

# MICRO-CRIMP RECTANGULAR CONNECTORS

## Series 792 High-Speed

**SERIES**  
**792**  
High-Speed

### 792-011

Panel Plug, 90° PC Tails, El Ochito®

- ◆ Octaxial PC tail contacts
- ◆ 90° mounting
- ◆ Socket contacts



792-011 panel plug has El Ochito® high-speed octaxial PC tail socket contacts for 90° thru-hole printed circuit board termination. Contacts are potted with epoxy. Machined aluminum shell has integral standoff and threaded holes for attachment to PC board. Combo arrangements have #23 contacts.

- Aerospace-grade rectangular PCB connector with high speed size 8 octaxial contacts
- 1–5 data ports
- Rugged duo-lobe aluminum shell
- Environmental

#### INSERT ARRANGEMENTS

| Thermoplastic Insert | Grounded All-Aluminum | No. of Contacts |     |
|----------------------|-----------------------|-----------------|-----|
|                      |                       | Ochito          | #23 |
| A-1P1                | A-1G1                 | 1               | –   |
| A-3P1                |                       | 1               | 2   |
| B-23P1               |                       | 1               | 22  |
| B-2P2                | B-2G2                 | 2               | –   |
| B-6P2                |                       | 2               | 4   |
| C-24P2               |                       | 2               | 22  |
| C-3P3                | C-3G3                 | 3               | –   |
| C-9P3                |                       | 3               | 6   |
| D-27P3               |                       | 3               | 24  |
| D-4P4                | D-4G4                 | 4               | –   |
| D-12P4               |                       | 4               | 8   |
| E-5P5                | E-5G5                 | 5               | –   |
| E-15P5               |                       | 5               | 10  |
| E-45P3               |                       | 3               | 42  |

#### HOW TO ORDER

| Sample Part Number                |                                                                                                                                               | 792-011S                                           | E-45P3 | M | G | AK | C | B |
|-----------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------|--------|---|---|----|---|---|
| Basic Part Number                 | 792-011S                                                                                                                                      | Panel Plug, 90° PC Tails, Octaxial Socket Contacts |        |   |   |    |   |   |
| Shell Size-Insert Arr.            | See <b><i>“Insert Arrangements”</i></b> Table                                                                                                 |                                                    |        |   |   |    |   |   |
| Shell Finish                      | M                                                                                                                                             | Electroless Nickel                                 |        |   |   |    |   |   |
|                                   | MT                                                                                                                                            | Nickel / PTFE                                      |        |   |   |    |   |   |
|                                   | NF                                                                                                                                            | Olive Drab Cadmium                                 |        |   |   |    |   |   |
|                                   | TZ                                                                                                                                            | Tin-Zinc                                           |        |   |   |    |   |   |
|                                   | ZR                                                                                                                                            | Black Zinc-Nickel                                  |        |   |   |    |   |   |
| Hardware Option<br><i>Table 1</i> | N                                                                                                                                             | No Hardware <i>Threaded holes</i>                  |        |   |   |    |   |   |
|                                   | G                                                                                                                                             | Guide Pins <i>For blind mating</i>                 |        |   |   |    |   |   |
|                                   | P                                                                                                                                             | Female Jackposts                                   |        |   |   |    |   |   |
| Protocol Code                     | See <b><i>“Protocol Code”</i></b> table on next page                                                                                          |                                                    |        |   |   |    |   |   |
| Panel O-Ring                      | N                                                                                                                                             | No O-ring                                          |        |   |   |    |   |   |
|                                   | C                                                                                                                                             | Conductive Fluorosilicone O-ring                   |        |   |   |    |   |   |
|                                   | F                                                                                                                                             | Fluorosilicone O-ring                              |        |   |   |    |   |   |
| Polarization Key Option           | Enter Letter Designator for Position <b>A, B, C, D, E, F, G, H, J, or K</b> per Mod Code 1104 (see page C-8 for details) <b>Omit</b> for none |                                                    |        |   |   |    |   |   |

#### TABLE 1 HARDWARE OPTION

|                                                                                       |                                                 |                           |
|---------------------------------------------------------------------------------------|-------------------------------------------------|---------------------------|
| <p><b>N</b> No Hardware<br/>Threaded Hole<br/>10-32 UNF-2B, 150 (3.81) min. depth</p> | <p><b>P</b> Female Jackpost<br/>8-32 UNC-2B</p> | <p><b>G</b> Guide Pin</p> |
|---------------------------------------------------------------------------------------|-------------------------------------------------|---------------------------|

#### RATINGS

- Voltage (DWV): 100 VAC
- Current: #23 1A
- Operating temperature: -65 to +150 °C
- Durability: 500 mating cycles
- Shock: 300 g
- Vibration: 20 g random

#### CONSTRUCTION

- #23 Contacts: Copper alloy, gold over nickel finish, stainless steel hood
- Ochito contact: Copper alloy, gold over nickel finish. Insulators are high performance thermoplastic.
- Shell: Aluminum
- Insulator: High performance thermoplastic
- Encapsulant: Epoxy
- Hardware: Stainless steel, passivated
- O-ring: Fluorosilicone. Conductive O-ring is Cho-Seal 1298 silver-plated aluminum filled fluorosilicone.

#### Application Note

##### Polarization Key Positions

See Mod Code 1104 pg. C-8 for details



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- ◆ 90° mounting
- ◆ Socket contacts

#### OCHITO PROTOCOLS



**WHITE**  
1000BASE-T  
10GBASE-T



**BLUE**  
USB 3.0

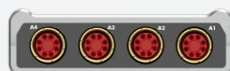


**RED**  
HDMI, SATA,  
DisplayPort

The Ochito octaxial contact is color-coded to signify the data protocol. White is used for high speed Ethernet, blue is used for USB 3.0, and red is used for multi gigabit 100 ohm protocols including HDMI, DisplayPort and SATA. The connector part number includes a code from the **Protocol Code** table. This code enables combinations of protocols as shown in the examples below.



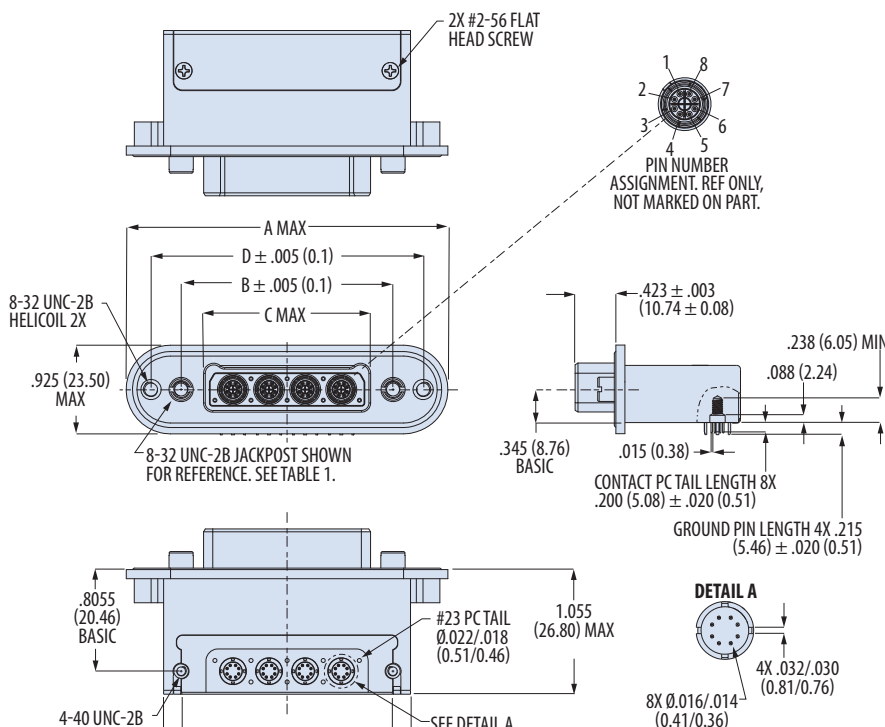
**Code AE**



**Code AQ**

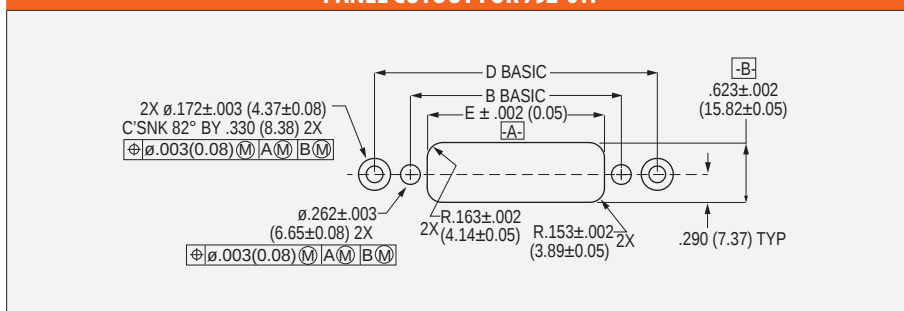
#### PROTOCOL CODE

| Code | Cavity |    |    |    |    |
|------|--------|----|----|----|----|
|      | A1     | A2 | A3 | A4 | A5 |
| AA   | W      | W  | W  | W  | W  |
| AB   | B      | W  | W  | W  | W  |
| AC   | R      | W  | W  | W  | W  |
| AD   | B      | B  | W  | W  | W  |
| AE   | R      | B  | W  | W  | W  |
| AF   | R      | R  | W  | W  | W  |
| AG   | B      | B  | B  | W  | W  |
| AH   | R      | B  | B  | W  | W  |
| AJ   | R      | R  | B  | W  | W  |
| AK   | R      | R  | R  | W  | W  |
| AL   | B      | B  | B  | B  | W  |
| AM   | R      | B  | B  | B  | W  |
| AN   | R      | R  | B  | B  | W  |
| AP   | R      | R  | R  | B  | W  |
| AQ   | R      | R  | R  | R  | W  |
| AR   | B      | B  | B  | B  | B  |
| AS   | R      | B  | B  | B  | B  |
| AT   | R      | R  | B  | B  | B  |
| AV   | R      | R  | R  | B  | B  |
| AW   | R      | R  | R  | R  | B  |
| AX   | R      | R  | R  | R  | R  |



| Shell Size | A Max |       | B ± .005 (0.1) |       | C Max |       | D ± .005 (0.1) |       | E ± .002 (0.05) |       | F Max |       |
|------------|-------|-------|----------------|-------|-------|-------|----------------|-------|-----------------|-------|-------|-------|
|            | in    | mm    | in             | mm    | in    | mm    | in             | mm    | in              | mm    | in    | mm    |
| A          | 2.220 | 56.39 | 1.075          | 27.31 | .615  | 15.62 | 1.699          | 43.15 | .725            | 18.42 | 1.455 | 36.96 |
| B          | 2.595 | 65.91 | 1.450          | 36.83 | .990  | 25.15 | 2.074          | 52.68 | 1.100           | 27.94 | 1.830 | 46.82 |
| C          | 2.970 | 75.44 | 1.825          | 46.36 | 1.365 | 34.67 | 2.449          | 62.20 | 1.475           | 37.47 | 2.205 | 56.01 |
| D          | 3.345 | 84.96 | 2.200          | 55.88 | 1.740 | 44.20 | 2.824          | 71.73 | 1.850           | 46.99 | 2.580 | 65.53 |
| E          | 3.720 | 94.49 | 2.575          | 65.41 | 2.115 | 53.72 | 3.199          | 81.25 | 2.225           | 56.52 | 2.955 | 75.06 |

#### PANEL CUTOUT FOR 792-011



# SERIES 792 HIGH-SPEED

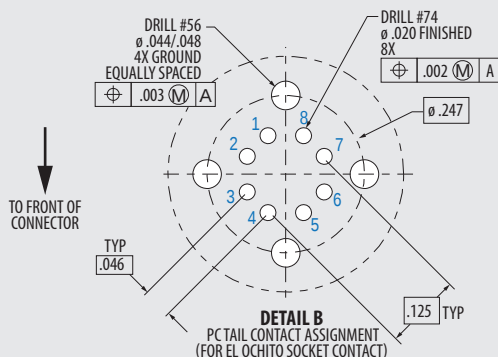
# Panel Plug, 90° PC Tails, El Ochoito®

- ## Optimizing PCB Design

See Glenair Application Note AN0002 *Design and Installation of EI Ochito PCB Connectors* for recommended solder pad sizing, trace routing, and connector installation.  
<https://cdn.glenair.com/test-reports-and-technical-information/pdf/application-note/an0002.pdf>

-  PCB hole patterns are shown for the **component mounting side** of the circuit board, looking through the connector.

### Detail B



# MICRO-CRIMP RECTANGULAR CONNECTORS

## Series 792 High-Speed

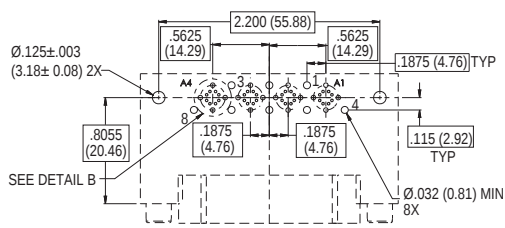


### 792-011

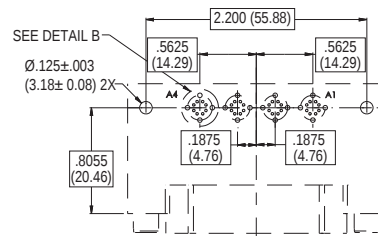
Panel Plug, 90° PC Tails, El Ochito®

- ◆ Octaxial PC tail contacts
- ◆ 90° mounting
- ◆ Socket contacts

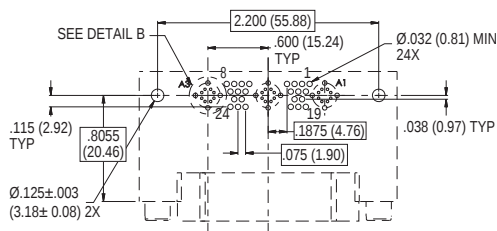
#### PCB FOOTPRINTS FOR 792-011 CONNECTOR



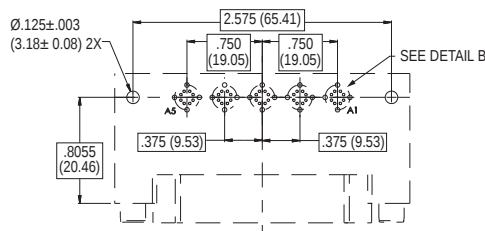
**D-12P4**



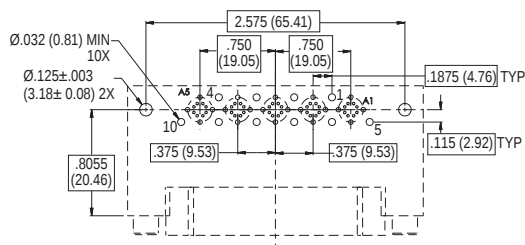
**D-4P4 D-4G4**



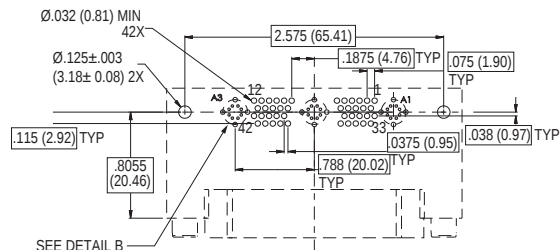
**D-27P3**



**E-5P5 E-5G5**



**E-15P5**



**E-45P3**

SERIES 792 HIGH-SPEED

# MICRO-CRIMP RECTANGULAR CONNECTORS

## Series 792 High-Speed



### Series 792 Insert Arrangements

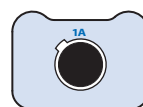
#### SERIES 792 INSERT ARRANGEMENTS

| Thermoplastic Insert | Grounded All-Aluminum | No. of Contacts |     |
|----------------------|-----------------------|-----------------|-----|
|                      |                       | #8              | #23 |
| A-1W1                | A-1G1                 | 1               | —   |
| A-3W1                |                       | 1               | 2   |
| B-23W1               |                       | 1               | 22  |
| B-2W2                | B-2G2                 | 2               | —   |
| B-6W2                |                       | 2               | 4   |
| C-24W2               |                       | 2               | 22  |
| C-3W3                | 3G3                   | 3               | —   |
| C-9W3                |                       | 3               | 6   |
| D-27W3               |                       | 3               | 24  |
| D-4W4                | D-4G4                 | 4               | —   |
| D-12W4               |                       | 4               | 8   |
| E-5W5                | E-5G5                 | 5               | —   |
| E-15W5               |                       | 5               | 10  |
| E-45W3               |                       | 3               | 42  |
| F-9W9                | F-9G9                 | 9               | —   |
| F-31W9               |                       | 9               | 22  |

#### Grounded Insert Arrangements

Series 792 connectors are available with thermoplastic inserts ("A-1W1" for example), or with all-aluminum construction for grounding datalink contacts together with the connector shell ("A-1G1").

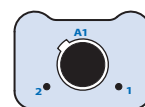
**⚠ Cavity Numbers**  
Cavity numbers shown are for mating face of plug (socket) connector. Receptacle (pin) numbers are reversed.



1 #8

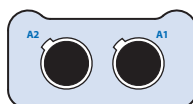
**A-1W1**

**A-1G1** Grounded



1 #8, 2 #23

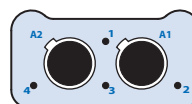
**A-3W1**



2 #8

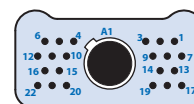
**B-2W2**

**B-2G2** Grounded



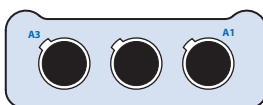
2 #8, 4 #23

**B-6W2**



1 #8, 22 #23

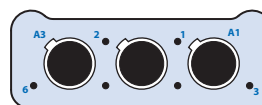
**B-23W1**



3 #8

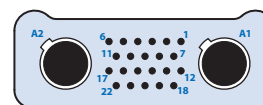
**C-3W3**

**C-3G3** Grounded



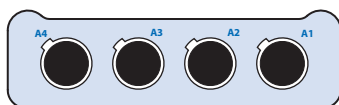
3 #8, 6 #23

**C-9W3**



2 #8, 22 #23

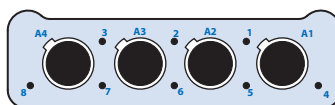
**C-24W2**



4 #8

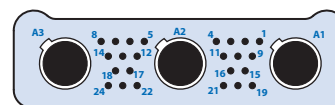
**D-4W4**

**D-4G4** Grounded



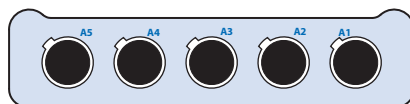
4 #8, 8 #23

**D-12W4**



3 #8, 24 #23

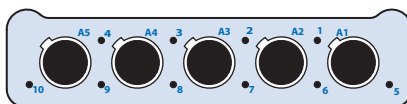
**D-27W3**



5 #8

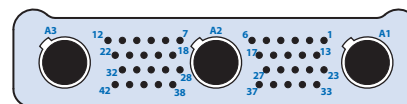
**E-5W5**

**E-5G5** Grounded



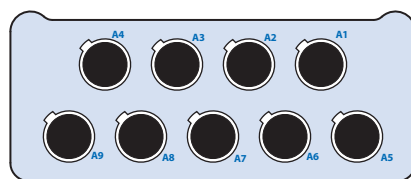
5 #8, 10 #23

**E-15W5**



3 #8, 42 #23

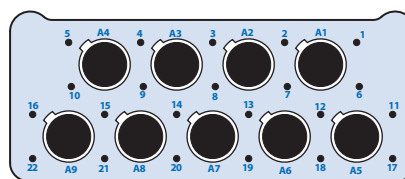
**E-45W3**



9 #8

**F-9W9**

**F-9G9** Grounded



9 #8, 22 #23

**F-31W9**

# MICRO-CRIMP RECTANGULAR CONNECTORS

## Series 792 High-Speed



### Series 792 Material and Finish Options

SERIES 792 HIGH-SPEED

The Series 792 High-Speed connector is available in five preferred finishes: **electroless nickel, nickel-PTFE, tin-zinc, cadmium, and zinc-nickel.**

Additional material and finish options are available. Replace the preferred plating code with the alternate code from the table below.

#### TIN-ZINC PLATING

The United States Department of Defense (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). Tin-Zinc is a RoHS cadmium-free sacrificial finish that offers high conductivity and shielding performance, corrosion resistance, solderability, and proven compatibility with legacy cadmium and zinc-nickel finishes. Tin-Zinc is DLA-qualified and RoHS compliant.

#### SERIES 79 PREFERRED FINISH OPTIONS

|                               | Electroless Nickel | Nickel-PTFE    | Tin-Zinc       | Olive Drab Cadmium | Black Zinc-Nickel |
|-------------------------------|--------------------|----------------|----------------|--------------------|-------------------|
| Glenair Code                  | <b>M</b>           | <b>MT</b>      | <b>TZ</b>      | <b>N</b>           | <b>ZR</b>         |
| Corrosion Resistance          | Fair               | Excellent      | Excellent      | Excellent          | Excellent         |
| Temperature Range             | -65 to +200 °C     | -65 to +175 °C | -65 to +175 °C | -65 to +175 °C     | -65 to +175 °C    |
| Salt Spray Hours              | 48                 | 500            | 500            | 500                | 500               |
| Conductivity                  | Excellent          | Excellent      | Very Good      | Very Good          | Very Good         |
| RoHS Compliant <sup>(1)</sup> | Yes                | Yes            | Yes            | No                 | Yes               |

<sup>(1)</sup> Does not contain cadmium or hexavalent chromium. Meets EU requirements.

#### ALTERNATE SHELL MATERIAL AND FINISH CODES

| Code                   | Shell Material | Shell Finish        | Finish Specification | Salt Spray Hrs. | Electrical Conductivity | RoHS <sup>(1)</sup> |
|------------------------|----------------|---------------------|----------------------|-----------------|-------------------------|---------------------|
| <b>C</b>               | Alum           | Anodize, Black      | MIL-PRF-8625         | 48              | Non-Conductive          | ✓                   |
| <b>E<sup>(2)</sup></b> | Alum           | Chem Film, Gold     | MIL-DTL-5541         | 168             | Conductive              |                     |
| <b>J</b>               | Alum           | Cadmium, Yellow     | AMS-QQ-P-416         | 500             | Conductive              |                     |
| <b>Z1</b>              | SST            | Passivate           | AMS2700              | 500             | Conductive              | ✓                   |
| <b>Z2</b>              | Alum           | Gold                | MIL-DTL-45204        | 48              | Conductive              | ✓                   |
| <b>ZM</b>              | SST            | Electroless Nickel  | AMS-C-26074          | 500             | Conductive              | ✓                   |
| <b>ZMT</b>             | SST            | Nickel-PTFE         | AMS2454              | 1000            | Conductive              | ✓                   |
| <b>ZW</b>              | SST            | Cadmium, Olive Drab | AMS-QQ-P-416         | 500             | Conductive              |                     |
| <b>ZZR</b>             | SST            | Zinc-Nickel, Black  | ASTM B841            | 500             | Conductive              | ✓                   |

<sup>(1)</sup> Does not contain cadmium or hexavalent chromium. Meets EU requirements.

<sup>(2)</sup> Maximum temperature = +125°C

# MICRO-CRIMP RECTANGULAR CONNECTORS

## Series 792 High-Speed



### Specifications

SERIES 792 HIGH-SPEED

#### CONSTRUCTION

|                         |                                             |
|-------------------------|---------------------------------------------|
| Contacts                | Copper alloy, gold over nickel finish       |
| Hood, socket contact    | Stainless steel, passivated                 |
| Clip, contact retaining | Beryllium copper                            |
| Clip, insert retaining  | Beryllium copper                            |
| Insulators              | High performance thermoplastic              |
| Grommet and face seal   | Fluorosilicone/silicone blend               |
| Shell                   | Aluminum                                    |
| O-ring                  | Fluorosilicone                              |
| EMI spring              | Beryllium copper, electroless nickel plated |
| EMI shroud (90° PCB)    | Aluminum                                    |
| Encapsulant (PCB)       | Epoxy                                       |
| Hardware                | Stainless steel, passivated                 |

#### RATINGS

|                                        |                                                                                                                                             |
|----------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------|
| Voltage (DWV)                          | Size 23 contacts: 750 VAC<br>Datalink contact outer body to shell: 1800 VAC (ungrounded insert)<br>Quadax and Ochito inner contact: 500 VAC |
| Current Rating                         | Size 23 contacts: 5 amps                                                                                                                    |
| Operating Temperature                  | -65 to +150 °C                                                                                                                              |
| Durability                             | 500 mating cycles                                                                                                                           |
| Datalink differential Impedance (nom.) | Quadax: 100 ohms<br>Ochito white, red: 100 ohms<br>Ochito blue: 90 ohms                                                                     |

#### PRODUCT SPECIFICATIONS

| Description                        | Requirement                                              | Procedure                                        |
|------------------------------------|----------------------------------------------------------|--------------------------------------------------|
| Contact Resistance                 | SAE AS39029 Table V                                      | EIA-364-06                                       |
| Low Level Contact Resistance       | SAE AS39029 Table IV                                     | EIA-364-23                                       |
| Insulation Resistance              | 5000 megohms minimum                                     | EIA-364-21                                       |
| Dielectric Withstanding Voltage    | #23 contacts 750 volts                                   | EIA-364-20                                       |
| Current Rating                     | #23: 5A                                                  | EIA-364-70 Method 1                              |
| Shell-to-shell Resistance          | 2.5 millivolt drop maximum (connector with EMI spring)   | EIA-364-83                                       |
| Shielding Effectiveness            | 100 – 1000MHz: >75 dB, 1 – 4GHz: >60dB, 4 – 10GHz: >40dB | EIA-364-66                                       |
| Vibration, Sine                    | 20 g                                                     | EIA-364-28 Test Condition IV                     |
| Vibration, Random                  | 16.91 g rms                                              | EIA-364-28 Test Condition VI Letter J            |
| Mechanical Shock                   | 300 g                                                    | EIA-364-27 Condition D                           |
| Thermal Shock                      | -65 to +150 °C                                           | EIA-364-32 Test Condition IV,                    |
| Humidity                           | 10 Day, +25 to +65° C                                    | EIA-364-31 Method IV, Step 7b vibration deleted. |
| Mechanical Durability              | 500 mating cycles                                        | EIA-364-09                                       |
| Salt Spray                         | Plating code M: 48 hours, MT, ZR, N, TZ: 500 hours       | EIA-364-26                                       |
| Solderability, PC Tail Contacts    | 95% solder coverage. Smooth, bright and even finish.     | EIA-364-52 Category 3, 8 hours steam aging       |
| Resistance To Soldering Heat (PCB) | 260° C, 10 seconds                                       | EIA-364-56                                       |
| Fluid Immersion                    | No damage from immersion in various fuels and oils.      | EIA-364-10                                       |
| Contact Retention                  | MIL-DTL-38999 Table XVIII                                | EIA-364-29                                       |
| Contact Separation Force           | SAE AS39029 Table 9                                      | EIA-364-37                                       |
| Magnetic Permeability              | 2 μ maximum.                                             | EIA-364-54                                       |

# MICRO-CRIMP RECTANGULAR CONNECTORS

## Series 792 High-Speed



### Series 792 Polarization Keying Option

#### OPTIONAL POLARIZATION KEYS



To prevent mis-mating of identical shell size and insert arrangement connectors

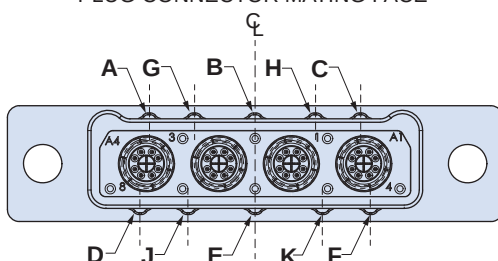
Series 792 connectors are available with an integral polarizing key. Keyed plug connectors have a raised boss on the shell. Receptacles have corresponding keyway. Ordering is simple—just add the keying position letter designator to the end of the part number.

*Note: keyed receptacles will mate with unkeyed plugs.*

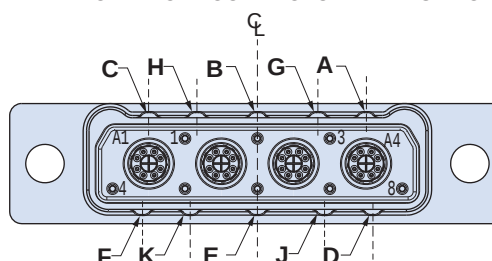
#### HOW TO ORDER

|        |                                                                                                  |                          |
|--------|--------------------------------------------------------------------------------------------------|--------------------------|
| Step 1 | Create a Series 792 connector part number:                                                       | 792-001SD-4G4MS          |
| Step 2 | Add the keying position letter designator<br>A, B, C, D, E, F, G, H, J, or K to the part number. | 792-001SD-4G4MS <u>B</u> |

MOD-1104 POLARIZING KEY LOCATIONS  
PLUG CONNECTOR MATING FACE



MOD-1104 POLARIZING KEY LOCATIONS  
RECEPTACLE CONNECTOR MATING FACE



#### KEY LOCATIONS

##### Key Position Offset From Vertical Centerline

| Shell Size | Position A |       | Position B |     | Position C |       | Position D |       | Position E |     | Position F |       | Position G                                                           |      | Position H |      | Position J |      | Position K |      |
|------------|------------|-------|------------|-----|------------|-------|------------|-------|------------|-----|------------|-------|----------------------------------------------------------------------|------|------------|------|------------|------|------------|------|
|            | in         | mm    | in         | mm  | in         | mm    | in         | mm    | in         | mm  | in         | mm    | in                                                                   | mm   | in         | mm   | in         | mm   | in         | mm   |
| A          | .025       | 0.64  | .000       | .00 | .025       | 0.64  | .100       | 2.54  | .000       | .00 | .100       | 2.54  | POSITIONS G, H, J AND K ARE NOT AVAILABLE FOR SHELL SIZES A, B AND C |      |            |      |            |      |            |      |
| B          | .200       | 2.29  | .000       | .00 | .200       | 2.29  | .325       | 8.26  | .000       | .00 | .325       | 8.26  |                                                                      |      |            |      |            |      |            |      |
| C          | .375       | 9.53  | .000       | .00 | .375       | 9.53  | .500       | 12.70 | .000       | .00 | .500       | 12.70 |                                                                      |      |            |      |            |      |            |      |
| D          | .550       | 13.97 | .000       | .00 | .550       | 13.97 | .600       | 15.24 | .000       | .00 | .600       | 15.24 | .315                                                                 | 8.00 | .315       | 8.00 | .350       | 8.89 | .350       | 8.89 |
| E          | .700       | 17.78 | .000       | .00 | .700       | 17.78 | .750       | 19.05 | .000       | .00 | .750       | 19.05 | .315                                                                 | 8.00 | .315       | 8.00 | .350       | 8.89 | .350       | 8.89 |
| F          | .700       | 17.78 | .000       | .00 | .700       | 17.78 | .750       | 19.05 | .000       | .00 | .750       | 19.05 | .315                                                                 | 8.00 | .315       | 8.00 | .350       | 8.89 | .350       | 8.89 |