

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

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  |
| 7               | 24-10S                | 45.02     | 30.87  | 45.15     | 30.98  | 33.09     | 27.08  |
| 9               | 24-11P                | 25.21     | 21.01  | 30.21     | 24.17  | 18.99     | 15.54  |
| 9               | 24-11S                | 31.89     | 26.57  | 33.97     | 28.31  | 26.41     | 21.61  |
| 5               | 24-12P                | 55.14     | 40.72  | 55.21     | 44.16  | 47.11     | 36.56  |
| 5               | 24-12S                | 66.94     | 50.90  | 69.03     | 55.22  | 61.87     | 48.00  |
| 7               | 24-16P                | 43.15     | 31.86  | 43.25     | 34.61  | 34.34     | 26.64  |
| 7               | 24-16S                | 59.95     | 40.52  | 52.42     | 41.93  | 37.41     | 31.18  |
| 12              | 24-19P                | 34.52     | 28.76  | 34.56     | 28.80  | 35.44     | 24.40  |
| 12              | 24-19S                | 54.94     | 37.59  | 55.03     | 37.64  | 33.12     | 27.09  |
| 11              | 24-20P                | 28.62     | 19.81  | 28.72     | 21.59  | 19.19     | 13.41  |
| 11              | 24-20S                | 28.79     | 19.93  | 30.07     | 21.73  | 19.70     | 16.12  |
| 10              | 24-21P                | 41.05     | 30.32  | 41.16     | 32.92  | 26.00     | 21.27  |
| 10              | 24-21S                | 44.98     | 33.22  | 45.05     | 36.05  | 29.33     | 24.00  |
| 4               | 24-22P                | 32.16     | 22.19  | 32.20     | 22.25  | 20.58     | 16.84  |
| 4               | 24-22S                | 33.19     | 27.66  | 33.23     | 27.69  | 30.17     | 20.85  |
| 7               | 24-27P                | 41.85     | 28.74  | 25.60     | 21.34  | 25.38     | 17.62  |
| 7               | 24-27S                | 42.92     | 29.48  | 28.49     | 23.31  | 21.85     | 17.48  |
| 24              | 24-28P                | 26.47     | 21.66  | 26.52     | 21.70  | 19.63     | 15.71  |
| 24              | 24-28S                | 29.47     | 24.11  | 29.51     | 24.15  | 23.00     | 18.40  |
| 9               | 28-1P                 | 50.66     | 37.40  | 55.42     | 44.35  | 43.77     | 33.97  |
| 9               | 28-1S                 | 70.13     | 51.79  | 74.90     | 59.92  | 64.53     | 50.08  |
| 14              | 28-2P                 | 31.22     | 21.58  | 34.55     | 24.96  | 19.72     | 16.13  |
| 14              | 28-2S                 | 33.08     | 22.85  | 36.37     | 26.20  | 24.67     | 17.16  |
| 3               | 28-3P                 | 45.65     | 33.73  | 50.42     | 40.33  | 38.43     | 29.82  |
| 3               | 28-3S                 | 49.74     | 36.73  | 54.51     | 43.61  | 42.78     | 33.20  |
| 3               | 28-6P                 | 39.58     | 29.21  | 44.35     | 35.48  | 31.94     | 24.79  |
| 3               | 28-6S                 | 44.67     | 32.98  | 49.43     | 39.54  | 27.95     | 23.27  |
| 12              | 28-8P                 | 43.38     | 32.02  | 48.14     | 38.51  | 35.99     | 27.93  |
| 12              | 28-8S                 | 45.65     | 33.73  | 50.42     | 40.33  | 38.43     | 29.82  |
| 12              | 28-9P                 | 56.25     | 38.46  | 61.68     | 42.16  | 40.78     | 28.04  |
| 12              | 28-9S                 | 61.33     | 41.90  | 66.88     | 45.66  | 45.72     | 31.37  |
| 7               | 28-10P                | 57.94     | 42.79  | 62.72     | 50.18  | 51.57     | 40.01  |
| 7               | 28-10S                | 75.78     | 55.95  | 80.55     | 64.44  | 70.56     | 54.75  |
| 22              | 28-11P                | 31.58     | 21.81  | 28.02     | 22.92  | 21.83     | 17.46  |
| 22              | 28-11S                | 37.94     | 26.10  | 40.72     | 30.38  | 26.75     | 21.88  |
| 26              | 28-12P                | 32.66     | 22.51  | 30.07     | 25.06  | 24.33     | 19.46  |
| 26              | 28-12S                | 34.66     | 26.10  | 39.42     | 31.54  | 28.02     | 22.42  |
| 35              | 28-15P                | 36.50     | 25.15  | 37.72     | 30.86  | 25.34     | 20.73  |
| 35              | 28-15S                | 35.37     | 29.48  | 44.91     | 33.25  | 30.44     | 24.91  |
| 20              | 28-16P                | 27.30     | 22.75  | 31.60     | 25.85  | 21.68     | 17.74  |
| 20              | 28-16S                | 32.66     | 24.81  | 34.25     | 27.40  | 26.24     | 18.82  |
| 15              | 28-17P                | 53.77     | 36.34  | 36.66     | 30.55  | 37.59     | 25.40  |
| 15              | 28-17S                | 57.60     | 38.95  | 39.39     | 32.83  | 41.39     | 27.99  |
| 12              | 28-18P                | 24.21     | 20.18  | 28.56     | 23.37  | 18.04     | 14.76  |
| 12              | 28-18S                | 32.27     | 24.56  | 30.92     | 25.30  | 20.79     | 17.01  |
| 10              | 28-19P                | 51.45     | 35.22  | 46.16     | 34.62  | 28.06     | 22.96  |
| 10              | 28-19S                | 62.18     | 42.49  | 59.38     | 44.53  | 47.83     | 32.35  |
| 14              | 28-20P                | 31.95     | 23.91  | 35.15     | 25.84  | 20.99     | 17.17  |
| 14              | 28-20S                | 35.26     | 26.59  | 38.53     | 28.27  | 27.42     | 19.70  |
| 37              | 28-21P                | 33.30     | 27.24  | 36.22     | 29.64  | 27.51     | 22.01  |
| 37              | 28-21S                | 37.63     | 30.79  | 43.76     | 35.01  | 36.97     | 25.50  |
| 2               | 32-5P                 | 44.38     | 34.37  | 47.45     | 37.50  | 33.80     | 25.17  |
| 2               | 32-5S                 | 49.31     | 35.94  | 51.88     | 41.20  | 38.33     | 28.66  |
| 23              | 32-6P                 | 35.76     | 30.25  | 49.06     | 40.59  | 28.49     | 24.10  |
| 23              | 32-6S                 | 61.74     | 51.09  | 67.74     | 56.06  | 42.02     | 35.56  |
| 35              | 32-7P                 | 58.86     | 48.72  | 64.86     | 53.67  | 50.12     | 40.10  |
| 35              | 32-7S                 | 68.79     | 57.32  | 84.82     | 70.19  | 70.09     | 56.06  |
| 30              | 32-8P                 | 43.39     | 29.80  | 46.07     | 34.02  | 34.66     | 23.90  |
| 30              | 32-8S                 | 44.14     | 30.29  | 39.35     | 32.79  | 35.26     | 24.29  |
| 23              | 32-13P                | 40.41     | 33.46  | 46.41     | 38.41  | 31.71     | 25.36  |
| 23              | 32-13S                | 46.52     | 38.49  | 52.99     | 43.86  | 38.24     | 30.61  |
| 4               | 32-17P                | 86.67     | 71.72  | 92.65     | 76.68  | 58.26     | 48.55  |
| 4               | 32-17S                | 96.76     | 80.06  | 75.32     | 62.76  | 65.69     | 54.74  |
| 52              | 32-414P               | 54.26     | 45.22  | 73.70     | 56.70  | 57.07     | 40.87  |
| 52              | 32-414S               | 73.34     | 61.11  | 98.67     | 75.89  | 65.69     | 54.74  |
| 22              | 36-1P                 | 64.69     | 53.54  | 66.20     | 54.78  | 45.23     | 37.71  |
| 22              | 36-1S                 | 63.60     | 56.11  | 66.73     | 56.46  | 67.08     | 55.91  |
| 4               | 36-5P                 | 133.53    | 110.49 | 135.06    | 111.77 | 111.33    | 92.79  |
| 4               | 36-5S                 | 163.28    | 135.13 | 164.82    | 136.40 | 139.90    | 116.59 |
| 6               | 36-6P                 | 87.96     | 72.80  | 89.49     | 74.06  | 55.84     | 47.25  |
| 6               | 36-6S                 | 108.20    | 89.54  | 109.75    | 90.83  | 87.02     | 72.51  |
| 47              | 36-7P                 | 49.52     | 41.90  | 70.37     | 58.23  | 49.26     | 41.05  |
| 47              | 36-7S                 | 76.22     | 63.07  | 77.73     | 64.32  | 56.29     | 46.92  |
| 47              | 36-8P                 | 94.61     | 78.30  | 96.14     | 79.58  | 73.99     | 61.66  |
| 47              | 36-8S                 | 103.14    | 85.36  | 104.67    | 86.63  | 82.18     | 68.48  |
| 31              | 36-9P                 | 118.33    | 97.92  | 112.51    | 93.11  | 96.72     | 80.59  |
| 31              | 36-9S                 | 148.24    | 122.67 | 149.77    | 123.94 | 125.47    | 104.56 |
| 48              | 36-10P                | 53.40     | 38.90  | 54.59     | 41.31  | 33.68     | 28.07  |
| 48              | 36-10S                | 46.31     | 39.18  | 48.02     | 40.02  | 37.29     | 31.08  |
| 35              | 36-15P                | 90.28     | 61.03  | 56.22     | 46.85  | 63.68     | 43.03  |
| 35              | 36-15S                | 99.26     | 67.12  | 82.65     | 61.98  | 72.78     | 49.20  |
| 52              | 36-403P               | 118.37    | 97.95  | 119.84    | 99.17  | 96.72     | 80.59  |
| 52              | 36-403S               | 167.12    | 138.31 | 168.63    | 139.56 | 143.58    | 119.65 |



available. Add the shell finish identification to the end of part number to 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  |
| 24-10P                | 39.67     | 27.26  | 50.46     | 37.27 | 45.57     | 33.56  | 63.01     | 46.53 | 44.94     | 31.10  |
| 24-11S                | 34.57     | 28.28  | 41.02     | 34.19 | 47.30     | 36.70  | 66.05     | 51.24 | 41.03     | 32.82  |
| 24-11P                | 27.15     | 22.22  | 34.35     | 28.63 | 39.48     | 30.63  | 58.24     | 45.19 | 33.73     | 26.98  |
| 24-12S                | 71.24     | 53.42  | 80.85     | 59.70 | 80.88     | 62.76  | 99.64     | 77.32 | 72.53     | 58.02  |
| 24-12P                | 45.15     | 37.62  | 67.03     | 49.51 | 66.17     | 51.34  | 84.90     | 65.88 | 58.72     | 46.98  |
| 24-16S                | 53.52     | 40.13  | 64.23     | 47.42 | 63.15     | 48.99  | 81.93     | 63.56 | 55.92     | 44.74  |
| 24-16P                | 36.35     | 30.29  | 40.15     | 33.97 | 54.81     | 42.52  | 73.58     | 57.09 | 46.76     | 37.40  |
| 24-19S                | 41.28     | 33.77  | 48.80     | 40.66 | 50.90     | 37.59  | 68.49     | 50.57 | 50.78     | 35.15  |
| 24-19P                | 52.73     | 36.12  | 52.20     | 38.53 | 38.01     | 31.67  | 64.76     | 47.83 | 46.80     | 32.40  |
| 24-20S                | 29.18     | 20.19  | 42.66     | 31.51 | 37.66     | 27.82  | 55.23     | 40.78 | 27.81     | 22.76  |
| 24-20P                | 28.93     | 20.01  | 42.13     | 31.10 | 37.12     | 27.43  | 54.70     | 40.39 | 27.38     | 22.40  |
| 24-21S                | 37.49     | 30.67  | 56.87     | 41.99 | 55.34     | 42.94  | 74.07     | 57.48 | 34.86     | 29.05  |
| 24-21P                | 41.51     | 31.13  | 52.97     | 39.22 | 51.15     | 39.68  | 69.91     | 54.24 | 32.95     | 27.45  |
| 24-22S                | 35.99     | 29.45  | 50.70     | 37.45 | 45.94     | 33.76  | 63.28     | 46.73 | 42.92     | 31.30  |
| 24-22P                | 28.72     | 23.50  | 43.58     | 32.17 | 38.67     | 28.47  | 56.14     | 41.47 | 35.71     | 26.04  |
| 24-27S                | 31.03     | 24.83  | 38.60     | 31.59 | 39.92     | 27.63  | 43.68     | 36.40 | 34.14     | 25.20  |
| 24-27P                | 42.68     | 29.30  | 36.62     | 30.52 | 39.87     | 27.59  | 54.95     | 40.58 | 34.07     | 25.16  |
| 24-28S                | 32.18     | 25.74  | 44.74     | 33.03 | 39.97     | 29.53  | 57.57     | 42.52 | 34.93     | 27.95  |
| 24-28P                | 28.81     | 23.05  | 41.79     | 30.86 | 36.77     | 27.15  | 54.37     | 40.14 | 33.48     | 24.72  |
| 28-1S                 | 74.30     | 55.72  | 84.04     | 61.79 | 76.08     | 60.87  | 102.80    | 79.75 | 73.19     | 60.99  |
| 28-1P                 | 41.98     | 34.35  | 65.35     | 48.06 | 56.66     | 45.32  | 82.03     | 63.64 | 56.76     | 45.41  |
| 28-2S                 | 30.01     | 24.55  | 48.91     | 36.11 | 37.63     | 27.65  | 57.72     | 42.63 | 37.81     | 27.75  |
| 28-2P                 | 27.99     | 22.90  | 37.88     | 31.57 | 35.48     | 26.20  | 55.72     | 41.16 | 30.80     | 25.67  |
| 28-3S                 | 52.54     | 39.42  | 67.16     | 49.59 | 55.70     | 44.55  | 81.03     | 62.86 | 55.84     | 44.68  |
| 28-3P                 | 48.22     | 36.16  | 63.08     | 46.58 | 51.63     | 41.30  | 76.67     | 59.49 | 52.66     | 38.88  |
| 28-6S                 | 47.15     | 35.35  | 62.10     | 45.84 | 50.64     | 40.51  | 75.63     | 58.69 | 50.78     | 40.63  |
| 28-6P                 | 41.43     | 31.07  | 56.98     | 42.08 | 45.55     | 36.42  | 69.91     | 54.24 | 45.67     | 36.56  |
| 28-8S                 | 48.22     | 36.16  | 63.08     | 46.58 | 51.63     | 41.30  | 76.67     | 59.49 | 51.74     | 41.40  |
| 28-8P                 | 45.78     | 34.34  | 60.80     | 44.90 | 49.33     | 39.47  | 74.26     | 57.60 | 49.49     | 39.60  |
| 28-9S                 | 63.31     | 43.27  | 70.19     | 51.84 | 58.74     | 43.38  | 79.01     | 58.36 | 56.53     | 43.49  |
| 28-9P                 | 58.43     | 39.94  | 59.15     | 43.68 | 47.70     | 35.24  | 67.98     | 50.20 | 47.86     | 35.33  |
| 28-10S                | 80.33     | 60.25  | 93.20     | 68.82 | 81.74     | 65.39  | 108.67    | 84.31 | 81.89     | 65.52  |
| 28-10P                | 61.33     | 46.00  | 75.37     | 55.65 | 63.94     | 51.15  | 89.79     | 69.67 | 64.07     | 51.24  |
| 28-11S                | 35.22     | 28.82  | 54.03     | 39.91 | 42.60     | 31.46  | 48.84     | 40.70 | 42.73     | 31.55  |
| 28-11P                | 31.36     | 25.09  | 41.96     | 34.33 | 36.60     | 27.03  | 43.64     | 36.36 | 36.72     | 27.12  |
| 28-12S                | 37.56     | 30.05  | 47.46     | 38.83 | 37.83     | 30.95  | 62.86     | 46.43 | 42.73     | 31.55  |
| 28-12P                | 32.31     | 25.85  | 42.82     | 35.03 | 32.44     | 26.54  | 57.82     | 42.70 | 31.31     | 25.93  |
| 28-15S                | 38.92     | 31.84  | 45.35     | 37.94 | 46.22     | 34.14  | 66.47     | 49.09 | 46.35     | 34.22  |
| 28-15P                | 33.82     | 27.67  | 52.64     | 38.87 | 41.18     | 30.41  | 61.42     | 45.36 | 36.50     | 30.41  |
| 28-16S                | 33.21     | 27.17  | 49.68     | 36.23 | 35.22     | 26.01  | 57.90     | 42.75 | 33.25     | 27.01  |
| 28-16P                | 33.53     | 25.41  | 48.79     | 36.05 | 37.37     | 27.59  | 57.62     | 42.55 | 37.50     | 27.70  |
| 28-17S                | 40.44     | 33.09  | 63.96     | 47.23 | 52.50     | 38.78  | 72.78     | 53.75 | 52.66     | 38.88  |
| 28-17P                | 37.42     | 30.62  | 60.43     | 33.16 | 48.97     | 36.16  | 69.25     | 51.13 | 49.10     | 36.25  |
| 28-18S                | 29.26     | 23.94  | 39.03     | 32.52 | 30.25     | 25.21  | 56.98     | 42.08 | 37.17     | 27.23  |
| 28-18P                | 26.52     | 21.70  | 36.56     | 30.46 | 34.04     | 25.14  | 43.33     | 36.11 | 34.63     | 25.25  |
| 28-19S                | 64.53     | 44.09  | 71.75     | 52.98 | 44.19     | 35.82  | 80.57     | 59.50 | 60.21     | 44.47  |
| 28-19P                | 53.98     | 36.97  | 59.36     | 43.84 | 36.78     | 30.65  | 68.18     | 50.35 | 48.02     | 35.47  |
| 28-20S                | 32.59     | 26.67  | 51.41     | 37.96 | 39.95     | 29.52  | 60.23     | 44.48 | 40.11     | 29.61  |
| 28-20P                | 29.47     | 24.11  | 48.40     | 35.73 | 36.95     | 27.28  | 57.22     | 42.25 | 37.08     | 27.37  |
| 28-21S                | 43.65     | 32.25  | 58.19     | 42.97 | 46.76     | 34.52  | 56.19     | 45.97 | 46.87     | 34.62  |
| 28-21P                | 37.03     | 29.62  | 53.54     | 39.53 | 42.08     | 31.07  | 59.83     | 44.18 | 52.00     | 43.03  |
| 32-5S                 | 57.37     | 40.71  | —         | —     | 60.86     | 44.95  | —         | —     | 56.12     | 46.76  |
| 32-5P                 | 56.90     | —      | —         | —     | 59.77     | 44.17  | —         | —     | 51.72     | 42.65  |
| 32-6S                 | 56.20     | 54.55  | —         | —     | 67.66     | 46.92  | —         | —     | 70.70     | 58.50  |
| 32-6P                 | 47.53     | 39.61  | —         | —     | 49.58     | 33.53  | —         | —     | 52.00     | 43.03  |
| 32-7S                 | 81.64     | 68.20  | —         | —     | 113.75    | 76.91  | —         | —     | 87.76     | 72.63  |
| 32-7P                 | 57.04     | 47.53  | —         | —     | 92.63     | 62.64  | —         | —     | 67.82     | 56.12  |
| 32-8S                 | 50.58     | 37.96  | —         | —     | 52.17     | 38.02  | —         | —     | 53.08     | 36.74  |
| 32-8P                 | 42.35     | 35.46  | —         | —     | 51.48     | 38.53  | —         | —     | 52.34     | 36.19  |
| 32-9S                 | 42.77     | 35.63  | —         | —     | 51.32     | 36.92  | —         | —     | 55.94     | 36.94  |
| 32-13P                | 45.00     | 37.51  | —         | —     | 48.86     | 33.02  | —         | —     | 49.36     | 40.84  |
| 32-17S                | 78.99     | 65.82  | —         | —     | 119.48    | 80.77  | —         | —     | 105.72    | 87.50  |
| 32-17P                | 71.56     | 59.64  | —         | —     | 110.40    | 74.63  | —         | —     | 95.62     | 79.13  |
| 32-414S               | 79.01     | 65.84  | —         | —     | 95.72     | 79.85  | —         | —     | 83.01     | 69.17  |
| 32-414P               | 59.91     | 49.93  | —         | —     | 73.96     | 60.06  | —         | —     | 62.06     | 51.71  |
| 36-1S                 | 84.84     | 70.71  | —         | —     | 114.28    | 77.24  | —         | —     | 98.81     | 81.76  |
| 36-1P                 | 52.06     | 44.05  | —         | —     | 93.81     | 63.42  | —         | —     | 76.04     | 62.95  |
| 36-5S                 | 136.67    | 131.38 | —         | —     | 181.64    | 122.81 | —         | —     | 161.21    | 130.99 |
| 36-5P                 | 157.44    | 107.57 | —         | —     | 155.64    | 105.22 | —         | —     | 133.76    | 108.67 |
| 36-6S                 | 109.14    | 87.31  | —         | —     | 109.86    | 80.43  | —         | —     | 110.37    | 89.68  |
| 36-6P                 | 68.66     | 58.09  | —         | —     | 88.80     | 72.02  | —         | —     | 91.70     | 74.51  |
| 36-7S                 | 77.14     | 61.71  | —         | —     | 78.37     | 52.99  | —         | —     | 80.84     | 65.68  |
| 36-7P                 | 69.77     | 55.83  | —         | —     | 71.64     | 48.46  | —         | —     | 74.02     | 60.14  |
| 36-8S                 | 82.55     | 69.85  | —         | —     | 128.64    | 86.96  | —         | —     | 105.54    | 85.74  |
| 36-8P                 | 78.80     | 64.13  | —         | —     | 120.95    | 81.77  | —         | —     | 97.84     | 79.48  |
| 36-9S                 | 149.18    | 119.34 | —         | —     | 168.55    | 113.96 | —         | —     | 147.34    | 119.72 |
| 36-9P                 | 119.25    | 95.40  | —         | —     | 141.61    | 93.75  | —         | —     | 119.70    | 97.25  |
| 36-10S                | 62.78     | 42.90  | —         | —     | 66.13     | 48.94  | —         | —     | 66.76     | 54.80  |
| 36-10P                | 48.29     | 40.24  | —         | —     | 49.16     | 40.47  | —         | —     | 62.69     | 51.62  |
| 36-15S                | 106.19    | 72.23  | —         | —     | 83.73     | 61.82  | —         | —     | 91.79     | 68.84  |
| 36-15P                | 97.75     | 66.53  | —         | —     | 75.47     | 55.73  | —         | —     | 66.10     | 55.08  |
| 36-403S               | 161.33    | 134.44 | —         | —     | 134.08    | 113.46 | —         | —     | 155.76    | 133.85 |
| 36-403P               | 114.47    | 95.40  | —         | —     | 95.36     | 80.69  | —         | —     | 113.17    | 97.25  |