

# YH5015 CONNECTOR

MIL-DTL-5015 Style





Overview



There connectors were originally designed for military equipments and they are widely used at low costs in various industries. In particular the YH5015 connectors are used in industrial producer which require high levels of reliability such as medical equipments, electric cars, industrial building machinery, robots, and etc.,

The YH5015 connector uses a screw type coupling method and soldering type coupling is used to contact the connector cables. Products in Class “A” and “B” are not waterproof types, whereas Class “E” , “F” ,and “R” types use insulating packing materials which enable the back of the connector cables to be waterproof. The Class “F” and “R” type YH3106/ YH3108 plug connector have an O–ring which enables the entire connector to be waterproof.

There connectors measurements regarding mutual coupling and contact arrangements are consistent with the MS5015 standards.

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YH5015 Connector (MIL-DTL-5015 Style)

ISO 9001/ISO14001



품명구성 (Ordering Information)

Military Standard Cross Reference

MS Number Shell Style

Class

Shell Size

Insert Arrangement

Contact Type

Alternate Insert Position

MS3100

E

18-22

P

Y

- MS Number Shell Style**  
MS3100 - Wall Mounting Receptacle  
MS3101 - Cable Connecting Plug  
MS3102 - Box mounting Receptacle  
MS3106 - Straight Plug  
MS3108 - 90°Angle Plug
- Class**  
A - Solid shell for general, non-environmental applications  
E - With resilient insulator and integral clamp for cable strain relief  
F - Same as E, However style 3106 with O-ring seal under the coupling nut  
R - With resilient insulator and shortened, lightweight endbell (additional sealing with O-ring under the coupling nut for shell styles 3106 and 3108)
- Shell Size**  
10SL, 12S, 12, 14S, 14, 16S, 16, 18, 20, 22, 24, 28, 32, 36
- Insert Arrangement**  
Based on MIL-STD-1651 or MIL-STD-1651
- Contact Type**  
P - Pin Contact  
S - Socket Contact
- Alternate Insert Position**  
N(Normal), W, X, Y, Z(MIL-STD-1651)

How to order YEONHAB(YH)

Commercial equivalent : YH-5015-XX (non-QPL)

YH Number Shell Style

Class

Shell Size

Contact Arrangement

Contact Type

Alternate Insert Position

Finish

YH3100

E

18

22

P

Y

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- YH Number Shell Style**  
YH3100 - Wall Mounting Receptacle  
YH3101 - Cable Connecting Plug  
YH3102 - Box mounting Receptacle  
YH3106 - Straight Plug  
YH3108 - 90°Angle Plug
- Class**  
A - Solid shell for general, non-environmental applications  
E - With resilient insulator and integral clamp for cable strain relief  
F - Same as E, However style 3106 with O-ring seal under the coupling nut  
R - With resilient insulator and shortened, lightweight endbell (additional sealing with O-ring under the coupling nut for shell styles 3106 and 3108)
- Shell Size**  
10SL, 12S, 12, 14S, 14, 16S, 16, 18, 20, 22, 24, 28, 32, 36
- Insert Arrangement**  
Based on MIL-STD-1651 or MIL-STD-1651
- Contact Type**  
P - Pin Contact  
S - Socket Contact
- Alternate Insert Position**  
N(Normal), W, X, Y, Z(MIL-STD-1651)
- Finish**  
BLANK - Conductive Olive Drab Chromate Over Cadmium or Zinc plate.  
01- Black Anodize  
02- Electroless Nickel plate  
03- Black Zinc Cobalt Plate

결합안내 (Mating Face View)



기술적 정보 (Technical Data)

Materials & Finish

| Portion         | Materials                   | Finishes                                                  |
|-----------------|-----------------------------|-----------------------------------------------------------|
| 몸체 (Shell)      | Aluminum alloy              | Olive drab chromate coating over cadmium or zinc plating. |
| 절연체 (Insulator) | Polychloroprene (resilient) | -                                                         |
| 접점 (contacts)   | Brass or Copper alloy       | Silver plate                                              |

Electrical Data

|                                      |                            |
|--------------------------------------|----------------------------|
| 절연저항 (Insulation Resistance)         | 5,000MΩ Min.(at 25℃)       |
| 사용온도범위 (Operating Temperature Range) | -55℃ ~ +125℃               |
| 내구성 (Durability)                     | 500 cycle, mate and unmate |

Insert Arrangements Service Rating

| Service Rating | Dielectric Withstanding Voltage |                   |       | Contact Engaging & Separating Force |              |         |         |
|----------------|---------------------------------|-------------------|-------|-------------------------------------|--------------|---------|---------|
|                | Test Voltage<br>AC(rms)         | Operating Voltage |       | Contact Size                        | Force in Lbs |         |         |
|                |                                 | AC (rms)          | DC    |                                     | Maximum      | Average | Minimum |
| inst.          | 1,000                           | 200               | 250   | 16                                  | 3.00         | 2.06    | 0.13    |
| A              | 2,000                           | 500               | 700   | 12                                  | 5.00         | 3.50    | 0.19    |
| D              | 2,800                           | 900               | 1,250 | 8                                   | 10.00        | -       | 0.31    |
| E              | 3,500                           | 1,250             | 1,750 | 4                                   | 15.00        | -       | 0.63    |
| B              | 4,500                           | 1,750             | 2,450 | 0                                   | 20.00        | -       | 0.94    |
| C              | 7,000                           | 3,000             | 4,200 |                                     |              |         |         |

Altitude Voltage Derating Chart

| Service Rating | Nominal Distance |          | Standard Sea Level Conditions     |                      | Pressure Altitude 70,000 ft       |                      |
|----------------|------------------|----------|-----------------------------------|----------------------|-----------------------------------|----------------------|
|                | Airspace         | Creepage | Minimum Flashover Voltage AC(rms) | Test Voltage AC(rms) | Minimum Flashover Voltage AC(rms) | Test Voltage AC(rms) |
| inst.          | 1/32             | 1/16     | 1400                              | 1,000                | 325                               | 260                  |
| A              | 1/16             | 1/8      | 2800                              | 2,000                | 450                               | 360                  |
| D              | 1/8              | 3/16     | 3600                              | 2,800                | 500                               | 400                  |
| E              | 3/16             | 1/4      | 4500                              | 3,500                | 550                               | 440                  |
| B              | 1/4              | 5/16     | 5700                              | 4,500                | 600                               | 480                  |
| C              | 5/16             | 1        | 8500                              | 7,000                | 700                               | 560                  |

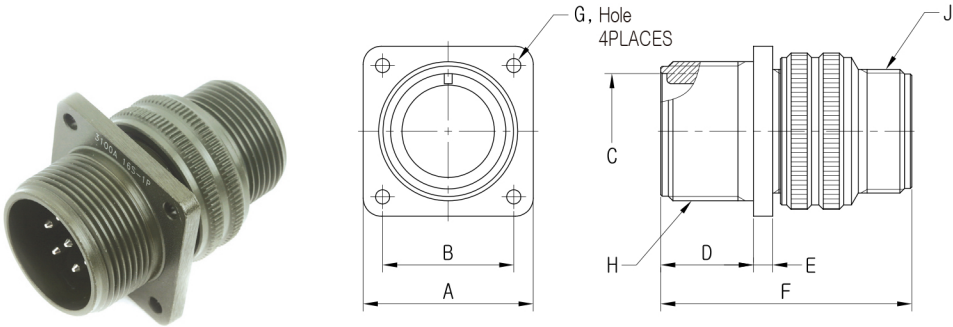
| Contact Size | Pin Contact Dia. | Solder Pot Dia. | Current(A) Rating (Mated With Insulators) | Contact Resistance |                        | Wire Range Accommodations |                            |                     |            |
|--------------|------------------|-----------------|-------------------------------------------|--------------------|------------------------|---------------------------|----------------------------|---------------------|------------|
|              |                  |                 |                                           | Test Current (A)   | Potential Drop Max(mV) | Wire Size (AWG)           | Wire Normal Square Size(㎟) | Dielectric Material | Outer Dia. |
| 16           | 1.6              | 2.0             | 13A                                       | 20A                | 21                     | 16~22                     | ≤ 1.3                      | 1.7~3.3             |            |
| 12           | 2.4              | 3.0             | 23A                                       | 35A                | 20                     | 12~14                     | ≤ 3.5                      | 2.9~4.3             |            |
| 8            | 3.6              | 5.2             | 46A                                       | 60A                | 12                     | 8~10                      | ≤ 8.0                      | 4.2~6.4             |            |
| 4            | 5.7              | 8.5             | 80A                                       | 110A               | 10                     | 6~4                       | ≤ 22.0                     | 7.0~9.4             |            |
| 0            | 9.1              | 12.0            | 150A                                      | 200A               | 10                     | 0~2                       | ≤ 50.0                     | 10.6~14.0           |            |

YH5015 Connector CLASS A/E/F/R

Wall Mouting Receptacle (YH 3100)

YH3100 CLASS “A”

Can be used with accessories such as YH3057 at the endbell.  
Excludes grommet and bushing.



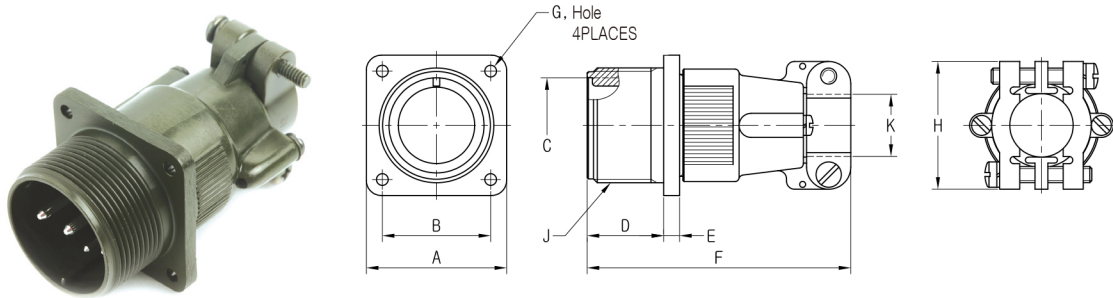
UNIT: mm

| Part Number      | A<br>±0.79 | B<br>±0.12 | C Dia.<br>+0.38<br>-0.00 | D<br>+0.79<br>-0.00 | E<br>Max./Min. | F<br>Max. | G Dia.<br>+0.25<br>-0.13 | H Thread.<br>(Class : 2A) | J Thread.<br>(Class : 2A) |
|------------------|------------|------------|--------------------------|---------------------|----------------|-----------|--------------------------|---------------------------|---------------------------|
| YH3100A10SL-xxxx | 25.40      | 18.26      | 11.38                    | 14.28               | 3.96/1.58      | 38.88     | 3.05                     | 5/8-24UNEF                | 5/8-24UNEF                |
| YH3100A12S-xxxx  | 27.79      | 20.62      | 14.15                    | 14.28               | 3.96/1.58      | 42.87     | 3.05                     | 3/4-20UNEF                | 5/8-24UNEF                |
| YH3100A12-xxxx   | 27.79      | 20.62      | 14.15                    | 19.05               | 3.96/1.58      | 52.37     | 3.05                     | 3/4-20UNEF                | 5/8-24UNEF                |
| YH3100A14S-xxxx  | 30.18      | 23.01      | 17.33                    | 14.28               | 3.96/1.58      | 42.87     | 3.05                     | 7/8-20UNEF                | 3/4-20UNEF                |
| YH3100A14-xxxx   | 30.18      | 23.01      | 17.33                    | 19.05               | 3.96/1.58      | 52.37     | 3.05                     | 7/8-20UNEF                | 3/4-20UNEF                |
| YH3100A16S-xxxx  | 32.54      | 24.61      | 20.50                    | 14.28               | 3.96/1.58      | 42.87     | 3.05                     | 1-20UNEF                  | 7/8-20UNEF                |
| YH3100A16-xxxx   | 32.54      | 24.61      | 20.50                    | 19.05               | 3.96/1.58      | 52.37     | 3.05                     | 1-20UNEF                  | 7/8-20UNEF                |
| YH3100A18-xxxx   | 34.93      | 26.97      | 23.68                    | 19.05               | 5.12/2.39      | 52.37     | 3.05                     | 1 1/8-18UNEF              | 1-20UNEF                  |
| YH3100A20-xxxx   | 38.10      | 29.36      | 26.88                    | 19.05               | 5.12/2.39      | 55.57     | 3.05                     | 1 1/4-18UNEF              | 1 3/16-18UNEF             |
| YH3100A22-xxxx   | 41.28      | 31.75      | 30.03                    | 19.05               | 5.12/2.39      | 55.57     | 3.05                     | 1 3/8-18UNEF              | 1 3/16-18UNEF             |
| YH3100A24-xxxx   | 44.45      | 34.93      | 33.20                    | 20.63               | 5.12/2.39      | 58.72     | 3.73                     | 1 1/2-18UNEF              | 1 7/16-18UNEF             |
| YH3100A28-xxxx   | 50.80      | 39.67      | 38.77                    | 20.63               | 5.12/2.39      | 58.72     | 3.73                     | 1 3/4-18UNS               | 1 7/16-18UNEF             |
| YH3100A32-xxxx   | 57.15      | 44.45      | 45.12                    | 22.23               | 9.11/3.18      | 61.92     | 4.39                     | 2-18UNS                   | 1 3/4-18UNS               |
| YH3100A36-xxxx   | 63.50      | 49.23      | 50.68                    | 22.23               | 9.11/3.18      | 61.92     | 4.39                     | 2 1/4-16UN                | 2-18UNS                   |

Wall Mounting Receptacle (YH 3100)

YH3100 CLASS “E”, “F”

Includes grommet and bushing.



UNIT: mm

| Part Number      | A<br>±0.79 | B<br>±0.12 | C Dia.<br>+0.38<br>-0.00 | D<br>+0.79<br>-0.00 | E<br>Max./Min. | F<br>Max. | G Dia.<br>+0.25<br>-0.13 | H<br>Max. | * K Dia.<br>Max. | J Thread.<br>(Class : 2A) |
|------------------|------------|------------|--------------------------|---------------------|----------------|-----------|--------------------------|-----------|------------------|---------------------------|
| YH3100x10SL-xxxx | 25.40      | 18.26      | 11.38                    | 14.28               | 3.96/1.58      | 57.15     | 3.05                     | 22.7      | 6.5              | 5/8-24UNEF                |
| YH3100x12S-xxxx  | 27.79      | 20.62      | 14.15                    | 14.28               | 3.96/1.58      | 57.15     | 3.05                     | 22.7      | 6.5              | 3/4-20UNEF                |
| YH3100x12-xxxx   | 27.79      | 20.62      | 14.15                    | 19.05               | 3.96/1.58      | 66.68     | 3.05                     | 22.7      | 6.5              | 3/4-20UNEF                |
| YH3100x14S-xxxx  | 30.18      | 23.01      | 17.33                    | 14.28               | 3.96/1.58      | 57.15     | 3.05                     | 27.5      | 9.0              | 7/8-20UNEF                |
| YH3100x14-xxxx   | 30.18      | 23.01      | 17.33                    | 19.05               | 3.96/1.58      | 66.68     | 3.05                     | 27.5      | 9.0              | 7/8-20UNEF                |
| YH3100x16S-xxxx  | 32.54      | 24.61      | 20.50                    | 14.28               | 3.96/1.58      | 57.15     | 3.05                     | 30.0      | 11.0             | 1-20UNEF                  |
| YH3100x16-xxxx   | 32.54      | 24.61      | 20.50                    | 19.05               | 3.96/1.58      | 66.68     | 3.05                     | 30.0      | 11.0             | 1-20UNEF                  |
| YH3100x18-xxxx   | 34.93      | 26.97      | 23.68                    | 19.05               | 5.12/2.39      | 68.28     | 3.05                     | 32.2      | 14.2             | 1 1/8-18UNEF              |
| YH3100x20-xxxx   | 38.10      | 29.36      | 26.88                    | 19.05               | 5.12/2.39      | 69.85     | 3.05                     | 37.5      | 15.8             | 1 1/4-18UNEF              |
| YH3100x22-xxxx   | 41.28      | 31.75      | 30.03                    | 19.05               | 5.12/2.39      | 69.85     | 3.05                     | 37.5      | 15.8             | 1 3/8-18UNEF              |
| YH3100x24-xxxx   | 44.45      | 34.93      | 33.20                    | 20.63               | 5.12/2.39      | 75.41     | 3.73                     | 43.3      | 21.4             | 1 1/2-18UNEF              |
| YH3100x28-xxxx   | 50.80      | 39.67      | 38.77                    | 20.63               | 5.12/2.39      | 76.99     | 3.73                     | 43.3      | 21.4             | 1 3/4-18UNS               |
| YH3100x32-xxxx   | 57.15      | 44.45      | 45.12                    | 22.23               | 9.11/3.18      | 76.99     | 4.39                     | 51.7      | 26.7             | 2-18UNS                   |
| YH3100x36-xxxx   | 63.50      | 49.23      | 50.68                    | 22.23               | 9.11/3.18      | 83.34     | 4.39                     | 58.0      | 31.7             | 2 1/4-16UN                |

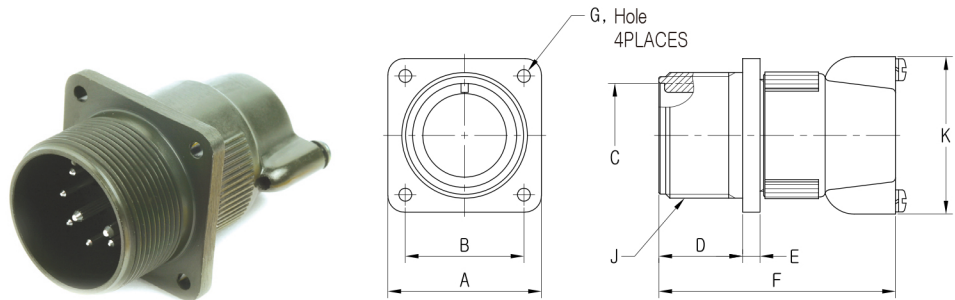
\* 적용 케이בל 최대 외경임.

YH5015 Connector CLASS A/E/F/R

Wall Mounting Receptacle (YH 3100)

YH3100 CLASS “R”

Includes grommet and bushing.



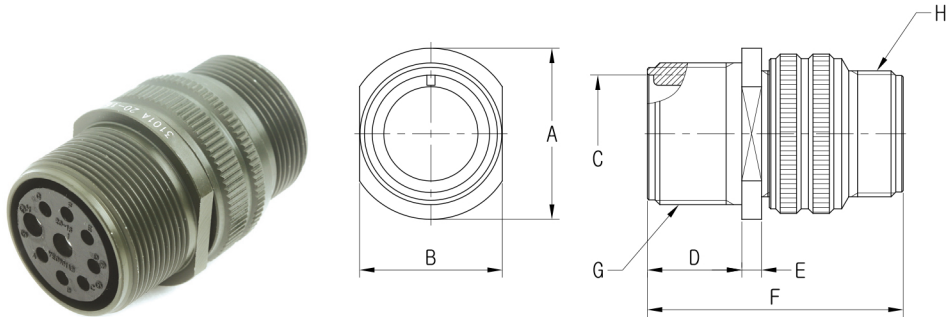
UNIT: mm

| Part Number      | A<br>±0.79 | B<br>±0.12 | C Dia.<br>+0.38<br>-0.00 | D<br>+0.79<br>-0.00 | E<br>Max./Min. | F<br>Max. | G Dia.<br>+0.25<br>-0.13 | K<br>Max. | J Thread.<br>(Class : 2A) |
|------------------|------------|------------|--------------------------|---------------------|----------------|-----------|--------------------------|-----------|---------------------------|
| YH3100R10SL-xxxx | 25.40      | 18.26      | 11.38                    | 14.28               | 3.96/1.58      | 46.69     | 3.05                     | 24.4      | 5/8-24UNEF                |
| YH3100R12S-xxxx  | 27.79      | 20.62      | 14.15                    | 14.28               | 3.96/1.58      | 46.69     | 3.05                     | 24.4      | 3/4-20UNEF                |
| YH3100R12-xxxx   | 27.79      | 20.62      | 14.15                    | 19.05               | 3.96/1.58      | 55.40     | 3.05                     | 24.4      | 3/4-20UNEF                |
| YH3100R14S-xxxx  | 30.18      | 23.01      | 17.33                    | 14.28               | 3.96/1.58      | 46.69     | 3.05                     | 29.0      | 7/8-20UNEF                |
| YH3100R14-xxxx   | 30.18      | 23.01      | 17.33                    | 19.05               | 3.96/1.58      | 55.40     | 3.05                     | 29.0      | 7/8-20UNEF                |
| YH3100R16S-xxxx  | 32.54      | 24.61      | 20.50                    | 14.28               | 3.96/1.58      | 46.69     | 3.05                     | 31.5      | 1-20UNEF                  |
| YH3100R16-xxxx   | 32.54      | 24.61      | 20.50                    | 19.05               | 3.96/1.58      | 55.40     | 3.05                     | 31.5      | 1-20UNEF                  |
| YH3100R18-xxxx   | 34.93      | 26.97      | 23.68                    | 19.05               | 5.12/2.39      | 55.40     | 3.05                     | 36.6      | 1 1/8-18UNEF              |
| YH3100R20-xxxx   | 38.10      | 29.36      | 26.88                    | 19.05               | 5.12/2.39      | 55.40     | 3.05                     | 39.7      | 1 1/4-18UNEF              |
| YH3100R22-xxxx   | 41.28      | 31.75      | 30.03                    | 19.05               | 5.12/2.39      | 55.40     | 3.05                     | 39.7      | 1 3/8-18UNEF              |
| YH3100R24-xxxx   | 44.45      | 34.93      | 33.20                    | 20.63               | 5.12/2.39      | 55.40     | 3.73                     | 47.4      | 1 1/2-18UNEF              |
| YH3100R28-xxxx   | 50.80      | 39.67      | 38.77                    | 20.63               | 5.12/2.39      | 55.40     | 3.73                     | 47.4      | 1 3/4-18UNS               |
| YH3100R32-xxxx   | 57.15      | 44.45      | 45.12                    | 22.23               | 9.11/3.18      | 58.98     | 4.39                     | 55.9      | 2-18UNS                   |
| YH3100R36-xxxx   | 63.50      | 49.23      | 50.68                    | 22.23               | 9.11/3.18      | 58.98     | 4.39                     | 60.8      | 2 1/4-16UN                |

Cable Connecting Plug (YH 3101)

YH3101 CLASS “A”

Can be used with accessories such as YH3057 at the endbell.  
Excludes grommet and bushing.



UNIT: mm

| Part Number      | A Dia.<br>Max. | B<br>Max. | C Dia.<br>+0.38<br>-0.00 | D<br>+0.79<br>-0.00 | E<br>Max./Min. | F<br>Max. | G Thread.<br>(Class : 2A) | H Thread.<br>(Class : 2A) |
|------------------|----------------|-----------|--------------------------|---------------------|----------------|-----------|---------------------------|---------------------------|
| YH3101A10SL-xxxx | 21.8           | 16.2      | 11.38                    | 14.28               | 3.96/1.58      | 38.88     | 5/8-24UNEF                | 5/8-24UNEF                |
| YH3101A12S-xxxx  | 25.0           | 19.3      | 14.15                    | 14.28               | 3.96/1.58      | 42.87     | 3/4-20UNEF                | 5/8-24UNEF                |
| YH3101A12-xxxx   | 25.0           | 19.3      | 14.15                    | 19.05               | 3.96/1.58      | 52.37     | 3/4-20UNEF                | 5/8-24UNEF                |
| YH3101A14S-xxxx  | 28.2           | 22.5      | 17.33                    | 14.28               | 3.96/1.58      | 42.87     | 7/8-20UNEF                | 3/4-20UNEF                |
| YH3101A14-xxxx   | 28.2           | 22.5      | 17.33                    | 19.05               | 3.96/1.58      | 52.37     | 7/8-20UNEF                | 3/4-20UNEF                |
| YH3101A16S-xxxx  | 31.4           | 25.6      | 20.50                    | 14.28               | 3.96/1.58      | 42.87     | 1-20UNEF                  | 7/8-20UNEF                |
| YH3101A16-xxxx   | 31.4           | 25.6      | 20.50                    | 19.05               | 3.96/1.58      | 52.37     | 1-20UNEF                  | 7/8-20UNEF                |
| YH3101A18-xxxx   | 34.5           | 28.8      | 23.68                    | 19.05               | 5.12/2.39      | 52.37     | 1 1/8-18UNEF              | 1-20UNEF                  |
| YH3101A20-xxxx   | 37.6           | 32.0      | 26.88                    | 19.05               | 5.12/2.39      | 55.57     | 1 1/4-18UNEF              | 1 3/16-18UNEF             |
| YH3101A22-xxxx   | 41.0           | 35.2      | 30.03                    | 19.05               | 5.12/2.39      | 55.57     | 1 3/8-18UNEF              | 1 3/16-18UNEF             |
| YH3101A24-xxxx   | 43.8           | 38.4      | 33.20                    | 20.63               | 5.12/2.39      | 58.72     | 1 1/2-18UNEF              | 1 7/16-18UNEF             |
| YH3101A28-xxxx   | 50.5           | 44.8      | 38.77                    | 20.63               | 5.12/2.39      | 58.72     | 1 3/4-18UNS               | 1 7/16-18UNEF             |
| YH3101A32-xxxx   | 57.0           | 51.2      | 45.12                    | 22.23               | 9.11/3.18      | 61.92     | 2-18UNS                   | 1 3/4-18UNS               |
| YH3101A36-xxxx   | 63.2           | 57.5      | 50.68                    | 22.23               | 9.11/3.18      | 61.92     | 2 1/4-16UN                | 2-18UNS                   |

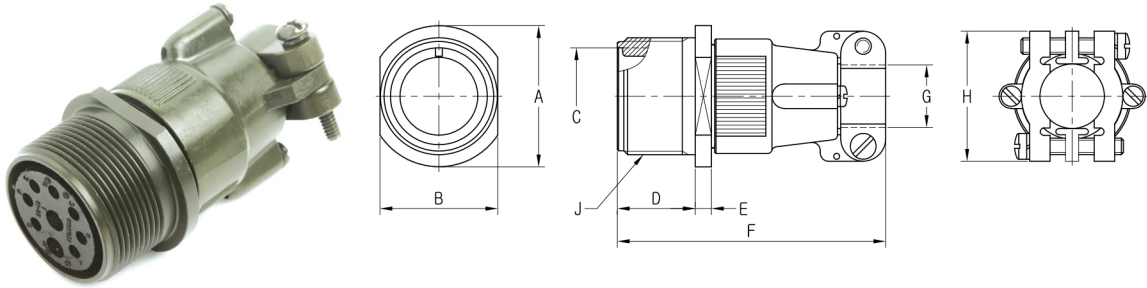


YH5015 Connector CLASS A/E/F/R

Cable Connecting Plug (YH 3101)

YH3101 CLASS “E”, “F”

Includes grommet and bushing.



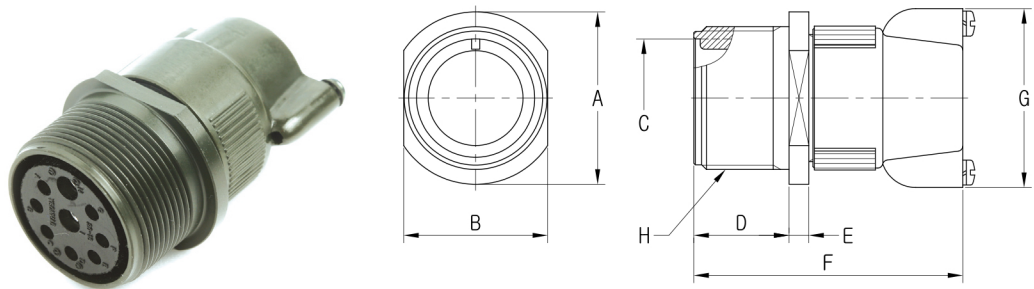
UNIT: mm

| Part Number      | A Dia.<br>Max. | B<br>Max. | C Dia.<br>+0.38<br>-0.00 | D<br>+0.79<br>-0.00 | E<br>Max./Min. | F<br>Max. | * G Dia.<br>Max. | H<br>Max. | J Thread.<br>(Class : 2A) |
|------------------|----------------|-----------|--------------------------|---------------------|----------------|-----------|------------------|-----------|---------------------------|
| YH3101x10SL-xxxx | 21.8           | 16.2      | 11.38                    | 14.28               | 3.96/1.58      | 57.15     | 6.5              | 22.7      | 5/8-24UNEF                |
| YH3101x12S-xxxx  | 25.0           | 19.3      | 14.15                    | 14.28               | 3.96/1.58      | 57.15     | 6.5              | 22.7      | 3/4-20UNEF                |
| YH3101x12-xxxx   | 25.0           | 19.3      | 14.15                    | 19.05               | 3.96/1.58      | 66.68     | 6.5              | 22.7      | 3/4-20UNEF                |
| YH3101x14S-xxxx  | 28.2           | 22.5      | 17.33                    | 14.28               | 3.96/1.58      | 57.15     | 9.0              | 27.5      | 7/8-20UNEF                |
| YH3101x14-xxxx   | 28.2           | 22.5      | 17.33                    | 19.05               | 3.96/1.58      | 66.68     | 9.0              | 27.5      | 7/8-20UNEF                |
| YH3101x16S-xxxx  | 31.4           | 25.6      | 20.50                    | 14.28               | 3.96/1.58      | 57.15     | 11.0             | 30.0      | 1-20UNEF                  |
| YH3101x16-xxxx   | 31.4           | 25.6      | 20.50                    | 19.05               | 3.96/1.58      | 66.68     | 11.0             | 30.0      | 1-20UNEF                  |
| YH3101x18-xxxx   | 34.5           | 28.8      | 23.68                    | 19.05               | 5.12/2.39      | 68.28     | 14.2             | 32.2      | 1 1/8-18UNEF              |
| YH3101x20-xxxx   | 37.6           | 32.0      | 26.88                    | 19.05               | 5.12/2.39      | 69.85     | 15.8             | 37.5      | 1 1/4-18UNEF              |
| YH3101x22-xxxx   | 41.0           | 35.2      | 30.03                    | 19.05               | 5.12/2.39      | 69.85     | 15.8             | 37.5      | 1 3/8-18UNEF              |
| YH3101x24-xxxx   | 43.8           | 38.4      | 33.20                    | 20.63               | 5.12/2.39      | 75.41     | 21.4             | 43.3      | 1 1/2-18UNEF              |
| YH3101x28-xxxx   | 50.5           | 44.8      | 38.77                    | 20.63               | 5.12/2.39      | 76.99     | 21.4             | 43.3      | 1 3/4-18UNEF              |
| YH3101x32-xxxx   | 57.0           | 51.2      | 45.12                    | 22.23               | 9.11/3.18      | 76.99     | 26.7             | 51.7      | 2-18UNEF                  |
| YH3101x36-xxxx   | 63.2           | 57.5      | 50.68                    | 22.23               | 9.11/3.18      | 83.34     | 31.7             | 58.0      | 2 1/4-16UN                |

Cable Connecting Plug (YH 3101)

YH3101 CLASS “R”

Includes grommet and bushing.



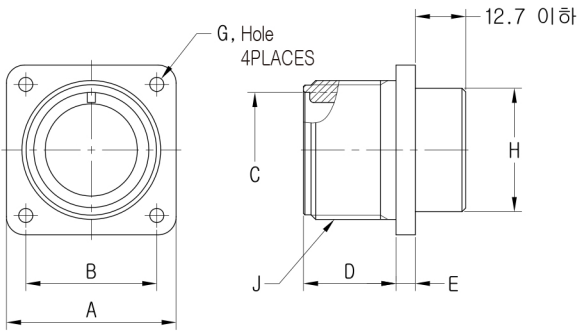
UNIT: mm

| Part Number      | A Dia.<br>Max. | B<br>Max. | C Dia.<br>+0.38<br>-0.00 | D<br>+0.79<br>-0.00 | E<br>Max./Min. | F<br>Max. | G<br>Max. | H Thread.<br>(Class : 2A) |
|------------------|----------------|-----------|--------------------------|---------------------|----------------|-----------|-----------|---------------------------|
| YH3101R10SL-xxxx | 21.8           | 16.2      | 11.38                    | 14.28               | 3.96/1.58      | 46.69     | 24.4      | 5/8-24UNEF                |
| YH3101R12S-xxxx  | 25.0           | 19.3      | 14.15                    | 14.28               | 3.96/1.58      | 46.69     | 24.4      | 3/4-20UNEF                |
| YH3101R12-xxxx   | 25.0           | 19.3      | 14.15                    | 19.05               | 3.96/1.58      | 55.40     | 24.4      | 3/4-20UNEF                |
| YH3101R14S-xxxx  | 28.2           | 22.5      | 17.33                    | 14.28               | 3.96/1.58      | 46.69     | 29.0      | 7/8-20UNEF                |
| YH3101R14-xxxx   | 28.2           | 22.5      | 17.33                    | 19.05               | 3.96/1.58      | 55.40     | 29.0      | 7/8-20UNEF                |
| YH3101R16S-xxxx  | 31.4           | 25.6      | 20.50                    | 14.28               | 3.96/1.58      | 46.69     | 31.5      | 1-20UNEF                  |
| YH3101R16-xxxx   | 31.4           | 25.6      | 20.50                    | 19.05               | 3.96/1.58      | 55.40     | 31.5      | 1-20UNEF                  |
| YH3101R18-xxxx   | 34.5           | 28.8      | 23.68                    | 19.05               | 5.12/2.39      | 55.40     | 36.6      | 1 1/8-18UNEF              |
| YH3101R20-xxxx   | 37.6           | 32.0      | 26.88                    | 19.05               | 5.12/2.39      | 55.40     | 39.7      | 1 1/4-18UNEF              |
| YH3101R22-xxxx   | 41.0           | 35.2      | 30.03                    | 19.05               | 5.12/2.39      | 55.40     | 39.7      | 1 3/8-18UNEF              |
| YH3101R24-xxxx   | 43.8           | 38.4      | 33.20                    | 20.63               | 5.12/2.39      | 55.40     | 47.4      | 1 1/2-18UNEF              |
| YH3101R28-xxxx   | 50.5           | 44.8      | 38.77                    | 20.63               | 5.12/2.39      | 55.40     | 47.4      | 1 3/4-18UNEF              |
| YH3101R32-xxxx   | 57.0           | 51.2      | 45.12                    | 22.23               | 9.11/3.18      | 58.98     | 55.9      | 2-18UNEF                  |
| YH3101R36-xxxx   | 63.2           | 57.5      | 50.68                    | 22.23               | 9.11/3.18      | 58.98     | 60.8      | 2 1/4-16UN                |

YH5015 Connector CLASS A/E/F/R

Box Mouting Receptacle (YH 3102)

YH3102 CLASS “E”, “R”



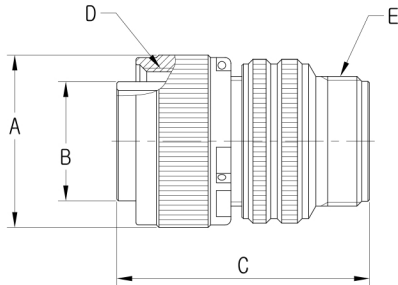
UNIT: mm

| Part Number      | A<br>±0.79 | B<br>±0.12 | C Dia.<br>+0.38<br>-0.00 | D<br>+0.79<br>-0.00 | E<br>Max./Min. | G Dia.<br>+0.25<br>-0.13 | H Dia.<br>±0.1 | J Thread.<br>(Class : 2A) |
|------------------|------------|------------|--------------------------|---------------------|----------------|--------------------------|----------------|---------------------------|
| YH3102x10SL-xxxx | 25.40      | 18.26      | 11.38                    | 14.28               | 3.96/1.58      | 3.05                     | 14.5           | 5/8-24UNEF                |
| YH3102x12S-xxxx  | 27.79      | 20.62      | 14.15                    | 14.28               | 3.96/1.58      | 3.05                     | 15.8           | 3/4-20UNEF                |
| YH3102x12-xxxx   | 27.79      | 20.62      | 14.15                    | 19.05               | 3.96/1.58      | 3.05                     | 15.8           | 3/4-20UNEF                |
| YH3102x14S-xxxx  | 30.18      | 23.01      | 17.33                    | 14.28               | 3.96/1.58      | 3.05                     | 19.0           | 7/8-20UNEF                |
| YH3102x14-xxxx   | 30.18      | 23.01      | 17.33                    | 19.05               | 3.96/1.58      | 3.05                     | 19.0           | 7/8-20UNEF                |
| YH3102x16S-xxxx  | 32.54      | 24.61      | 20.50                    | 14.28               | 3.96/1.58      | 3.05                     | 22.0           | 1-20UNEF                  |
| YH3102x16-xxxx   | 32.54      | 24.61      | 20.50                    | 19.05               | 3.96/1.58      | 3.05                     | 22.0           | 1-20UNEF                  |
| YH3102x18-xxxx   | 34.93      | 26.97      | 23.68                    | 19.05               | 5.12/2.39      | 3.05                     | 26.0           | 1 1/8-18UNEF              |
| YH3102x20-xxxx   | 38.10      | 29.36      | 26.88                    | 19.05               | 5.12/2.39      | 3.05                     | 29.0           | 1 1/4-18UNEF              |
| YH3102x22-xxxx   | 41.28      | 31.75      | 30.03                    | 19.05               | 5.12/2.39      | 3.05                     | 32.0           | 1 3/8-18UNEF              |
| YH3102x24-xxxx   | 44.45      | 34.93      | 33.20                    | 20.63               | 5.12/2.39      | 3.73                     | 35.3           | 1 1/2-18UNEF              |
| YH3102x28-xxxx   | 50.80      | 39.67      | 38.77                    | 20.63               | 5.12/2.39      | 3.73                     | 42.0           | 1 3/4-18UNEF              |
| YH3102x32-xxxx   | 57.15      | 44.45      | 45.12                    | 22.23               | 9.11/3.18      | 4.39                     | 47.3           | 2-18UNEF                  |
| YH3102x36-xxxx   | 63.50      | 49.23      | 50.68                    | 22.23               | 9.11/3.18      | 4.39                     | 53.3           | 2 1/4-16UN                |

Straight Plug (YH 3106)

YH3106 CLASS “A”

Can be used with accessories such as YH3057 at the endbell.  
Excludes O-Ring, grommet and bushing.



UNIT: mm

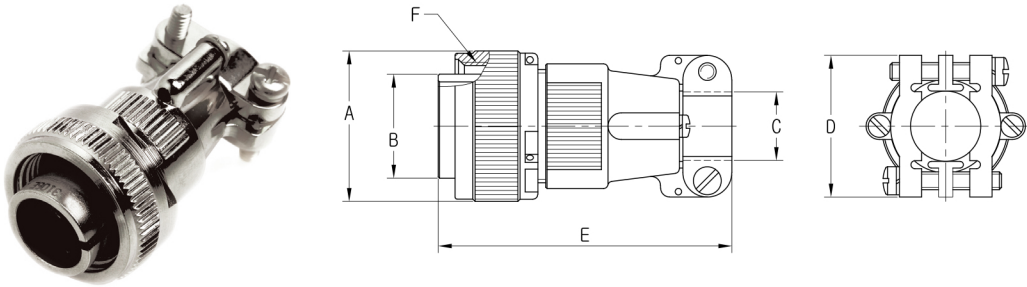
| Part Number      | A Dia.<br>Max. | B Dia.<br>+0.00<br>-0.38 | C<br>Max. | D Thread.<br>(Class : 2B) | E Thread.<br>(Class : 2A) |
|------------------|----------------|--------------------------|-----------|---------------------------|---------------------------|
| YH3106A10SL-xxxx | 24.61          | 11.33                    | 38.88     | 5/8-24UNEF                | 5/8-24UNEF                |
| YH3106A12S-xxxx  | 26.97          | 14.10                    | 42.87     | 3/4-20UNEF                | 5/8-24UNEF                |
| YH3106A12-xxxx   | 26.97          | 14.10                    | 52.37     | 3/4-20UNEF                | 5/8-24UNEF                |
| YH3106A14S-xxxx  | 29.36          | 17.15                    | 42.87     | 7/8-20UNEF                | 3/4-20UNEF                |
| YH3106A14-xxxx   | 29.36          | 17.15                    | 52.37     | 7/8-20UNEF                | 3/4-20UNEF                |
| YH3106A16S-xxxx  | 31.75          | 20.45                    | 42.87     | 1-20UNEF                  | 7/8-20UNEF                |
| YH3106A16-xxxx   | 31.75          | 20.45                    | 52.37     | 1-20UNEF                  | 7/8-20UNEF                |
| YH3106A18-xxxx   | 34.13          | 23.62                    | 52.37     | 1 1/8-18UNEF              | 1-20UNEF                  |
| YH3106A20-xxxx   | 37.31          | 26.67                    | 55.57     | 1 1/4-18UNEF              | 1 3/16-18UNEF             |
| YH3106A22-xxxx   | 40.48          | 29.85                    | 55.57     | 1 3/8-18UNEF              | 1 3/16-18UNEF             |
| YH3106A24-xxxx   | 43.66          | 33.02                    | 58.72     | 1 1/2-18UNEF              | 1 7/16-18UNEF             |
| YH3106A28-xxxx   | 50.01          | 38.61                    | 58.72     | 1 3/4-18UNEF              | 1 7/16-18UNEF             |
| YH3106A32-xxxx   | 56.36          | 44.96                    | 61.92     | 2-18UNEF                  | 1 3/4-18UNEF              |
| YH3106A36-xxxx   | 62.71          | 50.29                    | 61.92     | 2 1/4-16UN                | 2-18UNEF                  |

YH5015 Connector CLASS A/E/F/R

Straight Plug (YH 3106)

YH3106 CLASS “E”, “F”

E - Excludes O-Ring  
F - Includes O-Ring  
Includes grommet and bushing.



UNIT: mm

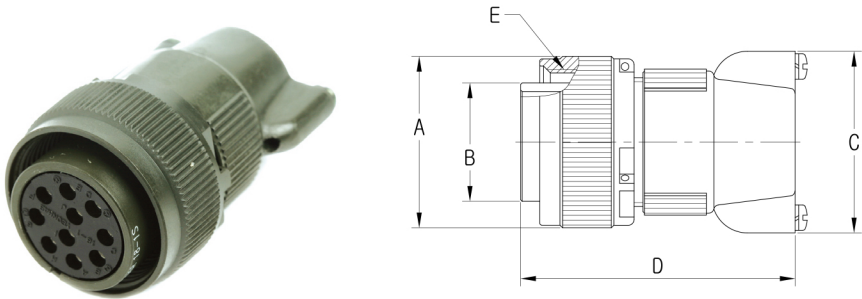
| Part Number      | A Dia.<br>Max. | B Dia.<br>+0.00<br>-0.38 | * C Dia.<br>Max. | D<br>Max. | E<br>Max. | F Thread.<br>(Class : 2B) |
|------------------|----------------|--------------------------|------------------|-----------|-----------|---------------------------|
| YH3106x10SL-xxxx | 24.61          | 11.33                    | 6.5              | 22.7      | 57.15     | 5/8-24UNEF                |
| YH3106x12S-xxxx  | 26.97          | 14.10                    | 6.5              | 22.7      | 57.15     | 3/4-20UNEF                |
| YH3106x12-xxxx   | 26.97          | 14.10                    | 6.5              | 22.7      | 66.68     | 3/4-20UNEF                |
| YH3106x14S-xxxx  | 29.36          | 17.15                    | 9.0              | 27.5      | 57.15     | 7/8-20UNEF                |
| YH3106x14-xxxx   | 29.36          | 17.15                    | 9.0              | 27.5      | 66.68     | 7/8-20UNEF                |
| YH3106x16S-xxxx  | 31.75          | 20.45                    | 11.0             | 30.0      | 57.15     | 1-20UNEF                  |
| YH3106x16-xxxx   | 31.75          | 20.45                    | 11.0             | 30.0      | 66.68     | 1-20UNEF                  |
| YH3106x18-xxxx   | 34.13          | 23.62                    | 14.2             | 32.2      | 68.28     | 1 1/8-18UNEF              |
| YH3106x20-xxxx   | 37.31          | 26.67                    | 15.8             | 37.5      | 69.85     | 1 1/4-18UNEF              |
| YH3106x22-xxxx   | 40.48          | 29.85                    | 15.8             | 37.5      | 69.85     | 1 3/8-18UNEF              |
| YH3106x24-xxxx   | 43.66          | 33.02                    | 21.4             | 43.3      | 75.41     | 1 1/2-18UNEF              |
| YH3106x28-xxxx   | 50.01          | 38.61                    | 21.4             | 43.3      | 76.99     | 1 3/4-18UNS               |
| YH3106x32-xxxx   | 56.36          | 44.96                    | 26.7             | 51.7      | 76.99     | 2-18UNS                   |
| YH3106x36-xxxx   | 62.71          | 50.29                    | 31.7             | 58.0      | 83.34     | 2 1/4-16UN                |

\* 적용 케이블 최대 외경임.

Straight Plug (YH 3106)

YH3106 CLASS“R”

Includes O-Ring, grommet and bushing.



UNIT: mm

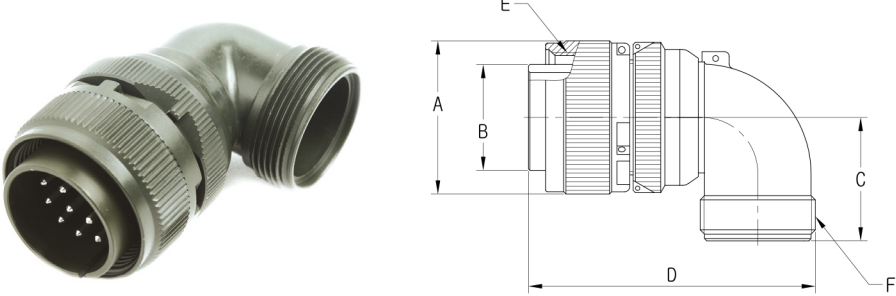
| Part Number      | A Dia.<br>Max. | B Dia.<br>+0.00<br>-0.38 | C<br>Max. | D<br>Max. | E Thread.<br>(Class : 2B) |
|------------------|----------------|--------------------------|-----------|-----------|---------------------------|
| YH3106R10SL-xxxx | 24.61          | 11.33                    | 24.4      | 46.69     | 5/8-24UNEF                |
| YH3106R12S-xxxx  | 26.97          | 14.10                    | 24.4      | 46.69     | 3/4-20UNEF                |
| YH3106R12-xxxx   | 26.97          | 14.10                    | 24.4      | 55.40     | 3/4-20UNEF                |
| YH3106R14S-xxxx  | 29.36          | 17.15                    | 29.0      | 46.69     | 7/8-20UNEF                |
| YH3106R14-xxxx   | 29.36          | 17.15                    | 29.0      | 55.40     | 7/8-20UNEF                |
| YH3106R16S-xxxx  | 31.75          | 20.45                    | 31.5      | 46.69     | 1-20UNEF                  |
| YH3106R16-xxxx   | 31.75          | 20.45                    | 31.5      | 55.40     | 1-20UNEF                  |
| YH3106R18-xxxx   | 34.13          | 23.62                    | 36.6      | 55.40     | 1 1/8-18UNEF              |
| YH3106R20-xxxx   | 37.31          | 26.67                    | 39.7      | 55.40     | 1 1/4-18UNEF              |
| YH3106R22-xxxx   | 40.48          | 29.85                    | 39.7      | 55.40     | 1 3/8-18UNEF              |
| YH3106R24-xxxx   | 43.66          | 33.02                    | 47.4      | 55.40     | 1 1/2-18UNEF              |
| YH3106R28-xxxx   | 50.01          | 38.61                    | 47.4      | 55.40     | 1 3/4-18UNS               |
| YH3106R32-xxxx   | 56.36          | 44.96                    | 55.9      | 58.98     | 2-18UNS                   |
| YH3106R36-xxxx   | 62.71          | 50.29                    | 60.8      | 58.98     | 2 1/4-16UN                |

YH5015 Connector CLASS A/E/F/R

90° Angle plug (YH 3108)

YH3108 CLASS “A”

Can be used with accessories such as  
YH3057 at the endbell.  
Excludes O-Ring, grommet and bushing.



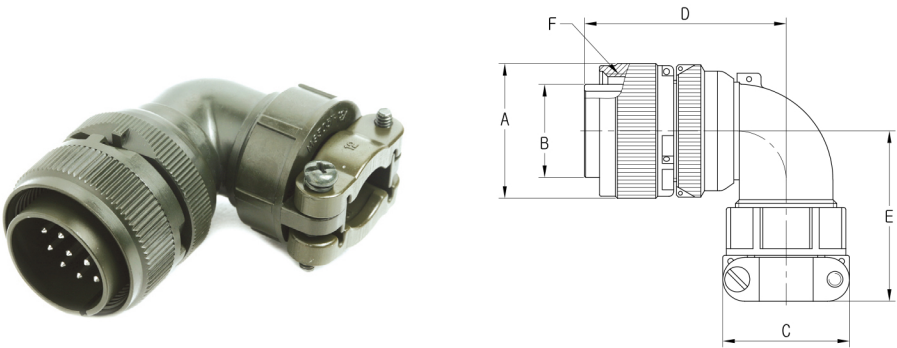
UNIT: mm

| Part Number      | A Dia.<br>Max. | B Dia.<br>+0.00<br>-0.38 | C<br>Max. | D<br>Max. | E Thread.<br>(Class : 2B) | F Thread.<br>(Class : 2A) |
|------------------|----------------|--------------------------|-----------|-----------|---------------------------|---------------------------|
| YH3108A10SL-xxxx | 24.61          | 11.33                    | 25.40     | 55.58     | 5/8-24UNEF                | 5/8-24UNEF                |
| YH3108A12S-xxxx  | 26.97          | 14.10                    | 26.97     | 55.58     | 3/4-20UNEF                | 5/8-24UNEF                |
| YH3108A12-xxxx   | 26.97          | 14.10                    | 26.97     | 64.29     | 3/4-20UNEF                | 5/8-24UNEF                |
| YH3108A14S-xxxx  | 29.36          | 17.15                    | 28.57     | 58.72     | 7/8-20UNEF                | 3/4-20UNEF                |
| YH3108A14-xxxx   | 29.36          | 17.15                    | 28.57     | 68.26     | 7/8-20UNEF                | 3/4-20UNEF                |
| YH3108A16S-xxxx  | 31.75          | 20.45                    | 30.17     | 61.11     | 1-20UNEF                  | 7/8-20UNEF                |
| YH3108A16-xxxx   | 31.75          | 20.45                    | 30.17     | 70.64     | 1-20UNEF                  | 7/8-20UNEF                |
| YH3108A18-xxxx   | 34.13          | 23.62                    | 33.32     | 72.24     | 1 1/8-18UNEF              | 1-20UNEF                  |
| YH3108A20-xxxx   | 37.31          | 26.67                    | 34.92     | 82.55     | 1 1/4-18UNEF              | 1 3/16-18UNEF             |
| YH3108A22-xxxx   | 40.48          | 29.85                    | 34.92     | 82.55     | 1 3/8-18UNEF              | 1 3/16-18UNEF             |
| YH3108A24-xxxx   | 43.66          | 33.02                    | 39.67     | 94.46     | 1 1/2-18UNEF              | 1 7/16-18UNEF             |
| YH3108A28-xxxx   | 50.01          | 38.61                    | 39.67     | 94.46     | 1 3/4-18UNS               | 1 7/16-18UNEF             |
| YH3108A32-xxxx   | 56.36          | 44.96                    | 47.62     | 106.38    | 2-18UNS                   | 1 3/4-18UNS               |
| YH3108A36-xxxx   | 62.71          | 50.29                    | 52.37     | 109.14    | 2 1/4-16UN                | 2-18UNS                   |

90° Angle Plug (YH 3108)

YH3108 CLASS “E”, “R”

E - Excludes O-Ring  
F - Includes O-Ring  
Includes grommet and bushing.



UNIT: mm

| Part Number      | A Dia.<br>Max. | B Dia.<br>+0.00<br>-0.38 | C<br>Max. | D<br>Max. | E<br>Max. | F Thread.<br>(Class : 2B) |
|------------------|----------------|--------------------------|-----------|-----------|-----------|---------------------------|
| YH3108x10SL-xxxx | 24.61          | 11.33                    | 22.7      | 45.0      | 38.10     | 5/8-24UNEF                |
| YH3108x12S-xxxx  | 26.97          | 14.10                    | 22.7      | 45.0      | 38.10     | 3/4-20UNEF                |
| YH3108x12-xxxx   | 26.97          | 14.10                    | 22.7      | 54.0      | 38.10     | 3/4-20UNEF                |
| YH3108x14S-xxxx  | 29.36          | 17.15                    | 27.5      | 47.0      | 40.49     | 7/8-20UNEF                |
| YH3108x14-xxxx   | 29.36          | 17.15                    | 27.5      | 55.0      | 40.49     | 7/8-20UNEF                |
| YH3108x16S-xxxx  | 31.75          | 20.45                    | 30.0      | 48.0      | 42.88     | 1-20UNEF                  |
| YH3108x16-xxxx   | 31.75          | 20.45                    | 30.0      | 57.0      | 42.88     | 1-20UNEF                  |
| YH3108x18-xxxx   | 34.13          | 23.62                    | 32.2      | 58.0      | 45.24     | 1 1/8-18UNEF              |
| YH3108x20-xxxx   | 37.31          | 26.67                    | 37.5      | 61.0      | 50.01     | 1 1/4-18UNEF              |
| YH3108x22-xxxx   | 40.48          | 29.85                    | 37.5      | 61.0      | 50.80     | 1 3/8-18UNEF              |
| YH3108x24-xxxx   | 43.66          | 33.02                    | 43.3      | 66.0      | 53.97     | 1 1/2-18UNEF              |
| YH3108x28-xxxx   | 50.01          | 38.61                    | 43.3      | 66.0      | 55.58     | 1 3/4-18UNS               |
| YH3108x32-xxxx   | 56.36          | 44.96                    | 51.7      | 72.0      | 65.89     | 2-18UNS                   |
| YH3108x36-xxxx   | 62.71          | 50.29                    | 58.0      | 75.0      | 69.06     | 2 1/4-16UN                |

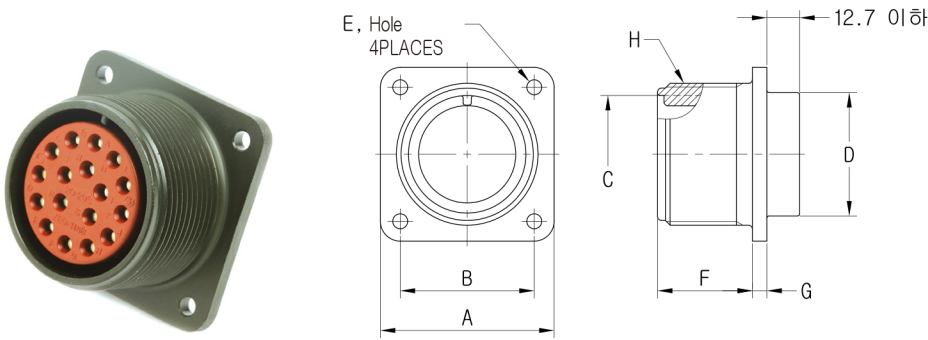


YH5015 Connector CLASS “B” [Split type]

Box Mounting Receptacle (YH 3102)

YH3102 CLASS “B”

Not a waterproof structure.



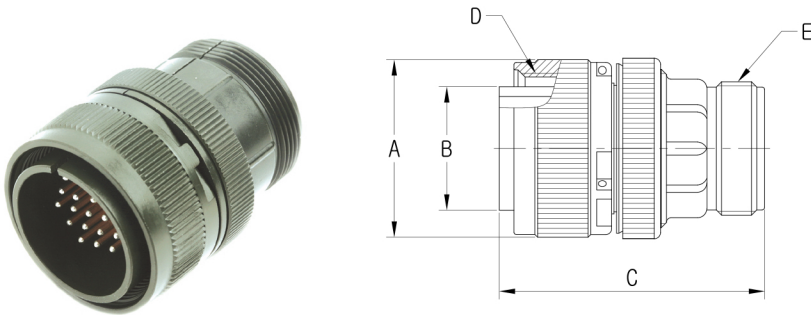
UNIT: mm

| Part Number      | A<br>±0.79 | B<br>±0.12 | C Dia.<br>+0.38<br>-0.00 | D Dia.<br>Max. | E Dia.<br>+0.25<br>-0.13 | F<br>+0.79<br>-0.00 | G<br>Max./Min. | H Thread.<br>(Class : 2A) |
|------------------|------------|------------|--------------------------|----------------|--------------------------|---------------------|----------------|---------------------------|
| YH3102B10SL-xxxx | 25.40      | 18.26      | 11.38                    | 15.9           | 3.05                     | 14.28               | 3.96/1.58      | 5/8-24UNEF                |
| YH3102B12S-xxxx  | 27.79      | 20.62      | 14.15                    | 15.9           | 3.05                     | 14.28               | 3.96/1.58      | 3/4-20UNEF                |
| YH3102B12-xxxx   | 27.79      | 20.62      | 14.15                    | 15.9           | 3.05                     | 19.05               | 3.96/1.58      | 3/4-20UNEF                |
| YH3102B14S-xxxx  | 30.18      | 23.01      | 17.33                    | 19.0           | 3.05                     | 14.28               | 3.96/1.58      | 7/8-20UNEF                |
| YH3102B14-xxxx   | 30.18      | 23.01      | 17.33                    | 19.0           | 3.05                     | 19.05               | 3.96/1.58      | 7/8-20UNEF                |
| YH3102B16S-xxxx  | 32.54      | 24.61      | 20.50                    | 22.2           | 3.05                     | 14.28               | 3.96/1.58      | 1-20UNEF                  |
| YH3102B16-xxxx   | 32.54      | 24.61      | 20.50                    | 22.2           | 3.05                     | 19.05               | 3.96/1.58      | 1-20UNEF                  |
| YH3102B18-xxxx   | 34.93      | 26.97      | 23.68                    | 25.4           | 3.05                     | 19.05               | 5.12/2.39      | 1 1/8-18UNEF              |
| YH3102B20-xxxx   | 38.10      | 29.36      | 26.88                    | 29.0           | 3.05                     | 19.05               | 5.12/2.39      | 1 1/4-18UNEF              |
| YH3102B22-xxxx   | 41.28      | 31.75      | 30.03                    | 32.2           | 3.05                     | 19.05               | 5.12/2.39      | 1 3/8-18UNEF              |
| YH3102B24-xxxx   | 44.45      | 34.93      | 33.20                    | 35.3           | 3.73                     | 20.63               | 5.12/2.39      | 1 1/2-18UNEF              |
| YH3102B28-xxxx   | 50.80      | 39.67      | 38.77                    | 41.2           | 3.73                     | 20.63               | 5.12/2.39      | 1 3/4-18UNS               |
| YH3102B32-xxxx   | 57.15      | 44.45      | 45.12                    | 47.6           | 4.39                     | 22.23               | 9.11/3.18      | 2-18UNS                   |
| YH3102B36-xxxx   | 63.50      | 49.23      | 50.68                    | 52.4           | 4.39                     | 22.23               | 9.11/3.18      | 2 1/4-16UN                |

Straight Plug (YH 3106)

YH3106 CLASS “B”

Can be used with accessories such as YH3057 at the endbell.  
Endbell may be separated.  
Not a waterproof structure.



UNIT: mm

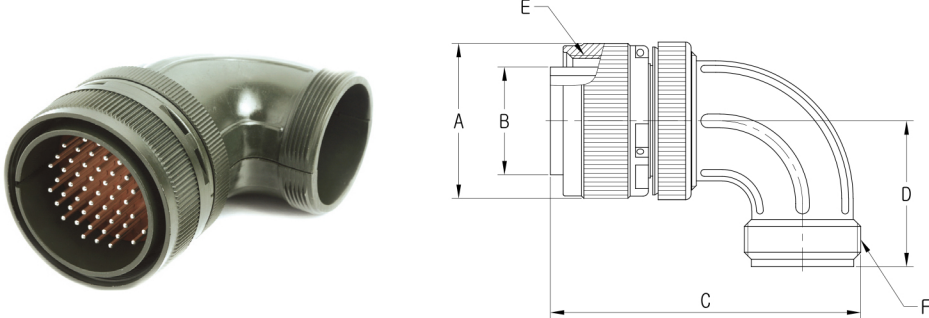
| Part Number      | A Dia.<br>Max. | B Dia.<br>+0.00<br>-0.38 | C<br>Max. | D Thread.<br>(Class : 2B) | E Thread.<br>(Class : 2A) |
|------------------|----------------|--------------------------|-----------|---------------------------|---------------------------|
| YH3106B10SL-xxxx | 24.61          | 11.33                    | 38.88     | 5/8-24UNEF                | 5/8-24UNEF                |
| YH3106B12S-xxxx  | 26.97          | 14.10                    | 42.87     | 3/4-20UNEF                | 5/8-24UNEF                |
| YH3106B12-xxxx   | 26.97          | 14.10                    | 52.37     | 3/4-20UNEF                | 5/8-24UNEF                |
| YH3106B14S-xxxx  | 29.36          | 17.15                    | 42.87     | 7/8-20UNEF                | 3/4-20UNEF                |
| YH3106B14-xxxx   | 29.36          | 17.15                    | 52.37     | 7/8-20UNEF                | 3/4-20UNEF                |
| YH3106B16S-xxxx  | 31.75          | 20.45                    | 42.87     | 1-20UNEF                  | 7/8-20UNEF                |
| YH3106B16-xxxx   | 31.75          | 20.45                    | 52.37     | 1-20UNEF                  | 7/8-20UNEF                |
| YH3106B18-xxxx   | 34.13          | 23.62                    | 52.37     | 1 1/8-18UNEF              | 1-20UNEF                  |
| YH3106B20-xxxx   | 37.31          | 26.67                    | 55.57     | 1 1/4-18UNEF              | 1 3/16-18UNEF             |
| YH3106B22-xxxx   | 40.48          | 29.85                    | 55.57     | 1 3/8-18UNEF              | 1 3/16-18UNEF             |
| YH3106B24-xxxx   | 43.66          | 33.02                    | 58.72     | 1 1/2-18UNEF              | 1 7/16-18UNEF             |
| YH3106B28-xxxx   | 50.01          | 38.61                    | 58.72     | 1 3/4-18UNS               | 1 7/16-18UNEF             |
| YH3106B32-xxxx   | 56.36          | 44.96                    | 61.92     | 2-18UNS                   | 1 3/4-18UNS               |
| YH3106B36-xxxx   | 62.71          | 50.29                    | 61.92     | 2 1/4-16UN                | 2-18UNS                   |

YH5015 Connector CLASS “B” [Split type]

90° Angle Plug (YH 3108)

YH3108 CLASS “B”

Can be used with accessories such as YH3057 at the endbell.  
Endbell may be separated.  
Not a waterproof structure.



UNIT: mm

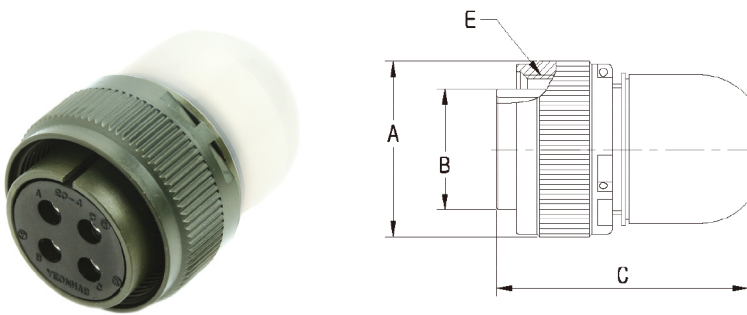
| Part Number      | A Dia.<br>Max. | B Dia.<br>+0.00<br>-0.38 | C<br>Max. | D<br>Max. | E Thread.<br>(Class : 2B) | F Thread.<br>(Class : 2A) |
|------------------|----------------|--------------------------|-----------|-----------|---------------------------|---------------------------|
| YH3108B10SL-xxxx | 24.61          | 11.33                    | 46.02     | 25.40     | 5/8-24UNEF                | 5/8-24UNEF                |
| YH3108B12S-xxxx  | 26.97          | 14.10                    | 50.80     | 26.97     | 3/4-20UNEF                | 5/8-24UNEF                |
| YH3108B12-xxxx   | 26.97          | 14.10                    | 57.15     | 26.97     | 3/4-20UNEF                | 5/8-24UNEF                |
| YH3108B14S-xxxx  | 29.36          | 17.15                    | 53.97     | 29.36     | 7/8-20UNEF                | 3/4-20UNEF                |
| YH3108B14-xxxx   | 29.36          | 17.15                    | 58.72     | 29.36     | 7/8-20UNEF                | 3/4-20UNEF                |
| YH3108B16S-xxxx  | 31.75          | 20.45                    | 60.32     | 31.75     | 1-20UNEF                  | 7/8-20UNEF                |
| YH3108B16-xxxx   | 31.75          | 20.45                    | 65.07     | 31.75     | 1-20UNEF                  | 7/8-20UNEF                |
| YH3108B18-xxxx   | 34.13          | 23.62                    | 68.27     | 33.32     | 1 1/8-18UNEF              | 1-20UNEF                  |
| YH3108B20-xxxx   | 37.31          | 26.67                    | 76.98     | 34.92     | 1 1/4-18UNEF              | 1 3/16-18UNEF             |
| YH3108B22-xxxx   | 40.48          | 29.85                    | 86.51     | 34.92     | 1 3/8-18UNEF              | 1 3/16-18UNEF             |
| YH3108B24-xxxx   | 43.66          | 33.02                    | 86.51     | 39.67     | 1 1/2-18UNEF              | 1 7/16-18UNEF             |
| YH3108B28-xxxx   | 50.01          | 38.61                    | 93.98     | 39.67     | 1 3/4-18UNS               | 1 7/16-18UNEF             |
| YH3108B32-xxxx   | 56.36          | 44.96                    | 100.02    | 47.62     | 2-18UNS                   | 1 3/4-18UNS               |
| YH3108B36-xxxx   | 62.71          | 50.29                    | 120.65    | 52.37     | 2 1/4-16UN                | 2-18UNS                   |

YH5015 Style

Straight Plug (YH 25183)

YH25183

Pot Type.  
Includes O-Ring.



UNIT: mm

| Part Number       | A Dia.<br>Max. | B Dia.<br>+0.00<br>-0.38 | C<br>Max. | E Thread.<br>(Class : 2B) |
|-------------------|----------------|--------------------------|-----------|---------------------------|
| YH25183-10SL-xxxx | 24.61          | 11.33                    | 38.10     | 5/8-24UNEF                |
| YH25183-12S-xxxx  | 26.97          | 14.10                    | 38.10     | 3/4-20UNEF                |
| YH25183-12-xxxx   | 26.97          | 14.10                    | 48.41     | 3/4-20UNEF                |
| YH25183-14S-xxxx  | 29.36          | 17.15                    | 38.10     | 7/8-20UNEF                |
| YH25183-14-xxxx   | 29.36          | 17.15                    | 48.41     | 7/8-20UNEF                |
| YH25183-16S-xxxx  | 31.75          | 20.45                    | 38.10     | 1-20UNEF                  |
| YH25183-16-xxxx   | 31.75          | 20.45                    | 48.41     | 1-20UNEF                  |
| YH25183-18-xxxx   | 34.13          | 23.62                    | 48.41     | 1 1/8-18UNEF              |
| YH25183-20-xxxx   | 37.31          | 26.67                    | 55.52     | 1 1/4-18UNEF              |
| YH25183-22-xxxx   | 40.48          | 29.85                    | 55.52     | 1 3/8-18UNEF              |
| YH25183-24-xxxx   | 43.66          | 33.02                    | 55.52     | 1 1/2-18UNEF              |
| YH25183-28-xxxx   | 50.01          | 38.61                    | 55.52     | 1 3/4-18UNS               |
| YH25183-32-xxxx   | 56.36          | 44.96                    | 55.52     | 2-18UNS                   |
| YH25183-36-xxxx   | 62.71          | 50.29                    | 55.52     | 2 1/4-16UN                |

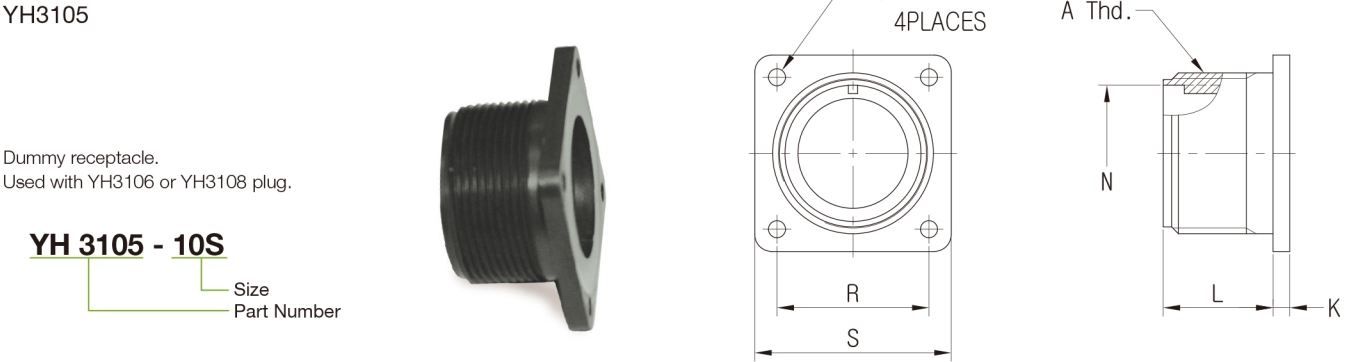
YH5015 Connector Accessories

Sealing Gasket (YH 52000)



| Part Number | Shell Size | A              | B     | C Dia.       | D Dia. |
|-------------|------------|----------------|-------|--------------|--------|
|             |            | +0.40<br>-0.00 | ±0.25 | +0.4<br>-0.0 | ±0.25  |
| YH52000-1   | 10SL       | 25.40          | 18.26 | 15.88        | 4.37   |
| YH52000-2   | 12         | 27.79          | 20.62 | 19.05        | 4.37   |
| YH52000-3   | 14         | 30.18          | 23.01 | 22.23        | 4.37   |
| YH52000-4   | 16         | 32.54          | 24.61 | 25.40        | 4.37   |
| YH52000-5   | 18         | 34.93          | 26.97 | 28.58        | 5.16   |
| YH52000-6   | 20         | 38.10          | 29.36 | 31.75        | 5.16   |
| YH52000-7   | 22         | 41.28          | 31.75 | 34.93        | 5.16   |
| YH52000-8   | 24         | 44.45          | 34.93 | 38.10        | 5.16   |
| YH52000-9   | 28         | 50.80          | 39.67 | 44.45        | 5.16   |
| YH52000-10  | 32         | 57.15          | 44.45 | 50.80        | 5.56   |
| YH52000-11  | 36         | 63.50          | 49.23 | 57.05        | 5.56   |

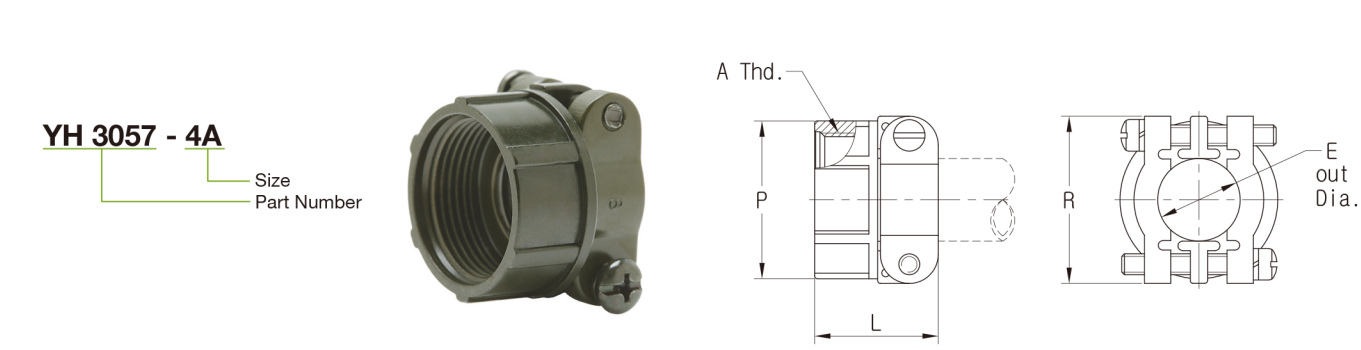
Dummy Receptacle (YH 3105)



| Part Number | A Thread.<br>(Class : 2A) | K         | L              | N     | R     | S     | T              |
|-------------|---------------------------|-----------|----------------|-------|-------|-------|----------------|
|             |                           | Max./Min. | +0.79<br>-0.00 | ±0.79 | ±0.12 | ±0.79 | +0.25<br>-0.13 |
| YH3105-10S  | 5/8-24UNEF                | 3.96/1.98 | 14.27          | 8.20  | 18.26 | 25.40 | 3.05           |
| YH3105-12S  | 3/4-20UNEF                | 3.96/1.98 | 14.27          | 11.43 | 20.62 | 27.79 | 3.05           |
| YH3105-12   | 3/4-20UNEF                | 3.96/1.98 | 19.05          | 11.43 | 20.62 | 27.79 | 3.05           |
| YH3105-14S  | 7/8-20UNEF                | 3.96/1.98 | 14.27          | 13.36 | 23.01 | 30.18 | 3.05           |
| YH3105-14   | 7/8-20UNEF                | 3.96/1.98 | 19.05          | 13.36 | 23.01 | 30.18 | 3.05           |
| YH3105-16S  | 1-20UNEF                  | 3.96/1.98 | 14.27          | 16.41 | 24.61 | 32.54 | 3.05           |
| YH3105-16   | 1-20UNEF                  | 3.96/1.98 | 19.05          | 16.41 | 24.61 | 32.54 | 3.05           |
| YH3105-18   | 1 1/8-18UNEF              | 3.96/1.98 | 19.05          | 19.58 | 26.97 | 34.93 | 3.05           |
| YH3105-20   | 1 1/4-18UNEF              | 5.16/2.39 | 19.05          | 23.55 | 29.36 | 38.10 | 3.05           |
| YH3105-22   | 1 3/8-18UNEF              | 5.16/2.39 | 19.05          | 25.93 | 31.75 | 41.28 | 3.05           |
| YH3105-24   | 1 1/2-18UNEF              | 5.16/2.39 | 20.62          | 29.21 | 34.93 | 44.45 | 3.73           |
| YH3105-28   | 1 3/4-18UNS               | 5.16/2.39 | 20.62          | 34.67 | 39.67 | 50.80 | 3.73           |
| YH3105-32   | 2-18UNS                   | 9.12/3.18 | 22.22          | 41.15 | 44.45 | 57.15 | 4.39           |
| YH3105-36   | 2 1/4-16UN                | 9.12/3.18 | 22.22          | 46.56 | 49.23 | 63.50 | 4.39           |

YH5015 Connector Accessories

YH3057 (YH 3057) Cable Clamp



| Part Number | Shell Size  | E     |       | L     | p     | R     | A                      |
|-------------|-------------|-------|-------|-------|-------|-------|------------------------|
|             |             | Min.  | Max.  | ±0.79 | ±0.79 | ±0.79 | Thread<br>(Class : 2B) |
| YH3057-4A   | 10SL,12S,12 | 3.56  | 7.92  | 20.62 | 20.62 | 22.22 | 5/8-24UNEF             |
| YH3057-6A   | 14S,14      | 4.95  | 11.13 | 22.22 | 24.61 | 26.97 | 3/4-20UNEF             |
| YH3057-8A   | 16S,16      | 6.48  | 14.27 | 23.83 | 27.79 | 29.36 | 7/8-20UNEF             |
| YH3057-10A  | 18          | 7.24  | 15.88 | 23.83 | 30.18 | 31.75 | 1-20UNEF               |
| YH3057-12A  | 20,22       | 8.89  | 19.05 | 23.83 | 34.92 | 37.31 | 1 3/16-18UNEF          |
| YH3057-16A  | 24,28       | 11.89 | 23.83 | 26.19 | 42.06 | 42.88 | 1 7/16-18UNEF          |
| YH3057-20A  | 32          | 16.87 | 31.75 | 27.79 | 51.59 | 51.59 | 1 3/4-18UNS            |
| YH3057-24A  | 36          | 17.63 | 34.92 | 29.36 | 56.36 | 57.94 | 2-18UNS                |

YH3420 (YH 3420) Rubber Bushing



| Part Number | Shell Size  | C     | L     | R     |
|-------------|-------------|-------|-------|-------|
|             |             | ±0.41 | ±0.79 | ±0.41 |
| YH3420-4    | 10SL,12,12S | 12.83 | 69.85 | 5.59  |
| YH3420-6    | 14,14S      | 15.72 | 66.68 | 7.92  |
| YH3420-8    | 16,16S      | 18.90 | 63.50 | 11.10 |
| YH3420-10   | 18          | 22.58 | 60.32 | 14.27 |
| YH3420-12   | 20,22       | 27.53 | 57.15 | 15.88 |
| YH3420-16   | 24,28       | 33.38 | 53.98 | 19.05 |
| YH3420-20   | 32          | 40.54 | 50.80 | 23.80 |
| YH3420-24   | 36          | 46.91 | 47.62 | 31.75 |



YH5015 Connector Accessories

YH25043 Protective Cap (Receptacle)



| Part Number | Shell Size | B<br>Max. | C<br>Dia<br>Max. | E<br>±One Link | D<br>Dia<br>+0.25<br>-0.13 | A<br>Thread<br>(Class : 2B) |
|-------------|------------|-----------|------------------|----------------|----------------------------|-----------------------------|
| YH25043-10D | 10S,10SL   | 11.91     | 20.70            | 101.6          | 3.56                       | 5/8-24UNEF                  |
| YH25043-12D | 12S,12SL   | 11.91     | 25.40            | 114.3          | 3.56                       | 3/4-20UNEF                  |
| YH25043-14D | 14,14S     | 11.91     | 25.58            | 114.3          | 3.56                       | 7/8-20UNEF                  |
| YH25043-16D | 16,16S     | 11.91     | 30.18            | 114.3          | 3.56                       | 1-20UNEF                    |
| YH25043-18D | 18         | 11.91     | 34.14            | 114.3          | 3.56                       | 1 1/8-18UNEF                |
| YH25043-20D | 20         | 11.91     | 37.31            | 127.0          | 3.56                       | 1 1/4-18UNEF                |
| YH25043-22D | 22         | 11.91     | 40.49            | 127.0          | 3.56                       | 1 3/8-18UNEF                |
| YH25043-24D | 24         | 11.91     | 43.66            | 139.7          | 4.34                       | 1 1/2-18UNEF                |
| YH25043-28D | 28         | 13.49     | 50.01            | 196.9          | 4.34                       | 1 3/4-18UNS                 |
| YH25043-32D | 32         | 13.49     | 56.36            | 196.9          | 4.75                       | 2-18UNS                     |
| YH25043-36D | 36         | 13.49     | 62.71            | 196.9          | 4.75                       | 2 1/4-16UN                  |

YH25042 Protective Cap (Plug )



| Part Number | Shell Size | B<br>Max. | C<br>Dia<br>Max. | E<br>±One Link | D<br>Dia<br>+0.25<br>-0.13 | A<br>Thread<br>(Class : 2A) |
|-------------|------------|-----------|------------------|----------------|----------------------------|-----------------------------|
| YH25042-10D | 10S,10SL   | 16.66     | 17.45            | 114.30         | 3.96                       | 5/8-24UNEF                  |
| YH25042-12D | 12S,12SL   | 21.44     | 20.62            | 127.00         | 3.96                       | 3/4-20UNEF                  |
| YH25042-14D | 14,14S     | 21.44     | 23.80            | 127.00         | 3.96                       | 7/8-20UNEF                  |
| YH25042-16D | 16S,16SL   | 21.44     | 26.97            | 127.00         | 3.96                       | 1-20UNEF                    |
| YH25042-18D | 18         | 21.44     | 30.15            | 127.00         | 3.96                       | 1 1/8-18UNEF                |
| YH25042-20D | 20         | 21.44     | 33.32            | 139.70         | 4.75                       | 1 1/4-18UNEF                |
| YH25042-22D | 22         | 21.44     | 36.50            | 139.70         | 4.75                       | 1 3/8-18UNEF                |
| YH25042-24D | 24         | 21.44     | 39.67            | 152.40         | 4.75                       | 1 1/2-18UNEF                |
| YH25042-28D | 28         | 21.44     | 46.02            | 209.55         | 4.75                       | 1 3/4-18UNS                 |
| YH25042-32D | 32         | 21.44     | 52.37            | 209.55         | 5.54                       | 2-18UNS                     |
| YH25042-36D | 36         | 21.44     | 58.72            | 209.55         | 5.54                       | 2 1/4-16UN                  |

YH5015 Connector Dust Cap



The polyethylene dust caps provide added protection for precision-built YH connectors during storage and handling, in assembling with equipment, protective caps cover threaded sections of plug and receptacles, assure against damage to thread from any cause permit lowcost, attractive coverings which protect contacts and the insulation from dust, dirt and handling damage.

| Part Number | YH3100FR     |                | YH3102FR     |                | YH3106/YH3108FR |                | Part Number | YH3100FR     |                | YH3102FR     |                | YH3106/YH3108FR |                |
|-------------|--------------|----------------|--------------|----------------|-----------------|----------------|-------------|--------------|----------------|--------------|----------------|-----------------|----------------|
|             | Coupling End | Solder Pot End | Coupling End | Solder Pot End | Coupling End    | Solder Pot End |             | Coupling End | Solder Pot End | Coupling End | Solder Pot End | Coupling End    | Solder Pot End |
| YH01-90376  |              |                |              | 8S             | 8S              |                | YH21-90376  |              |                |              |                | 22              |                |
| YH02-90376  | 8S           | 8S,10S         | 8S           | 8S,10S         |                 | 8S,10S         | YH22-90376  |              |                |              |                | 24              |                |
| YH03-90376  | 10S,10SL     | 10SL,12S,12    | 10S,10SL     | 10SL,12S,12    | 10SL,12S,12     | 10SL,12S,12    | YH23-90376  |              |                |              |                | 28              |                |
| YH04-90376  | 12S,12       | 14S,14         | 12S,12       | 14S,14         |                 | 14S,14         | YH24-90376  |              |                |              |                | 32              |                |
| YH05-90376  | 14S,14       | 16S,16         | 14S,14       | 16S,16         |                 | 16S,16         | YH25-90376  |              |                |              |                | 36              |                |
| YH06-90376  |              |                |              | 18             |                 |                | YH26-90376  |              |                |              |                | 40              |                |
| YH07-90376  |              |                |              | 20             | 20              |                | YH27-90376  |              |                |              |                | 44              |                |
| YH08-90376  | 20           |                | 20           | 22             |                 |                | YH28-90376  |              |                |              |                | 48              |                |
| YH09-90376  | 22           |                | 22           | 24             |                 |                | YH29-90376  | 16S,16       | 18             | 16S,16       | 48             |                 | 18             |
| YH10-90376  |              |                |              | 28             |                 |                | YH30-90376  |              | 20,22          |              | 36             | 22              | 20,22          |
| YH11-90376  |              |                |              | 32             |                 |                | YH31-90376  |              | 24,28          |              | 40             |                 | 24,28          |
| YH12-90376  |              |                |              | 36             |                 |                | YH32-90376  | 28           | 32             | 28           | 44             |                 | 32             |
| YH13-90376  |              |                |              | 40             |                 |                | YH33-90376  | 32           | 36             | 32           | 32             |                 | 36             |
| YH14-90376  |              |                |              | 44             |                 |                | YH34-90376  | 36           | 40             | 36           | 24,28          |                 | 40             |
| YH15-90376  |              |                |              | 48             |                 |                | YH35-90376  | 40           | 44             | 40           | 20,22          |                 | 44             |
| YH16-90376  |              |                |              |                | 10S,10SL        |                | YH36-90376  | 48           |                | 48           | 18             |                 | 48             |
| YH17-90376  |              |                |              |                | 12S,12          |                | YH37-90376  | 18           |                | 18           |                |                 |                |
| YH18-90376  |              |                |              |                | 14S,14          |                | YH38-90376  | 24           |                | 24           |                |                 |                |
| YH19-90376  |              |                |              |                | 16S,16          |                | YH39-90376  | 44           | 48             | 44           |                |                 |                |
| YH20-90376  |              |                |              |                | 18              |                |             |              |                |              |                |                 |                |

YH5015 Connector Insert Arrangements

|                                                                            |                                                |                                             |                        |                          |                          |                       |                       |
|----------------------------------------------------------------------------|------------------------------------------------|---------------------------------------------|------------------------|--------------------------|--------------------------|-----------------------|-----------------------|
| Insert Arrangement<br>Service Rating<br>Number of Contacts<br>Contact Size | Shell Size 10                                  |                                             |                        | Shell Size 12            |                          |                       |                       |
|                                                                            |                                                |                                             |                        |                          |                          |                       |                       |
|                                                                            | 10S-2<br>A<br>1<br>16                          | 10SL-3<br>INST<br>3<br>16                   | 10SL-4<br>A<br>2<br>16 | 12S-3<br>A<br>2<br>16    | 12S-4<br>D<br>1<br>16    | 12-5<br>D<br>1<br>12  |                       |
|                                                                            |                                                |                                             |                        |                          |                          |                       |                       |
| Insert Arrangement<br>Service Rating<br>Number of Contacts<br>Contact Size | Shell Size 14                                  |                                             |                        |                          |                          |                       |                       |
|                                                                            |                                                |                                             |                        |                          |                          |                       |                       |
|                                                                            | 14S-1<br>A<br>3<br>16                          | 14S-2<br>INST<br>4<br>16                    | 14-3<br>A<br>1<br>8    | 14S-5<br>INST<br>5<br>16 | 14S-6<br>INST<br>6<br>16 | 14S-7<br>A<br>3<br>16 | 14S-9<br>A<br>2<br>16 |
|                                                                            |                                                |                                             |                        |                          |                          |                       |                       |
| Insert Arrangement<br>Service Rating<br>Number of Contacts<br>Contact Size | Shell Size 16                                  |                                             |                        |                          |                          |                       |                       |
|                                                                            |                                                |                                             |                        |                          |                          |                       |                       |
|                                                                            | 16S-1<br>A<br>7<br>16                          | (Non-standard)<br>16S-01<br>INST<br>8<br>16 | 16S-4<br>D<br>2<br>16  | 16S-5<br>A<br>3<br>16    |                          |                       |                       |
|                                                                            |                                                |                                             |                        |                          |                          |                       |                       |
| Insert Arrangement<br>Service Rating<br>Number of Contacts<br>Contact Size | Shell Size 16                                  |                                             |                        |                          |                          |                       |                       |
|                                                                            |                                                |                                             |                        |                          |                          |                       |                       |
|                                                                            | 16S-8<br>A<br>5<br>16                          | 16-9<br>A<br>2<br>16                        | 16-10<br>A<br>3<br>12  | 16-11<br>A<br>2<br>12    | 16-12<br>A<br>1<br>4     | 16-13<br>A<br>2<br>12 |                       |
|                                                                            |                                                |                                             |                        |                          |                          |                       |                       |
| Insert Arrangement<br>Service Rating<br>Number of Contacts<br>Contact Size | Shell Size 18                                  |                                             |                        |                          |                          |                       |                       |
|                                                                            |                                                |                                             |                        |                          |                          |                       |                       |
|                                                                            | 18-1<br>A(B,C,F,G)<br>INST(OTHERS)<br>10<br>16 | (Non-standard)<br>18-2<br>D<br>3<br>16      | 18-3<br>D<br>2<br>12   | 18-4<br>D<br>4<br>16     | 18-5<br>D<br>1<br>16     | 18-8<br>A<br>7<br>16  |                       |
|                                                                            |                                                |                                             |                        |                          |                          |                       |                       |
| Insert Arrangement<br>Service Rating<br>Number of Contacts<br>Contact Size | Shell Size 18                                  |                                             |                        |                          |                          |                       |                       |
|                                                                            |                                                |                                             |                        |                          |                          |                       |                       |
|                                                                            | 18-9<br>INST<br>5<br>16                        | 18-10<br>A<br>4<br>12                       | 18-11<br>A<br>5<br>12  | 18-12<br>A<br>6<br>16    | 18-13<br>A<br>3<br>12    |                       |                       |
|                                                                            |                                                |                                             |                        |                          |                          |                       |                       |

1. View looking into front face of pin insert (+insulator).  
2. Please make a direct inquiry for the information not contained in the table.  
3. The contact arrangement in the table meets the MIL-STD-1651 standards.

Contact Legend  
 0 4 8 12 16

YH5015 Connector Insert Arrangements

|                                                                            |                                          |                                             |                        |                                         |                       |                                                |
|----------------------------------------------------------------------------|------------------------------------------|---------------------------------------------|------------------------|-----------------------------------------|-----------------------|------------------------------------------------|
| Insert Arrangement<br>Service Rating<br>Number of Contacts<br>Contact Size | Shell Size 18                            |                                             |                        |                                         |                       |                                                |
|                                                                            |                                          |                                             |                        |                                         |                       |                                                |
|                                                                            | 18-16<br>C<br>1<br>12                    | (Non-standard)<br>18-19<br>INST<br>10<br>16 | 18-20<br>A<br>5<br>16  | (Non-standard)<br>18-21<br>A<br>3<br>12 | 18-22<br>D<br>3<br>16 | (Non-standard)<br>18-32<br>A<br>8<br>16        |
| Insert Arrangement<br>Service Rating<br>Number of Contacts<br>Contact Size | Shell Size 20                            |                                             |                        |                                         |                       |                                                |
|                                                                            |                                          |                                             |                        |                                         |                       |                                                |
|                                                                            | (Non-standard)<br>20-01<br>A<br>10<br>16 | 20-2<br>D<br>1<br>0                         | 20-3<br>D<br>3<br>12   | (Non-standard)<br>20-03<br>A<br>1<br>12 | 20-4<br>D<br>4<br>12  | 20-7<br>A(ALL OTHERS)<br>D(A,B,G,H)<br>8<br>16 |
| Insert Arrangement<br>Service Rating<br>Number of Contacts<br>Contact Size | Shell Size 20                            |                                             |                        |                                         |                       |                                                |
|                                                                            |                                          |                                             |                        |                                         |                       |                                                |
|                                                                            | 20-8<br>INST<br>4<br>16                  | 20-11<br>INST<br>13<br>16                   | 20-14<br>A<br>3<br>12  | 20-15<br>A<br>7<br>12                   | 20-16<br>A<br>7<br>16 |                                                |
| Insert Arrangement<br>Service Rating<br>Number of Contacts<br>Contact Size | Shell Size 20                            |                                             |                        |                                         |                       |                                                |
|                                                                            |                                          |                                             |                        |                                         |                       |                                                |
|                                                                            | 20-17<br>A<br>1<br>16                    | 20-18<br>A<br>6<br>16                       | 20-19<br>A<br>3<br>8   | 20-22<br>A<br>3<br>16                   | 20-23<br>A<br>2<br>8  | 20-24<br>A<br>2<br>16                          |
| Insert Arrangement<br>Service Rating<br>Number of Contacts<br>Contact Size | Shell Size 20                            |                                             |                        | Shell Size 22                           |                       |                                                |
|                                                                            |                                          |                                             |                        |                                         |                       |                                                |
|                                                                            | 20-27<br>A<br>14<br>16                   | 20-29<br>A<br>17<br>16                      | 20-33<br>A<br>11<br>16 | 22-1<br>D<br>2<br>8                     | 22-2<br>D<br>3<br>8   | 22-4<br>A<br>2<br>12                           |

1. View looking into front face of pin insert (+insulator).  
2. Please make a direct inquiry for the information not contained in the table.  
3. The contact arrangement in the table meets the MIL-STD-1651 standards.

Contact Legend  
 0 4 8 12 16



YH5015 Connector Insert Arrangements

| Shell Size 22                                                              |                            |                                                |                                               |                                            |
|----------------------------------------------------------------------------|----------------------------|------------------------------------------------|-----------------------------------------------|--------------------------------------------|
|                                                                            |                            |                                                |                                               |                                            |
| Insert Arrangement<br>Service Rating<br>Number of Contacts<br>Contact Size | 22-5<br>D<br>4 2<br>16 12  | 22-7<br>E<br>1<br>0                            | 22-8<br>E<br>2<br>12                          | 22-9<br>E<br>3<br>12                       |
| Shell Size 22                                                              |                            |                                                |                                               |                                            |
|                                                                            |                            |                                                |                                               |                                            |
| Insert Arrangement<br>Service Rating<br>Number of Contacts<br>Contact Size | 22-14<br>A<br>19<br>16     | 22-15<br>A(ALL OTHERS)<br>D( )<br>1 5<br>16 12 | 22-18<br>A(C,D,E)<br>D(ALL OTHERS)<br>8<br>16 | 22-19<br>A<br>14<br>16                     |
| Shell Size 22                                                              |                            |                                                |                                               |                                            |
|                                                                            |                            |                                                |                                               |                                            |
| Insert Arrangement<br>Service Rating<br>Number of Contacts<br>Contact Size | 22-20<br>A<br>9<br>16      | 22-21<br>A<br>2 1<br>16 0                      | 22-22<br>A<br>4<br>8                          | 22-23<br>A(ALL OTHERS), D(H)<br>8<br>12    |
| Shell Size 24                                                              |                            |                                                |                                               |                                            |
|                                                                            |                            |                                                |                                               |                                            |
| Insert Arrangement<br>Service Rating<br>Number of Contacts<br>Contact Size | 24-3<br>D<br>5 2<br>16 12  | 24-4<br>D<br>3 1<br>16 0                       | 24-5<br>A<br>16<br>16                         | 24-6<br>A(ALL OTHERS), D(A,G,H)<br>8<br>12 |
| Shell Size 24                                                              |                            |                                                |                                               |                                            |
|                                                                            |                            |                                                |                                               |                                            |
| Insert Arrangement<br>Service Rating<br>Number of Contacts<br>Contact Size | 24-7<br>A<br>14 2<br>16 12 | 24-9<br>A<br>2<br>4                            | 24-10<br>A<br>7<br>8                          | 24-11<br>A<br>6 3<br>12 8                  |

1. View looking into front face of pin insert (+insulator).  
2. Please make a direct inquiry for the information not contained in the table.  
3. The contact arrangement in the table meets the MIL-STD-1651 standards.

Contact Legend

0 4 8 12 16

YH5015 Connector Insert Arrangements

| Shell Size 24                                                              |                                                      |                                                                   |                                                          |                                                 |
|----------------------------------------------------------------------------|------------------------------------------------------|-------------------------------------------------------------------|----------------------------------------------------------|-------------------------------------------------|
|                                                                            |                                                      |                                                                   |                                                          |                                                 |
| Insert Arrangement<br>Service Rating<br>Number of Contacts<br>Contact Size | 24-12<br>A<br>3 2<br>12 4                            | 24-20<br>D<br>9 2<br>16 12                                        | 24-22<br>A<br>4<br>8                                     | 24-28<br>INST<br>24<br>16                       |
| Shell Size 28                                                              |                                                      |                                                                   |                                                          |                                                 |
|                                                                            |                                                      |                                                                   |                                                          |                                                 |
| Insert Arrangement<br>Service Rating<br>Number of Contacts<br>Contact Size | 28-2<br>D<br>12 2<br>16 12                           | 28-3<br>E<br>3<br>8                                               | 28-6<br>D<br>3<br>4                                      | 28-10<br>A(ALL OTHERS), D(G)<br>3 2 2<br>12 8 4 |
| Shell Size 28                                                              |                                                      |                                                                   |                                                          |                                                 |
|                                                                            |                                                      |                                                                   |                                                          |                                                 |
| Insert Arrangement<br>Service Rating<br>Number of Contacts<br>Contact Size | 28-11<br>A<br>18 4<br>16 12                          | 28-12<br>A<br>26<br>16                                            | 28-15<br>A<br>35<br>16                                   | 28-16<br>A<br>20<br>16                          |
| Shell Size 28                                                              |                                                      |                                                                   |                                                          |                                                 |
|                                                                            |                                                      |                                                                   |                                                          |                                                 |
| Insert Arrangement<br>Service Rating<br>Number of Contacts<br>Contact Size | 28-17<br>A(ALL OTHERS)<br>B(F), D(M,N,P)<br>15<br>16 | 28-18<br>A(A,B), C(M), INST(C,D,E,F)<br>D(ALL OTHERS)<br>12<br>16 | 28-19<br>A(ALL OTHERS)<br>B(H,M), D(A,B)<br>6 4<br>16 12 | 28-20<br>A<br>4 10<br>16 12                     |

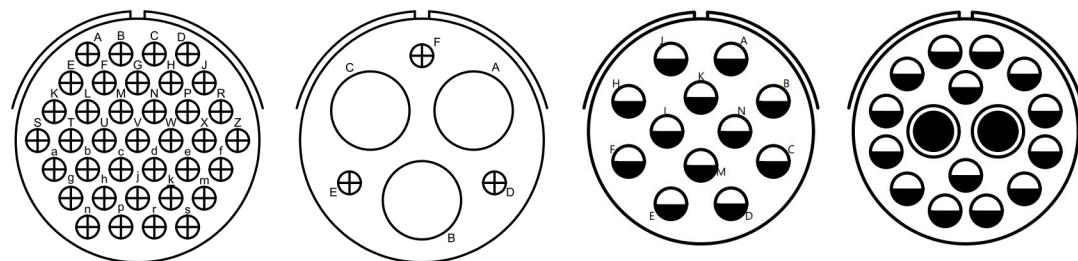
1. View looking into front face of pin insert (+insulator).  
2. Please make a direct inquiry for the information not contained in the table.  
3. The contact arrangement in the table meets the MIL-STD-1651 standards.

Contact Legend

0 4 8 12 16

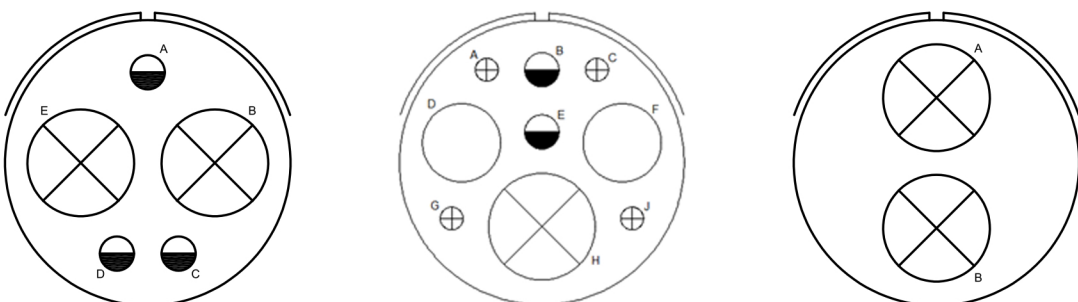
## YH5015 Connector Insert Arrangements

Shell Size 28



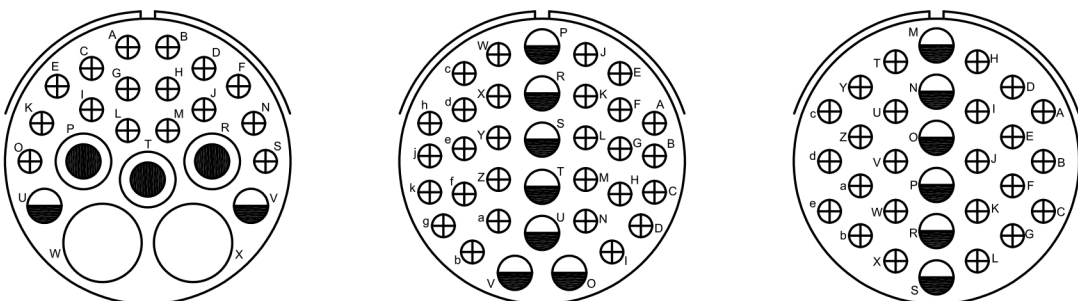
|                    |       |       |       |       |
|--------------------|-------|-------|-------|-------|
| Insert Arrangement | 28-21 | 28-22 | 28-51 | 28-66 |
| Service Rating     | A     | D     | D     | A     |
| Number of Contacts | 37    | 3     | 12    | 14    |
| Contact Size       | 16    | 4     | 8     | 2     |

## Shell Size 32



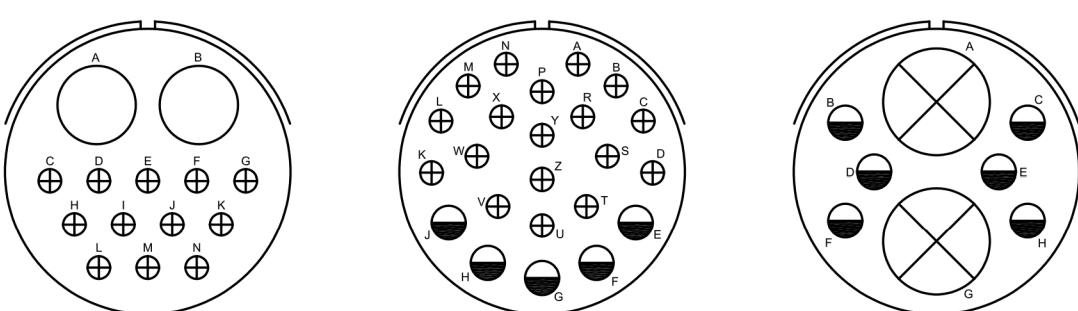
|                    |                     |                |           |                |      |                |
|--------------------|---------------------|----------------|-----------|----------------|------|----------------|
| Insert Arrangement | 32-1                | (Non standard) | 32-3      | (Non standard) | 32-5 | (Non standard) |
| Service Rating     | E(A), D(ALL OTHERS) |                | D         |                | F    |                |
| Number of Contacts | 3 2                 |                | 4 2 2 1   |                | 2    |                |
| Contact Size       | 12 0                |                | 16 12 4 0 |                | 0    |                |

## Shell Size 32



|                    |      |    |   |      |                                               |    |      |    |    |
|--------------------|------|----|---|------|-----------------------------------------------|----|------|----|----|
| Insert Arrangement | 32-6 |    |   | 32-7 |                                               |    | 32-8 |    |    |
| Service Rating     | A    |    |   | A    |                                               |    | A    |    |    |
| Number of Contacts | 16   | 2  | 3 | 2    | A(O,P,S,R,T,U,V), INST(A,B,H,J), (ALL OTHERS) |    |      | 24 | 6  |
| Contact Size       | 16   | 12 | 8 | 4    | 28                                            | 7  |      | 16 | 12 |
|                    |      |    |   |      | 16                                            | 12 |      |    |    |

### Shell Size 32



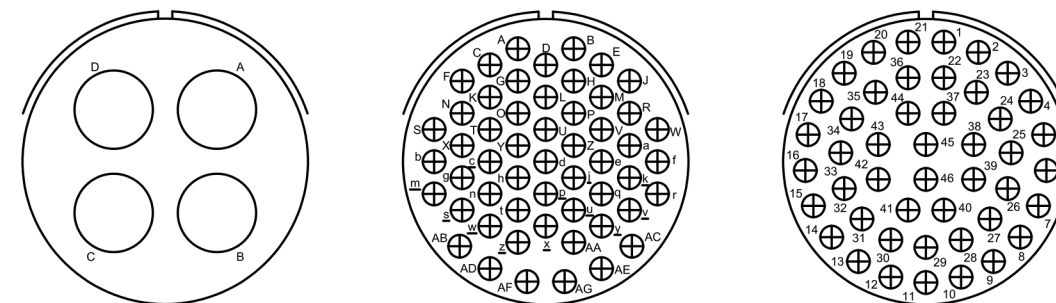
|                    |      |   |       |    |       |
|--------------------|------|---|-------|----|-------|
| Insert Arrangement | 32-9 |   | 32-13 |    | 32-15 |
| Service Rating     | D    |   | D     |    | D     |
| Number of Contacts | 12   | 2 | 18    | 5  | 6     |
| Contact Size       | 16   | 4 | 16    | 12 | 12    |

1. View looking into front face of pin insert (+insulator).
2. Please make a direct inquiry for the information not contained in the table.
3. The contact arrangement in the table meets the MIL-STD-1651 standards.



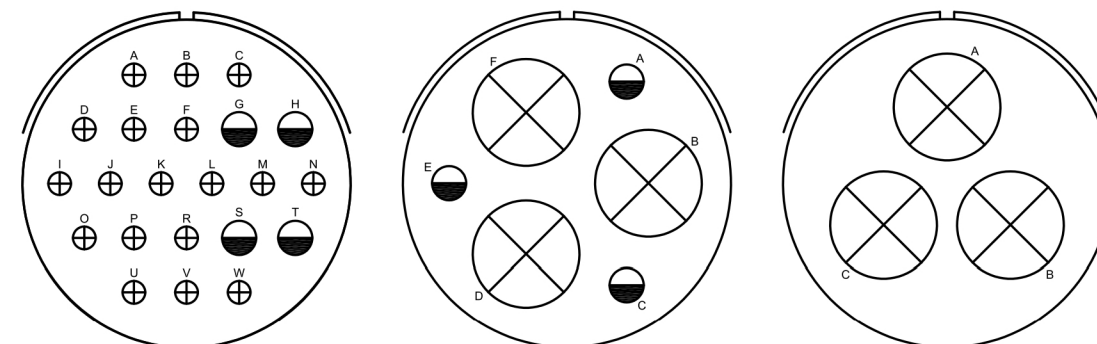
## YH5015 Connector Insert Arrangements

## Shell Size 32



|                    |       |       |       |
|--------------------|-------|-------|-------|
| Insert Arrangement | 32-17 |       |       |
| Service Rating     | D     | 32-22 | 32-73 |
| Number of Contacts | 4     | A     | A     |
| Contact Size       | 4     | 54    | 46    |
|                    |       | 16    | 16    |

Shell Size 36



|                    |       |      |               |
|--------------------|-------|------|---------------|
| Insert Arrangement | 36-1  | 36-3 | 36-4          |
| Service Rating     | D     | D    | A(B, C), D(A) |
| Number of Contacts | 18 4  | 3 3  | 3             |
| Contact Size       | 16 12 | 12 0 | 0             |

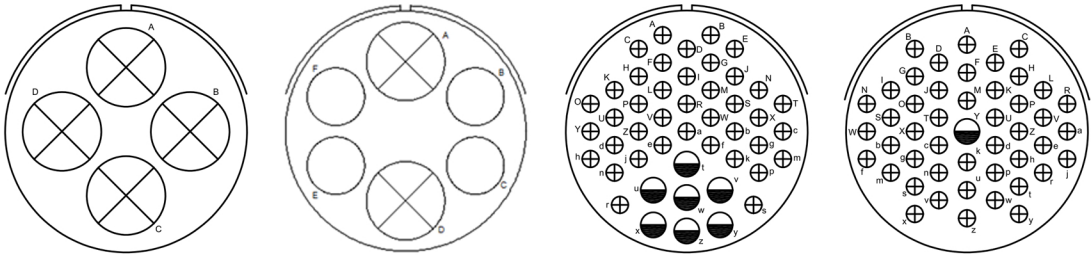
1. View looking into front face of pin insert (+insulator).
2. Please make a direct inquiry for the information not contained in the table.
3. The contact arrangement in the table meets the MIL-STD-1651 standards





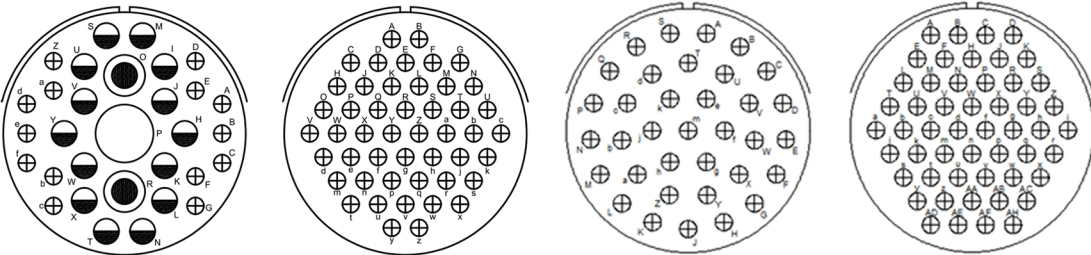
YH5015 Connector Insert Arrangements

Shell Size 36



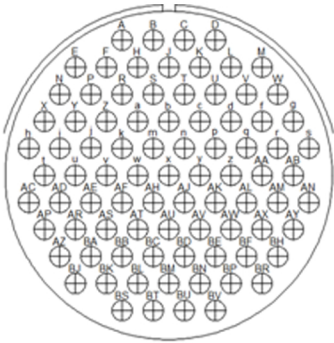
Insert Arrangement  
Service Rating  
Number of Contacts  
Contact Size

Shell Size 36



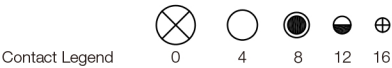
Insert Arrangement  
Service Rating  
Number of Contacts  
Contact Size

Shell Size 40



Insert Arrangement  
Service Rating  
Number of Contacts  
Contact Size

- 1. View looking into front face of pin insert (+insulator).
- 2. Please make a direct inquiry for the information not contained in the table.
- 3. The contact arrangement in the table meets the MIL-STD-1651 standards.

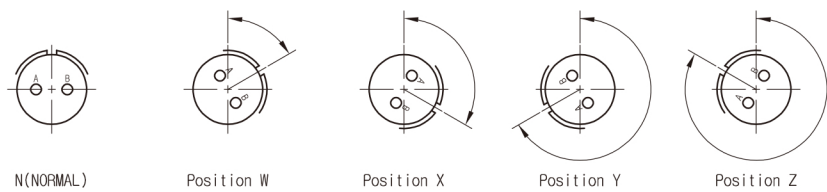


YH5015 Connector Insert Arrangements  
Insert Availability and Identification

| Shell Size | PIN | Pin     |    |    |   |   |   | Shell Size | PIN | Pin     |    |    |   |   |   | Shell Size | PIN | Pin     |    |    |   |   |   |
|------------|-----|---------|----|----|---|---|---|------------|-----|---------|----|----|---|---|---|------------|-----|---------|----|----|---|---|---|
|            |     | 20      | 16 | 12 | 8 | 4 | 0 |            |     | 20      | 16 | 12 | 8 | 4 | 0 |            |     | 20      | 16 | 12 | 8 | 4 | 0 |
|            |     | 10 size |    |    |   |   |   |            |     | 22 size |    |    |   |   |   |            |     | 32 size |    |    |   |   |   |
| 10S-2      | 1   | 1       |    |    |   |   |   | 22-1       | 2   |         |    | 2  |   |   |   | 32-1       | 5   |         |    |    |   |   | 2 |
| 10SL-3     | 3   | 3       |    |    |   |   |   | 22-2       | 3   |         |    | 3  |   |   |   | 32-3       | 9   | 4       | 2  |    | 2 |   | 1 |
| 10SL-4     | 2   | 2       |    |    |   |   |   | 22-4       | 4   |         |    | 2  | 2 |   |   | 32-5       | 2   |         |    |    |   |   | 2 |
|            |     | 12 size |    |    |   |   |   | 22-5       | 6   | 4       | 2  |    |   |   |   | 32-6       | 23  |         | 16 | 2  | 3 | 2 |   |
| 12S-3      | 2   |         |    |    |   |   |   | 22-7       | 1   |         |    |    |   | 1 |   | 32-7       | 35  |         | 28 | 7  |   |   |   |
| 12S-4      | 1   | 1       |    |    |   |   |   | 22-8       | 2   |         |    | 2  |   |   |   | 32-8       | 30  |         | 24 | 6  |   |   |   |
| 12-5       | 1   |         | 1  |    |   |   |   | 22-9       | 3   |         |    | 3  |   |   |   | 32-9       | 14  |         | 12 |    |   | 2 |   |
|            |     | 14 size |    |    |   |   |   | 22-10      | 4   | 4       |    |    |   |   |   | 32-13      | 23  |         | 18 | 5  |   |   |   |
| 14S-1      | 3   | 3       |    |    |   |   |   | 22-14      | 19  | 19      |    |    |   |   |   | 32-15      | 8   | 6       |    |    |   |   | 2 |
| 14S-2      | 4   | 4       |    |    |   |   |   | 22-15      | 6   | 1       | 5  |    |   |   |   | 32-17      | 4   |         |    |    |   | 4 |   |
| 14S-5      | 5   | 5       |    |    |   |   |   | 22-18      | 8   | 8       |    |    |   |   |   | 32-22      | 54  |         | 54 |    |   |   |   |
| 14S-6      | 6   | 6       |    |    |   |   |   | 22-19      | 14  | 14      |    |    |   |   |   | 32-73      | 46  |         | 46 |    |   |   |   |
| 14S-7      | 3   | 3       |    |    |   |   |   | 22-20      | 9   | 9       |    |    |   |   |   |            |     | 36 size |    |    |   |   |   |
| 14S-9      | 2   | 2       |    |    |   |   |   | 22-21      | 3   | 2       |    |    |   | 1 |   | 36-1       | 22  |         | 18 | 4  |   |   |   |
| 14-3       | 1   |         |    | 1  |   |   |   | 22-22      | 4   |         |    | 4  |   |   |   | 36-3       | 6   |         | 3  |    |   | 3 |   |
|            |     | 16 size |    |    |   |   |   | 22-23      | 8   |         |    | 8  |   |   |   | 36-4       | 3   |         |    |    |   | 3 |   |
| 16-9       | 4   | 2       | 2  |    |   |   |   | 22-27      | 9   | 8       |    | 1  |   |   |   | 36-5       | 4   |         |    |    |   | 4 |   |
| 16-10      | 3   |         | 3  |    |   |   |   |            |     | 24 size |    |    |   |   |   | 36-6       | 6   |         |    |    |   | 4 | 2 |
| 16-11      | 2   |         | 2  |    |   |   |   | 24-2       | 7   |         |    | 7  |   |   |   | 36-7       | 47  | 40      | 7  |    |   |   |   |
| 16-12      | 1   |         |    |    | 1 |   |   | 24-03      | 12  | 12      |    |    |   |   |   | 36-8       | 47  |         | 46 | 1  |   |   |   |
| 16-13      | 2   |         | 2  |    |   |   |   | 24-3       | 7   | 5       | 2  |    |   |   |   | 36-9       | 31  | 14      | 14 | 2  | 1 |   |   |
| 16S-1      | 7   | 7       |    |    |   |   |   | 24-4       | 4   | 3       |    |    |   | 1 |   | 36-10      | 48  |         | 48 |    |   |   |   |
| 16S-01     | 8   | 8       |    |    |   |   |   | 24-5       | 16  | 16      |    |    |   |   |   | 36-15      | 35  |         | 35 |    |   |   |   |
| 16S-4      | 2   | 2       |    |    |   |   |   | 24-6       | 8   |         | 8  |    |   |   |   | 36-52      | 52  |         | 52 |    |   |   |   |
| 16S-5      | 3   | 3       |    |    |   |   |   | 24-7       | 16  | 14      | 2  |    |   |   |   |            |     | 40 size |    |    |   |   |   |
| 16S-8      | 5   | 5       |    |    |   |   |   | 24-9       | 2   |         |    |    | 2 |   |   | 40-56      | 85  |         | 85 |    |   |   |   |
|            |     | 18 size |    |    |   |   |   | 24-10      | 7   |         |    | 7  |   |   |   |            |     |         |    |    |   |   |   |
| 18-1       | 10  | 10      |    |    |   |   |   | 24-11      | 9   |         | 6  | 3  |   |   |   |            |     |         |    |    |   |   |   |
| 18-2       | 3   | 3       |    |    |   |   |   | 24-12      | 5   |         | 3  |    | 2 |   |   |            |     |         |    |    |   |   |   |
| 18-3       | 2   |         | 2  |    |   |   |   | 24-20      | 11  |         | 9  | 2  |   |   |   |            |     |         |    |    |   |   |   |
| 18-4       | 4   | 4       |    |    |   |   |   | 24-22      | 4   |         |    |    | 4 |   |   |            |     |         |    |    |   |   |   |
| 18-5       | 3   | 1       | 2  |    |   |   |   | 24-28      | 24  |         | 24 |    |   |   |   |            |     |         |    |    |   |   |   |
| 18-8       | 8   | 7       | 1  |    |   |   |   | 24-58      | 13  |         |    | 7  | 3 | 3 |   |            |     |         |    |    |   |   |   |
| 18-9       | 7   | 5       | 2  |    |   |   |   |            |     | 28 size |    |    |   |   |   |            |     |         |    |    |   |   |   |
| 18-10      | 4   |         | 4  |    |   |   |   | 28-2       | 14  |         | 12 | 2  |   |   |   |            |     |         |    |    |   |   |   |
| 18-11      | 5   |         | 5  |    |   |   |   | 28-3       | 3   |         |    |    | 3 |   |   |            |     |         |    |    |   |   |   |
| 18-12      | 6   | 6       |    |    |   |   |   | 28-6       | 3   |         |    |    |   | 3 |   |            |     |         |    |    |   |   |   |
| 18-13      | 4   |         | 3  | 1  |   |   |   | 28-7       | 2   |         |    |    |   | 2 |   |            |     |         |    |    |   |   |   |
| 18-16      | 1   |         | 1  |    |   |   |   | 28-9       | 12  |         |    | 6  | 6 |   |   |            |     |         |    |    |   |   |   |
| 18-19      | 10  | 10      |    |    |   |   |   | 28-10      | 7   |         |    | 3  | 2 | 2 |   |            |     |         |    |    |   |   |   |
| 18-20      | 5   | 5       |    |    |   |   |   | 28-11      | 22  |         | 18 | 4  |   |   |   |            |     |         |    |    |   |   |   |
| 18-21      | 3   |         | 3  |    |   |   |   | 28-12      | 26  |         | 26 |    |   |   |   |            |     |         |    |    |   |   |   |
| 18-22      | 3   | 3       |    |    |   |   |   | 28-15      | 35  |         | 35 |    |   |   |   |            |     |         |    |    |   |   |   |
| 18-32      | 8   | 8       |    |    |   |   |   | 28-16      | 20  |         | 20 |    |   |   |   |            |     |         |    |    |   |   |   |
|            |     | 20 size |    |    |   |   |   | 28-17      | 15  |         | 15 |    |   |   |   |            |     |         |    |    |   |   |   |
| 20-01      | 10  | 10      |    |    |   |   |   | 28-18      | 12  |         | 12 |    |   |   |   |            |     |         |    |    |   |   |   |
| 20-03      | 3   |         | 1  | 2  |   |   |   | 28-19      | 10  |         | 6  | 4  |   |   |   |            |     |         |    |    |   |   |   |
| 20-2       | 1   |         |    |    |   | 1 |   | 28-20      | 14  |         | 4  | 10 |   |   |   |            |     |         |    |    |   |   |   |
| 20-3       | 3   |         | 3  |    |   |   |   | 28-21      | 37  |         | 37 |    |   |   |   |            |     |         |    |    |   |   |   |
| 20-4       | 4   |         | 4  |    |   |   |   | 28-22      | 6   |         | 3  |    |   | 3 |   |            |     |         |    |    |   |   |   |
| 20-7       | 8   | 8       |    |    |   |   |   | 28-51      | 12  |         | 12 |    |   |   |   |            |     |         |    |    |   |   |   |
| 20-8       | 6   | 4       |    | 2  |   |   |   | 28-66      | 16  |         | 14 | 2  |   |   |   |            |     |         |    |    |   |   |   |
| 20-11      | 13  | 13      |    |    |   |   |   |            |     |         |    |    |   |   |   |            |     |         |    |    |   |   |   |
| 20-14      | 5   |         | 3  | 2  |   |   |   |            |     |         |    |    |   |   |   |            |     |         |    |    |   |   |   |
| 20-15      | 7   |         | 7  |    |   |   |   |            |     |         |    |    |   |   |   |            |     |         |    |    |   |   |   |
| 20-16      | 9   |         | 7  | 2  |   |   |   |            |     |         |    |    |   |   |   |            |     |         |    |    |   |   |   |
| 20-17      | 6   |         | 1  | 5  |   |   |   |            |     |         |    |    |   |   |   |            |     |         |    |    |   |   |   |
| 20-18      | 9   |         | 6  | 3  |   |   |   |            |     |         |    |    |   |   |   |            |     |         |    |    |   |   |   |
| 20-19      | 3   |         |    |    | 3 |   |   |            |     |         |    |    |   |   |   |            |     |         |    |    |   |   |   |
| 20-22      | 6   |         | 3  |    | 3 |   |   |            |     |         |    |    |   |   |   |            |     |         |    |    |   |   |   |
| 20-23      | 2   |         |    |    | 2 |   |   |            |     |         |    |    |   |   |   |            |     |         |    |    |   |   |   |
| 20-24      | 4   |         | 2  |    | 2 |   |   |            |     |         |    |    |   |   |   |            |     |         |    |    |   |   |   |
| 20-27      | 14  |         | 14 |    |   |   |   |            |     |         |    |    |   |   |   |            |     |         |    |    |   |   |   |
| 20-29      | 17  |         | 17 |    |   |   |   |            |     |         |    |    |   |   |   |            |     |         |    |    |   |   |   |
| 20-33      | 11  |         | 11 |    |   |   |   |            |     |         |    |    |   |   |   |            |     |         |    |    |   |   |   |

Please make a direct inquiry for the information not contained in the table. (Follow the MIL-STD-1651 standards.)

YH5015 Connector Polarization Positions



View looking into front face of pin insert or rear of socket insert.

| Shell Size | Insert Arrangement | Service Rating | Total Contact | Contact Size |   |   |    |    | Alternate Positions |     |     |       |       | Shell Size | Insert Arrangement | Service Rating | Total Contact | Contact Size |   |    |     |     | Alternate Positions |     |     |     |     |     |
|------------|--------------------|----------------|---------------|--------------|---|---|----|----|---------------------|-----|-----|-------|-------|------------|--------------------|----------------|---------------|--------------|---|----|-----|-----|---------------------|-----|-----|-----|-----|-----|
|            |                    |                |               | 0            | 4 | 8 | 12 | 16 | W                   | X   | Y   | Z     |       |            |                    |                |               | 0            | 4 | 8  | 12  | 16  | W                   | X   | Y   | Z   |     |     |
| 10S        | 10S-2              | A              | 1             |              |   |   |    | 1  | -                   | -   | -   | -     | 28    | 28-2       | D                  | 14             |               |              |   | 2  | 12  | 35  | 110                 | 250 | 325 |     |     |     |
|            | 10SL-3             | A              | 3             |              |   |   |    | 3  | -                   | -   | -   | -     |       | 28-3       | E                  | 3              |               |              | 3 |    |     | 70  | 145                 | 215 | 290 |     |     |     |
|            | 10SL-4             | A              | 2             |              |   |   |    | 2  | -                   | -   | -   | -     |       | 28-6       | D                  | 3              |               |              | 3 |    |     | 70  | 145                 | 215 | 290 |     |     |     |
| 12S        | 12S-3              | A              | 2             |              |   |   |    | 2  | 70                  | 145 | 215 | 290   | 28-7  | D          | 2                  |                |               | 2            |   |    | 35  | 110 | 250                 | 325 |     |     |     |     |
|            | 12S-4              | D              | 1             |              |   |   |    | 1  | -                   | -   | -   | -     |       | 28-9       | D                  | 12             |               |              |   | 6  | 6   | 80  | 110                 | 250 | 280 |     |     |     |
| 12         | 12-5               | D              | 1             |              |   |   | 1  | -  | -                   | -   | -   | 28-10 | A/D   | 7          |                    |                | 2             | 2            | 3 | 80 | 110 | 250 | 280                 |     |     |     |     |     |
|            | 14S-1              | A              | 3             |              |   |   |    | 3  | -                   | -   | -   |       | -     | 28-11      | A                  | 22             |               |              |   | 4  | 18  | 80  | 110                 | 250 | 280 |     |     |     |
| 14S        | 14S-2              | Inst           | 4             |              |   |   |    | 4  | -                   | 120 | 240 | -     | 28-12 | A          | 26                 |                |               |              |   | 26 | 90  | 180 | 270                 | -   |     |     |     |     |
|            | 14S-5              | Inst           | 5             |              |   |   |    | 5  | -                   | 110 | -   | -     |       | 28-15      | A                  | 35             |               |              |   |    | 35  | 80  | 110                 | 250 | 280 |     |     |     |
|            | 14S-6              | Inst           | 6             |              |   |   |    | 6  | -                   | -   | -   | -     |       | 28-16      | A                  | 20             |               |              |   |    | 20  | 80  | 110                 | 250 | 280 |     |     |     |
|            | 14S-7              | A              | 3             |              |   |   |    | 3  | 90                  | 180 | 270 | -     |       | 28-17      | B/D/A              | 15             |               |              |   |    | 15  | 80  | 110                 | 250 | 280 |     |     |     |
|            | 14S-9              | A              | 2             |              |   |   |    | 2  | 70                  | 145 | 215 | 290   |       |            | 28-18              | A/C/D /Inst    | 12            |              |   |    |     | 12  | 70                  | 145 | 215 | 290 |     |     |
|            | 14                 | 14-3           | 1             | 1            |   |   | 1  |    | -                   | -   | -   | -     |       |            |                    | 28-19          | B/D/A         | 10           |   |    |     |     | 4                   | 6   | 80  | 110 | 250 | 280 |
|            | 16S                | 16S-1          | A             | 7            |   |   |    |    | 7                   | 80  | -   | -     |       | 250        | 28-20              | A              | 14            |              |   |    |     | 10  | 4                   | 80  | 110 | 250 | 280 |     |
| 16S-01     |                    | Inst           | 8             |              |   |   |    | 8  | -                   | -   | -   | -     | 28-21 | A          |                    | 37             |               |              |   |    |     | 37  | 80                  | 110 | 250 | 280 |     |     |
| 16S-4      |                    | D              | 2             |              |   |   |    | 2  | 35                  | 110 | 250 | 325   | 28-22 | D          |                    | 6              |               |              | 3 |    |     | 3   | 70                  | 145 | 215 | 290 |     |     |
| 16S-5      |                    | A              | 3             |              |   |   |    | 3  | 70                  | 145 | 215 | 290   |       | 28-51      |                    | D              | 12            |              |   |    |     | 12  | -                   | -   | -   | -   |     |     |
| 16S-8      |                    | A              | 5             |              |   |   |    | 2  | -                   | 170 | 265 | -     | 28-66 | A          |                    | 16             |               |              |   | 2  | 14  | -   | -                   | -   | -   | -   |     |     |
| 16         |                    | 16-9           | A             | 4            |   |   |    | 2  | 2                   | 35  | 110 | 250   |       | 325        |                    | 32             | 32-1          | E/D          | 5 | 2  |     | 3   |                     |     | 80  | 110 | 250 | 280 |
| 18         | 16-10              | A              | 3             |              |   |   |    | 3  | 35                  | 90  | 180 | 270   | -     | 36         | 32-3               | D              | 9             | 1            | 2 | 2  | 4   | 80  | 110                 | 250 | 280 |     |     |     |
|            | 16-11              | A              | 2             |              |   |   | 2  |    | 35                  | 110 | 150 | 325   |       |            | 32-5               | D              | 2             | 2            |   |    |     |     | 80                  | 110 | 250 | 325 |     |     |
|            | 16-12              | A              | 1             |              |   | 1 |    |    | -                   | -   | -   | -     | 32-6  |            | A                  | 23             |               |              | 2 | 3  | 2   | 16  | 80                  | 110 | 250 | 280 |     |     |
|            | 16-13              | A              | 2             |              |   |   | 2  |    | 35                  | 110 | 250 | 325   | 32-7  |            | Inst/A             | 35             |               |              |   |    | 7   | 28  | 80                  | 125 | 235 | 280 |     |     |
|            | 18-1               | A/Inst         | 10            |              |   |   |    | 10 | 7                   | 145 | -   | 290   | 32-8  |            | A                  | 30             |               |              |   |    | 6   | 24  | 80                  | 125 | 235 | 280 |     |     |
|            | 18-2               | D              | 3             |              |   |   |    | 3  | -                   | -   | -   | -     | 32-9  |            | D                  | 14             |               |              | 2 |    |     | 12  | 80                  | 110 | 250 | 280 |     |     |
|            | 18-3               | D              | 2             |              |   |   | 2  |    | 35                  | 110 | 250 | 325   | 32-13 |            | D                  | 23             |               |              |   |    | 5   | 18  | 80                  | 110 | 250 | 280 |     |     |
|            | 18-4               | D              | 4             |              |   |   |    | 4  | 35                  | 110 | 250 | 325   | 32-15 |            | D                  | 8              | 2             |              |   |    | 6   |     | 35                  | 110 | 250 | 280 |     |     |
|            | 18-5               | D              | 3             |              |   |   | 2  | 1  | 80                  | 110 | 250 | 280   | 32-17 |            | D                  | 4              |               |              | 4 |    |     | 45  | 110                 | 250 | -   |     |     |     |
|            | 18-8               | A              | 8             |              |   |   | 1  | 7  | 70                  | -   | -   | 290   | 32-22 |            | A                  | 54             |               |              |   |    |     | 54  | 80                  | 110 | 250 | 280 |     |     |
|            | 18-9               | Inst           | 7             |              |   |   | 2  | 5  | 80                  | 110 | 250 | 280   | 32-73 |            | A                  | 46             |               |              |   |    |     | 46  | 36                  | -   | -   | -   |     |     |
|            | 18-10              | A              | 4             |              |   |   | 4  |    | -                   | 120 | 240 | -     | 36-1  |            | D                  | 22             |               |              |   |    | 4   | 18  | 80                  | 110 | 250 | 280 |     |     |
|            | 18-11              | A              | 5             |              |   |   |    | 5  | -                   | 170 | 265 | -     |       |            | 36-3               | D              | 6             | 3            |   |    | 3   |     |                     | 70  | 145 | 215 | 290 |     |
|            | 18-12              | A              | 6             |              |   |   |    | 6  | 80                  | -   | -   | 280   |       |            | 36-4               | D/A            | 3             | 3            |   |    |     |     | 70                  | 145 | 215 | 290 |     |     |
|            | 18-13              | A              | 4             |              |   | 1 | 3  |    | 80                  | 110 | 250 | 280   |       |            | 36-5               | A              | 4             | 4            |   |    |     |     | -                   | 120 | 240 | -   |     |     |
|            | 18-16              | C              | 1             |              |   |   | 1  |    | -                   | -   | -   | -     |       |            | 36-6               | A              | 6             |              |   | 2  | 4   |     |                     | 35  | 110 | 250 | 325 |     |
|            | 18-19              | A              | 10            |              |   |   |    | 10 | -                   | 120 | 240 | -     |       |            | 36-7               | A              | 47            |              |   |    |     | 7   | 40                  | 80  | 110 | 250 | 280 |     |
|            | 18-20              | A              | 5             |              |   |   |    | 5  | 90                  | 180 | 270 | -     |       |            | 36-8               | A              | 47            |              |   |    |     | 1   | 46                  | 80  | 110 | 250 | 280 |     |
|            | 18-21              | A              | 3             |              |   |   | 3  |    | -                   | -   | -   | -     |       |            | 36-9               | A              | 31            |              |   | 1  | 2   | 14  | 14                  | 80  | 125 | 235 | 280 |     |
|            | 18-22              | D              | 3             |              |   |   |    | 3  | 70                  | 145 | 215 | 290   |       |            | 36-10              | A              | 48            |              |   |    |     |     | 48                  | 80  | 125 | 235 | 280 |     |
| 18-32      | A                  | 8              |               |              |   |   | 8  | 70 | 145                 | 215 | 290 | 36-15 |       | A/D        | 35                 |                |               |              |   |    | 35  | 60  | 125                 | 245 | 305 |     |     |     |
| 20         | 20-01              | A              | 10            |              |   |   |    | 10 | -                   | -   | -   | -     | 40    | 36-52      | A/D                | 52             |               |              |   |    | 52  | 72  | 144                 | 216 | 288 |     |     |     |
|            | 20-03              | A              | 3             |              |   |   |    |    | -                   | -   | -   | -     |       | 40-56      | A                  | 85             |               |              |   |    |     | 85  | 72                  | 144 | 216 | 288 |     |     |
|            | 20-2               | D              | 1             |              |   | 1 |    |    | -                   | -   | -   | -     |       |            |                    |                |               |              |   |    |     |     |                     |     |     |     |     |     |
|            | 20-3               | D              | 3             |              |   |   | 3  |    | 70                  | 145 | 215 | 290   |       |            |                    |                |               |              |   |    |     |     |                     |     |     |     |     |     |
|            | 20-4               | D              | 4             |              |   |   | 4  |    | 45                  | 110 | 250 | -     |       |            |                    |                |               |              |   |    |     |     |                     |     |     |     |     |     |
|            | 20-7               | A/D            | 8             |              |   |   |    | 8  | 80                  | 110 | 250 | 280   |       |            |                    |                |               |              |   |    |     |     |                     |     |     |     |     |     |
|            | 20-8               | Inst           | 6             |              |   |   |    | 4  | 80                  | 110 | 250 | 280   |       |            |                    |                |               |              |   |    |     |     |                     |     |     |     |     |     |
|            | 20-11              | Inst           | 13            |              |   |   |    | 13 | -                   | -   | -   | -     |       |            |                    |                |               |              |   |    |     |     |                     |     |     |     |     |     |
|            | 20-14              | A              | 5             |              |   |   | 2  | 3  |                     | 80  | 110 | 250   |       | 280        |                    |                |               |              |   |    |     |     |                     |     |     |     |     |     |
|            | 20-15              | A              | 7             |              |   |   |    | 7  |                     | 80  | -   | -     |       | 280        |                    |                |               |              |   |    |     |     |                     |     |     |     |     |     |
|            | 20-16              | A              | 9             |              |   |   |    | 2  | 7                   | 80  | 110 | 250   |       | 280        |                    |                |               |              |   |    |     |     |                     |     |     |     |     |     |
|            | 20-17              | A              | 6             |              |   |   |    | 5  | 1                   | 90  | 180 | 270   |       | -          |                    |                |               |              |   |    |     |     |                     |     |     |     |     |     |
|            | 20-18              | A              | 9             |              |   |   |    | 3  | 6                   | 35  | 110 | 250   |       | 325        |                    |                |               |              |   |    |     |     |                     |     |     |     |     |     |
| 20-19      | A                  | 3              |               |              |   | 3 |    |    | 90                  | 180 | 270 | -     |       |            |                    |                |               |              |   |    |     |     |                     |     |     |     |     |     |
| 20-22      | A                  | 6              |               |              |   |   | 3  | 3  | 80                  | 110 | 250 | 280   |       |            |                    |                |               |              |   |    |     |     |                     |     |     |     |     |     |
| 20-23      | A                  | 2              |               |              |   | 2 |    |    | 35                  | 110 | 250 | 325   |       |            |                    |                |               |              |   |    |     |     |                     |     |     |     |     |     |
| 20-24      | A                  | 4              |               |              |   | 2 |    |    | 2                   | 35  | 110 | 250   | 325   |            |                    |                |               |              |   |    |     |     |                     |     |     |     |     |     |
| 20-27      | A                  | 14             |               |              |   |   |    | 14 | 35                  | 110 | 250 | 325   |       |            |                    |                |               |              |   |    |     |     |                     |     |     |     |     |     |
| 20-29      | A                  | 17             |               |              |   |   |    | 17 | 80                  | -   | -   | 280   |       |            |                    |                |               |              |   |    |     |     |                     |     |     |     |     |     |
| 20-33      | A                  | 11             |               |              |   |   |    | 11 | -                   | -   | -   | -     |       |            |                    |                |               |              |   |    |     |     |                     |     |     |     |     |     |
| 22         | 22-1               | D              | 2             |              |   |   | 2  |    | 35                  | 110 | 250 | 325   |       |            |                    |                |               |              |   |    |     |     |                     |     |     |     |     |     |
|            | 22-2               | D              | 3             |              |   |   |    | 3  | 70                  | 145 | 215 | 290   |       |            |                    |                |               |              |   |    |     |     |                     |     |     |     |     |     |
|            | 22-4               | A              | 4             |              |   |   | 2  | 2  | 35                  | 110 | 250 | 325   |       |            |                    |                |               |              |   |    |     |     |                     |     |     |     |     |     |
|            | 22-5               | D              | 6             |              |   |   | 2  | 4  | 35                  | 110 | 250 | 325   |       |            |                    |                |               |              |   |    |     |     |                     |     |     |     |     |     |
|            | 22-7               | E              | 1             |              |   | 1 |    |    | -                   | -   | -   | -     |       |            |                    |                |               |              |   |    |     |     |                     |     |     |     |     |     |
|            | 22-8               | E              | 2             |              |   |   |    | 2  | 35                  | 110 | 250 | 325   |       |            |                    |                |               |              |   |    |     |     |                     |     |     |     |     |     |
|            | 22-9               | E              | 3             |              |   |   |    | 3  |                     | 70  | 145 | 215   | 290   |            |                    |                |               |              |   |    |     |     |                     |     |     |     |     |     |
|            | 22-10              | E              | 4             |              |   |   |    | 4  | 35                  | 110 | 250 | 325   |       |            |                    |                |               |              |   |    |     |     |                     |     |     |     |     |     |
|            | 22-14              | A              | 19            |              |   |   |    | 19 | 80                  | 110 | 250 | 280   |       |            |                    |                |               |              |   |    |     |     |                     |     |     |     |     |     |
|            | 22-15              | E/A            | 6             |              |   |   |    | 5  | 1                   | 80  | 110 | 250   | 280   |            |                    |                |               |              |   |    |     |     |                     |     |     |     |     |     |
|            | 22-18              | D/A            | 8             |              |   |   |    |    | 8                   | 80  | 110 | 250   | 280   |            |                    |                |               |              |   |    |     |     |                     |     |     |     |     |     |
|            | 22-19              | A              | 14            |              |   |   |    | 14 | 80                  | 110 | 250 | 280   |       |            |                    |                |               |              |   |    |     |     |                     |     |     |     |     |     |
|            | 22-20              | A              | 9             |              |   |   |    | 9  | 35                  | 110 | 250 | 325   |       |            |                    |                |               |              |   |    |     |     |                     |     |     |     |     |     |
|            | 22-21              | A              | 3             |              |   | 1 |    | 2  | 80                  | 110 | 250 | 280   |       |            |                    |                |               |              |   |    |     |     |                     |     |     |     |     |     |
|            | 22-22              | A              | 4             |              |   |   | 4  |    | -                   | 110 | 250 | -     |       |            |                    |                |               |              |   |    |     |     |                     |     |     |     |     |     |
|            | 22-23              | D/A            | 8             |              |   |   |    | 8  | 80                  | -   | -   | 250   | 280   |            |                    |                |               |              |   |    |     |     |                     |     |     |     |     |     |
|            | 22-27              | D/A            | 9             |              |   |   | 1  |    | 8                   | 80  | -   | -     | 250   | 280        |                    |                |               |              |   |    |     |     |                     |     |     |     |     |     |
| 24         | 24-2               | D              | 7             |              |   |   | 7  |    | 80                  | -   | -   | 280   |       |            |                    |                |               |              |   |    |     |     |                     |     |     |     |     |     |
|            | 24-03              | A              | 12            |              |   |   |    | 12 | -                   | -   | -   | -     |       |            |                    |                |               |              |   |    |     |     |                     |     |     |     |     |     |
|            | 24-3               | D              | 7             |              |   |   | 2  | 5  | 80                  | 110 | 250 | 280   |       |            |                    |                |               |              |   |    |     |     |                     |     |     |     |     |     |
|            | 24-4               | D              | 4             |              |   | 1 |    |    | 3                   | 80  | 110 | 250   | 280   |            |                    |                |               |              |   |    |     |     |                     |     |     |     |     |     |