MS3124E
6 June 2003
SUPERSEDING
MS3124D
5 September 1975

## DETAIL SPECIFICATION SHEET

CONNECTORS, RECEPTACLE, ELECTRICAL, CRIMP TYPE, REAR MOUNTING, JAM NUT, BAYONET COUPLING, CLASSES E, F AND P

This specification is approved for use by all Departments and Agencies of the Department of Defense.

The requirements for acquiring the product described herein shall consist of this specification and MIL-C-26482.

Inactive for new design after 5 September 1975.


FIGURE 1. Receptacle, style P (pin insert), for classes E, F, and P.


FIGURE 1. Receptacle, style S (socket insert), for classes E, F, and P - Continued.


PANEL MTG DIMS REF

| Size | $\begin{gathered} \hline \text { DD } \\ +.011 \\ \text { o-ring } \\ \text { protection } \end{gathered}$ | $\begin{gathered} \text { HH } \\ \max _{\text {id }} \\ \text { gasket } \end{gathered}$ | $\begin{gathered} \hline \text { FF } \\ \text { +. } 010 \\ -.005 \\ \text { panel } \\ \text { mounting } \\ \text { hole } \\ \hline \end{gathered}$ | $\begin{gathered} \hline \text { GG } \\ +.010 \\ -.005 \\ \text { panel } \\ \text { flat } \\ \text { location } \\ \hline \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: |
| 8 | . 023 | . 329 | . 572 | . 540 |
| 10 |  | 457 | . 697 | . 665 |
| 12 |  | . 564 | . 885 | . 828 |
| 14 |  | . 689 | 1.010 | . 952 |
| 16 |  | . 814 | 1.135 | 1.076 |
| 18 |  | . 907 | 1.260 | 1.201 |
| 20 | . 028 | 1.032 | 1.385 | 1.326 |
| 22 |  | 1.164 | 1.510 | 1.451 |
| 24 |  | 1.259 | 1.635 | 1.576 |

## NOTES:

1. Dimensions in inches.
2. Distance between end of shell and the point at which a gage pin having the same basic diameter as the mating contact and a square face first engages socket contact spring.
3. Packing material shall meet the requirements of ASTM-D2000.
4. True position (TP) tolerances specified are in accordance with ANSI Y14.5.
5. Material: shell-aluminum alloy; bayonet pins (B dia) - stainless steel, passivated.

FIGURE 1. Dimensions for classes $E, F$, and $P$ - Continued.

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| Size | $\begin{gathered} \mathrm{A} \\ \mathrm{dia} \\ +.001 \\ -.005 \\ \text { od } \end{gathered}$ | $\begin{gathered} \text { B } \\ +.006 \\ . .002 \\ \text { bay } \\ \text { pin } \\ \text { dia } \\ \hline \end{gathered}$ | $\begin{gathered} \hline \text { C } \\ \text { dia } \\ +.000 \\ -.016 \\ \text { over } \\ \text { bay pins } \\ \hline \end{gathered}$ | $\begin{gathered} \mathrm{D} \\ \mathrm{dia} \\ +.005 \\ -.001 \\ \text { id } \end{gathered}$ | $\begin{gathered} \mathrm{E} \\ +.000 \\ -.010 \\ \text { mounting } \\ \text { flat } \end{gathered}$ | F min mounting thread location | $\begin{gathered} \mathrm{G} \\ +.000 \\ . .032 \\ \text { across } \\ \text { flange } \\ \text { corner } \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 8 | . 473 | . 078 | . 563 | . 362 | . 530 | . 384 | 1.078 |
| 10 | . 590 |  | . 680 | . 490 | . 655 |  | 1.203 |
| 12 | . 750 |  | . 859 | . 607 | . 818 |  | 1.391 |
| 14 | . 875 |  | . 984 | . 732 | . 942 |  | 1.516 |
| 16 | 1.000 |  | 1.108 | . 857 | 1.066 |  | 1.641 |
| 18 | 1.125 |  | 1.233 | . 962 | 1.191 |  | 1.766 |
| 20 | 1.250 |  | 1.358 | 1.087 | 1.316 | . 446 | 1.954 |
| 22 | 1.375 |  | 1.483 | 1.212 | 1.441 |  | 2.078. |
| 24 | 1.500 | . 125 | 1.610 | 1.337 | 1.566 | . 479 | 2.203 |


| Size | $\begin{gathered} \mathrm{H} \\ +.000 \\ -.020 \\ \text { socket } \\ \text { insert } \\ \text { location } \end{gathered}$ | $\begin{gathered} \mathrm{I} \\ \text { max } \\ \text { insert } \\ \text { dia } \end{gathered}$ | $\begin{gathered} \mathrm{J} \\ +.010 \end{gathered}$ <br> packing location | $\begin{gathered} \mathrm{JJ} \\ +.000 \\ -.020 \\ \text { pin } \\ \text { insert } \\ \text { location } \end{gathered}$ | $\begin{gathered} \text { K } \\ \pm .016 \\ \text { thick } \\ \text { mounting } \\ \text { flange } \end{gathered}$ | $\begin{gathered} \mathrm{M} \\ +.031 \\ -. .000 \end{gathered}$ <br> mounting flange location |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 8 | . 025 | . 285 | . 382 | . 332 | . 117 | . 691 |
| 10 |  | 402 |  |  |  |  |
| 12 |  | . 516 |  |  |  |  |
| 14 |  | . 641 |  |  |  |  |
| 16 |  | . 766 |  |  |  |  |
| 18 |  | . 855 |  |  |  |  |
| 20 | . 087 | . 980 | . 444 | . 394 | . 148 | . 879 |
| 22 |  | 1.105 |  |  |  |  |
| 24 |  | 1.229 |  |  |  | . 912 |

FIGURE 1. Dimensions for classes E, F, and P - Continued.

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| Size | $P$panelthickness <br> (Ref) |  | $\begin{gathered} \hline \mathrm{Q} \\ \text { dia } \\ +.005 \\ -.006 \\ \text { over } \\ \text { keyways } \end{gathered}$ | $S$ $\max$ length side | $\begin{gathered} \mathrm{U} \\ +.010 \\ -.020 \\ \text { pin } \\ \text { contact } \\ \text { location } \end{gathered}$ | V class 2 A mounting thread |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 8 | . 062 | . 125 | . 412 | . 828 | . 085 | 9/16-24 |
| 10 |  |  | . 540 | . 954 |  | 11/16-24 |
| 12 |  |  | . 689 | 1.047 |  | 7/8-20 |
| 14 |  |  | . 814 | 1.141 |  | 1-20 |
| 16 |  |  | . 939 | 1.234 |  | 1-1/8-18 |
| 18 |  |  | 1.039 | 1.326 |  | 1-1/4-18 |
| 20 |  | . 250 | 1.164 | 1.453 | . 147 | 1-3/8-18 |
| 22 |  |  | 1.289 | 1.578 |  | 1-1/2-18 |
| 24 |  |  | 1.414 | 1.703 |  | 1-5/8-18 |


| Size | $\begin{gathered} \text { W } \\ \text { (TP) } \\ \text { bay } \\ \text { pin } \\ \text { location } \end{gathered}$ | $\begin{gathered} \mathrm{Z}(\mathrm{~b}) \\ +. .000 \\ -. .078 \\ \text { socket contact } \\ \text { spring location } \end{gathered}$ | $\begin{gathered} \text { YY } \\ \text { o-ring } \\ \text { seal } \end{gathered}$ | VV <br> class 2B accessory thread |
| :---: | :---: | :---: | :---: | :---: |
| 8 | . 100 | . 153 | SAE-AS 29513-17 | 5/8-24 |
| 10 |  |  | SAE-AS 29513-19 | 3/4-24 |
| 12 |  |  | SAE-AS 29513-22 | 7/8-20 |
| 14 |  |  | SAE-AS 29513-24 | 1-20 |
| 16 |  |  | SAE-AS 29513-26 | 1-1/8-18 |
| 18 |  |  | SAE-AS 29513-28 | 1-1/4-18 |
| 20 |  | . 215 | SAE-AS 29513-128 | 1-3/8-18 |
| 22 |  |  | SAE-AS 29513-130 | 1-1/2-18 |
| 24 | . 109 |  | SAE-AS 29513-132 | 1-5/8-18 |

FIGURE 1. Dimensions for classes E, F, and P - Continued.

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Dimensions for class E

| Size |  | $\begin{gathered} \mathrm{X} \\ \mathrm{dia} \\ \mathrm{~min} \\ \mathrm{id} \\ \hline \end{gathered}$ | $\begin{gathered} \mathrm{Y} \\ \text { dia } \\ \max \\ \mathrm{od} \\ \hline \end{gathered}$ |
| :---: | :---: | :---: | :---: |
| 8 | 1.552 | . 259 | . 750 |
| 10 |  | . 359 | . 875 |
| 12 |  | 469 | 1.000 |
| 14 |  | . 589 | 1.125 |
| 16 |  | 717 | 1.250 |
| 18 |  | 779 | 1.375 |
| 20 | 1.709 | . 901 | 1.531 |
| 22 |  | 1.009 | 1.656 |
| 24 |  | 1.123 | 1.781 |

FIGURE 1. Dimensions for classes E, F, and P - Continued.

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Dimensions for class F


Dimensions for class F, bushing removed

FIGURE 1. Dimensions for classes E, F, and P - Continued.

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| Size |  | X dla min open | $\begin{gathered} \mathrm{Y} \\ \max \end{gathered}$ | $\begin{gathered} \mathrm{V} \\ \text { max } \\ \text { closed } \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: |
| 8 | 2.422 | . 234 | . 828 | . 187 |
| 10 |  | . 297 | . 891 | . 187 |
| 12 |  | 422 | 1.016 | . 281 |
| 14 |  | . 547 | 1.141 | . 325 |
| 16 | 2.537 | . 609 | 1.203 | . 356 |
| 18 |  | . 734 | 1.469 | 456 |
| 20 | 2.824 |  |  |  |
| 22 |  | . 922 | 1.656 | . 519 |
| 24 | 2.900 | . 984 | 1.750 | . 657 |


| Size | N(G) free dia $\pm .010$ | $\begin{gathered} \text { ZZ } \\ \text { screw } \\ \text { threads } \end{gathered}$ | YZ lockwashers NASM35338 OR NASM35333 |
| :---: | :---: | :---: | :---: |
| 8 | . 110 | 6-32UNC | NASM35338B6L OR -6L <br> NASM35333-105 OR NASM35333-37 |
| 10 | . 173 |  |  |
| 12 | . 297 |  |  |
| 14 | . 360 |  |  |
| 16 | . 485 |  |  |
| 18 | . 610 | 8-32UNC | NASM35338B6L OR -6L <br> NASM35333-106 OR NASM35333-38 |
| 20 | . 610 |  |  |
| 22 | . 735 |  |  |
| 24 | . 785 |  |  |

FIGURE 1. Dimensions for classes E, F, and P - Continued.


Dimensions for class $P$

| Size |  | $\begin{gathered} X \\ \text { dia } \\ \mathrm{min} \end{gathered}$ | $\begin{gathered} \mathrm{Y} \\ \mathrm{dia} \\ \max \end{gathered}$ | $\begin{aligned} & \mathrm{PP} \\ & \mathrm{~min} \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: |
| 8 | 1.675 | . 317 | . 608 | . 250 |
| 10 |  | . 434 | . 734 |  |
| 12 |  | . 548 | . 858 |  |
| 14 |  | . 673 | . 984 |  |
| 16 |  | . 798 | 1.110 |  |
| 18 |  | . 899 | 1.234 |  |
| 20 | 1.963 | 1.024 | 1.360 |  |
| 22 | 1.963 | 1.149 | 1.484 |  |
| 24 | 2.025 | 1.274 | 1.610 |  |

FIGURE 1. Dimensions for classes E, F, and P - Continued.

## REQUIREMENTS:

Dimensions and configuration: See figure 1.
Connector mating: This connector mates with MS3121 and MS3126.
Insert arrangement shall be in accordance with MIL-STD-1669.
Sealing member: Bonded to vitreous insert.
Packing material shall meet the requirements of ASTM-D2000.
Part or Identifying Number (PIN) example:


CONCLUDING MATERIAL

| Custodians: | Preparing activity: |
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