

Formerly MIL-C-5015 Types A and B

See page 429 for dimension table. MS receptacles mate with MS mating plugs that are on the same line in the table below. \*Standard shells have cadmium plating with drab olive chromate finish. In shell sizes 12S, 14S, 16, 16S, 18, 20, 22, 24, and 28, clear chromate over cadmium plating (639), black zinc over zinc plating (621), or electroless nickel plating (689) are also available. Add the shell finish identification to the end of part number to

MS Receptacles

| No. of Contacts | Shell Size and Insert | 97-3100A* |       | 97-3101A* |       | 97-3102A* |       |
|-----------------|-----------------------|-----------|-------|-----------|-------|-----------|-------|
|                 |                       | EACH      |       | EACH      |       | EACH      |       |
|                 |                       | 1-9       | 10-49 | 1-9       | 10-49 | 1-9       | 10-49 |
| 3               | 10SL-3P               | 11.37     | 8.46  | 14.35     | 11.48 | 8.24      | 6.59  |
| 2               | 10SL-4P               | 10.62     | 7.13  | 12.06     | 10.05 | 7.57      | 6.06  |
| 1               | 12-5P                 | —         | —     | —         | —     | 8.96      | 6.06  |
| 1               | 12-5S                 | —         | —     | —         | —     | 8.51      | 7.02  |
| 2               | 12S-3P                | 11.60     | 8.26  | 11.45     | 9.37  | 7.48      | 5.39  |
| 2               | 12S-3S                | 10.68     | 7.61  | 11.56     | 9.46  | 5.33      | 4.26  |
| 4               | 12SL-844P             | —         | —     | —         | —     | 12.34     | 10.29 |
| 4               | 14S-1P                | 10.94     | 8.75  | 13.12     | 9.30  | 6.66      | 5.32  |
| 3               | 14S-1S                | 12.36     | 8.74  | 14.03     | 10.30 | 6.88      | 5.51  |
| 4               | 14S-2P                | 10.66     | 8.53  | 14.29     | 10.15 | 7.33      | 5.94  |
| 4               | 14S-2S                | 12.60     | 10.08 | 14.82     | 11.85 | 9.47      | 7.07  |
| 1               | 14S-4P                | 32.16     | 22.19 | 16.68     | 12.94 | 9.22      | 7.47  |
| 1               | 14S-4S                | 21.04     | 17.61 | 21.42     | 16.61 | 16.18     | 12.22 |
| 5               | 14S-5P                | 13.33     | 9.41  | 14.44     | 10.19 | 7.62      | 6.10  |
| 5               | 14S-5S                | 13.60     | 9.65  | 14.66     | 11.73 | 8.31      | 6.65  |
| 6               | 14S-6P                | 12.44     | 9.96  | 14.66     | 11.73 | 9.98      | 7.17  |
| 6               | 14S-6S                | 12.67     | 10.14 | 14.89     | 11.91 | 8.69      | 6.88  |
| 3               | 14S-7P                | 10.81     | 8.65  | 14.36     | 10.18 | 6.93      | 5.37  |
| 3               | 14S-7S                | 12.36     | 8.74  | 13.36     | 10.70 | 6.88      | 5.51  |
| 2               | 14S-9P                | 11.60     | 8.26  | 13.81     | 9.77  | 6.74      | 4.81  |
| 2               | 14S-9S                | 13.74     | 9.73  | 13.17     | 10.77 | 8.44      | 6.75  |
| 3               | 16-7P                 | 19.08     | 12.97 | 21.49     | 16.69 | 12.88     | 9.91  |
| 3               | 16-7S                 | 22.00     | 14.89 | 25.15     | 19.51 | 16.43     | 12.75 |
| 4               | 16-9P                 | 18.22     | 12.71 | 14.65     | 12.21 | 11.64     | 8.27  |
| 4               | 16-9S                 | 20.07     | 14.04 | 20.79     | 15.68 | 13.27     | 9.86  |
| 3               | 16-10P                | 16.39     | 13.41 | 16.86     | 13.80 | 11.50     | 9.20  |
| 3               | 16-10S                | 15.25     | 12.47 | 15.71     | 12.85 | 10.20     | 8.16  |
| 2               | 16-11P                | 13.53     | 11.07 | 17.96     | 13.17 | 10.23     | 7.33  |
| 2               | 16-11S                | 18.29     | 12.87 | 15.80     | 12.93 | 10.33     | 8.26  |
| 1               | 16-12P                | 18.72     | 12.33 | 21.35     | 16.55 | 12.76     | 9.80  |
| 1               | 16-12S                | 21.38     | 15.00 | 24.52     | 19.04 | 15.82     | 12.26 |
| 7               | 16S-1P                | 12.76     | 10.44 | 16.03     | 11.30 | 8.29      | 6.63  |
| 7               | 16S-1S                | 13.94     | 11.41 | 15.14     | 12.39 | 10.80     | 7.68  |
| 2               | 16S-4P                | 14.72     | 10.40 | 15.92     | 11.25 | 6.96      | 5.69  |
| 2               | 16S-4S                | 15.22     | 10.76 | 16.67     | 11.73 | 7.52      | 6.16  |
| 3               | 16S-5P                | 11.24     | 9.37  | 12.32     | 10.27 | 9.44      | 6.68  |
| 3               | 16S-5S                | 15.20     | 10.74 | 15.67     | 11.08 | 9.68      | 6.97  |
| 3               | 16S-6P                | 18.01     | 13.34 | 21.89     | 16.99 | 12.99     | 9.99  |
| 3               | 16S-6S                | 25.85     | 18.34 | 16.85     | 14.04 | 12.99     | 9.99  |
| 5               | 16S-8P                | 15.29     | 10.83 | 13.87     | 11.35 | 8.74      | 6.35  |
| 5               | 16S-8S                | 15.70     | 11.25 | 17.18     | 12.24 | 10.23     | 7.33  |
| 10              | 18-1P                 | 16.91     | 13.53 | 18.97     | 15.18 | 11.40     | 9.12  |
| 10              | 18-1S                 | 18.05     | 14.44 | 21.79     | 15.18 | 12.55     | 10.04 |
| 2               | 18-3P                 | 18.48     | 13.09 | 18.67     | 13.09 | 10.79     | 7.71  |
| 2               | 18-3S                 | 19.79     | 13.86 | 22.22     | 15.49 | 11.82     | 9.67  |
| 4               | 18-4P                 | 12.38     | 10.13 | 15.50     | 12.40 | 8.50      | 6.17  |
| 4               | 18-4S                 | 13.44     | 11.00 | 16.68     | 13.34 | 9.79      | 6.97  |
| 3               | 18-5P                 | 15.75     | 10.66 | 16.38     | 12.71 | 8.62      | 6.63  |
| 3               | 18-5S                 | 17.64     | 11.93 | 16.50     | 13.50 | 10.79     | 8.29  |
| 8               | 18-6P                 | 18.06     | 12.68 | 18.97     | 15.18 | 12.21     | 8.67  |
| 8               | 18-6S                 | 19.19     | 13.41 | 21.16     | 14.78 | 12.91     | 9.39  |
| 7               | 18-9P                 | 15.93     | 13.04 | 21.41     | 14.94 | 11.06     | 9.05  |
| 7               | 18-9S                 | 17.45     | 14.28 | 22.86     | 15.92 | 12.53     | 10.26 |
| 4               | 18-10P                | 17.68     | 12.43 | 18.05     | 14.44 | 10.69     | 8.46  |
| 4               | 18-10S                | 15.64     | 12.80 | 19.83     | 15.87 | 12.06     | 9.65  |
| 4               | 18-11P                | 17.68     | 12.43 | 19.61     | 13.76 | 10.48     | 8.38  |
| 5               | 18-11S                | 17.08     | 13.67 | 20.19     | 15.27 | 11.40     | 9.12  |
| 6               | 18-12P                | 15.02     | 12.01 | 16.91     | 13.53 | 9.34      | 7.47  |
| 6               | 18-12S                | 17.68     | 12.43 | 18.05     | 14.44 | 10.48     | 8.38  |
| 4               | 18-13P                | 33.75     | 22.82 | 30.00     | 23.27 | 22.44     | 17.41 |
| 4               | 18-13S                | 38.22     | 26.37 | 34.99     | 27.14 | 27.18     | 21.11 |
| 1               | 18-16P                | 17.49     | 12.24 | 20.04     | 14.02 | 11.84     | 8.40  |
| 1               | 18-16S                | 20.69     | 14.45 | 22.86     | 15.92 | 13.26     | 10.62 |
| 10              | 18-19P                | 22.26     | 17.81 | 24.33     | 19.46 | 17.77     | 13.04 |
| 10              | 18-19S                | 18.28     | 14.63 | 21.86     | 16.38 | 12.78     | 10.22 |
| 5               | 18-20P                | 17.75     | 12.47 | 19.79     | 13.86 | 11.64     | 8.27  |
| 5               | 18-20S                | 18.67     | 13.09 | 21.08     | 14.74 | 12.83     | 9.08  |
| 3               | 18-22P                | 16.28     | 11.48 | 18.67     | 13.09 | 10.79     | 7.71  |
| 3               | 18-22S                | 17.75     | 12.47 | 16.21     | 13.26 | 11.64     | 8.27  |
| 5               | 18-29P                | 19.85     | 16.24 | 24.39     | 19.51 | 18.79     | 12.71 |
| 5               | 18-29S                | 29.86     | 20.19 | 23.81     | 17.86 | 9.22      | 7.47  |
| 1               | 18-420P               | —         | —     | —         | —     | 39.07     | 33.49 |
| 1               | 18-420S               | —         | —     | —         | —     | 51.01     | 36.61 |
| 3               | 20-3P                 | 15.84     | 12.96 | 20.19     | 14.30 | 10.02     | 8.20  |
| 3               | 20-3S                 | 24.66     | 16.71 | 22.12     | 18.10 | 15.21     | 12.44 |
| 4               | 20-4P                 | 18.00     | 12.59 | 18.23     | 14.58 | 9.68      | 7.92  |
| 4               | 20-4S                 | 24.86     | 19.89 | 26.45     | 20.27 | 19.49     | 15.10 |
| 3               | 20-6P                 | 22.86     | 18.28 | 19.24     | 15.75 | 11.46     | 9.55  |
| 3               | 20-6S                 | 19.28     | 15.78 | 20.17     | 16.51 | 11.93     | 9.95  |
| 8               | 20-7P                 | 16.83     | 13.46 | 18.05     | 14.44 | 12.10     | 8.60  |
| 8               | 20-7S                 | 18.26     | 14.61 | 19.51     | 15.61 | 11.73     | 9.38  |
| 6               | 20-8P*                | 38.78     | 26.23 | 27.63     | 22.61 | 25.81     | 20.02 |



specify a shell finish other than drab olive. \*notes the shell styles that are available with all four of these finish choices. Pricing shown is for standard drab olive and for (639) clear chromate and (621) black zinc finishes. Prices for finish (689) are higher. See page 436 for cable clamps and other accessories.

MS Mating Plugs

| Shell Size and Insert | 97-3106A* |       | 97-3107A* |       | 97-3106B* |       | 97-3108A* |       | 97-3108B* |       |
|-----------------------|-----------|-------|-----------|-------|-----------|-------|-----------|-------|-----------|-------|
|                       | EACH      |       | EACH      |       | EACH      |       | EACH      |       | EACH      |       |
|                       | 1-9       | 10-49 | 1-9       | 10-49 | 1-9       | 10-49 | 1-9       | 10-49 | 1-9       | 10-49 |
| 10SL-3S               | 12.24     | 9.79  | —         | —     | —         | —     | 23.08     | 17.31 | 17.61     | 13.21 |
| 10SL-4S               | 11.58     | 9.26  | —         | —     | —         | —     | 22.43     | 16.82 | 15.41     | 12.48 |
| 12-5S                 | 12.02     | 10.01 | —         | —     | —         | —     | —         | —     | —         | —     |
| 12-5P                 | 11.44     | 9.54  | —         | —     | —         | —     | —         | —     | —         | —     |
| 12S-3S                | 9.84      | 7.87  | 17.79     | 13.14 | —         | —     | 25.93     | 19.15 | 15.23     | 11.41 |
| 12S-3P                | 10.95     | 7.79  | 17.62     | 13.02 | —         | —     | 25.76     | 19.02 | 15.05     | 11.28 |
| 12SL-844S             | 23.01     | 19.18 | —         | —     | —         | —     | —         | —     | —         | —     |
| 14S-1S                | 11.02     | 8.81  | 17.51     | 14.01 | 14.36     | 10.18 | 25.14     | 18.55 | 13.74     | 9.65  |
| 14S-1P                | 12.15     | 8.64  | 18.00     | 13.04 | 14.43     | 10.15 | 24.92     | 18.40 | 13.44     | 9.45  |
| 14S-2S                | 12.60     | 10.08 | 19.09     | 15.27 | 14.99     | 11.05 | 24.15     | 19.32 | 14.21     | 10.76 |
| 14S-2P                | 11.76     | 8.32  | 17.95     | 13.02 | 14.37     | 10.09 | 24.88     | 18.37 | 14.00     | 10.28 |
| 14S-4S                | 17.23     | 14.09 | 26.09     | 19.13 | 21.14     | 16.40 | 29.92     | 23.21 | 20.27     | 15.73 |
| 14S-4P                | 13.52     | 10.13 | 21.20     | 15.55 | 16.38     | 12.71 | 34.34     | 26.64 | 15.52     | 12.04 |
| 14S-5S                | 12.44     | 9.96  | 19.56     | 14.21 | 14.77     | 10.43 | 26.38     | 19.47 | 15.30     | 11.10 |
| 14S-5P                | 11.83     | 9.47  | 18.22     | 13.65 | 15.22     | 10.76 | 25.78     | 19.04 | 14.43     | 10.15 |
| 14S-6S                | 12.92     | 10.24 | 18.11     | 14.82 | 16.03     | 11.30 | 24.22     | 19.38 | 17.90     | 12.90 |
| 14S-6P                | 12.67     | 10.14 | 18.77     | 15.01 | 15.92     | 11.25 | 24.26     | 19.41 | 14.83     | 10.65 |
| 14S-7S                | 12.36     | 8.74  | 17.29     | 13.83 | 14.36     | 10.18 | 25.14     | 18.55 | 12.54     | 9.93  |
| 14S-7P                | 10.81     | 8.65  | 17.25     | 13.81 | 12.90     | 10.32 | 24.92     | 18.40 | 13.44     | 9.45  |
| 14S-9S                | 14.56     | 10.21 | 19.51     | 14.30 | 15.23     | 11.82 | 26.51     | 19.57 | 14.85     | 10.76 |
| 14S-9P                | 11.60     | 8.23  | 17.65     | 12.96 | 13.64     | 10.22 | 24.52     | 18.09 | 12.84     | 9.10  |
| 16-7S                 | 20.45     | 15.10 | 28.25     | 20.86 | —         | —     | 36.70     | 27.55 | 25.82     | 20.66 |
| 16-7P                 | 17.00     | 12.54 | 25.08     | 18.51 | —         | —     | 40.32     | 30.23 | 22.64     | 18.11 |
| 16-9S                 | 17.97     | 14.97 | 24.79     | 18.29 | —         | —     | 34.09     | 25.17 | 23.12     | 16.50 |
| 16-9P                 | 14.40     | 11.79 | 23.18     | 17.12 | —         | —     | 32.38     | 23.91 | 21.16     | 15.21 |
| 16-10S                | 15.55     | 12.44 | 19.92     | 16.30 | —         | —     | 33.62     | 24.84 | 21.16     | 15.21 |
| 16-10P                | 16.70     | 13.36 | 24.29     | 17.95 | —         | —     | 32.38     | 23.91 | 23.32     | 16.13 |
| 16-11S                | 15.50     | 12.40 | 23.16     | 17.11 | —         | —     | 32.48     | 23.99 | 18.11     | 14.82 |
| 16-11P                | 15.70     | 11.10 | 21.37     | 15.78 | —         | —     | 30.72     | 22.69 | 20.19     | 13.98 |
| 16-12S                | 19.87     | 14.67 | 27.63     | 20.41 | —         | —     | 36.54     | 28.36 | 25.21     | 20.17 |
| 16-12P                | 14.70     | 12.24 | 24.94     | 18.42 | —         | —     | 39.68     | 30.79 | 22.49     | 18.00 |
| 16S-1S                | 13.18     | 10.55 | 17.44     | 14.27 | 16.09     | 13.17 | 29.13     | 23.83 | 17.75     | 13.31 |
| 16S-1P                | 11.86     | 9.49  | 16.12     | 13.19 | 14.76     | 12.07 | 32.12     | 23.72 | 16.48     | 12.37 |
| 16S-4S                | 10.72     | 8.77  | 18.50     | 13.66 | 16.91     | 12.48 | 32.16     | 23.75 | 16.71     | 12.51 |
| 16S-4P                | 10.35     | 8.39  | 17.91     | 13.22 | 16.33     | 12.07 | 24.81     | 20.67 | 16.09     | 12.07 |
| 16S-5S                | 10.70     | 8.75  | 18.46     | 13.62 | 16.89     | 12.46 | 32.14     | 23.74 | 16.68     | 12.49 |
| 16S-5P                | 10.27     | 8.40  | 18.04     | 13.32 | 16.45     | 12.14 | 31.73     | 23.43 | 16.20     | 12.15 |
| 16S-6S                | 15.45     | 12.65 | 23.05     | 17.01 | 22.87     | 17.75 | 39.10     | 30.36 | 21.55     | 16.73 |
| 16S-6P                | 16.94     | 12.70 | 23.05     | 17.01 | 22.87     | 17.75 | 39.10     | 30.36 | 21.55     | 16.73 |
| 16S-8S                | 12.21     | 9.77  | 19.08     | 14.08 | 17.47     | 12.91 | 32.72     | 24.16 | 14.33     | 11.46 |
| 16S-8P                | 13.36     | 9.43  | 18.57     | 13.73 | 16.98     | 12.53 | 32.72     | 24.15 | 17.31     | 12.97 |
| 18-1S                 | 17.16     | 13.73 | 24.03     | 19.66 | 18.11     | 14.82 | 35.25     | 26.30 | 21.34     | 17.07 |
| 18-1P                 | 16.01     | 12.81 | 23.01     | 18.82 | 20.53     | 14.87 | 33.07     | 26.46 | 20.40     | 16.32 |
| 18-3S                 | 19.04     | 13.35 | 27.47     | 20.28 | 22.47     | 15.99 | 37.25     | 27.51 | 24.23     | 18.18 |
| 18-3P                 | 18.00     | 13.47 | 26.35     | 19.46 | 20.54     | 15.17 | 29.85     | 24.42 | 20.05     | 17.30 |
| 18-4S                 | 13.72     | 10.98 | 21.18     | 17.32 | 18.61     | 13.74 | 34.23     | 25.26 | 20.97     | 15.73 |
| 18-4P                 | 12.57     | 10.06 | 23.25     | 17.17 | 17.47     | 12.91 | 33.12     | 24.45 | 19.77     | 14.83 |
| 18-5S                 | 13.89     | 11.37 | 25.57     | 18.88 | 21.08     | 16.36 | 35.61     | 27.61 | 20.83     | 16.07 |
| 18-5P                 | 11.81     | 9.66  | 23.53     | 17.37 | 18.92     | 14.69 | 37.74     | 29.29 | 18.80     | 15.65 |
| 18-8S                 | 17.72     | 13.00 | 27.27     | 20.15 | 18.72     | 15.32 | 37.08     | 27.37 | 21.07     | 16.86 |
| 18-8P                 | 16.17     | 12.94 | 26.63     | 19.66 | 20.53     | 13.37 | 36.42     | 26.90 | 23.34     | 17.49 |
| 18-9S                 | 16.83     | 13.77 | 28.02     | 20.70 | 23.12     | 16.60 | 31.80     | 26.02 | 25.13     | 18.85 |
| 18-9P                 | 15.14     | 12.39 | 26.80     | 19.79 | 20.75     | 15.32 | 36.62     | 27.05 | 23.54     | 17.63 |
| 18-10S                | 16.70     | 13.36 | 23.62     | 19.32 | 21.79     | 15.87 | 33.71     | 26.97 | 21.07     | 16.86 |
| 18-10P                | 16.77     | 11.83 | 25.74     | 19.01 | 17.34     | 14.19 | 30.80     | 25.20 | 22.42     | 16.82 |
| 18-11S                | 16.01     | 12.81 | 26.63     | 19.66 | 20.83     | 15.37 | 35.57     | 28.46 | 23.34     | 17.49 |
| 18-11P                | 15.12     | 12.10 | 20.56     | 17.14 | 20.04     | 14.75 | 35.56     | 26.27 | 19.30     | 15.44 |
| 18-12S                | 15.12     | 12.10 | 22.21     | 18.17 | 20.04     | 14.75 | 35.56     | 26.27 | 22.42     | 16.82 |
| 18-12P                | 13.97     | 11.18 | 24.60     | 18.18 | 17.41     | 13.93 | 34.45     | 25.44 | 21.20     | 15.92 |
| 18-13S                | 29.76     | 22.31 | 40.90     | 30.19 | 37.48     | 29.07 | 49.38     | 38.31 | 36.18     | 28.95 |
| 18-13P                | 26.23     | 19.67 | 35.67     | 26.34 | 32.51     | 25.22 | 54.36     | 42.16 | 31.53     | 25.22 |
| 18-16S                | 17.93     | 13.76 | 28.02     | 20.70 | 23.12     | 16.60 | 38.08     | 28.13 | 25.13     | 18.85 |
| 18-16P                | 15.12     | 12.05 | 25.57     | 18.88 | 21.08     | 14.59 | 36.62     | 27.22 | 22.42     | 16.82 |
| 18-19S                | 17.89     | 13.93 | 23.23     | 19.83 | 22.36     | 16.38 | 37.77     | 27.88 | 24.79     | 18.68 |
| 18-19P                | 22.65     | 16.63 | 31.53     | 23.29 | 22.89     | 18.73 | 41.59     | 30.71 | 28.62     | 21.46 |
| 18-20S                | 13.60     | 11.13 | 21.28     | 17.73 | 21.19     | 15.33 | 36.38     | 26.87 | 22.22     | 16.12 |
| 18-20P                | 15.02     | 12.29 | 20.13     | 16.78 | 20.09     | 14.38 | 35.08     | 25.91 | 21.16     | 15.16 |
| 18-22S                | 12.40     | 10.14 | 25.26     | 18.67 | 20.09     | 14.38 | 35.08     | 25.91 | 21.16     | 15.16 |
| 18-22P                | 16.71     | 11.75 | 24.04     | 17.76 | 18.30     | 13.53 | 33.94     | 25.06 | 19.79     | 14.29 |
| 18-23S                | 17.14     | 13.14 | 30.80     | 22.29 | 22.67     | 18.23 | 40.26     | 29.73 | 27.45     | 20.58 |
| 18-23P                | 18.86     | 15.43 | 30.19     | 22.29 | 24.67     | 18.23 | 40.26     | 29.73 | 27.45     | 20.58 |
| 18-420S               | 64.34     | 53.13 | —         | —     | —         | —     | —         | —     | —         | —     |
| 18-420P               | 67.42     | 56.19 | —         | —     | —         | —     | —         | —     | —         | —     |
| 20-3S                 | 22.58     | 18.47 | 32.70     | 24.15 | 28.14     | 20.78 | 45.43     | 33.56 | 30.21     | 21.78 |
| 20-3P                 | 17.39     | 14.22 | 27.85     | 20.56 | 23.57     | 17.40 | 40.65     | 30.01 | 23.94     | 18.42 |
| 20-4S                 | 26.34     | 21.07 | 34.74     | 25.65 | 30.49     | 22.53 | 47.81     | 35.30 | 33.97     | 25.48 |
| 20-4P                 | 20.07     | 14.04 | 27.52     | 20.31 | 23.23     | 17.15 | 40.31     | 29.77 | 26.23     | 19.66 |
| 20-6S                 | 20.63     | 16.88 | 24.97     | 20.81 | 26.61     | 22.21 | 46.83     | 36.34 | 29.76     | 23.10 |
| 20-6P                 | 20.11     | 16.45 | 24.50     | 20.42 | 28.04     | 21.76 | 46.21     | 35.86 | 29.18     | 22.65 |
| 20-7S                 | 19.99     | 15.99 | 26.83     | 21.15 | 24.63     | 18.01 | 41.69     | 30.79 | 27.66     | 20.76 |
| 20-7P                 | 18.56     | 14.85 | 24.63     | 19.34 | 21.25     | 17.00 | 40.13     | 29.63 | 26.05     | 19.52 |
| 20-8S                 | 41.51     | 31.13 | 48.34     | 35.70 | 47.04     | 36.50 | 65.47     | 50.79 | 48.47     | 37.61 |