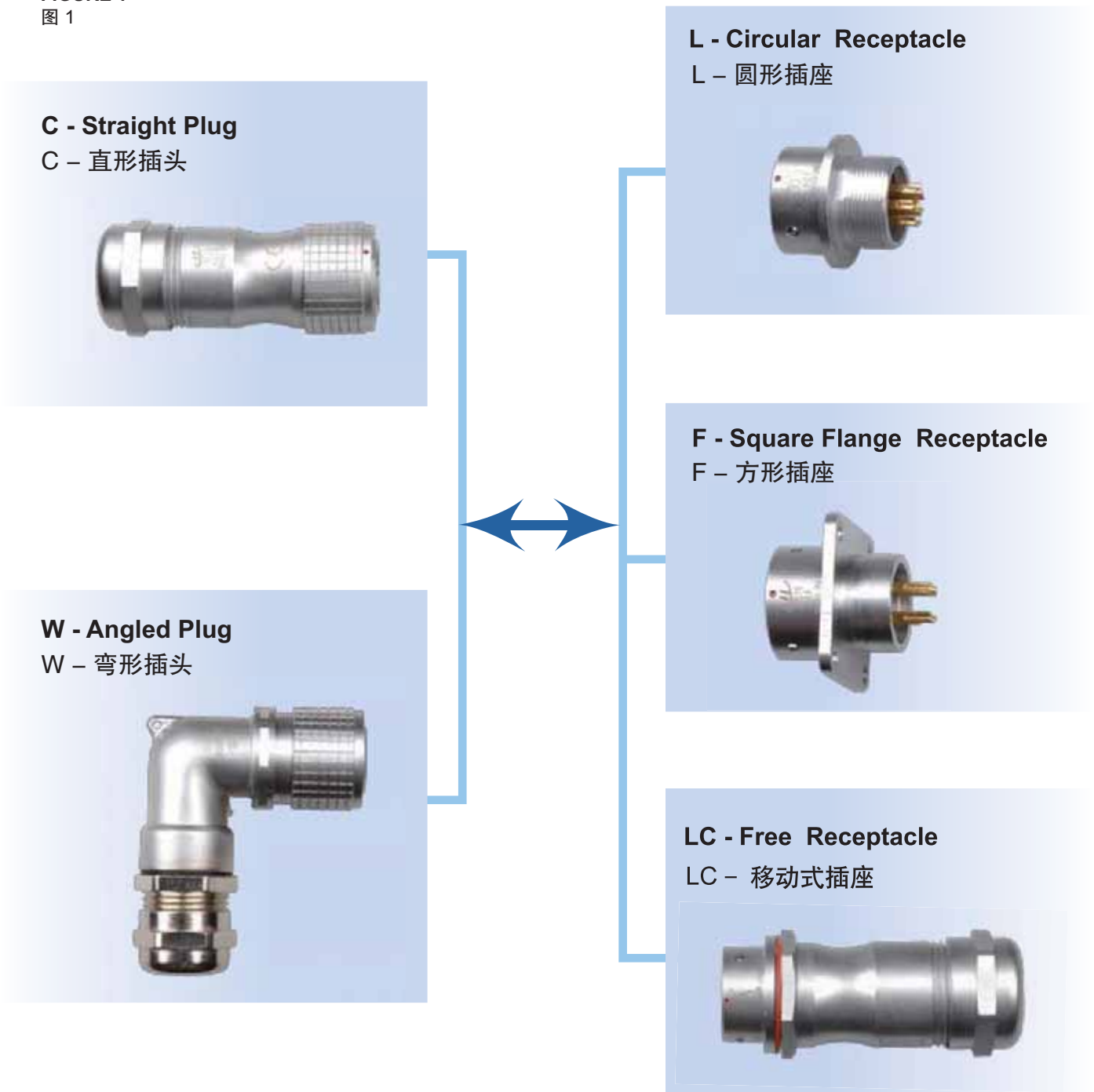


# COUPLING INSTRUCTION

## 插头插座适配图

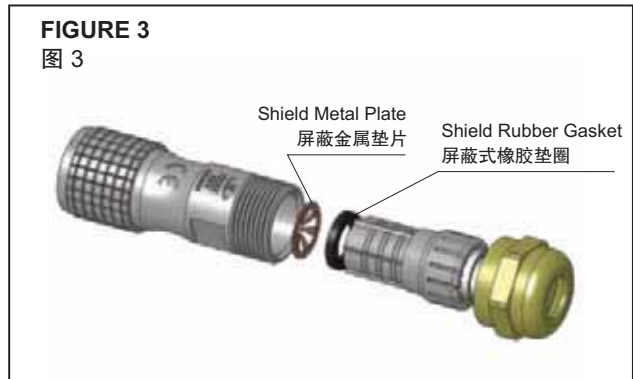
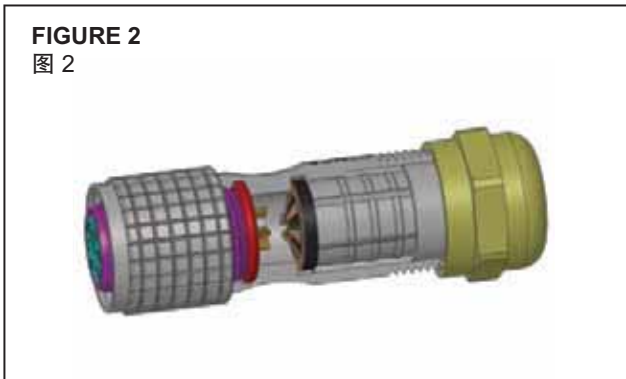
FIGURE 1  
图 1



## Order Number Explanation 产品订货代码

| Series Prefix<br>连接器型号 | Shell Size<br>壳体规格   | Contact Type<br>接触件类型                 | Qty. of Contacts<br>芯数  | Plug and Receptacle<br>插头或插座  | Sealed Cable Diameter<br>密封电缆直径                           |
|------------------------|--|---------------------------------------|---|---|---|
| XS                     | 12   | J                                     | 3   | C   | II  |
| ↓                      | ↓  | ↓                                     | ↓   | ↓   | ↓   |
| XS系列<br>XS Series      | 4种面板安装开孔<br>直径(mm)<br>10、12、16、18<br><br>4 Mounting hole<br>diameters(mm)<br>10、12、16、18 | J-插针<br>K-插孔<br><br>J-Pin<br>K-Socket | 详见表3<br>(a, b, c, d)<br>芯数排布图<br><br>see table 3<br>(a, b, c, d) for<br>details of<br>contacts<br>arrangement | 插头:<br>C-电缆密封式插头<br>W-弯管插头<br>插座:<br>F-方型插座<br>L-圆型插座<br>LC-移动式插座<br><br>Plug:<br>C-sealed Plug<br>W-Angled Plug<br>Receptacle:<br>F-square flange<br>L-circular<br>LC-free   | 类别:<br>I、II(见P11图11)<br>I、II(see figure 11<br>on page 11) |
| <b>EXAMPLE:</b>        |  |                                       |   |   |   |
| 例:                     | ① Plug: XS12J3C I<br>Receptacle: XS12K3L<br>Abbr: XS12J3C I/K3L                          |                                       | 插头: XS12J3C I<br>插座: XS12K3L<br>缩写: XS12J3C I/K3L   | <div style="border: 2px solid red; padding: 5px; color: red; font-weight: bold;"> <p style="margin: 0;">大豪电子</p> <p style="margin: 0;">电话: 0755-83233025</p> <p style="margin: 0;"><a href="http://www.szdahao.com">http://www.szdahao.com</a></p> <p style="margin: 0;"><a href="http://www.very-tec.com">http://www.very-tec.com</a></p> </div> |   |

To order IP67 shield XS connector, please add “-EMC” to end of part number  
订购屏蔽式的，需在插头代码后加注“-EMC”



Note: Please contact sales to order IP67 shield XS for consultation  
注: 订购屏蔽式的XS系列IP67连接器如需咨询，请联系本公司销售部

## Service Ambient Conditions 使用环境条件

|  |  |
|--|--|
| Ambient temperature: Lower limit -40°C Upper limit+100°C   | 环境温度： 下限-40°C 上限+100°C                     |
| Relative humidity: 95% at +40 ± 2°C                        | 相对湿度： +40°C 达95% ± 2%                      |
| Frequency: 50HZ ~ 60HZ                                     | 频率： 50HZ ~ 60HZ                            |
| Vibration: 10 ~ 500HZ 100m/s <sup>2</sup> acceleration     | 振 动： 10 ~ 500HZ 加速度 100m/s <sup>2</sup>    |
| Shock: 40 ~ 80 cycles/min 250m/s <sup>2</sup> acceleration | 冲 击： 40 ~ 80次/min 加速度达 250m/s <sup>2</sup> |
| Insulating Material Flammability: UL94 V-0                 | 绝缘材料阻燃等级： UL94 V-0                         |
| Mechanical Life: >500 Cycles                               | 机械寿命： >500次                                |

### Rated Current, Contact Resistance, Wire Gauge For Soldering

额定电流、接触电阻、焊接导线截面积

TABLE 1 表 1

| Contact diameter (mm)<br>接触对直径 (mm) | Rated current (A)<br>额定电流 (A) | Contact resistance (mΩ)<br>接触电阻 (mΩ) | Wire gauge for soldering (mm <sup>2</sup> )<br>焊接导线截面积 (mm <sup>2</sup> ) | AWG |
|-------------------------------------|-------------------------------|--------------------------------------|---|-----|
| φ 0.8                               | 3                             | ≤ 10                                 | ≤ 0.5   | #20 |
| φ 1.0                               | 5                             | ≤ 5                                  | ≤ 0.785   | #18 |
| φ 1.5                               | 10                            | ≤ 2.5                                | ≤ 1.75  | #15 |
| φ 1.6                               | 13                            | ≤ 2.0                                | ≤ 2   | #14 |
| φ 2.5                               | 25                            | ≤ 1                                  | ≤ 4.9   | #11 |

### Insulation Resistance

绝缘电阻

TABLE 2 表 2

| Service Condition<br>工作环境     | Normal<br>常态下 | Damp Heat<br>湿热 |
|-------------------------------|---------------|-----------------|
| Insulation resistance<br>绝缘电阻 | ≥ 5000 (MΩ)   | ≥ 1000 (MΩ)     |

## Contacts Arrangement 芯数排布图

View from mating face of Pin insert

耦合面为插针(J)的视图

TABLE 3(a) 表 3(a)


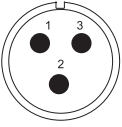
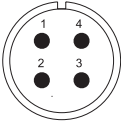
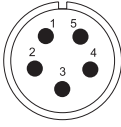

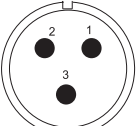
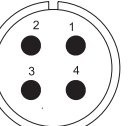
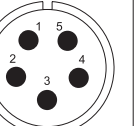
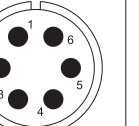
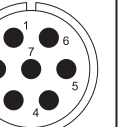
| XS 10                                     |   |   |  |   |
|---|---|---|--|---|
| Qty.of contacts<br>芯数                     | 2   | 3   | 4  | 5   |
| Contacts arrangement<br>排列图               |  |  |  |  |
| Diameter of contacts × Qty.<br>接触对直径 × 数量 | $\phi 1.0 \times 2$   | $\phi 1.0 \times 3$   | $\phi 0.8 \times 4$  | $\phi 0.8 \times 5$   |
| Rated voltage<br>额定电压                     | 250V  | 250V  | 200V   | 125V  |
| Overvoltage category<br>过电压类别             | II  | II  | II   | II  |
| Degree of pollution<br>污染等级               | 2   | 2   | 2  | 2   |
| Withstand voltage<br>耐压                   | 1500V   | 1500V   | 1000V  | 1000V   |



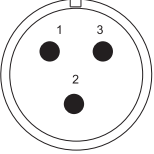
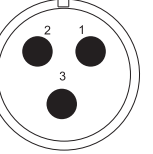
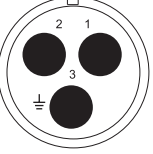
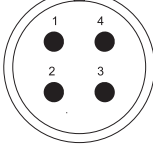
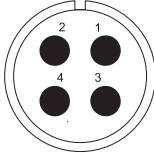
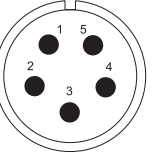
TABLE 3(b) 表 3(b)

| XS 12                                     |   |   |   |  |   |   |
|---|---|---|---|--|---|---|
| Qty.of contacts<br>芯数                     | 2   | 3   | 4   | 5  | 6   | 7   |
| Contacts arrangement<br>排列图               |  |  |  |  |  |  |
| Diameter of contacts × Qty.<br>接触对直径 × 数量 | $\phi 1.6 \times 2$   | $\phi 1.0 \times 3$   | $\phi 1.0 \times 4$   | $\phi 1.0 \times 5$  | $\phi 1.0 \times 6$   | $\phi 1.0 \times 7$   |
| Rated voltage<br>额定电压                     | 250V  | 250V  | 200V  | 180V   | 125V  | 125V  |
| Overvoltage category<br>过电压类别             | II  | II  | II  | II   | II  | II  |
| Degree of pollution<br>污染等级               | 2   | 2   | 2   | 2  | 2   | 2   |
| Withstand voltage<br>耐压                   | 1500V   | 1500V   | 1500V   | 1500V  | 1000V   | 1000V   |

### View from mating face of Pin insert

耦合面为插针(J)的视图

TABLE 3(c) 表 3(c)

| XS 16                                     |   |   |  |   |
|---|---|---|--|---|
| Qty.of contacts<br>芯数                     | 2   | 2a  | 3  | 3a  |
| Contacts arrangement<br>排列图               |    |    |    |    |
| Diameter of contacts × Qty.<br>接触对直径 × 数量 | $\phi 1.5 \times 2$   | $\phi 2.5 \times 2$   | $\phi 1.0 \times 3$  | $\phi 1.5 \times 3$   |
| Rated voltage<br>额定电压                     | 320V  | 250V  | 250V   | 250V  |
| Overvoltage category<br>过电压类别             | II  | II  | II   | II  |
| Degree of pollution<br>污染等级               | 2   | 2   | 2  | 2   |
| Withstand voltage<br>耐压                   | 2000V   | 2000V   | 2000V  | 2000V   |
| XS 16                                     |   |   |  |   |
| Qty.of contacts<br>芯数                     | 3b  | 4   | 4a   | 5   |
| Contacts arrangement<br>排列图               |  |  |  |  |
| Diameter of contacts × Qty.<br>接触对直径 × 数量 | $\phi 2.5 \times 3$   | $\phi 1.0 \times 4$   | $\phi 1.5 \times 4$  | $\phi 1.0 \times 5$   |
| Rated voltage<br>额定电压                     | 250V  | 250V  | 250V   | 250V  |
| Overvoltage category<br>过电压类别             | II  | II  | II   | II  |
| Degree of pollution<br>污染等级               | 2   | 2   | 2  | 2   |
| Withstand voltage<br>耐压                   | 2000V   | 2000V   | 2000V  | 2000V   |

### View from mating face of Pin insert

耦合面为插针(J)的视图

TABLE 3(c) 表 3(c)

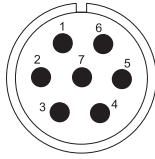
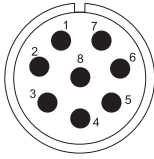
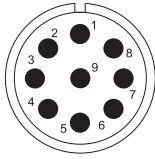
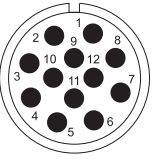
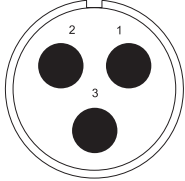
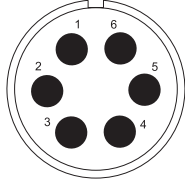
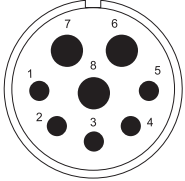
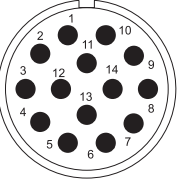
| XS 16                                     |   |   |  |   |
|---|---|---|--|---|
| Qty.of contacts<br>芯数                     | 7   | 8   | 9  | 12  |
| Contacts arrangement<br>排列图               |  |  |  |  |
| Diameter of contacts × Qty.<br>接触对直径 × 数量 | $\phi 1.0 \times 7$   | $\phi 1.0 \times 8$   | $\phi 1.0 \times 9$  | $\phi 1.0 \times 12$  |
| Rated voltage<br>额定电压                     | 250V  | 250V  | 220V   | 160V  |
| Overvoltage category<br>过电压类别             | II  | II  | II   | II  |
| Degree of pollution<br>污染等级               | 2   | 2   | 2  | 2   |
| Withstand voltage<br>耐压                   | 2000V   | 2000V   | 1500V  | 1500V   |

TABLE 3(d) 表 3(d)

| XS 18                                     |   |   |  |   |
|---|---|---|--|---|
| Qty.of contacts<br>芯数                     | 3   | 6   | 8  | 14  |
| Contacts arrangement<br>排列图               |  |  |  |  |
| Diameter of contacts × Qty.<br>接触对直径 × 数量 | $\phi 2.5 \times 3$   | $\phi 1.6 \times 6$   | $\phi 1.6 \times 3$<br>$\phi 1.0 \times 5$   | $\phi 1.0 \times 14$  |
| Rated voltage<br>额定电压                     | 320V  | 320V  | 6 ~ 8 400V<br>1 ~ 5 200V   | 200V  |
| Overvoltage category<br>过电压类别             | II  | II  | II   | II  |
| Degree of pollution<br>污染等级               | 2   | 2   | 2  | 2   |
| Withstand voltage<br>耐压                   | 2000V   | 2000V   | 2000V  | 1500V   |

## Plug Drawings & Dimensions

### 插头外形尺寸图

#### C - Straight

#### C - 直形

FIGURE 4 图 4



(a)

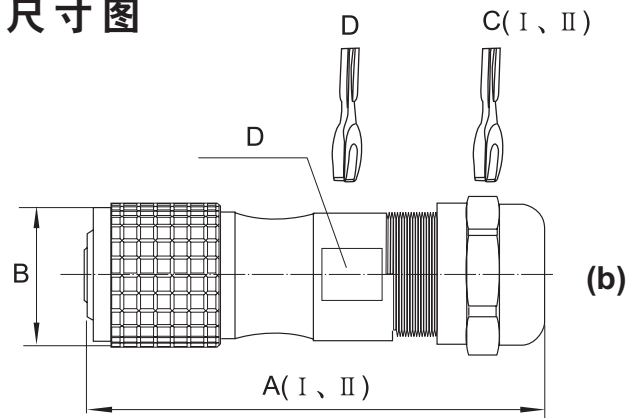





TABLE 4 表 4

Unit 单位: mm

| Series XS<br>型号 XS | A I (max) | A II (max) | B           | C I  | C II  | D  |
|--------------------|-----------|------------|-------------|---|--|---|
| 10                 | -         | 50         | $\phi 14$   | -   | 14   | 12 × 6  |
| 12                 | 50        | 56         | $\phi 17$   | 14  | 17   | 14 × 7  |
| 16                 | 56        | 62         | $\phi 22$   | 17  | 22   | 18 × 8  |
| 18                 | 62        | 64         | $\phi 24.5$ | 22  | 24   | 21 × 9  |

#### W - Angled

#### W - 弯形

FIGURE 5 图 5



(a)

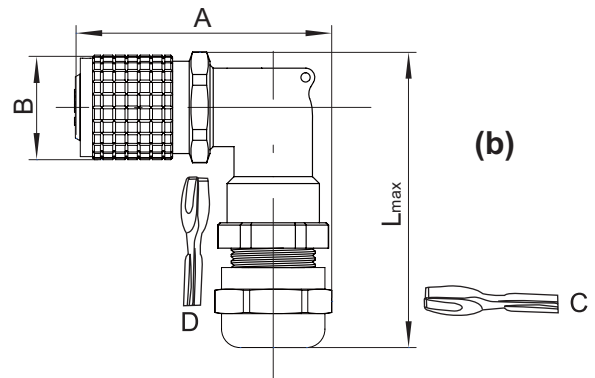




TABLE 5 表 5

Unit 单位: mm

| Series XS<br>型号 XS | A    | B           | C  | D  | L <sub>max</sub> |
|--------------------|------|-------------|---|---|------------------|
| 10                 | 41   | $\phi 14$   | 14  | 14  | 51               |
| 12                 | 45   | $\phi 17$   | 17  | 17  | 56.5             |
| 16                 | 50   | $\phi 22$   | 20  | 22  | 60.5             |
| 18                 | 52.5 | $\phi 24.5$ | 22  | 24  | 67               |

# Receptacle Drawings & Dimensions

## 插座外形尺寸图

### Square Flange

#### 方形法兰

FIGURE 6 图6

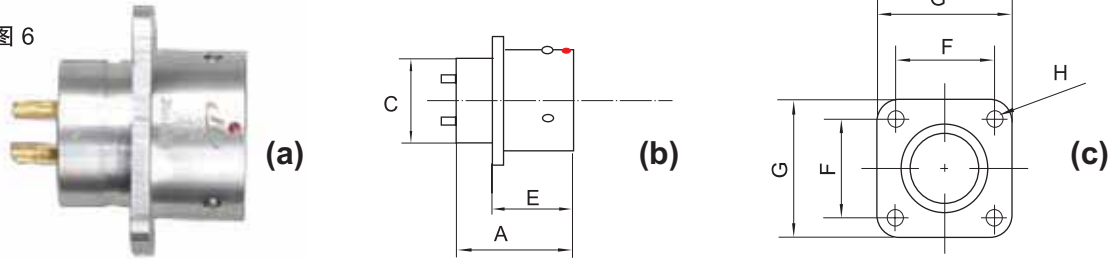


TABLE 6 表6

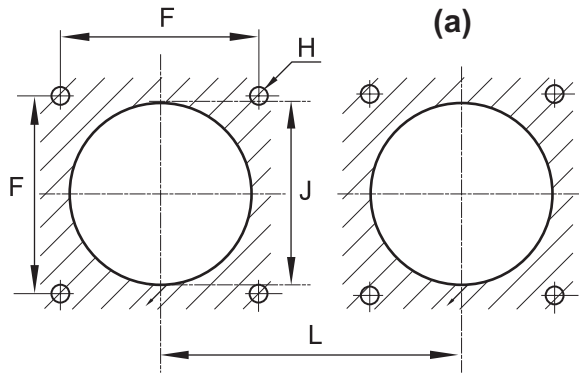
Unit 单位: mm

| Series XS<br>型号 XS | A  | C    | E    | F        | G  | H        |
|--------------------|----|------|------|----------|----|----------|
| 10                 | 20 | φ 10 | 11.5 | 11 ± 0.1 | 16 | 4- φ 2.3 |
| 12                 | 20 | φ 12 | 11.5 | 13 ± 0.1 | 18 | 4- φ 2.3 |
| 16                 | 20 | φ 16 | 12   | 20 ± 0.1 | 26 | 4- φ 3.2 |
| 18                 | 20 | φ 18 | 12   | 22 ± 0.1 | 28 | 4- φ 3.2 |

### Mounting Hole dimensions

#### 面板开孔尺寸

FIGURE 7 图7



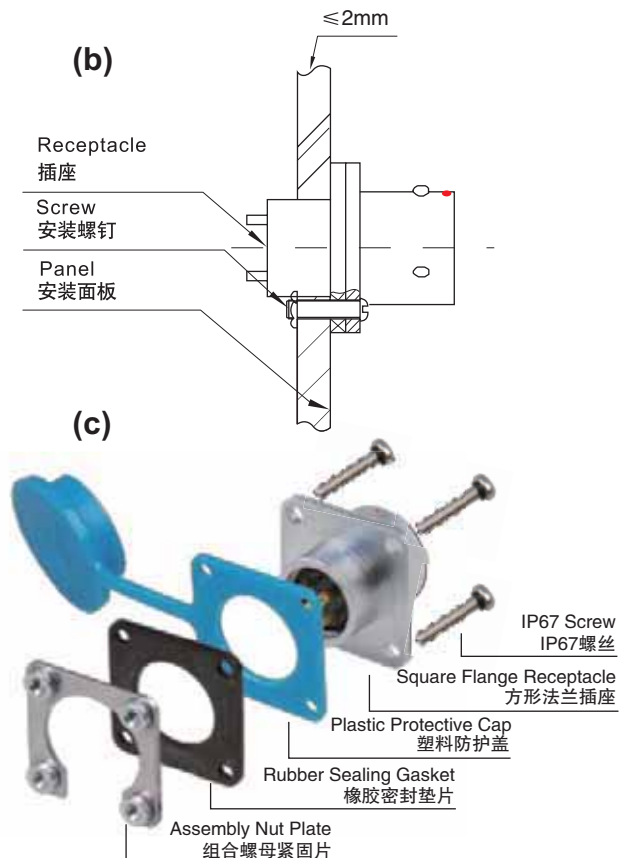
### Square Flange Receptacle Mounting Hole Data

#### 方形插座安装开孔参数

TABLE 7 表7

Unit 单位: mm

| Spec.<br>规格 | F        | J      | H        | L (min)<br>最小间距 |
|-------------|----------|--------|----------|-----------------|
| 10          | 11 ± 0.1 | φ 10.5 | 4- φ 2.3 | 26              |
| 12          | 13 ± 0.1 | φ 12.5 | 4- φ 2.3 | 28              |
| 16          | 20 ± 0.1 | φ 16.5 | 4- φ 3.2 | 36              |
| 18          | 22 ± 0.1 | φ 18.5 | 4- φ 3.2 | 38              |





## Circular Flange

### 圆形法兰

FIGURE 8 图 8

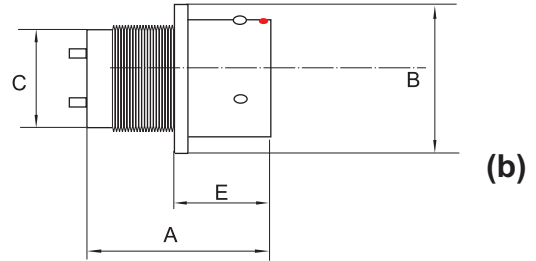


TABLE 8 表 8

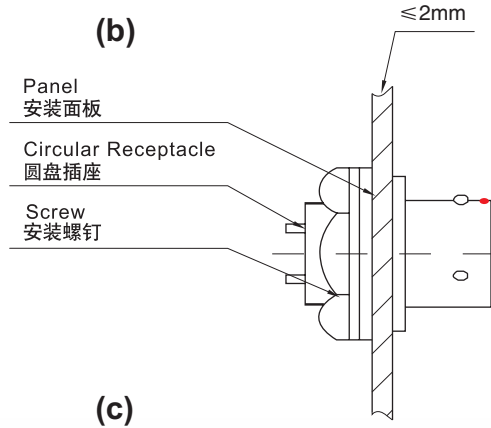
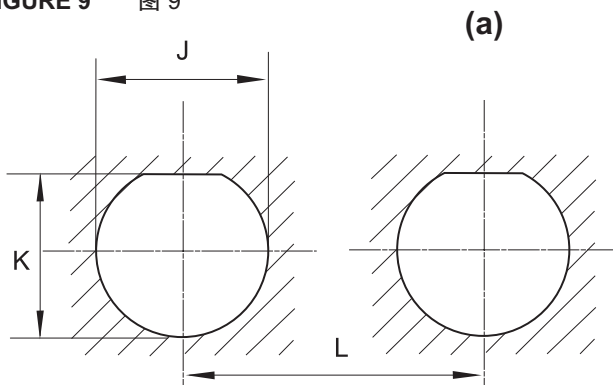
Unit 单位: mm

| Series XS<br>型号 XS | A  | B    | C          | E    | H |
|--------------------|----|------|------------|------|---|
| 10                 | 20 | φ 15 | M10 × 0.75 | 11   | 3 |
| 12                 | 20 | φ 18 | M12 × 0.75 | 10.5 | 3 |
| 16                 | 20 | φ 23 | M16 × 0.75 | 11   | 3 |
| 18                 | 20 | φ 25 | M18 × 1    | 11   | 3 |

## Mounting Hole dimensions

### 面板开孔尺寸

FIGURE 9 图 9



## Circular Flange Receptacle Mounting Hole Data

### 圆形插座安装开孔参数

TABLE 9 表 9

Unit 单位: mm

| Spec.<br>规格 | J    | K    | L (min)<br>最小间距 |
|-------------|------|------|-----------------|
| 10          | φ 10 | 9.5  | 26              |
| 12          | φ 12 | 11.5 | 30              |
| 16          | φ 16 | 15.5 | 36              |
| 18          | φ 18 | 17.5 | 38              |



## Free Receptacle

移动式插座

FIGURE 10 图 10

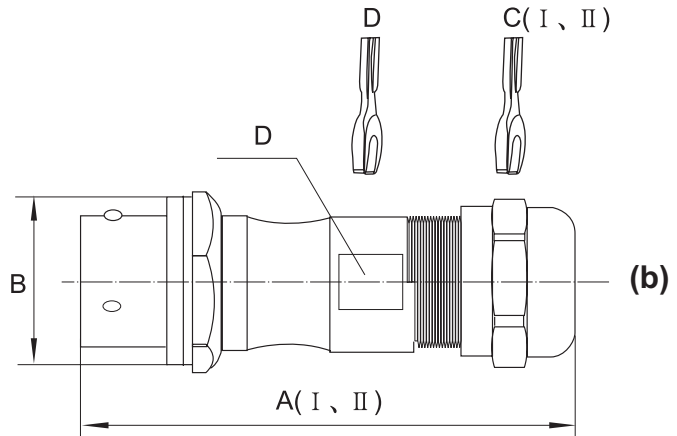





TABLE 10 表 10

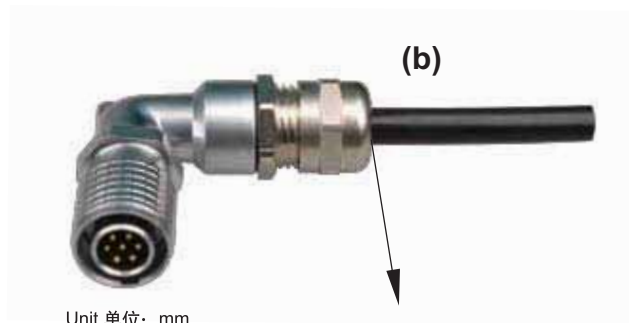
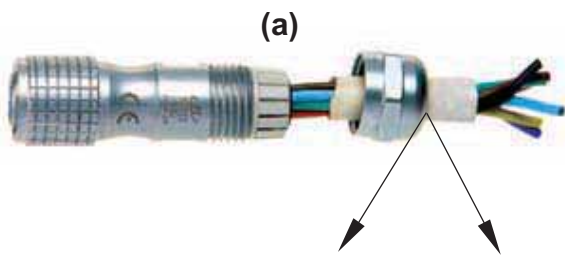
Unit 单位: mm

| Series XS<br>型号 XS | A I (max) | A II (max) | B         | C I  | C II  | D  |
|--------------------|-----------|------------|-----------|--|--|---|
| 10                 | -         | 50         | $\phi 15$ | -  | 14   | 12 × 6  |
| 12                 | 50        | 56         | $\phi 18$ | 14   | 17   | 14 × 7  |
| 16                 | 56        | 63         | $\phi 23$ | 17   | 22   | 18 × 8  |
| 18                 | 63        | 64         | $\phi 25$ | 22   | 24   | 21 × 9  |

## Outlet of Sealed Accessory

密封电缆外径尺寸范围

FIGURE 11 图 11



Unit 单位: mm

| Series XS<br>型号 XS | Cable Diameter<br>电缆线直径 | Cable Diameter<br>电缆线直径 |
|--------------------|-------------------------|-------------------------|
| 10                 | -                       | $\phi 3-\phi 6.5$       |
| 12                 | $\phi 3-\phi 6.5$       | $\phi 4-\phi 8$         |
| 16                 | $\phi 4-\phi 8$         | $\phi 7-\phi 12$        |
| 18                 | $\phi 7-\phi 12$        | $\phi 10-\phi 14$       |

Unit 单位: mm

| Series XS<br>型号 XS | Cable Diameter<br>电缆线直径 |
|--------------------|-------------------------|
| 10                 | $\phi 3-\phi 6.5$       |
| 12                 | $\phi 4-\phi 8$         |
| 16                 | $\phi 5-\phi 10$        |
| 18                 | $\phi 7-\phi 12$        |

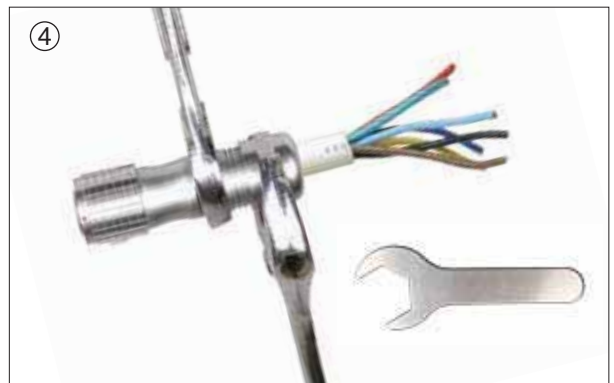
# Plug Drawings & Dimensions

## 插头装配



FIGURE 12 图 12

Safety Notice: This part should not be open. Please follow the instruction.



# IP67 Metal Protective Caps

## IP67金属防护盖外形图

### For Square Flange Receptacle

#### 方形法兰插座防护盖

FIGURE 13 图 13

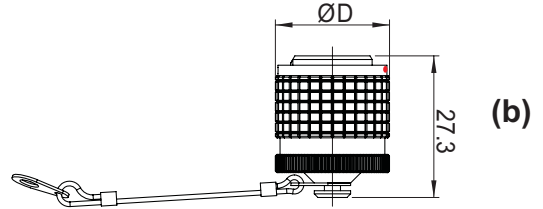


TABLE 11 表 11

Unit 单位: mm

| Part Number<br>订购代码 | D    | L    |
|---------------------|------|------|
| XS10-FG             | 14   | 27.3 |
| XS12-FG             | 17   | 27.3 |
| XS16-FG             | 22   | 27.3 |
| XS18-FG             | 24.5 | 27.3 |

### For Circular Flange Receptacle

#### 圆形法兰插座防护盖

FIGURE 14 图 14

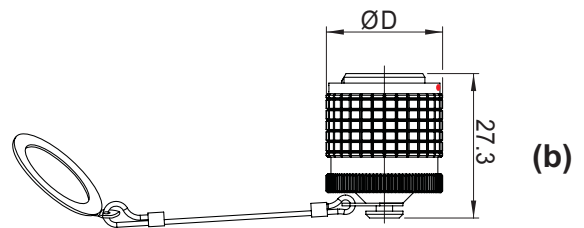


TABLE 12 表 12

Unit 单位: mm

| Part Number<br>订购代码 | D    | L    |
|---------------------|------|------|
| XS10-LG             | 14   | 27.3 |
| XS12-LG             | 17   | 27.3 |
| XS16-LG             | 22   | 27.3 |
| XS18-LG             | 24.5 | 27.3 |

**For Plug**  
**插头防护盖**

FIGURE 15 图 15

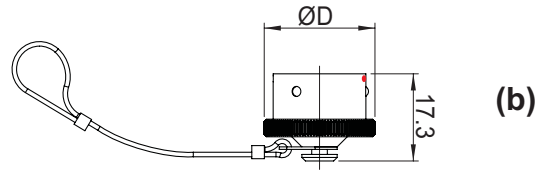


TABLE 13 表 13

Unit 单位: mm

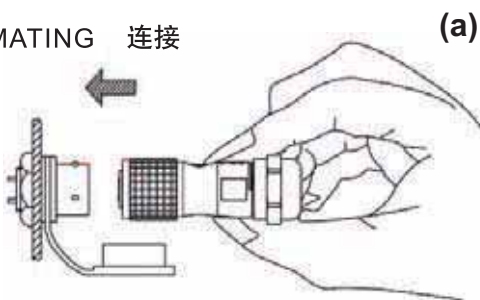
| Part Number<br>订购代码 | D    | L    |
|---------------------|------|------|
| XS10                | 14   | 17.3 |
| XS12                | 17   | 17.3 |
| XS16                | 22   | 17.3 |
| XS18                | 24.5 | 17.3 |



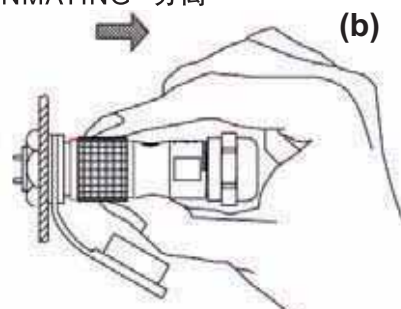
**Mating & Unmating**  
**连接与分离示意图**

FIGURE 16 图 16

MATING 连接



UNMATING 分离



**MATING:** Smooth part of plug is held as Figure16(a) shows. a red point "●" is set upward and pushed into receptacle as it is exactly opposite to another "●" of receptacle. Coupling is done when a cracking sound is heard. (There is a red point "●" on plug's shell and receptacle's respectively)

**UNMATING:** Hold the knurled part of coupling nut of plug and pull to unmate as Figure 16(b) shows.

**连接:** 请按图16(a)所示手指握住插头光滑部分,“●”垂直向上,对齐插座“●”轴向往里推、听见“咔嚓”声音,表明已锁紧。(插头、插座外壳均标“●”)

**分离:** 请按图16(b)所示手指捏住插头的滚花部分沿轴向轻轻一拉,即可分离。