

## Manual Service Disconnecter (MSD7)



### Features/Application

- MSD7 provides stable high voltage power transmission for EV/HEV systems. The fuses in MSD7 provides overcurrent and short-circuit protection.
- Breaking structure and fuses are highly integrated inside which saves installation space and convenient for repair and maintenance.
- MSD7 is connector comprising of plug and jack. The jack is joint with cable. Back installation of socket for option.
- Current rating 250A and 300A in 30 mins, catch one pair of HVIL.
- The connectors have rotatable locking handle and secondary lock-unlock structure, it's convenient to operate and save strength.

### Technical Specification

#### Electrical property

contact resistance:  
 total power contact resistance  $\leq 0.5\text{m}\Omega$  (not including fuse resistance)  
 signal contact resistance  $\leq 5\text{m}\Omega$  (not including HVIL resistance)  
 current rating: 25A (300A in 30 mins) end temperature rise  $< 55\text{K}$   
 voltage rating: 750V DC  
 voltage Resistance:  
 3000V DC in 1 min, Leakage current  $< 0.1\text{ mA}$  (in normal status except fuse)  
 fuse technical specification:  
 Insulation resistance:  
 5000m $\Omega$  (Normal; test environment temperature  $\leq 40^\circ\text{C}$ , humidity 50%RH)  
 300m $\Omega$  (humidity  $\geq 95\%$  RH)  
 fuse Electrical property: voltage rating: 750V DC  
 current rating: 100A~400A

#### Environment Property

Working temperature:  $-40^\circ\text{C} \sim +85^\circ\text{C}$   
 Relative humidity: 95%(40 $^\circ\text{C}$ )  
 Sealing: IP68 (plug and socket Insert or state, 1 metre depth, Immerse 48h, no leakage);  
 plug meet IPXXB separately

#### Mechanical Property

Mating cycle: 75 times  
 Vibration: 10~55GHz, amplitude 0.75mm  
 Mechanical shocks: 980m/s<sup>2</sup>  
 plug and socket divorce:  $\leq 75\text{N}$

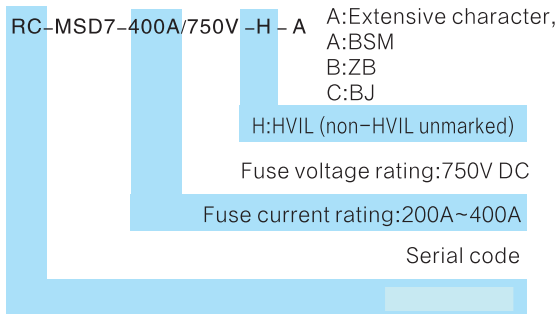
#### Material

Shell: thermoplastic flame-retardant  
 Contact: copper alloy silver plated  
 Seal: silicon rubber

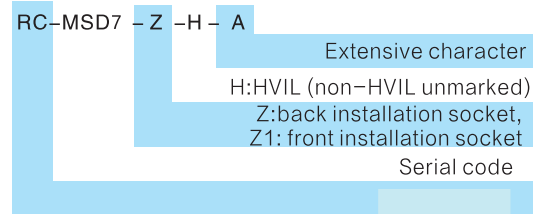
## Ordering information

The plug and socket are separate as default, if you need whole part connected with "&".  
For example, RC-MSD7-400A/750V-H-A&RC-MSD7-Z-H-A means Equipped with 400A/750V fuse, with HVIL plug and socket whole part.

### Plug



### Jack



#### Remarks:

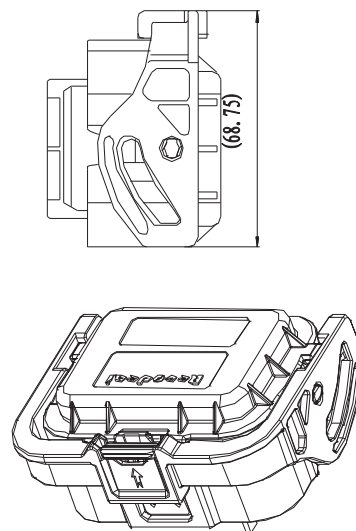
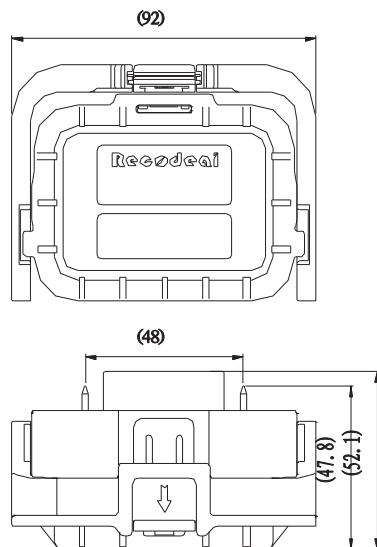
Plug and Jack need to have high voltage interlock at the same time to meet the functional requirements, and the high voltage interlock is 1 set;

- 500A/500V fuse can only choose BJ and fuse voltage rating is 500V DC, 400A fuse and voltage rating 750V can choose BJ, 600V DC can choose ZB, fuse type is optional.
- "RC-MSD7-400A/750V-H-A" means equipped with 400A/750V BSM fuse, with HVIL MSD7 plug.
- Non-hvil without fuse: RC-MSD7-A;
- HVIL without fuse: RC-MSD7-H-A;
- Fuse specification;

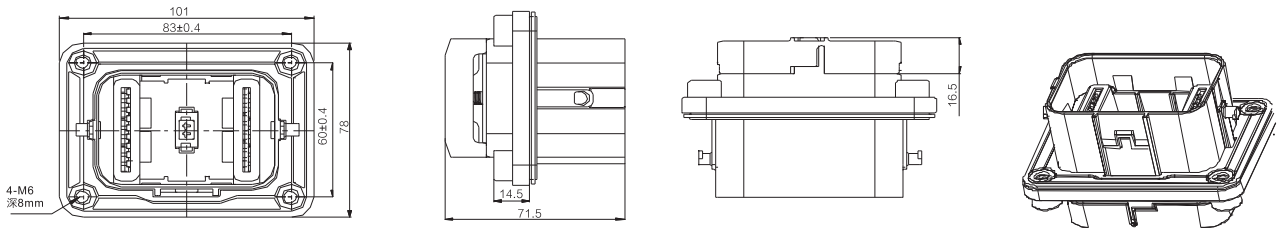
125A 750VDC	160A 750VDC	200A 750VDC
250A 750VDC	315A 750VDC	350A 750VDC
400A 750VDC(BY)	400A 600VDC(ZB)	500A 500VDC(BY)

## Size

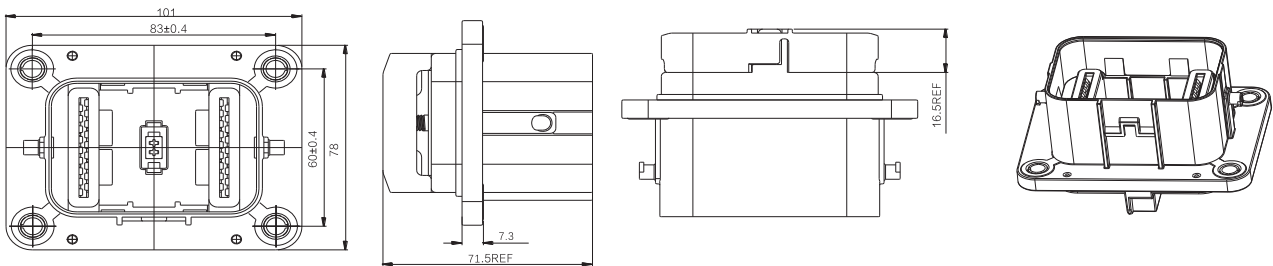
### Plug



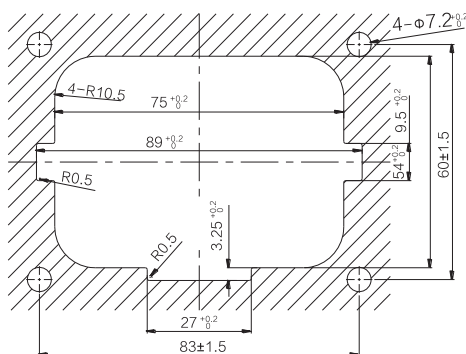
Back installation socket



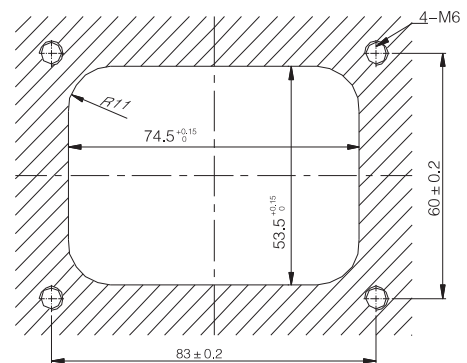
Front installation socket



Back installation socket size



Front installation socket size



NOTE:

- To meet protection level, the roughness of the panel should be not less than 1.6, flatness should be not less than 0.2;
- The product socket and the panel connected to M6 is recommended 6~7 N.m.

Special Instruction:

The product has Equipped fuse and Equipped copper platoon two working states, it has different Current-carrying performance when different state, pay attention when choosing.

1. Equip fuse

current rating: 250A Max( specification  $\geq 350A$ , Temperature rise  $\geq 55K$ , specification  $< 350A$  current rating should decrease Accordingly);

2. Equip copper platoon

current rating: 300A Max