

# HD38999

## High Density

A connector that has the  
connections...

The HD38999 family of connectors was designed to work with existing mil-specified 38999 shells. To the end users familiar with standard 38999 connectors, this family of high density connectors will look, feel, and perform just like the mil-qualified connectors. Utilizing an existing mil-qualified 39029 size 23 contact and mil-qualified shells, the new system will be, in many cases, a drop-in connector. Even though the HD38999 has 30% more contacts, it still performs to minimum electrical requirements of standard 38999 connectors.



## High Density Interconnects

Goes from 9 to 187 contacts!



- Aluminum
- Composite
- Stainless Steel
- Sealed
- Filtered

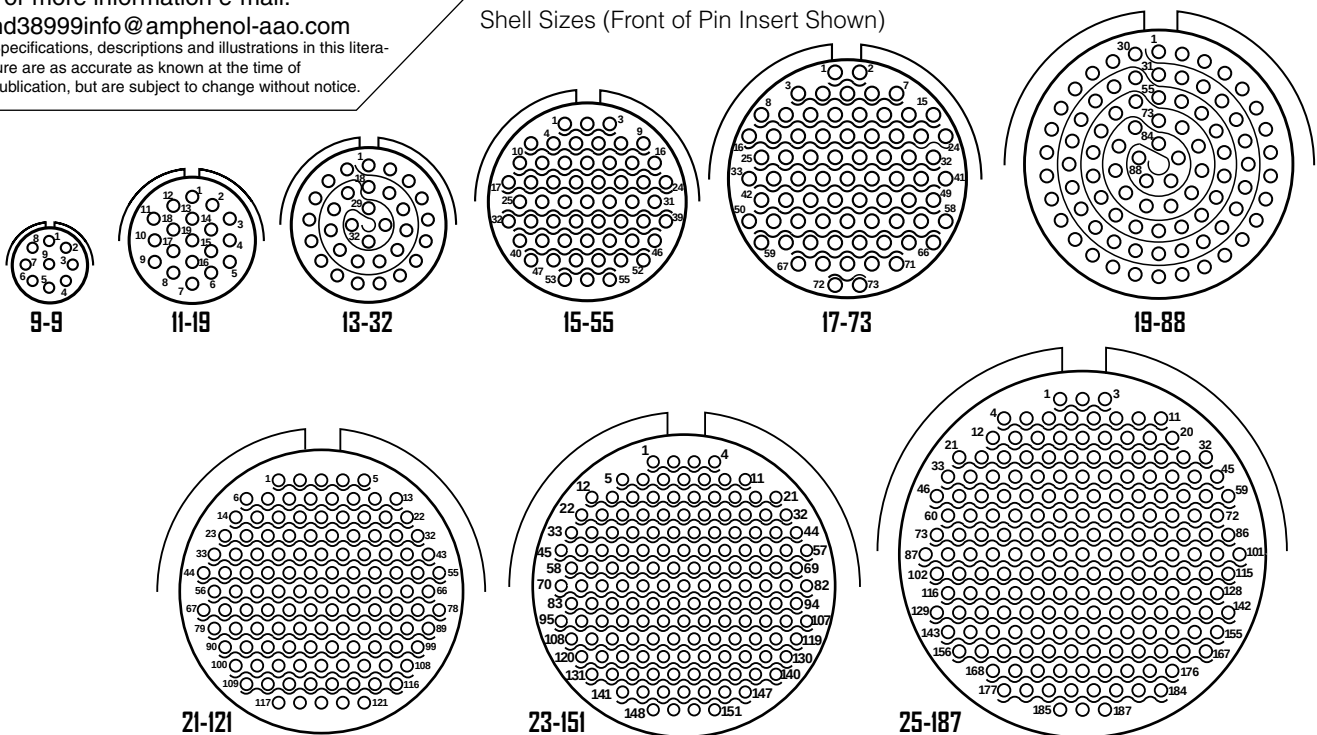


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Specifications, descriptions and illustrations in this literature are as accurate as known at the time of publication, but are subject to change without notice.

Shell Sizes (Front of Pin Insert Shown)



Front of  
Pin Insert Shown.

III  
II  
I  
SJT  
38999

26482  
Matrix 2

83723 III  
Matrix  
Pyle

5015  
Crimp Rear  
Release Matrix

26500 Pyle

Printed  
Circuit Board

EMI Filter  
Transient

Fiber Optics

High Speed  
Contacts

Options  
Others

38999

III

SJT

26482

Matrix 2

83723 III

Matrix Pyle

5015

Crimp Rear Release Matrix

26500 Pyle

Printed Circuit Board

EMI Filter Transient

Fiber Optics

High Speed Contacts

Options Others

#### CRIMP CONTACT SIZE

SAE AS39029, SIZE 23

#### WIRE BARREL RANGES/CURRENT CAPABILITY

|        |          |
|--------|----------|
| 22 AWG | 5.0 AMPS |
| 24 AWG | 3.0 AMPS |
| 26 AWG | 2.0 AMPS |
| 28 AWG | 1.5 AMPS |

#### CRIMP BARREL DIAMETER

(Inches) .034-.036

#### CRIMP BARREL

Depth (Inches).151-.155

Note: Wire insulation diameter greater than 0.045 inches is too large for the extraction tool to work properly. Connector damage is possible.  
Contact Part Numbers

Size 23 Sockets 10-597330-735

Crimp Tool - Daniels M22520/2-01

Size 23 Pins 10-597331-735

Positioner - Daniels M22520/2-13 - Pins

Sealing Plugs 10-405996-222 (M27488-22-2)

Daniels M22520/2-16 - Sockets

Insertion/Removal Tool - Glenair 809-088

Temperature Range:  
-65C to 175C

Insulation Resistance:  
5000 megohms min. @ 500 VDC 25C

Dielectric Withstanding Voltage:  
1000 VRMS @ Sea level

## Easy Steps to build a part number... HD38999



| 1. Connector Type | 2. Shell Styles | 3. Service Class | 4. Shell Size - Insert arrangement | 5. Contact Type | 6. Alternate Positions | 7. PCB Options |
|-------------------|-----------------|------------------|------------------------------------|-----------------|------------------------|----------------|
| (P)TV             | 06              | RW               | 23-151                             | P               | B                      | (P25)          |

### Step 1. Select a Connector Type

|     | Designates                    |
|-----|-------------------------------|
| TV  | Tri-Start Series Connector    |
| TVP | Back panel mounted receptacle |
| (P) | Potted version                |

### Step 2. Select a Shell Style

|    | Designates            |
|----|-----------------------|
| 00 | Wall mount receptacle |
| 01 | Line receptacle       |
| 06 | Straight plug         |
| 07 | Jam nut receptacle    |

### Step 3. Select a Service Class

|    | Designates                                                                                                                                               |
|----|----------------------------------------------------------------------------------------------------------------------------------------------------------|
| RF | Electroless nickel plated aluminum, optimum EMI shielding effectiveness -65dB @ 10GHz specification min., 48 hour salt spray, 175°C                      |
| RW | Corrosion resistant olive drab cadmium plate aluminum, 500 hour extended salt spray, EMI -50dB @ 10GHz specification min., 175°C                         |
| RK | Corrosion resistant stainless steel, plus 500 hour salt spray resistance, EMI -45 dB @ 10 GHz specification min., 175°C                                  |
| DT | Durmalon plated, alternative to Cadmium. Corrosion resistant, 500 hour extended salt spray, EMI -50dB @ 10GHz specification min. without CR <sup>6</sup> |
| ZN | Zinc-Nickel Alternative to Cadmium corrosion resistant, 500 hour salt spray, Conductive, -65°C to +175°C                                                 |

### Step 4. Select a Shell Size - Insert Arrangement

Shell Sizes are MIL-DTL-38999, Series III, plus newer High Density insert arrangements

| Shell Size | Insert Arrangement | Shell Size | Insert Arrangement |
|------------|--------------------|------------|--------------------|
| 9 - 9      |                    | 19 - 88    |                    |
| 11 - 19    |                    | 21 - 121   |                    |
| 13 - 32    |                    | 23 - 151   |                    |
| 15 - 55    |                    | 25 - 187   |                    |
| 17 - 73    |                    |            |                    |

### Step 5. Select a Contact Type

|   | Designates      |
|---|-----------------|
| P | Pin contacts    |
| S | Socket contacts |

### Step 6. Select an Alternate Position

A, B, C, D, E, blank for normal

| Shell Size     | Key & keyway arrangement identification letter | AR <sup>6</sup> or AP <sup>6</sup> BSC | BR <sup>6</sup> or BP <sup>6</sup> BSC | CR <sup>6</sup> or CP <sup>6</sup> BSC | DR <sup>6</sup> or DP <sup>6</sup> BSC |
|----------------|------------------------------------------------|----------------------------------------|----------------------------------------|----------------------------------------|----------------------------------------|
| 9              | N*                                             | 105                                    | 140                                    | 215                                    | 265                                    |
|                | A                                              | 102                                    | 132                                    | 248                                    | 320                                    |
|                | B                                              | 80                                     | 118                                    | 230                                    | 312                                    |
|                | C                                              | 35                                     | 140                                    | 205                                    | 275                                    |
|                | D                                              | 64                                     | 155                                    | 234                                    | 304                                    |
| 11, 13, and 15 | E                                              | 91                                     | 131                                    | 197                                    | 240                                    |
|                | N*                                             | 95                                     | 141                                    | 208                                    | 236                                    |
|                | A                                              | 113                                    | 156                                    | 182                                    | 292                                    |
|                | B                                              | 90                                     | 145                                    | 195                                    | 252                                    |
|                | C                                              | 53                                     | 156                                    | 220                                    | 255                                    |
| 17 and 19      | D                                              | 119                                    | 146                                    | 176                                    | 298                                    |
|                | E                                              | 51                                     | 141                                    | 184                                    | 242                                    |
|                | N*                                             | 80                                     | 142                                    | 196                                    | 293                                    |
|                | A                                              | 135                                    | 170                                    | 200                                    | 310                                    |
|                | B                                              | 49                                     | 169                                    | 200                                    | 244                                    |
| 21, 23, and 25 | C                                              | 66                                     | 140                                    | 200                                    | 257                                    |
|                | D                                              | 62                                     | 145                                    | 180                                    | 280                                    |
|                | E                                              | 79                                     | 153                                    | 197                                    | 272                                    |
|                | N*                                             | 80                                     | 142                                    | 196                                    | 293                                    |
|                | A                                              | 135                                    | 170                                    | 200                                    | 310                                    |
|                | B                                              | 49                                     | 169                                    | 200                                    | 244                                    |
|                | C                                              | 66                                     | 140                                    | 200                                    | 257                                    |
|                | D                                              | 62                                     | 145                                    | 180                                    | 280                                    |
|                | E                                              | 79                                     | 153                                    | 197                                    | 272                                    |

A plug with a given rotation letter will mate with a receptacle with the same rotation letter. The angles for a given connector are the same whether it contains pins or sockets. Inserts are not rotated in conjunction with the master key/keyway.

### Step 7. Select a PCB Contacts

| Pin | Socket | Designates                                    |
|-----|--------|-----------------------------------------------|
| P1  | S1     | PCB tail stickout .100" nominal +/- .040 inch |
| P15 | S15    | PCB tail stickout .150" nominal +/- .040 inch |
| P2  | S2     | PCB tail stickout .200" nominal +/- .040 inch |
| P25 | S25    | PCB tail stickout .250" nominal +/- .040 inch |

