

# HV

## HV Series Connector and cable assembly



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### **HVBI**

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### **HVG**

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### **HVS**

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PRODUCT INTRODUCTION: HV SERIES



KEY FEATURES

- Easy to install in a limited space
- Push-pull locking system with audible "click"
- EMI shielding
- No tool required for unmating
- Sealing, IP67 (mated)
- Shock and vibration resistant
- Multiple coding positions
- RoHS compliant

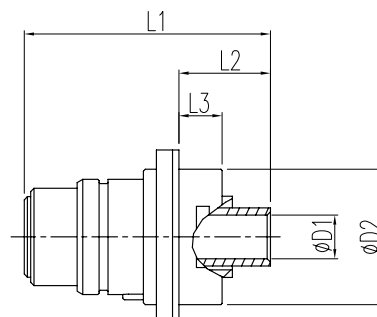
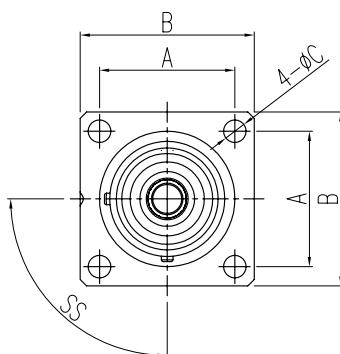
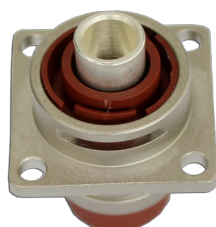
| MECHANICAL                   |   |
|------------------------------|---|
| Durability                   | > 500 mating cycles (up to 1000)                              |
| Wire range                   | 16 to 70mm <sup>2</sup>                                       |
| Connection type              | Crimping  |
| ELECTRICAL                   |   |
| Rated voltage                | 230V to 400V AC<br>400V to 690V DC                            |
| Rated current                | 250A Max  |
| Insulator resistance         | > 2000MΩ  |
| Dielectric withstand voltage | 2500V AC  |
| Shielding                    | Available in shielded & unshielded variants                   |
| ENVIRONMENTAL                |   |
| Sealing                      | IP67 (mated)  |
| Temperature range            | -40°C to 125°C, short term to 150°C                           |
| Inflammability               | UL94V0  |
| Salt spray                   | 48h, 96h  |
| MATERIAL                     |   |
| Shell                        | Aluminum alloy with zinc, nickel plating and anodic oxidation |
| Contacts                     | Copper alloy, silver plating                                  |
| Insulator                    | Flame-retardant thermoplastic composition                     |
| Sealing                      | Rubber  |

## HOW TO ORDER: RECEPTACLE

---

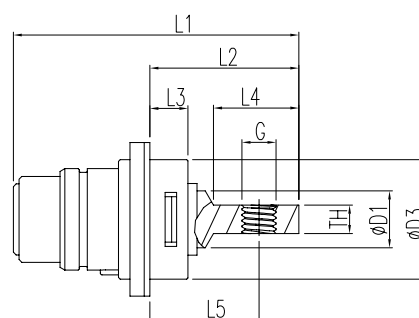
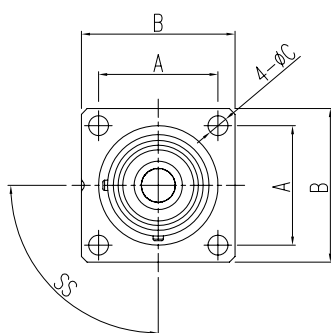
|  | HV | 0 | R6 | 1 | F | C | X | R |
|--|----|---|----|---|---|---|---|---|
| <b>Shell type:</b><br>0: Receptacle  |    |   |    |   |   |   |   |   |
| <b>Insert size:</b><br>R6: 6mm Radsok (Max current 120A)<br>R8: 8mm Radsok (Max current 150A)<br>R7: 8mm Radsok (Max current 180A)<br>RA: 10mm Radsok (Max current 250A) |    |   |    |   |   |   |   |   |
| <b>Number of position:</b><br>1: 1 position receptacle   |    |   |    |   |   |   |   |   |
| <b>Insert type:</b><br>F: Socket (Recommended)<br>M: Pin   |    |   |    |   |   |   |   |   |
| <b>Termination:</b><br>C: Crimp cable<br>H: Copper bar<br>T: Screw   |    |   |    |   |   |   |   |   |
| <b>Alternate keying positions:</b><br>X: 90°<br>Y: 180°<br>Z: 135°<br>W: 120°<br>U: 155°<br>N: Normal  |    |   |    |   |   |   |   |   |
| R: Right angle socket, only for HV0RA-1FC*-R   |    |   |    |   |   |   |   |   |

## RECEPTACLE WITH CRIMP CABLE



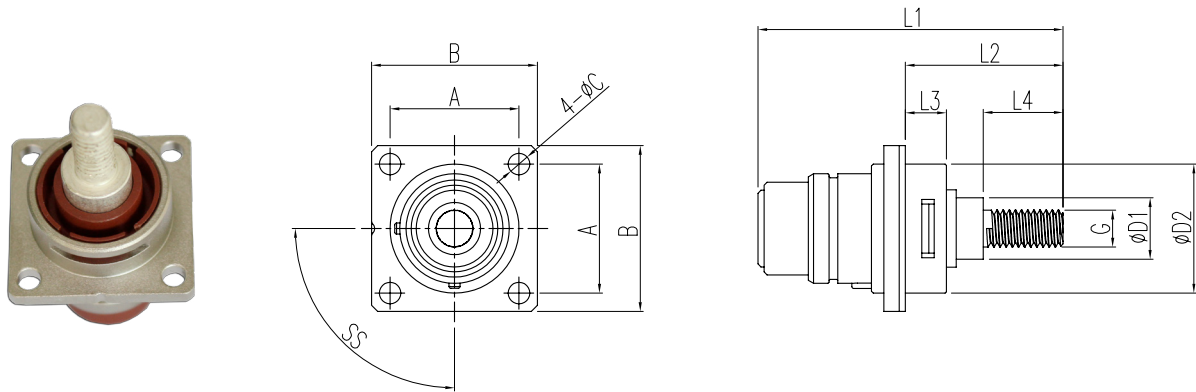
| Part number | A    | B    | C   | D1   | D2   | L1   | L2   | L3   | Crimp cable (mm <sup>2</sup> )         |
|-------------|------|------|-----|------|------|------|------|------|--|
| HV0R6-1FCX  | 21.0 | 27.0 | 3.5 | 7.2  | 21.0 | 38.2 | 14.2 | 6.7  | 16mm <sup>2</sup> to 25mm <sup>2</sup> |
| HV0R7-1FCX  | 24.6 | 33.0 | 4.5 | 10.5 | 26.0 | 75.4 | 37.7 | 12.0 | 35mm <sup>2</sup> to 50mm <sup>2</sup> |
| HV0R8-1FCX  | 23.0 | 31.0 | 4.5 | 9.0  | 23.0 | 53.7 | 20.5 | 5.5  | 25mm <sup>2</sup> to 35mm <sup>2</sup> |
| HV0RA-1FCX  | 29.4 | 36.5 | 4.5 | 12.5 | 32.0 | 63.4 | 26.2 | 13.0 | 50mm <sup>2</sup> to 70mm <sup>2</sup> |

## RECEPTACLE WITH COPPER BAR



| Part number | A    | B    | C   | D1   | D3   | L1   | L2   | L3   | L4   | L5   | TH  | G      | Crimp cable (mm <sup>2</sup> ) |
|-------------|------|------|-----|------|------|------|------|------|------|------|-----|--------|--------------------------------|
| HV0R6-1FHX  | 21.0 | 27.0 | 3.5 | 10.0 | 21.0 | 50.2 | 26.2 | 6.7  | 15.0 | 19.2 | 5.0 | M6 X 1 | 25mm <sup>2</sup>              |
| HV0R7-1FHX  | 24.6 | 33.0 | 4.5 | 15.0 | 26.0 | 73.9 | 36.2 | 12.1 | 25.0 | 28.2 | 4.0 | 8.5    | 50mm <sup>2</sup>              |
| HV0R8-1FHX  | 23.0 | 31.0 | 4.5 | 11.8 | 23.0 | 58.9 | 25.7 | 5.5  | 14.8 | 18.2 | 6.0 | M6 X 1 | 35mm <sup>2</sup>              |
| HV0RA-1FHX  | 29.4 | 36.5 | 4.5 | 22.5 | 32.2 | 82.2 | 45.0 | 13.0 | 32.0 | 33.0 | 5.0 | 10.5   | 70mm <sup>2</sup>              |

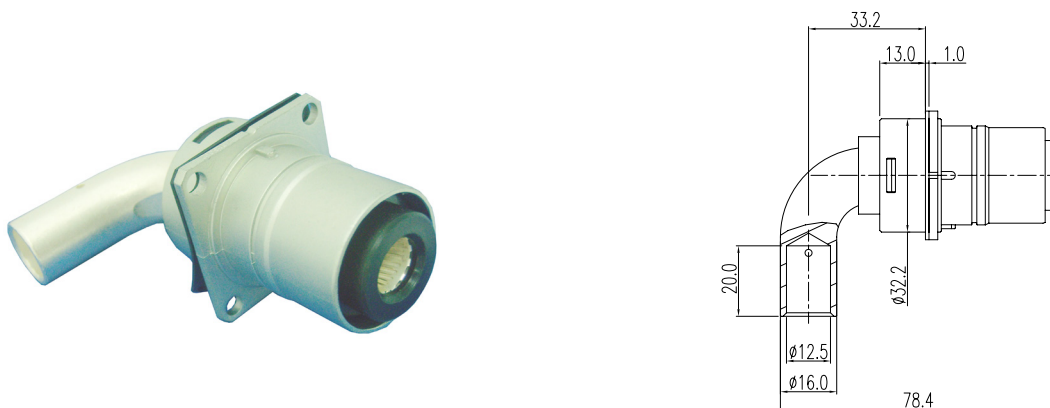
## RECEPTACLE WITH SCREW



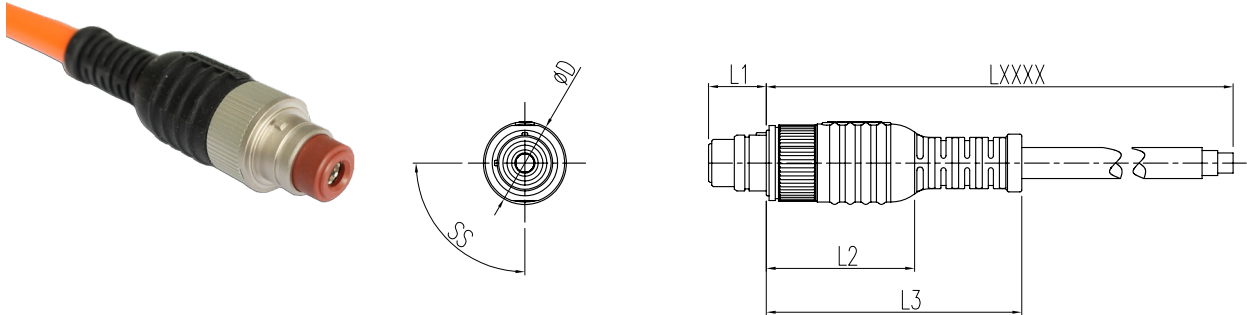
| Part number | A    | B    | C   | D1   | D2   | L1   | L2   | L3   | L4   | G         |
|-------------|------|------|-----|------|------|------|------|------|------|-----------|
| HV0R6-1FTX  | 21.0 | 27.0 | 3.5 | 10.0 | 21.0 | 49.7 | 25.7 | 6.7  | 13.0 | M6x1      |
| HV0R7-1FTX  | 24.6 | 33.0 | 4.5 | 15.0 | 26.0 | 71.7 | 34.0 | 12.1 | 12.5 | M8.0x1.25 |
| HV0R8-1FTX  | 23.0 | 31.0 | 4.5 | 11.8 | 23.0 | 63.7 | 30.5 | 5.5  | 16.5 | M8.0x1.25 |
| HV0RA-1FTX  | 29.4 | 36.5 | 4.5 | 22.5 | 32.2 | 80.2 | 43.0 | 13.0 | 20.0 | M10x1.5   |

Receptacle with right angle socket: [HVORA-1FC\\*-R](#)

(Remark: custom orders are available)

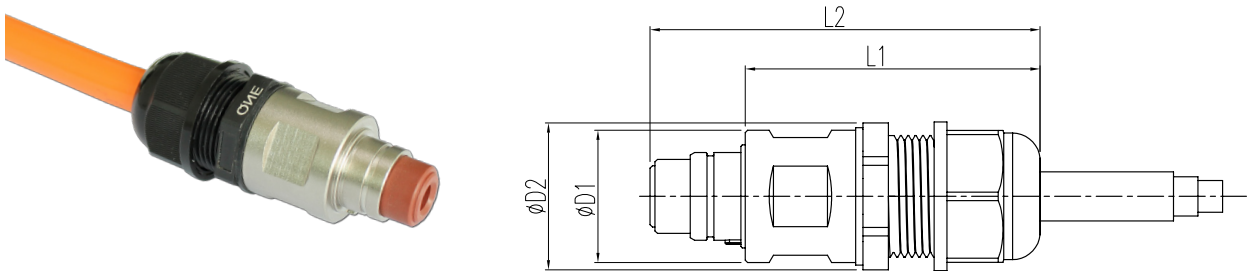


## CABLE MOUNTED RECEPTACLE WITH CABLE (SHIELDED)



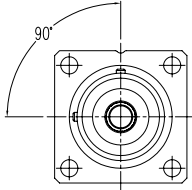
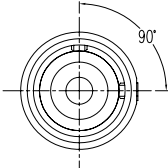
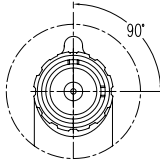
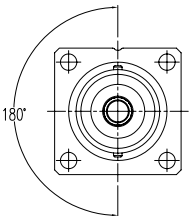
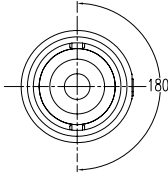
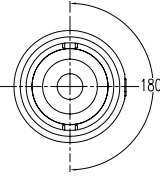
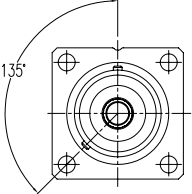
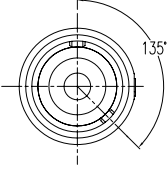
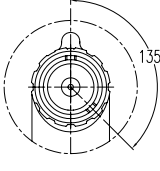
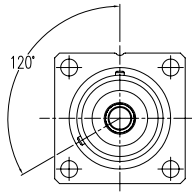
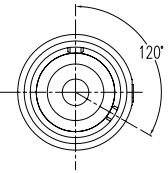
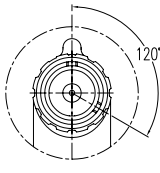
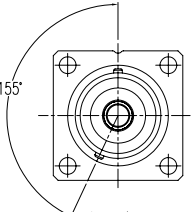
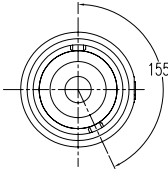
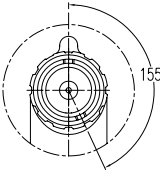
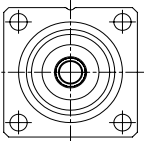
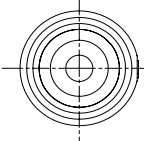
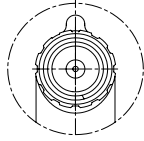
| Part number       | D    | L1   | L2   | L3   | LXXXX  |
|-------------------|------|------|------|------|--|
| HV1R6-1FCX-FG-... | 26.0 | 18.5 | 47.4 | 72.4 | Cable length (mm), custom orders are available |
| HV1R7-1FCX-FG-... | 30.8 | 32.7 | 50.0 | 79.0 |  |
| HV1R8-1FCX-FG-... | 27.5 | 27.2 | 47.3 | 72.3 |  |
| HV1RA-1FCX-FG-... | 36.0 | 32.7 | 56.0 | 81.0 |  |

## CABLE MOUNTED RECEPTACLE (UNSHIELDED)



| Part number       | D1   | D2   | L1 REF | L2 REF | LXXXX  |
|-------------------|------|------|--------|--------|--|
| HV1R6-1FCX-PC-... | TBD  |      |        |        | Cable length (mm), custom orders are available |
| HV1R7-1FCX-PC-... | TBD  |      |        |        |  |
| HV1R8-1FCX-PC-... | 27.0 | 30.0 | 63.0   | 90.0   |  |
| HV1RA-1FCX-PC-... | TBD  |      |        |        |  |

## ALTERNATE KEYING POSITIONS

|           | RECEPTACLE  | STRAIGHT PLUG   | RIGHT ANGLE PLUG   |
|-----------|---|---|--|
| X: 90°    |    |    |    |
| Y: 180°   |    |    |    |
| Z: 135°   |   |   |   |
| W: 120°   |  |  |  |
| U: 155°   |  |  |  |
| N: NORMAL |  |  |  |

### REMARK

To avoid cross-plugging problems in applications requiring the use of more than one connector of the same size and arrangement, alternate keying positions are available.

The shell key is rotated counter-clockwise. The plug would be rotated clockwise the same number of degrees in respect to the shell key.



## HOW TO ORDER: PLUG AND CABLE MOUNT RECEPTACLE

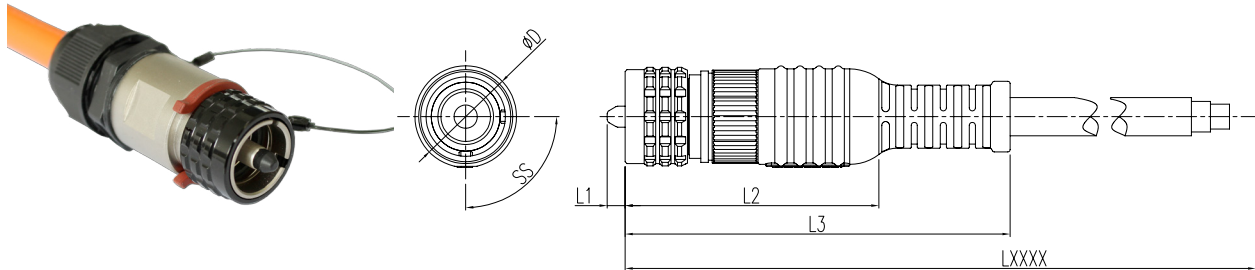
|  | HV | 1 | R6 | 1MCX | FG | 25 | LXXXX |
|--|----|---|----|------|----|----|-------|
| <b>Shell type:</b>                                 |    |   |    |      |    |    |       |
| 1: Cable mount receptacle                          |    |   |    |      |    |    |       |
| 7: Straight plug                                   |    |   |    |      |    |    |       |
| 9: Right angle plug                                |    |   |    |      |    |    |       |
| <b>Insert size:</b>                                |    |   |    |      |    |    |       |
| R6: 6mm Radsok (Max current 120A)                  |    |   |    |      |    |    |       |
| R8: 8mm Radsok (Max current 150A)                  |    |   |    |      |    |    |       |
| R7: 8mm Radsok (Max current 180A)                  |    |   |    |      |    |    |       |
| RA: 10mm Radsok (Max current 250A)                 |    |   |    |      |    |    |       |
| <b>Number of position:</b>                         |    |   |    |      |    |    |       |
| 1: 1 position                                      |    |   |    |      |    |    |       |
| <b>Type of insert:</b>                             |    |   |    |      |    |    |       |
| M: Male (Recommended)                              |    |   |    |      |    |    |       |
| F: Female  |    |   |    |      |    |    |       |
| <b>Contact tails:</b>                              |    |   |    |      |    |    |       |
| C: Crimp   |    |   |    |      |    |    |       |
| <b>Alternate keying positions:</b>                 |    |   |    |      |    |    |       |
| X: 90°   |    |   |    |      |    |    |       |
| Y: 180°  |    |   |    |      |    |    |       |
| Z: 135°  |    |   |    |      |    |    |       |
| W: 120°  |    |   |    |      |    |    |       |
| U: 155°  |    |   |    |      |    |    |       |
| N: Normal  |    |   |    |      |    |    |       |
| <b>Backshell type:</b>                             |    |   |    |      |    |    |       |
| FG: Flex grip (Shielded, backshell with glue type) |    |   |    |      |    |    |       |
| PC: Plastic grand (Unshielded)                     |    |   |    |      |    |    |       |
| <b>Cable section:</b>                              |    |   |    |      |    |    |       |
| 25: 25mm <sup>2</sup> cable                        |    |   |    |      |    |    |       |
| 35: 35mm <sup>2</sup> cable                        |    |   |    |      |    |    |       |
| 50: 50mm <sup>2</sup> cable                        |    |   |    |      |    |    |       |
| 70: 70mm <sup>2</sup> cable                        |    |   |    |      |    |    |       |
| <b>Cable length:</b>                               |    |   |    |      |    |    |       |
| LXXXX: Cable length (Unit in mm)                   |    |   |    |      |    |    |       |

Remarks:

To find the suitable cable for your model, please refer to the instructions below:

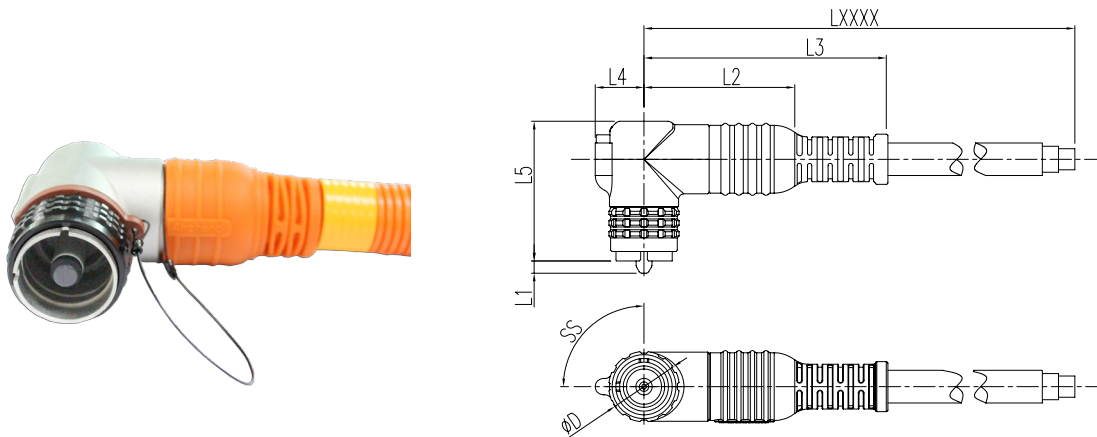
- R6: 25mm<sup>2</sup>
- R8: 35mm<sup>2</sup>
- R7: 50mm<sup>2</sup>
- RA: 70mm<sup>2</sup>

## STRAIGHT PLUG (SHIELDED)



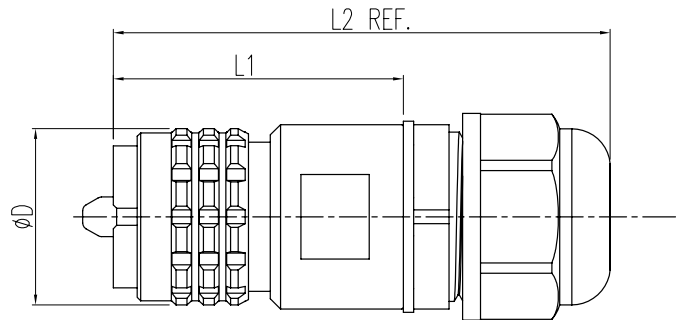
| Part number       | D    | L1  | L2   | L3    | LXXXX  |
|-------------------|------|-----|------|-------|--|
| HV7R6-1MCX-FG-... | 26.0 | 4.5 | 66.5 | 91.5  | Cable length (mm), custom orders are available |
| HV7R7-1MCX-FG-... | 32.5 | 0.3 | 84.5 | 109.5 |  |
| HV7R8-1MCX-FG-... | 27.5 | 1.7 | 74.1 | 99.1  |  |
| HV7RA-1MCX-FG-... | 37.5 | 0   | 88.0 | 113.0 |  |

## RIGHT ANGLE PLUG (SHIELDED)



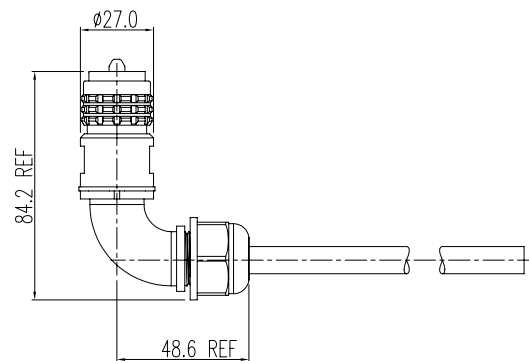
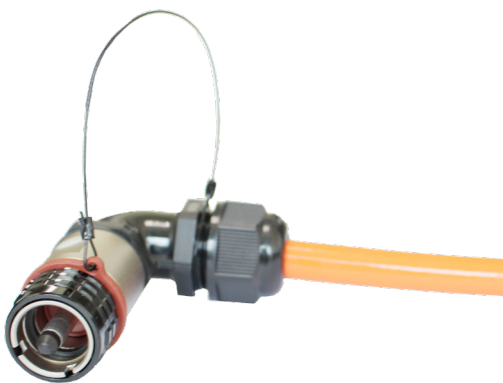
| Part number       | D    | L1  | L2   | L3   | L4   | L5   | LXXXX  |
|-------------------|------|-----|------|------|------|------|--|
| HV9R6-1MCX-FG-... | 26.0 | 5.5 | 55.5 | 80.5 | 18.0 | 51.5 | Cable length (mm), custom orders are available |
| HV9R7-1MCX-FG-... | 32.5 | 0   | 59.5 | 91.0 | 19.5 | 68.5 |  |
| HV9R8-1MCX-FG-... | 27.5 | 4.3 | 60.3 | 90.0 | 18.5 | 59.0 |  |
| HV9RA-1MCX-FG-... | 37.5 | 0   | 59.5 | 84.5 | 22.5 | 75.5 |  |

## STRAIGHT PLUG (UNSHIELDED)

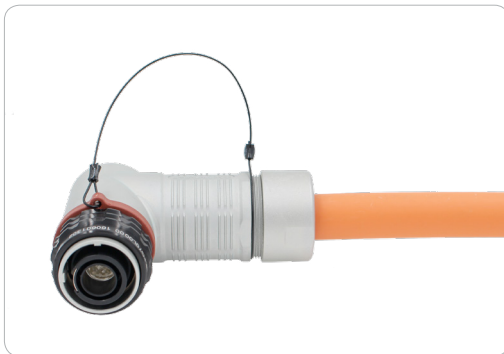


| Part number       | D    | L1   | L2 REF | LXXXX  |
|-------------------|------|------|--------|--|
| HV7R6-1MCX-PC-... | 27.0 | 42.5 | 80.0   | Cable length (mm), custom orders are available |
| HV7R7-1MCX-PC-... | TBD  |      |        |  |
| HV7R8-1MCX-PC-... | 29.0 | 55.0 | 90.0   |  |
| HV7RA-1MCX-PC-... | TBD  |      |        |  |

## RIGHT ANGLE PLUG (UNSHIELDED)



| Part number        | LXXXX  |
|--------------------|--|
| HV9R6-1MC**-PC-... | Cable length (mm), custom orders are available |



**KEY FEATURES**

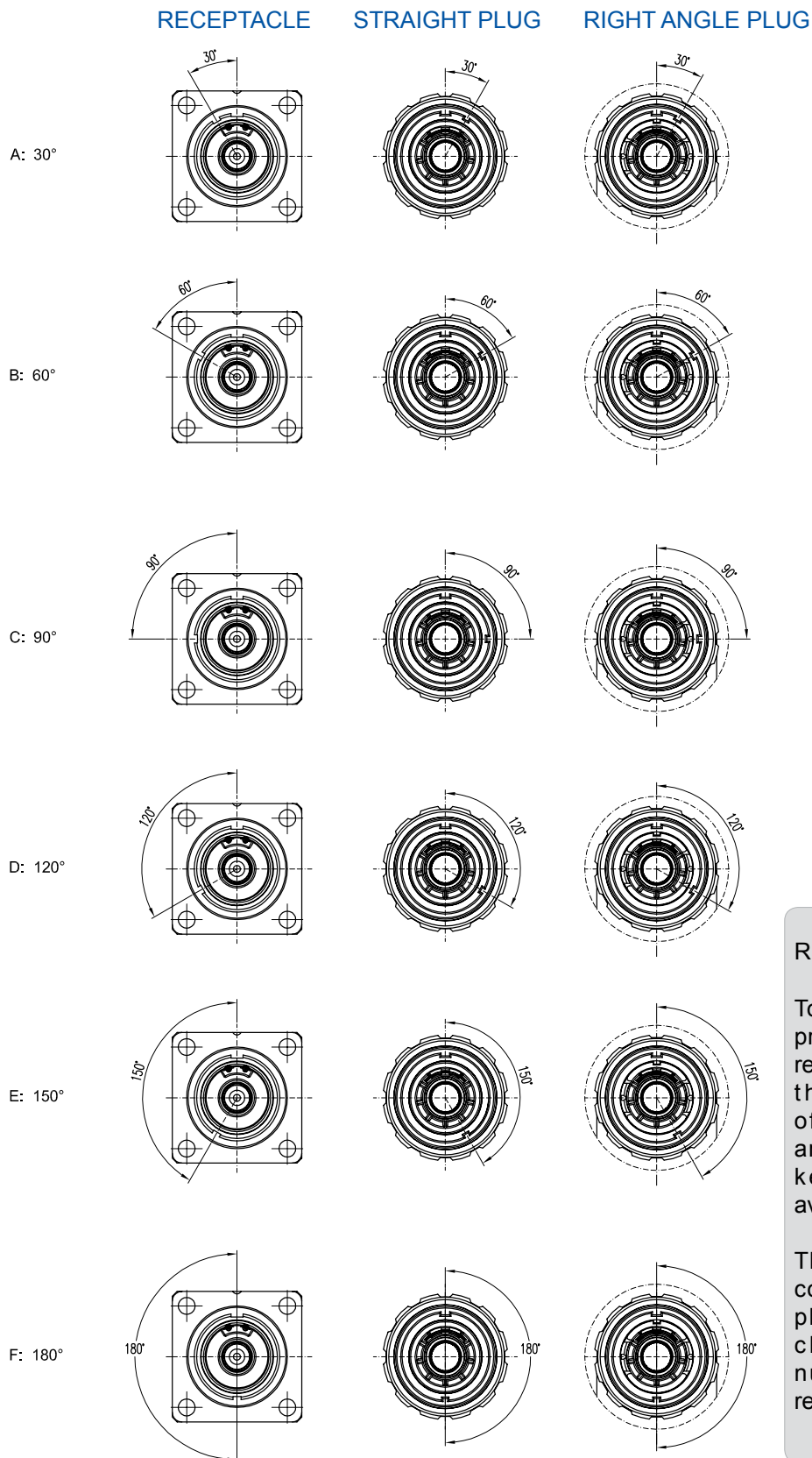
- High voltage with interlock
- Easy to install in a limited space
- Push-pull locking system with audible "click"
- EMI shielding
- No tool required for unmating
- Sealing, IP67 (mated)
- RoHS compliant
- Multiple coding positions

| MECHANICAL                   |   |
|------------------------------|---|
| Durability                   | > 200 mating cycles   |
| Wire range                   | 16 to 70mm <sup>2</sup>                                       |
| Connection type              | Crimping  |
| ELECTRICAL                   |   |
| Rated voltage                | 1000V DC  |
| Rated current                | 250A Max  |
| Insulator resistance         | > 2000MΩ  |
| Dielectric withstand voltage | 3000V AC  |
| ENVIRONMENTAL                |   |
| Sealing                      | IP67 (mated)  |
| Temperature range            | -40°C to 125°C  |
| Inflammability               | UL94V0  |
| Salt spray                   | 48h, 96h  |
| MATERIAL                     |   |
| Shell                        | Aluminum alloy with zinc, nickel plating and anodic oxidation |
| Contacts                     | Copper alloy, silver plating                                  |
| Insulator                    | Flame-retardant thermoplastic composition                     |
| Sealing                      | Rubber  |

## HOW TO ORDER: RECEPTACLE

|  | HVBI | 0 | 02R6 | A | M | H | X | BK |
|--|------|---|------|---|---|---|---|----|
| <b>Shell type:</b><br>0: Receptacle  |      |   |      |   |   |   |   |    |
| <b>Insert size:</b><br>02R6: 6mm Radsok (Max current 120A)<br>03R8: 8mm Radsok (Max current 180A)<br>05R10: 10mm Radsok (Max current 250A) |      |   |      |   |   |   |   |    |
| <b>HVIL:</b><br>A: With HVIL<br>B: Without HVIL  |      |   |      |   |   |   |   |    |
| <b>Insert type:</b><br>M: Pin  |      |   |      |   |   |   |   |    |
| <b>Termination:</b><br>H: Copper bar<br>T: Screw   |      |   |      |   |   |   |   |    |
| <b>Alternate keying positions:</b><br>A: 30°<br>B: 60°<br>C: 90°<br>D: 120°<br>E: 150°<br>F: 180°  |      |   |      |   |   |   |   |    |
| <b>Color of locking nut:</b><br>BK: Black<br>RD: Red<br>YL: Yellow<br>GR: Green<br>BL: Blue  |      |   |      |   |   |   |   |    |

## ALTERNATE KEYING POSITIONS

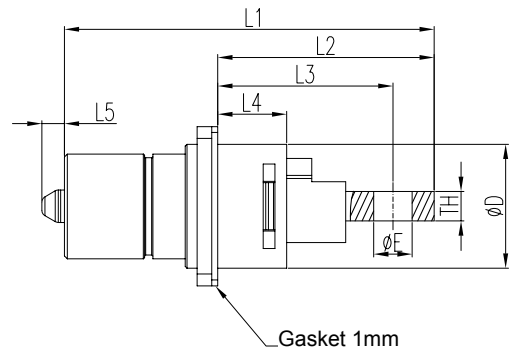
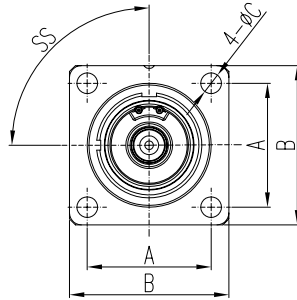


**REMARK**

To avoid cross-plugging problems in applications requiring the use of more than one connector of the same size and arrangement, alternate keying positions are available.

The shell key is rotated counter-clockwise. The plug would be rotated clockwise the same number of degrees in respect to the shell key.

## RECEPTACLE WITH COPPER BAR



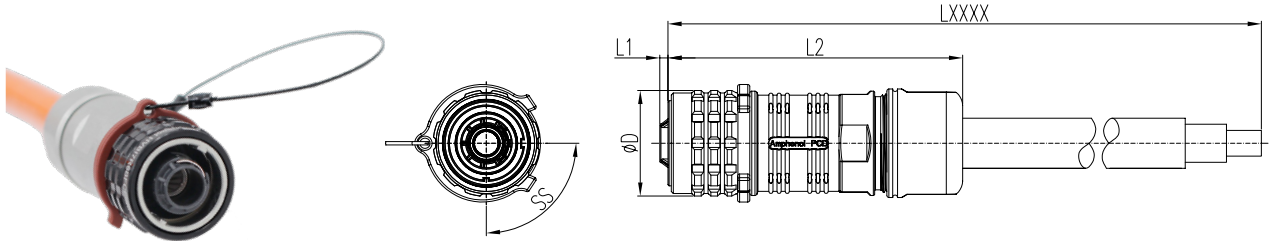
| Part number       | A    | B    | C   | D    | E    | L1   | L2   | L3   | L4   | L5  | TH  |
|-------------------|------|------|-----|------|------|------|------|------|------|-----|-----|
| HVBI-0-02R6-XMHX  | 21.0 | 27.0 | 3.5 | 21.0 | 6.5  | 62.7 | 37.7 | 30.7 | 12.7 | 3.8 | 5.0 |
| HVBI-0-03R8-XMHX  | 23.0 | 31.0 | 4.5 | 23.0 | 8.5  | 76.7 | 43.7 | 35.7 | 15.9 | /   | 5.0 |
| HVBI-0-05R10-XMHX | 24.6 | 33.0 | 4.5 | 26.0 | 10.5 | 85.9 | 52.6 | 40.6 | 18.4 | 0.8 | 6.0 |

## HOW TO ORDER: PLUG

|                                       | HVBI | 9 | 02R6 | A | F | C | A | BK | FG | 25 | LXXXX |
|---------------------------------------|------|---|------|---|---|---|---|----|----|----|-------|
| <b>Shell type:</b>                    |      |   |      |   |   |   |   |    |    |    |       |
| 7: Straight plug                      |      |   |      |   |   |   |   |    |    |    |       |
| 9: Right angle plug                   |      |   |      |   |   |   |   |    |    |    |       |
| <b>Insert size:</b>                   |      |   |      |   |   |   |   |    |    |    |       |
| 02R6: 6mm Radsok (Max current 120A)   |      |   |      |   |   |   |   |    |    |    |       |
| 03R8: 8mm Radsok (Max current 180A)   |      |   |      |   |   |   |   |    |    |    |       |
| 05R10: 10mm Radsok (Max current 250A) |      |   |      |   |   |   |   |    |    |    |       |
| <b>HVIL:</b>                          |      |   |      |   |   |   |   |    |    |    |       |
| A: With HVIL                          |      |   |      |   |   |   |   |    |    |    |       |
| B: Without HVIL                       |      |   |      |   |   |   |   |    |    |    |       |
| <b>Insert type:</b>                   |      |   |      |   |   |   |   |    |    |    |       |
| M: Pin                                |      |   |      |   |   |   |   |    |    |    |       |
| <b>Contact type:</b>                  |      |   |      |   |   |   |   |    |    |    |       |
| C: Crimp                              |      |   |      |   |   |   |   |    |    |    |       |
| <b>Alternate keying positions:</b>    |      |   |      |   |   |   |   |    |    |    |       |
| A: 30°                                |      |   |      |   |   |   |   |    |    |    |       |
| B: 60°                                |      |   |      |   |   |   |   |    |    |    |       |
| C: 90°                                |      |   |      |   |   |   |   |    |    |    |       |
| D: 120°                               |      |   |      |   |   |   |   |    |    |    |       |
| E: 150°                               |      |   |      |   |   |   |   |    |    |    |       |
| F: 180°                               |      |   |      |   |   |   |   |    |    |    |       |
| <b>Color of locking nut:</b>          |      |   |      |   |   |   |   |    |    |    |       |
| BK: Black                             |      |   |      |   |   |   |   |    |    |    |       |
| RD: Red                               |      |   |      |   |   |   |   |    |    |    |       |
| YL: Yellow                            |      |   |      |   |   |   |   |    |    |    |       |
| GR: Green                             |      |   |      |   |   |   |   |    |    |    |       |
| BL: Blue                              |      |   |      |   |   |   |   |    |    |    |       |
| <b>FG: Shielded</b>                   |      |   |      |   |   |   |   |    |    |    |       |
| <b>PC: Unshielded</b>                 |      |   |      |   |   |   |   |    |    |    |       |
| <b>Cable section:</b>                 |      |   |      |   |   |   |   |    |    |    |       |
| 16: 16mm <sup>2</sup> cable           |      |   |      |   |   |   |   |    |    |    |       |
| 25: 25mm <sup>2</sup> cable           |      |   |      |   |   |   |   |    |    |    |       |
| 5: 35mm <sup>2</sup> cable            |      |   |      |   |   |   |   |    |    |    |       |
| 50: 50mm <sup>2</sup> cable           |      |   |      |   |   |   |   |    |    |    |       |
| 70: 70mm <sup>2</sup> cable           |      |   |      |   |   |   |   |    |    |    |       |
| <b>Cable length:</b>                  |      |   |      |   |   |   |   |    |    |    |       |
| LXXXX: Cable length (Unit in mm)      |      |   |      |   |   |   |   |    |    |    |       |



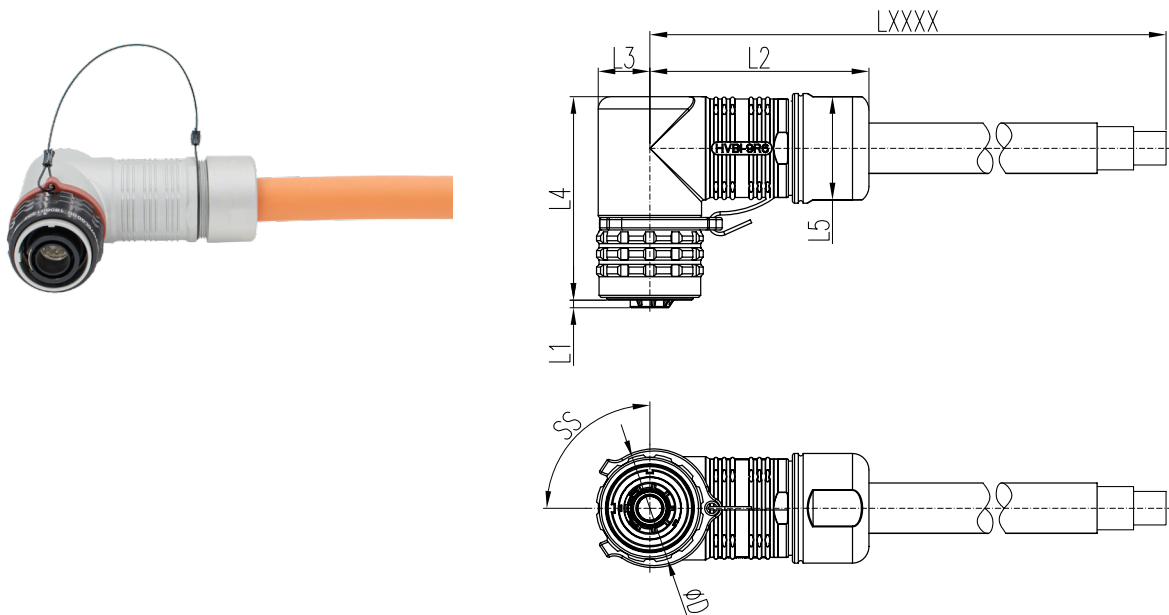
## STRAIGHT PLUG



| Part number                      | D    | L1  | L2 | LXXXX  | Cable section(mm <sup>2</sup> )        |
|----------------------------------|------|-----|----|--|--|
| HVBI-7-02R6-XFC-XXXX-FG / PC.... | 26.0 | 2.0 | 70 | Cable length (mm),<br>custom orders are<br>available | 16mm <sup>2</sup> to 25mm <sup>2</sup> |
| HVBI-7-03R8-XFC-XXXX-FG / PC.... | 27.5 | 2.0 | 82 |  | 35mm <sup>2</sup> to 50mm <sup>2</sup> |
| HVBI-7-05R10-XFC-XXXX-FG / PC... | 32.5 | 1.5 | 92 |  | 50mm <sup>2</sup> to 70mm <sup>2</sup> |

Notes: **FG**: Shielded type **PC**: Unshielded type

## RIGHT ANGLE PLUG



| Part number                      | D    | L1  | L2   | L3   | L4   | L5   | LXXXX   | Cable section (mm <sup>2</sup> )       |
|----------------------------------|------|-----|------|------|------|------|---|--|
| HVBI-9-02R6-XFC-XXXX-FG / PC.... | 26.0 | 1.8 | 53.0 | 12.5 | 49.3 | 25.0 | Cable length<br>(mm), custom<br>orders are<br>available | 16mm <sup>2</sup> to 25mm <sup>2</sup> |
| HVBI-9-03R8-XFC-XXXX-FG / PC.... | 27.5 | 2.0 | 62.0 | 13.9 | 58.5 | 27.3 |   | 35mm <sup>2</sup> to 50mm <sup>2</sup> |
| HVBI-9-05R10-XFC-XXXX-FG / PC... | 32.5 | 1.5 | 69.5 | 16.0 | 64.0 | 31.5 |   | 50mm <sup>2</sup> to 70mm <sup>2</sup> |

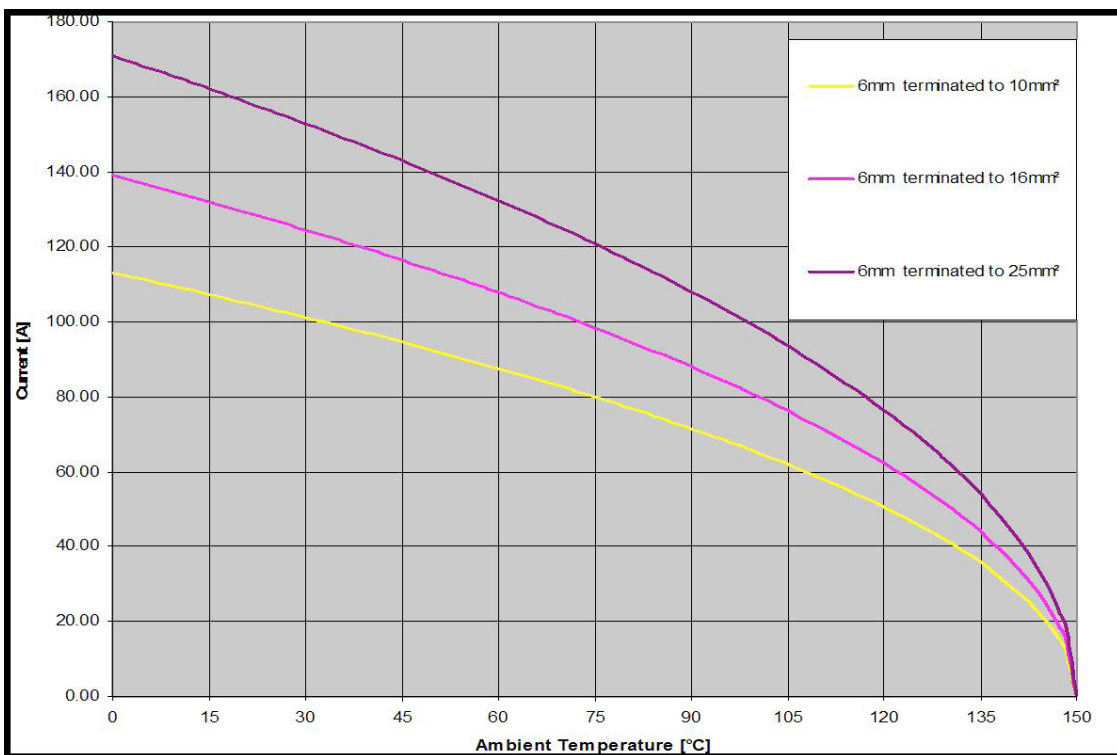
Notes: **FG**: Shielded type **PC**: Unshielded type

## RADSOK SOCKET CONTACT WITH CABLE SECTION AND RATING CURRENT

6mm Radsok socket: 16mm<sup>2</sup> to 25mm<sup>2</sup>

### Rated current

| Insert size | Cable                                | Rated current |
|-------------|--------------------------------------|---------------|
| R6          | 6mm Radsok (16mm <sup>2</sup> cable) | 80A           |
| R6          | 6mm Radsok (20mm <sup>2</sup> cable) | 100A          |
| R6          | 6mm Radsok (25mm <sup>2</sup> cable) | 120A          |



Remark:

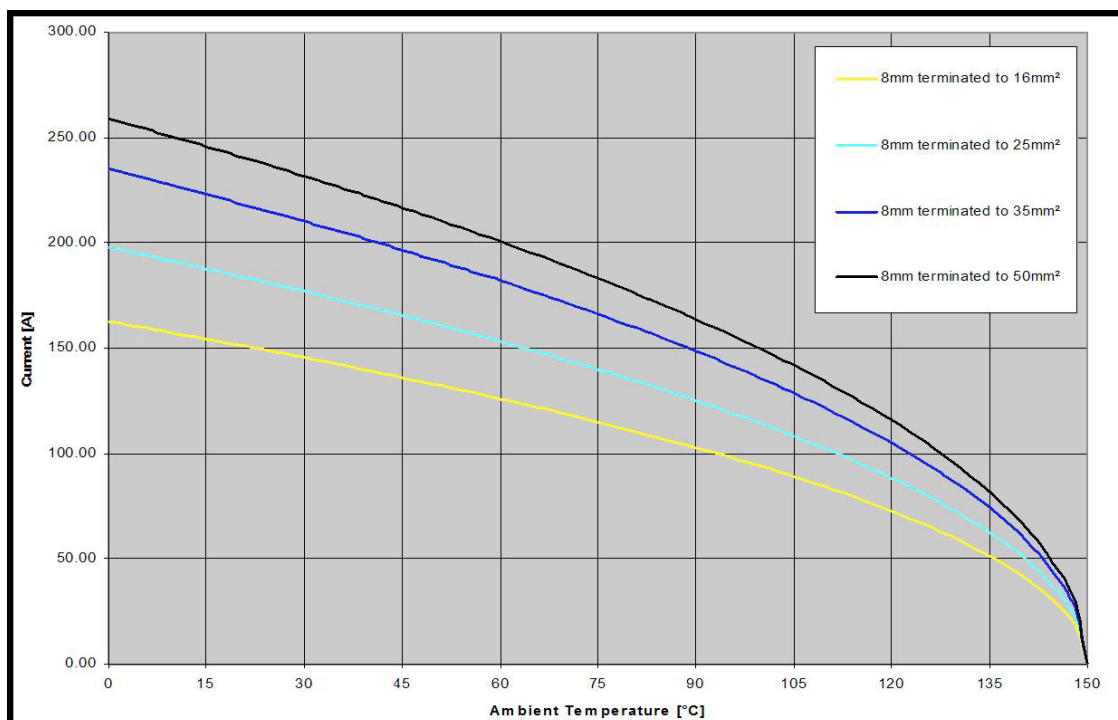
The given electrical values correspond to a single contact. With the addition of a housing, an increased number of poles or other modifications the values must be adjusted downwards accordingly.

|                                 |                |          |
|---------------------------------|----------------|----------|
| Technical data                  | HV             | HVBI     |
| Rated voltage                   | 400V DC        | 1000V DC |
| Operating temperature           | -40°C to 125°C |          |
| Dielectric withstanding voltage | 2500V AC       |          |
| Insulation resistance           | 2000MΩ (25°C)  |          |
| Durability                      | 200 cycles     |          |
| Shielding                       | Upon request   |          |
| Sealing                         | IP67 (mated)   |          |

## 8MM RADSOK SOCKET: 25MM<sup>2</sup> TO 35MM<sup>2</sup>

### Rated current

| Insert size | Cable                                | Rated current |
|-------------|--------------------------------------|---------------|
| R8          | 8mm Radsok (35mm <sup>2</sup> cable) | 150A          |
| R8          | 8mm Radsok (25mm <sup>2</sup> cable) | 120A          |



### Remark:

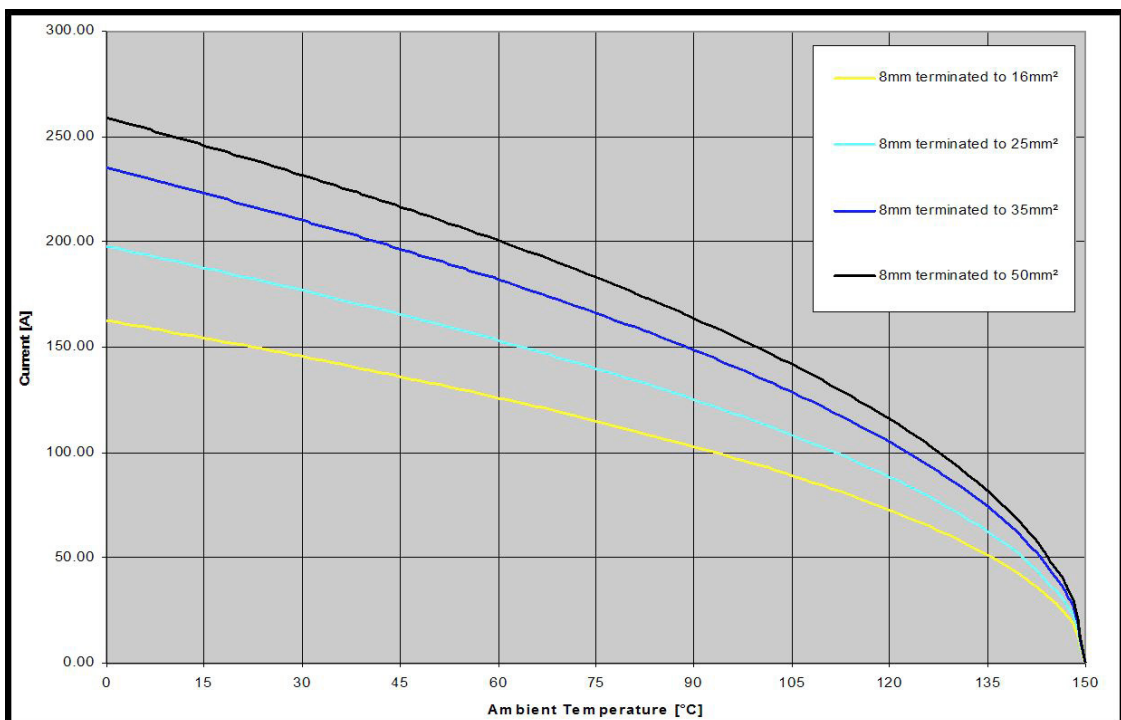
The given electrical values correspond to a single contact. With the addition of a housing, an increased number of poles or other modifications the values must be adjusted downwards accordingly.

|                                 |                |          |
|---------------------------------|----------------|----------|
| Technical data                  | HV             | HVBI     |
| Rated voltage                   | 400V DC        | 1000V DC |
| Operating temperature           | -40°C to 125°C |          |
| Dielectric withstanding voltage | 2500V AC       |          |
| Insulation resistance           | 2000MΩ (25°C)  |          |
| Durability                      | 200 cycles     |          |
| Shielding                       | Upon request   |          |
| Sealing                         | IP67 (mated)   |          |

## 8MM RADSOK SOCKET: 35MM<sup>2</sup> TO 50MM<sup>2</sup>

### Rated current

| Insert size | Cable                                | Rated current |
|-------------|--------------------------------------|---------------|
| R7          | 8mm Radsok (50mm <sup>2</sup> cable) | 180A          |
| R7          | 8mm Radsok (35mm <sup>2</sup> cable) | 150A          |



### Remark:

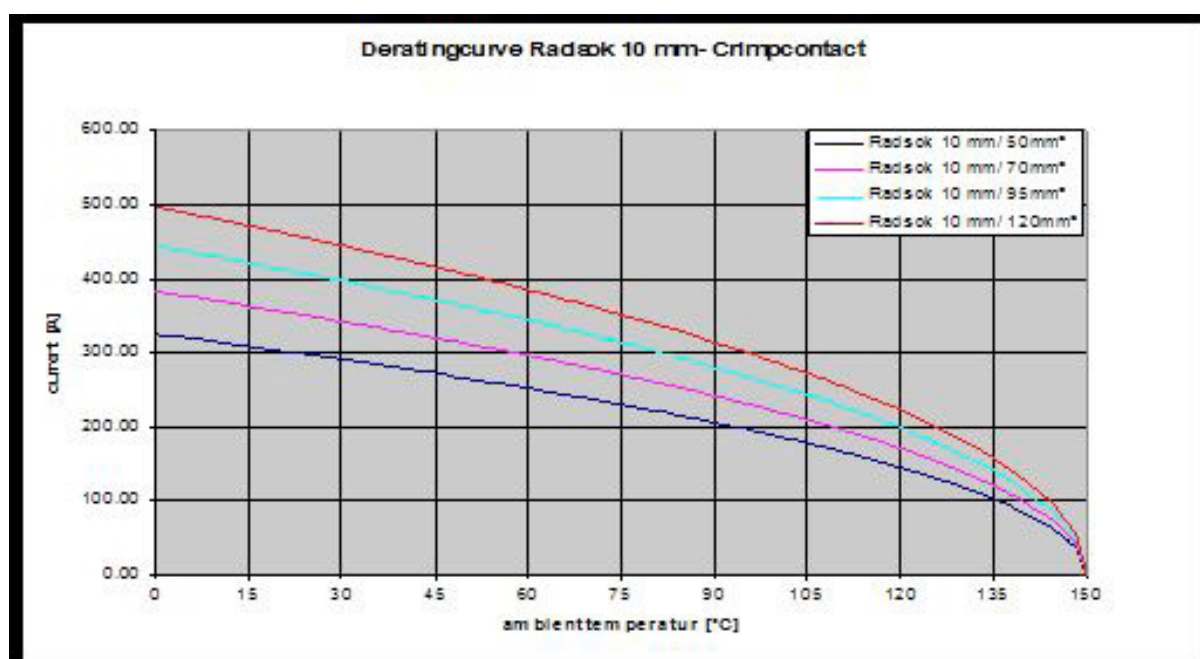
The given electrical values correspond to a single contact. With the addition of a housing, an increased number of poles or other modifications the values must be adjusted downwards accordingly.

|                                 |                |          |
|---------------------------------|----------------|----------|
| Technical data                  | HV             | HVBI     |
| Rated voltage                   | 400V DC        | 1000V DC |
| Operating temperature           | -40°C to 125°C |          |
| Dielectric withstanding voltage | 2500V AC       |          |
| Insulation resistance           | 2000MΩ (25°C)  |          |
| Durability                      | 200 cycles     |          |
| Shielding                       | Upon request   |          |
| Sealing                         | IP67 (mated)   |          |

## 10MM RADSOK SOCKET: 70MM<sup>2</sup>

### Rated current

| Insert size | Cable                                 | Rated current |
|-------------|---------------------------------------|---------------|
| RA          | 10mm Radsok (70mm <sup>2</sup> cable) | 250A          |
| RA          | 10mm Radsok (50mm <sup>2</sup> cable) | 180A          |



### Remark:

The given electrical values correspond to a single contact. With the addition of a housing, an increased number of poles or other modifications the values must be adjusted downwards accordingly.

|                                 |                |          |
|---------------------------------|----------------|----------|
| Technical data                  | HV             | HVBI     |
| Rated voltage                   | 400V DC        | 1000V DC |
| Operating temperature           | -40°C to 125°C |          |
| Dielectric withstanding voltage | 2500V AC       |          |
| Insulation resistance           | 2000MΩ (25°C)  |          |
| Durability                      | 200 cycles     |          |
| Shielding                       | Upon request   |          |
| Sealing                         | IP67 (mated)   |          |

## HVG SERIES



### KEY FEATURES

- Easy to install in a limited space
- Push-pull locking system with audible "click"
- EMI shielding
- No tool required to unmate
- Sealing, IP67 (mated)
- Multiple coding positions
- RoHS compliant

| APPLICATIONS                 |   |
|------------------------------|---|
| PHEV air-conditioner         |   |
| DCDC                         |   |
| PTC                          |   |
| Power distribution boxes     |   |
| MECHANICAL                   |   |
| Durability                   | > 500 mating cycles (up to 1000)                              |
| Connection type              | Crimping  |
| ELECTRICAL                   |   |
| Rated voltage                | 400V AC / 690V DC   |
| Rated current                | 50A Max   |
| Insulator resistance         | > 2000MΩ  |
| Dielectric withstand voltage | 3000V AC  |
| Shielding                    | Yes   |
| ENVIRONMENTAL                |   |
| Sealing                      | IP67 (mated)  |
| Temperature range            | -40°C to 125°C, short term to 150°C                           |
| Inflammability               | UL94V0  |
| Salt spray                   | 48h, 96h  |
| MATERIAL                     |   |
| Shell                        | Aluminum alloy with zinc, nickel plating and anodic oxidation |
| Contacts                     | Copper alloy, silver plating                                  |
| Insulator                    | Flame-retardant thermoplastic composition                     |
| Sealing                      | Rubber  |

## HOW TO ORDER

### RECEPTACLE

| HVG  | 1S | 402 | M | C | X |
|--|----|-----|---|---|---|
| <b>Product type:</b><br>1S: Flange receptacle  |    |     |   |   |   |
| <b>Insert arrangement:</b><br>402: 2 X (23A to 40A) + 2 X 7.5A<br>403: 3 X (23A to 40A) + 2 X 7.5A<br>492: 2 X (40A to 50A) + 2 X 7.5A |    |     |   |   |   |
| <b>Contact type:</b><br>M: Male contact<br>F: Female contact   |    |     |   |   |   |
| C: Crimp version   |    |     |   |   |   |
| <b>Alternate keying positions:</b><br>/: Normal<br>X: 270°<br>Y: 315°<br>Z: 90°<br>W: 45°  |    |     |   |   |   |

### CONTACT

| HVG  | 30 | M | 4 |
|--|----|---|---|
| <b>Contact sizes:</b><br>30: 3.0mm<br>20: # 20   |    |   |   |
| <b>Contact type:</b><br>M: Male contact<br>F: Female contact   |    |   |   |
| <b>Crimp cable diameter:</b><br>1: 0.5 to 1.0mm <sup>2</sup><br>2: 2.5mm <sup>2</sup><br>4: 4mm <sup>2</sup> to 6mm <sup>2</sup><br>6: 6mm <sup>2</sup> to 10mm <sup>2</sup> |    |   |   |

## HOW TO ORDER

### PLUG

|  | HVG | 1P | 402 | M | C | X | E | 2A | 2 | LXXXX | H6 |
|--|-----|----|-----|---|---|---|---|----|---|-------|----|
| <b>Product type:</b><br>1P: Plug   |     |    |     |   |   |   |   |    |   |       |    |
| <b>Insert arrangement:</b><br>402: 2 X (23A to 40A) + 2 X 7.5A<br>403: 3 X (23A to 40A) + 2 X 7.5A<br>492: 2 X (40A to 50A) + 2 X 7.5A   |     |    |     |   |   |   |   |    |   |       |    |
| <b>Contact type:</b><br>M: Male contact<br>F: Female contact   |     |    |     |   |   |   |   |    |   |       |    |
| <b>Contact type:</b><br>C: Crimp version   |     |    |     |   |   |   |   |    |   |       |    |
| <b>Alternate keying positions:</b><br>/: Standard position<br>X: 270°<br>Y: 315°<br>Z: 90°<br>W: 45°   |     |    |     |   |   |   |   |    |   |       |    |
| <b>Gland type:</b><br>/: Straight metal gland<br>E: Right angle plastic gland<br>D: Straight plastic gland   |     |    |     |   |   |   |   |    |   |       |    |
| <b>Cable type:</b><br>1A: 1 single shielded cable<br>1B: 1 single unshielded cable<br>2A: 2 core shielded cable<br>3A: 3 core shielded cable<br>2B: 2 core unshielded cable<br>3B: 3 core unshielded cable<br>2D: 2 single unshielded cable<br>3D: 3 single unshielded cable |     |    |     |   |   |   |   |    |   |       |    |
| <b>Cable section:</b><br>1: 1.5mm <sup>2</sup><br>2: 2.5mm <sup>2</sup><br>4: 4mm <sup>2</sup><br>6: 6mm <sup>2</sup><br>10: 10mm <sup>2</sup>   |     |    |     |   |   |   |   |    |   |       |    |
| <b>Cable length:</b><br>LXXXX: Cable length (Unit in mm)   |     |    |     |   |   |   |   |    |   |       |    |
| <b>Termination:</b><br>H6: Through hole M6<br>H8: Through hole M8  |     |    |     |   |   |   |   |    |   |       |    |

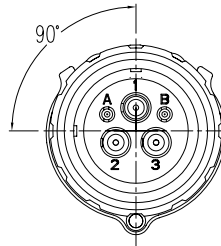
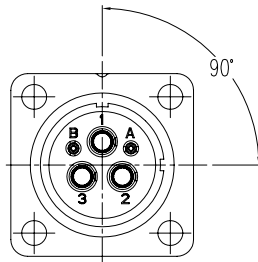


## ALTERNATE KEYING POSITIONS

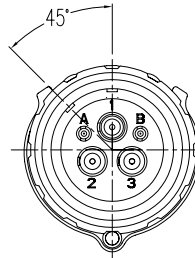
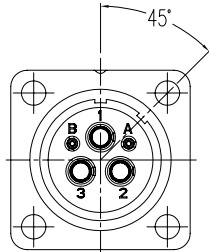
RECEPTACLE

STRAIGHT PLUG

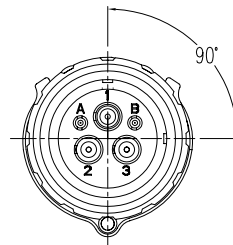
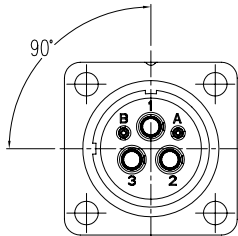
X: 270°



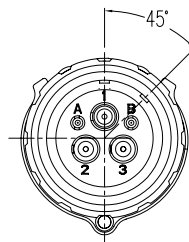
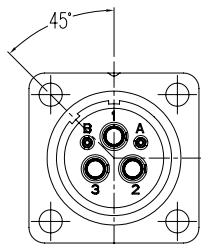
Y: 315°



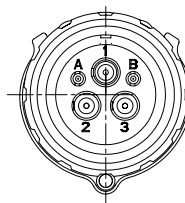
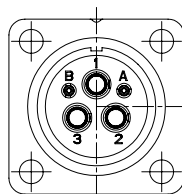
Z: 90°



W: 45°



N: NORMAL

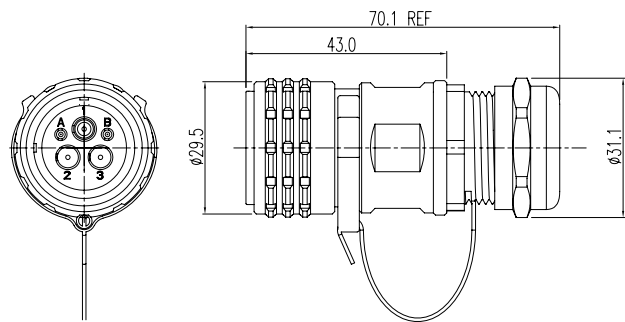
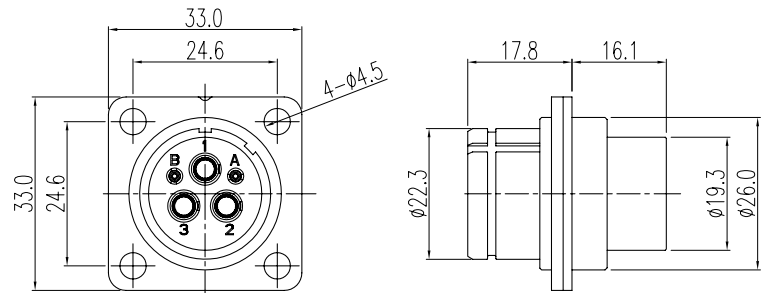


### REMARK

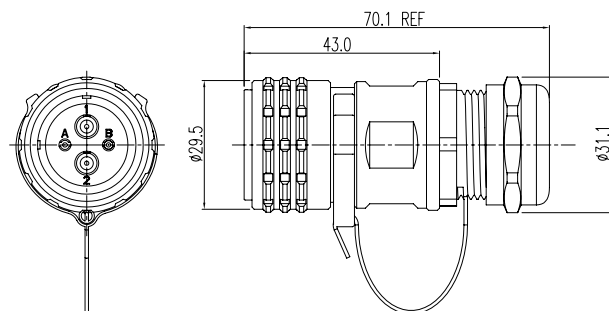
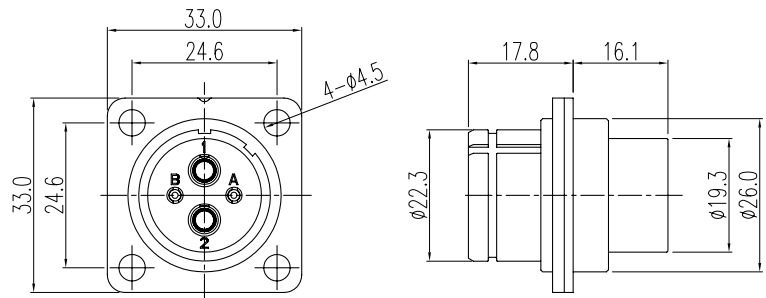
To avoid cross-plugging problems in applications requiring the use of more than one connector of the same size and arrangement, alternate keying positions are available.

The shell key is rotated counter-clockwise. The plug would be rotated clockwise the same number of degrees in respect to the shell key.

## RECEPTACLE AND PLUG: 403



## RECEPTACLE AND PLUG: 402



## HVS SERIES



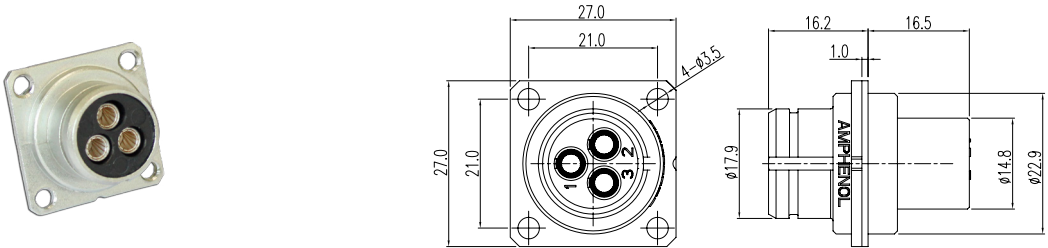
### KEY FEATURES

- Easy to install in a limited space
- Push-pull locking system with audible "click"
- EMI shielding
- No tool required for unmating
- Sealing, IP67 (mated)
- Multiple coding positions
- RoHS compliant

| APPLICATIONS                 |   |
|------------------------------|---|
| PHEV air-conditioner         |   |
| DCDC                         |   |
| PTC                          |   |
| Power distribution boxes     |   |
| MECHANICAL                   |   |
| Durability                   | > 500 mating cycles   |
| Connection type              | Crimping  |
| ELECTRICAL                   |   |
| Rated voltage                | 230V AC / 400V DC   |
| Rated current                | 32A Max   |
| Insulator resistance         | > 2000MΩ  |
| Dielectric withstand voltage | 3000V AC  |
| Shielding                    | Yes   |
| ENVIRONMENTAL                |   |
| Sealing                      | IP67 (mated)  |
| Temperature range            | -40°C to 125°C, short term to 150°C                           |
| Inflammability               | UL94V0  |
| Salt spray                   | 48h, 96h  |
| MATERIAL                     |   |
| Shell                        | Aluminum alloy with zinc, nickel plating and anodic oxidation |
| Contacts                     | Copper alloy, silver plating                                  |
| Insulator                    | Flame-retardant thermoplastic composition                     |
| Sealing                      | Rubber  |

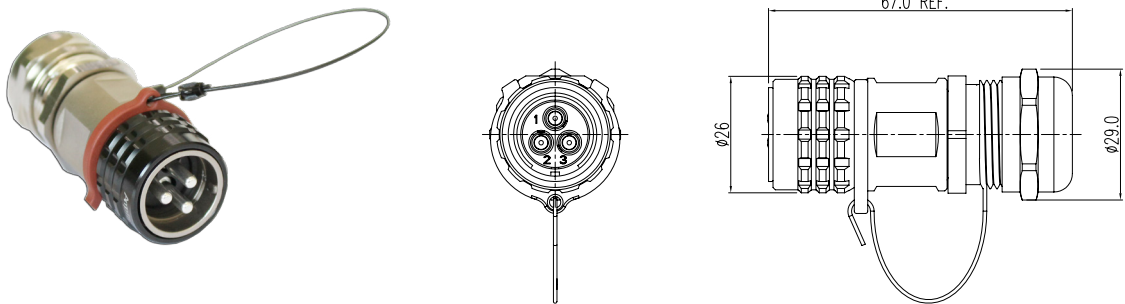
RECEPTACLE

P/N: **HVS1S-203FC** (socket) / **HVS1S-203MC** (pin)



PLUG

P/N: **HVS1P-203MC** (pin) / **HVS1P-203FC** (socket)



TOOLS

| Contact size | Cable section (mm <sup>2</sup> ) | Extraction tool |
|--------------|----------------------------------|-----------------|
| #20          | 0.5 to 1                         | HV-TOOL-20R     |
| 3.0mm        | 2.5 / 4.0 / 6.0                  | HV-TOOL-30R     |
| 3.6mm        | 6 / 10.0                         | HV-TOOL-36R     |

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Notes:

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