

# SERIES 23 SUPERNINE

## Better-than-QPL SuperNine D38999 Connectors with SpeedMaster™ 10G high-speed contacts



### 233-219 Environmental High-Speed Connectors

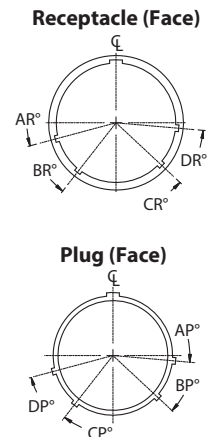
| SpeedMaster™ Connector Part Number Development |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |     |    |    |    |   |   |    |
|------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|----|----|----|---|---|----|
| Sample Part Number                             | 233-219                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | -G6 | ME | 25 | -7 | P | N | -1 |
| Series / Basic Part No.                        | SuperNine Environmental High-Speed connector                                                                                                                                                                                                                                                                                                                                                                                                                                                          |     |    |    |    |   |   |    |
| SpeedMaster™ Connector Style                   | <b>G6</b> = Plug 38999/26<br><b>05</b> = Receptacle, in-line<br><b>07</b> = Receptacle, jam-nut 38999/24<br><b>00</b> = Receptacle, wall mount 38999/20<br><b>CM</b> = Receptacle, wall mount, metric clinch nuts<br><b>CS</b> = Receptacle, wall mount, standard clinch nuts<br><b>DO</b> = Receptacle, wall mount, thru holes<br><b>HM</b> = Receptacle, wall mount, metric helicoils<br><b>HS</b> = Receptacle, wall mount, standard helicoils<br><b>TO</b> = Receptacle, wall mount, tapped holes |     |    |    |    |   |   |    |
| Material/Finish                                | <b>NF</b> = Cadmium Olive Drab<br><b>ME</b> = Electroless Nickel<br><b>MT</b> = Nickel PTFE<br><b>ZR</b> = Black Zinc Nickel<br><b>Z1</b> = Passivated<br><b>ZL</b> = Electrodeposited Nickel                                                                                                                                                                                                                                                                                                         |     |    |    |    |   |   |    |
| Shell Size                                     | <b>11, 17, 19, 21, 25</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |     |    |    |    |   |   |    |
| Insert Arrangement                             | See Insert Arrangements Table                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |     |    |    |    |   |   |    |
| Contact Gender                                 | <b>P</b> = Pin <b>S</b> = Socket <b>A</b> = Pin, less contacts; see Note 1 <b>B</b> = Socket, less contacts; see Note 1                                                                                                                                                                                                                                                                                                                                                                               |     |    |    |    |   |   |    |
| Alternate Polarization                         | <b>A, B, C, D, E, N</b> = Normal (IAW MIL-DTL-38999 Series III); See alternate positions table.                                                                                                                                                                                                                                                                                                                                                                                                       |     |    |    |    |   |   |    |
| Cable Size                                     | <b>0, 1, 2, 3, 4, 5, 6, 7</b> ; See cable size table for details <b>Omit</b> for pre-terminated contact modules; See note 1                                                                                                                                                                                                                                                                                                                                                                           |     |    |    |    |   |   |    |



#### NOTES

1. Spare SpeedMaster contacts (858-100-X, 858-101-X) may be ordered separately. Retention ferrule tool (607-011) supplied with each connector. Select the "less contacts (A)" option when ordering pre-terminated cable to SpeedMaster contacts listed on page 6. Omit cable size from part number development when selecting the "less contact" option.
2. See assembly instructions A185082 for SpeedMaster assembly. See assembly instructions A185086 for SpeedMaster installation.
3. Unless otherwise specified, all dimensions are per MIL-DTL-38999/20, /24 and /26
4. For cables in between sizes, select the smaller size
5. See 858-100 or 858-101 SpeedMaster contact drawing for inner contact pinout.
6. Glenair 233-219 connectors only accommodate Glenair SpeedMaster contacts.
7. SpeedMaster insert arrangements are exclusive to SpeedMaster and are unrelated to other insert patterns of the same size and arrangement

| Alternate Positions |               |         |         |         |         |
|---------------------|---------------|---------|---------|---------|---------|
| Shell Size          | Position Code | AR° AP° | BR° BP° | CR° CP° | DR° DP° |
| 11                  | N             | 95      | 141     | 208     | 236     |
|                     | A             | 113     | 156     | 182     | 292     |
|                     | B             | 90      | 145     | 195     | 252     |
|                     | C             | 53      | 156     | 220     | 255     |
|                     | D             | 119     | 146     | 176     | 298     |
|                     | E             | 51      | 141     | 184     | 242     |
| 17                  | N             | 80      | 142     | 196     | 293     |
|                     | A             | 135     | 170     | 200     | 310     |
| 19                  | B             | 49      | 169     | 200     | 244     |
|                     | C             | 66      | 140     | 200     | 257     |
| 21                  | D             | 62      | 145     | 180     | 280     |
|                     | E             | 79      | 153     | 197     | 272     |

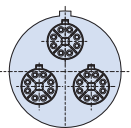
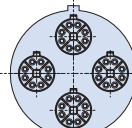
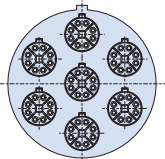
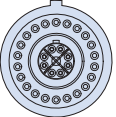
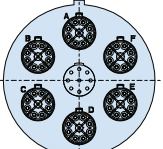
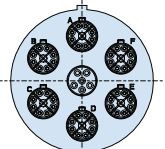
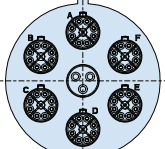
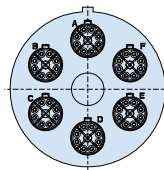
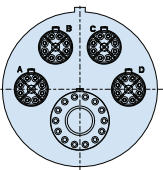
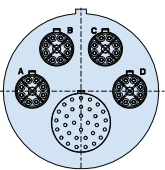
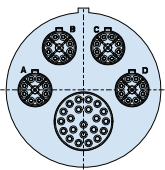
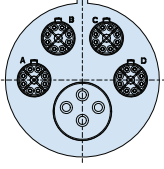
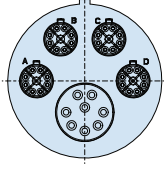
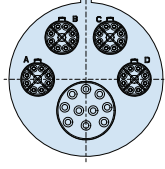


| SpeedMaster™ High-Speed Cable |            |              |           |             |            |                      |
|-------------------------------|------------|--------------|-----------|-------------|------------|----------------------|
| Cable P/N                     | Cable Cat. | Cable Const. | Wire Gage | Cable Dia.  | Cable Size | Assembly Instruction |
| 963-066-24                    | Cat 6A     | SF/FTP       | 24        | .260 (6.60) | 2          | A185082              |
| 963-066-26                    | Cat 6A     | SF/FTP       | 26        | .238 (6.05) | 5          |                      |
| 963-075-24                    | Cat 6A     | SF/UTP       | 24        | .265 (6.73) | 2          |                      |

| Cable Size |                 |            |             |
|------------|-----------------|------------|-------------|
| Cable Size | Cable Ø         | Cable Size | Cable Ø     |
| 0*         | .305 (7.47) Max | 4          | .250 (6.35) |
| 1          | .280 (7.11)     | 5          | .240 (6.10) |
| 2          | .270 (6.86)     | 6          | .230 (5.84) |
| 3          | .260 (6.60)     | 7          | .220 (5.59) |

\*Cable size 0 does not have environmental sealing.

233-219-07 Environmental High-Speed Connectors

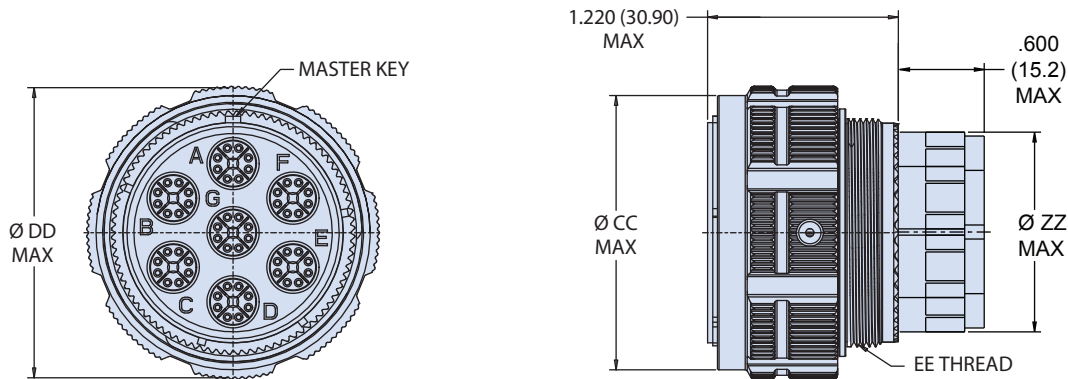
| Insert Arrangements                                                                 |                                                                                     |                                                                                      |                                                                                      |
|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
|    |    |    |   |
| <b>11-1</b><br>1X SpeedMaster                                                       | <b>19-3</b><br>3X SpeedMaster                                                       | <b>21-4</b><br>4X SpeedMaster                                                        | <b>25-7</b><br>7X SpeedMaster                                                        |
|    |    |    |   |
| <b>17-23</b><br>1X SpeedMaster<br>22X Size 22                                       | <b>25-6A23</b><br>6X SpeedMaster<br>9X Size 23                                      | <b>25-6A35</b><br>6X SpeedMaster<br>6X Size 22D                                      | <b>25-6A98</b><br>6X SpeedMaster<br>3X Size 20                                       |
|   |   |   |  |
| <b>25-6AG5</b><br>6X SpeedMaster<br>1X Size 8                                       | <b>25-4C14</b><br>4X SpeedMaster<br>14X Size 23<br>1X Size 8                        | <b>25-4C23</b><br>4X SpeedMaster<br>32X Size 23                                      | <b>25-4C35</b><br>4X SpeedMaster<br>22X Size 22D                                     |
|  |  |  |                                                                                      |
| <b>25-4C4</b><br>4X SpeedMaster<br>4X Size 16                                       | <b>25-4C8</b><br>4X SpeedMaster<br>8X Size 20                                       | <b>25-4C98</b><br>4X SpeedMaster<br>10X Size 20                                      |                                                                                      |

SERIES 23 SUPERNINE  
Better-than-QPL SuperNine D38999 Connectors  
with SpeedMaster™ 10G high-speed contacts



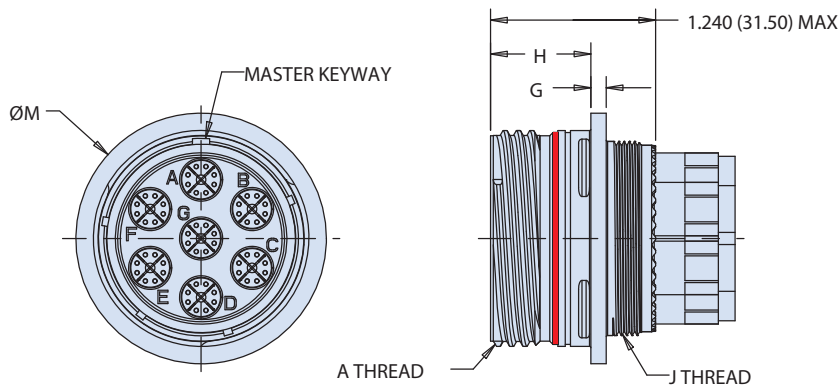
## 233-219-G6 Plug

### PLUG (G6) D38999/26 TYPE



| G6 Plug Per MIL-DTL-38999/26 |               |               |                   |               |
|------------------------------|---------------|---------------|-------------------|---------------|
| Shell Size                   | Ø CC Max      | Ø DD Max      | EE Thread         | Ø ZZ Max      |
| 11                           | .929 (23.60)  | .984 (24.99)  | M15x1.0-6g 0.100R | .405 (10.29)  |
| 17                           | 1.358 (34.49) | 1.406 (35.71) | M25x1.0-6g 0.100R | N/A           |
| 19                           | 1.469 (37.31) | 1.516 (38.51) | M28x1.0-6g 0.100R | .885 (22.48)  |
| 21                           | 1.594 (40.49) | 1.642 (41.71) | M31x1.0-6g 0.100R | .845 (21.46)  |
| 25                           | 1.843 (46.81) | 1.890 (48.01) | M37x1.0-6g 0.100R | 1.285 (32.64) |

### IN-LINE (05) RECEPTACLE



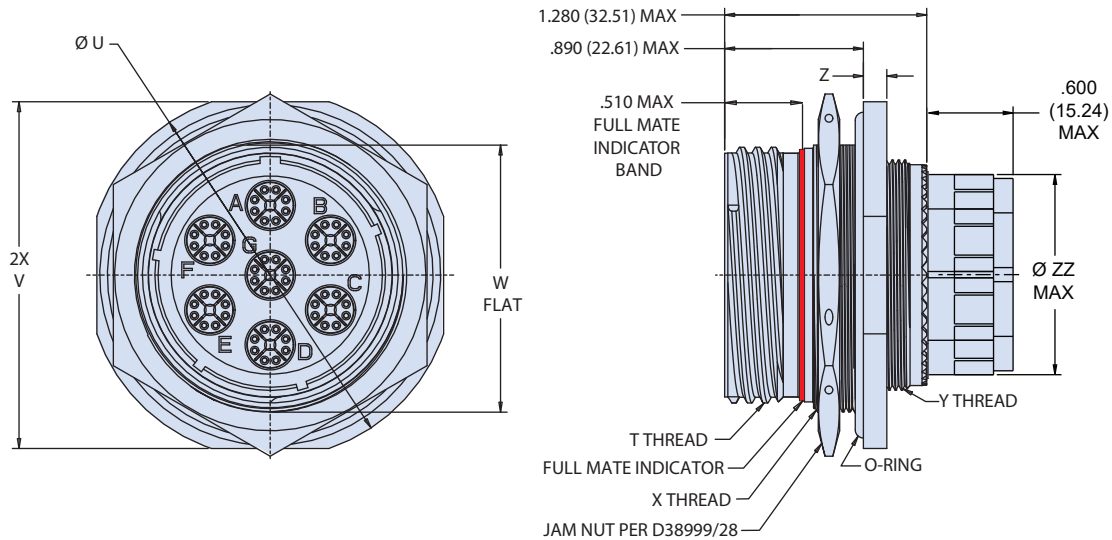
| 05 In-Line Receptacle |                      |                            |                              |                   |               |
|-----------------------|----------------------|----------------------------|------------------------------|-------------------|---------------|
| Shell Size            | A Thread             | G                          | H                            | J THREAD          | ØM            |
| 11                    | .7500-.1P-.3L-TS-2A  | .098 (2.49)<br>.083 (2.11) | .820 (20.83)<br>.771 (19.58) | M15x1.0-6g 0.100R | .984 (24.99)  |
| 17                    | 1.1875-.1P-.3L-TS-2A |                            |                              | M25x1.0-6g 0.100R | 1.406 (35.71) |
| 19                    | 1.2500-.1P-.3L-TS-2A |                            |                              | M28x1.0-6g 0.100R | 1.516 (38.51) |
| 21                    | 1.3750-.1P-.3L-TS-2A | .126 (3.20)<br>.083 (2.11) | .790 (20.07)<br>.741 (18.82) | M31x1.0-6g 0.100R | 1.642 (41.71) |
| 25                    | 1.6250-.1P-.3L-TS-2A |                            |                              | M37x1.0-6g 0.100R | 1.890 (48.01) |

# SERIES 23 SUPERNINE Better-than-QPL SuperNine D38999 Connectors with SpeedMaster™ 10G high-speed contacts

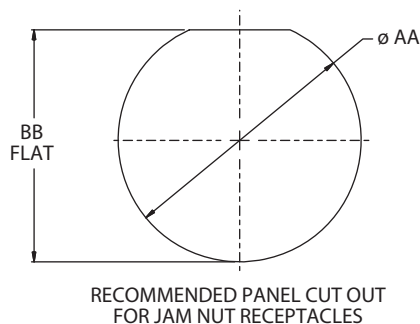


## 233-219-07 Jam Nut Receptacle

### JAM-NUT (07) MOUNT RECEPTACLE, D38999/24 TYPE



| 07 Jam Nut Per MIL-DTL-38999/24 |                     |                                |                                |                                |                      |                      |                            |               |
|---------------------------------|---------------------|--------------------------------|--------------------------------|--------------------------------|----------------------|----------------------|----------------------------|---------------|
| Shell Size                      | T Thread            | U                              | V                              | W Flat                         | X Thread             | Y Thread             | Z                          | ZZ Max        |
| 11                              | .7500-1P-.3L-TS-2A  | 1.385 (35.18)<br>1.363 (34.62) | 1.267 (32.18)<br>1.237 (31.42) | 0.756 (19.20)<br>0.746 (18.95) | M20x1.0-6g<br>0.100R | M15x1.0-6g<br>0.100R | .122 (3.10)<br>.083 (2.11) | .405 (10.29)  |
| 17                              | 1.1875-1P-.3L-TS-2A | 1.764 (44.81)<br>1.740 (44.20) | 1.642 (41.71)<br>1.610 (40.89) | 1.191 (30.25)<br>1.181 (30.00) | M32x1.0-6g<br>0.100R | M25x1.0-6g<br>0.100R | .153 (3.89)<br>.114 (2.90) | N/A           |
| 19                              | 1.2500-1P-.3L-TS-2A | 1.949 (49.50)<br>1.925 (48.89) | 1.827 (46.41)<br>1.795 (45.59) | 1.316 (33.43)<br>1.306 (33.17) | M35x1.0-6g<br>0.100R | M28x1.0-6g<br>0.100R |                            | .885 (22.48)  |
| 21                              | 1.3750-1P-.3L-TS-2A | 2.075 (52.70)<br>2.051 (52.10) | 1.953 (49.61)<br>1.921 (48.79) | 1.441 (36.60)<br>1.431 (36.35) | M38x1.0-6g<br>0.100R | M31x1.0-6g<br>0.100R |                            | .845 (21.46)  |
| 25                              | 1.6250-1P-.3L-TS-2A | 2.323 (59.00)<br>2.299 (58.39) | 2.205 (56.01)<br>2.173 (55.19) | 1.691 (42.95)<br>1.681 (42.70) | M44x1.0-6g<br>0.100R | M37x1.0-6g<br>0.100R |                            | 1.285 (32.64) |



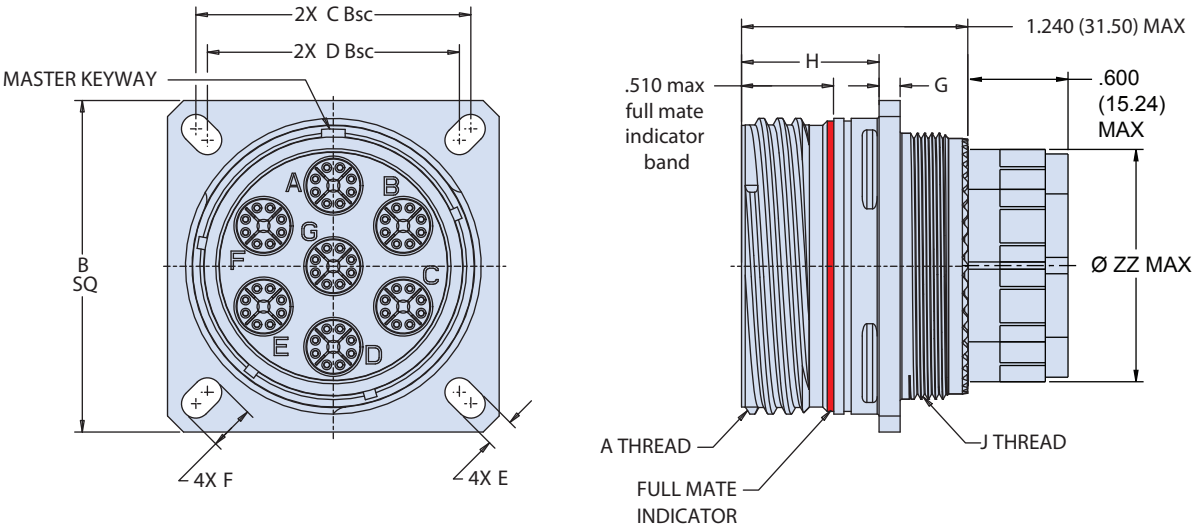
| Mounting Holes Per MIL-DTL-38999 |                                |                                |
|----------------------------------|--------------------------------|--------------------------------|
| Shell Size                       | $\varnothing AA$               | $BB$ Flat                      |
| 11                               | 0.835 (21.21)<br>0.825 (20.95) | 0.771 (19.58)<br>0.761 (19.33) |
| 17                               | 1.270 (32.26)<br>1.260 (32.00) | 1.210 (30.73)<br>1.200 (30.48) |
| 19                               | 1.395 (35.43)<br>1.385 (35.18) | 1.335 (33.91)<br>1.325 (33.65) |
| 21                               | 1.520 (38.61)<br>1.510 (38.35) | 1.460 (37.08)<br>1.450 (36.83) |
| 25                               | 1.770 (44.96)<br>1.760 (44.70) | 1.710 (43.43)<br>1.700 (43.18) |

SERIES 23 SUPERNINE  
 Better-than-QPL SuperNine D38999 Connectors  
 with SpeedMaster™ 10G high-speed contacts

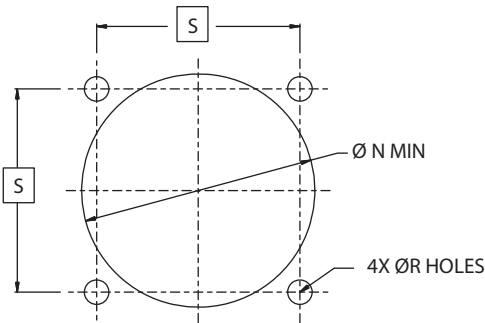


233-219-00 Wall Mount Receptacle

SLOTTED HOLE (00), D38999/20 TYPE



| 00 Wall Mount Per MIL-DTL-38999/20 |                      |                                |               |               |                            |                            |                            |                              |                   |               |
|------------------------------------|----------------------|--------------------------------|---------------|---------------|----------------------------|----------------------------|----------------------------|------------------------------|-------------------|---------------|
| Shell Size                         | A Thread             | B                              | C BSC         | D BSC         | E                          | F                          | G                          | H                            | J THREAD          | ZZ Max        |
| 11                                 | .7500-.1P-.3L-TS-2A  | 1.040 (26.42)<br>1.016 (25.81) | .812 (20.62)  | .719 (18.26)  |                            |                            | .098 (2.49)                |                              | M15x1.0-6g 0.100R | .405 (10.29)  |
| 17                                 | 1.1875-.1P-.3L-TS-2A | 1.323 (33.60)<br>1.299 (32.99) | 1.062 (26.97) | .969 (24.61)  | .136 (3.45)<br>.120 (3.05) | .202 (5.13)<br>.186 (4.72) | .083 (2.11)                | .820 (20.83)<br>.771 (19.58) | M25x1.0-6g 0.100R | N/A           |
| 19                                 | 1.2500-.1P-.3L-TS-2A | 1.449 (36.80)<br>1.425 (36.20) | 1.156 (29.36) | 1.062 (26.97) |                            |                            |                            |                              | M28x1.0-6g 0.100R | .885 (22.48)  |
| 21                                 | 1.3750-.1P-.3L-TS-2A | 1.575 (40.00)<br>1.551 (39.40) | 1.250 (31.75) | 1.156 (29.36) |                            |                            | .126 (3.20)<br>.083 (2.11) | .790 (20.07)<br>.741 (18.82) | M31x1.0-6g 0.100R | .845 (21.46)  |
| 25                                 | 1.6250-.1P-.3L-TS-2A | 1.823 (46.30)<br>1.799 (45.69) | 1.500 (38.10) | 1.375 (34.92) | .162 (4.11)<br>.142 (3.61) | .250 (6.35)<br>.234 (5.94) |                            |                              | M37x1.0-6g 0.100R | 1.285 (32.64) |



| Mounting Holes Per MIL-DTL-38999 |               |                            |               |
|----------------------------------|---------------|----------------------------|---------------|
| Shell Size                       | Ø N Min       | Ø R Holes                  | S BSC         |
| 11                               | .796 (20.22)  |                            | .812 (20.62)  |
| 17                               | 1.219 (30.96) | .133 (3.38)                | 1.062 (26.97) |
| 19                               | 1.297 (32.94) | .123 (3.12)                | 1.156 (29.36) |
| 21                               | 1.422 (36.12) |                            | 1.250 (31.75) |
| 25                               | 1.672 (42.47) | .155 (3.94)<br>.145 (3.68) | 1.500 (38.10) |

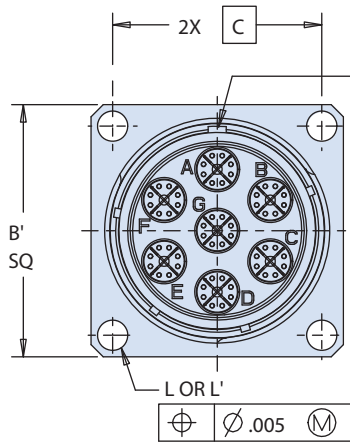
RECOMMENDED MOUNTING HOLES FOR WALL MOUNT (00) RECEPTACLES PER MIL-DTL-38999.

# SERIES 23 SUPERNINE Better-than-QPL SuperNine D38999 Connectors with SpeedMaster™ 10G high-speed contacts

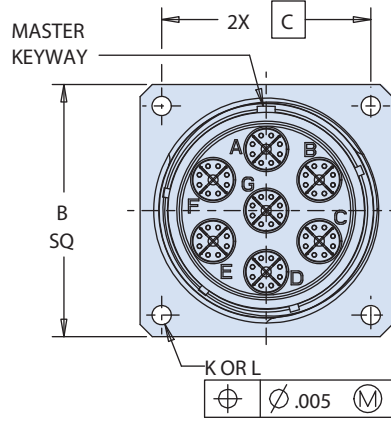


## 233-219-CS/CM Wall Mount Receptacle

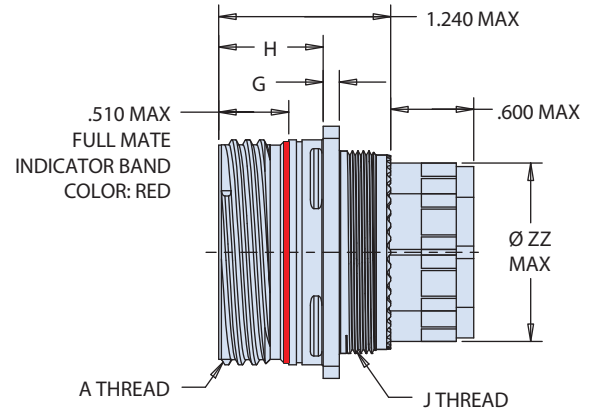
### CLINCH NUT STANDARD (CS) AND METRIC (CM) , THRU HOLES (DO) AND TAPPED HOLES (TO)



CM & CS STYLE

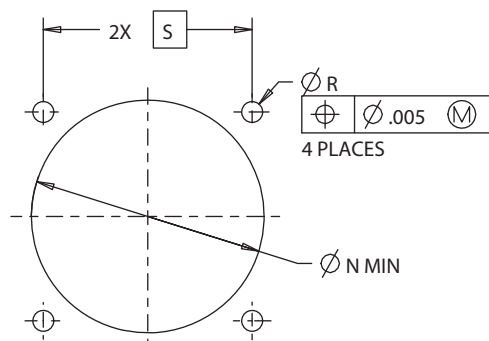


DO & TO STYLE



CM, CS, DO, & TO STYLE

| CM, CS, DO and TO Wall Mount |                      |                  |                  |                  |                                  |                                    |                   |                            |                   |           |                  |
|------------------------------|----------------------|------------------|------------------|------------------|----------------------------------|------------------------------------|-------------------|----------------------------|-------------------|-----------|------------------|
| Shell Size                   | A Thread             | B SQ             | B' SQ            | C BSC            | G                                | H                                  | J Thread          | ØK                         | L Standard        | L' Metric | ZZ Max           |
| 11                           | .7500-.1P-.3L-TS-2A  | 1.043<br>(26.49) | 1.187<br>(30.15) | .812<br>(20.62)  | .098<br>(2.49)<br>.083<br>(2.11) | .820<br>(20.83)<br>.771<br>(19.58) | M15x1.0-6g 0.100R | .136 (3.45)<br>.120 (3.05) | .112-40<br>UNC-2B | M3 x 0.5  | .405<br>(10.29)  |
| 17                           | 1.1875-.1P-.3L-TS-2A | 1.323<br>(26.49) | 1.437<br>(30.15) | 1.062<br>(26.91) |                                  |                                    | M25x1.0-6g 0.100R |                            |                   |           | N/A              |
| 19                           | 1.2500-.1P-.3L-TS-2A | 1.449<br>(36.80) | 1.531<br>(38.89) | 1.156<br>(29.36) |                                  |                                    | M28x1.0-6g 0.100R |                            |                   |           | .885<br>(22.48)  |
| 21                           | 1.3750-.1P-.3L-TS-2A | 1.575<br>(40.00) | 1.625<br>(41.28) | 1.250<br>(31.75) | .126<br>(3.20)<br>.083<br>(2.11) | .790<br>(20.07)<br>.741<br>(18.82) | M31x1.0-6g 0.100R | .162 (4.11)<br>.146 (3.71) | .138-32<br>UNC-2B | M4 x 0.7  | .845<br>(21.46)  |
| 25                           | 1.6250-.1P-.3L-TS-2A | 1.823<br>(46.30) | 1.875<br>(47.63) | 1.500<br>(38.10) |                                  |                                    | M37x1.0-6g 0.100R |                            |                   |           | 1.285<br>(32.64) |



| Mounting Holes |               |                            |               |
|----------------|---------------|----------------------------|---------------|
| Shell Size     | Ø N Min       | Ø R Holes                  | S BSC         |
| 11             | .796 (20.22)  | .133 (3.38)<br>.123 (3.12) | .812 (20.62)  |
| 17             | 1.219 (30.96) |                            | 1.062 (26.97) |
| 19             | 1.297 (32.94) |                            | 1.156 (29.36) |
| 21             | 1.422 (36.12) |                            | 1.250 (31.75) |
| 25             | 1.672 (42.47) | .155 (3.94)<br>.145 (3.68) | 1.500 (38.10) |

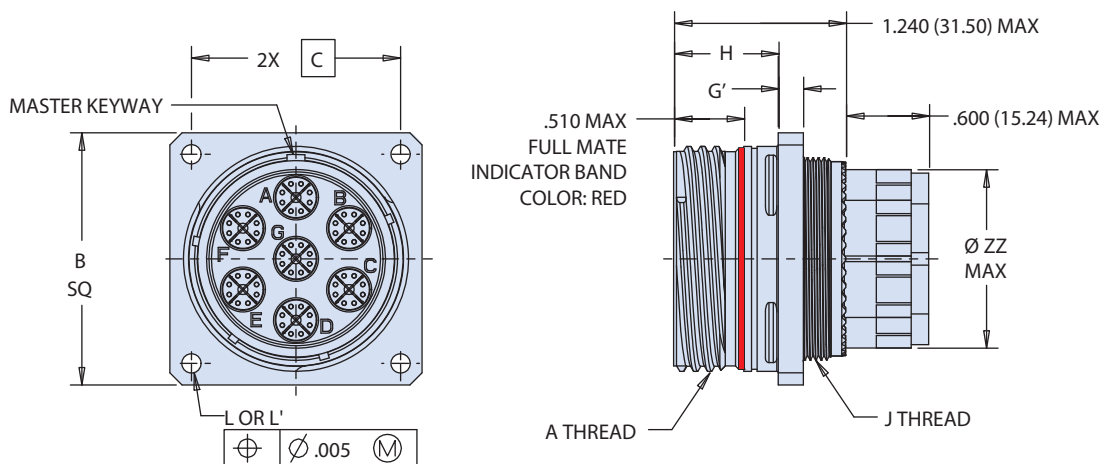
# SERIES 23 SUPERNINE

## Better-than-QPL SuperNine D38999 Connectors with SpeedMaster™ 10G high-speed contacts



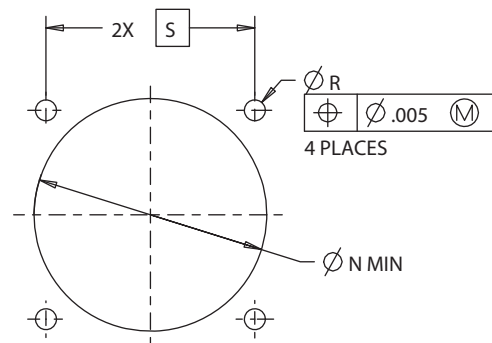
### 233-219-HS/HM Wall Mount Receptacle

#### HELICOILS STANDARD (HS) AND METRIC (HM)



#### HM & HS STYLE

| HM and HS Wall Mount |                      |                                |               |                            |                              |                   |                     |                    |               |
|----------------------|----------------------|--------------------------------|---------------|----------------------------|------------------------------|-------------------|---------------------|--------------------|---------------|
| Shell Size           | A Thread             | B SQ                           | C BSC         | G'                         | H                            | J Thread          | L Thread (Standard) | L' Thread (Metric) | ZZ Max        |
| 11                   | .7500-.1P-.3L-TS-2A  | 1.043 (26.49)<br>1.019 (25.88) | .812 (20.62)  | .179 (4.55)<br>.140 (3.56) | .820 (20.83)<br>.771 (19.58) | M15x1.0-6g 0.100R | .112-40<br>UNC-2B   | M3 x 0.5           | .405 (10.29)  |
| 17                   | 1.1875-.1P-.3L-TS-2A | 1.437 (36.50)<br>1.397 (35.48) | 1.062 (26.97) |                            |                              | M25x1.0-6g 0.100R |                     |                    | N/A           |
| 19                   | 1.2500-.1P-.3L-TS-2A | 1.449 (36.80)<br>1.425 (36.20) | 1.156 (29.36) |                            |                              | M28x1.0-6g 0.100R |                     |                    | .885 (22.48)  |
| 21                   | 1.3750-.1P-.3L-TS-2A | 1.575 (40.00)<br>1.551 (39.40) | 1.250 (31.75) |                            |                              | M31x1.0-6g 0.100R |                     |                    | .845 (21.46)  |
| 25                   | 1.6250-.1P-.3L-TS-2A | 1.823 (46.30)<br>1.799 (45.69) | 1.500 (38.10) | .190 (4.83)<br>.170 (4.32) | .790 (20.07)<br>.741 (18.82) | M37x1.0-6g 0.100R | .138-32<br>UNC-2B   | M4 x 0.7           | 1.285 (32.64) |



| Mounting Holes |               |                            |               |
|----------------|---------------|----------------------------|---------------|
| Shell Size     | Ø N Min       | Ø R Holes                  | S BSC         |
| 11             | .796 (20.22)  | .133 (3.38)<br>.123 (3.12) | .812 (20.62)  |
| 17             | 1.219 (30.96) |                            | 1.062 (26.97) |
| 19             | 1.297 (32.94) |                            | 1.156 (29.36) |
| 21             | 1.422 (36.12) |                            | 1.250 (31.75) |
| 25             | 1.672 (42.47) | .155 (3.94)<br>.145 (3.68) | 1.500 (38.10) |