



AMPHENOL PCD SHENZHEN



# EXCEL | MATE MSD

Manual Service Disconnect

[www.amphenolpcd.com.cn](http://www.amphenolpcd.com.cn)

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### Amphenol PCD Manual Service Disconnect

Excel|Mate MSD is a safe and a reliable solution for HEV servicing.

Equipped with a two-stage lever to open the HVIL circuit prior to the separation of HV contacts, it is a tool-free solution for disconnecting the internal high voltage battery pack and protecting it from short circuit. All HV conductive contact surfaces on the receptacle assembly are finger-touch safe.

Available in a scalable design with a variety of fuse ratings.

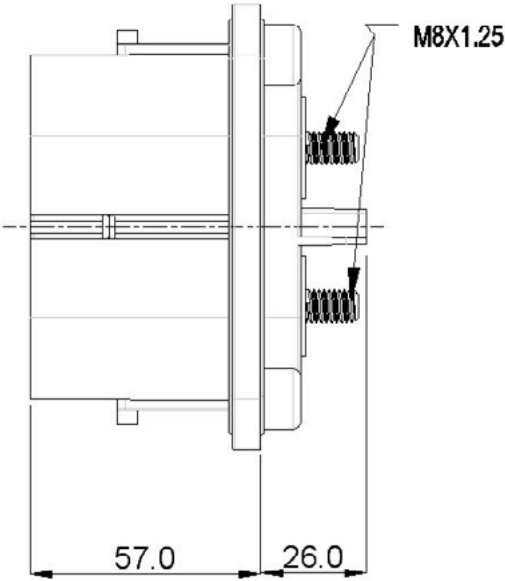
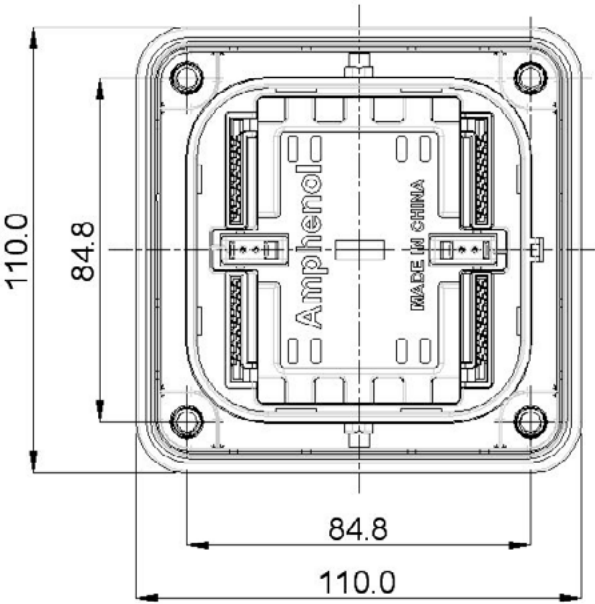
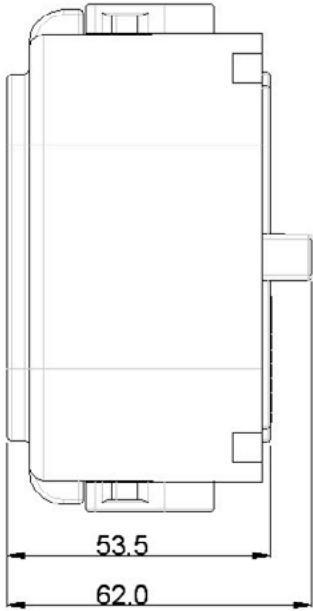
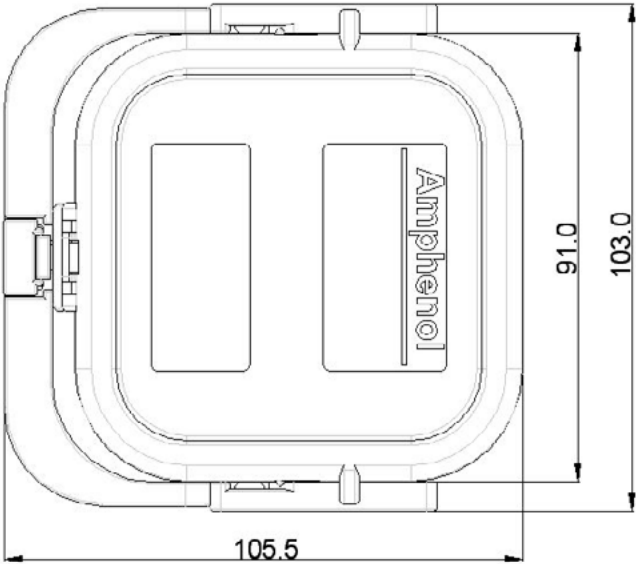


### KEY FEATURES

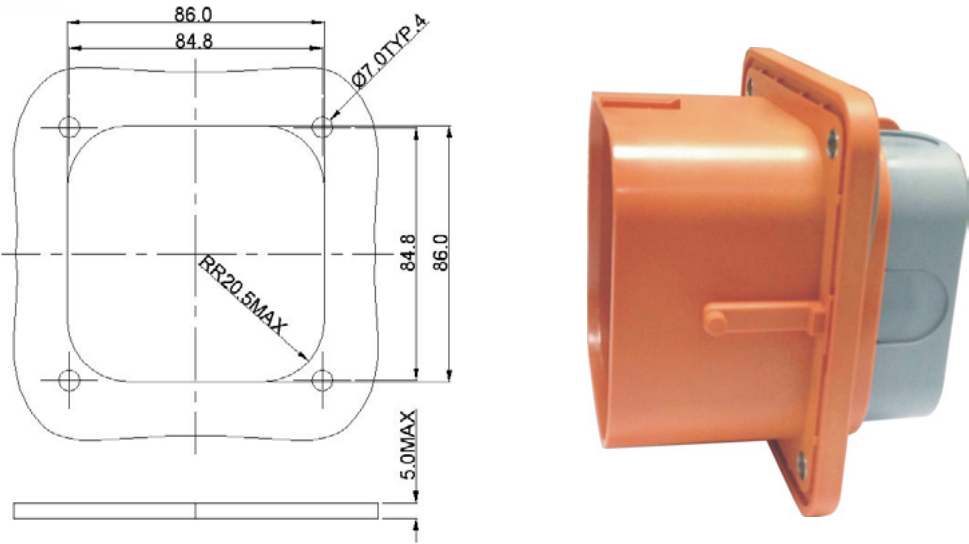
- A two-stage lever provides an HVIL time delay
- 2 x integrated internal HVIL
- Unique cooling structure
- Dual-channel design lowers temperature rise
- No tools required to unmate
- Various fuse ratings
- Receptacle can be front or rear mounted

| APPLICATION                                                                                                               |                                                         |
|---------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------|
| It is a tool-free solution for disconnecting the internal high voltage battery pack and protecting it from short circuit. |                                                         |
| MECHANICAL                                                                                                                |                                                         |
| Mating cycles                                                                                                             | ≥ 50 cycles                                             |
| ELECTRICAL                                                                                                                |                                                         |
| Fuse specification                                                                                                        | up to 630A                                              |
| With fuse:                                                                                                                |                                                         |
| Rated current                                                                                                             | Current is approximately 1/3 the fuse rating (230A Max) |
| Rated voltage                                                                                                             | 600V DC                                                 |
| With shunt:                                                                                                               |                                                         |
| Rated current                                                                                                             | 230A Max                                                |
| Rated voltage                                                                                                             | 1000V DC Max                                            |
| ENVIRONMENTAL                                                                                                             |                                                         |
| Protection degree                                                                                                         | IP67, IP6K9K (mated)                                    |
| Ambient temperature                                                                                                       | -40°C to 70°C                                           |
| Storage temperature                                                                                                       | -40°C to 85°C                                           |
| Operating temperature                                                                                                     | -40°C to 125°C                                          |
| STANDARDS                                                                                                                 |                                                         |
| USCAR-2                                                                                                                   |                                                         |
| USCAR-37                                                                                                                  |                                                         |
| LV-215                                                                                                                    |                                                         |
| RoHS                                                                                                                      |                                                         |

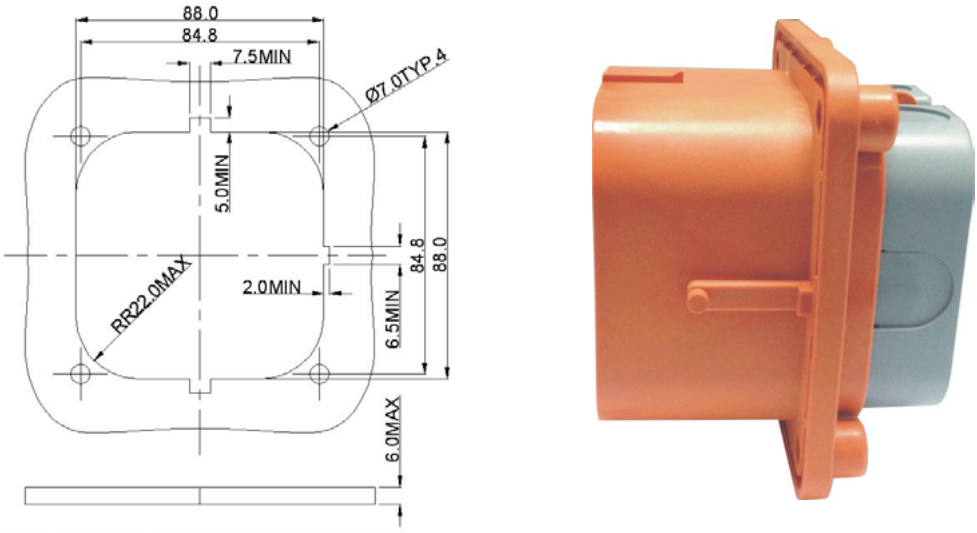
PRODUCT DIMENSIONS



FRONT MOUNTED



REAR MOUNTED



DUST CAP AVAILABLE  
P/N: C270006810



|                                                                        | MSD | M | 350 | 2 | F |
|------------------------------------------------------------------------|-----|---|-----|---|---|
| Shell type:                                                            |     |   |     |   |   |
| <b>M:</b> Plug                                                         |     |   |     |   |   |
| <b>F:</b> Receptacle                                                   |     |   |     |   |   |
| Fuse rating current:                                                   |     |   |     |   |   |
| <b>XXX:</b> 200, 250, 315, 350, 400, 450, 500, 550, 630<br>(Unit: AMP) |     |   |     |   |   |
| <b>000:</b> No fuse needed, can directly use the terminal              |     |   |     |   |   |
| Fuse brand (this applies to plugs) :                                   |     |   |     |   |   |
| <b>1:</b> Ferraz                                                       |     |   |     |   |   |
| <b>2:</b> Bussmann                                                     |     |   |     |   |   |
| Flange mounted type (this applies to sockets) :                        |     |   |     |   |   |
| <b>F:</b> Front mounted                                                |     |   |     |   |   |
| <b>R:</b> Rear mounted                                                 |     |   |     |   |   |

## EXCEL|MATE MSD V - TECHNICAL CHARACTERISTICS



MSD V is an upgraded version of the standard MSD.

It provides a rated voltage of 800V and a plug with integrated fuse. The other parameters remain unchanged.

### KEY FEATURES

A two-stage lever provides an HVIL time delay

2 x integrated internal HVIL

Unique cooling structure

Dual-channel design lowers temperature rise

No tools required to unmate

Various fuse ratings

Receptacle can be front or rear mounted

### APPLICATION

It is a tool-free solution for disconnecting the internal high voltage battery pack and protecting it from short circuit.

### MECHANICAL

|               |             |
|---------------|-------------|
| Mating cycles | ≥ 50 cycles |
|---------------|-------------|

### ELECTRICAL

|                    |            |
|--------------------|------------|
| Fuse specification | up to 630A |
|--------------------|------------|

#### With fuse:

|               |                                                         |
|---------------|---------------------------------------------------------|
| Rated current | Current is approximately 1/3 the fuse rating (230A Max) |
| Rated voltage | 800V DC                                                 |

#### With shunt:

|               |              |
|---------------|--------------|
| Rated current | 230A Max     |
| Rated voltage | 1000V DC Max |

### ENVIRONMENTAL

|                       |                      |
|-----------------------|----------------------|
| Protection degree     | IP67, IP6K9K (mated) |
| Ambient temperature   | -40°C to 70°C        |
| Storage temperature   | -40°C to 85°C        |
| Operating temperature | -40°C to 125°C       |

### STANDARDS

USCAR-2

USCAR-37

LV-215

RoHS

HOW TO ORDER - EXCEL|MATE MSD V

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|                                                    |       |   |     |   |
|----------------------------------------------------|-------|---|-----|---|
|                                                    | MSD V | M | 350 | / |
| Shell type:                                        |       |   |     |   |
| M: Plug                                            |       |   |     |   |
| Fuse rating current:                               |       |   |     |   |
| XXX: 200, 250, 315, 350, 400, 450, 500, 550, 630   |       |   |     |   |
| (Unit: AMP)                                        |       |   |     |   |
| 000: No fuse needed, can directly use the terminal |       |   |     |   |
| Fuse brand (this applies to plugs):                |       |   |     |   |
| / : Bussmann (by default)                          |       |   |     |   |
| For other brands, please contact us                |       |   |     |   |

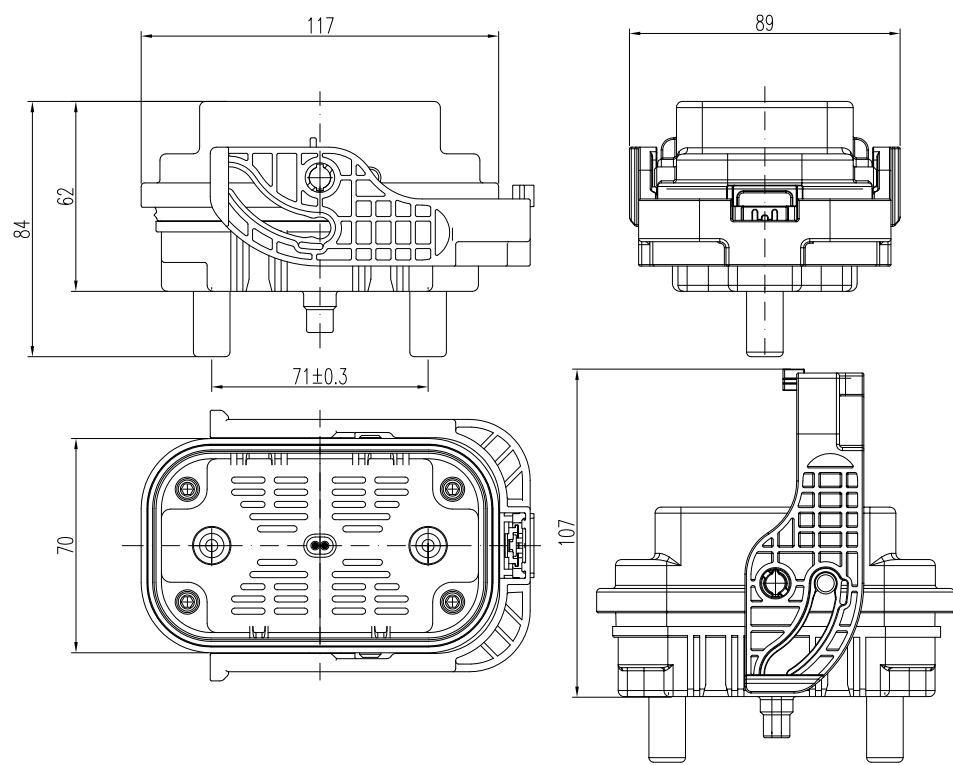


## KEY FEATURES

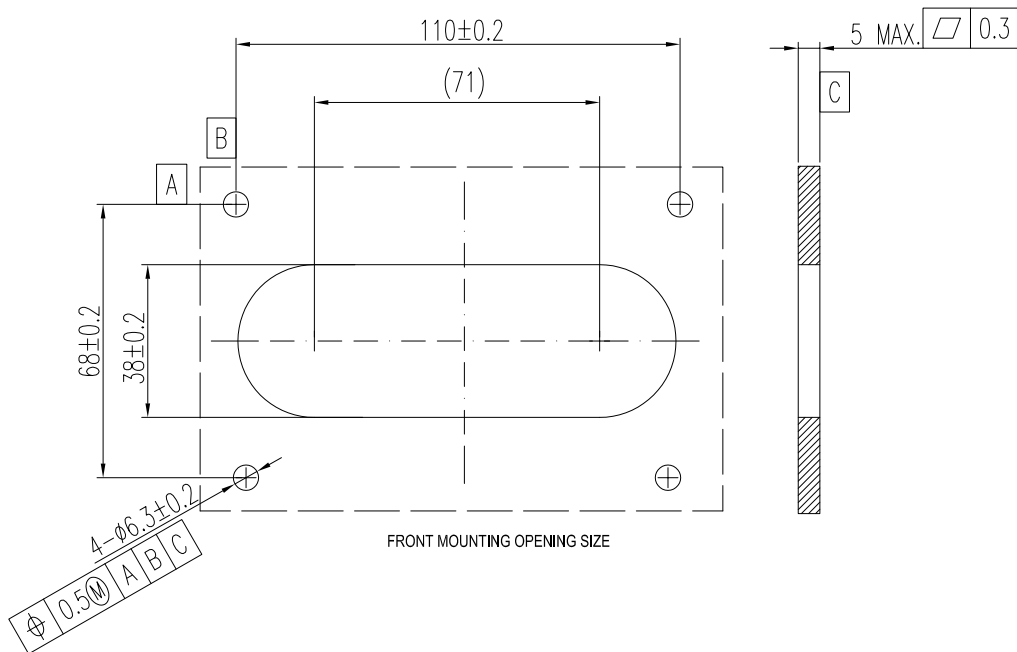
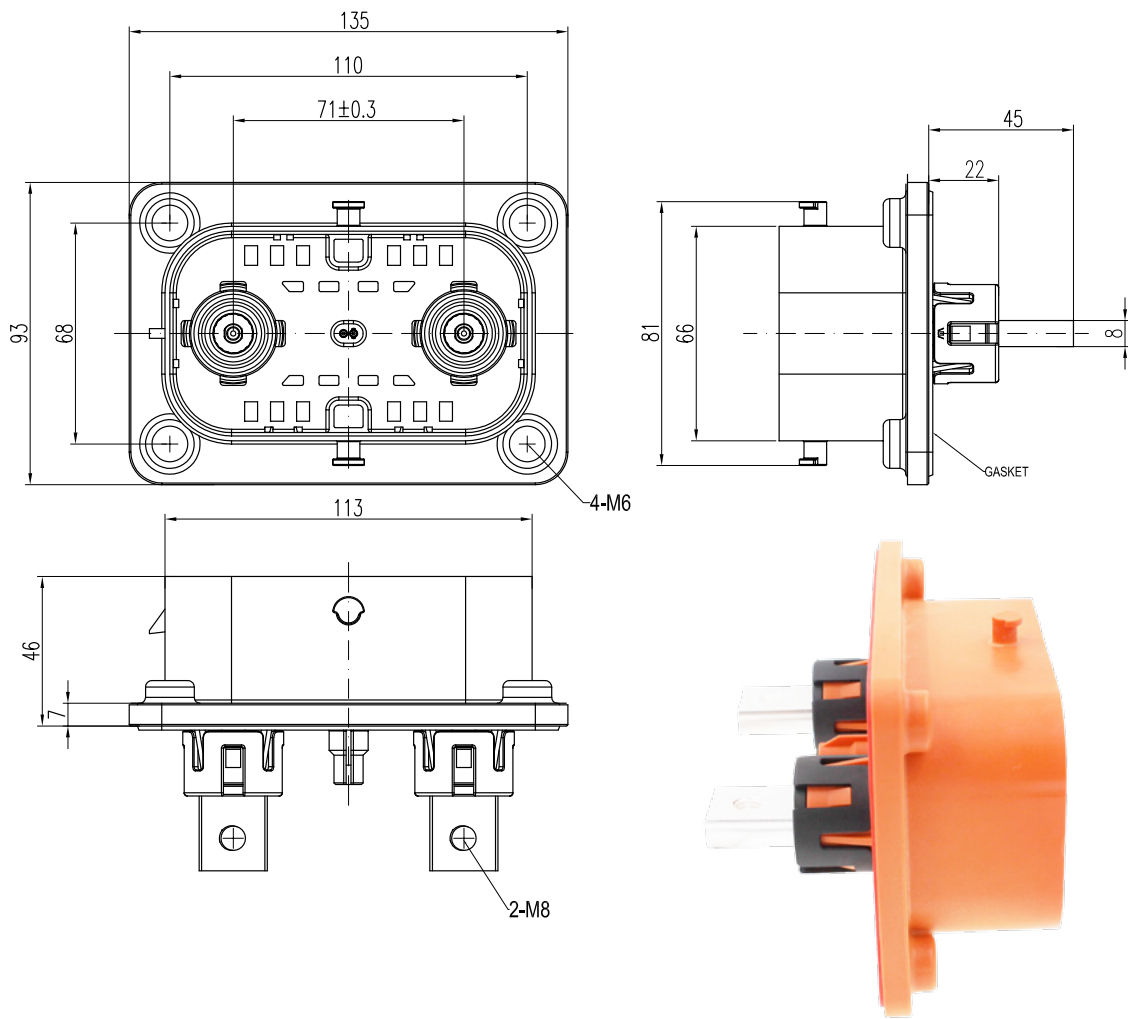
- 1 x integrated internal HVIL
- Unique cooling structure
- High current contacts with Amphenol Radsok technology
- No tools required to unmate
- Various fuse ratings
- Receptacle can be front or rear mounted

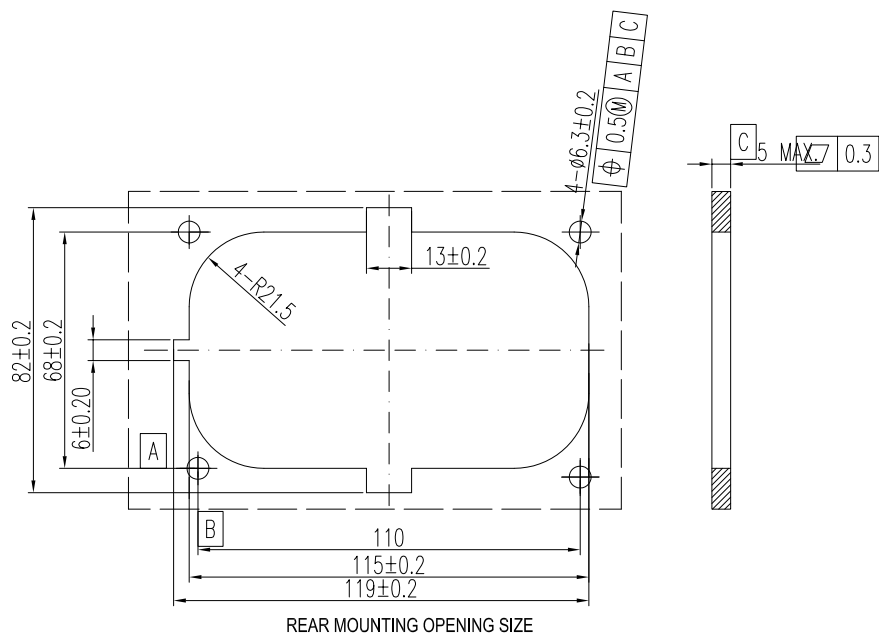
| APPLICATION                                                                                                               |                      |
|---------------------------------------------------------------------------------------------------------------------------|----------------------|
| It is a tool-free solution for disconnecting the internal high voltage battery pack and protecting it from short circuit. |                      |
| MECHANICAL                                                                                                                |                      |
| Mating cycles                                                                                                             | ≥ 500 cycles         |
| ELECTRICAL                                                                                                                |                      |
| Fuse specification                                                                                                        | up to 630A           |
| With fuse:                                                                                                                |                      |
| Rated current                                                                                                             | 300A Max             |
| Rated voltage                                                                                                             | 1000V DC             |
| With shunt:                                                                                                               |                      |
| Rated current                                                                                                             | 300A                 |
| Rated voltage                                                                                                             | 1500V DC Max         |
| ENVIRONMENTAL                                                                                                             |                      |
| Protection degree                                                                                                         | IP67, IP6K9K (mated) |
| Ambient temperature                                                                                                       | -40°C to 70°C        |
| Storage temperature                                                                                                       | -40°C to 85°C        |
| Operating temperature                                                                                                     | -40°C to 125°C       |
| STANDARDS                                                                                                                 |                      |
| USCAR-2                                                                                                                   |                      |
| USCAR-37                                                                                                                  |                      |
| LV-215                                                                                                                    |                      |
| RoHS                                                                                                                      |                      |

PRODUCT DIMENSIONS



FRONT MOUNTED





|                                                              |        |   |     |   |   |
|--------------------------------------------------------------|--------|---|-----|---|---|
|                                                              | MSD XL | M | 350 | / | F |
| Shell type:                                                  |        |   |     |   |   |
| <b>M:</b> Plug                                               |        |   |     |   |   |
| <b>F:</b> Receptacle                                         |        |   |     |   |   |
| Fuse rating current:                                         |        |   |     |   |   |
| <b>XXX:</b> 160, 200, 250, 315, 350, 400, 450, 500, 550, 630 |        |   |     |   |   |
| (Unit: AMP)                                                  |        |   |     |   |   |
| <b>000:</b> No fuse needed, can directly use the terminal    |        |   |     |   |   |
| Fuse brand (this applies to plugs):                          |        |   |     |   |   |
| / : Bussmann (by default)                                    |        |   |     |   |   |
| For other brands, please contact us                          |        |   |     |   |   |
| Flange mounted type (this applies to sockets) :              |        |   |     |   |   |
| <b>F:</b> Front mounted                                      |        |   |     |   |   |
| <b>R:</b> Rear mounted                                       |        |   |     |   |   |



### Amphenol PCD MINI Manual Service Disconnect

Mini MSD has been developed from the standard MSD. Smaller in size and lower in cost, it offers a more compact solution.

Available in a scalable design with a variety of fuse ratings.

## EXCEL|MATE MINI MSD - TECHNICAL CHARACTERISTICS



### KEY FEATURES

A two-stage lever provides an HVIL time delay

1 x integrated internal HVIL

Unique cooling structure

Dual-channel design lowers temperature rise

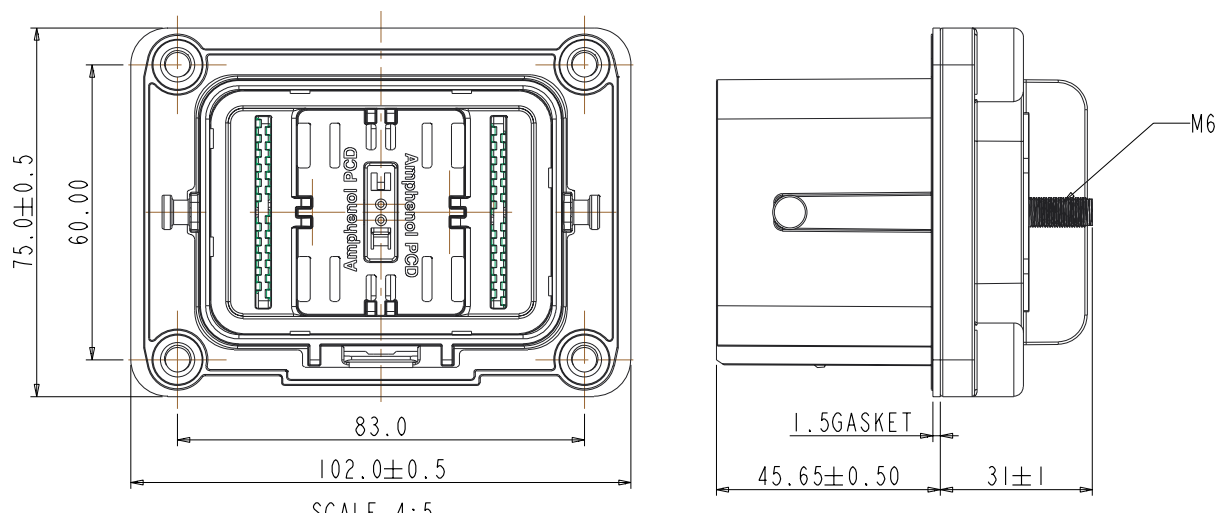
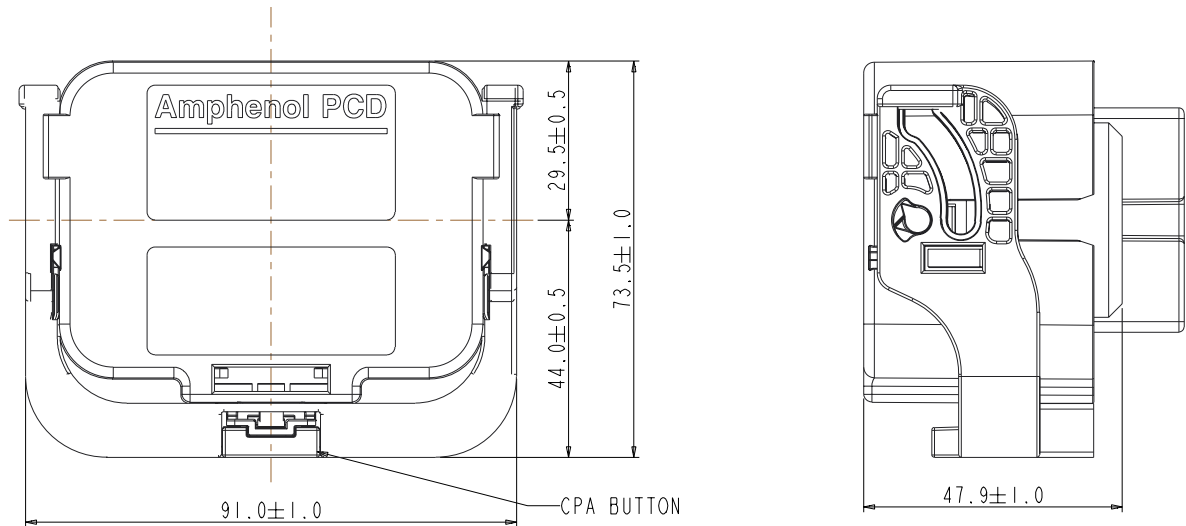
No tools required to unmate

Various fuse ratings

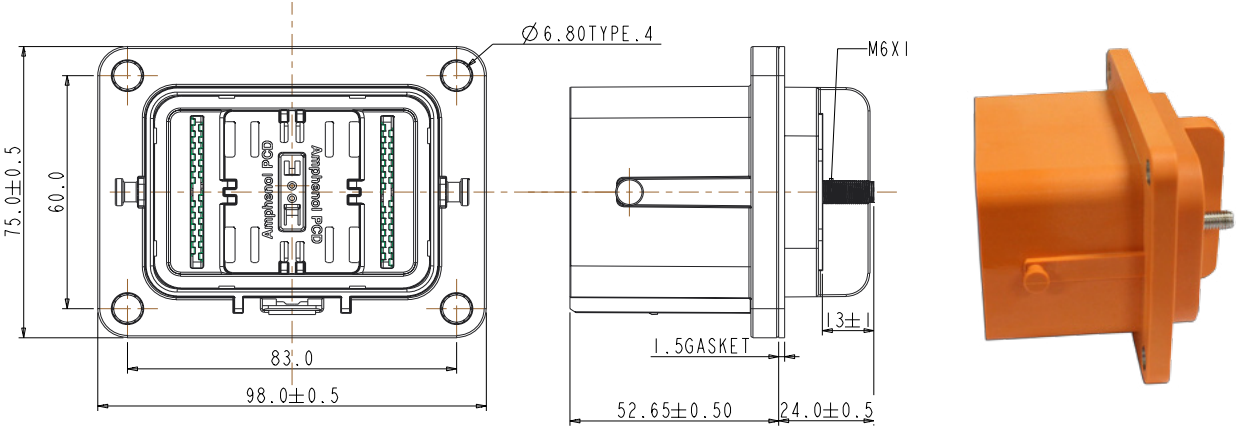
Receptacle can be front or rear mounted

| APPLICATION                                                                                                               |                                                         |
|---------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------|
| It is a tool-free solution for disconnecting the internal high voltage battery pack and protecting it from short circuit. |                                                         |
| MECHANICAL                                                                                                                |                                                         |
| Mating cycles                                                                                                             | ≥ 50 cycles                                             |
| ELECTRICAL                                                                                                                |                                                         |
| Fuse specification                                                                                                        | up to 400A                                              |
| With fuse:                                                                                                                |                                                         |
| Rated current                                                                                                             | Current is approximately 1/3 the fuse rating (170A Max) |
| Rated voltage                                                                                                             | 600V to 700V DC                                         |
| With shunt:                                                                                                               |                                                         |
| Rated current                                                                                                             | 170A Max                                                |
| Rated voltage                                                                                                             | 1500V DC Max                                            |
| ENVIRONMENTAL                                                                                                             |                                                         |
| Protection degree                                                                                                         | IP67, IP6K9K (mated)                                    |
| Ambient temperature                                                                                                       | -40°C to 70°C                                           |
| Storage temperature                                                                                                       | -40°C to 85°C                                           |
| Operating temperature                                                                                                     | -40°C to 125°C                                          |
| STANDARDS                                                                                                                 |                                                         |
| USCAR-2                                                                                                                   |                                                         |
| USCAR-37                                                                                                                  |                                                         |
| LV-215                                                                                                                    |                                                         |
| RoHS                                                                                                                      |                                                         |

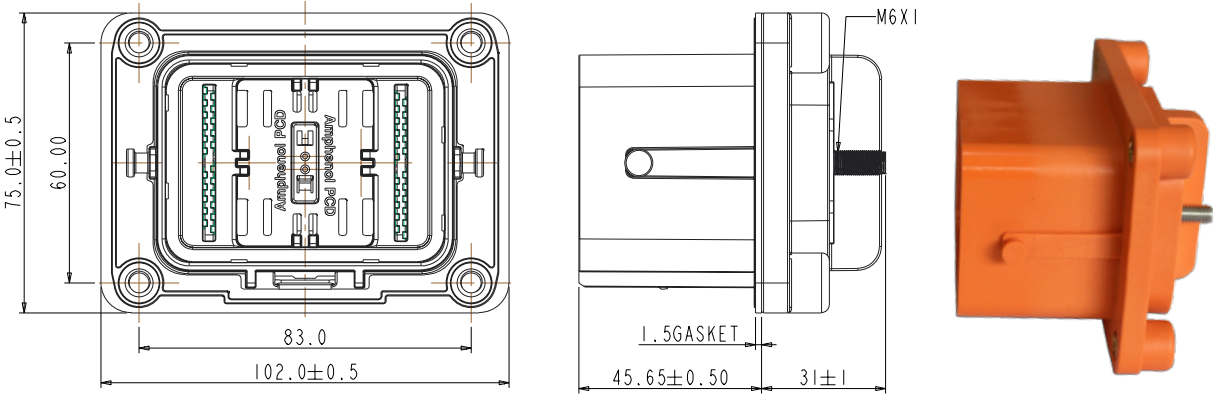
PRODUCT DIMENSIONS



FRONT MOUNTED



REAR MOUNTED



DUST CAP AVAILABLE:  
P/N: C270006809



|                                                           |          |   |     |   |   |
|-----------------------------------------------------------|----------|---|-----|---|---|
|                                                           | MINI MSD | M | 350 | / | F |
| Shell type:                                               |          |   |     |   |   |
| <b>M:</b> Plug                                            |          |   |     |   |   |
| <b>F:</b> Receptacle                                      |          |   |     |   |   |
| Fuse rating current:                                      |          |   |     |   |   |
| <b>XXX:</b> 080, 100, 125, 160, 200, 250, 315, 350, 400   |          |   |     |   |   |
| (Unit: AMP)                                               |          |   |     |   |   |
| <b>000:</b> No fuse needed, can directly use the terminal |          |   |     |   |   |
| Fuse brand (this applies to plugs) :                      |          |   |     |   |   |
| / : Bussmann (by default)                                 |          |   |     |   |   |
| <b>1:</b> Other brands (TBD)                              |          |   |     |   |   |
| Flange mounted type (this applies to sockets):            |          |   |     |   |   |
| <b>F:</b> Front mounted                                   |          |   |     |   |   |
| <b>R:</b> Rear mounted                                    |          |   |     |   |   |

## Amphenol PCD Shenzhen

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### Notes:

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Amphenol PCD Shenzhen reserves the right to clarify this catalog.