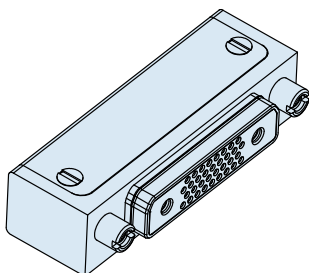


# Series 79 Micro-Crimp

## Section G: Right Angle Printed Circuit Board Connectors



### 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**

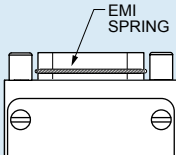
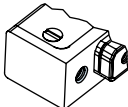
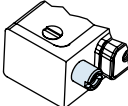
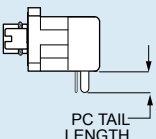
**L-6P6**

**M**

**E**

**P**

**A**

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

#### 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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# Series 79 Micro-Crimp

## Section G: Right Angle Printed Circuit Board Connectors

Table 1 Contact Arrangements

| Layout | Contact Quantity |     |     | Face View |
|--------|------------------|-----|-----|-----------|
|        | #23              | #16 | #12 |           |
| 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

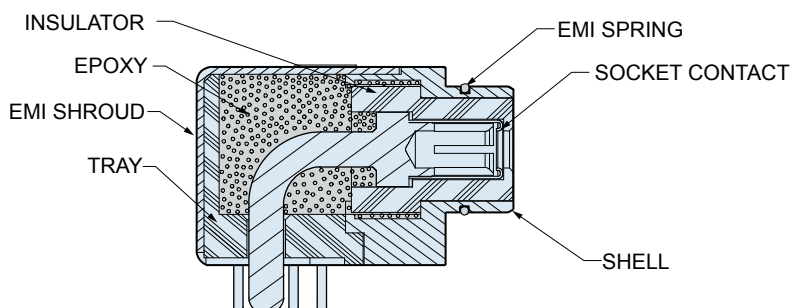
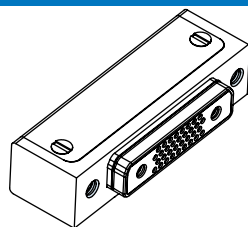
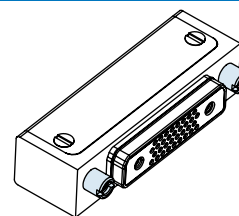


TABLE 2 HARDWARE OPTION

**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).

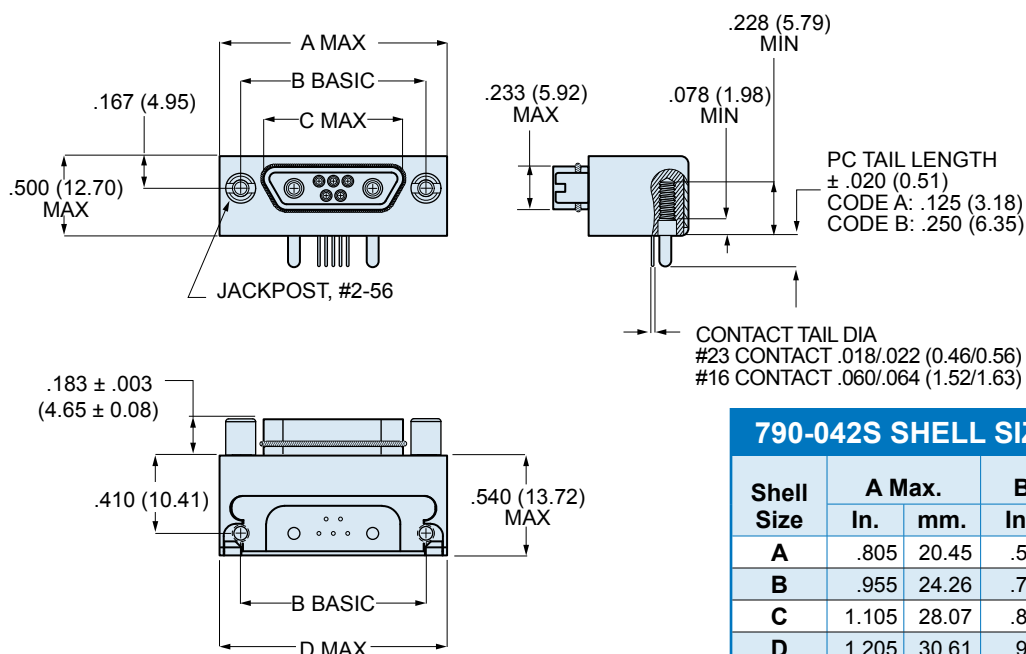
**P****Jackposts**

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.

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



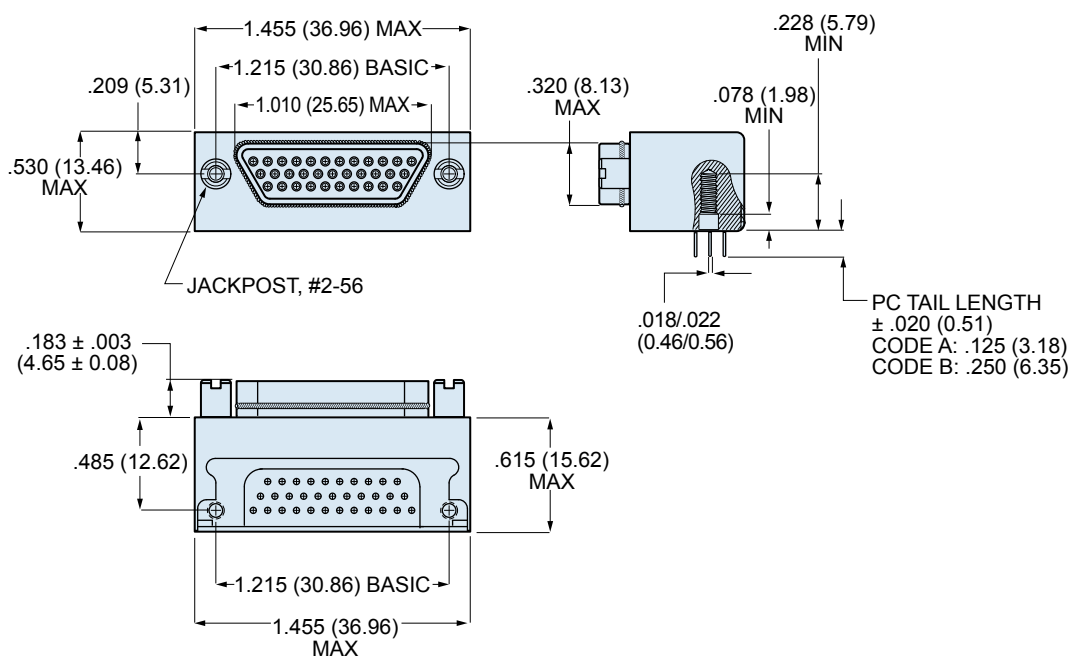
## 790-042S DIMENSIONS: SHELL SIZE A-F, J AND K



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 | 1.380  | 35.05 |
| K          | 2.255  | 57.28 | 2.015   | 51.18 | 1.783  | 45.29 |

## 790-042S DIMENSIONS: SHELL SIZE G

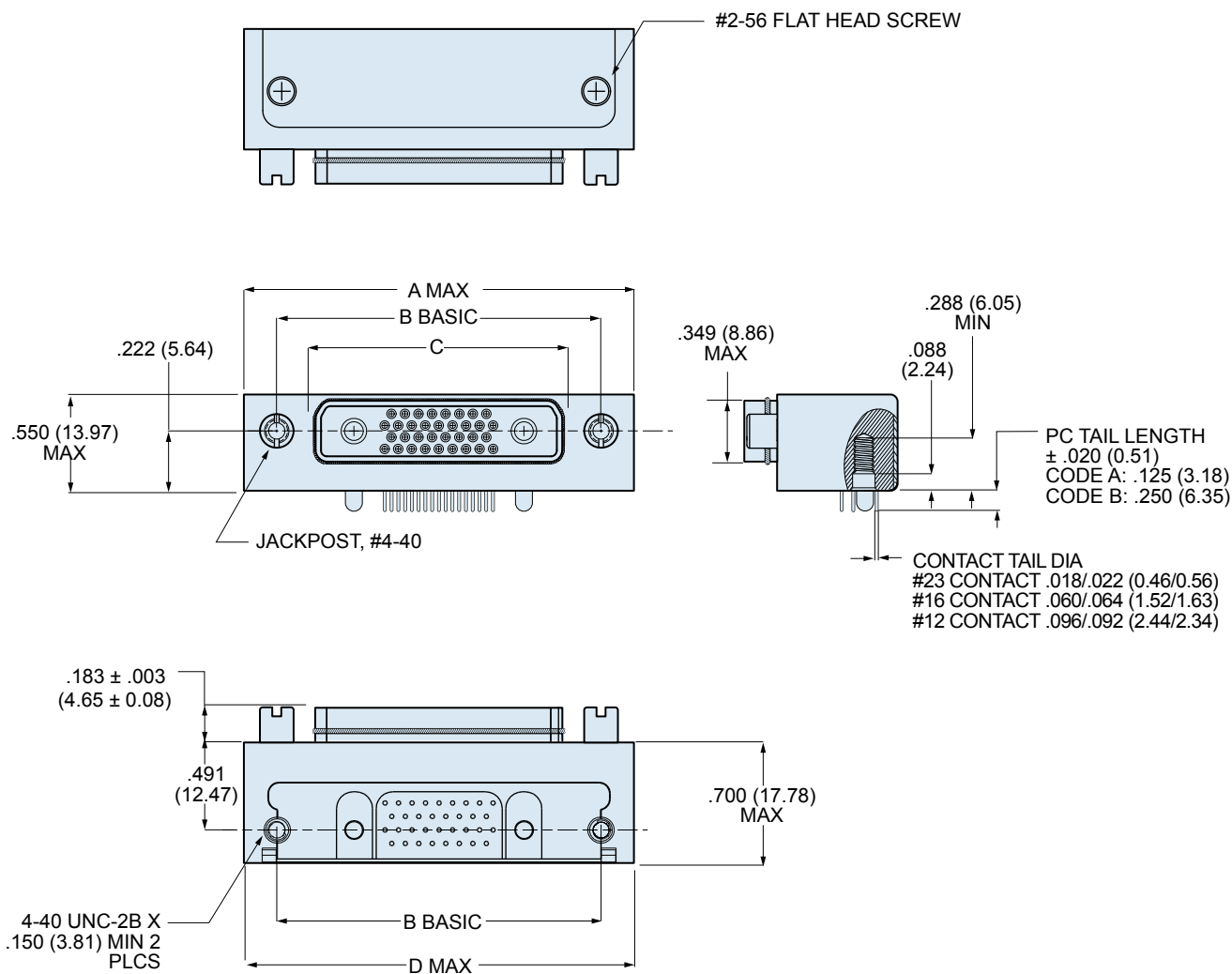


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# Series 79 Micro-Crimp

## Section G: Right Angle Printed Circuit Board Connectors

### 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 |

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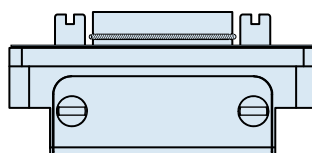
# Series 79 Micro-Crimp

## Section G: Right Angle Printed Circuit Board Connectors



### 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.   | Ø Diameter 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. | <p align="center"><b>Component Mounting Side of PCB</b><br/> <b>Mating Face of Connector is Toward Top of Page</b></p> |
|-------------|------------------------------------------------------------------------------------------------------------------------|
| 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. | <b>Component Mounting Side of PCB</b><br><b>Mating Face of Connector is Toward Top of Page</b> |
|-------------|------------------------------------------------------------------------------------------------|
| H-10P4      |                                                                                                |
| H-29P7      |                                                                                                |
| H-36P2      |                                                                                                |
| H-54P2      |                                                                                                |
| H-5P5       |                                                                                                |

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## Section G: Right Angle Printed Circuit Board Connectors



### 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       |                                                                                  |

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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 |
|-------------|----------------------------------------------------------------------------------|
| K-27P4      |                                                                                  |
| K-35P2      |                                                                                  |
| K-43        |                                                                                  |
| K-9P9       |                                                                                  |
| L-6P6       |                                                                                  |

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