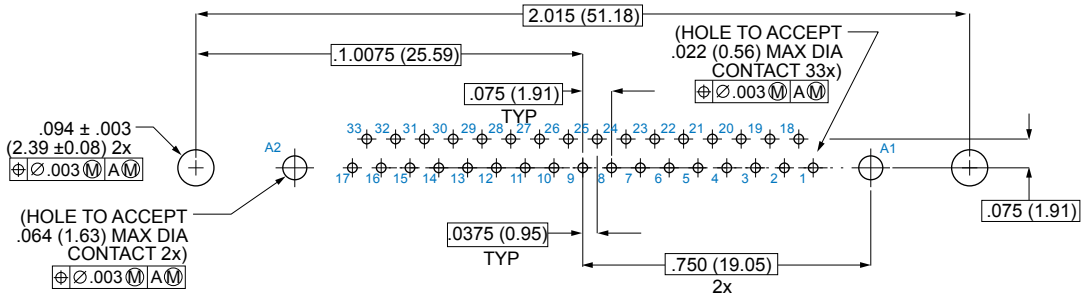
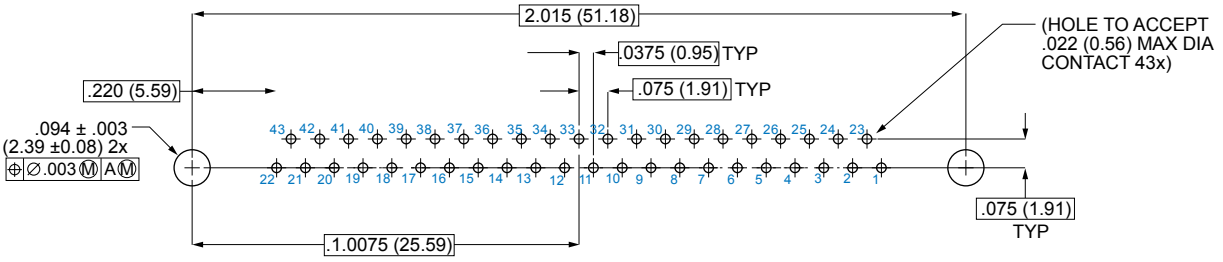
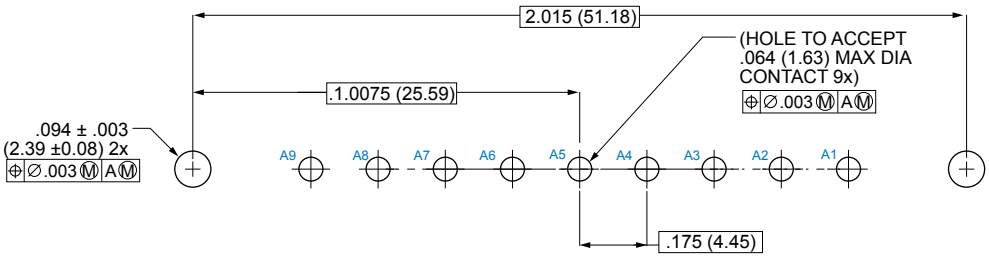
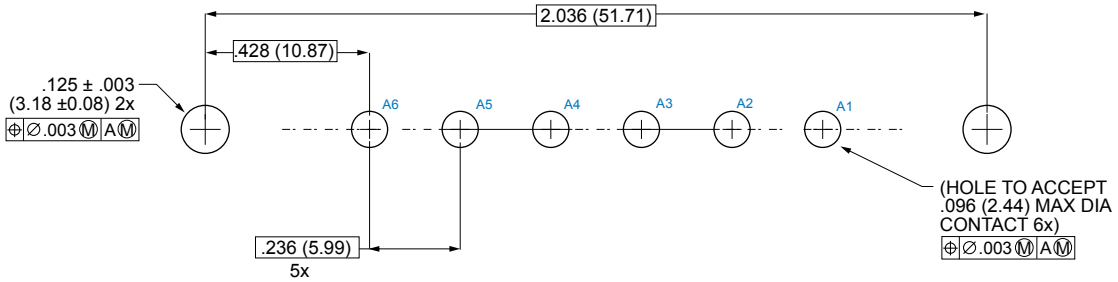
## 790-036P AND 790-041P PRINTED CIRCUIT BOARD PATTERNS

| Insert Arr. | Component Mounting Side of PCB<br>Mating Face of Connector is Toward Top of Page |
|---|---|
| H-66 |  |
| J-17P4 |  |
| J-25P2 |  |
| J-33 |  |
| J-7P7 |  |

Dimensions in inches (millimeters) and are subject to change without notice.

## 790-036P AND 790-041P PRINTED CIRCUIT BOARD PATTERNS

| Insert Arr. | Component Mounting Side of PCB<br>Mating Face of Connector is Toward Top of Page |
|---|---|
| K-27P4 |  |
| K-35P2 |  |
| K-43 |  |
| K-9P9 |  |
| L-6P6 |  |

Dimensions in inches (millimeters) and are subject to change without notice.



CAGE Code 06324

Printed in U.S.A.

Glenair®

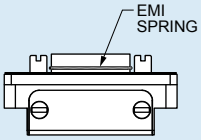
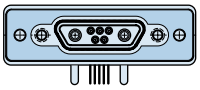
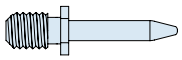
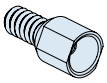
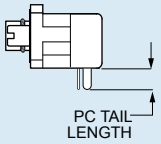
# Series 79 Micro-Crimp
# Section G: Right Angle Printed Circuit Board Connectors

## PANEL MOUNT PLUGS, SOCKET CONTACTS, 90° PCB TERMINATION, 790-037S

Lightweight, rugged right angle headers feature gold-plated PC tail contacts for thru-hole printed circuit board termination. 790-037S connectors are designed for rear-panel mounting and are supplied with conductive panel gaskets. Contacts are permanently installed and are sealed with epoxy. Shells are aluminum alloy. EMI shroud improves shielding performance. Threaded board mounting holes and integral standoffs simplify installation. Available in 29 different contact arrangements, these connectors feature size #23 signal contacts along with #16 and #12 power contacts for up to 23 amps current rating. Optional EMI spring improves shell-to-shell conductivity and shielding performance.

## HOW TO ORDER

**Sample Part Number**

| 790-037S | H-5P5 | M | E | P | B |
|---|---|---|---|---|---|
| **Part Number** | **Shell Size - Insert Arr.** | **Shell Finish** | **EMI Spring** | **Hardware Option** | **PC Tail Length** |
| **790-037S**<br>Rear Panel Mounted Plug with 90° PC Tail Contacts for Termination to Backplanes or Flexible Circuits | See Table 1 for Available Insert Arrangements | **M**<br>Electroless Nickel<br>*general purpose applications*<br>**MT**<br>Nickel-PTFE<br>*1000 Hour Grey™ maximum corrosion protection and durability (non-reflective grey)*<br>**ZNU**<br>Zinc-Nickel with Black Chromate<br>*tactical applications (non-reflective black)*<br>Additional shell finishes are listed on page C-9. | **E**<br>EMI Spring<br>**N**<br>No Spring<br>  |  <br>**N**<br>No Hardware<br>  <br>**G**<br>Guide Pin<br>  <br>**P**<br>Female Jackpost<br>  <br>**S**<br>Female Guide Socket | **A**<br>.125 Inch (3.2 mm.)<br>**B**<br>.250 inch (6.4 mm.)<br>  |

## SPECIFICATIONS

| | |
|---|---|
| Current Rating | #23 5 AMPS, #16 13 A., #12 23 A. |
| Dielectric Withstanding Voltage | #23 500 VAC RMS, #12 and #16 1800 VAC RMS |
| Insulation Resistance | 5000 megohms minimum |
| Operating Temperature | -65° C. to +150° C. |
| Shock | 300 g. |
| Vibration | 37 g. |

## MATERIALS AND FINISHES

| | |
|---|---|
| Shell | Aluminum alloy |
| Contacts | Copper alloy, gold plated, with stainless steel hood |
| Insulator | Liquid crystal polymer (LCP) |
| PCB Tray | Thermoplastic |
| EMI Shroud | Aluminum alloy |
| Hardware | 300 series stainless steel |
| Panel Gasket | Fluorosilicone, conductive |
| Encapsulant | Epoxy |

Dimensions in inches (millimeters) and are subject to change without notice.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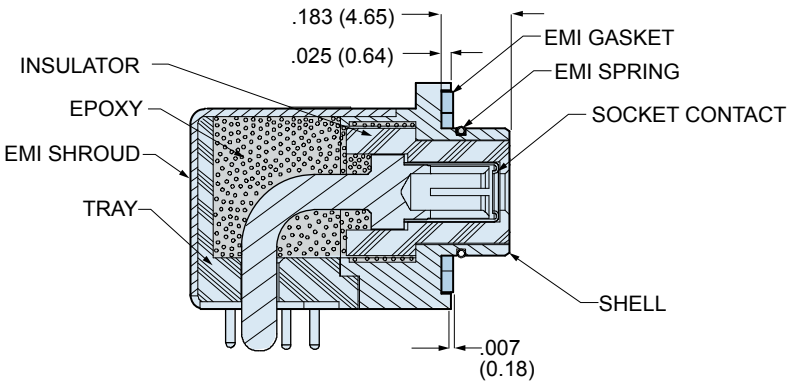
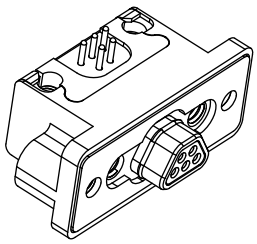
## Table 1
## Contact Arrangements

| Layout | Contact Quantity #23 | #16 | #12 | Face View |
|---|---|---|---|---|
| A-5 | 5 | | | |
| B-2P2 | | 2 | | |
| B-9 | 9 | | | |
| C-13 | 13 | | | |
| D-15 | 15 | | | |
| D-3P3 | | 3 | | |
| D-7P2 | 5 | 2 | | |
| E-11P2 | 9 | 2 | | |
| E-19 | 19 | | | |
| E-7P3 | 4 | 3 | | |
| F-15P2 | 13 | 2 | | |
| F-23 | 23 | | | |
| F-5P5 | | 5 | | |
| G-33 | 33 | | | |
| H-10P4 | 6 | | 4 | |
| H-29P7 | 22 | 7 | | |
| H-36P2 | 34 | | 2 | |
| H-54P2 | 52 | 2 | | |
| H-5P5 | | | 5 | |
| H-66 | 66 | | | |
| J-17P4 | 13 | 4 | | |
| J-25P2 | 23 | 2 | | |
| J-33 | 33 | | | |
| J-7P7 | | 7 | | |
| K-27P4 | 23 | 4 | | |
| K-35P2 | 33 | 2 | | |
| K-43 | 43 | | | |
| K-9P9 | | 9 | | |
| L-6P6 | | | 6 | |

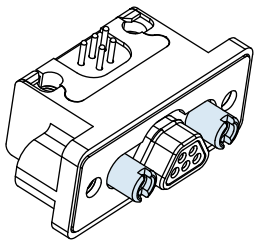
## CROSS-SECTIONAL VIEW OF 790-037S



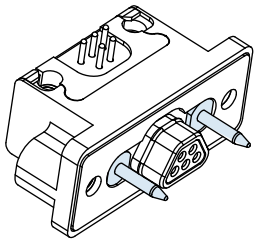

## TABLE 2
## HARDWARE OPTION



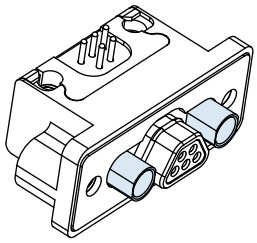
**N**
**No Mating Hardware**
Connector is supplied with blind, tapped holes. Shell sizes H and L have 6-32 UNC-2B thread, other sizes are #4-40. Minimum thread depth is .150" (3.81).



**P**
**Jackposts**
Connector is supplied with non-removable jackposts. Shell sizes H and L have #4-40 UNC-2B thread, other sizes have #2-56 thread.



**G**
**Male Guide Pins**
Connector is supplied with stainless steel guide pins to mate with code S guide sockets. Pins are non-removable.



**S**
**Female Guide Sockets**
Connector is supplied with stainless steel guide sockets to mate with code G guide pins. Sockets are non-removable.

G

Dimensions in inches (millimeters) and are subject to change without notice.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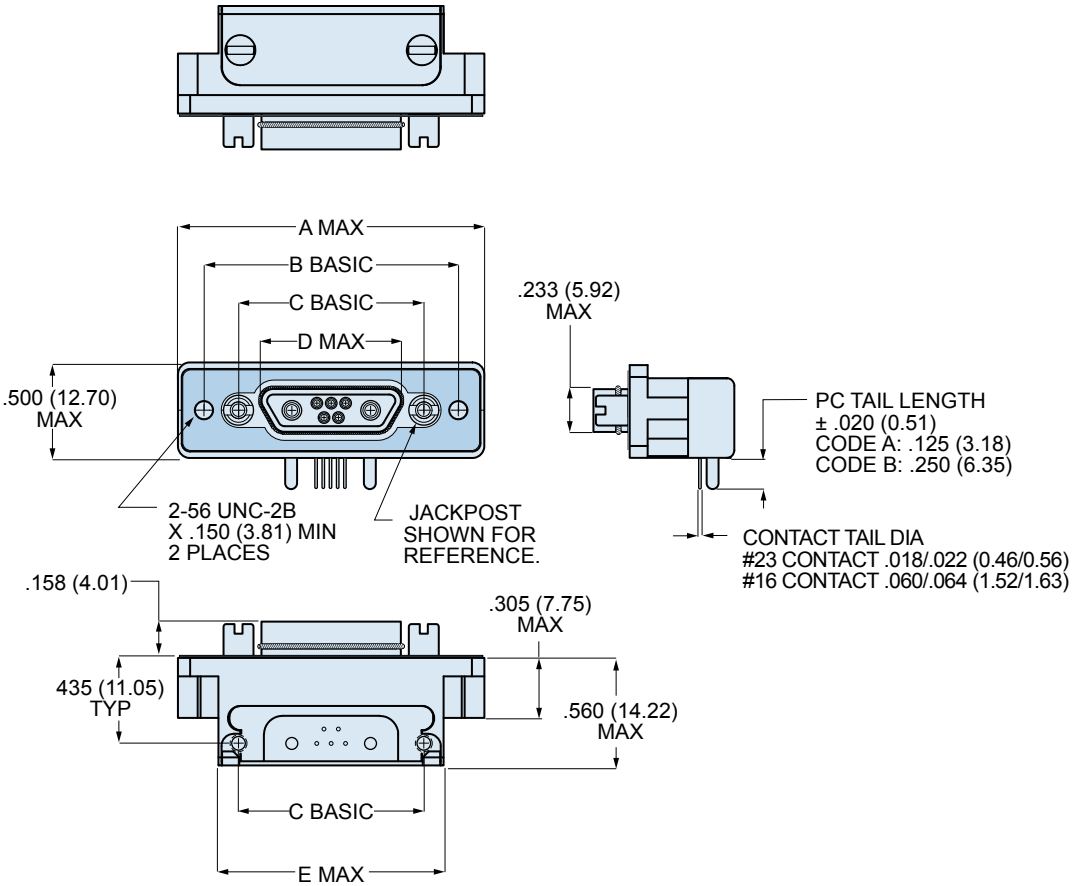
## 790-037S DIMENSIONS: SHELL SIZE A-F, J AND K




### 790-037S SHELL SIZES A-F, J AND K

| Shell Size | A Max. | | B Basic | | C Basic | | D Max. | | E Max. | |
|---|---|---|---|---|---|---|---|---|---|---|
| | In. | mm. | In . | mm. | In. | mm. | In. | mm. | In. | mm. |
| A | 1.101 | 27.97 | .925 | 23.50 | .565 | 14.35 | .335 | 8.51 | .395 | 10.03 |
| B | 1.251 | 31.78 | 1.075 | 27.31 | .715 | 18.16 | .485 | 12.32 | .545 | 13.84 |
| C | 1.401 | 35.59 | 1.225 | 31.12 | .865 | 21.97 | .635 | 16.13 | .695 | 17.63 |
| D | 1.501 | 39.13 | 1.325 | 33.66 | .965 | 24.51 | .735 | 18.67 | .795 | 20.19 |
| E | 1.651 | 41.94 | 1.475 | 37.47 | 1.115 | 28.32 | .885 | 22.48 | .945 | 24.00 |
| F | 1.801 | 45.75 | 1.625 | 41.28 | 1.265 | 32.13 | 1.035 | 26.29 | 1.095 | 27.81 |
| J | 2.151 | 54.64 | 1.975 | 50.17 | 1.615 | 41.02 | 1.450 | 36.83 | 1.455 | 36.96 |
| K | 2.551 | 64.80 | 2.375 | 60.33 | 2.015 | 51.18 | 1.851 | 47.02 | 1.855 | 47.12 |

Dimensions in inches (millimeters) and are subject to change without notice.



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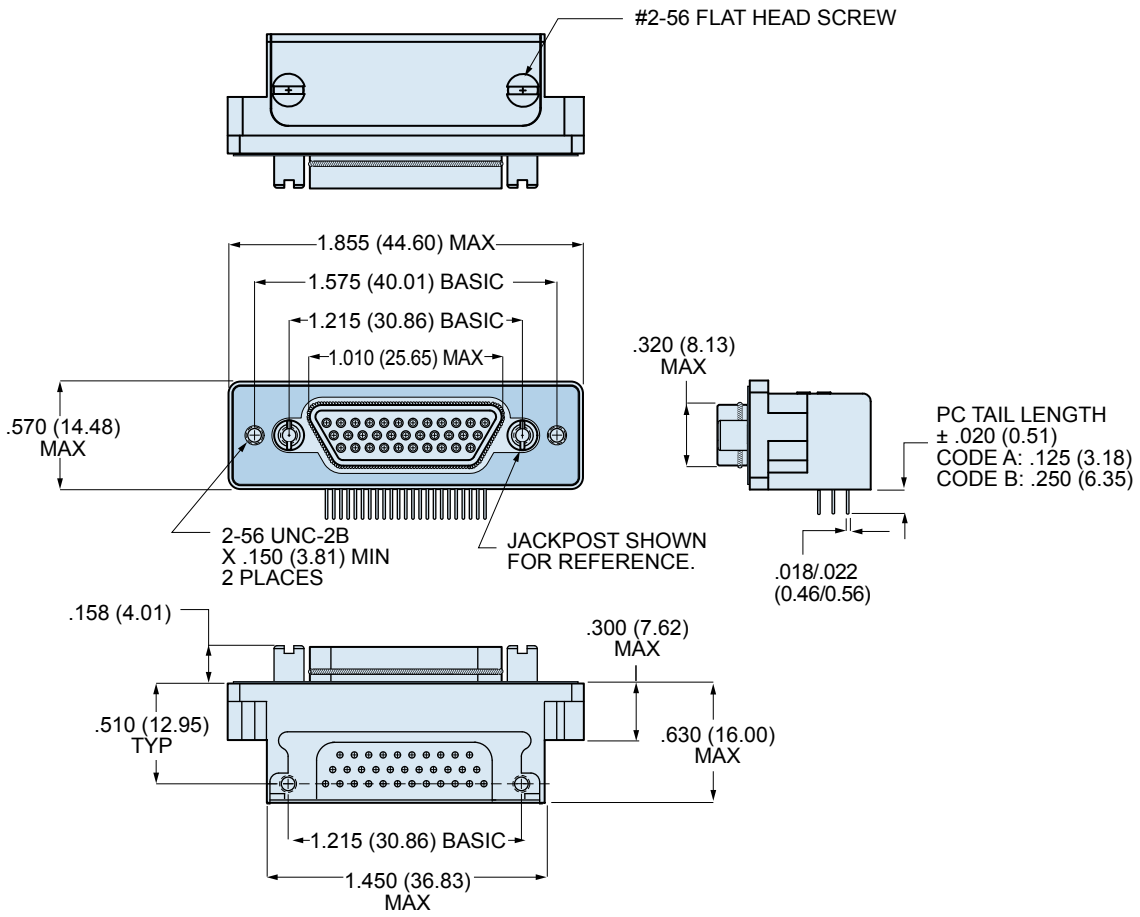
## 790-037S DIMENSIONS: SHELL SIZE G




G

Dimensions in inches (millimeters) and are subject to change without notice.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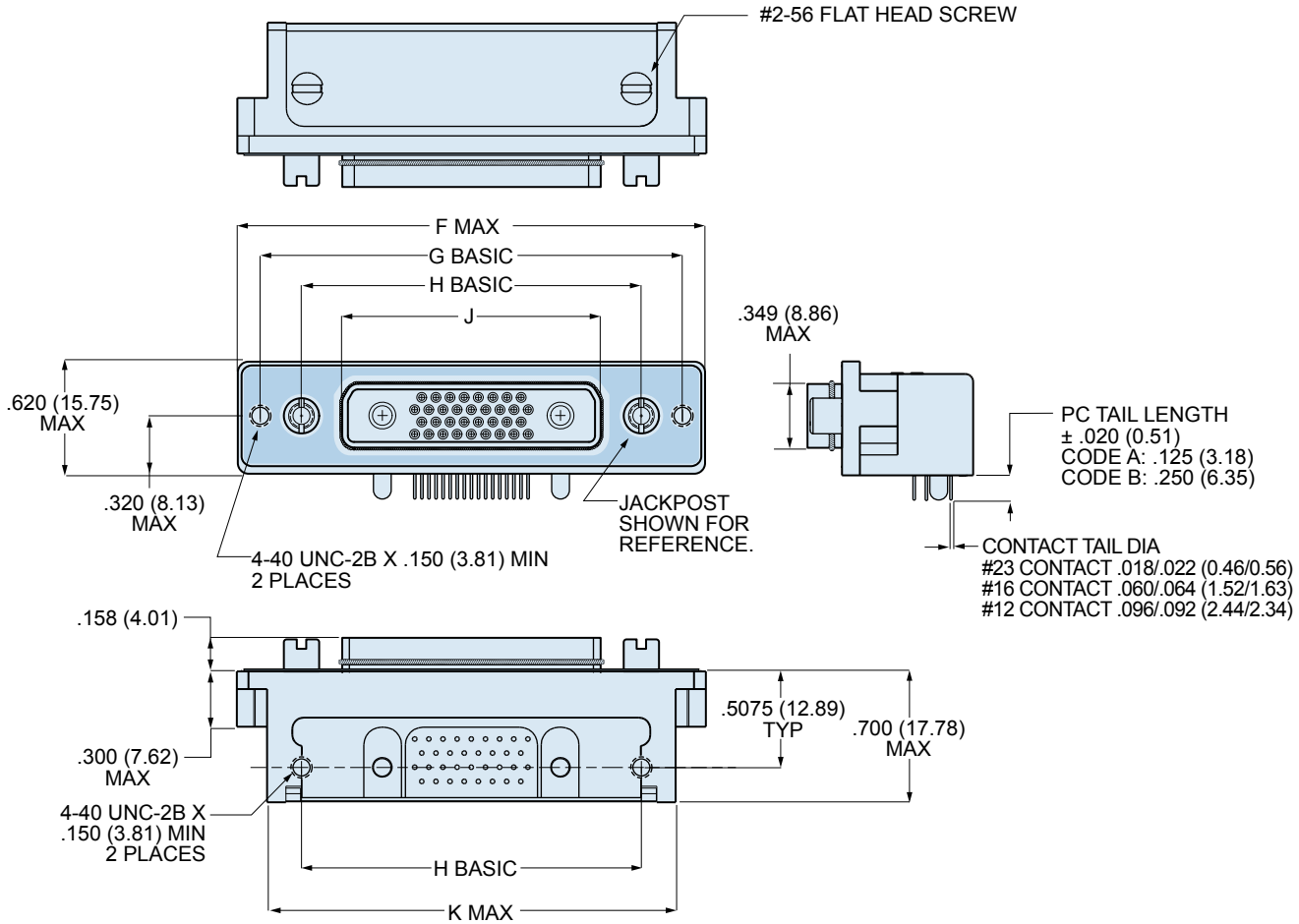
## 790-037S DIMENSIONS: SHELL SIZE H AND L




### 790-037S SHELL SIZES H AND L

| Shell Size | F Max. | | G Basic | | H Basic | | J Max. | | K Max. | |
|---|---|---|---|---|---|---|---|---|---|---|
| | In. | mm. | In . | mm. | In. | mm. | In. | mm. | In. | mm. |
| H | 2.500 | 63.50 | 2.236 | 56.79 | 1.800 | 45.72 | 1.385 | 35.18 | 2.175 | 55.25 |
| L | 2.736 | 69.49 | 2.472 | 62.79 | 2.036 | 51.71 | 1.623 | 41.22 | 2.411 | 61.24 |



Dimensions in inches (millimeters) and are subject to change without notice.



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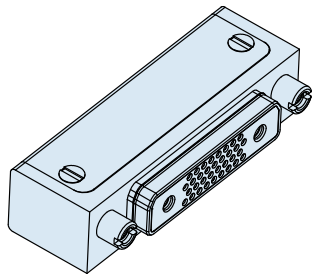
GLENAIR, INC. • 1211 AIR WAY • GLENDALE, CA 91201-2497 • 818-247-6000 • FAX 818-500-9912

www.glenair.com

E-Mail: sales@glenair.com

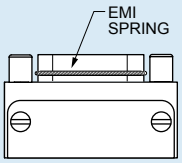
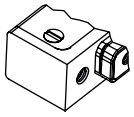
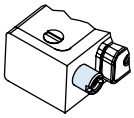
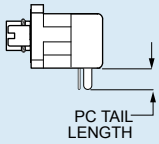
## BOARD MOUNT PLUGS, SOCKET CONTACTS, 90° PCB TERMINATION, 790-042S



Free-standing rugged right angle headers feature gold-plated PC tail contacts for thru-hole printed circuit board termination. Not for panel mounting. Contacts are permanently installed and are sealed with epoxy. Shells are aluminum alloy. EMI shroud improves shielding performance. Threaded board mounting holes and integral standoffs simplify installation. Available in 29 different contact arrangements, these connectors feature size #23 signal contacts along with #16 and #12 power contacts for up to 23 amps current rating. Optional EMI spring improves shell-to-shell conductivity and shielding performance. Mates with 790-024p cable receptacles.

## HOW TO ORDER

**Sample Part Number**

| 790-042S | L-6P6 | M | E | P | A |
|---|---|---|---|---|---|
| **Part Number** | **Shell Size - Insert Arr.** | **Shell Finish** | **EMI Spring** | **Hardware Option** | **PC Tail Length** |
| **790-042S**<br>Right Angle Plug with 90° PC Tail Contacts for Termination to Backplanes or Flexible Circuits | See Table 1 for Available Insert Arrangements | **M**<br>Electroless Nickel<br>*general purpose applications*<br>**MT**<br>Nickel-PTFE<br>*1000 Hour Grey™ maximum corrosion protection and durability (non-reflective grey)*<br>**ZNU**<br>Zinc-Nickel with Black Chromate<br>*tactical applications (non-reflective black)*<br>Additional shell finishes are listed on page C-9. | **E**<br>EMI Spring<br>**N**<br>No Spring<br>  |  <br>**N**<br>No Hardware<br>  <br>**P**<br>Female Jackpost | **A**<br>.125 Inch (3.2 mm.)<br>**B**<br>.250 inch (6.4 mm.)<br>  |

G

## SPECIFICATIONS

| | |
|---|---|
| Current Rating | #23 5 AMPS, #16 13 A., #12 23 A. |
| Dielectric Withstanding Voltage | #23 500 VAC RMS, #12 and #16 1800 VAC RMS |
| Insulation Resistance | 5000 megohms minimum |
| Operating Temperature | -65° C. to +150° C. |
| Shock | 300 g. |
| Vibration | 37 g. |

## MATERIALS AND FINISHES

| | |
|---|---|
| Shell | Aluminum alloy |
| Contacts | Copper alloy, gold plated |
| Insulator | Liquid crystal polymer (LCP) |
| PCB Tray | Thermoplastic |
| EMI Shroud | Aluminum alloy |
| Hardware | 300 series stainless steel |
| Panel Gasket | Fluorosilicone, conductive |
| Encapsulant | Epoxy |

Dimensions in inches (millimeters) and are subject to change without notice.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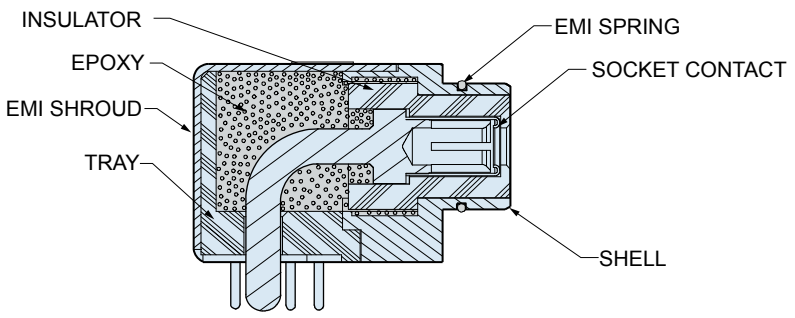
Glenair®

# Series 79 Micro-Crimp
# Section G: Right Angle Printed Circuit Board Connectors

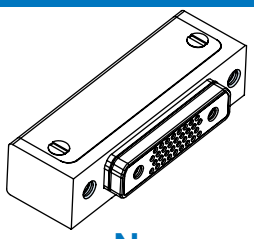
## Table 1 Contact Arrangements

| Layout | Contact Quantity #23 | #16 | #12 | Face View |
|---|---|---|---|---|
| A-5 | 5 | | | |
| B-2P2 | | 2 | | |
| B-9 | 9 | | | |
| C-13 | 13 | | | |
| D-15 | 15 | | | |
| D-3P3 | | 3 | | |
| D-7P2 | 5 | 2 | | |
| E-11P2 | 9 | 2 | | |
| E-19 | 19 | | | |
| E-7P3 | 4 | 3 | | |
| F-15P2 | 13 | 2 | | |
| F-23 | 23 | | | |
| F-5P5 | | 5 | | |
| G-33 | 33 | | | |
| H-10P4 | 6 | | 4 | |
| H-29P7 | 22 | 7 | | |
| H-36P2 | 34 | | 2 | |
| H-54P2 | 52 | 2 | | |
| H-5P5 | | | 5 | |
| H-66 | 66 | | | |
| J-17P4 | 13 | 4 | | |
| J-25P2 | 23 | 2 | | |
| J-33 | 33 | | | |
| J-7P7 | | 7 | | |
| K-27P4 | 23 | 4 | | |
| K-35P2 | 33 | 2 | | |
| K-43 | 43 | | | |
| K-9P9 | | 9 | | |
| L-6P6 | | | 6 | |

## CROSS-SECTIONAL VIEW OF 790-042S



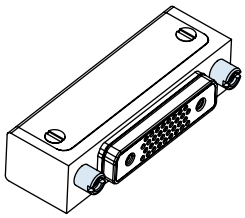

## TABLE 2 HARDWARE OPTION



**N**

**No Mating Hardware**

Connector is supplied with threaded holes. Shell sizes H and L have #6-32 threads, other sizes have #4-40 threads. Thread depth is .150" (3.8).



**P**

**Jackposts**

Connector is supplied with non-removable stainless steel jackposts. Shell sizes H and L have #4-40 UNC thread, other sizes have #2-56 thread.

G

Dimensions in inches (millimeters) and are subject to change without notice.



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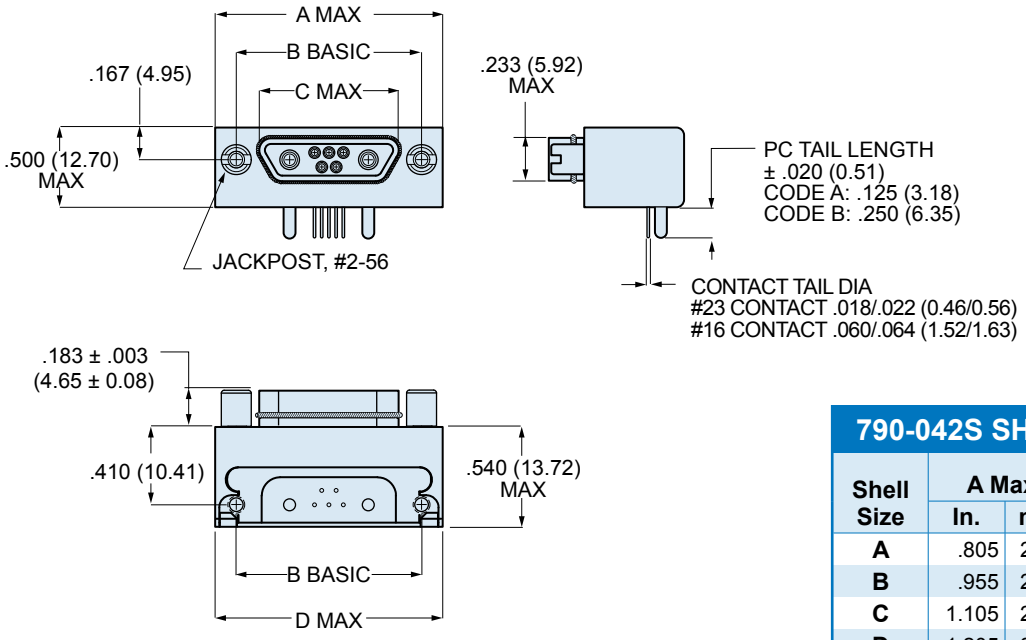
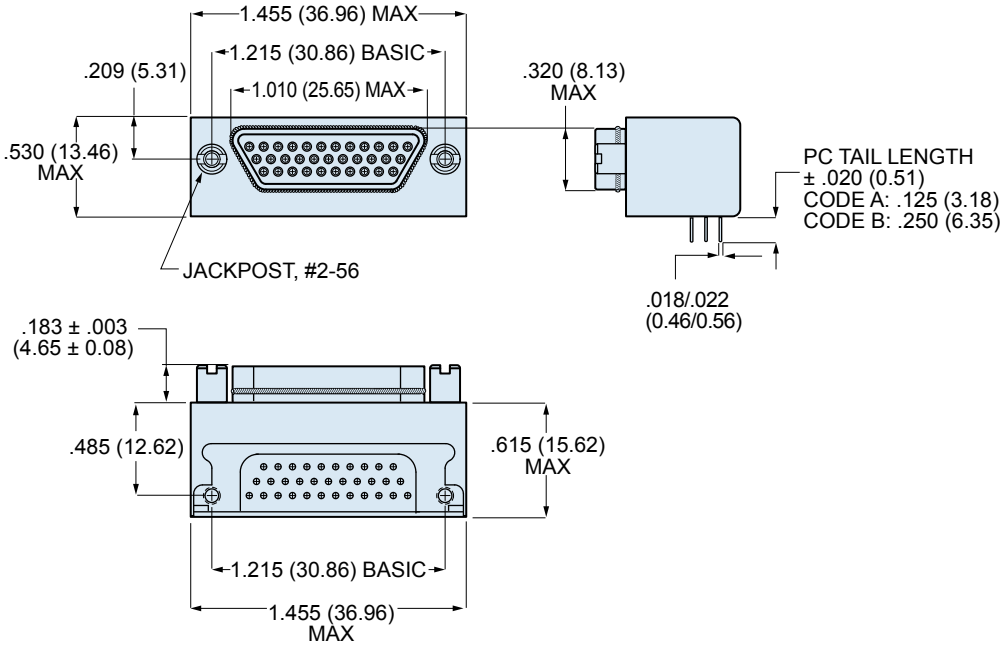
## 790-042S DIMENSIONS: SHELL SIZE A-F, J AND K




### 790-042S SHELL SIZES A-F, J AND K

| Shell Size | A Max. | | B Basic | | C Max. | |
|---|---|---|---|---|---|---|
| | In. | mm. | In. | mm. | In. | mm. |
| A | .805 | 20.45 | .565 | 14.35 | .335 | 8.51 |
| B | .955 | 24.26 | .715 | 18.16 | .485 | 12.32 |
| C | 1.105 | 28.07 | .865 | 21.97 | .635 | 16.13 |
| D | 1.205 | 30.61 | .965 | 24.51 | .735 | 18.67 |
| E | 1.355 | 34.42 | 1.115 | 28.32 | .885 | 22.48 |
| F | 1.505 | 38.23 | 1.265 | 32.13 | 1.035 | 26.29 |
| J | 1.855 | 47.12 | 1.615 | 41.02 | 1.450 | 36.83 |
| K | 2.255 | 57.28 | 2.015 | 51.18 | 1.851 | 47.02 |

## 790-042S DIMENSIONS: SHELL SIZE A-F, J AND K

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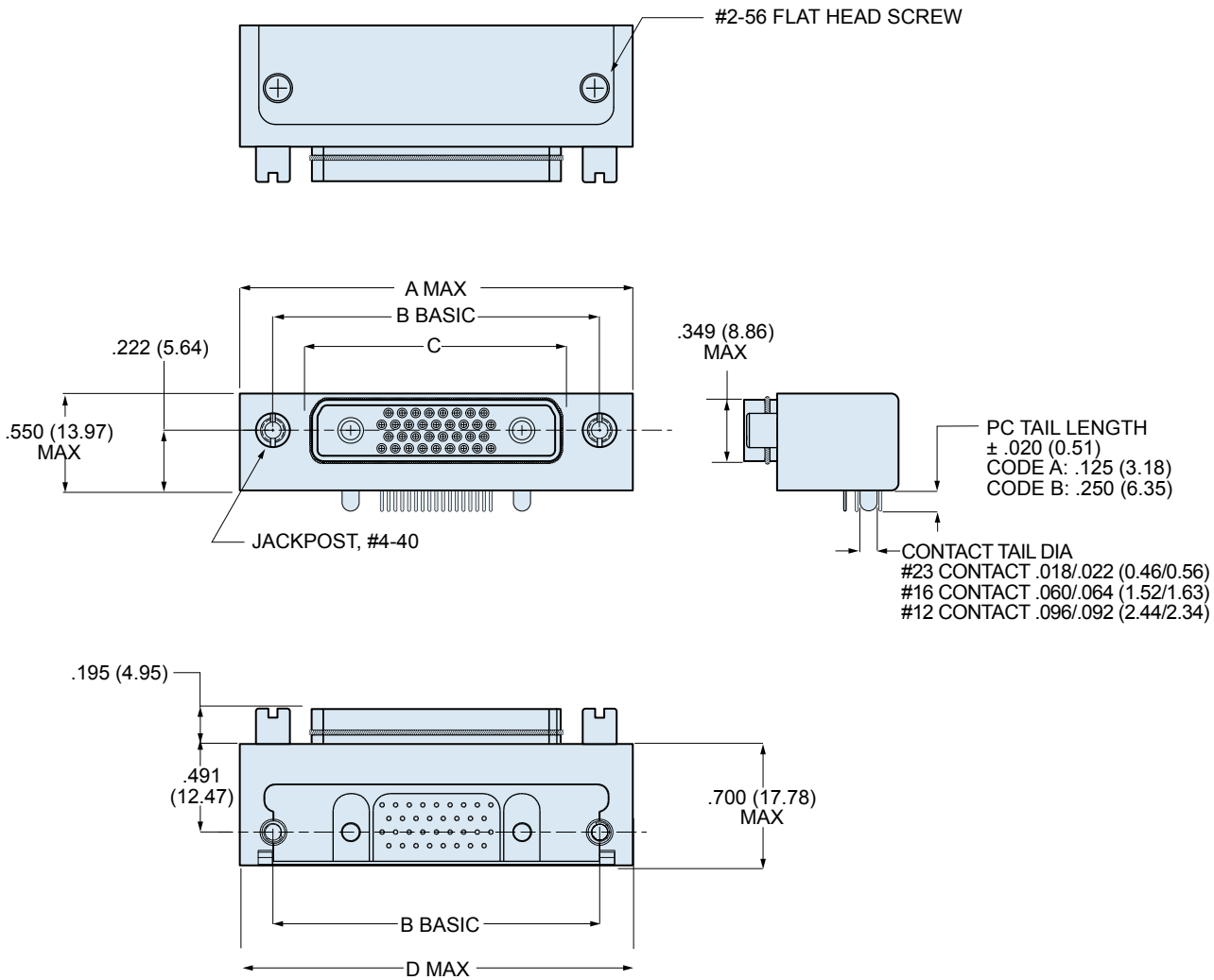
## 790-042S DIMENSIONS: SHELL SIZES H & L




### 790-042S SHELL SIZES H AND L

| Shell Size | A Max. | | B Basic | | C Max. | |
|---|---|---|---|---|---|---|
| | In. | mm. | In. | mm. | In. | mm. |
| H | 2.185 | 55.50 | 1.800 | 45.72 | 1.385 | 35.18 |
| L | 2.430 | 61.72 | 2.036 | 51.71 | 1.623 | 41.22 |

Dimensions in inches (millimeters) and are subject to change without notice.



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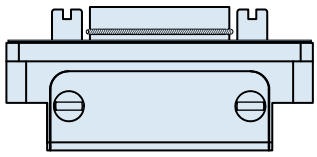
## PCB Hole Patterns for 790-037S and 790-042S Plugs

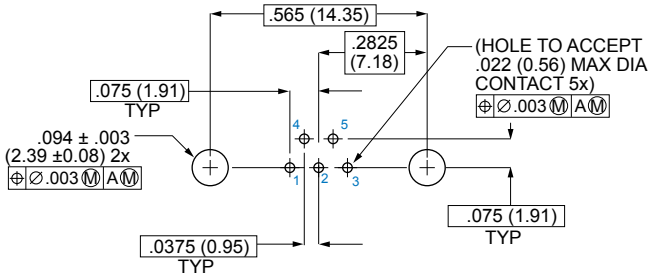
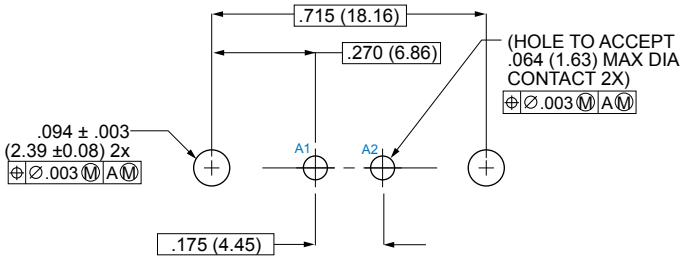
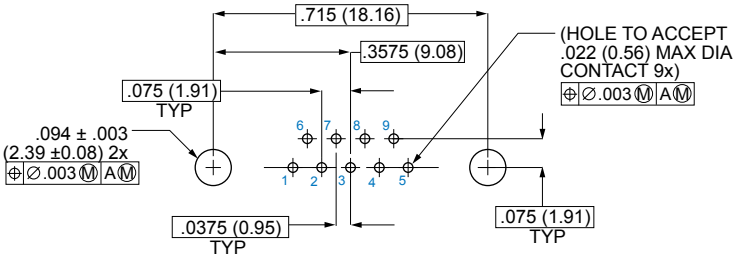
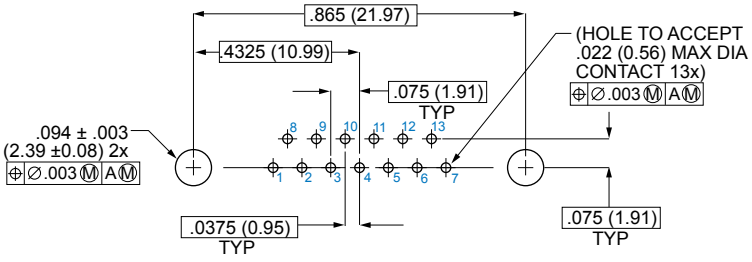
This section contains printed circuit board footprints for right angle Series 79 plugs. The contact identification numbers are shown for the connector mounting side of the PC board. Contact tails are gold over nickel plated.



CONNECTOR ORIENTATION

| Contact Size | PC Tail Diameter Ø Diameter In. | mm. |
|---|---|---|
| #23 | .018-.022 | 0.46-0.56 |
| #16 | .060-.064 | 1.52-1.63 |
| #12 | .092-.096 | 2.34-2.44 |

### 790-037S AND 790-042S PRINTED CIRCUIT BOARD PATTERNS

| Insert Arr. | Component Mounting Side of PCB<br>Mating Face of Connector is Toward Top of Page |
|---|---|
| A-5 |  |
| B-2P2 |  |
| B-9 |  |
| C-13 |  |



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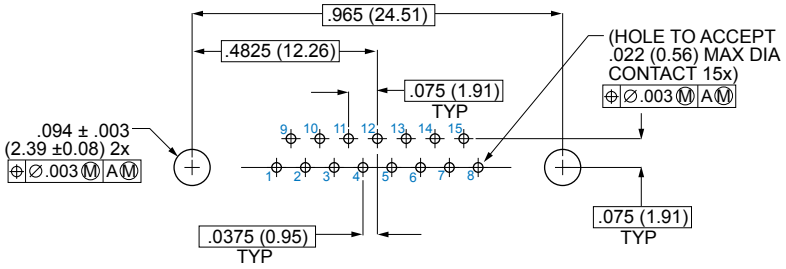
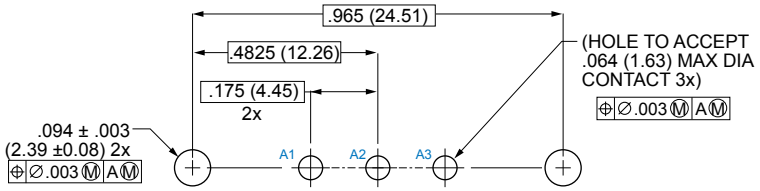
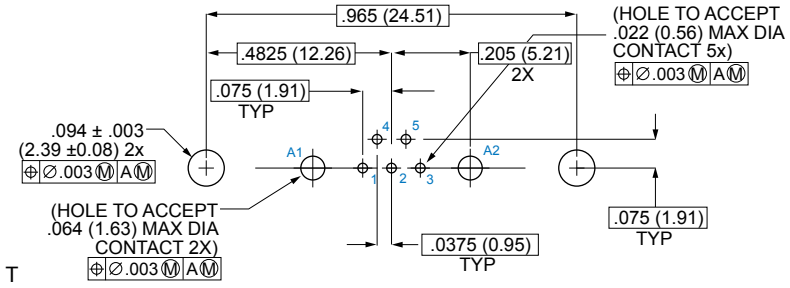
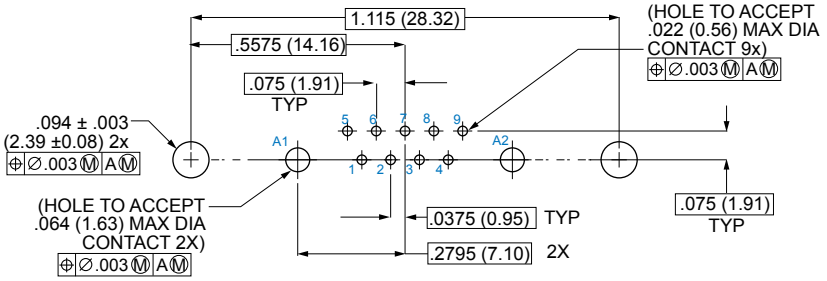
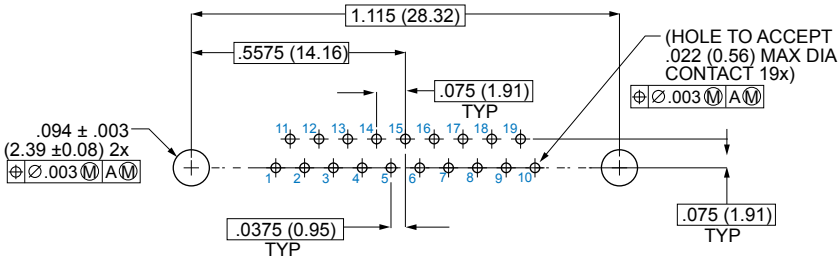
## 790-037S AND 790-042S PRINTED CIRCUIT BOARD PATTERNS

| Insert Arr. | Component Mounting Side of PCB<br>Mating Face of Connector is Toward Top of Page |
|---|---|
| D-15 |  |
| D-3P3 |  |
| D-7P2 |  |
| E-11P2 |  |
| E-19 |  |

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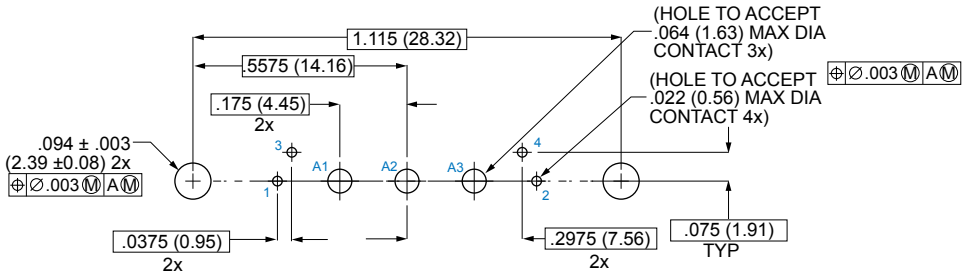
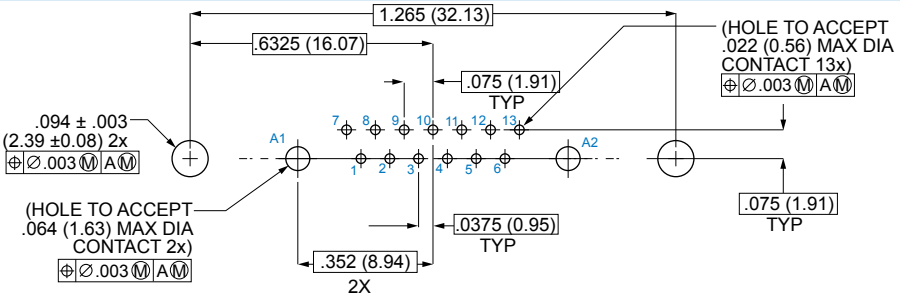
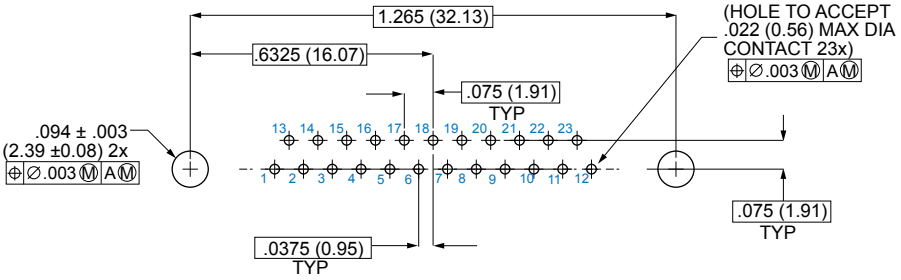
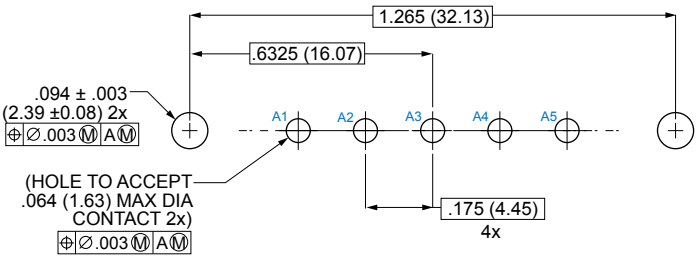
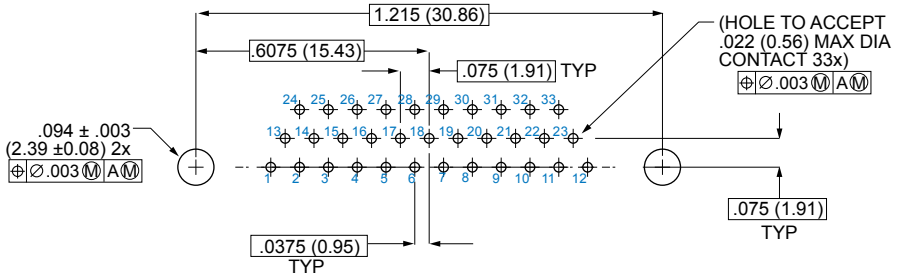
## 790-037S AND 790-042S PRINTED CIRCUIT BOARD PATTERNS

| Insert Arr. | Component Mounting Side of PCB<br>Mating Face of Connector is Toward Top of Page |
|---|---|
| E-7P3 |  |
| F-15P2 |  |
| F-23 |  |
| F-5P5 |  |
| G-33 |  |

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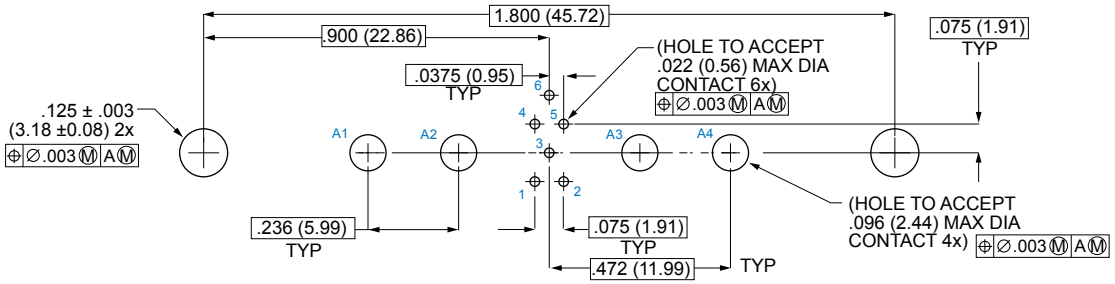
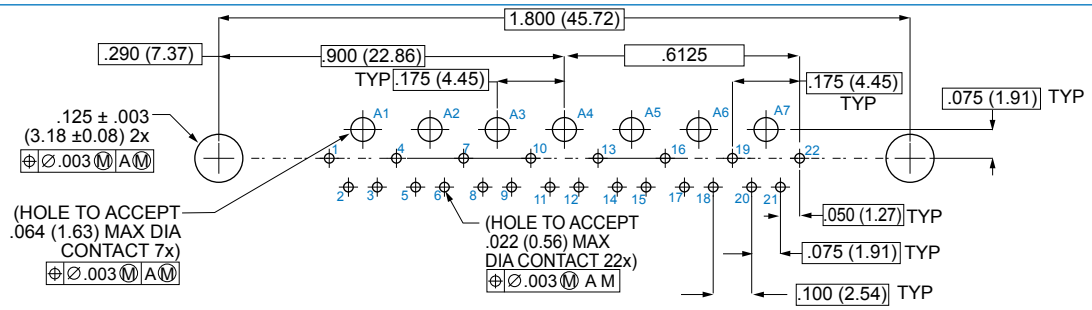
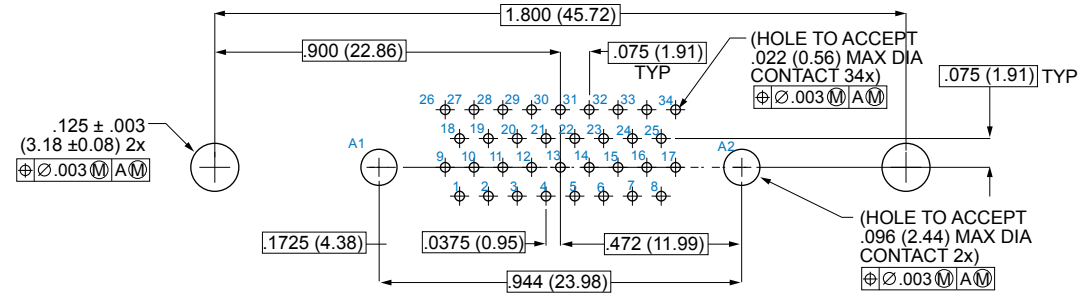
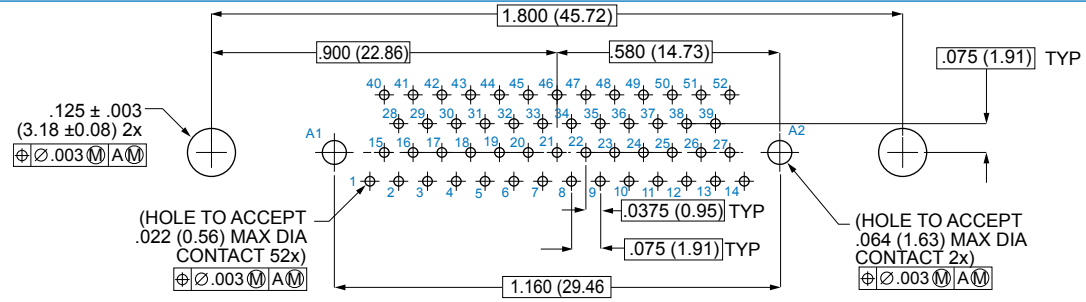
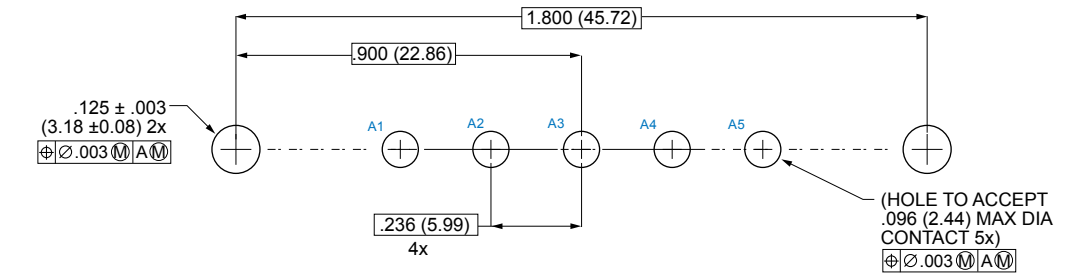
## 790-037S AND 790-042S PRINTED CIRCUIT BOARD PATTERNS

| Insert Arr. | Component Mounting Side of PCB<br>Mating Face of Connector is Toward Top of Page |
|---|---|
| H-10P4 |  |
| H-29P7 |  |
| H-36P2 |  |
| H-54P2 |  |
| H-5P5 |  |

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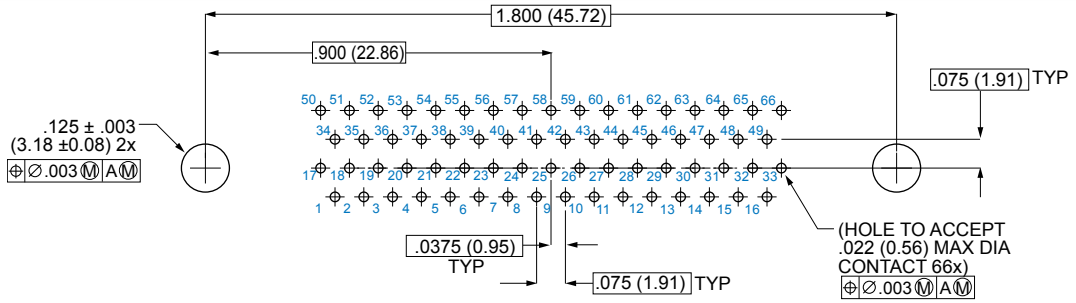
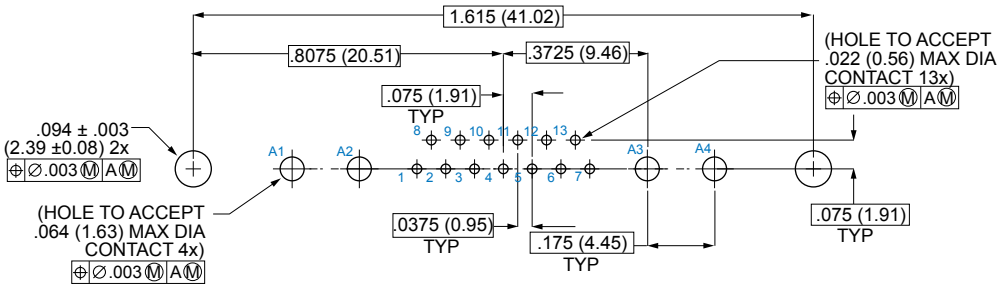
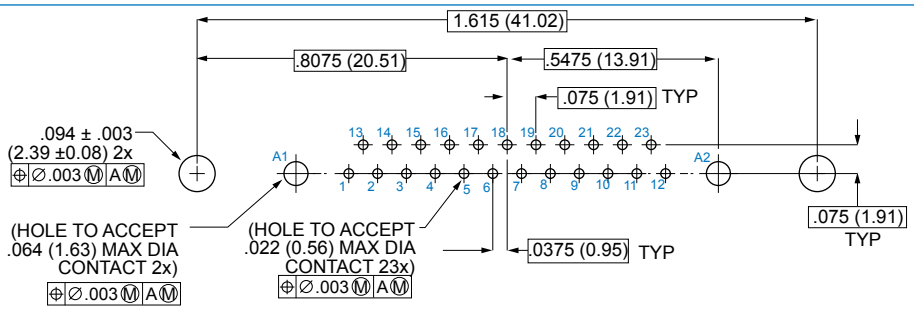
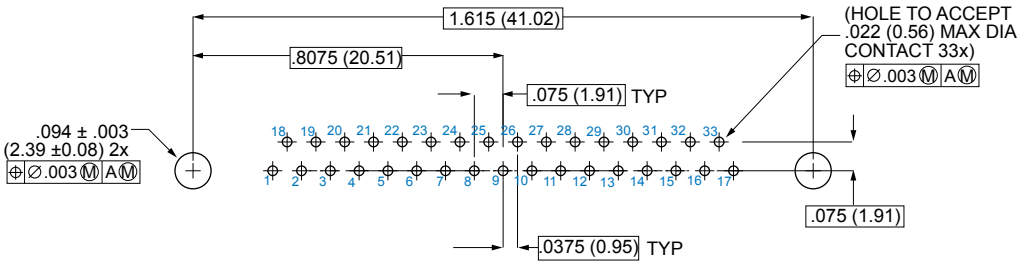
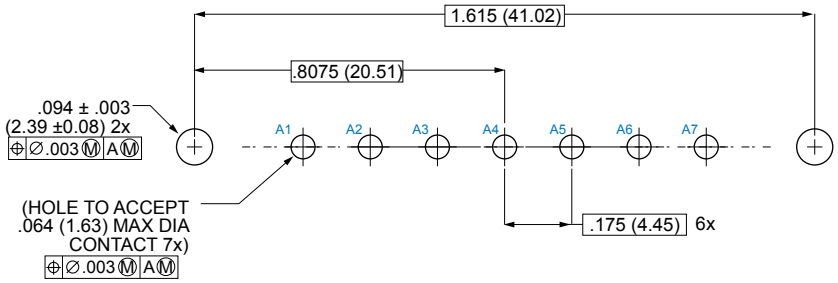
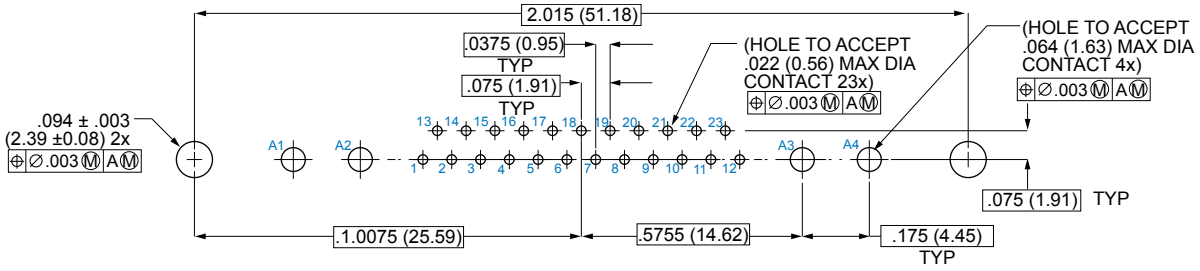
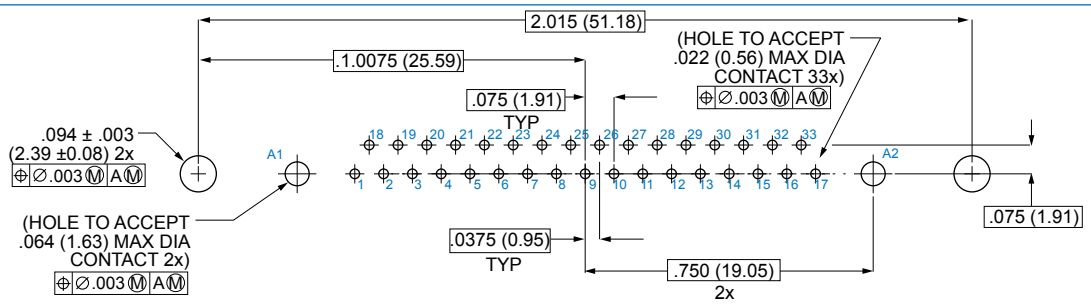
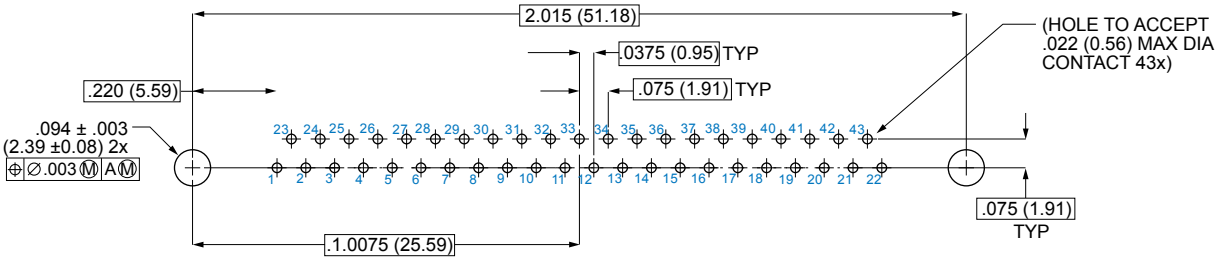
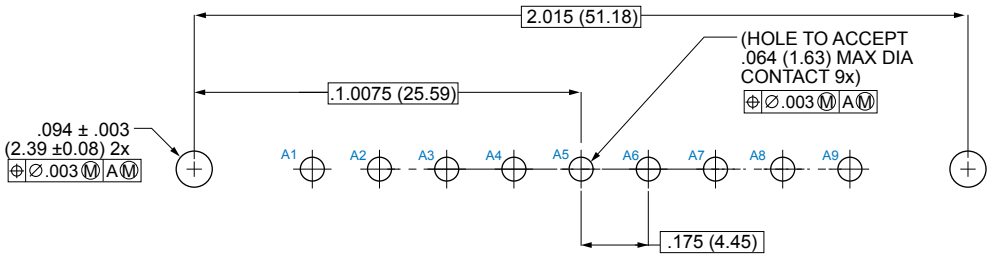
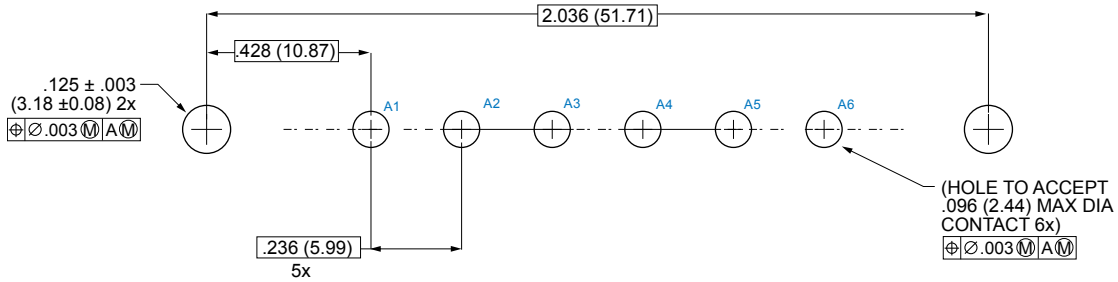
## 790-037S AND 790-042S PRINTED CIRCUIT BOARD PATTERNS

| Insert Arr. | Component Mounting Side of PCB<br>Mating Face of Connector is Toward Top of Page |
|---|---|
| H-66 |  |
| J-17P4 |  |
| J-25P2 |  |
| J-33 |  |
| J-7P7 |  |

## 790-037S AND 790-042S PRINTED CIRCUIT BOARD PATTERNS

| Insert Arr. | Component Mounting Side of PCB<br>Mating Face of Connector is Toward Top of Page |
|---|---|
| K-27P4 |  |
| K-35P2 |  |
| K-43 |  |
| K-9P9 |  |
| L-6P6 |  |

Dimensions in inches (millimeters) and are subject to change without notice.



CAGE Code 06324

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## 799-015 LOW PROFILE EMI BACKSHELL

Attach cable braid to connector with 799-015 adapters. These adapters fit securely into a groove on 790-024 and 790-025 cable connectors. Terminate shields with ***BAND-IT***® stainless steel straps. Elliptical cable entry provides room for large wire bundles. Machined T6061 aluminum adapters consist of two interlocking housings, two fillister head screws and two lockwashers. These lightweight, space-saving adapters are compatible with captive screws on connector flange. This adapter is non-environmental. Fill with potting compound to prevent water intrusion.

| Component | Material | Finish |
|---|---|---|
| Backshell | Aluminum Alloy | See table below |
| Hardware | Stainless Steel | Passivated |

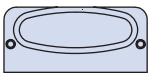
## How To Order

**Sample Part Number**

| 799-015T | M | B | 02 | N | 02 |
|---|---|---|---|---|---|
| Part Number | Shell Finish | Shell Size | Cable Entry Size | Band Option | Optional Height Code |

**Part Number**

**799-015T**
Top Entry



**799-015S**
Side Entry

**Shell Finish**

**M**
Electroless Nickel
*general purpose applications*

**MT**
Nickel-PTFE
*1000 Hour Grey™ maximum corrosion protection and durability (non-reflective grey)*

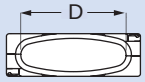
**ZNU**
Zinc-Nickel with Black Chromate
*tactical applications (non-reflective black)*

Additional shell finishes are listed on page C-9.

**Shell Size**

A
B
C
D
E
F
G
H
J
K
L

**Cable Entry Size**



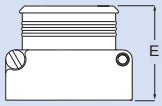

| Cable Entry Code | D In. | D mm. | Shell Size |
|---|---|---|---|
| 01 | .140 | 3.56 | A-L |
| 02 | .290 | 7.37 | B-L |
| 03 | .440 | 11.18 | C-L |
| 04 | .540 | 13.72 | D-L |
| 05 | .690 | 17.53 | E-L |
| 06 | .810 | 20.57 | F-L |
| 07 | 1.000 | 25.40 | H-L |
| 08 | 1.190 | 30.23 | H-L |
| 09 | 1.305 | 33.15 | K-L |
| 10 | 1.420 | 36.07 | K-L |
| 11 | 1.600 | 40.64 | K |

**Band Option**

**N**
No Band Supplied

**M**
***BAND-IT***™ Micro-Band Included. .125 (3.18) Wide.

**Optional Height Code**




| Height Code | E In. | E mm. |
|---|---|---|
| (None) | .690 | 17.5 |
| 01 | .810 | 20.6 |
| 02 | .940 | 23.9 |
| 03 | 1.060 | 26.9 |
| 04 | 1.190 | 30.2 |
| 05 | 1.310 | 33.3 |
| 06 | 1.440 | 36.6 |
| 07 | 1.560 | 39.6 |
| 08 | 1.690 | 42.9 |
| 09 | 1.810 | 46.0 |
| 10 | 1.940 | 49.3 |



Dimensions in inches (millimeters) and are subject to change without notice.


CAGE Code 06324
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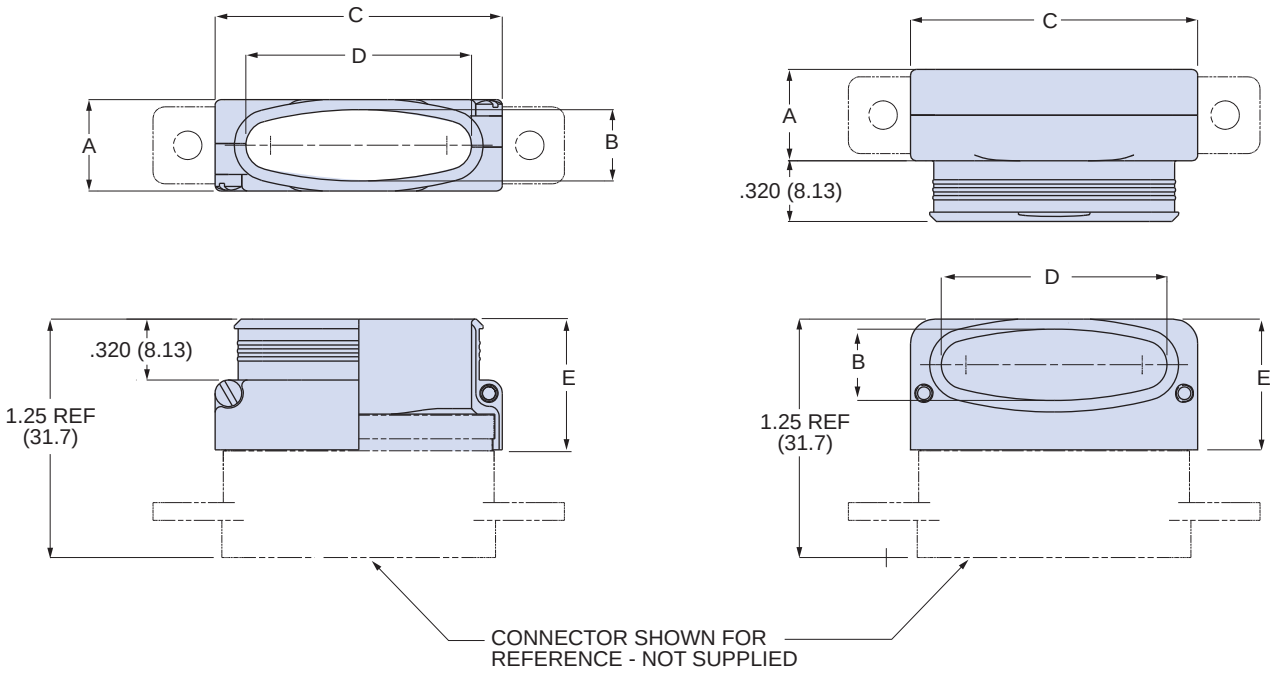
# 799-015 LOW PROFILE EMI BACKSHELL

STYLE T - TOP ENTRY

STYLE S - SIDE ENTRY




## 799-015 DIMENSIONS

| Shell Size | A Max. | | B | | C Max. | | Available Entries |
|---|---|---|---|---|---|---|---|
| | In. | mm. | In . | mm. | In. | mm. | |
| A | .385 | 9.78 | .270 | 6.86 | .485 | 12.32 | 01 |
| B | .385 | 9.78 | .270 | 6.86 | .635 | 16.13 | 01 thru 02 |
| C | .385 | 9.78 | .270 | 6.86 | .785 | 19.94 | 01 thru 03 |
| D | .385 | 9.78 | .270 | 6.86 | .885 | 22.48 | 01 thru 04 |
| E | .385 | 9.78 | .270 | 6.86 | 1.035 | 26.29 | 01 thru 05 |
| F | .385 | 9.78 | .270 | 6.86 | 1.185 | 30.10 | 01 thru 06 |
| G | .465 | 11.81 | .350 | 8.89 | 1.145 | 29.08 | 01 thru 06 |
| H | .495 | 12.57 | .380 | 9.65 | 1.525 | 38.74 | 01 thru 08 |
| J | .385 | 9.78 | .270 | 6.86 | 1.545 | 39.24 | 01 thru 08 |
| K | .385 | 9.78 | .270 | 6.86 | 1.945 | 49.40 | 01 thru 11 |
| L | .495 | 12.57 | .380 | 9.65 | 1.765 | 44.83 | 01 thru 10 |

## ENTRY SIZE

| Entry Size | D | | Available Sizes |
|---|---|---|---|
| | In. | mm. | |
| 01 | .140 | 3.56 | A Thru L |
| 02 | .290 | 7.37 | B thru L |
| 03 | .440 | 11.18 | C thru L |
| 04 | .540 | 13.72 | D thru L |
| 05 | .690 | 17.53 | E thru L |
| 06 | .810 | 20.57 | F, H, J, K, L |
| 07 | 1.000 | 25.40 | H thru L |
| 08 | 1.190 | 30.23 | H Thru L |
| 09 | 1.305 | 33.15 | K, L |
| 10 | 1.420 | 36.07 | K, L |
| 11 | 1.600 | 40.64 | K |

## HEIGHT CODE

| CODE | E | |
|---|---|---|
| | In. | mm. |
| (None) | .690 | 17.5 |
| 01 | .810 | 20.6 |
| 02 | .940 | 23.9 |
| 03 | 1.060 | 26.9 |
| 04 | 1.190 | 30.2 |
| 05 | 1.310 | 33.3 |
| 06 | 1.440 | 36.6 |
| 07 | 1.560 | 39.6 |
| 08 | 1.690 | 42.9 |
| 09 | 1.810 | 46.0 |
| 10 | 1.940 | 49.3 |

H

Dimensions in inches (millimeters) and are subject to change without notice.



CAGE Code 06324

Printed in U.S.A.

## 799-011 STANDARD EMI BACKSHELL

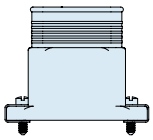
Terminate shield braid and strain relieve wire bundles with standard EMI backshells. These backshells fit 790-024P and 790-025S cable connectors. These one-piece backshells attach to connector with stainless steel clips. Terminate shields with ***BAND-IT***™ stainless steel straps. Elliptical cable entry provides room for large wire bundles. These machined T6061 aluminum backshells are supplied with two clips and mating hardware.

| Component | Material | Finish |
|---|---|---|
| Backshell | Aluminum Alloy | See table below |
| Hardware | Stainless Steel | Passivated |

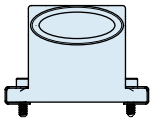
### How To Order

**Sample Part Number**

| 799-011T | M | C | 03 | B | N | T | 06 |
|---|---|---|---|---|---|---|---|
| **Part Number** | **Shell Finish** | **Shell Size** | **Cable Entry Size** | **Mating Hardware** | **Band Option** | **Qwik-Ty Option** | **Height Code** |



**799-011T**
Top Entry



**799-011S**
Side Entry

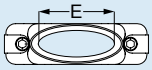
**M**
Electroless Nickel
*general purpose applications*

**MT**
Nickel-PTFE
*1000 Hour Grey™ maximum corrosion protection and durability (non-reflective grey)*

**ZNU**
Zinc-Nickel with Black Chromate
*tactical applications (non-reflective black)*

Additional shell finishes are listed on page C-9.

**A**
**B**
**C**
**D**
**E**
**F**
**G**
**H**
**J**
**K**
**L**

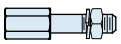



| Cable Entry Code | E (In.) | Shell Size |
|---|---|---|
| 01 | .300 | A-L |
| 02 | .450 | B-L |
| 03 | .600 | C-L |
| 04 | .700 | D-L |
| 05 | .850 | E-L |
| 06 | .965 | F-L |
| 07 | 1.155 | H-L |
| 08 | 1.345 | H-L |
| 09 | 1.460 | K-L |
| 10 | 1.580 | K-L |
| 11 | 1.760 | K |

**B**
Fillister Head Jackscrews

**H**
Hex Socket Head Jackscrews

**E**
Extended Slotted Head Jackscrew



**F**
Female Jackpost

**N**
No Band Supplied

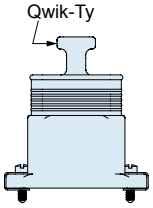
**M**
***BAND-IT***™
Micro-Band Included. .125 (3.18) Wide.

**B**
***BAND-IT***™
Standard Band Included. .250 (6.35) Wide.

**N**
No Qwik-Ty

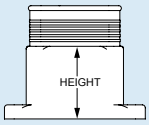
**T**
Qwik-Ty Option Included

Qwik-Ty



| Height Code | Length (In.) |
|---|---|
| 06 | .750 |
| 07 | .875 |
| 08 | 1.000 |
| 09 | 1.125 |
| 10 | 1.250 |

Note: Code 06 and 07 are for Top Entry only.






Dimensions in inches (millimeters) and are subject to change without notice.


CAGE Code 06324
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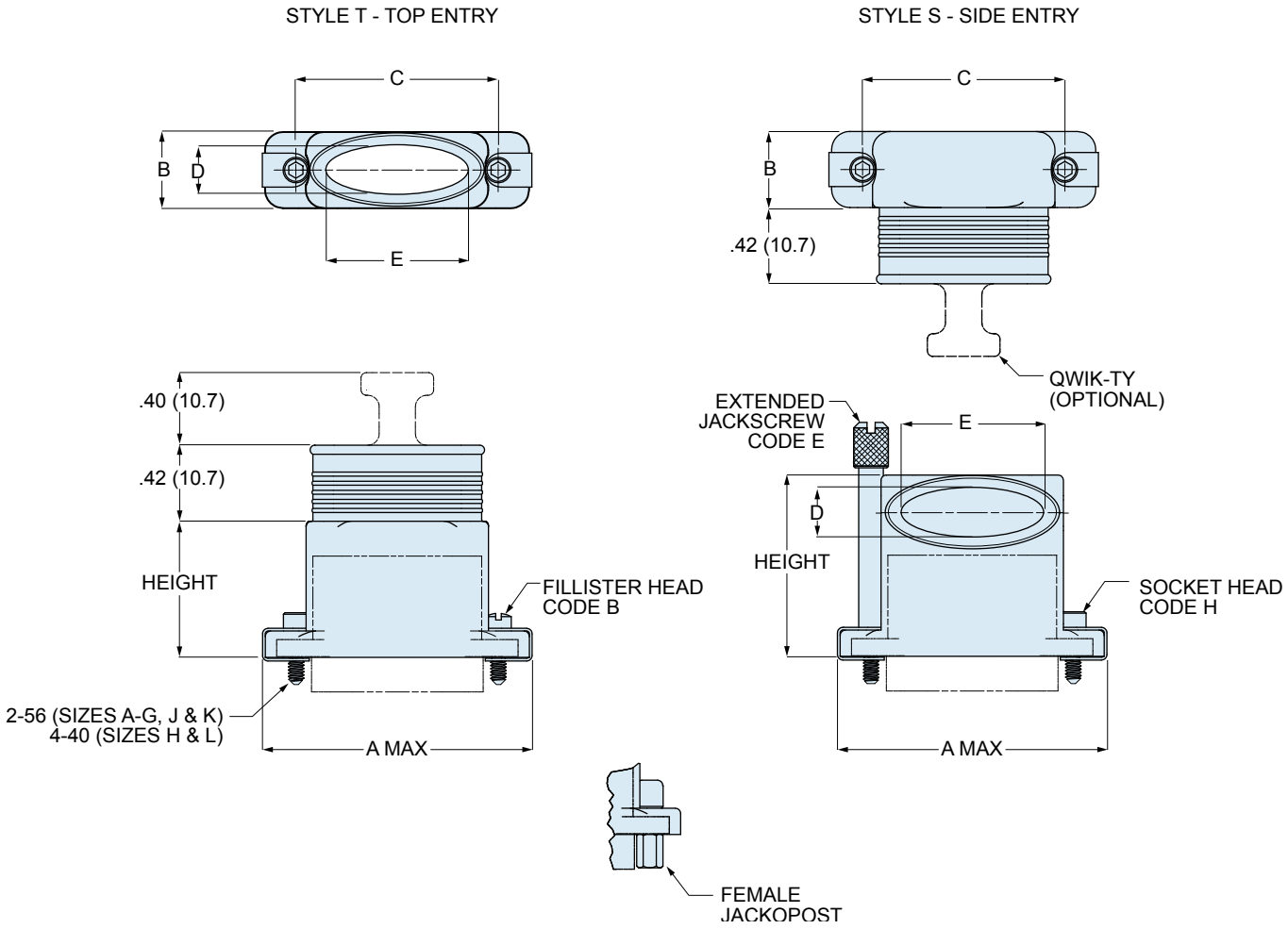
## 799-011 STANDARD EMI BACKSHELL




### 799-011 DIMENSIONS

| Shell Size | A Max. | | B Max. | | C | | D | | Available Entries |
|---|---|---|---|---|---|---|---|---|---|
| | In. | mm. | In . | mm. | In. | mm. | In. | mm. | |
| A | .935 | 23.75 | .450 | 11.43 | .565 | 14.35 | .300 | 7.62 | 01 |
| B | 1.085 | 27.56 | .450 | 11.43 | .715 | 18.16 | .300 | 7.62 | 01 thru 02 |
| C | 1.235 | 31.37 | .450 | 11.43 | .865 | 21.97 | .300 | 7.62 | 01 thru 03 |
| D | 1.335 | 33.91 | .450 | 11.43 | .965 | 24.51 | .300 | 7.62 | 01 thru 04 |
| E | 1.485 | 37.72 | .450 | 11.43 | 1.115 | 28.32 | .300 | 7.62 | 01 thru 05 |
| F | 1.635 | 41.53 | .450 | 11.43 | 1.265 | 32.13 | .300 | 7.62 | 01 thru 06 |
| G | 1.585 | 40.26 | .533 | 13.54 | 1.215 | 30.86 | .383 | 9.73 | 01 thru 06 |
| H | 2.320 | 58.93 | .560 | 14.22 | 1.800 | 45.72 | .410 | 10.41 | 01 thru 08 |
| J | 1.990 | 50.55 | .450 | 11.43 | 1.615 | 41.02 | .300 | 7.62 | 01 thru 08 |
| K | 2.385 | 60.58 | .450 | 11.43 | 2.015 | 51.18 | .300 | 7.62 | 01 thru 11 |
| L | 2.556 | 64.92 | .560 | 14.22 | 2.036 | 51.71 | .410 | 10.41 | 01 thru 10 |

### ENTRY SIZE

| | E | | Available Sizes |
|---|---|---|---|
| Code | In. | mm. | |
| 01 | .300 | 7.62 | A thru L |
| 02 | .450 | 11.43 | B thru L |
| 03 | .600 | 15.24 | C thru L |
| 04 | .700 | 17.78 | D thru L |
| 05 | .850 | 21.59 | E thru L |
| 06 | .965 | 24.51 | F thru L |
| 07 | 1.155 | 29.34 | H thru L |
| 08 | 1.345 | 34.16 | H thru L |
| 09 | 1.460 | 37.08 | K, L |
| 10 | 1.581 | 40.16 | K, L |
| 11 | 1.760 | 44.70 | K |

Dimensions in inches (millimeters) and are subject to change without notice.


CAGE Code 06324
Printed in U.S.A.

## 799-016 EMI BACKSHELL FOR PANEL MOUNT CONNECTORS

Attach shield braid to panel-mounted connectors with 799-016 EMI adapters. These one-piece backshells attach to connector with stainless steel screws. These adapters feature an interlocking tongue that fits inside the connector for improved EMI shielding. Terminate shields with ***BAND-IT***™ stainless steel straps. Elliptical cable entry provides room for large wire bundles. These machined T6061 aluminum backshells are supplied with two mounting screws. These adapters fit 790-026 receptacles and 790-027 plugs.

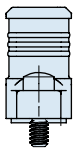
| Component | Material | Finish |
|---|---|---|
| Backshell | Aluminum Alloy | See table below |
| Hardware | Stainless Steel | Passivated |

## How To Order

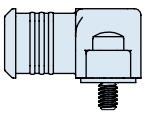
**Sample Part Number**

**799-016T M F 04 N 09**

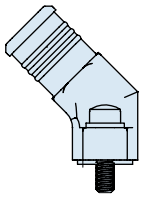
### Part Number



**799-016T**
Top Entry



**799-016S**
Side Entry



**799-016E**
45° Entry

### Shell Finish

**M**
Electroless Nickel
*general purpose applications*

**MT**
Nickel-PTFE
*1000 Hour Grey™ maximum corrosion protection and durability (non-reflective grey)*

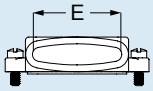
**ZNU**
Zinc-Nickel with Black Chromate
*tactical applications (non-reflective black)*

Additional shell finishes are listed on page C-9.

### Shell Size

**A B C D E F G H J K L**

### Cable Entry Size



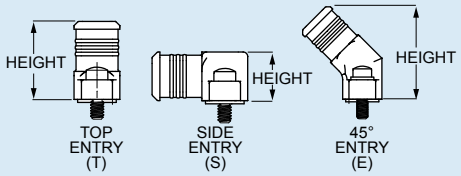

| Cable Entry Code | E (In.) | Shell Size |
|---|---|---|
| 01 | .255 | A-L |
| 02 | .405 | B-L |
| 03 | .555 | C-L |
| 04 | .655 | D-L |
| 05 | .805 | E-L |
| 06 | .920 | F-L |
| 07 | 1.110 | H- L |
| 08 | 1.300 | H-L |
| 09 | 1.415 | K, L |
| 10 | 1.535 | K, L |
| 11 | 1.715 | K |

### Band Option

**N**
No Band Supplied

**M**
***BAND-IT***™
Micro-Band Included. .125 (3.18) Wide.

### Height Code




| Height Code | Length (In.) | Entry Style Range Top Entry (T) | Side Entry (S) | 45° Entry (E) |
|---|---|---|---|---|
| 05 | .313 | — | A-F, J, K | — |
| 06 | .375 | — | A-F, J, K | — |
| 07 | .438 | — | A-L | — |
| 08 | .500 | — | A-L | — |
| 09 | .563 | A-F, J, K | A-L | A-F, J, K |
| 10 | .625 | A-L | A-L | A-L |
| 11 | .688 | A-L | A-L | A-L |
| 12 | .750 | A-L | A-L | A-L |
| 13 | .813 | A-L | — | A-L |
| 14 | .875 | A-L | — | A-L |
| 15 | .938 | A-L | — | A-L |
| 16 | 1.000 | A-L | — | A-L |
| 17 | 1.063 | A-L | — | A-L |
| 18 | 1.125 | A-L | — | G, H, L |
| 19 | 1.188 | G, H, L | — | G, H, L |
| 20 | 1.250 | G, H, L | — | G, H, L |
| 21 | 1.313 | G, H, L | — | G, H, L |
| 22 | 1.375 | G, H, L | — | — |



Dimensions in inches (millimeters) and are subject to change without notice.


CAGE Code 06324
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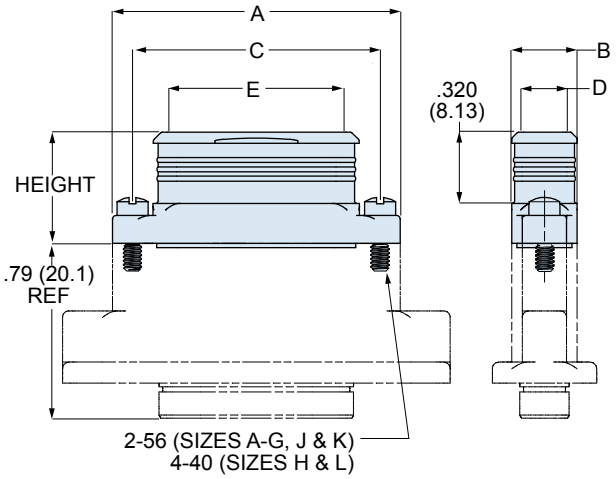
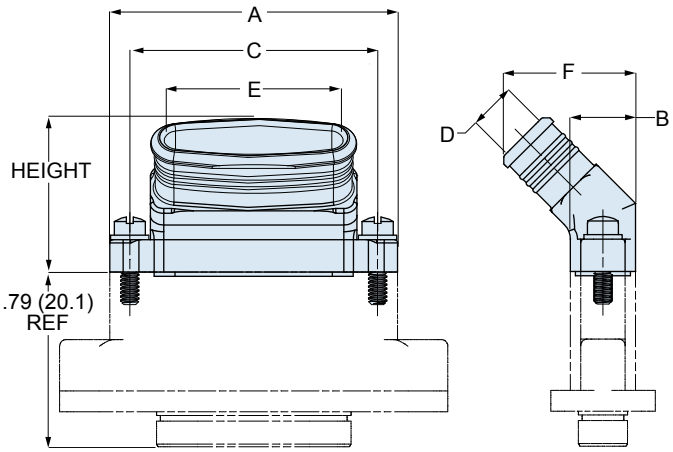
Glenair®

# Series 79 Micro-Crimp
# Section H: Backshells and Accessories

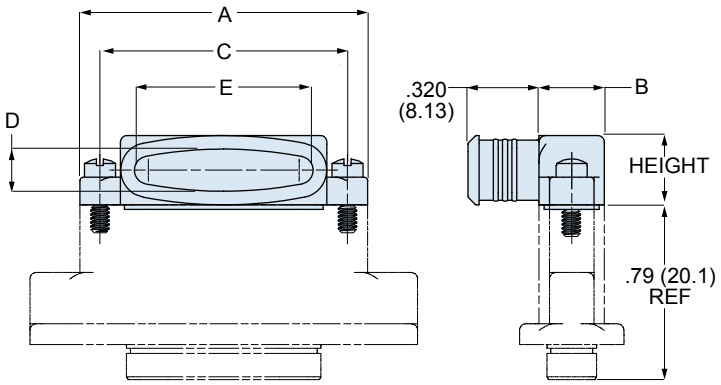
## 799-016 STYLE T - TOP ENTRY




## 799-016 STYLE E - 45° ENTRY




## 799-016 STYLE S - SIDE ENTRY




## 799-016 DIMENSIONS

| Shell Size | A Max. | | B Max. | | C | | D | | F | | Max. Entry Size |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | In. | mm. | In . | mm. | In. | mm. | In. | mm. | In. | mm. | |
| A | .760 | 19.30 | .308 | 7.82 | .565 | 14.35 | .190 | 4.83 | .59 | 15.0 | 01 |
| B | .910 | 23.11 | .308 | 7.82 | .715 | 18.16 | .190 | 4.83 | .59 | 15.0 | 02 |
| C | 1.060 | 26.92 | .308 | 7.82 | .865 | 21.97 | .190 | 4.83 | .59 | 15.0 | 03 |
| D | 1.160 | 29.46 | .308 | 7.82 | .965 | 24.51 | .190 | 4.83 | .59 | 15.0 | 04 |
| E | 1.310 | 33.27 | .308 | 7.82 | 1.115 | 28.32 | .190 | 4.83 | .59 | 15.0 | 05 |
| F | 1.460 | 36.83 | .308 | 7.82 | 1.265 | 32.13 | .190 | 4.83 | .59 | 15.0 | 06 |
| G | 1.410 | 35.81 | .395 | 10.03 | 1.215 | 30.86 | .275 | 6.99 | .68 | 17.3 | 06 |
| H | 2.045 | 51.94 | .410 | 10.41 | 1.800 | 45.72 | .300 | 7.62 | .70 | 17.8 | 08 |
| J | 1.810 | 45.97 | .308 | 7.82 | 1.615 | 41.02 | .190 | 4.83 | .59 | 15.0 | 08 |
| K | 2.210 | 56.13 | .308 | 7.82 | 2.015 | 51.18 | .190 | 4.83 | .59 | 15.0 | 11 |
| L | 2.281 | 57.94 | .410 | 10.41 | 2.036 | 51.71 | .300 | 7.62 | .70 | 17.8 | 10 |

## ENTRY SIZE

| | E | | Available Sizes |
|---|---|---|---|
| Code | In. | mm. | |
| 01 | .255 | 6.48 | A thru L |
| 02 | .405 | 10.29 | B thru L |
| 03 | .555 | 14.10 | C thru L |
| 04 | .655 | 16.64 | D thru L |
| 05 | .805 | 20.45 | E thru L |
| 06 | .920 | 23.37 | F thru L |
| 07 | 1.110 | 28.19 | H thru L |
| 08 | 1.300 | 33.02 | H thru L |
| 09 | 1.415 | 35.94 | K, L |
| 10 | 1.535 | 38.99 | K, L |
| 11 | 1.715 | 43.56 | K |

H

Dimensions in inches (millimeters) and are subject to change without notice.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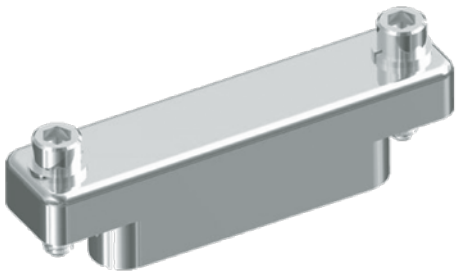
# 799-018 & 799-019 METAL PROTECTIVE COVERS FOR MICRO-CRIMP CONNECTORS



***Protect Connectors From Damage*** – Machined aluminum covers prevent ingress of water and contamination. Plug covers provide metal-to-metal bottoming for EMI protection. Receptacle covers feature conductive fluorosilicone gaskets.

***Stainless Steel Fittings and Rings*** – Choose small diameter eye fittings for panel attachment. Larger rings fit over cable jackets. Split rings can be installed on fully assembled cables.

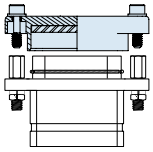
***Polyurethane-Coated SST Wire Rope*** offers high strength, excellent abrasion resistance and good flexibility. Or, choose Teflon® jacket for high temperature exposure.

***Braided Nylon Rope*** provides excellent flexibility and good abrasion resistance, and can be ordered with slip knot fittings for easy installation on any size cable.

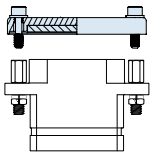
## How To Order

**Sample Part Number**

| 799-018 | E | E | MB | N | 6 | -04 |
|---|---|---|---|---|---|---|
| **Part Number** | **Shell Finish** | **Shell Size** | **Jackscrew Option** | **Lanyard Type** | **Attachment Length in Inches** | **Attachment Code** |



**799-018**
Plug Cover



**799-019**
Receptacle Cover

**M**
Electroless Nickel
*general purpose applications*

**MT**
Nickel-PTFE
*1000 Hour Grey™ maximum corrosion protection and durability (non-reflective grey)*

**ZNU**
Zinc-Nickel with Black Chromate
*tactical applications (non-reflective black)*

Additional shell finishes are listed on page C-9.

**A**
**B**
**C**
**D**
**E**
**F**
**G**
**H**
**J**
**K**
**L**

**MB**
Slotted Fillister Head Jackscrew

**MH**
Hex Socket Head Jackscrew

**MF**
Female Jackpost

**N**
No Attachment

**G**
Nylon Rope

**H**
Stainless Steel Rope, Teflon jacket

**U**
Stainless Steel Rope, Polyurethane jacket

**T**
Stainless Steel Rope, No Jacket

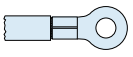
**SK**
Nylon Rope with Slip Knot

Omit for Attachment Type **N** (no attachment)

**Example**

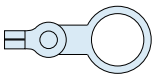
"6" equals six inch length

Omit for attachment Types **N** (No Attachment) and **SK** (Slip Knot)



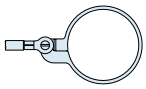
Small Ring

**01** – .126 (3.20) I.D.
**02** – .145 (3.68) I.D.
**04** – .188 (4.78) I.D.
**06** – .197 (5.00) I.D.



Large Ring

**14** – .385 (9.78) I.D.
**15** – .445 (11.30) I.D.
**16** – .570 (14.48) I.D.
**17** – .635 (16.13) I.D.
**18** – .695 (17.65) I.D.
**19** – .885 (22.48) I.D.
**20** – 1.070 (27.17) I.D.



Split Ring

**50** – .420 (10.67) I.D.
**52** – .480 (12.19) I.D.
**54** – .635 (16.13) I.D.
**56** – .745 (18.92) I.D.
**58** – .885 (22.48) I.D.
**60** – 1.010 (25.65) I.D.
**64** – 1.125 (28.58) I.D.
**68** – 1.345 (34.16) I.D.



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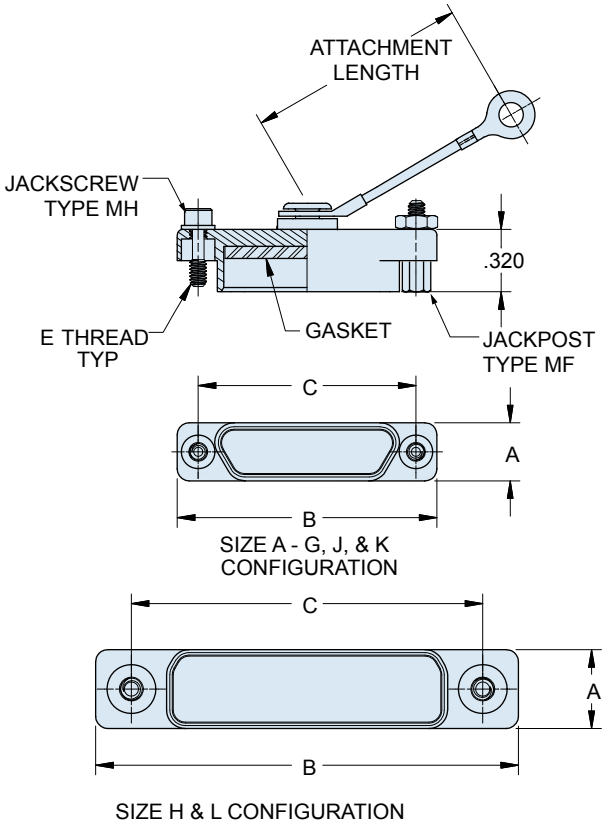
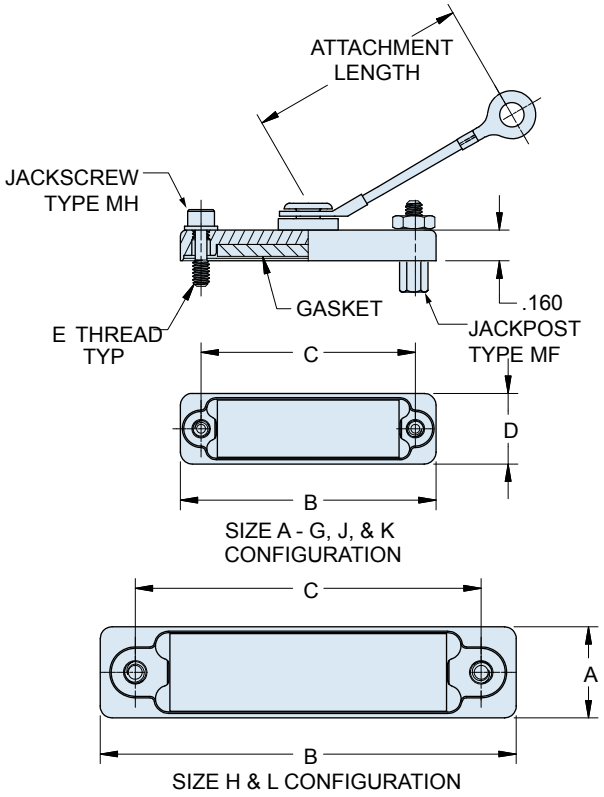
Glenair®

# Series 79 Micro-Crimp
# Section H: Backshells and Accessories

## 799-018 PLUG COVER




## 799-019 RECEPTACLE COVER




## 799-018 & 799-019 DIMENSIONS

| Shell Size | A Max. | | B Max. | | C | | D Max. | | E Thread |
|---|---|---|---|---|---|---|---|---|---|
| | In. | mm. | In . | mm. | In. | mm. | In. | mm. | |
| A | .308 | 7.82 | .785 | 19.94 | .565 | 14.35 | .385 | 9.78 | 2-56 UNC |
| B | .308 | 7.82 | .935 | 23.75 | .715 | 18.16 | .385 | 9.78 | 2-56 UNC |
| C | .308 | 7.82 | 1.085 | 27.56 | .865 | 21.97 | .385 | 9.78 | 2-56 UNC |
| D | .308 | 7.82 | 1.185 | 30.10 | .965 | 24.51 | .385 | 9.78 | 2-56 UNC |
| E | .308 | 7.82 | 1.335 | 33.91 | 1.115 | 28.32 | .385 | 9.78 | 2-56 UNC |
| F | .308 | 7.82 | 1.485 | 37.72 | 1.265 | 32.13 | .385 | 9.78 | 2-56 UNC |
| G | .395 | 10.03 | 1.435 | 36.45 | 1.215 | 30.86 | .470 | 11.94 | 2-56 UNC |
| H | .410 | 10.41 | 2.170 | 55.12 | 1.800 | 45.72 | .490 | 12.45 | 4-40 UNC |
| J | .308 | 7.82 | 1.845 | 46.86 | 1.615 | 41.02 | .385 | 9.78 | 2-56 UNC |
| K | .308 | 7.82 | 2.240 | 56.90 | 2.015 | 51.18 | .385 | 9.78 | 2-56 UNC |
| L | .410 | 10.41 | 2.406 | 61.11 | 2.036 | 51.71 | .490 | 12.45 | 4-40 UNC |

| Component | Material | Finish |
|---|---|---|
| Backshell | Aluminum Alloy | See Ordering Info |
| Hardware | Stainless Steel | Passivated |
| Gasket | Conductive Fluorosilicone | None |

## Lanyard options

**Nylon Rope**

-55° to +100°C., black, very flexible, very good abrasion resistance, good resistance to fuels, .120" (3mm) diameter

**Polyurethane Coated Wire Rope**

Black polyurethane over stainless steel rope, -55° to +125°C., very flexible, excellent abrasion resistance, excellent resistance to fuels, .080" (2mm) diameter

**Teflon® Jacketed Wire Rope**

Translucent FEP jacket over stainless steel, -55° to +200°C., fair flexibility, good abrasion resistance, .100" diameter

**Slip Knot (SK)**
for Attaching Covers to Cable

55° to +100°C., black, very flexible, very good abrasion resistance, good resistance to fuels, .120" (3mm) diameter. Length includes .5" (13mm) diameter loop.

H

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# Part Number Index





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# Glenair, the World's Largest Manufacturer of

# *Standard* Micro-D and Nano Connectors


## Fully Tooled and In-Stock for Immediate Same Day Shipment

In addition to our innovative Series 79 Micro-Crimp product line, Glenair is also the premier supplier of *Standard* MIL-DTL-83513 Micro-D and MIL-DTL-32139 Nano Miniature Connectors.
Our TwistPin contact equipped product lines are fully tooled and in-stock for immediate same day shipment. Both feature our advanced performance TwistPin contact system and are available in preterminated pigtails, solder cup and PCB versions. Consult our website www.glenair.com for details.

Glenair

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