

# HVSP

## High Voltage Small Plastic



## PRODUCT INTRODUCTION



HVSP series is High Voltage Small size Plastic connector, it has rotation and polarization integration, can be used in EV & Energy Storage. It's a prime solution for limited space and cost.

Polarization / Alternate positions

To avoid cross plugging problems in applications, we designed 2 types:

HVSPN - Alternate keyway no rotation

HVSP - Alternate keyway with rotation and polarization integration

| Product Series | HVSPN R6          | HVSP R6           | HVSP R8                 | HVSP R10                |
|----------------|-------------------|-------------------|-------------------------|-------------------------|
| Rated Current  | 100A              | 100A              | 150A to 180A            | 180A to 250A            |
| Rated Voltage  | 1000V DC          | 1000V DC          | 1000V DC                | 1000V DC                |
| IP Rating      | IP67/IP6K9K       | IP67/IP6K9K       | IP67/IP6K9K             | IP67/IP6K9K             |
| Touch-Proof    | Yes               | Yes               | Yes                     | No                      |
| Cable Type     | 25mm <sup>2</sup> | 25mm <sup>2</sup> | 35 to 50mm <sup>2</sup> | 50 to 70mm <sup>2</sup> |
| Shielding      | No                | No                | No                      | No                      |

## HVSP PROFILE



### HVSP KEY FEATURES

Small in size with plastic housing

Broad wire range

Right angle plug

360° rotation & polarization intergation

Multiple alternate positions

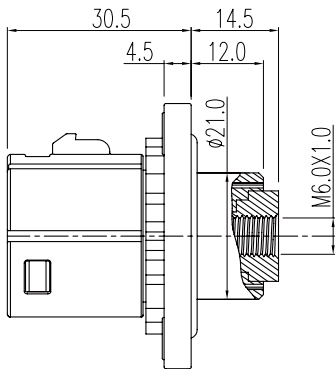
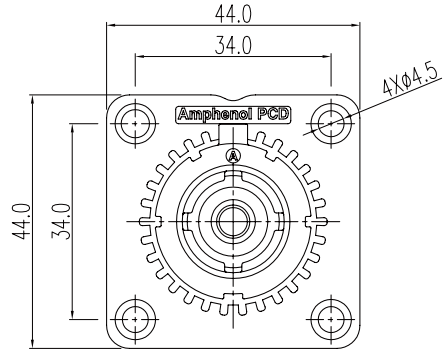
No tool required to unmate

Safe, sealed with touch proof

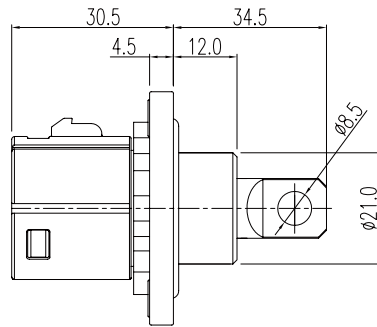
RoHS compliant

| APPLICATIONS                   |  |
|--------------------------------|--|
| Battery                        |  |
| Motor                          |  |
| Inverter                       |  |
| MECHANICAL                     |  |
| Durability                     | ≥ 50 mating cycles                     |
| Wire range                     | 25mm <sup>2</sup> to 70mm <sup>2</sup> |
| Insertion and extraction force | < 100N                                 |
| CPA                            | Aavailable                             |
| ELECTRICAL                     |  |
| Rated voltage                  | 1000V DC                               |
| Max rated current              | up to 250A                             |
| Insulator resistance           | > 2000MΩ                               |
| Dielectric withstand voltage   | 3000V AC                               |
| Shielding type                 | no shielding                           |
| ENVIRONMENTAL                  |  |
| Sealing                        | IP67(mated), IP6K9K                    |
| Temperature range              | -40°C to 125°C                         |
|                                |  |

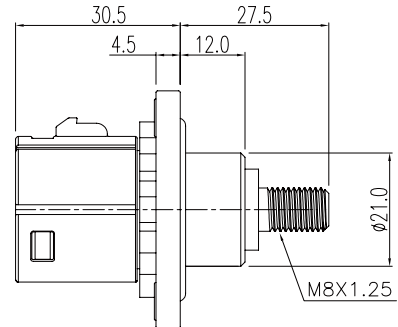
## RECEPTACLE R8



Screw termination- Internal  
MD Type

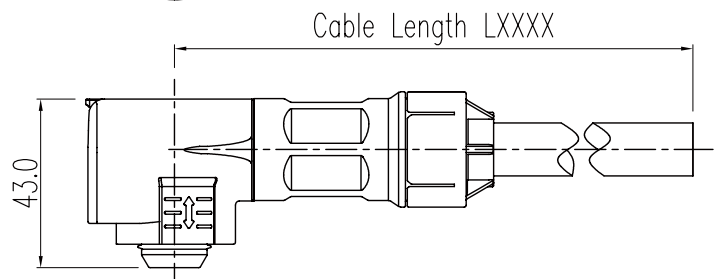
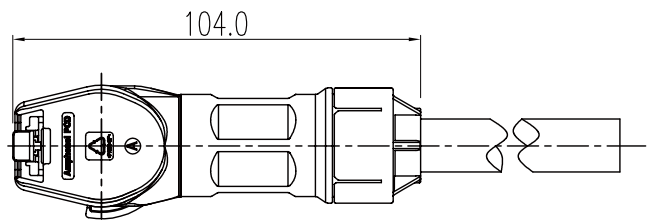
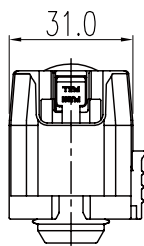


Through hole termination  
MH Type

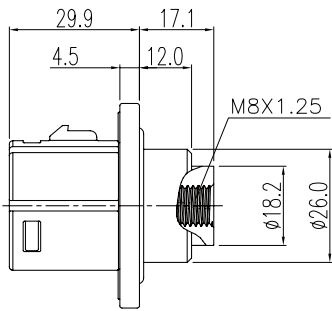
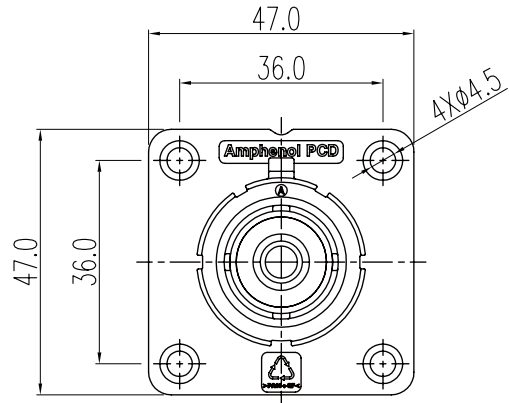


Screw termination - External  
MT Type

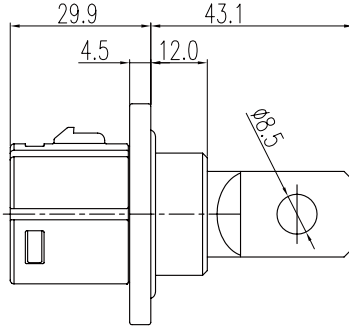
## PLUG R8



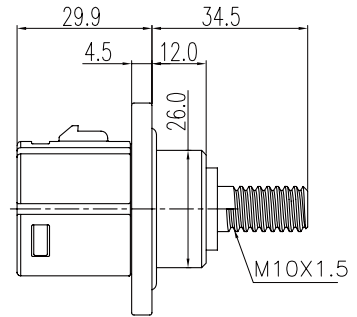
## RECEPTACLE R10



Screw termination - Internal  
MD Type

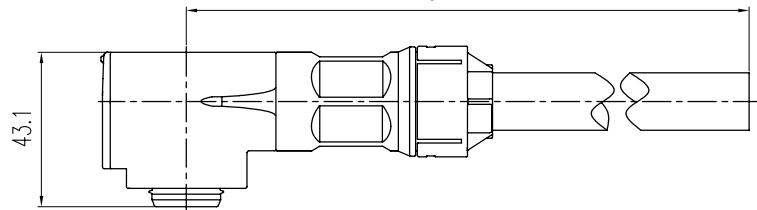
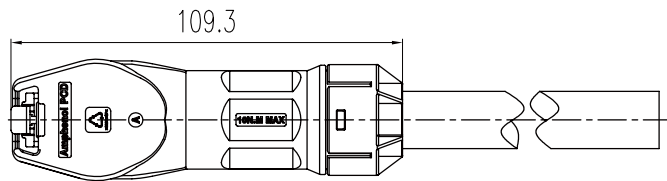
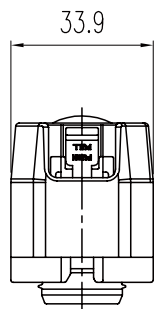


Through hole termination  
MH Type



Screw termination - External  
MT Type

## PLUG R10



## HOW TO ORDER RECEPTACLE

|   |      |   |    |    |   |   |  |
|---|------|---|----|----|---|---|--|
|   | HVSP | 0 | R8 | MT | A | / |  |
| <b>Shell type:</b>                              |      |   |    |    |   |   |  |
| 0: Box mounting receptacle                      |      |   |    |    |   |   |  |
| <b>Insert size:</b>                             |      |   |    |    |   |   |  |
| R6: 6mm pin contact                             |      |   |    |    |   |   |  |
| R8: 8mm pin contact                             |      |   |    |    |   |   |  |
| R10: 10mm pin contact                           |      |   |    |    |   |   |  |
| <b>Termination:</b>                             |      |   |    |    |   |   |  |
| MT: Screw tail                                  |      |   |    |    |   |   |  |
| MH: Through hole contact                        |      |   |    |    |   |   |  |
| MD: Screw tail inside                           |      |   |    |    |   |   |  |
| <b>Coding / Alternate position:</b>             |      |   |    |    |   |   |  |
| A: Alternate position A, please refer to page 6 |      |   |    |    |   |   |  |
| B: Alternate position B, please refer to page 6 |      |   |    |    |   |   |  |
| C: Alternate position C, please refer to page 6 |      |   |    |    |   |   |  |
| D: Alternate position D, please refer to page 6 |      |   |    |    |   |   |  |
| E: Alternate position E, please refer to page 6 |      |   |    |    |   |   |  |
| <b>Color of housing:</b>                        |      |   |    |    |   |   |  |
| /: Omit, orange                                 |      |   |    |    |   |   |  |
| B: Black  |      |   |    |    |   |   |  |

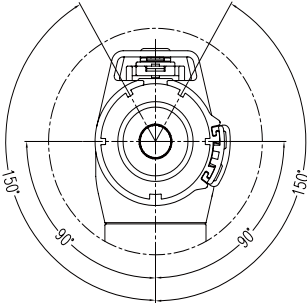
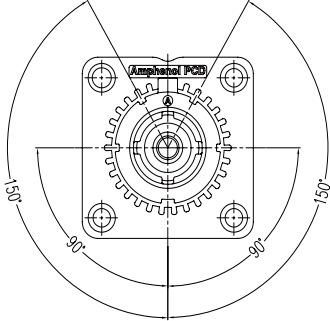
## HOW TO ORDER PLUG

|  |      |   |    |    |   |   |    |       |
|--|------|---|----|----|---|---|----|-------|
|  | HVSP | 9 | R8 | FC | X | / | 35 | LXXXX |
| <b>Shell type:</b>                               |      |   |    |    |   |   |    |       |
| 9: Right angle plug                              |      |   |    |    |   |   |    |       |
| <b>Insert size:</b>                              |      |   |    |    |   |   |    |       |
| R6: 6mm socket contact                           |      |   |    |    |   |   |    |       |
| R8: 8mm socket contact                           |      |   |    |    |   |   |    |       |
| R10: 10mm socket contact                         |      |   |    |    |   |   |    |       |
| <b>Termination:</b>                              |      |   |    |    |   |   |    |       |
| FC: Crimp  |      |   |    |    |   |   |    |       |
| <b>Coding / Alternate position:</b>              |      |   |    |    |   |   |    |       |
| A: Alternate position A, please refer to page 6  |      |   |    |    |   |   |    |       |
| B: Alternate position B, please refer to page 6  |      |   |    |    |   |   |    |       |
| C: Alternate position C, please refer to page 6  |      |   |    |    |   |   |    |       |
| D: Alternate position D, please refer to page 6  |      |   |    |    |   |   |    |       |
| E: Alternate position E, please refer to page 6  |      |   |    |    |   |   |    |       |
| <b>Color of housing:</b>                         |      |   |    |    |   |   |    |       |
| /: Omit, orange                                  |      |   |    |    |   |   |    |       |
| B: Black   |      |   |    |    |   |   |    |       |
| <b>Cable diameter:</b>                           |      |   |    |    |   |   |    |       |
| 25: 25mm <sup>2</sup> cable (OD: 9.5mm to 11mm)  |      |   |    |    |   |   |    |       |
| 35: 35mm <sup>2</sup> cable (OD: 11mm to 12.5mm) |      |   |    |    |   |   |    |       |
| 50: 50mm <sup>2</sup> cable (OD: 13mm to 14.5mm) |      |   |    |    |   |   |    |       |
| 70: 70mm <sup>2</sup> cable (OD: 15mm to 16.5mm) |      |   |    |    |   |   |    |       |
| <b>Cable length :</b>                            |      |   |    |    |   |   |    |       |
| LXXXX: (Unit in mm)                              |      |   |    |    |   |   |    |       |

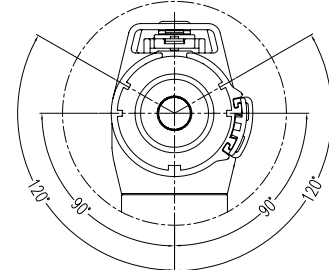
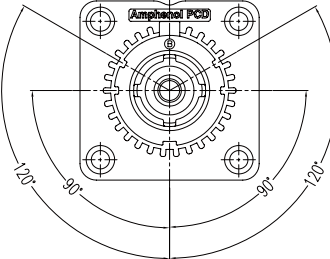
| PART NUMBER REFERENCE     |                       |
|---------------------------|-----------------------|
| Recetpacle                | Plug                  |
| HVSP R6 PART NUMBER (TBD) |                       |
| HVSP-0R6-M D/H/T A        | HVSP-9R6-FCA-XXLXXXX  |
| HVSP-0R6-M D/H/T B        | HVSP-9R6-FCB-XXLXXXX  |
| HVSP-0R6-M D/H/T C        | HVSP-9R6-FCC-XXLXXXX  |
| HVSP-0R6-M D/H/T D        | HVSP-9R6-FCD-XXLXXXX  |
| HVSP-0R6-M D/H/T E        | HVSP-9R6-FCE-XXLXXXX  |
| HVSP R8 PART NUMBER       |                       |
| HVSP-0R8-M D/H/T A        | HVSP-9R8-FCA-XXLXXXX  |
| HVSP-0R8-M D/H/T B        | HVSP-9R8-FCB-XXLXXXX  |
| HVSP-0R8-M D/H/T C        | HVSP-9R8-FCC-XXLXXXX  |
| HVSP-0R8-M D/H/T D        | HVSP-9R6-FCD-XXLXXXX  |
| HVSP-0R8-M D/H/T E        | HVSP-9R6-FCE-XXLXXXX  |
| HVSP R10 PART NUMBER      |                       |
| HVSP-0R10-M D/H/T A       | HVSP-9R10-FCA-XXLXXXX |
| HVSP-0R10-M D/H/T B       | HVSP-9R10-FCB-XXLXXXX |
| HVSP-0R10-M D/H/T C       | HVSP-9R10-FCC-XXLXXXX |
| HVSP-0R10-M D/H/T D       | HVSP-9R10-FCD-XXLXXXX |
| HVSP-0R10-M D/H/T E       | HVSP-9R10-FCE-XXLXXXX |

CODING / ALTERNATE POSITION

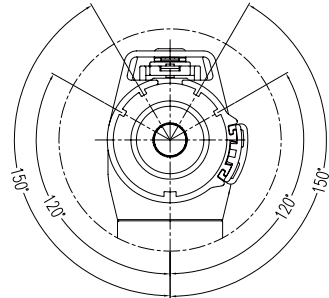
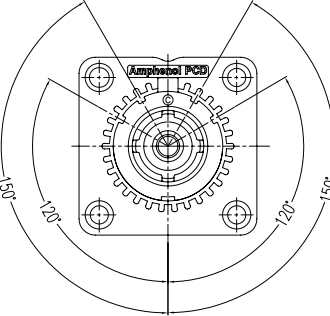
Coding A



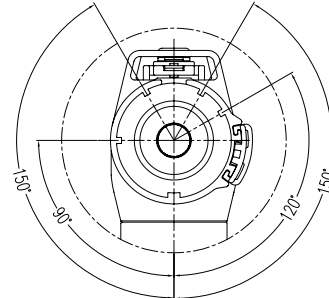
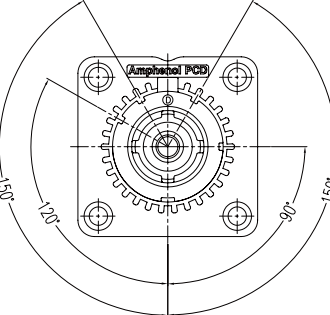
Coding B



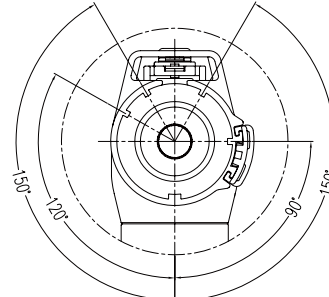
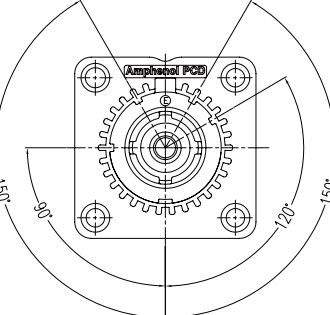
Coding C



Coding D



Coding E



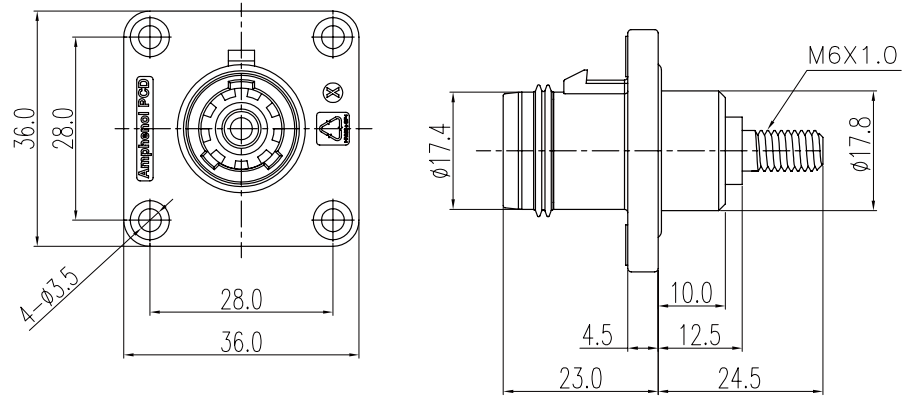


## HVSPN R6 PROFILE



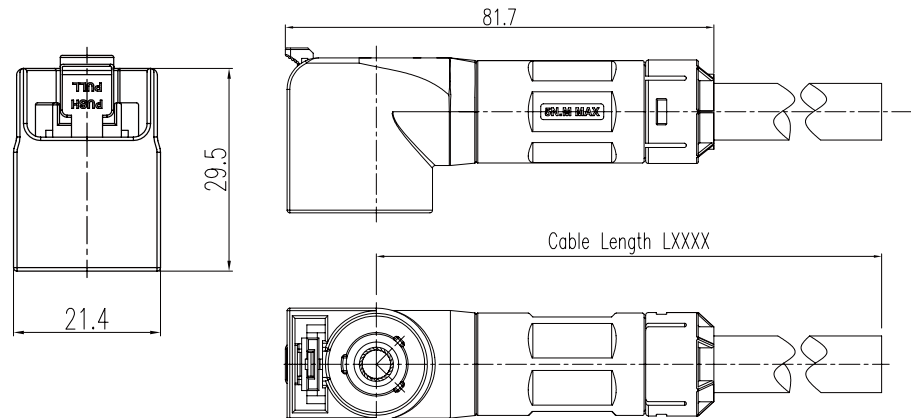
| APPLICATIONS                   |                     |
|--------------------------------|---------------------|
| Battery                        |                     |
| Motor                          |                     |
| Inverter                       |                     |
| MECHANICAL                     |                     |
| Durability                     | ≥ 50 mating cycles  |
| Wire range                     | 25mm <sup>2</sup>   |
| Insertion and extraction force | < 100N              |
| CPA                            | Aavailable          |
| ELECTRICAL                     |                     |
| Rated voltage                  | 1000V DC            |
| Max rated current              | 100A                |
| Insulator resistance           | > 2000MΩ            |
| Dielectric withstand voltage   | 3000V AC            |
| Shielding type                 | no shielding        |
| ENVIRONMENTAL                  |                     |
| Sealing                        | IP67(mated), IP6K9K |
| Temperature range              | -40°C to 125°C      |
|                                |                     |

## RECEPTACLE



| Receptacle | Part Number   | Alternate Position |
|------------|---------------|--------------------|
| REP 1      | HVSPN0 R6 MTX | 135°               |
| REP 2      | HVSPN0 R6 MTY | 120°               |

## PLUG



| Plug   | Part number           | Alternate position |
|--------|-----------------------|--------------------|
| PLUG 1 | HVSPN9 R6 FCX 25LXXXX | 135°               |
| PLUG 2 | HVSPN9 R6 FCY 25LXXXX | 120°               |

### Notes:

**25** means: cable diameter **25mm<sup>2</sup>** unshielded single core  
**XXXX** means: cable length, depends on customers request  
 (Unit in mm)

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Notes:

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## JONHON

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