

# Series 700 Specifications and Connector Ordering

## Mechanical Specifications

- Shell . . . . . Zinc or aluminum diecast, nickel plated  
150  $\mu$  inches (3.81  $\mu$ m) min.
- Insulators . . . . . Glass-filled polyester,  
flammability UL94V-0
- Pin Contacts . . . . . Copper alloy, 15  $\mu$  inches  
(0.38  $\mu$ m) gold plated \* over nickel
- Socket Contacts . . . . . Copper alloy, 30  $\mu$  inches  
(0.76  $\mu$ m) gold plated \* over nickel  
  
\* Heavier gold plating available upon request.  
See pg. FC43: Connector Options
- Terminations . . . . . Gold flash for PCB mount and solder  
cups. Solder dipped also available.
- Ground Plane . . . . . Brass, solder plated
- Grounding  
Springs . . . . . Beryllium copper, tin plated per  
MIL-T-10727
- Operating  
Temperature . . . . . -55°C to +125°C
- Capacitors . . . . . Proprietary barium titanate  
ceramic formulations

## Electrical Specifications

- Current Rating . . . . . 5 Amps
  - R.F. Current  
Rating . . . . . 0.3 Amps
  - Contact  
Resistance . . . . . 10 milliohms maximum
  - UL Recognized . . . . . Under category of communication  
circuit accessories, File #E149046
  - Inductance on  
PI Filters . . . . . ~ 860 nH between 100 kHz and 1 MHz
- Solder cups accept up to a 20 gauge wire.

**Note:**  
 For additional mechanical, electrical, and  
 environmental specifications, refer to page FC79.

## Ordering Your Connector

### STEP 1: SELECTING THE FILTER

- Using the insert loss graphs on page FC20 determine which filters provide the required attenuation at the troublesome frequency, while not affecting the signal frequency by more than 3 to 6 dB.
- Choose the filter type, either feed-through capacitor or Pi. The Pi is generally considered better due to its superior high frequency performance and steeper curve. The feed-through capacitor is lower cost.
- Select capacitance value.
- Note the Spectrum letter designation for the filter chosen from the table on page FC20.

### STEP 2: SELECTING THE CONNECTOR

- Turn to the appropriate size section.  
(9, 15, 25, 37, 50)
- Choose either pin contacts (plug) or socket contacts (receptacle).
- Choose the required termination type.
- From the table on the appropriate connector page, using the filter letter designation chosen in step 1 above, select the part number.

### STEP 3: SPECIFYING OPTIONS

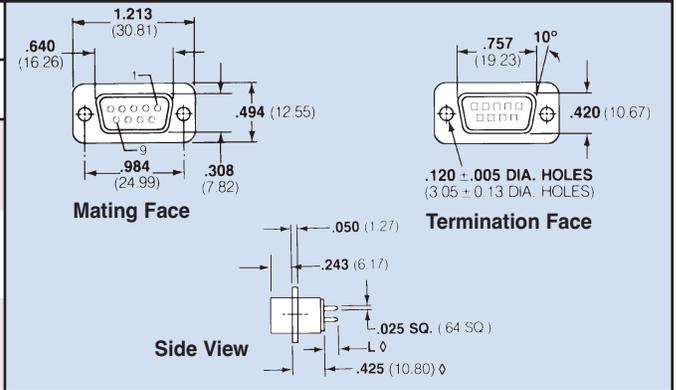
- Refer to page FC43 for special options including heavy gold plating, 4-40 mounting threads, grounding brackets, hardware, and others.
- Most options are available within the standard lead times.
- Some options require a part number suffix, while other combinations may require factory assistance for part number assignment. If a suffix is shown, add it to your selected part number. If more than one option is needed, consult with factory for part number assignment.

# 9 Series 700 Shell Size Socket Contact & Pin/Socket Adapter



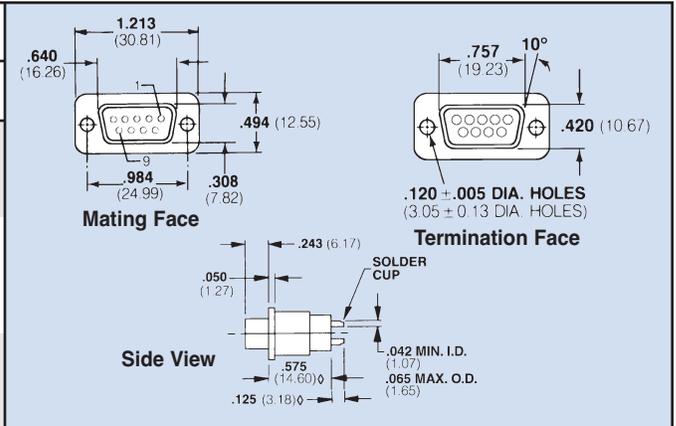
## Solderless Wire Wrap

| Spectrum Part Number<br><i>Select one</i> | EMI Filter |           |           |                 |            |
|---|------------|-----------|-----------|-----------------|------------|
|   | L<br>.500  | L<br>.375 | L<br>.250 | Filter Desig.** | Cap. Value |
| 56-703 -006                               | -016       | -011      |           | A               | 310 pF Pi  |
| 56-703 -007                               | -017       | -012      |           | B               | 1000 pF C  |
| 56-703 -008                               | -018       | -013      |           | C               | 1000 pF Pi |
| 56-703 -009                               | -019       | -014      |           | D               | 5000 pF C  |
| * 56-703 -010                             | -020       | * -015    |           | E               | 4000 pF Pi |
| 56-703 -031                               | -028       | -025      |           | F               | 830 pF C   |
| 56-703 -032                               | -029       | -026      |           | J               | 100 pF Pi  |
| 56-703 -033                               | -030       | -027      |           | K               | 2500 pF Pi |
| 56-703 -039                               | -038       | -037      |           | N               | 375 pF C   |



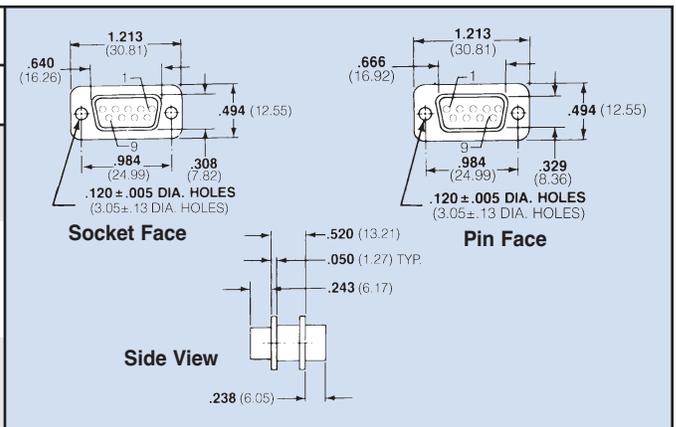
## Solder Cup Termination

| Spectrum Part Number | EMI Filter           |            |
|----------------------|----------------------|------------|
|                      | Filter Designation** | Cap. Value |
| * 56-706-001         | A                    | 310 pF Pi  |
| 56-706-002           | B                    | 1000 pF C  |
| * 56-706-003         | C                    | 1000 pF Pi |
| 56-706-004           | D                    | 5000 pF C  |
| * 56-706-005         | E                    | 4000 pF Pi |
| 56-706-006           | F                    | 830 pF C   |
| 56-706-007           | J                    | 100 pF Pi  |
| * 56-706-008         | K                    | 2500 pF Pi |
| 56-706-009           | N                    | 375 pF C   |
| 56-706-017           | L                    | 500 pF C   |



## Pin/Socket Adapter

| Spectrum Part Number | EMI Filter           |            |
|----------------------|----------------------|------------|
|                      | Filter Designation** | Cap. Value |
| * 56-705-001         | A                    | 310 pF Pi  |
| 56-705-002           | B                    | 1000 pF C  |
| * 56-705-003 €       | C                    | 1000 pF Pi |
| 56-705-004           | D                    | 5000 pF C  |
| * 56-705-005 €       | E                    | 4000 pF Pi |
| * 56-705-008         | F                    | 830 pF C   |
| 56-705-009           | J                    | 100 pF Pi  |
| 56-705-010           | K                    | 2500 pF Pi |
| 56-705-026           | N                    | 375 pF C   |
| 56-705-049           | L                    | 500 pF C   |



€ Also available through API's authorized European distributors/agents.

\* May be available from distributor stock.

\*\* See page FC20 for filter performance.

Standard Tolerance = ±.005 except where noted, φ = ±.015

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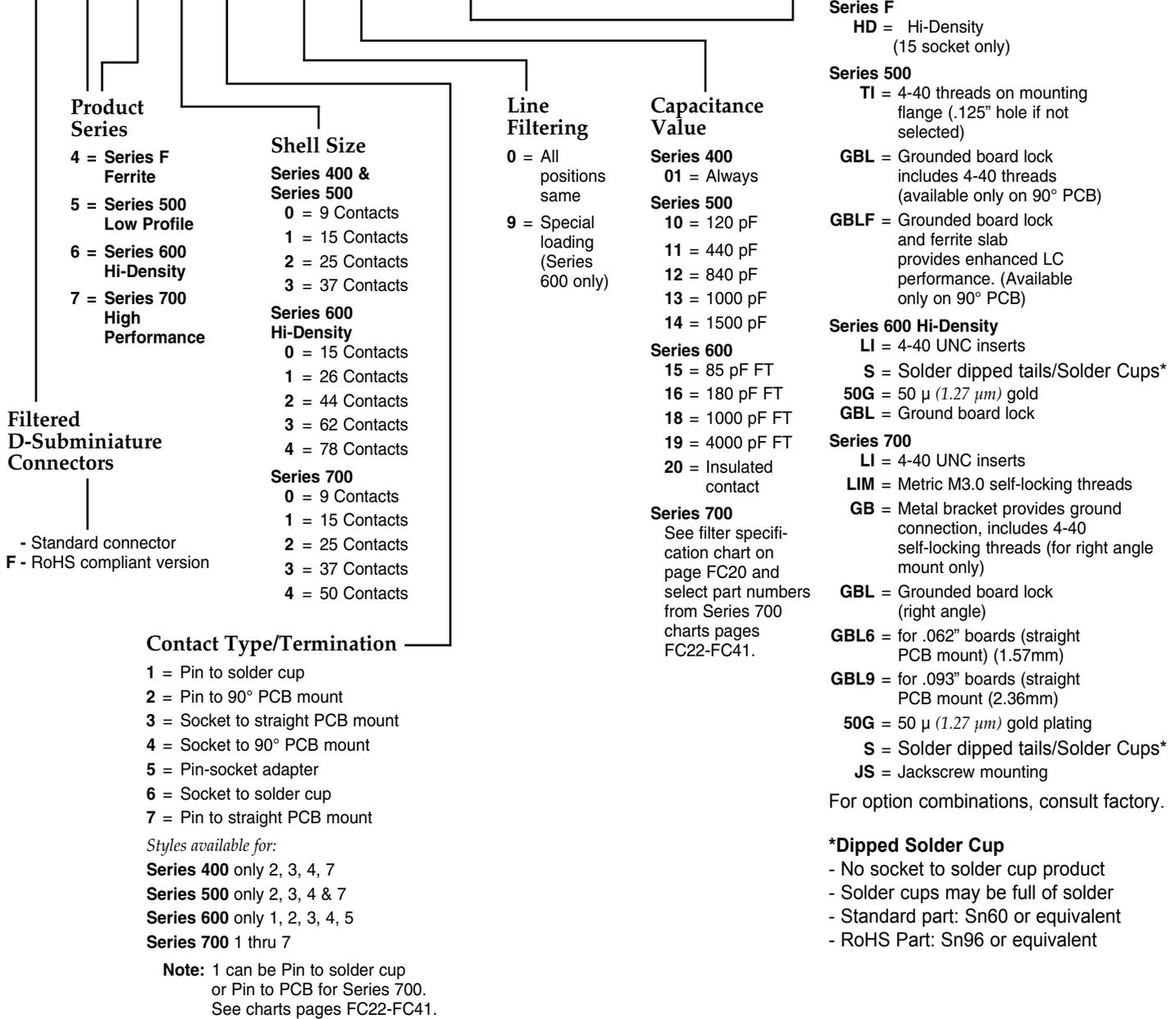
Dimensions in inches (mm)

# D-Subminiature Part Numbering System

## Ordering Information

Example: **56-513-012-TI**

**56** - **5** **1** **3** - **0** **12** - **TI**



To assist your efforts in selecting the correct Filtered Connector to meet your needs, we have developed a part numbering system. All of the standard products are shown in their respective catalog pages.

Part number **56-513-012-TI** represents a Series 500 connector with 15 contacts in a socket to straight PCB mount configuration. All connector positions have a capacitance value of 840 pF and there are 4-40 threads on mounting flange.

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