

# MIL-DTL-38999 QPL Insert Arrangement D38999

|            |      |      |      |      |      |       |       |       |
|------------|------|------|------|------|------|-------|-------|-------|
|            |      |      |      |      |      |       |       |       |
| Series I   | 9-35 | 9-98 | 11-2 | 11-4 | 11-5 | 11-35 | 11-98 | 11-99 |
| Series II  | 8-35 | 8-98 | 10-2 | 10-4 | 10-5 | 10-35 | 10-98 | 10-99 |
| Series III | A35  | A98  | B2   | B4   | B5   | B35   | B98   | B99   |
| Series IV  | ---  | ---  | ---  | ---  | B5   | B35   | B98   | B99   |

|            |      |      |       |       |
|------------|------|------|-------|-------|
|            |      |      |       |       |
| Series I   | 13-4 | 13-8 | 13-35 | 13-98 |
| Series II  | 12-4 | 12-8 | 12-35 | 12-98 |
| Series III | C4   | C8   | C35   | C98   |
| Series IV  | C4   | ---  | C35   | C98   |

|            |      |       |       |       |       |       |
|------------|------|-------|-------|-------|-------|-------|
|            |      |       |       |       |       |       |
| Series I   | 15-5 | 15-15 | 15-18 | 15-19 | 15-35 | 15-97 |
| Series II  | 14-5 | 14-15 | 14-18 | 14-19 | 14-35 | 14-97 |
| Series III | D5   | D15   | D18   | D19   | D35   | D97   |
| Series IV  | D5   | ---   | D18   | D19   | D35   | D97   |

|            |      |      |       |       |       |  |
|------------|------|------|-------|-------|-------|--|
|            |      |      |       |       |       |  |
| Series I   | 17-6 | 17-8 | 17-26 | 17-35 | 17-99 |  |
| Series II  | 16-6 | 16-8 | 16-26 | 16-35 | 16-99 |  |
| Series III | E6   | E8   | E26   | E35   | E99   |  |
| Series IV  | E6   | E8   | E26   | E35   | ---   |  |

|            |       |       |       |       |       |       |
|------------|-------|-------|-------|-------|-------|-------|
|            |       |       |       |       |       |       |
| Series I   | 19-11 | 19-28 | 19-32 | 19-35 | 19-30 | 19-45 |
| Series II  | 18-11 | 18-28 | 18-32 | 18-35 | 18-30 | 18-45 |
| Series III | F11   | F28   | F32   | F35   | F30   | F45   |
| Series IV  | F11   | ---   | F32   | F35   | ---   | ---   |

# MIL-DTL-38999 Series I, II, III, and IV Hermetic Class Connectors Insert Arrangements (IAW MIL-STD-1560)

|                |          |          |          |                  |          |
|----------------|----------|----------|----------|------------------|----------|
|                |          |          |          |                  |          |
| Series I       | 21-11    | 21-16    | 21-35    | 21-41            |          |
| Series II      | 20-11    | 20-16    | 20-35    | 20-41            |          |
| Series III, IV | G11, G11 | G16, G16 | G35, G35 | G41, G41         |          |
|                |          |          |          |                  |          |
| Series I       | 21-24    | 21-25    | 21-27    | 21-39            |          |
| Series II      | 20-24    | 20-25    | 20-27    | 20-39            |          |
| Series III, IV | G24, G24 | G25, --- | G27, --- | G39, ---         |          |
|                |          |          |          |                  |          |
| Series I       | 23-21    | 23-35    | 23-53    | 23-55            | 23-32    |
| Series II      | 22-21    | 22-35    | 22-53    | 22-55            | 22-32    |
| Series III, IV | H21, H21 | H35, H35 | H53, --- | H55, H55         | H32, --- |
|                |          |          |          |                  |          |
| Series I       | 23-34    | 23-36    | 23-97    | 23-99            |          |
| Series II      | 22-34    | 22-36    | 22-97    | 22-99            |          |
| Series III, IV | H34, --- | H36, --- | H97, --- | H99, ---         |          |
|                |          |          |          |                  |          |
| Series I       | 25-29    | 25-35    | 25-61    | 25-4             |          |
| Series II      | 24-29    | 24-35    | 24-61    | 24-4             |          |
| Series III, IV | J29, J29 | J35, J35 | J61, J61 | J4, J4           |          |
|                |          |          |          |                  |          |
| Series I       | 25-43    | 25-19    | 25-24    | J-11             |          |
| Series II      | 24-43    | 24-19    | 24-24    | (Series IV Only) |          |
| Series III, IV | J43, J43 | J19, J19 | J24, J24 |                  |          |



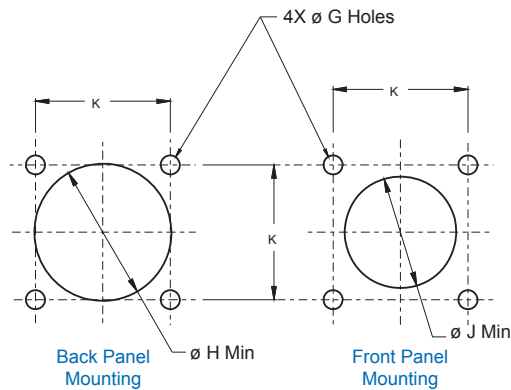
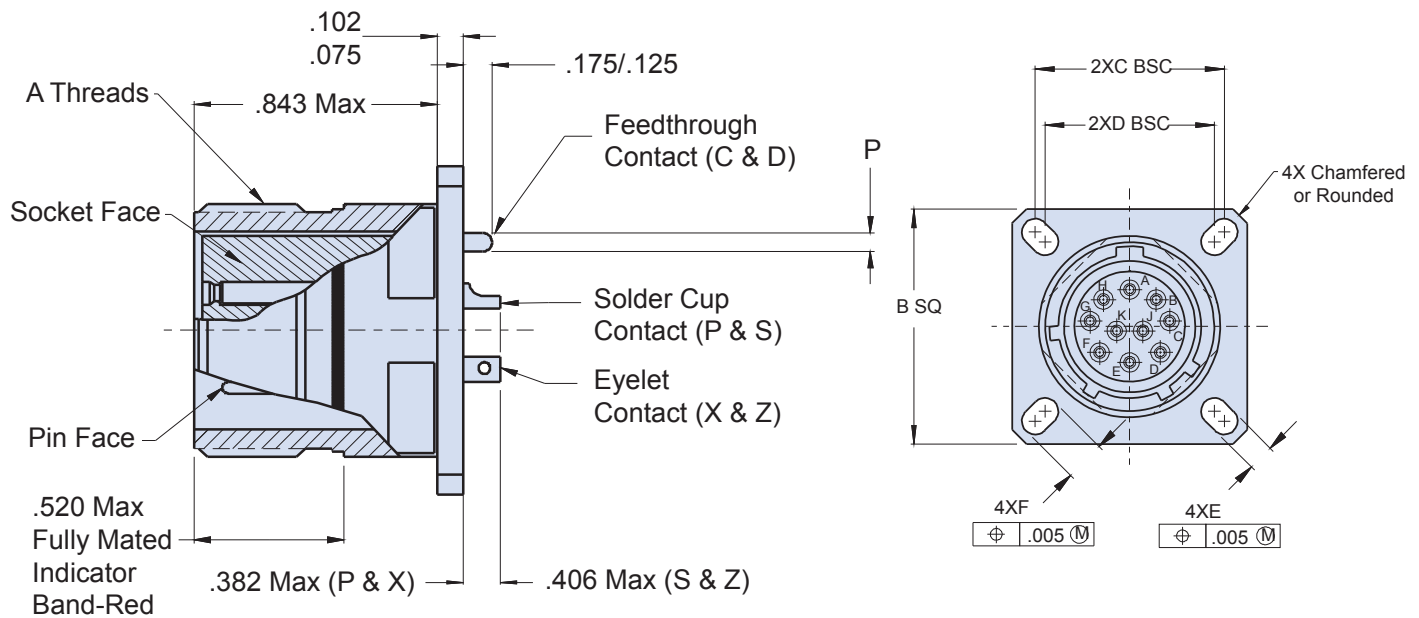
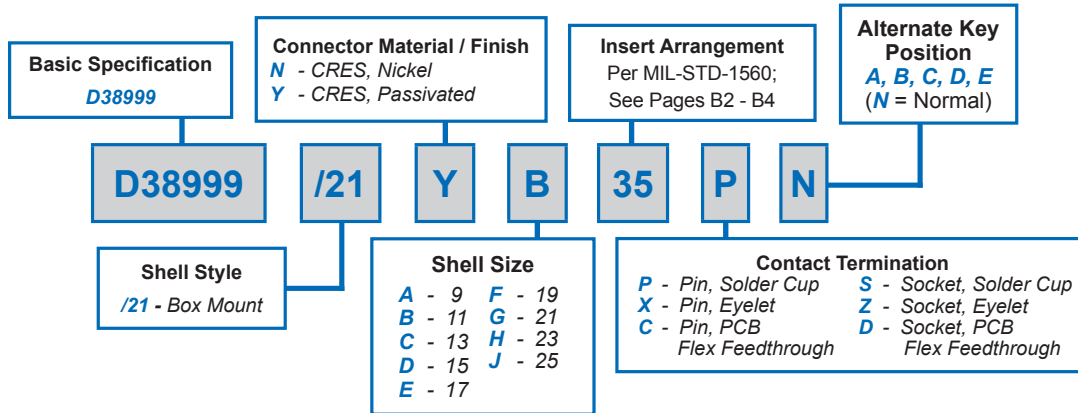
# MIL-DTL-38999 Series I, II, III, and IV Hermetic Class Connectors Layouts and Pin Counts

| Shell Size and Insert Arrangements |              |                   | Number of Pins |    |    |    |
|------------------------------------|--------------|-------------------|----------------|----|----|----|
| MS Series I                        | MS Series II | D38999 Series III | 22D            | 20 | 16 | 12 |
| 9-35                               | 8-35         | A35               | 6              |    |    |    |
| 9-98                               | 8-98         | A98               |                | 3  |    |    |
| 11-2                               | 10-2         | B2                |                |    | 2  |    |
| 11-4                               | 10-4         | B4                |                | 4  |    |    |
| 11-5                               | 10-5         | B5                |                | 5  |    |    |
| 11-35                              | 10-35        | B35               | 13             |    |    |    |
| 11-98                              | 10-98        | B98               |                | 6  |    |    |
| 11-99                              | 10-99        | B99               |                | 7  |    |    |
| 13-4                               | 12-4         | C4                |                |    | 4  |    |
| 13-8                               | 12-8         | C8                |                | 8  |    |    |
| 13-35                              | 12-35        | C35               | 22             |    |    |    |
| 13-98                              | 12-98        | C98               |                | 10 |    |    |
| 15-5                               | 14-5         | D5                |                |    | 5  |    |
| 15-15                              | 14-15        | D15               |                | 14 | 1  |    |
| 15-18                              | 14-18        | D18               |                | 18 |    |    |
| 15-19                              | 14-19        | D19               |                | 19 |    |    |
| 15-35                              | 14-35        | D35               | 37             |    |    |    |
| 15-97                              | 14-97        | D97               |                | 8  | 4  |    |
| 17-6                               | 16-6         | E6                |                |    |    | 6  |
| 17-8                               | 16-8         | E8                |                |    | 8  |    |
| 17-26                              | 16-26        | E26               |                | 26 |    |    |
| 17-35                              | 16-35        | E35               | 55             |    |    |    |
| 17-99                              | 16-99        | E99               |                | 21 | 2  |    |
| 19-11                              | 18-11        | F11               |                |    | 11 |    |
| 19-28                              | 18-28        | F28               |                | 26 | 2  |    |
| 19-30                              | 18-30        | F30               |                | 29 | 1  |    |
| 19-32                              | 18-32        | F32               |                | 32 |    |    |
| 19-35                              | 18-35        | F35               | 66             |    |    |    |
| 19-45                              | 18-45        | F45               | 67             |    |    |    |
| 21-11                              | 20-11        | G11               |                |    |    | 11 |
| 21-16                              | 20-16        | G16               |                |    | 16 |    |
| 21-24                              | 20-24        | G24               |                | 24 |    |    |
| 21-25                              | 20-25        | G25               |                | 25 |    |    |
| 21-27                              | 20-27        | G27               |                | 27 |    |    |
| 21-35                              | 20-35        | G35               | 79             |    |    |    |
| 21-39                              | 20-39        | G39               |                | 37 | 2  |    |
| 21-41                              | 20-41        | G41               |                | 41 |    |    |
| 23-21                              | 22-21        | H21               |                |    | 21 |    |
| 23-32                              | 22-32        | H32               |                | 32 |    |    |
| 23-34                              | 22-34        | H34               |                | 34 |    |    |
| 23-35                              | 22-35        | H35               | 100            |    |    |    |
| 23-36                              | 22-36        | H36               |                | 36 |    |    |
| 23-53                              | 22-53        | H53               |                | 53 |    |    |
| 23-55                              | 22-55        | H55               |                | 55 |    |    |
| 23-97                              | 22-97        | H97               |                |    | 16 |    |
| 23-99                              | 22-99        | H99               |                |    | 11 |    |
| 25-4                               | 24-4         | J4                |                | 48 | 8  |    |
| 25-19                              | 24-19        | J19               |                |    |    | 19 |
| 25-24                              | 24-24        | J24               |                |    | 12 | 12 |
| 25-29                              | 24-29        | J29               |                |    | 29 |    |
| 25-35                              | 24-35        | J35               | 128            |    |    |    |
| 25-37                              | N/A          | J37               | 37             |    | 37 | 16 |
| 25-43                              | 24-43        | J43               |                | 23 | 20 |    |
| 25-61                              | 24-61        | J61               |                | 61 |    |    |

| Shell Size / Insert Arrangements | Number of Pins |    |    |    |    |
|----------------------------------|----------------|----|----|----|----|
| D38999 Series IV                 | 22D            | 20 | 16 | 12 | 10 |
| B5                               |                | 5  |    |    |    |
| B35                              | 13             |    |    |    |    |
| B98                              |                | 6  |    |    |    |
| B99                              |                | 7  |    |    |    |
| C4                               |                |    | 4  |    |    |
| C35                              | 22             |    |    |    |    |
| C98                              |                | 10 |    |    |    |
| D5                               |                |    | 5  |    |    |
| D18                              |                | 18 |    |    |    |
| D19                              | 37             | 19 |    |    |    |
| D35                              |                |    |    |    |    |
| D97                              |                | 8  | 4  |    |    |
| E6                               |                |    |    | 6  |    |
| E8                               |                |    | 8  |    |    |
| E26                              |                | 26 |    |    |    |
| E35                              | 55             |    |    |    |    |
| F11                              |                |    | 11 |    |    |
| F32                              |                | 32 |    |    |    |
| F35                              | 66             |    |    |    |    |
| G11                              |                |    |    | 11 |    |
| G16                              |                |    | 16 |    |    |
| G35                              | 79             |    |    |    |    |
| G41                              |                | 41 |    |    |    |
| H21                              |                |    | 21 |    |    |
| H35                              | 100            |    |    |    |    |
| H55                              |                | 55 |    |    |    |
| J4                               |                | 48 | 8  |    |    |
| J11                              |                | 2  |    |    | 9  |
| J19                              |                |    |    | 19 |    |
| J24                              |                |    | 12 | 12 |    |
| J29                              |                |    | 29 |    |    |
| J35                              | 128            |    |    |    |    |
| J43                              |                | 23 | 20 |    |    |
| J61                              |                | 61 |    |    |    |
| J37                              |                |    | 37 |    |    |

# D38999/21 Box Mount Hermetic Receptacle MIL-DTL-38999 Series III

## How To Order: MS



# D38999/23 Jam Nut Mount Hermetic Receptacle MIL-DTL-38999 Series III

## How To Order: MS

**Basic Specification**  
D38999

**Connector Material / Finish**  
N - CRES, Nickel  
Y - CRES, Passivated

**Insert Arrangement**  
Per MIL-STD-1560;  
See Pages B2 - B4

**Alternate Key Position**  
A, B, C, D, E  
(N = Normal)

**D38999**

**/23**

**Y**

**B**

**35**

**P**

**N**

### Shell Style

/23 - Jam Nut Mount

### Shell Size

A - 9 F - 19  
B - 11 G - 21  
C - 13 H - 23  
D - 15 J - 25  
E - 17

### Contact Termination

P - Pin, Solder Cup S - Socket, Solder Cup  
X - Pin, Eyelet Z - Socket, Eyelet  
C - Pin, PCB D - Socket, PCB  
Flex Feedthrough Flex Feedthrough

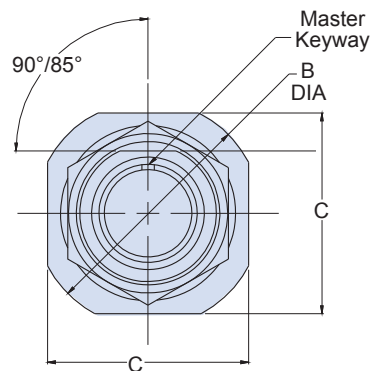
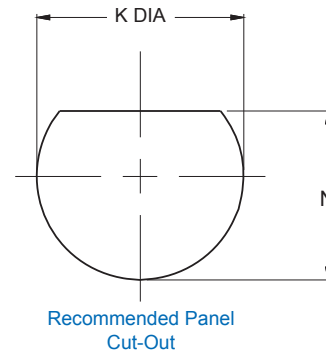
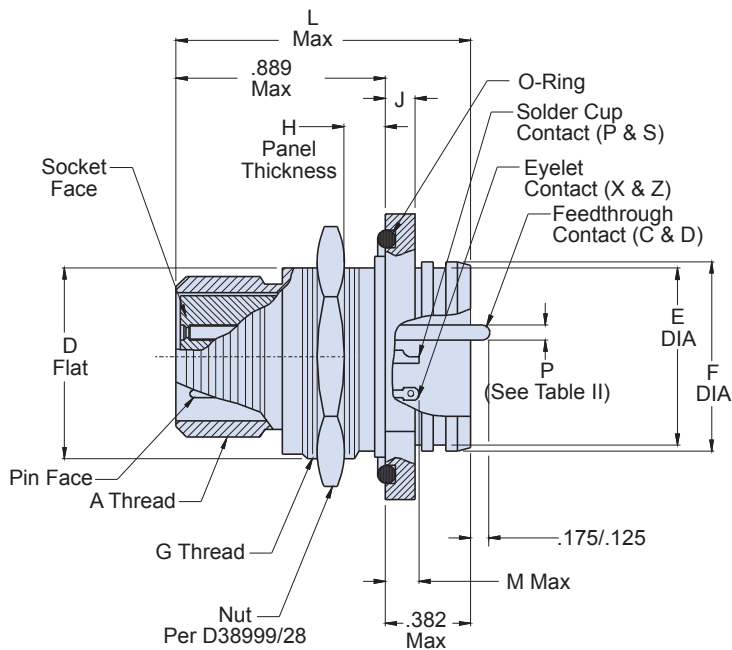
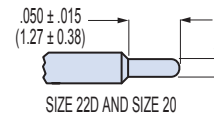


TABLE II: CONTACT SIZE

PRINTED CIRCUIT TAIL CONFIGURATIONS  
CONTACT STYLE C AND D



SIZE 12 AND SIZE 16

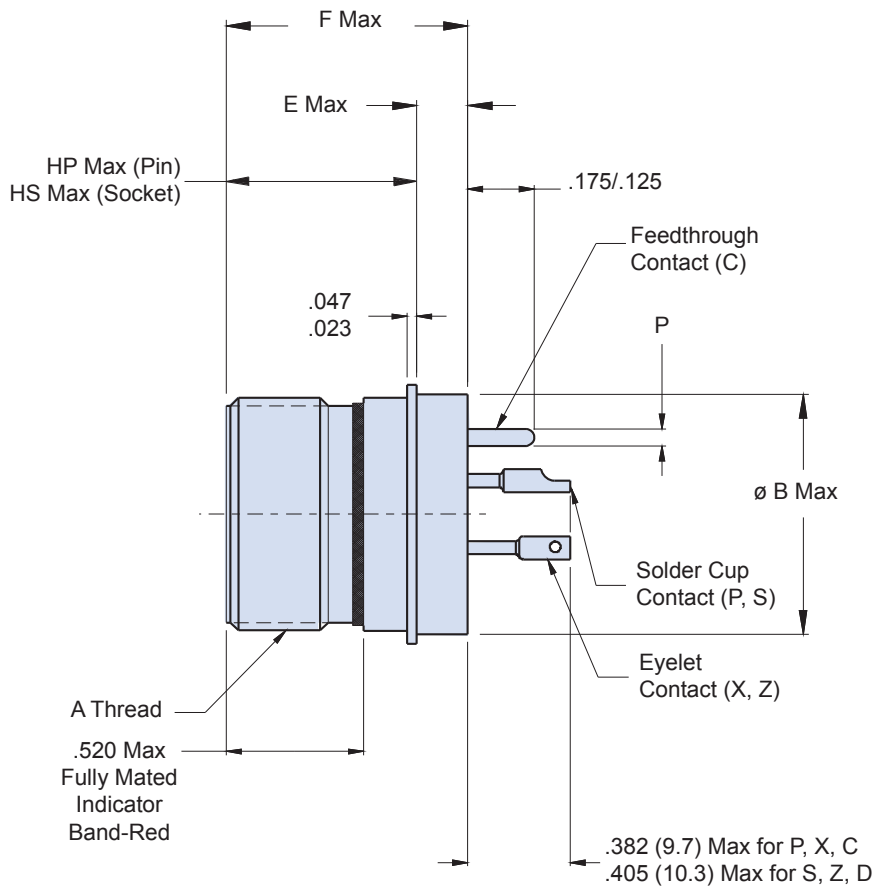
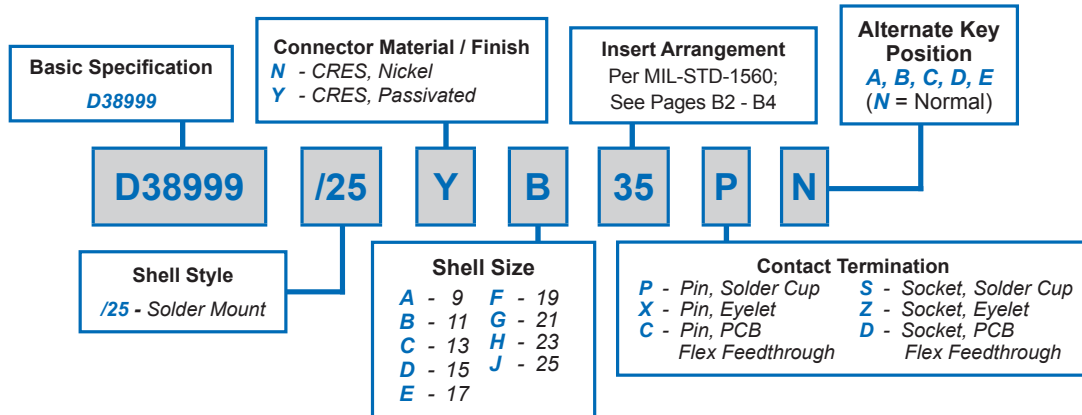


SIZE 22D AND SIZE 20

| Contact Size | ø P                          |
|--------------|------------------------------|
| 22D          | .011 (0.28)<br>.015 (0.38)   |
| 20           | .024 (0.61)<br>.028 (0.71)   |
| 16           | .0635 (1.61)<br>.0615 (1.56) |
| 12           | .095 (2.41)<br>.093 (2.36)   |

# D38999/25 Solder Mount Hermetic Receptacle MIL-DTL-38999 Series III

## How To Order: MS

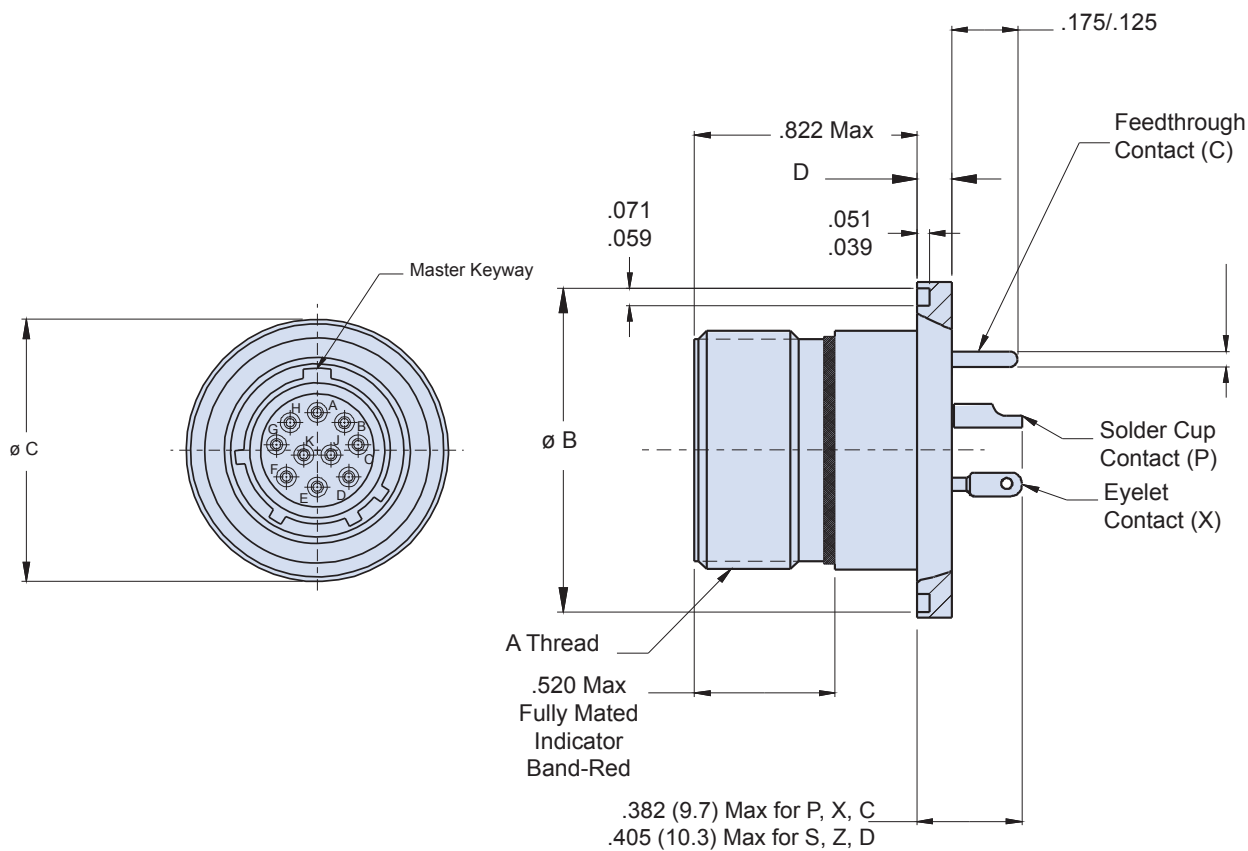
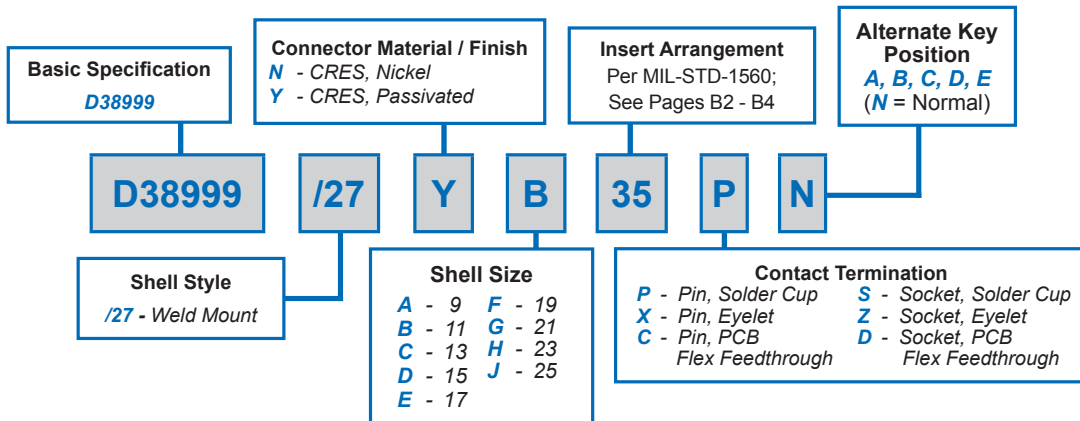


# D38999/27

## Weld Mount Hermetic Receptacle

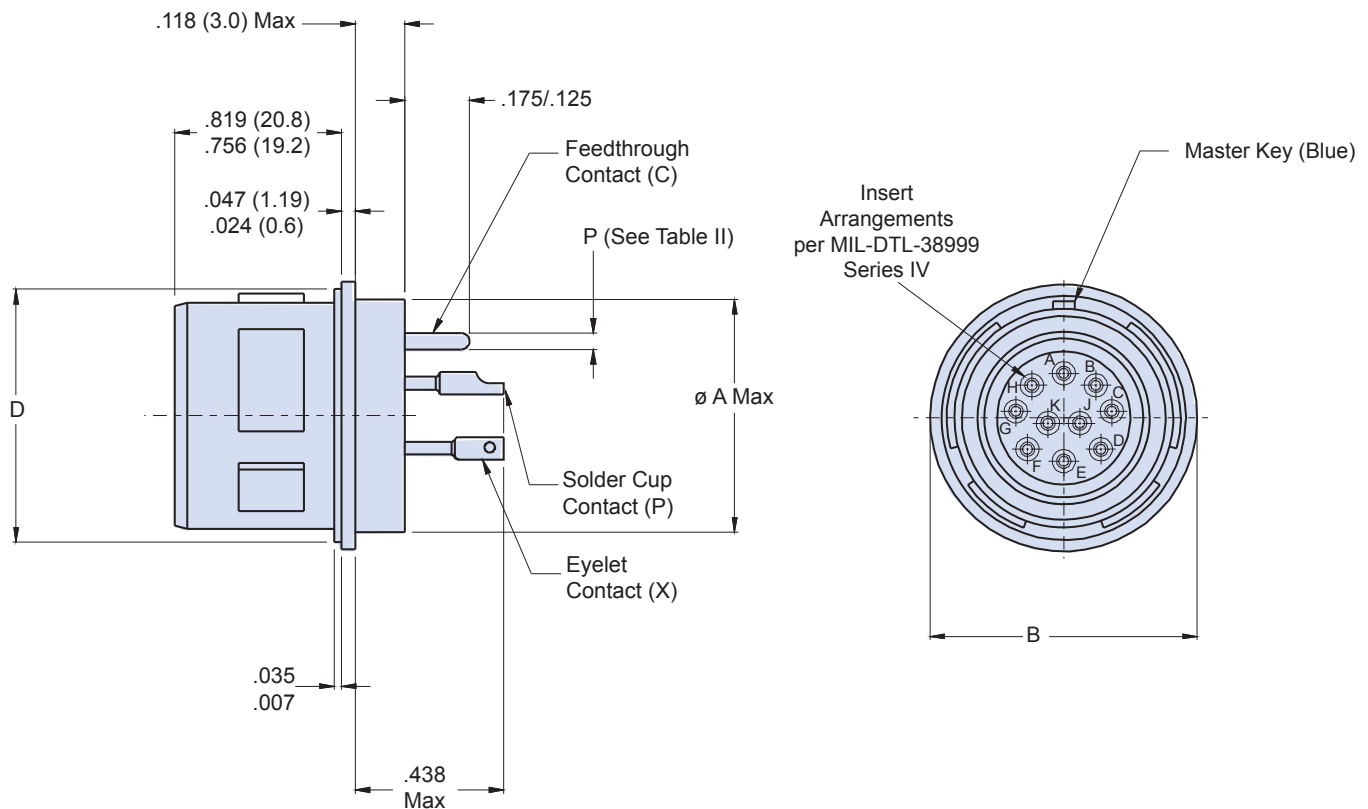
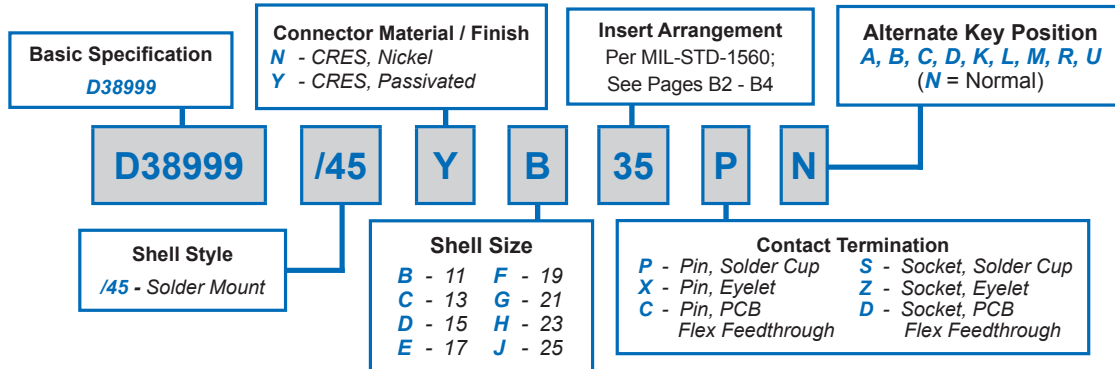
### MIL-DTL-38999 Series III

#### How To Order: MS



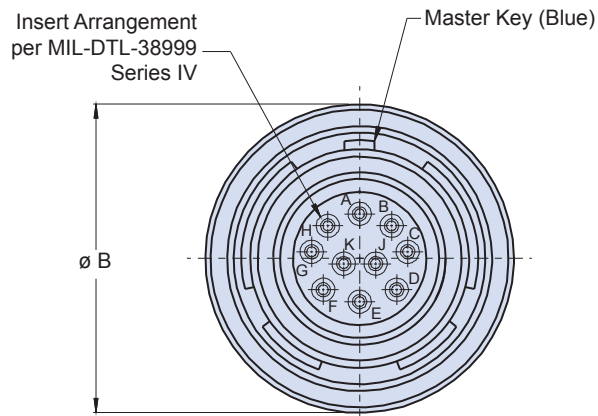
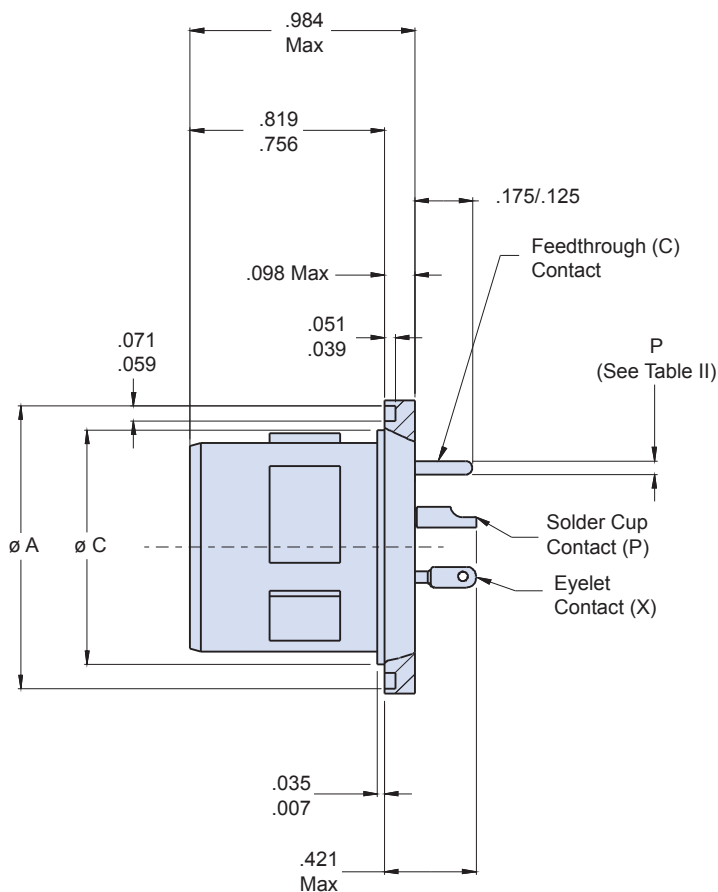
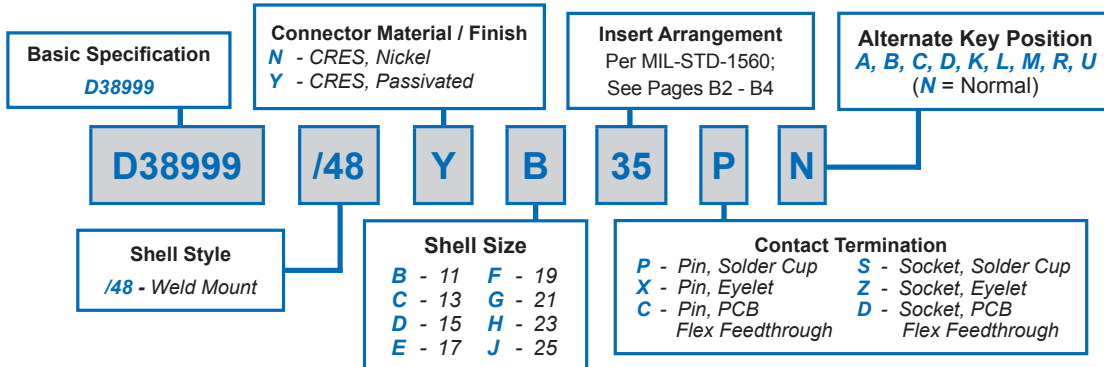
# D38999/45 Solder Mount Hermetic Receptacle MIL-DTL-38999 Series IV

## How To Order: *MS*



# D38999/48 Weld Mount Hermetic Receptacle MIL-DTL-38999 Series IV

## How To Order: MS



**D38999/27**  
**Weld Mount Hermetic Receptacle**  
**MIL-DTL-38999 Series III**

**D38999 QPL**  
**Hermetic**

**TABLE I: CONNECTOR DIMENSIONS**

| SHELL<br>SIZE<br>CODE | SHELL<br>SIZE | A THREAD             | Ø B                          | Ø C                          | Ø D                      |
|-----------------------|---------------|----------------------|------------------------------|------------------------------|--------------------------|
| A                     | 9/09          | .6250-.1P-.3L-TS-2A  | .941 (23.9)<br>.929 (23.6)   | .984 (25.0)<br>.972 (24.7)   | .134 (3.4)<br>.118 (3.0) |
| B                     | 11            | .7500-.1P-.3L-TS-2A  | 1.063 (27.0)<br>1.051 (27.0) | 1.106 (28.1)<br>1.094 (27.8) | .134 (3.4)<br>.118 (3.0) |
| C                     | 13            | .8750-.1P-.3L-TS-2A  | 1.189 (30.2)<br>1.177 (28.9) | 1.232 (31.3)<br>1.220 (31.0) | .134 (3.4)<br>.118 (3.0) |
| D                     | 15            | 1.0000-.1P-.3L-TS-2A | 1.315 (33.4)<br>1.303 (33.1) | 1.358 (34.5)<br>1.346 (34.2) | .134 (3.4)<br>.118 (3.0) |
| E                     | 17            | 1.1875-.1P-.3L-TS-2A | 1.402 (35.6)<br>1.390 (35.3) | 1.445 (36.7)<br>1.433 (36.4) | .134 (3.4)<br>.118 (3.0) |
| F                     | 19            | 1.2500-.1P-.3L-TS-2A | 1.547 (39.3)<br>1.535 (39.0) | 1.591 (40.4)<br>1.579 (40.1) | .134 (3.4)<br>.118 (3.0) |
| G                     | 21            | 1.3750-.1P-.3L-TS-2A | 1.689 (42.9)<br>1.677 (42.6) | 1.732 (44.0)<br>1.720 (43.7) | .134 (3.4)<br>.118 (3.0) |
| H                     | 23            | 1.5000-.1P-.3L-TS-2A | 1.854 (47.1)<br>1.842 (46.8) | 1.898 (48.2)<br>1.886 (47.4) | .165 (4.2)<br>.149 (3.8) |
| J                     | 25            | 1.6250-.1P-.3L-TS-2A | 1.941 (49.3)<br>1.929 (49.0) | 1.984 (50.4)<br>1.972 (50.1) | .165 (4.2)<br>.149 (3.8) |