

# MICRO-CRIMP RECTANGULAR CONNECTORS

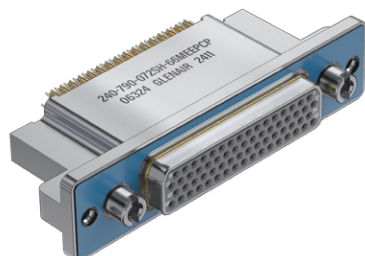
## Series 790 High-Density

SERIES™  
**790**  
HD

### 240-790-072

#### Panel Plug, Filtered

- ◆ Solder cup termination
- ◆ Socket contacts



240-790-070 cable plug has ceramic filter array to attenuate unwanted signals. Solder cup contacts. Available with two filter types (C, Pi) and 11 filter classes ranging from 35 pF to 240K pF. Conductive fluorosilicone panel gasket provides low resistance panel bonding and ingress protection. Machined aluminum shell has rear threads for attaching EMI banding adapter (799-016, sold separately).

- Aerospace-grade microminiature rectangular connector with ceramic filter
- 39 insert arrangements with up to 102 contacts
- Environmental

#### INSERT ARRANGEMENTS

| Insert Arrangement | No. of Contacts |     |     |    |
|--------------------|-----------------|-----|-----|----|
|                    | #23             | #16 | #12 | #8 |
| 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-14P3             | 11              | 3   |     |    |
| F-15P2             | 13              | 2   |     |    |
| F-23               | 23              |     |     |    |
| F-5P5              |                 | 5   |     |    |
| G-13P2             | 11              |     | 2   |    |
| G-21P1             | 20              |     | 1   |    |
| G-3P3              |                 |     | 3   |    |
| G-33               | 33              |     |     |    |
| H-10P4             | 6               |     | 4   |    |
| H-29P7             | 22              | 7   |     |    |
| H-36P2             | 34              |     | 2   |    |
| H-51P1             | 50              |     | 1   |    |
| 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-22P4             | 18              |     | 4   |    |
| L-48P2             | 46              |     | 2   |    |
| L-6P6              |                 |     | 6   |    |
| L-78               | 78              |     |     |    |
| M-17P17            |                 | 17  |     |    |
| M-102              | 102             |     |     |    |

#### HOW TO ORDER

How To Order

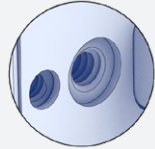
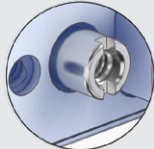
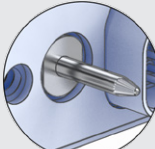
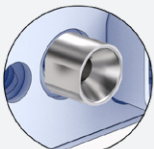
| Sample Part Number         |                                                                                                                                                                          | 240-790-072S                          | G-33 | ME | E | P | C | S |
|----------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------|------|----|---|---|---|---|
| Basic Part Number          | 240-790-072S                                                                                                                                                             | Panel Plug, Filtered, Socket Contacts |      |    |   |   |   |   |
| Shell Size-Insert Arr.     | See <i>“Insert Arrangements”</i> Table                                                                                                                                   |                                       |      |    |   |   |   |   |
| Shell Finish               | <u>ME</u> Electroless Nickel<br><u>MT</u> Nickel / PTFE<br><u>N</u> Olive Drab Cadmium<br><u>TZ</u> Tin-Zinc<br><u>ZR</u> Black Zinc-Nickel                              |                                       |      |    |   |   |   |   |
| EMI Spring                 | <u>E</u> EMI Spring <i>Shell finishes ME and MT only</i><br><u>N</u> No EMI Spring                                                                                       |                                       |      |    |   |   |   |   |
| Filter Type                | <u>C</u> C Circuit<br><u>P</u> Pi Circuit                                                                                                                                |                                       |      |    |   |   |   |   |
| Filter Capacitance Class   | See <i>“Filter Capacitance Class”</i> Table                                                                                                                              |                                       |      |    |   |   |   |   |
| Hardware Option<br>Table 1 | <u>N</u> No Hardware <i>Threaded holes</i><br><u>G</u> Guide Pins <i>For blind mating</i><br><u>P</u> Female Jackposts<br><u>S</u> Guide Sockets <i>For blind mating</i> |                                       |      |    |   |   |   |   |

#### FILTER CAPACITANCE CLASS

| Filter Class | Capacitance Range (pF) |                |
|--------------|------------------------|----------------|
|              | Filter Type P          | Filter Type C  |
| X*†          | 160,000-240,000        | 80,000-120,000 |
| Y*           | 80,000-120,000         | 40,000-60,000  |
| Z*           | 60,000-90,000          | 30,000-45,000  |
| A            | 38,000-56,000          | 19,000-28,000  |
| B            | 32,000-45,000          | 16,000-22,500  |
| C            | 18,000-33,000          | 9,000-16,500   |
| D            | 8,000-12,000           | 4,000-6,000    |
| E            | 3,300-5,000            | 1,650-2,500    |
| F            | 800-1,300              | 400-650        |
| G            | 400-600                | 200-300        |
| J            | 70-120                 | 35-60          |

\* Filter classes X, Y and Z are 250 VDC. All others are 500 VDC.  
 † Class X filters not available for arrangements with 3 or more rows of contacts.

#### TABLE 1 HARDWARE OPTIONS

|                                                                                                                                          |                                                                                                                      |
|------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------|
| <br><b>N</b><br>No Hardware<br>Threaded Blind Holes | <br><b>P</b><br>Female Jackpost |
| <br><b>G</b><br>Guide Pin                           | <br><b>S</b><br>Guide Socket    |

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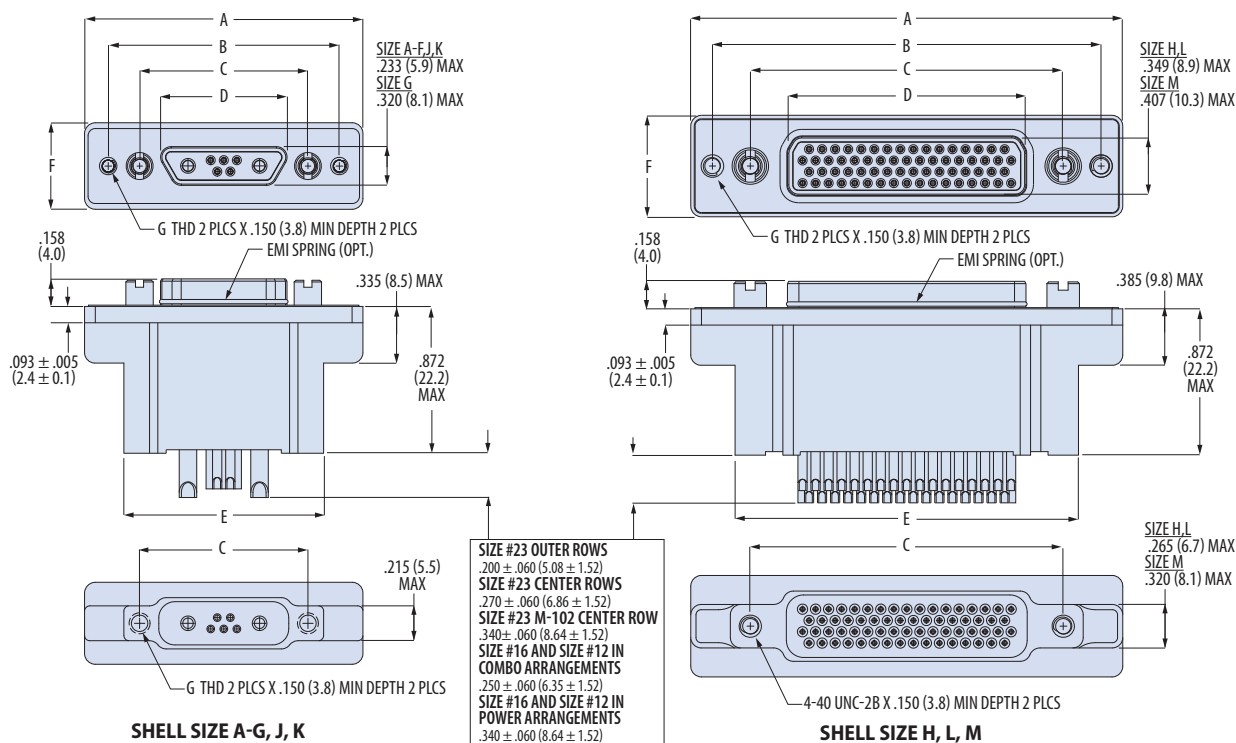
## Series 790 High-Density



### 240-790-072

### Panel Plug, Filtered

- ◆ Solder cup termination
- ◆ Socket contacts



| Shell Size | A Max |      | B ± .005 (0.1) |      | C ± .005 (0.1) |      | D Max |      | E Max |      | F Max |      | G THD  |
|------------|-------|------|----------------|------|----------------|------|-------|------|-------|------|-------|------|--------|
|            | in    | mm   | in             | mm   | in             | mm   | in    | mm   | in    | mm   | in    | mm   | UNC-2B |
| A          | 1.211 | 30.8 | .925           | 23.5 | .565           | 14.4 | .335  | 8.5  | .760  | 19.3 | .485  | 12.3 | 2-56   |
| B          | 1.361 | 34.6 | 1.075          | 27.3 | .715           | 18.2 | .485  | 12.3 | .910  | 23.1 | .485  | 12.3 | 2-56   |
| C          | 1.511 | 38.4 | 1.225          | 31.1 | .865           | 22.0 | .635  | 16.1 | 1.060 | 26.9 | .485  | 12.3 | 2-56   |
| D          | 1.611 | 40.9 | 1.325          | 33.7 | .965           | 24.5 | .735  | 18.7 | 1.160 | 29.5 | .485  | 12.3 | 2-56   |
| E          | 1.761 | 44.7 | 1.475          | 37.5 | 1.115          | 28.3 | .885  | 22.5 | 1.310 | 33.3 | .485  | 12.3 | 2-56   |
| F          | 1.911 | 48.5 | 1.625          | 41.3 | 1.265          | 32.1 | 1.035 | 26.3 | 1.460 | 37.1 | .485  | 12.3 | 2-56   |
| G          | 1.861 | 47.3 | 1.575          | 40.0 | 1.215          | 30.9 | 1.010 | 25.7 | 1.410 | 35.8 | .575  | 14.6 | 2-56   |
| H          | 2.500 | 63.5 | 2.236          | 56.8 | 1.800          | 45.7 | 1.385 | 35.2 | 2.045 | 51.9 | .600  | 15.2 | 4-40   |
| J          | 2.261 | 57.4 | 1.975          | 50.2 | 1.615          | 41.0 | 1.390 | 35.3 | 1.810 | 46.0 | .485  | 12.3 | 2-56   |
| K          | 2.661 | 67.6 | 2.375          | 60.3 | 2.015          | 51.2 | 1.795 | 45.6 | 2.210 | 56.1 | .485  | 12.3 | 2-56   |
| L          | 2.736 | 69.5 | 2.472          | 62.8 | 2.036          | 51.7 | 1.623 | 41.2 | 2.281 | 57.9 | .600  | 15.2 | 4-40   |
| M          | 3.085 | 78.4 | 2.770          | 70.4 | 2.200          | 55.9 | 1.675 | 42.5 | 2.485 | 63.1 | .660  | 16.8 | 6-32   |

#### RATINGS

- Voltage (DWV): 500 VDC. Class X, Y, Z: 250 VDC.
- Current rating for arrangements with all contacts the same size: #23 5A, #16 13A, #12 23A
- Current rating for arrangements with mixed contact sizes: #23 5A, #16 7.5A, #12 13A
- Operating temperature: -55 to +125 °C
- Durability: 500 mating cycles
- Shock: 300 g
- Vibration: 20 g random
- Insulation resistance: 5000 megohm @ 200 VDC. Class X, Y, Z: 1000 megohm @ 83 VDC

#### CONSTRUCTION

- Contacts: Copper alloy, gold over nickel finish
- Shell: Aluminum
- Insulators: High performance dielectric
- Wire grommet, face seal: Fluorosilicone/silicone blend
- Panel gasket: Cho-Seal 1287 silver-plated aluminum filled fluorosilicone
- EMI spring: Stainless steel, gold plated
- Hardware: Stainless steel



#### Application Note

EMI Banding Backshell 799-016

See page F-32 for backshell ordering information.

#### HARDWARE DETAILS

|                                                                                                                                 |                                                                                                                                     |
|---------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|
| <p><b>N</b> No Hardware<br/>Tapped holes. Size A-G, J, K = 4-40, H, L = 6-32, M = 8-32. .150 (3.8) min. depth</p>               | <p><b>P</b> Female Jackposts<br/>Jackposts are non-removable. Size A-G, J, K = 2-56, H, L = 4-40, M = 6-32.</p>                     |
| <p><b>G</b> Guide Pins<br/>Guide pins for blind mate applications. Non-removable. Requires guide socket (S) on mating plug.</p> | <p><b>S</b> Guide Sockets<br/>Guide sockets for blind mate applications. Non-removable. Requires guide pins (G) on mating plug.</p> |

#### BLIND MATE TOLERANCES

| Shell Size  | Allowable Misalignment from Centerline |
|-------------|----------------------------------------|
| A - G, J, K | ± .030 (0.8)                           |
| H, L        | ± .040 (1.0)                           |
| M, N        | ± .050 (1.3)                           |



#### Application Note

See page A-60 for panel cutout dimensions.