

# BMS

- **Coupling: Bayonet**
- **Terminal: Solder**

VG95234  
MIL-DTL-5015



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High-tech Enterprise Certificate



Foreign Invested Advanced



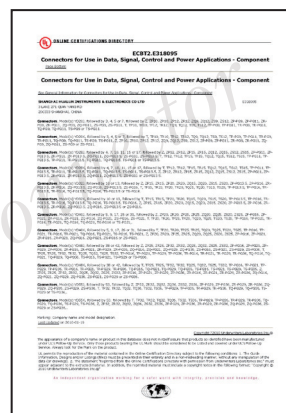
Enterprise Credit Rating AAA



Software Copyright



ISO9001, ISO14001, ISO45001



UL for YD series

## Live parts should not be disassembled without authorization!!!



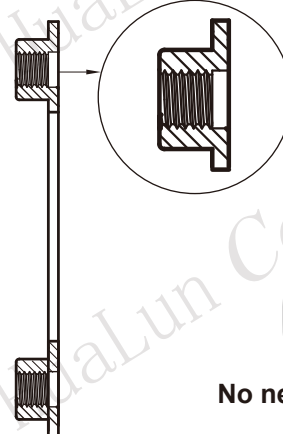
### TIPS

- 1 After the wire is welded, be sure to seal the heat shrinkable sleeve at the welding site



- 2 Especially Recommended Assembly Nut Plate

The Feature of Assembly Nut Plate  
Convenient and Fast! Firm!



No need 4 mounting nut



## Profile

- ◆ Design according to MIL5015, VG95234, interchangeable with equivalent products.
- ◆ Insert: Halogen free & fire resistance thermoplastic UL94V-0; 2-60 pins. More than 65 types.
- ◆ Shell size-arrangement: 14S, 16S, 16, 18, 20, 22, 24, 28, 32, 36, 40.
- ◆ Coupling: bayonet
- ◆ Terminal: solder
- ◆ Tools: hand crimp tool-M22520/1-01. Pneumatic crimp tool would be update efficiency and fit for mass crimping.
- ◆ Shell Protection degree: IP65/67
- ◆ Shock vibration: Class 1B (GB/T21563-2018 Shock and vibration test of rail transit locomotive and rolling stock equipment)
- ◆ Technical data qualified to NFF61030 ( Normes francaises ) & GB/T34119-2017 ( Railway rolling stock-Electrical connectors ) .
- ◆ Shell color: Black, Army Green
- ◆ TUV certification.

Hualun connectors are appointed by Chinese rail transport, engineering machinery, power electric power, thermoplastic machinery, industrial automation, and robot manufacturing enterprises. as a perennial supporting product.

## Technical Data

### Environmental

|                       |                                                          |
|-----------------------|----------------------------------------------------------|
| Operating Temperature | Upper limit+125°C * Lower limit-55°C                     |
| Relative Humidity     | 40°C±2°C 93%~95%                                         |
| Salty Spray Corrosion | ≥96hours                                                 |
| Protection Degree     | IP65,IP67 (when mated,wired and mounted according to DS) |
| Shock Vibration       | Class 1B (GB/T21563-2018 / IEC61373: 2010)               |

**Note:** \* The upper limit temperature is the maximum internal hot spot temperature that occurs in either combination of electrical load and environmental conditions.

### Contact current De-rating

|                 |      |       |       |       |       |
|-----------------|------|-------|-------|-------|-------|
| Qty of contacts | 1~10 | 11~20 | 21~30 | 31~50 | 51~80 |
| Drop rate%      | 0    | 10    | 20    | 30    | 40    |

### Mechanical Features

|                                                                            |            |                 |             |       |
|----------------------------------------------------------------------------|------------|-----------------|-------------|-------|
| Type of contacts#                                                          | ● 16#      | ⊕ 12#           | ⊗ 8#        | ⊙ 4#  |
| retention force (min)                                                      | 44.5N      | 66.7N           | 89.0N       | 89.0N |
| Minimum separation force                                                   | 0.56N      | 0.83N           | 1.39N       | 2.78N |
| The contact crimp is sufficient to match the tensile strength of the cable |            |                 |             |       |
| Type of contacts#                                                          | Wire Gauge |                 | OD of Cable |       |
|                                                                            | AWG        | mm <sup>2</sup> | min         | max   |
| ● 16#                                                                      | 20         | 0.50            | 1.63        | 3.30  |
|                                                                            | 18         | 0.80            |             |       |
|                                                                            | 16         | 1.25            |             |       |
| ⊕ 12#                                                                      | 14         | 2.00            | 2.90        | 4.32  |
|                                                                            | 12         | 3.15            |             |       |
| ⊗ 8#                                                                       | 10         | 6.30            | 4.17        | 6.48  |
|                                                                            | 8          | 8.00            |             |       |
| ⊙ 4#                                                                       | 6          | 12.50           | 6.91        | 9.40  |
|                                                                            | 4          | 25.00           |             |       |
| Mechanical Life                                                            | ≥500       |                 |             |       |

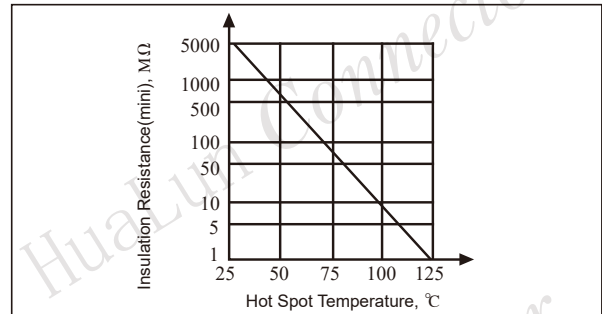
### Testing Condition

|                        |                            |                                    |
|------------------------|----------------------------|------------------------------------|
| Temperature: 15°C~35°C | Relative Humidity: 20%~80% | Atmospheric Pressure: 73KPa~106KPa |
|------------------------|----------------------------|------------------------------------|

### Electric Features

|                              |                                              |         |         |         |
|------------------------------|----------------------------------------------|---------|---------|---------|
| Service rating               | Inst.                                        | A       | D       | E       |
| Rated Voltage                | 250VDC                                       | 700VDC  | 1250VDC | 1750VDC |
|                              | 200VAC                                       | 500VAC  | 900VAC  | 1250VAC |
| Dielectric Withstand Voltage | 1000VAC                                      | 2000VAC | 2800VAC | 3500VAC |
| Mechanical Spacing           | -                                            | 1.59mm  | 3.18mm  | 4.76mm  |
| Creepage Distance            | 1.59mm                                       | 3.18mm  | 4.76mm  | 6.35mm  |
| Insulation Resistance        | Normal: >5000MΩ, (Dynamic values see tableA) |         |         |         |
| Type of contacts#            | ● 16#                                        | ⊕ 12#   | ⊗ 8#    | ⊙ 4#    |
| Working Current              | 13A                                          | 23A     | 46A     | 80A     |
| Contact Resistance           | 2.5mΩ                                        | 1.3mΩ   | 0.7mΩ   | 0.35mΩ  |

**TableA** The limit value of insulation resistance varies with temperature



### Material of Main Parts

|                   |                        |                                                       |
|-------------------|------------------------|-------------------------------------------------------|
| Shell             | Material               | Aluminum Alloy                                        |
|                   | Finish                 | Electrophoretic Paint; Zinc Passivation               |
| Insert            | Material               | Halogen free & fire resistance thermoplastic material |
|                   | Flame Retardant Grade  | UL94V-0                                               |
| Contacts          | Material               | Copper Alloy                                          |
|                   | Plating                | Silver; Gold                                          |
| Grommet & Bushing | Low Fire Hazard Rubber |                                                       |

## Part Number (Explanation)

### Receptacle ①

(Panels Mounted)

(No Protective Enclosure)

e.g. ① BMS 31 02 S18-19 N

e.g. ② BMS 31 22 P18-19 W L

① ② ③ ④ ⑤ ⑥

## Explanation

① **BMS** : Coupling (bayonet)

② **31** : Terminal (solder)

③ **02** : Front Mounting { panel mounted,  
**22** : Rear Mounting { No protective enclosure

④ Insert:

**S (P) 18 - 19**

S: Socket

P: Pin

Shell-size

Arrangement No.

Insert P/N: See Page 9-18

■ Shell Size See Page 20



⑤ Insert Orientation:

**N**: Cardinal Points; (Default)

**W, X, Y, Z**, See Page 19

⑥ Shell Color:

◆ **H**: Black

◆ **L**: Army Green

## Part Number (Explanation)

### Receptacle ②

(Protective Enclosure)

(Clamp/Gland)

|        |            |           |           |               |          |            |          |
|--------|------------|-----------|-----------|---------------|----------|------------|----------|
| e.g. ① | <b>BMS</b> | <b>31</b> | <b>20</b> | <b>S18-19</b> | <b>N</b> | <b>18A</b> |          |
| e.g. ② | <b>BMS</b> | <b>31</b> | <b>00</b> | <b>P18-19</b> | <b>Y</b> | <b>18A</b> | <b>L</b> |
|        | ①          | ②         | ③         | ④             | ⑤        | ⑥          | ⑦        |

## Explanation

① **BMS** : Coupling (bayonet)

② **31** : Terminal (solder)

③ **00** : Front Mounting  
**20** : Rear Mounting

{ Protective Enclosure,  
Clamp/Gland

④ Insert:

**S(P) 18 - 19**

S: Socket  
P: Pin

Shell-size Arrangement No.

Insert P/N: See Page 9-18

⑤ Insert Orientation:

**N**: Cardinal Points; (Default)

**W, X, Y, Z**, See Page 19

⑥ Outlet Type:

◆ **\*\*A** : Cable Clamp (3057+3420)  
size

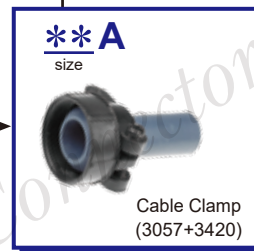
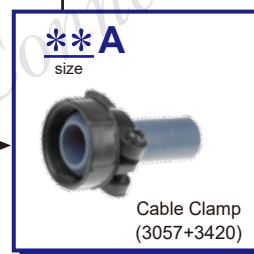
◆ **PG \*\*** : PG Nylon Cable Gland Outlet  
size

⑦ Shell Color:

◆ **H**: Black

◆ **L**: Army Green

■ Shell Size See  
Page 21~23



## Part Number (Explanation)

### Receptacle ③

(Free)

e.g. ① **BMS** ② **31** ③ **01** ④ **S18-19** ⑤ **N** ⑥ **18A**

e.g. ① **BMS** ② **31** ③ **01** ④ **P18-19** ⑤ **Y** ⑥ **PG13.5** ⑦ **L**

### Explanation

① **BMS** : Coupling (bayonet)

② **31** : Terminal (solder)

③ **01** : Free Receptacle

④ Insert:

**S(P) 18 - 19**

S: Socket  
P: Pin

Shell-size

Arrangement No.

Insert P/N: See Page 9-18

⑤ Insert Orientation:

**N**: Cardinal Points; (Default)

**W, X, Y, Z**, See Page 19

⑥ Outlet Type:

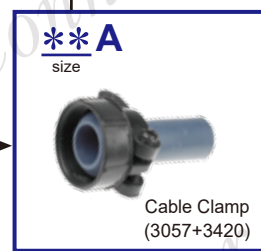
◆ **\*\*A** : Cable Clamp (3057+3420)  
size

◆ **PG \*\*** : PG Nylon Cable Gland Outlet  
size

⑦ Shell Color:

◆ **H**: Black

◆ **L**: Army Green

■ Shell Size See  
Page 24


## Part Number (Explanation)

### Receptacle ④

(Adapter)

e.g. **1** BMS 31 022 S18-19P N

e.g. **2** BMS 31 011 P18-19S W L

①                  ②                  ③                  ④                  ⑤                  ⑥

## Explanation

**① BMS** : Coupling (bayonet)

**② 31** : Terminal (solder)

**③ 022** : Adapter (Square flange)

**011** : Adapter (Round flange)

**④ Insert:**

**S 18 - 19 P**

S: Socket  
P: Pin

Shell-size Arrangement  
No.

P: Pin  
S: Socket

Insert P/N: See [Page 9-18](#)

■ Shell Size See [Page 25](#)

**022**



**011**



**⑤ Insert Orientation:**

**N**: Cardinal Points; ([Default](#))

**W, X, Y, Z**, See [Page 19](#)

**⑥ Shell Color:**

◆ **H**: Black

◆ **L**: Army Green



## Part Number (Explanation)

### Plug

e.g. **1** **BMS** **31** **06** **P18-19** **N** **18A**

e.g. **2** **BMS** **31** **08** **S18-19** **Y** **PG13.5** **L**

### Explanation

**1 BMS** : Coupling (bayonet)

**2 31** : Terminal (solder)

**3 06** : Straight  
**08** : 90° Angled

{ Protective Enclosure,  
Clamp/Gland

**4 Insert:**

**S (P) 18 - 19**

S: Socket  
P: Pin

Shell-size

Arrangement No.

Insert P/N: See Page 9-18

**5 Insert Orientation:**

**N**: Cardinal Points; (Default)

**W, X, Y, Z**, See Page 19

**6 Outlet Type:**

◆ **\*\*A** : Cable Clamp (3057+3420)  
size

◆ **PG\*\*** : PG Nylon Cable Gland  
size

◆ **G\*\*** : G Nylon Hose Clamp  
size

**7 Shell Color:**

◆ **H**: Black

◆ **L**: Army Green

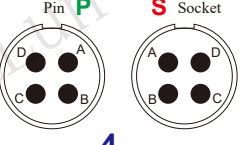
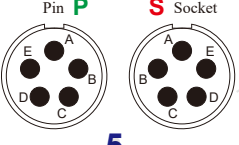
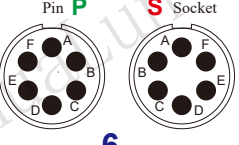
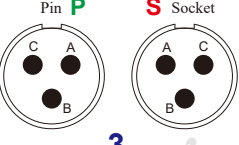
■ Shell Size See Page 26~28

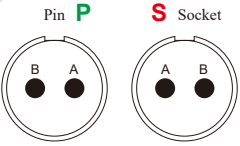
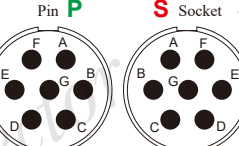
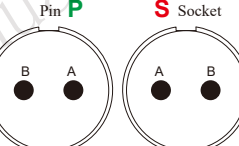
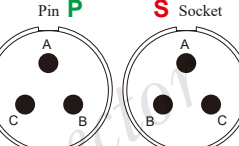


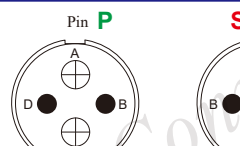
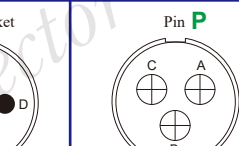
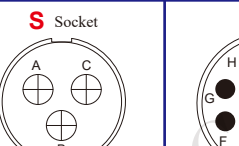
## Shell Size - Arrangement No.

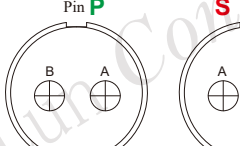
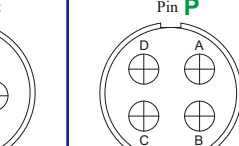
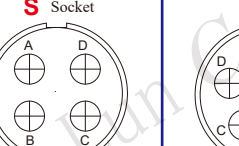
View from mating face

● 16# ⊕ 12#

| Type                               | 14S                                                                                            |        |                                                                                                |        |                                                                                                 |        |                                                                                                  |        |
|------------------------------------|------------------------------------------------------------------------------------------------|--------|------------------------------------------------------------------------------------------------|--------|-------------------------------------------------------------------------------------------------|--------|--------------------------------------------------------------------------------------------------|--------|
| P Shell Size-<br>S Arrangement No. | P14S-2                                                                                         | S14S-2 | P14S-5                                                                                         | S14S-5 | P14S-6                                                                                          | S14S-6 | P14S-7                                                                                           | S14S-7 |
| Contact Arrangement                | <br>4 Contact |        | <br>5 Contact |        | <br>6 Contact |        | <br>3 Contact |        |
| Contact Size×Contact Qty.          | 16# × 4                                                                                        |        | 16# × 5                                                                                        |        | 16# × 6                                                                                         |        | 16# × 3                                                                                          |        |
| Service Rating                     | Inst.                                                                                          |        | Inst.                                                                                          |        | Inst.                                                                                           |        | A                                                                                                |        |

| Type                               | 14S                                                                                             |        | 16S                                                                                             |        |                                                                                                  |        |                                                                                                   |        |
|------------------------------------|-------------------------------------------------------------------------------------------------|--------|-------------------------------------------------------------------------------------------------|--------|--------------------------------------------------------------------------------------------------|--------|---------------------------------------------------------------------------------------------------|--------|
| P Shell Size-<br>S Arrangement No. | P14S-9                                                                                          | S14S-9 | P16S-1                                                                                          | S16S-1 | P16S-4                                                                                           | S16S-4 | P16S-5                                                                                            | S16S-5 |
| Contact Arrangement                | <br>2 Contact |        | <br>7 Contact |        | <br>2 Contact |        | <br>3 Contact |        |
| Contact Size×Contact Qty.          | 16# × 2                                                                                         |        | 16# × 7                                                                                         |        | 16# × 2                                                                                          |        | 16# × 3                                                                                           |        |
| Service Rating                     | A                                                                                               |        | A                                                                                               |        | D                                                                                                |        | A                                                                                                 |        |

| Type                               | 16                                                                                               |       |                                                                                                  |        | 18                                                                                                 |       |
|------------------------------------|--------------------------------------------------------------------------------------------------|-------|--------------------------------------------------------------------------------------------------|--------|----------------------------------------------------------------------------------------------------|-------|
| P Shell Size-<br>S Arrangement No. | P16-9                                                                                            | S16-9 | P16-10                                                                                           | S16-10 | P18-1                                                                                              | S18-1 |
| Contact Arrangement                | <br>4 Contact |       | <br>3 Contact |        | <br>10 Contact |       |
| Contact Size×Contact Qty.          | 16# × 2    12# × 2                                                                               |       | 12# × 3                                                                                          |        | 16# × 10                                                                                           |       |
| Service Rating                     | A                                                                                                |       | A                                                                                                |        | B.C.F.G = A    Other = Inst.                                                                       |       |

| Type                               | 18                                                                                               |       |                                                                                                  |        |                                                                                                   |        |
|------------------------------------|--------------------------------------------------------------------------------------------------|-------|--------------------------------------------------------------------------------------------------|--------|---------------------------------------------------------------------------------------------------|--------|
| P Shell Size-<br>S Arrangement No. | P18-3                                                                                            | S18-3 | P18-10                                                                                           | S18-10 | P18-11                                                                                            | S18-11 |
| Contact Arrangement                | <br>2 Contact |       | <br>4 Contact |        | <br>5 Contact |        |
| Contact Size×Contact Qty.          | 12# × 2                                                                                          |       | 12# × 4                                                                                          |        | 12# × 5                                                                                           |        |
| Service Rating                     | D                                                                                                |       | A                                                                                                |        | A                                                                                                 |        |



TUV SUD



ISO9001 ISO14001 ISO45001

华伦连接器  
HuaLun Connector

## Shell Size - Arrangement No.

View from mating face

● 16# ⊕ 12#

| Type                                             | 18            |               |               |               |               |               |
|--------------------------------------------------|---------------|---------------|---------------|---------------|---------------|---------------|
| <b>P</b> Shell Size-<br><b>S</b> Arrangement No. | <b>P18-12</b> | <b>S18-12</b> | <b>P18-19</b> | <b>S18-19</b> | <b>P18-20</b> | <b>S18-20</b> |
| Contact Arrangement                              |               |               |               |               |               |               |
| Contact Size×Contact Qty.                        | 16# × 6       |               | 16# × 10      |               | 16# × 5       |               |
| Service Rating                                   | A             |               | A             |               | A             |               |

| Type                                             | 18            |               | 20           |              |              |              |
|--------------------------------------------------|---------------|---------------|--------------|--------------|--------------|--------------|
| <b>P</b> Shell Size-<br><b>S</b> Arrangement No. | <b>P18-22</b> | <b>S18-22</b> | <b>P20-3</b> | <b>S20-3</b> | <b>P20-4</b> | <b>S20-4</b> |
| Contact Arrangement                              |               |               |              |              |              |              |
| Contact Size×Contact Qty.                        | 16# × 3       |               | 12# × 3      |              | 12# × 4      |              |
| Service Rating                                   | D             |               | D            |              | D            |              |

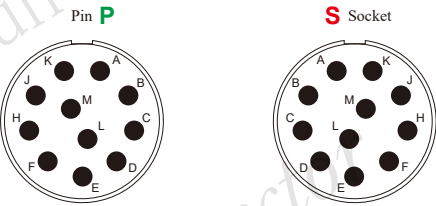
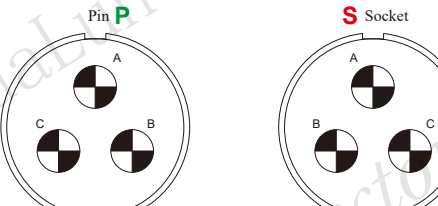
| Type                                             | 20                         |              |               |               |               |               |
|--------------------------------------------------|----------------------------|--------------|---------------|---------------|---------------|---------------|
| <b>P</b> Shell Size-<br><b>S</b> Arrangement No. | <b>P20-7</b>               | <b>S20-7</b> | <b>P20-15</b> | <b>S20-15</b> | <b>P20-16</b> | <b>S20-16</b> |
| Contact Arrangement                              |                            |              |               |               |               |               |
| Contact Size×Contact Qty.                        | 16# × 8                    |              | 12# × 7       |               | 16# × 7       | 12# × 2       |
| Service Rating                                   | C.D.E.F = A    A.B.G.H = D |              | A             |               | A             |               |

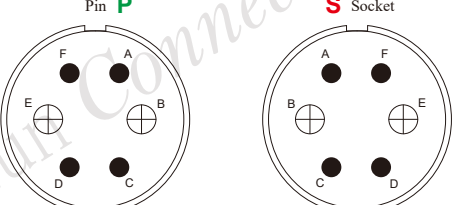
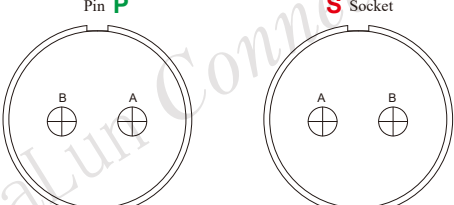
| Type                                             | 20            |               |               |               |               |               |
|--------------------------------------------------|---------------|---------------|---------------|---------------|---------------|---------------|
| <b>P</b> Shell Size-<br><b>S</b> Arrangement No. | <b>P20-18</b> | <b>S20-18</b> | <b>P20-27</b> | <b>S20-27</b> | <b>P20-29</b> | <b>S20-29</b> |
| Contact Arrangement                              |               |               |               |               |               |               |
| Contact Size×Contact Qty.                        | 16# × 6       | 12# × 3       | 16# × 14      |               | 16# × 17      |               |
| Service Rating                                   | A             |               | A             |               | A             |               |

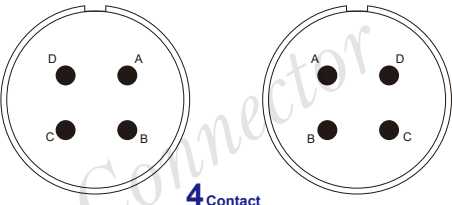
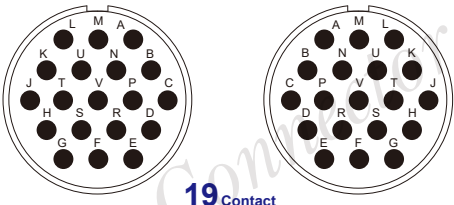
## Shell Size - Arrangement No.

View from mating face

● 16# ⊕ 12# ⊗ 8#

| Type                                             | 20                                                                                                  |               | 22                                                                                                  |              |
|--------------------------------------------------|-----------------------------------------------------------------------------------------------------|---------------|-----------------------------------------------------------------------------------------------------|--------------|
| <b>P</b> Shell Size-<br><b>S</b> Arrangement No. | <b>P20-33</b>                                                                                       | <b>S20-33</b> | <b>P22-2</b>                                                                                        | <b>S22-2</b> |
| Contact Arrangement                              |  <p>11 Contact</p> |               |  <p>3 Contact</p> |              |
| Contact Size×Contact Qty.                        | 16# × 11                                                                                            |               | 8# × 3                                                                                              |              |
| Service Rating                                   | A                                                                                                   |               | D                                                                                                   |              |

| Type                                             | 22                                                                                                   |              |                                                                                                       |              |
|--------------------------------------------------|------------------------------------------------------------------------------------------------------|--------------|-------------------------------------------------------------------------------------------------------|--------------|
| <b>P</b> Shell Size-<br><b>S</b> Arrangement No. | <b>P22-5</b>                                                                                         | <b>S22-5</b> | <b>P22-8</b>                                                                                          | <b>S22-8</b> |
| Contact Arrangement                              |  <p>6 Contact</p> |              |  <p>2 Contact</p> |              |
| Contact Size×Contact Qty.                        | 16# × 4    12# × 2                                                                                   |              | 12# × 2                                                                                               |              |
| Service Rating                                   | D                                                                                                    |              | E                                                                                                     |              |

| Type                                             | 22                                                                                                   |               |                                                                                                        |               |
|--------------------------------------------------|------------------------------------------------------------------------------------------------------|---------------|--------------------------------------------------------------------------------------------------------|---------------|
| <b>P</b> Shell Size-<br><b>S</b> Arrangement No. | <b>P22-10</b>                                                                                        | <b>S22-10</b> | <b>P22-14</b>                                                                                          | <b>S22-14</b> |
| Contact Arrangement                              |  <p>4 Contact</p> |               |  <p>19 Contact</p> |               |
| Contact Size×Contact Qty.                        | 16# × 4                                                                                              |               | 16# × 19                                                                                               |               |
| Service Rating                                   | E                                                                                                    |               | A                                                                                                      |               |





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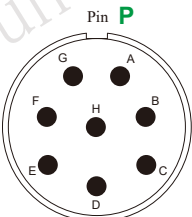
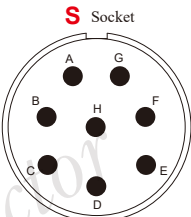
ISO9001 ISO14001 ISO45001

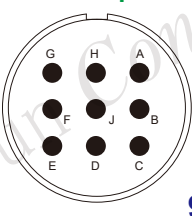
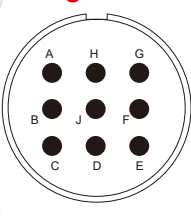
华伦连接器  
HuaLun Connector

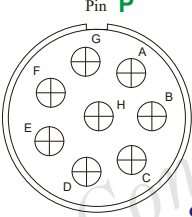
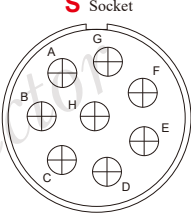
## Shell Size - Arrangement No.

View from mating face

● 16# ⊕ 12# ● 8#

| Type                                             | 22                                                                                                          |               |                                                                                                              |               |
|--------------------------------------------------|-------------------------------------------------------------------------------------------------------------|---------------|--------------------------------------------------------------------------------------------------------------|---------------|
| <b>P</b> Shell Size-<br><b>S</b> Arrangement No. | <b>P22-18</b>                                                                                               | <b>S22-18</b> | <b>P22-19</b>                                                                                                | <b>S22-19</b> |
| <b>Contact Arrangement</b>                       | Pin <b>P</b> <br>8 Contact |               | <b>S</b> Socket <br>16# × 8 |               |
| Contact Size×Contact Qty.                        | 16# × 8                                                                                                     |               | 16# × 14                                                                                                     |               |
| Service Rating                                   | C.D.E = A Other = D                                                                                         |               | A                                                                                                            |               |

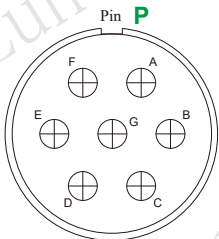
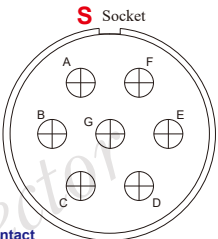
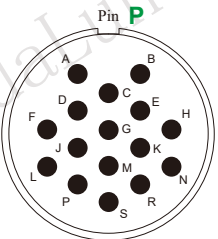
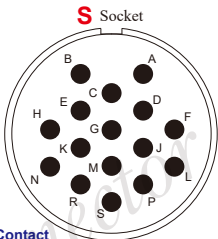
| Type                                             | 22                                                                                                            |               |                                                                                                                |               |
|--------------------------------------------------|---------------------------------------------------------------------------------------------------------------|---------------|----------------------------------------------------------------------------------------------------------------|---------------|
| <b>P</b> Shell Size-<br><b>S</b> Arrangement No. | <b>P22-20</b>                                                                                                 | <b>S22-20</b> | <b>P22-22</b>                                                                                                  | <b>S22-22</b> |
| <b>Contact Arrangement</b>                       | Pin <b>P</b> <br>9 Contact |               | <b>S</b> Socket <br>16# × 9 |               |
| Contact Size×Contact Qty.                        | 16# × 9                                                                                                       |               | 8# × 4                                                                                                         |               |
| Service Rating                                   | A                                                                                                             |               | A                                                                                                              |               |

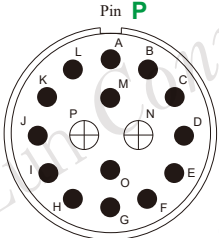
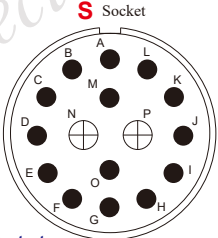
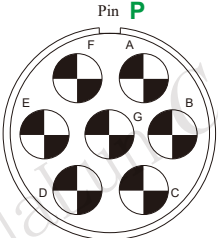
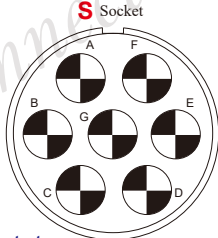
| Type                                             | 22                                                                                                            |               |                                                                                                                |               |
|--------------------------------------------------|---------------------------------------------------------------------------------------------------------------|---------------|----------------------------------------------------------------------------------------------------------------|---------------|
| <b>P</b> Shell Size-<br><b>S</b> Arrangement No. | <b>P22-23</b>                                                                                                 | <b>S22-23</b> | <b>P22-28</b>                                                                                                  | <b>S22-28</b> |
| <b>Contact Arrangement</b>                       | Pin <b>P</b> <br>8 Contact |               | <b>S</b> Socket <br>12# × 8 |               |
| Contact Size×Contact Qty.                        | 12# × 8                                                                                                       |               | 12# × 7                                                                                                        |               |
| Service Rating                                   | H = D Other = A                                                                                               |               | A                                                                                                              |               |

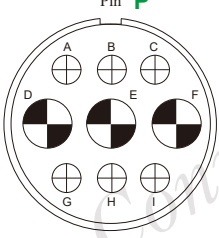
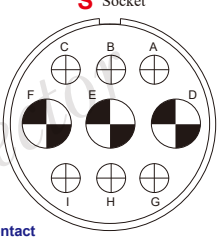
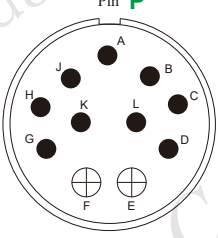
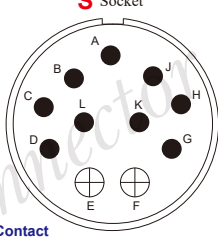
## Shell Size - Arrangement No.

View from mating face

● 16# ⊕ 12# ⊗ 8#

| Type                                             | 24                                                                                                                            |                                                                                                                                  |                                                                                                                                 |                                                                                                                                     |
|--------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|
| <b>P</b> Shell Size-<br><b>S</b> Arrangement No. | <b>P24-2</b>                                                                                                                  | <b>S24-2</b>                                                                                                                     | <b>P24-5</b>                                                                                                                    | <b>S24-5</b>                                                                                                                        |
| <b>Contact Arrangement</b>                       |  <p>Pin <b>P</b></p> <p><b>7 Contact</b></p> |  <p><b>S</b> Socket</p> <p><b>7 Contact</b></p> |  <p>Pin <b>P</b></p> <p><b>16 Contact</b></p> |  <p><b>S</b> Socket</p> <p><b>16 Contact</b></p> |
| Contact Size×Contact Qty.                        | 12# × 7                                                                                                                       |                                                                                                                                  | 16# × 16                                                                                                                        |                                                                                                                                     |
| Service Rating                                   | D                                                                                                                             |                                                                                                                                  | A                                                                                                                               |                                                                                                                                     |

| Type                                             | 24                                                                                                                               |                                                                                                                                     |                                                                                                                                  |                                                                                                                                      |
|--------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------|
| <b>P</b> Shell Size-<br><b>S</b> Arrangement No. | <b>P24-7</b>                                                                                                                     | <b>S24-7</b>                                                                                                                        | <b>P24-10</b>                                                                                                                    | <b>S24-10</b>                                                                                                                        |
| <b>Contact Arrangement</b>                       |  <p>Pin <b>P</b></p> <p><b>16 Contact</b></p> |  <p><b>S</b> Socket</p> <p><b>12 Contact</b></p> |  <p>Pin <b>P</b></p> <p><b>7 Contact</b></p> |  <p><b>S</b> Socket</p> <p><b>8 Contact</b></p> |
| Contact Size×Contact Qty.                        | 16# × 14                                                                                                                         | 12# × 2                                                                                                                             | 8# × 7                                                                                                                           |                                                                                                                                      |
| Service Rating                                   | A                                                                                                                                |                                                                                                                                     | A                                                                                                                                |                                                                                                                                      |

| Type                                             | 24                                                                                                                              |                                                                                                                                    |                                                                                                                                   |                                                                                                                                       |
|--------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------|
| <b>P</b> Shell Size-<br><b>S</b> Arrangement No. | <b>P24-11</b>                                                                                                                   | <b>S24-11</b>                                                                                                                      | <b>P24-20</b>                                                                                                                     | <b>S24-20</b>                                                                                                                         |
| <b>Contact Arrangement</b>                       |  <p>Pin <b>P</b></p> <p><b>9 Contact</b></p> |  <p><b>S</b> Socket</p> <p><b>8 Contact</b></p> |  <p>Pin <b>P</b></p> <p><b>11 Contact</b></p> |  <p><b>S</b> Socket</p> <p><b>12 Contact</b></p> |
| Contact Size×Contact Qty.                        | 12# × 6                                                                                                                         | 8# × 3                                                                                                                             | 16# × 9                                                                                                                           | 12# × 2                                                                                                                               |
| Service Rating                                   | A                                                                                                                               |                                                                                                                                    | D                                                                                                                                 |                                                                                                                                       |



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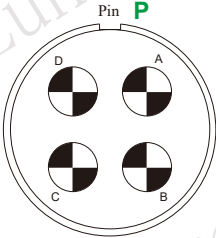
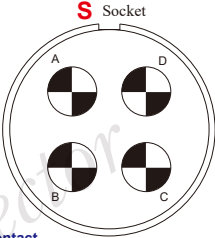
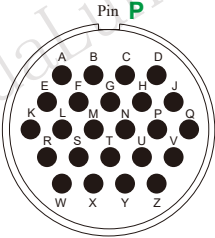
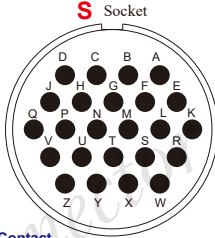
ISO9001 ISO14001 ISO45001

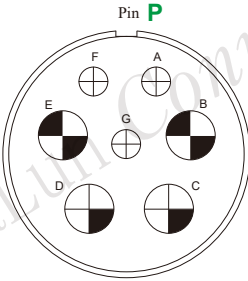
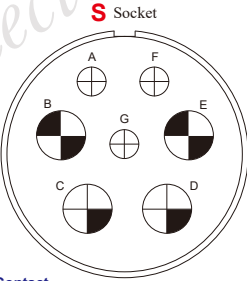
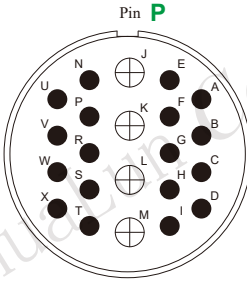
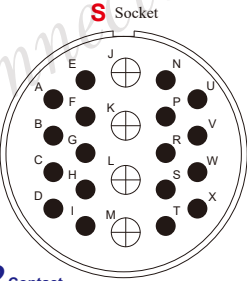
华伦连接器  
HuaLun Connector

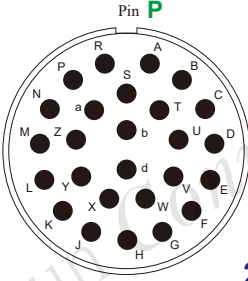
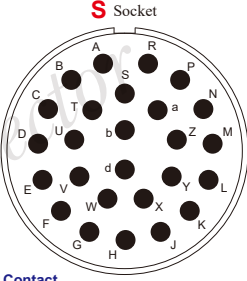
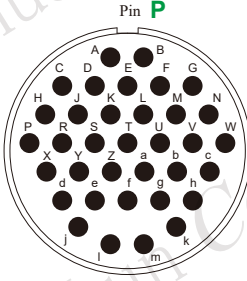
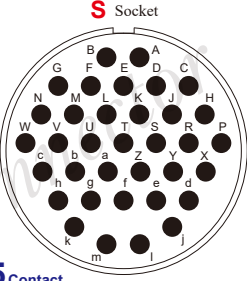
## Shell Size - Arrangement No.

View from mating face

● 16# ⊕ 12# ⊗ 8# ⊕ 4#

| Type                                             | 24                                                                                             |                                                                                                |                                                                                                  |                                                                                                   |
|--------------------------------------------------|------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------|
| <b>P</b> Shell Size-<br><b>S</b> Arrangement No. | <b>P24-22</b>                                                                                  | <b>S24-22</b>                                                                                  | <b>P24-28</b>                                                                                    | <b>S24-28</b>                                                                                     |
| Contact Arrangement                              | <br>4 Contact | <br>4 Contact | <br>24 Contact | <br>24 Contact |
| Contact Size×Contact Qty.                        | 8# × 4                                                                                         |                                                                                                | 16# × 24                                                                                         |                                                                                                   |
| Service Rating                                   | D                                                                                              |                                                                                                | Inst.                                                                                            |                                                                                                   |

| Type                                             | 28                                                                                               |                                                                                                  |                                                                                                    |                                                                                                     |
|--------------------------------------------------|--------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|
| <b>P</b> Shell Size-<br><b>S</b> Arrangement No. | <b>P28-10</b>                                                                                    | <b>S28-10</b>                                                                                    | <b>P28-11</b>                                                                                      | <b>S28-11</b>                                                                                       |
| Contact Arrangement                              | <br>7 Contact | <br>7 Contact | <br>22 Contact | <br>22 Contact |
| Contact Size×Contact Qty.                        | 12# × 3                                                                                          | 8# × 2                                                                                           | 16# × 18                                                                                           | 12# × 4                                                                                             |
| Service Rating                                   | G = D                                                                                            |                                                                                                  | A                                                                                                  |                                                                                                     |

| Type                                             | 28                                                                                                |                                                                                                   |                                                                                                    |                                                                                                     |
|--------------------------------------------------|---------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|
| <b>P</b> Shell Size-<br><b>S</b> Arrangement No. | <b>P28-12</b>                                                                                     | <b>S28-12</b>                                                                                     | <b>P28-15</b>                                                                                      | <b>S28-15</b>                                                                                       |
| Contact Arrangement                              | <br>26 Contact | <br>26 Contact | <br>35 Contact | <br>35 Contact |
| Contact Size×Contact Qty.                        | 16# × 26                                                                                          |                                                                                                   | 16# × 35                                                                                           |                                                                                                     |
| Service Rating                                   | A                                                                                                 |                                                                                                   | A                                                                                                  |                                                                                                     |

## Shell Size - Arrangement No.

View from mating face

● 16# ⊕ 12# ⊗ 4#

| Type                                             | 28                |               |                     |               |
|--------------------------------------------------|-------------------|---------------|---------------------|---------------|
| <b>P</b> Shell Size-<br><b>S</b> Arrangement No. | <b>P28-16</b>     | <b>S28-16</b> | <b>P28-20</b>       | <b>S28-20</b> |
| <b>Contact Arrangement</b>                       | <p>20 Contact</p> |               | <p>14 Contact</p>   |               |
| Contact Size×Contact Qty.                        | 16# × 20          |               | 16# × 4    12# × 10 |               |
| Service Rating                                   | A                 |               | A                   |               |

| Type                                             | 28                |               |                   |               |
|--------------------------------------------------|-------------------|---------------|-------------------|---------------|
| <b>P</b> Shell Size-<br><b>S</b> Arrangement No. | <b>P28-21</b>     | <b>S28-21</b> | <b>P28-22</b>     | <b>S28-22</b> |
| <b>Contact Arrangement</b>                       | <p>37 Contact</p> |               | <p>6 Contact</p>  |               |
| Contact Size×Contact Qty.                        | 16# × 37          |               | 16# × 3    4# × 3 |               |
| Service Rating                                   | A                 |               | D                 |               |

| Type                                             | 28                |               | 32                           |              |
|--------------------------------------------------|-------------------|---------------|------------------------------|--------------|
| <b>P</b> Shell Size-<br><b>S</b> Arrangement No. | <b>P28-A9</b>     | <b>S28-A9</b> | <b>P32-7</b>                 | <b>S32-7</b> |
| <b>Contact Arrangement</b>                       | <p>9 Contact</p>  |               | <p>35 Contact</p>            |              |
| Contact Size×Contact Qty.                        | 16# × 5    4# × 4 |               | 16# × 28    12# × 7          |              |
| Service Rating                                   | A                 |               | A.B.h.j = Inst.    Other = A |              |



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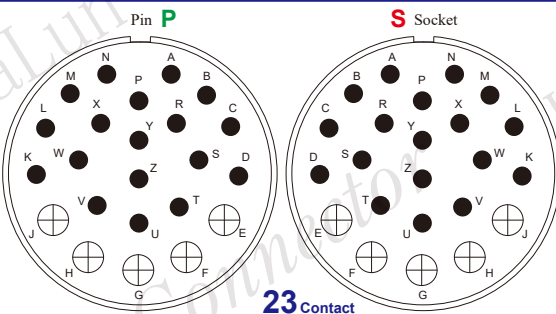
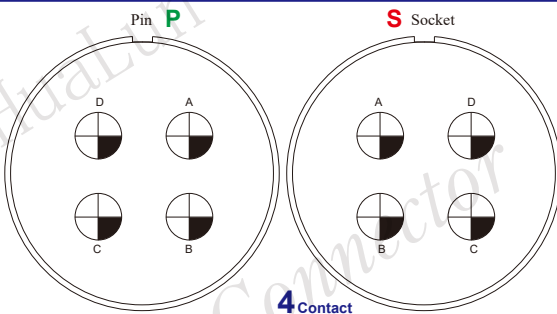
ISO9001 ISO14001 ISO45001

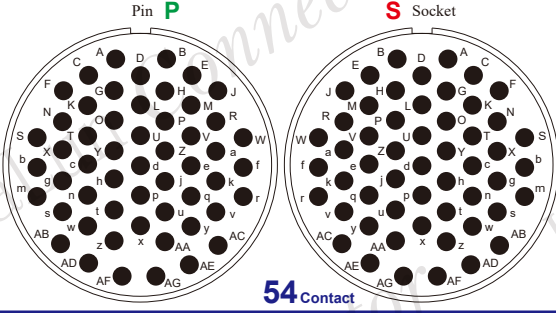
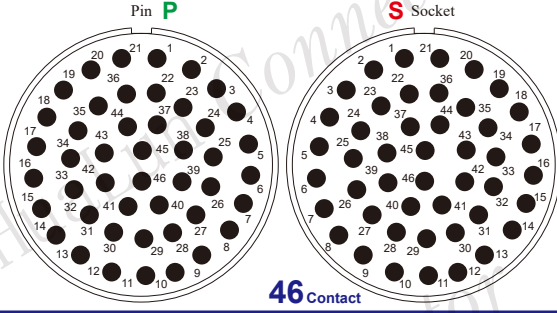
华伦连接器  
HuaLun Connector

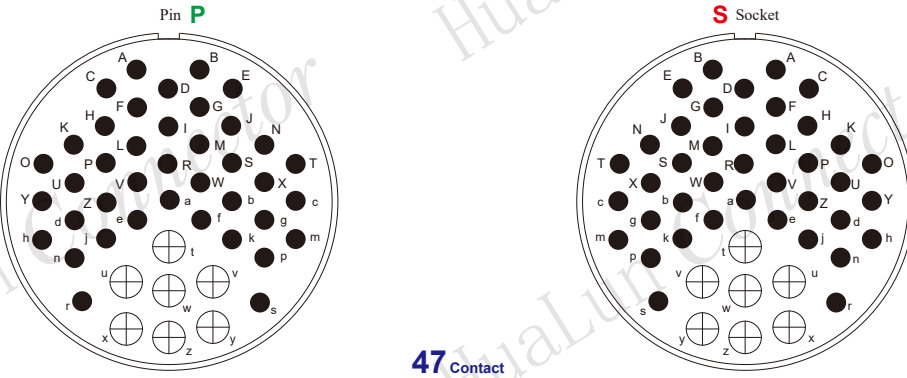
## Shell Size - Arrangement No.

View from mating face

● 16# ⊕ 12# ⊕ 4#

| Type                                             | 32                                                                                |               |                                                                                    |               |
|--------------------------------------------------|-----------------------------------------------------------------------------------|---------------|------------------------------------------------------------------------------------|---------------|
| <b>P</b> Shell Size-<br><b>S</b> Arrangement No. | <b>P32-13</b>                                                                     | <b>S32-13</b> | <b>P32-17</b>                                                                      | <b>S32-17</b> |
| Contact Arrangement                              |  |               |  |               |
| Contact Size×Contact Qty.                        | 16# × 18      12# × 5                                                             |               | 4# × 4                                                                             |               |
| Service Rating                                   | D                                                                                 |               | D                                                                                  |               |

| Type                                             | 32                                                                                  |               |                                                                                      |               |
|--------------------------------------------------|-------------------------------------------------------------------------------------|---------------|--------------------------------------------------------------------------------------|---------------|
| <b>P</b> Shell Size-<br><b>S</b> Arrangement No. | <b>P32-22</b>                                                                       | <b>S32-22</b> | <b>P32-73</b>                                                                        | <b>S32-73</b> |
| Contact Arrangement                              |  |               |  |               |
| Contact Size×Contact Qty.                        | 16# × 54                                                                            |               | 16# × 46                                                                             |               |
| Service Rating                                   | A                                                                                   |               | A                                                                                    |               |

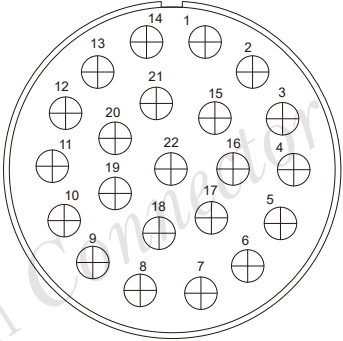
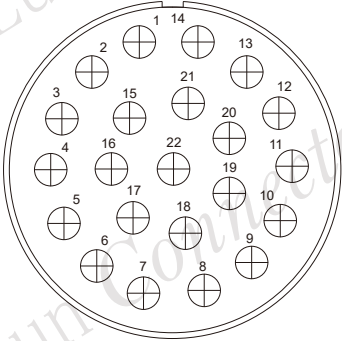
| Type                                             | 36                                                                                   |              |
|--------------------------------------------------|--------------------------------------------------------------------------------------|--------------|
| <b>P</b> Shell Size-<br><b>S</b> Arrangement No. | <b>P36-7</b>                                                                         | <b>S36-7</b> |
| Contact Arrangement                              |  |              |
| Contact Size×Contact Qty.                        | 16# × 40                                                                             | 12# × 7      |
| Service Rating                                   | A                                                                                    |              |

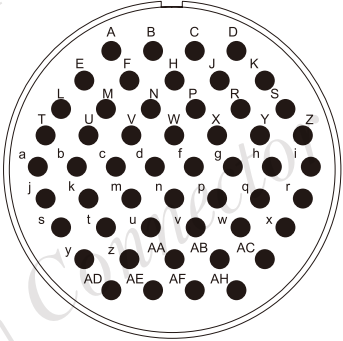
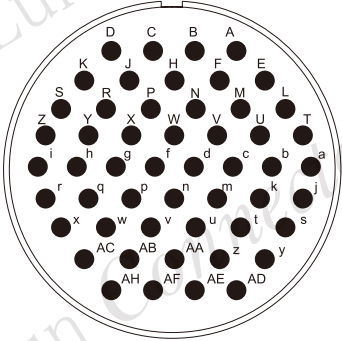


## Shell Size - Arrangement No.

View from mating face

● 16# ⊕ 12#

| Type                                             | 36                                                                                                                                                                                                                                                                                                                                                                                                                 |                |
|--------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|
| <b>P</b> Shell Size-<br><b>S</b> Arrangement No. | <b>P36-A22</b>                                                                                                                                                                                                                                                                                                                                                                                                     | <b>S36-A22</b> |
| Contact Arrangement                              | <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;"> <p>Pin <b>P</b></p>  <p><b>22</b> Contact</p> </div> <div style="text-align: center;"> <p><b>S</b> Socket</p>  </div> </div> |                |
| Contact Size×Contact Qty.                        | 12# × 22                                                                                                                                                                                                                                                                                                                                                                                                           |                |
| Service Rating                                   | D                                                                                                                                                                                                                                                                                                                                                                                                                  |                |

| Type                                             | 36                                                                                                                                                                                                                                                                                                                                                                                                                     |               |
|--------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|
| <b>P</b> Shell Size-<br><b>S</b> Arrangement No. | <b>P36-52</b>                                                                                                                                                                                                                                                                                                                                                                                                          | <b>S36-52</b> |
| Contact Arrangement                              | <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;"> <p>Pin <b>P</b></p>  <p><b>52</b> Contact</p> </div> <div style="text-align: center;"> <p><b>S</b> Socket</p>  </div> </div> |               |
| Contact Size×Contact Qty.                        | 16# × 52                                                                                                                                                                                                                                                                                                                                                                                                               |               |
| Service Rating                                   | A                                                                                                                                                                                                                                                                                                                                                                                                                      |               |



TUV SUD



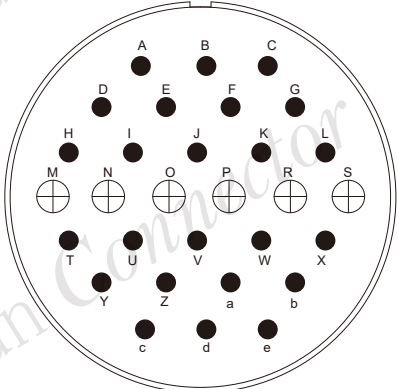
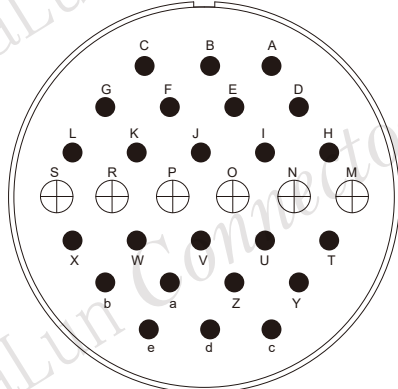
ISO9001 ISO14001 ISO45001

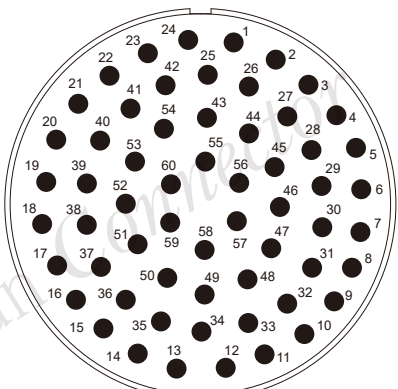
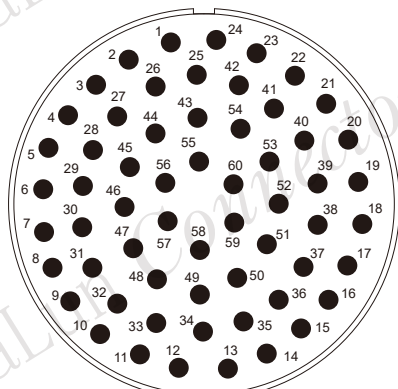
华伦连接器  
HuaLun Connector

## Shell Size - Arrangement No.

View from mating face

● 16# ⊕ 12#

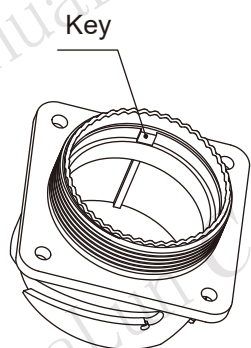
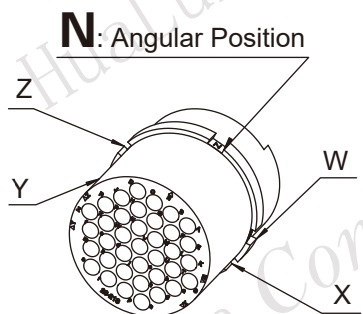
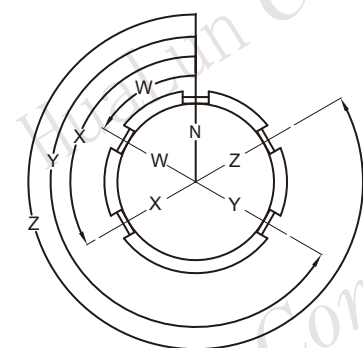
| Type                                             | 40                                                                                                                                                                                                                                                                                                                                                                                                          |              |
|--------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|
| <b>P</b> Shell Size-<br><b>S</b> Arrangement No. | <b>P40-1</b>                                                                                                                                                                                                                                                                                                                                                                                                | <b>S40-1</b> |
| Contact Arrangement                              | <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;"> <p>Pin <b>P</b></p>  <p>30 Contact</p> </div> <div style="text-align: center;"> <p><b>S</b> Socket</p>  </div> </div> |              |
| Contact Size×Contact Qty.                        | 16# × 24                                                                                                                                                                                                                                                                                                                                                                                                    | 12# × 6      |
| Service Rating                                   | D                                                                                                                                                                                                                                                                                                                                                                                                           |              |

| Type                                             | 40                                                                                                                                                                                                                                                                                                                                                                                                              |                |
|--------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|
| <b>P</b> Shell Size-<br><b>S</b> Arrangement No. | <b>P40-A60</b>                                                                                                                                                                                                                                                                                                                                                                                                  | <b>S40-A60</b> |
| Contact Arrangement                              | <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="text-align: center;"> <p>Pin <b>P</b></p>  <p>60 Contact</p> </div> <div style="text-align: center;"> <p><b>S</b> Socket</p>  </div> </div> |                |
| Contact Size×Contact Qty.                        | 16# × 60                                                                                                                                                                                                                                                                                                                                                                                                        |                |
| Service Rating                                   | A                                                                                                                                                                                                                                                                                                                                                                                                               |                |

## Angular Displacement Of Insert

When more than two connectors with same Insert are applied to a device together, to alternate the inserts to different angulars can prevent mismatching.

Front face of pin insert



| Insert Code | Angular Displacement Of Insert |     |     |     |     |
|-------------|--------------------------------|-----|-----|-----|-----|
|             | N                              | W   | X   | Y   | Z   |
| 14S-2       | 0                              | —   | 120 | 240 | —   |
| 14S-5       | 0                              | —   | 110 | —   | —   |
| 14S-6       | 0                              | —   | —   | —   | —   |
| 14S-7       | 0                              | 90  | 180 | 270 | —   |
| 14S-9       | 0                              | 70  | 145 | 215 | 290 |
| 16S-1       | 0                              | 80  | —   | —   | 280 |
| 16S-4       | 0                              | 35  | 110 | 250 | 325 |
| 16S-5       | 0                              | 70  | 145 | 215 | 290 |
| 16-9        | 0                              | 35  | 110 | 250 | 325 |
| 16-10       | 0                              | 90  | 180 | 270 | —   |
| 18-1        | 0                              | 70  | 145 | 215 | 290 |
| 18-3        | 0                              | 35  | 110 | 250 | 325 |
| 18-10       | 0                              | —   | 120 | 120 | —   |
| 18-11       | 0                              | —   | 170 | 265 | —   |
| 18-12       | 0                              | 80  | —   | —   | 280 |
| 18-19       | 0                              | —   | 120 | 240 | —   |
| 18-20       | 0                              | 90  | 180 | 270 | —   |
| 18-22       | 0                              | 70  | 145 | 215 | 290 |
| 20-3        | 0                              | 70  | 145 | 215 | 290 |
| 20-4        | 0                              | 45  | 110 | 250 | —   |
| 20-7        | 0                              | 80  | 110 | 250 | 280 |
| 20-15       | 0                              | 80  | —   | —   | 280 |
| 20-16       | 0                              | 80  | 110 | 250 | 280 |
| 20-18       | 0                              | 35  | 110 | 250 | 325 |
| 20-27       | 0                              | 35  | 110 | 250 | 325 |
| 20-29       | 0                              | 80  | —   | —   | 280 |
| 20-33       | 0                              | —   | —   | —   | —   |
| 22-2        | 0                              | 70  | 145 | 215 | 290 |
| 22-5        | 0                              | 35  | 110 | 250 | 325 |
| 22-8        | 0                              | 35  | 110 | 250 | 325 |
| 22-10       | 0                              | 35  | 110 | 250 | 325 |
| 22-14       | 0                              | 80  | 110 | 250 | 280 |
| 22-18       | 0                              | 80  | 110 | 250 | 280 |
| 22-19       | 0                              | 80  | 110 | 250 | 280 |
| 22-20       | 0                              | 35  | 110 | 250 | 325 |
| 22-22       | 0                              | —   | 110 | 250 | —   |
| 22-23       | 0                              | 35  | —   | 250 | —   |
| 22-28       | 0                              | 80  | —   | —   | 280 |
| 24-2        | 0                              | 80  | —   | —   | 280 |
| 24-5        | 0                              | 80  | 110 | 250 | 280 |
| 24-7        | 0                              | 80  | 110 | 250 | 280 |
| 24-10       | 0                              | 80  | —   | —   | 280 |
| 24-11       | 0                              | 35  | 110 | 250 | 325 |
| 24-20       | 0                              | 80  | 110 | 250 | 280 |
| 24-22       | 0                              | 45  | 110 | 250 | —   |
| 24-28       | 0                              | 80  | 110 | 250 | 280 |
| 28-10       | 0                              | 80  | 110 | 250 | 280 |
| 28-11       | 0                              | 80  | 110 | 250 | 280 |
| 28-12       | 0                              | 90  | 180 | 270 | —   |
| 28-15       | 0                              | 80  | 110 | 250 | 280 |
| 28-16       | 0                              | 80  | 110 | 250 | 280 |
| 28-20       | 0                              | 80  | 110 | 250 | 280 |
| 28-21       | 0                              | 80  | 110 | 250 | 280 |
| 28-22       | 0                              | 70  | 145 | 215 | 290 |
| 28-A9       | 0                              | 110 | 250 | 260 | 280 |
| 32-7        | 0                              | 80  | 125 | 235 | 280 |
| 32-13       | 0                              | 80  | 110 | 250 | 280 |
| 32-17       | 0                              | 45  | 110 | 250 | —   |
| 32-22       | 0                              | 80  | 110 | 250 | 280 |
| 32-73       | 0                              | 36  | —   | —   | —   |
| 36-7        | 0                              | 80  | 110 | 250 | 280 |
| 36-A22      | 0                              | 80  | 110 | 250 | 280 |
| 36-52       | 0                              | 72  | 144 | 216 | 288 |
| 40-1        | 0                              | 65  | 130 | 235 | 300 |
| 40-A60      | 0                              | 80  | 110 | 250 | 280 |

**Note:** 32-22 has two angles of U (100) and V (260), besides N, W, X, Y and Z.

## Size of Receptacle

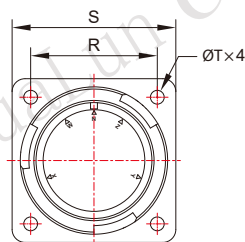
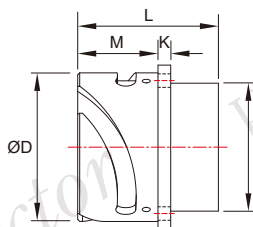
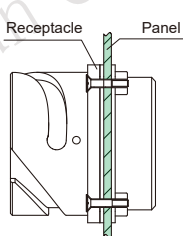
### Receptacle ①

(Panels Mounted)

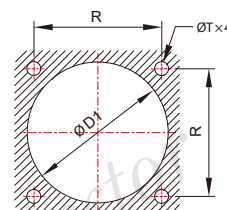
(No Protective Enclosure)

#### Front Mounting

### BMS3102



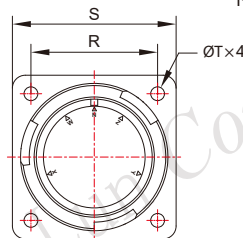
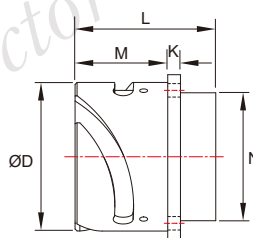
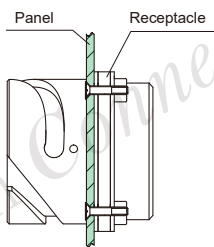
Receptacle Mounting &amp; Mounting Hole



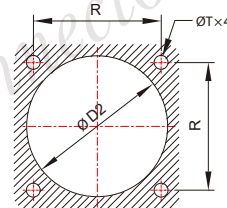
| Shell Spec | ØD <sub>-0.15</sub> <sup>0</sup> | M <sub>0</sub> <sup>+0.2</sup> | L <sub>±0.3</sub> | K <sub>±0.2</sub> | ØN <sub>max</sub> | S <sub>±0.3</sub> | R <sub>±0.1</sub> | ØT <sub>0</sub> <sup>+0.1</sup> | ØD1 <sub>±0.2</sub> |      |
|------------|----------------------------------|--------------------------------|-------------------|-------------------|-------------------|-------------------|-------------------|---------------------------------|---------------------|------|
| 14S        | 24.6                             | 14.2                           | 25.7              | 3.2               | 19.2              | 30.0              | 23.0              | 3.2                             | 20.0                |      |
| 16S        | 27.4                             |                                | 32.5              |                   | 22.4              | 32.5              | 24.6              |                                 | 23.2                |      |
| 16         |                                  | 20.2                           |                   |                   | 25.6              | 35.0              | 27.0              |                                 |                     | 26.6 |
| 18         | 30.8                             |                                |                   |                   | 29.0              | 38.0              | 29.4              |                                 |                     | 30.0 |
| 20         | 34.2                             |                                |                   |                   | 32.2              | 41.0              | 31.8              |                                 |                     | 33.2 |
| 22         | 37.4                             |                                |                   |                   | 35.3              | 44.5              | 34.9              | 3.7                             | 36.3                |      |
| 24         | 40.9                             |                                |                   |                   | 41.4              | 50.8              | 39.7              |                                 | 42.4                |      |
| 28         | 46.7                             | 33.8                           |                   |                   | 47.8              | 57.0              | 44.5              | 4.3                             | 48.8                |      |
| 32         | 53.4                             |                                |                   |                   | 54.1              | 63.5              | 49.2              |                                 | 55.0                |      |
| 36         | 59.6                             |                                |                   |                   | 59.0              | 69.9              | 55.5              |                                 | 60.0                |      |
| 40         | 65.5                             | 22.2                           |                   |                   | 37.3              |                   |                   |                                 |                     |      |

#### Rear Mounting

### BMS3122



Receptacle Mounting &amp; Mounting Hole



| Shell Spec | ØD <sub>-0.15</sub> <sup>0</sup> | M <sub>0</sub> <sup>+0.2</sup> | L <sub>±0.3</sub> | K <sub>±0.2</sub> | ØN <sub>max</sub> | S <sub>±0.3</sub> | R <sub>±0.1</sub> | ØT <sub>0</sub> <sup>+0.1</sup> | ØD2 <sub>±0.2</sub> |      |      |
|------------|----------------------------------|--------------------------------|-------------------|-------------------|-------------------|-------------------|-------------------|---------------------------------|---------------------|------|------|
| 14S        | 24.6                             | 18.2                           | 24.7              | 3.2               | 19.2              | 30.0              | 23.0              | 3.2                             | 26.0                |      |      |
| 16S        | 27.4                             |                                |                   |                   | 23.05             | 33.8              | 22.4              |                                 | 32.5                | 24.6 | 28.4 |
| 16         |                                  |                                |                   |                   |                   |                   | 25.6              |                                 | 35.0                | 27.0 | 32.0 |
| 18         | 30.8                             | 29.0                           | 38.0              |                   |                   |                   | 29.4              |                                 | 35.5                |      |      |
| 20         | 34.2                             | 32.2                           | 41.0              |                   |                   |                   | 31.8              |                                 | 38.5                |      |      |
| 22         | 37.4                             | 35.3                           | 44.5              |                   |                   |                   | 34.9              | 3.7                             | 42.0                |      |      |
| 24         | 40.9                             | 41.4                           | 50.8              |                   | 39.7              | 48.0              |                   |                                 |                     |      |      |
| 28         | 46.7                             | 24.05                          | 37.3              |                   | 47.8              | 57.0              | 44.5              | 4.3                             | 55.0                |      |      |
| 32         | 53.4                             |                                |                   |                   | 54.1              | 63.5              | 49.2              |                                 | 61.5                |      |      |
| 36         | 59.6                             |                                |                   |                   | 59.0              | 69.9              | 55.5              |                                 | 67.0                |      |      |
| 40         | 65.5                             |                                |                   |                   |                   |                   |                   |                                 |                     |      |      |

## Size of Receptacle

### Receptacle ②

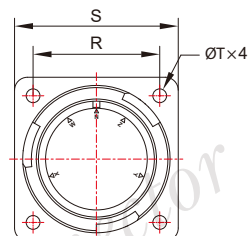
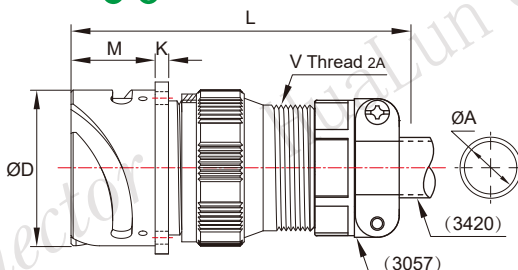
(Protective Enclosure)

(Clamp/Gland)

Front Mounting

**BMS3100** Insulator **\*\*A**

④ ⑤

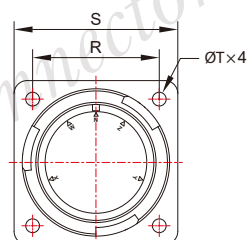
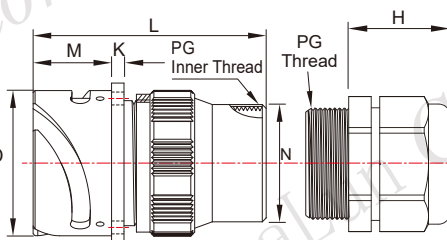


| Shell Spec | ØD <sub>0.15</sub> <sup>0</sup> | V Thread 2A  | Cable Clamp<br>(3057)+(3420) | OD of Cable(mm) | ØA <sub>max</sub> | L       | M <sup>+0.2</sup> <sub>0</sub> | K <sub>±0.2</sub> | S <sub>±0.3</sub> | R <sub>±0.1</sub> | ØT <sub>0</sub> <sup>+0.1</sup> |
|------------|---------------------------------|--------------|------------------------------|-----------------|-------------------|---------|--------------------------------|-------------------|-------------------|-------------------|---------------------------------|
| 14S        | 24.6                            | ¾-20UNEF     | 14A                          | Ø 5-7           | 7.92              | 75~77   | 14.2                           | 3.2               | 30.0              | 23.0              | 3.2                             |
| 16S        | 27.4                            | 7/8-20UNEF   | 16A                          | Ø 8-11          | 11.1              |         |                                |                   | 81~83             | 32.5              |                                 |
| 16         |                                 |              |                              |                 |                   | 35.0    | 27.0                           |                   |                   |                   |                                 |
| 18         | 30.8                            | 1-20UNEF     | 18A                          | Ø 11-14         | 14.3              | 83~85   | 38.0                           |                   | 29.4              |                   |                                 |
| 20         | 34.2                            | 1⅓/16-18UNEF | 20A                          | Ø 14-16         | 16.2              | 86~88   | 41.0                           |                   | 31.8              |                   |                                 |
| 22         | 37.4                            |              | 22A                          |                 |                   |         | 44.5                           |                   | 34.9              |                   |                                 |
| 24         | 40.9                            | 1⅞/16-18UNEF | 24A                          | Ø 16-19         | 19.1              | 88~91   | 50.8                           |                   | 39.7              | 3.7               |                                 |
| 28         | 46.7                            |              | 28A                          |                 |                   |         | 57.0                           |                   | 44.5              |                   |                                 |
| 32         | 53.4                            | 1¾/4-18UNS   | 32A                          | Ø 19-23         | 23.8              | 90~92   | 63.5                           |                   | 49.2              | 4.3               |                                 |
| 36         | 59.6                            | 2-18UNS      | 36A                          | Ø 24-31         | 31.7              | 103~105 | 69.9                           |                   | 55.5              |                   |                                 |
| 40         | 65.5                            | 2⅞/4-16UN    | 40A                          | Ø 31-34         | 35.0              |         |                                |                   |                   |                   |                                 |

Front Mounting

**BMS3100** Insulator **PG\*\***

④ ⑤



| Shell Spec | ØD <sub>0.15</sub> | PG Inner Thread | OD of Cable(mm) | ØN <sub>max</sub> | L ±0.3 | M <sub>0</sub> <sup>+0.2</sup> | K ±0.2 | H    | S ±0.3 | R ±0.1 | ØT <sub>0</sub> <sup>+0.1</sup> |      |
|------------|--------------------|-----------------|-----------------|-------------------|--------|--------------------------------|--------|------|--------|--------|---------------------------------|------|
| 14S        | 24.6               | PG9             | Ø 4-8           | 19.2              | 52.7   | 14.2                           | 3.2    | 22.0 | 30.0   | 23.0   | 3.2                             |      |
| 16S        | 27.4               | PG13.5          | Ø 6-12          | 24.6              |        |                                |        | 57.5 | 20.2   | 27.0   |                                 | 32.5 |
| 16         |                    |                 |                 |                   | 28.0   | 35.0                           |        |      |        | 27.0   |                                 |      |
| 18         | 30.8               | PG16            | Ø 8.5-14        | 27.6              | 31.0   | 38.0                           |        | 29.4 |        |        |                                 |      |
| 20         | 34.2               | PG21            | Ø 12.5-18       | 33.6              | 41.0   | 31.8                           |        |      |        |        |                                 |      |
| 22         | 37.4               |                 |                 |                   | 33.0   | 44.5                           |        | 34.9 |        |        |                                 |      |
| 24         | 40.9               | PG25            | Ø 14-20         | 37.6              | 58.0   | 20.2                           |        | 50.8 |        | 39.7   | 3.7                             |      |
| 28         | 46.7               |                 |                 |                   |        |                                |        | 37.0 |        | 57.0   |                                 | 44.5 |
| 32         | 53.4               | PG29            | Ø 18-25         | 42.0              |        |                                |        | 48.0 |        | 63.5   | 49.2                            | 4.3  |
| 36         | 59.6               | PG36            | Ø 24-32         | 51.2              |        |                                |        | 69.9 |        | 55.5   |                                 |      |
| 40         | 65.5               |                 |                 |                   |        |                                |        |      |        |        |                                 |      |



## Size of Receptacle

### Receptacle ②

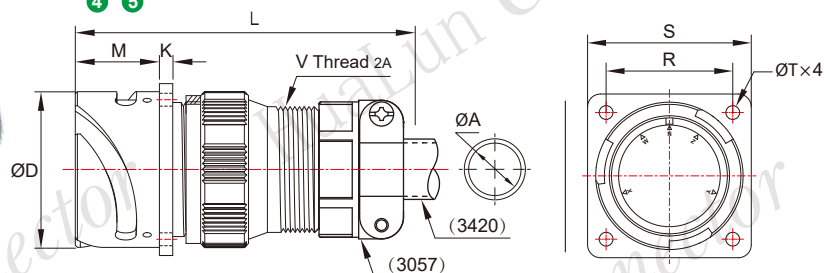
(Protective Enclosure)

(Clamp/Gland)

Rear Mounting

BMS3120 Insulator \*\*A

④ ⑤

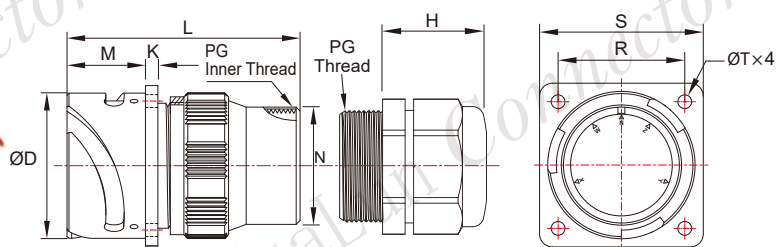


| Shell Spec | ØD <sub>0</sub> <sup>0</sup> <sub>-0.15</sub> | V Thread 2A                                       | Cable Clamp<br>(3057)+(3420) | OD of Cable(mm) | ØA <sub>max</sub> | L       | M <sub>0</sub> <sup>+0.2</sup> <sub>0</sub> | K <sub>±0.2</sub> | S <sub>±0.3</sub> | R <sub>±0.1</sub> | ØT <sub>0</sub> <sup>+0.1</sup> <sub>0</sub> |
|------------|-----------------------------------------------|---------------------------------------------------|------------------------------|-----------------|-------------------|---------|---------------------------------------------|-------------------|-------------------|-------------------|----------------------------------------------|
| 14S        | 24.6                                          | <sup>3</sup> / <sub>4</sub> -20UNEF               | 14A                          | Ø 5-7           | 7.92              | 75~77   | 18.2                                        | 3.2               | 30.0              | 23.0              | 3.2                                          |
| 16S        | 27.4                                          | <sup>7</sup> / <sub>8</sub> -20UNEF               | 16A                          | Ø 8-11          | 11.1              |         | 81~83                                       |                   | 23.05             | 32.5              |                                              |
| 16         |                                               |                                                   |                              |                 |                   | 35.0    |                                             |                   |                   | 27.0              |                                              |
| 18         | 30.8                                          | 1-20UNEF                                          | 18A                          | Ø 11-14         | 14.3              | 38.0    | 29.4                                        |                   |                   |                   |                                              |
| 20         | 34.2                                          | <sup>1</sup> <sup>3</sup> / <sub>16</sub> -18UNEF | 20A                          | Ø 14-16         | 16.2              | 41.0    | 31.8                                        |                   |                   |                   |                                              |
| 22         | 37.4                                          |                                                   | 22A                          |                 |                   | 44.5    | 34.9                                        |                   |                   |                   |                                              |
| 24         | 40.9                                          | <sup>1</sup> <sup>7</sup> / <sub>16</sub> -18UNEF | 24A                          | Ø 16-19         | 19.1              | 50.8    | 39.7                                        |                   | 3.7               |                   |                                              |
| 28         | 46.7                                          |                                                   | 28A                          |                 |                   | 57.0    | 44.5                                        |                   |                   |                   |                                              |
| 32         | 53.4                                          | <sup>1</sup> <sup>3</sup> / <sub>4</sub> -18UNS   | 32A                          | Ø 19-23         | 23.8              | 88~91   | 24.05                                       |                   | 63.5              | 49.2              | 4.3                                          |
| 36         | 59.6                                          | 2-18UNS                                           | 36A                          | Ø 24-31         | 31.7              | 90~92   |                                             |                   | 69.9              | 55.5              |                                              |
| 40         | 65.5                                          | 2 <sup>1</sup> / <sub>4</sub> -16UN               | 40A                          | Ø 31-34         | 35.0              | 103~105 |                                             |                   |                   |                   |                                              |

Rear Mounting

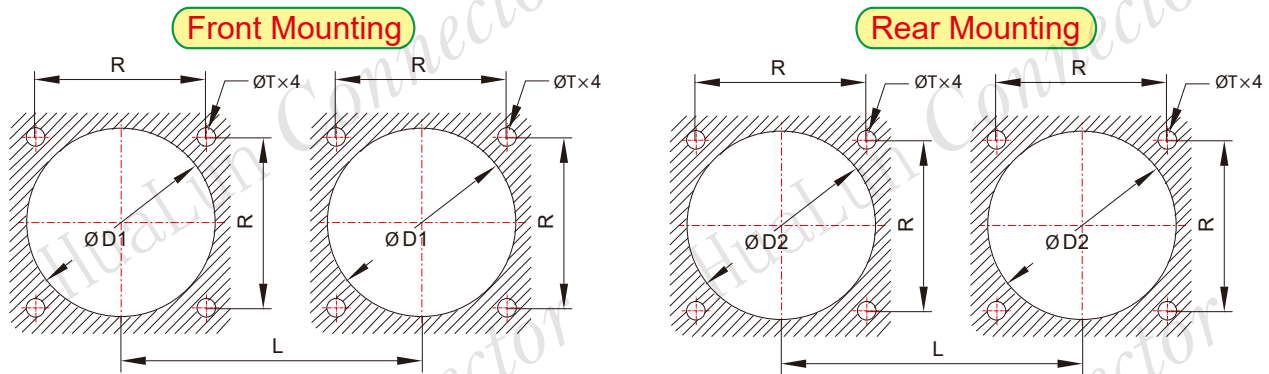
BMS3120 Insulator PG\*\*

④ ⑤



| Shell Spec | ØD <sub>0-0.15</sub> | PG Inner Thread | OD of Cable(mm) | ØN <sub>max</sub> | L ±0.3 | M <sup>+0.2</sup> <sub>0</sub> | K ±0.2 | H    | S ±0.3 | R ±0.1 | ØT <sup>+0.1</sup> <sub>0</sub> |
|------------|----------------------|-----------------|-----------------|-------------------|--------|--------------------------------|--------|------|--------|--------|---------------------------------|
| 14S        | 24.6                 | PG9             | Ø 4-8           | 19.2              | 52.7   | 18.2                           | 3.2    | 22.0 | 30.0   | 23.0   | 3.2                             |
| 16S        | 27.4                 | PG13.5          | Ø 6-12          | 24.6              |        |                                |        | 57.5 | 23.05  | 27.0   |                                 |
| 16         |                      |                 |                 |                   | 28.0   | 35.0                           |        |      |        | 27.0   |                                 |
| 18         | 30.8                 | PG16            | Ø 8.5-14        | 27.6              | 58.0   | 31.0                           |        | 38.0 |        | 29.4   |                                 |
| 20         | 34.2                 | PG21            | Ø 12.5-18       | 33.6              |        | 41.0                           |        | 31.8 |        |        |                                 |
| 22         | 37.4                 |                 |                 |                   |        | 44.5                           |        | 34.9 |        |        |                                 |
| 24         | 40.9                 | PG25            | Ø 14-20         | 37.6              | 24.05  | 33.0                           |        | 50.8 | 39.7   | 3.7    |                                 |
| 28         | 46.7                 |                 |                 |                   |        | 37.0                           |        | 57.0 | 44.5   |        |                                 |
| 32         | 53.4                 | PG29            | Ø 18-25         | 42.0              |        | 48.0                           |        | 63.5 | 49.2   | 4.3    |                                 |
| 36         | 59.6                 | PG36            | Ø 24-32         | 51.2              |        | 69.9                           |        | 55.5 |        |        |                                 |
| 40         | 65.5                 |                 |                 |                   |        |                                |        |      |        |        |                                 |

## Receptacle Mounting & Mounting Hole



| Shell Spec | ØT <sup>+0.1</sup> <sub>0</sub> | ØD1 <sub>±0.2</sub> | ØD2 <sub>±0.2</sub> | R <sub>±0.1</sub> | L    | Screw Spec |
|------------|---------------------------------|---------------------|---------------------|-------------------|------|------------|
| 14S        | 3.2                             | 20.0                | 26.0                | 23.0              | 33.0 | M3 × 10    |
| 16S        |                                 | 23.2                | 28.4                | 24.6              | 34.4 |            |
| 16         |                                 |                     |                     |                   |      |            |
| 18         |                                 |                     |                     |                   |      |            |
| 20         |                                 | 30.0                | 35.5                | 29.4              | 41.7 |            |
| 22         | 3.7                             | 33.2                | 38.5                | 31.8              | 45.2 | M4 × 12    |
| 24         |                                 | 36.3                | 42.0                | 34.9              | 48.7 |            |
| 28         | 4.3                             | 42.4                | 48.0                | 39.7              | 55.5 |            |
| 32         |                                 | 48.8                | 55.0                | 44.5              | 62.4 |            |
| 36         |                                 | 55.0                | 61.5                | 49.2              | 69.0 |            |
| 40         |                                 | 60.0                | 67.0                | 55.5              | 75.0 |            |

## Size of Receptacle

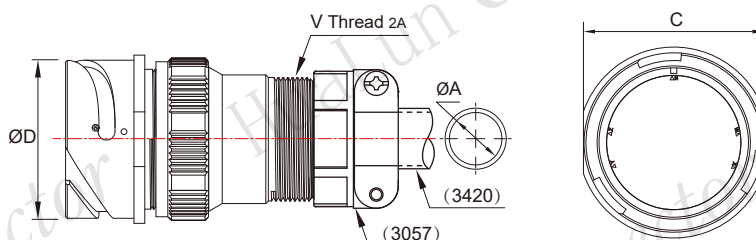
### Receptacle ③

(Free)

Free

BMS3101 Insulator \*\*A

4 5

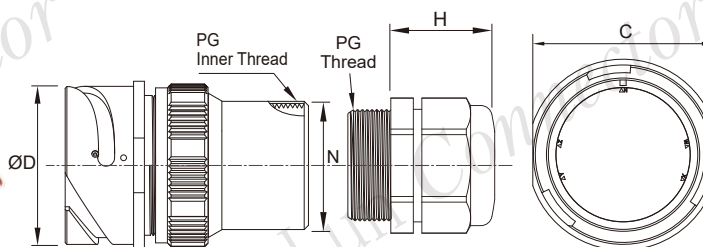


| Shell Spec | ØD $\frac{0}{-0.15}$ | V Thread 2A   | Cable Clamp<br>(3057) + (3420) | OD of Cable(mm) | ØA max | C    |
|------------|----------------------|---------------|--------------------------------|-----------------|--------|------|
| 14S        | 24.6                 | 3/4-20UNEF    | <b>14A</b>                     | Ø 5-7           | 7.92   | 25.2 |
| 16S        | 27.4                 | 7/8-20UNEF    | <b>16A</b>                     | Ø 8-11          | 11.1   | 28.8 |
| 16         |                      |               |                                |                 |        |      |
| 18         | 30.8                 | 1-20UNEF      | <b>18A</b>                     | Ø 11-14         | 14.3   | 31.5 |
| 20         | 34.2                 | 1 3/16-18UNEF | <b>20A</b>                     | Ø 14-16         | 16.2   | 34.6 |
| 22         | 37.4                 |               | <b>22A</b>                     |                 |        | 38.0 |
| 24         | 40.9                 | 1 7/16-18UNEF | <b>24A</b>                     | Ø 16-19         | 19.1   | 41.5 |
| 28         | 46.7                 |               | <b>28A</b>                     |                 |        | 47.0 |
| 32         | 53.4                 | 1 3/4-18UNS   | <b>32A</b>                     | Ø 19-23         | 23.8   | 53.7 |
| 36         | 59.6                 | 2-18UNS       | <b>36A</b>                     | Ø 24-31         | 31.7   | 60.2 |
| 40         | 65.5                 | 2 1/4-16UN    | <b>40A</b>                     | Ø 31-34         | 35.0   | 66.2 |

Free

BMS3101 Insulator PG\*\*

4 5



| Shell Spec | ØD $\frac{0}{-0.15}$ | PG Inner Thread | OD of Cable(mm) | ØN max | H    | C    |
|------------|----------------------|-----------------|-----------------|--------|------|------|
| 14S        | 24.6                 | <b>PG9</b>      | Ø 4-8           | 19.2   | 22.0 | 25.2 |
| 16S        | 27.4                 | <b>PG13.5</b>   | Ø 6-12          | 24.6   | 27.0 | 28.8 |
| 16         |                      |                 |                 |        |      |      |
| 18         | 30.8                 | <b>PG16</b>     | Ø 8.5-14        | 27.6   | 28.0 | 31.5 |
| 20         | 34.2                 | <b>PG21</b>     | Ø 12.5-18       | 33.6   | 31.0 | 34.6 |
| 22         | 37.4                 |                 |                 |        |      | 38.0 |
| 24         | 40.9                 | <b>PG25</b>     | Ø 14-20         | 37.6   | 33.0 | 41.5 |
| 28         | 46.7                 |                 |                 |        |      | 47.0 |
| 32         | 53.4                 | <b>PG29</b>     | Ø 18-25         | 42.0   | 37.0 | 53.7 |
| 36         | 59.6                 | <b>PG36</b>     | Ø 24-32         | 51.2   | 48.0 | 60.2 |
| 40         | 65.5                 |                 |                 |        |      | 66.2 |

## Size of Receptacle

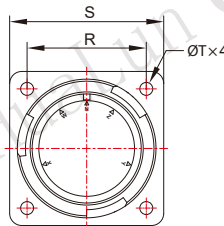
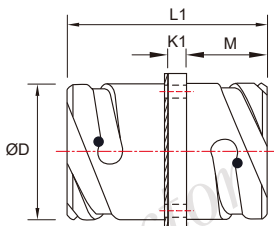
### Receptacle ④

(Adapter)

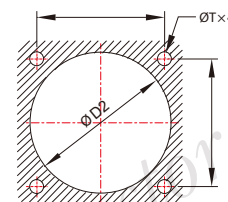
Adapter

### BMS31022

(Square flange)



Receptacle Mounting & Mounting Hole

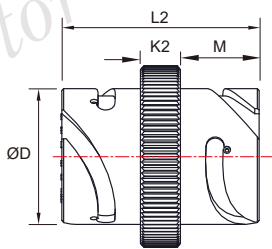


| Shell Spec | ØD <sub>-0.15</sub> <sup>0</sup> | L1 ±0.7 | K1 ±0.2 | M <sub>0</sub> <sup>+0.2</sup> | S ±0.3 | R ±0.1 | ØT <sub>0</sub> <sup>+0.1</sup> | ØD2 ±0.2 |
|------------|----------------------------------|---------|---------|--------------------------------|--------|--------|---------------------------------|----------|
| 14S        | 24.6                             | 37.5    | 3.2     | 14.20                          | 30.0   | 23.0   | 3.2                             | 26.0     |
| 16S        | 27.4                             |         |         |                                | 19.0   | 32.5   |                                 | 24.6     |
| 16         |                                  | 35.0    | 27.0    | 32.0                           |        |        |                                 |          |
| 18         |                                  | 38.0    | 29.4    | 35.5                           |        |        |                                 |          |
| 20         |                                  | 41.0    | 31.8    | 38.5                           |        |        |                                 |          |
| 22         | 37.4                             | 51.4    | 4.0     | 20.6                           | 44.5   | 34.9   | 3.7                             | 42.0     |
| 24         | 40.9                             |         |         |                                | 50.8   | 39.7   |                                 | 48.0     |
| 28         | 46.7                             |         |         | 22.2                           | 57.0   | 44.5   | 4.3                             | 55.0     |
| 32         | 53.4                             |         |         |                                | 63.5   | 49.2   |                                 | 61.5     |
| 36         | 59.6                             |         |         |                                | 69.9   | 55.5   |                                 | 67.0     |
| 40         | 65.5                             |         |         |                                |        |        |                                 |          |

Adapter

### BMS31011

(Round flange)

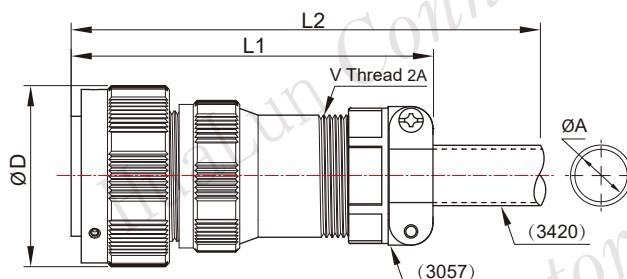


| Shell Spec | ØD <sub>-0.15</sub> <sup>0</sup> | L2 ±0.7 | K2 ±0.2 | M <sub>0</sub> <sup>+0.2</sup> |
|------------|----------------------------------|---------|---------|--------------------------------|
| 14S        | 24.6                             | 39.4    | 11.0    | 14.20                          |
| 16S        | 27.4                             |         |         |                                |
| 16         |                                  | 49.0    |         | 19.0                           |
| 18         | 30.8                             |         |         |                                |
| 20         | 34.2                             |         |         |                                |
| 22         | 37.4                             |         |         |                                |
| 24         | 40.9                             | 52.2    |         | 20.6                           |
| 28         | 46.7                             |         |         |                                |
| 32         | 53.4                             | 55.4    |         | 22.2                           |
| 36         | 59.6                             |         |         |                                |
| 40         | 65.5                             |         |         |                                |

## Size of Plug

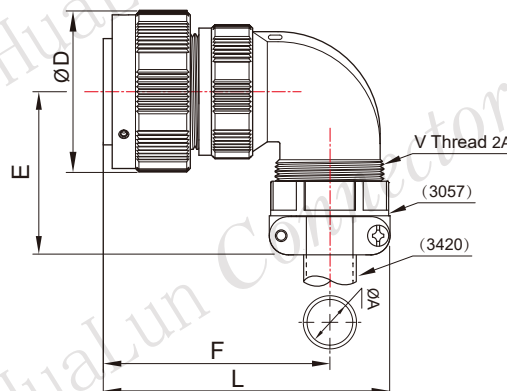
### Plug

#### BMS3106 Insulator \*\*A (Cable Clamp)



| Shell Spec | ØD $\begin{smallmatrix} 0 \\ -0.15 \end{smallmatrix}$ | V Thread 2A             | Cable Clamp<br>(3057) + (3420) | OD of Cable(mm) | ØA max | L1 max | L2 max |
|------------|-------------------------------------------------------|-------------------------|--------------------------------|-----------------|--------|--------|--------|
| 14S        | 29.2                                                  | $\frac{3}{4}$ -20UNEF   | 14A                            | Ø 5-7           | 7.92   | 82     | 115    |
| 16S        | 32.0                                                  | $\frac{7}{8}$ -20UNEF   | 16A                            | Ø 8-11          | 11.1   | 87     | 118    |
| 16         |                                                       |                         |                                |                 |        |        |        |
| 18         | 36.5                                                  | 1-20UNEF                | 18A                            | Ø 11-14         | 14.3   |        |        |
| 20         | 39.9                                                  | $1\frac{3}{16}$ -18UNEF | 20A                            | Ø 14-16         | 16.2   | 89     |        |
| 22         | 43.1                                                  |                         | 22A                            |                 | 16.2   | 92     | 121    |
| 24         | 46.6                                                  | $1\frac{7}{16}$ -18UNEF | 24A                            | Ø 16-19         | 19.1   | 95     | 124    |
| 28         | 53.4                                                  |                         | 28A                            |                 |        |        |        |
| 32         | 60.1                                                  | $1\frac{3}{4}$ -18UNS   | 32A                            | Ø 19-23         | 23.8   | 96     |        |
| 36         | 66.3                                                  | 2-18UNS                 | 36A                            | Ø 24-31         | 31.7   | 100    | 127    |
| 40         | 72.4                                                  | $2\frac{1}{4}$ -16UN    | 40A                            | Ø 31-34         | 35.0   | 112    |        |

#### BMS3108 Insulator \*\*A (Cable Clamp)



| Shell Spec | ØD $\begin{smallmatrix} 0 \\ -0.15 \end{smallmatrix}$ | V Thread 2A             | Cable Clamp<br>(3057) + (3420) | OD of Cable(mm) | ØA max | E max | F max | L max |
|------------|-------------------------------------------------------|-------------------------|--------------------------------|-----------------|--------|-------|-------|-------|
| 14S        | 29.2                                                  | $\frac{3}{4}$ -20UNEF   | <b>14A</b>                     | Ø 5-7           | 7.92   | 40.0  | 47.0  | 70.0  |
| 16S        | 32.0                                                  | $\frac{7}{8}$ -20UNEF   | <b>16A</b>                     | Ø 8-11          | 11.1   | 40.8  | 59.5  | 72.5  |
| 16         |                                                       |                         |                                |                 |        |       |       |       |
| 18         | 36.5                                                  | 1-20UNEF                | <b>18A</b>                     | Ø 11-14         | 14.3   | 41.7  | 60.4  | 75.5  |
| 20         | 39.9                                                  | $1\frac{3}{16}$ -18UNEF | <b>20A</b>                     | Ø 14-16         | 16.2   | 42.6  | 61.8  | 79.0  |
| 22         | 43.1                                                  |                         | <b>22A</b>                     |                 |        | 44.0  |       |       |
| 24         | 46.6                                                  | $1\frac{7}{16}$ -18UNEF | <b>24A</b>                     | Ø 16-19         | 19.1   | 54.6  | 68.4  | 89.5  |
| 28         | 53.4                                                  |                         | <b>28A</b>                     |                 |        |       |       |       |
| 32         | 60.1                                                  | $1\frac{3}{4}$ -18UNS   | <b>32A</b>                     | Ø 19-23         | 23.8   | 58.5  | 72.9  | 98.6  |
| 36         | 66.3                                                  | 2-18UNS                 | <b>36A</b>                     | Ø 24-31         | 31.7   | 62.0  | 73.9  | 102.0 |
| 40         | 72.4                                                  | $2\frac{1}{4}$ -16UN    | <b>40A</b>                     | Ø 31-34         | 35.0   | 79.0  | 76.9  | 108.7 |



## Size of Plug

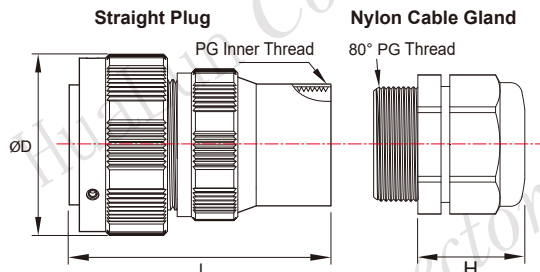
### Plug

#### BMS3106 Insulator PG\*\* (Nylon Cable Gland)

4 5



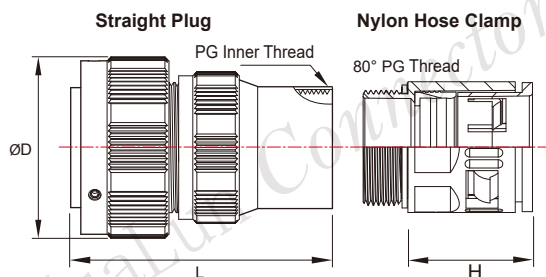
IP67



| Shell Spec | ØD $\begin{smallmatrix} 0 \\ -0.15 \end{smallmatrix}$ | PG Inner Thread | OD of Cable(mm) | L  | H    |
|------------|-------------------------------------------------------|-----------------|-----------------|----|------|
| 14S        | 29.2                                                  | PG9             | Ø 4-8           | 50 | 22.0 |
| 16S        | 32.0                                                  | PG13.5          | Ø 6-12          | 60 | 27.0 |
| 16         |                                                       |                 |                 |    |      |
| 18         | 36.5                                                  | PG16            | Ø 8.5-14        | 60 | 28.0 |
| 20         | 39.9                                                  | PG21            | Ø 12.5-18       | 60 | 31.0 |
| 22         | 43.1                                                  |                 |                 |    |      |
| 24         | 46.6                                                  | PG25            | Ø 14-20         | 65 | 33.0 |
| 28         | 53.4                                                  |                 |                 |    |      |
| 32         | 60.1                                                  | PG29            | Ø 18-25         | 65 | 37.0 |
| 36         | 66.3                                                  |                 |                 |    |      |
| 40         | 72.4                                                  | PG36            | Ø 24-32         | 80 | 48.0 |

#### BMS3106 Insulator G\*\* (Nylon Hose Clamp)

4 5

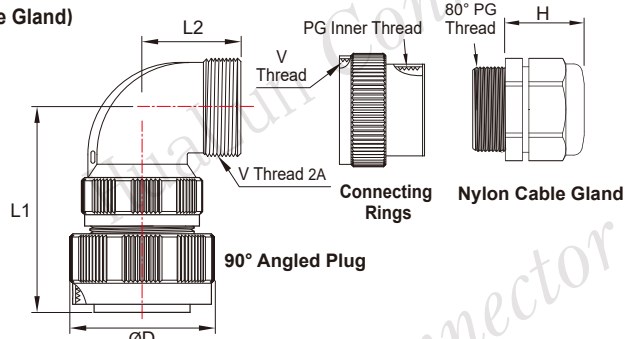


| Shell Spec | ØD $\begin{smallmatrix} 0 \\ -0.15 \end{smallmatrix}$ | PG Inner Thread | OD of Cable(mm) | L  | Nylon Hose Clamp Code |
|------------|-------------------------------------------------------|-----------------|-----------------|----|-----------------------|
| 14S        | 29.2                                                  | PG9             | Ø 4-8           | 50 | G9                    |
| 16S        | 32.0                                                  | PG13.5          | Ø 6-12          | 60 | G13.5                 |
| 16         |                                                       |                 |                 |    |                       |
| 18         | 36.5                                                  | PG16            | Ø 8.5-14        | 60 | G16                   |
| 20         | 39.9                                                  | PG21            | Ø 12.5-18       | 60 | G21                   |
| 22         | 43.1                                                  |                 |                 |    |                       |
| 24         | 46.6                                                  | PG25            | Ø 14-20         | 65 | G25                   |
| 28         | 53.4                                                  |                 |                 |    |                       |
| 32         | 60.1                                                  | PG29            | Ø 18-25         | 65 | G29                   |
| 36         | 66.3                                                  |                 |                 |    |                       |
| 40         | 72.4                                                  | PG36            | Ø 24-32         | 80 | G36                   |

## Size of Plug

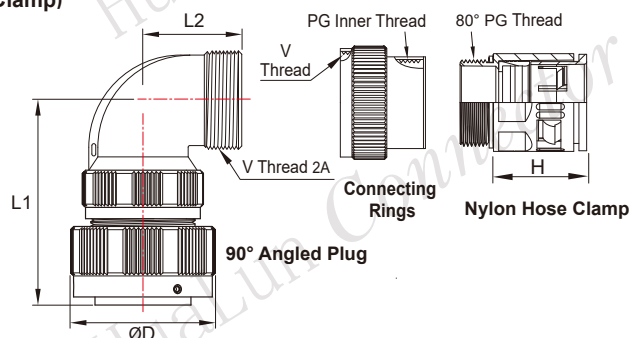
### Plug

#### BMS3108 Insulator PG\*\* (Nylon Cable Gland)



| Shell Spec | ØD $\begin{smallmatrix} 0 \\ -0.15 \end{smallmatrix}$ | L1 $\pm 0.2$ | L2 $\pm 0.2$ | V Thread 2A             | PG Inner Thread | OD of Cable(mm) | H    |
|------------|-------------------------------------------------------|--------------|--------------|-------------------------|-----------------|-----------------|------|
| 14S        | 29.2                                                  | 47           | 30           | $\frac{3}{4}$ -20UNEF   | PG9             | Ø 4-8           | 22.0 |
| 16S        | 32.0                                                  | 48           |              | $\frac{7}{8}$ -20UNEF   | PG13.5          | Ø 6-12          | 27.0 |
| 16         |                                                       | 57           |              |                         |                 |                 |      |
| 18         | 36.5                                                  | 58           | 35           | 1-20UNEF                | PG16            | Ø 8.5-14        | 28.0 |
| 20         | 39.9                                                  | 61           |              | $1\frac{3}{16}$ -18UNEF | PG21            | Ø 12.5-18       | 31.0 |
| 22         | 43.1                                                  |              |              |                         |                 |                 |      |
| 24         | 46.6                                                  | 66           | 40           | $1\frac{7}{16}$ -18UNEF | PG25            | Ø 14-20         | 33.0 |
| 28         | 53.4                                                  |              |              |                         |                 |                 |      |
| 32         | 60.1                                                  | 72           | 45           | $1\frac{3}{4}$ -18UNS   | PG29            | Ø 18-25         | 37.0 |
| 36         | 66.3                                                  | 75           | 50           | 2-18UNS                 | PG36            | Ø 24-32         | 48.0 |
| 40         | 72.4                                                  | 78           | 55           | $2\frac{1}{4}$ -16UN    |                 |                 |      |

#### BMS3108 Insulator G\*\* (Nylon Hose Clamp)



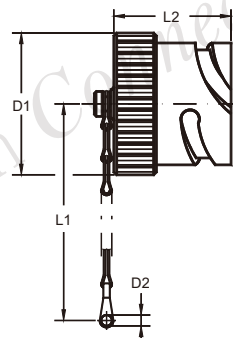
| Shell Spec | ØD $\begin{smallmatrix} 0 \\ -0.15 \end{smallmatrix}$ | L1 ±0.2 | L2 ±0.2 | V Thread 2A             | PG Inner Thread | OD of Cable(mm) | Nylon Hose Clamp Code |
|------------|-------------------------------------------------------|---------|---------|-------------------------|-----------------|-----------------|-----------------------|
| 14S        | 29.2                                                  | 47      | 30      | $\frac{3}{4}$ -20UNEF   | PG9             | Ø 4-8           | G9                    |
| 16S        | 32.0                                                  | 48      |         | $\frac{7}{8}$ -20UNEF   | PG13.5          | Ø 6-12          | G13.5                 |
| 16         |                                                       | 57      |         |                         |                 |                 |                       |
| 18         | 36.5                                                  | 58      | 35      | 1-20UNEF                | PG16            | Ø 8.5-14        | G16                   |
| 20         | 39.9                                                  | 61      |         | $1\frac{3}{16}$ -18UNEF | PG21            | Ø 12.5-18       | G21                   |
| 22         | 43.1                                                  |         |         |                         |                 |                 |                       |
| 24         | 46.6                                                  | 66      | 40      | $1\frac{7}{16}$ -18UNEF | PG25            | Ø 14-20         | G25                   |
| 28         | 53.4                                                  |         |         |                         |                 |                 |                       |
| 32         | 60.1                                                  | 72      | 45      | $1\frac{3}{4}$ -18UNS   | PG29            | Ø 18-25         | G29                   |
| 36         | 66.3                                                  | 75      | 50      | 2-18UNS                 | PG36            | Ø 24-32         | G36                   |
| 40         | 72.4                                                  | 78      | 55      | $2\frac{1}{4}$ -16UN    |                 |                 |                       |

## Protection Cap-Parts To Be Ordered Separately

Plug  
Protection Cap



Size of Cap



Unit: mm

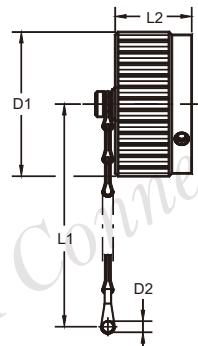
| Dust Cap Code      | Application   |
|--------------------|---------------|
| <b>BMS25042-14</b> | Shell 14 Plug |
| <b>BMS25042-16</b> | Shell 16 Plug |
| <b>BMS25042-18</b> | Shell 18 Plug |
| <b>BMS25042-20</b> | Shell 20 Plug |
| <b>BMS25042-22</b> | Shell 22 Plug |
| <b>BMS25042-24</b> | Shell 24 Plug |
| <b>BMS25042-28</b> | Shell 28 Plug |
| <b>BMS25042-32</b> | Shell 32 Plug |
| <b>BMS25042-36</b> | Shell 36 Plug |
| <b>BMS25042-40</b> | Shell 40 Plug |

| Shell Spec | D1<br>Max | D2<br>$+0.6$<br>$-0$ | L1<br>Max | L2<br>Max |
|------------|-----------|----------------------|-----------|-----------|
| 14S        | 27.5      | 4.3                  | 100       | 29        |
| 16S        | 30.0      |                      | 115       | 37        |
| 16         |           |                      |           |           |
| 18         |           |                      |           |           |
| 20         | 130       |                      |           |           |
| 22         |           |                      |           |           |
| 24         |           |                      |           |           |
| 28         |           |                      |           |           |
| 32         | 56.0      | 4.7                  | 190       |           |
| 36         |           |                      |           |           |
| 40         |           |                      |           |           |

Receptacle  
Protection Cap



Size of Cap



Unit: mm

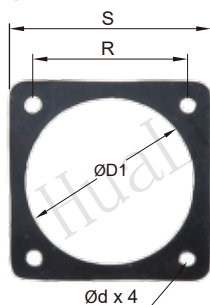
| Dust Cap Code      | Application         |
|--------------------|---------------------|
| <b>BMS25043-14</b> | Shell 14 Receptacle |
| <b>BMS25043-16</b> | Shell 16 Receptacle |
| <b>BMS25043-18</b> | Shell 18 Receptacle |
| <b>BMS25043-20</b> | Shell 20 Receptacle |
| <b>BMS25043-22</b> | Shell 22 Receptacle |
| <b>BMS25043-24</b> | Shell 24 Receptacle |
| <b>BMS25043-28</b> | Shell 28 Receptacle |
| <b>BMS25043-32</b> | Shell 32 Receptacle |
| <b>BMS25043-36</b> | Shell 36 Receptacle |
| <b>BMS25043-40</b> | Shell 40 Receptacle |

| Shell Spec | D1<br>Max | D2<br><sup>+0.6</sup><br>-0 | L1<br>Max | L2<br>Max |
|------------|-----------|-----------------------------|-----------|-----------|
| 14S        | 30.5      | 4.3                         | 90        | 20        |
| 16S        | 33.0      |                             | 100       | 25        |
| 16         |           |                             |           |           |
| 18         | 37.5      |                             |           |           |
| 20         | 41.0      |                             |           |           |
| 22         | 44.0      |                             |           |           |
| 24         | 47.5      | 115                         |           |           |
| 28         | 54.5      |                             |           |           |
| 32         | 61.0      | 5.5                         | 160       |           |
| 36         | 67.5      |                             |           |           |
| 40         | 73.5      |                             |           |           |

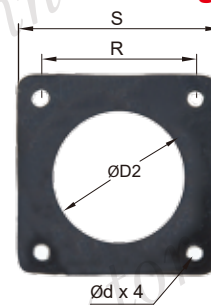
## Mounting Plate & Gasket

### Rubber Sealing Gasket Size

#### ● Rear Mounting

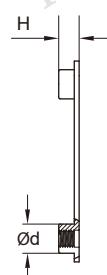
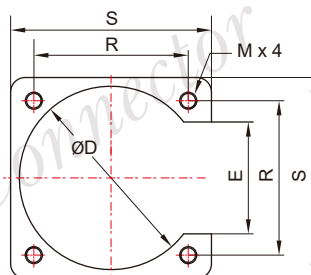
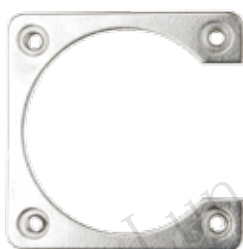


#### ● Front Mounting



| Shell Size | Rear Mounting ØD1 | $R_{\pm 0.1}$ | $S_{\pm 0.3}$ | $\phi d_{+0.1}^0$ | Front Mounting ØD2 |
|------------|-------------------|---------------|---------------|-------------------|--------------------|
| 14S        | 24.9              | 23.0          | 28.6          | 3.5               | 22.1               |
| 16S、16     | 28.2              | 24.6          | 32.5          |                   | 25.3               |
| 18         | 30.9              | 27.0          | 35.0          |                   | 28.4               |
| 20         | 34.3              | 29.4          | 38.0          |                   | 31.6               |
| 22         | 37.7              | 31.8          | 41.3          |                   | 34.8               |
| 24         | 41.2              | 34.9          | 44.5          | 3.7               | 38                 |
| 28         | 46.8              | 39.7          | 50.8          |                   | 44.3               |
| 32         | 53.4              | 44.5          | 57.2          | 4.5               | 50.7               |
| 36         | 59.6              | 49.2          | 63.5          |                   | 57                 |
| 40         | 65.5              | 55.5          | 69.9          | 5.0               | 61.9               |

### Mounting Plate(Metal) Order Code, Size



**Especially Recommended**



Mounting Plate & Gasket

| Code | Shell Size | $R_{\pm 0.1}$ | $S_{\pm 0.3}$ | $\phi D$ | E    | H   | $\phi d_{+0.1}^0$ | Thread M | Screw Spec |
|------|------------|---------------|---------------|----------|------|-----|-------------------|----------|------------|
| SG14 | 14S        | 23.0          | 30.0          | 24.9     | 15.8 | 2.6 | 6.3               | M3       | M3 x 10    |
| SG16 | 16S、16     | 24.6          | 32.3          | 28.2     | 17.9 |     |                   |          |            |
| SG18 | 18         | 27.0          | 34.6          | 30.9     | 20.2 |     |                   |          |            |
| SG20 | 20         | 29.4          | 38.5          | 34.3     | 22.5 |     |                   |          |            |
| SG22 | 22         | 31.8          | 40.8          | 37.7     | 23.5 |     |                   |          |            |
| SG24 | 24         | 34.9          | 44.8          | 41.2     | 25.9 | 3.0 | 8.0               | M4       | M4 x 12    |
| SG28 | 28         | 39.7          | 51.2          | 46.8     | 29.1 |     |                   |          |            |
| SG32 | 32         | 44.5          | 59.1          | 53.4     | 30.7 |     |                   |          |            |
| SG36 | 36         | 49.2          | 63.9          | 59.6     | 35.5 |     |                   |          |            |
| SG40 | 40         | 55.5          | 74.7          | 65.5     | 38.6 |     |                   |          |            |



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