

MSD-C1 Series Manual Service Disconnect

Main Features

- For energy storage systems, new energy vehicles, and other applications
- Secondary locking function
- Compact size and lightweight design
- High-voltage interlock (HVIL)



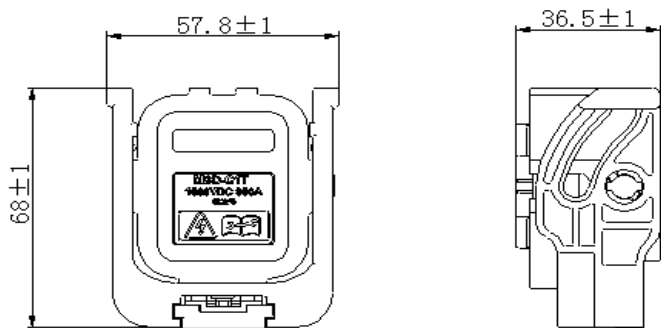
Ordering Code Example

MSD-C1	T	A
With signal terminals; not marked indicates without signal terminals.		
Product Type: T - Plug, Z - Receptacle		
Product Series		

Overall Dimensions

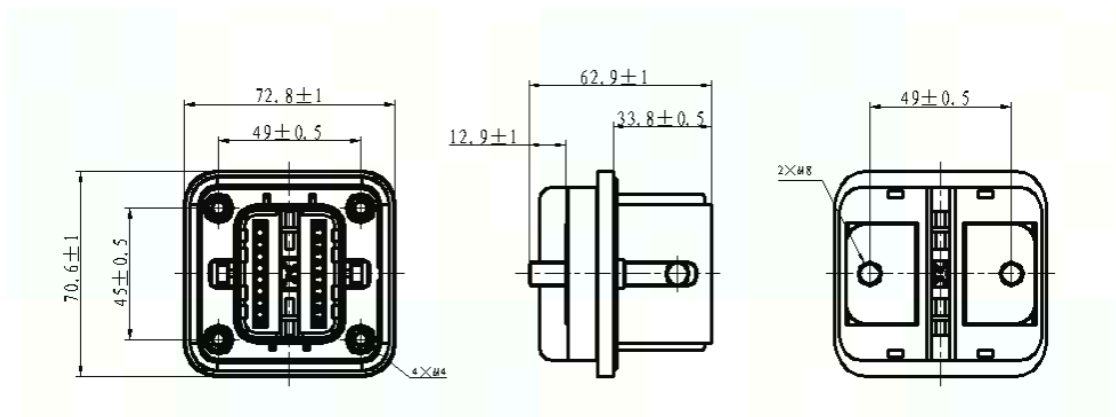
MSD-C1T (Manual Service Disconnect Plug)

- Outline Dimensions (mm):



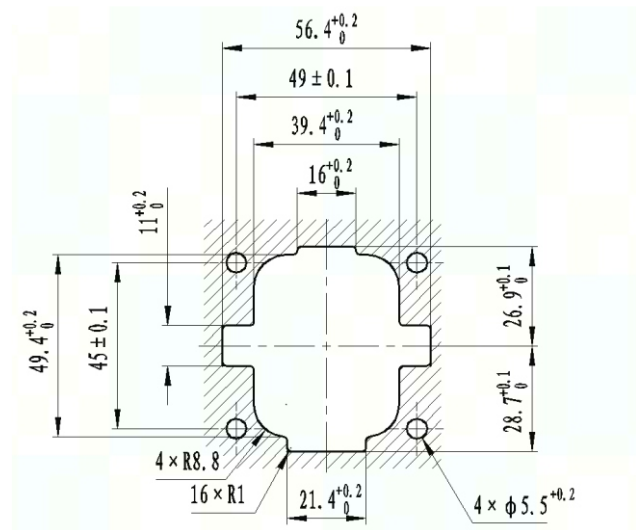
MSD-C1Z (Manual Service Disconnect Receptacle)

- Outline Dimensions
- Recommended Panel Cutout Dimensions (mm):



Panel Cutout Dimension

- Recommended Panel Cutout Dimensions (Panel Thickness: 2–4.5 mm)



Technical Data

Item	Specification
Rated Current	350A
Operating Voltage	1500VDC
Dielectric Withstand Voltage	5000VDC
Insulation Resistance	≥5000MΩ
Operating Temperature	-40°C~+125°C
Mechanical Life	500 cycles
Protection Rating	IPX8 (mated)
Flammability Rating	UL94-V0

Notes

1. The signal-circuit contacts are not included with the accessories by default. Customers may specify the required crimped wire specification and length. Please contact our sales representatives for the specific part number.
2. The mounting panel thickness shall be ≤ 4 mm. The recommended M8 screw installation torque is 14 N·m.
3. The customer shall provide and install four M5 bolt assemblies (including spring washers and flat washers) separately. The recommended bolt length is 8 + A + B mm, where A is the mounting panel thickness and B is the combined thickness of the spring washer and flat washer.
4. The recommended installation torque for the four M5 mounting bolts is (5 ± 0.5) N·m.

MSD-C Series Manual Service Disconnect

Main Features

- Mechanical switching for ESS high-voltage power circuits
- Visual assembly confirmation
- Quick and easy rotary locking
- Integrated HVIL protection



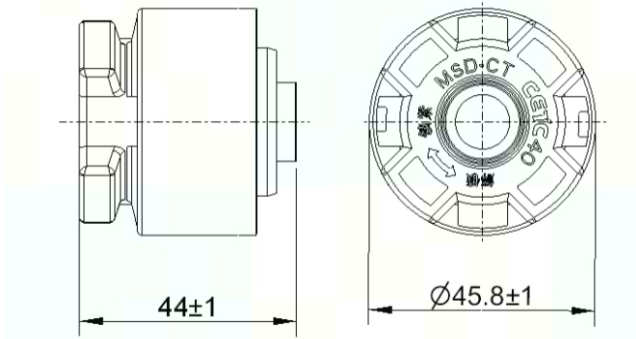
Ordering Code Example

MSD-C		T
	Product Type: T - Plug, Z - Receptacle	
	Product Series	

Overall Dimensions

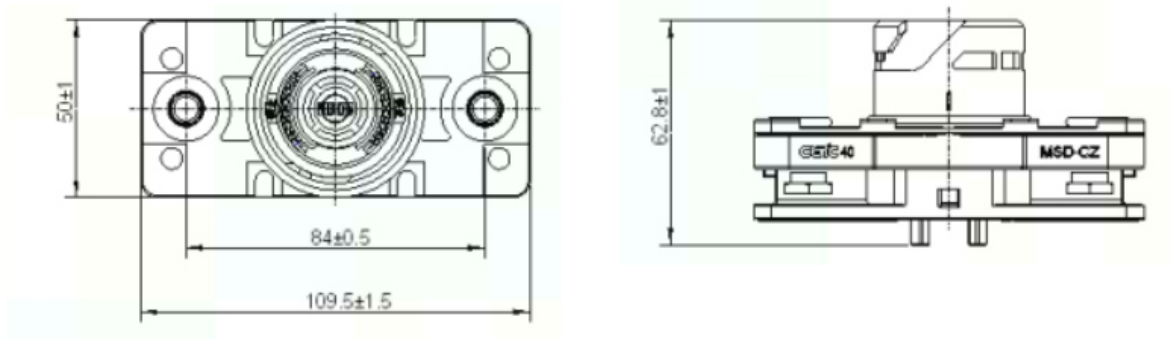
MSD-CT (Manual Service Disconnect Plug)

- Outline Dimensions (mm):



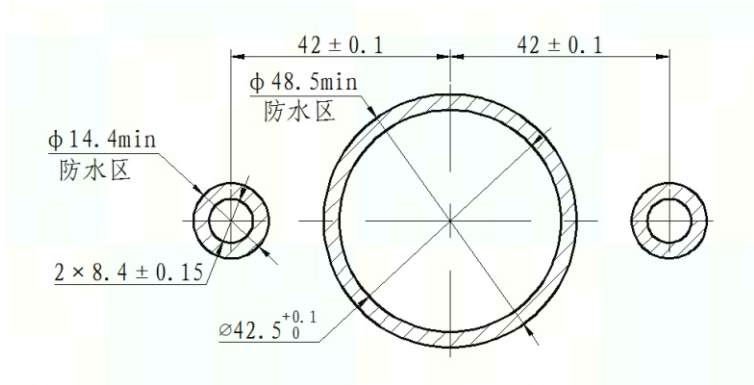
MSD-CZ (Manual Service Disconnect Receptacle)

- Outline Dimensions
- Recommended Panel Cutout Dimensions (mm):



Panel Cutout Dimension

- Recommended Panel Cutout Dimensions (Panel Thickness: 2–4.5 mm)



Technical Data

Item	Specification
Rated Current	200A
Operating Voltage	1500VDC
Dielectric Withstand Voltage	5000VDC
Insulation Resistance	≥5000MΩ
Operating Temperature	-40°C~+125°C
Mechanical Life	200次
Protection Rating	IPX8 (插入状态)
Flammability Rating	UL94-V0

Notes

1. The signal circuit contacts are supplied as standard accessories with the receptacle and do not include wires. Customers may specify the wire specification and length for crimping. Please consult our sales team for the specific part number.
2. The crimped wire for the signal connector contacts is 22 AWG, with an outer diameter of Ø1.2–1.42 mm.
3. Recommended panel thickness: 2–4.5 mm. The M8 screw thread length should be 10–12 mm.
4. The recommended thickness of the rear busbar is 2.5–3 mm. The M8 screw thread length should be 12–15 mm.
5. Recommended M8 screw tightening torque: 6–6.5 N·m.

MSD-D Manual Service Disconnect

Main Features

- Designed for high-voltage circuit system maintenance and short-circuit protection. Provides safe and reliable protection during maintenance of electric vehicle power systems, serving as both a service disconnect switch and a short-circuit protection device.
- Switch capacity can be conveniently configured by selecting the appropriate fuse rating.
- Two-stage stepped opening mechanism provides sufficient system response time. Built-in dual signal control pins with highly reliable redundant design.
- Optimized thermal management effectively extends fuse service life.
- Dual-channel design effectively reduces temperature rise.
- Multiple fuse specifications available to meet different application requirements.
- Flexible mounting options: front or rear mounting.



Technical Data

Environmental Performance	
Working Temperature	-40°C~+125°C
Flame Retardancy Rating	UL94-V0
Protection Level	IP67 (mated)

Mechanical Performance	
Service Life	≥500 Cycles

Electrical Performance	
Rated Current	200A~630A
Rated Voltage	700-800VDC(根据熔断器规格确定)
Withstand Voltage	5000VDC
Insulation Resistance	≥5000MΩ

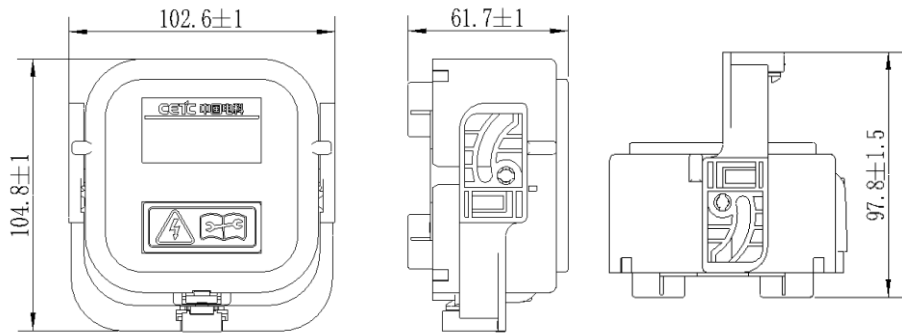
Ordering Code Example

MSD-D T - XXX - X -F			
			Mounting Option (for receptacle only): F - Front Mounting; R - Rear Mounting
			Fuse Brand: 1 – Bussmann; 2 – Sinofuse; 3 – Prosem; 4 – YouRong; 5 – Zhongbei; 6 – Boyue
			Fuse Rated Current (For Plug Only): 200, 250, 315, 350, 400, 450, 500, 550, 630 A 000 indicates no fuse installed, direct connection via a copper busbar.
			Product Type: T - Plug, Z - Receptacle
			Product Series No.: Large Manual Service Disconnect Switch (MSD)

- Notes:
1. The signal circuit contacts are supplied as standard accessories with the receptacle and do not include wires. Customers may specify the crimp wire specification, wire length, terminal type at the other end, and other requirements.
 2. For continuous operation, it is recommended that the current not exceed 50% of the rated current, and that the cable current-carrying capacity not exceed 3 A/mm².
 3. Recommended tightening torque: M8 thread: 20 ± 0.5 N·m; M6 thread: 8 ± 0.5 N·m.

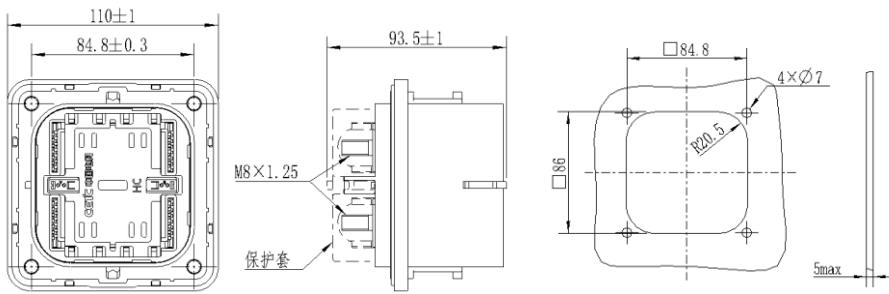
MSD-DT-XXX-X (Large MSD)

- Outline Dimensions (mm):



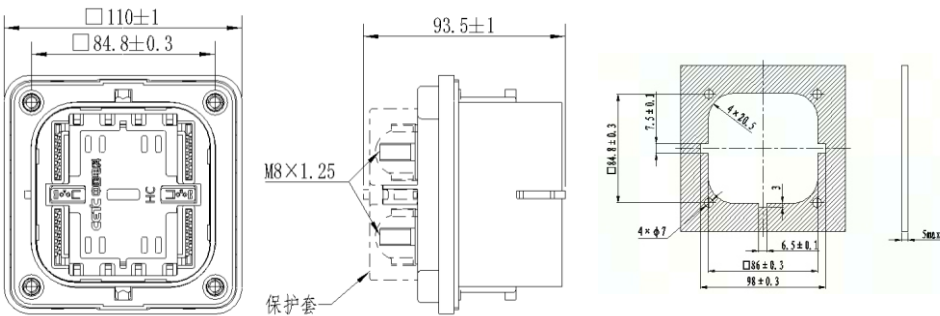
MSD-DZ-F (Large MSD, Receptacle, Front Mounting)

- Front-Mounting Outline Dimensions
- Panel Cutout Dimensions



MSD-DZ-R (Large MSD, Receptacle, Rear Mounting)

- Rear-Mounting Outline Dimensions
- Panel Cutout Dimensions



MSD-DA Series Manual Service Disconnect

Main Features

- Designed for maintenance and protection of high-voltage circuit systems in new energy vehicles, including high-voltage power distribution units (PDU), integrated controllers, battery packs, and other HV applications.
- Plug-and-receptacle handle-assisted mating for convenient operation.
- Built-in signal control contacts.Rated voltage: 750 VDC; maximum current: 630 A with fuse.
- Blade-type contacts provide short-term current carrying capability of up to 300 A.



Ordering Code Example

PLUG

MSD-DA T - XXX - 5			
Product Series			Fuse Brand: 5-CHNBEL
			Fuse Rated Current: 400、500A、550A、630A 000 indicates no fuse; direct busbar connection is used
			Product Type: T - Plug

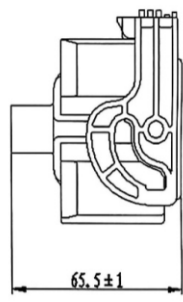
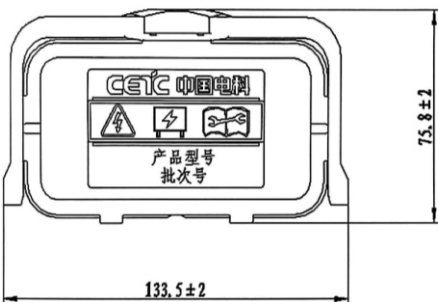
RECEP

MSD-DA Z - R - XX			
Product Series			Special-Requirement Variants: Special requirements shall be discussed and confirmed with our engineering/design team.
			Mounting Option (for receptacle only): R - Rear Mounting
			Product Type: Z - Receptacle

Overall Dimensions

MSD-DAT (Manual Service Disconnect Plug)

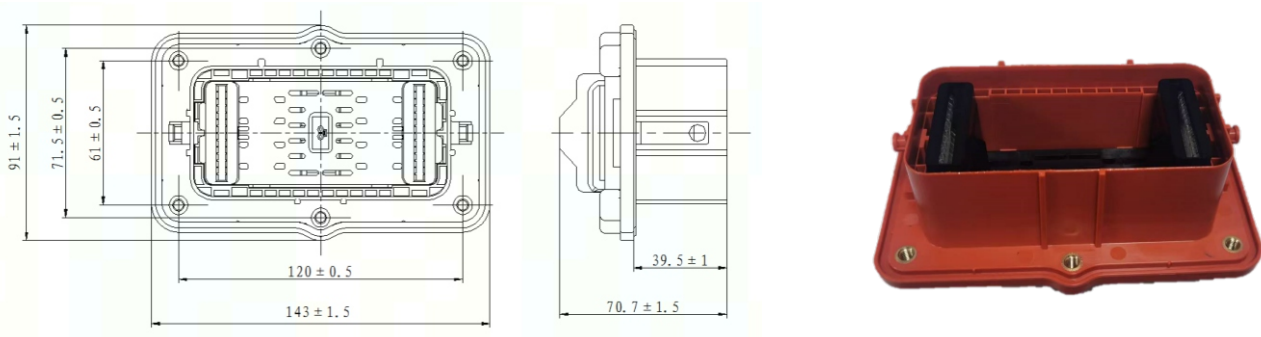
- Outline Dimensions (mm):



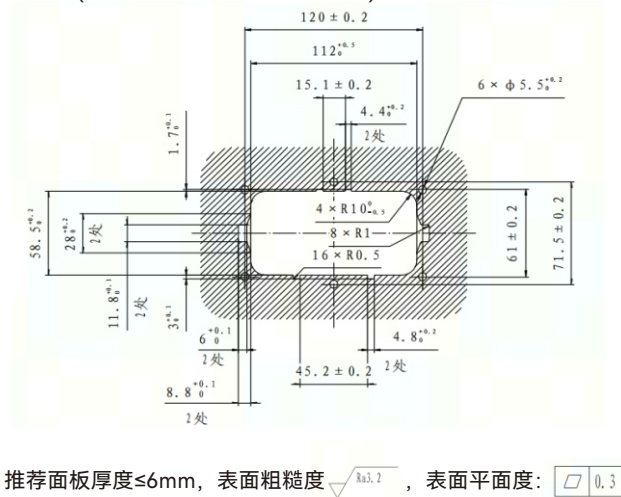
Panel Cutout Dimensions

MSD-DAZ-R (Manual Service Disconnect Receptacle, Rear Mounting)

- Rear-Mounting Outline Dimensions
- Panel Cutout Dimensions (mm):



Recommended Panel Cutout Dimensions (Panel Thickness: 1.5–2.5 mm)



推荐面板厚度≤6mm，表面粗糙度 $\sqrt{Ra3.2}$ ，表面平面度: $\square 0.3$

Technical Data

Item	Specification
Rated Current	330 A (without fuse) 300 A (with a 630 A fuse; 1-hour continuous current, busbar temperature rise ≤ 60 K)
Operating Voltage	750V DC (with fuse) ,1500VDC (without fuse)
Dielectric Withstand Voltage	5000VAC
Insulation Resistance	≥5000MΩ
Operating Temperature	-40°C~+125°C
Mechanical Life	500次
Protection Rating	IP68 / IP6K9K when mated
Flammability Rating	UL94-V0

Notes

1. The busbar at the rear of the receptacle is connected using M6 bolts. The recommended bolt engagement depth is 7–10 mm, with a tightening torque of 7–9 N·m. A soft copper busbar is recommended for the connection. The receptacle mounting holes use M5 bolts. The customer shall provide six sets of M5 bolt assemblies (including spring washers and flat washers) for installation. The recommended bolt engagement depth is 7–10 mm, with a tightening torque of 5–6 N·m.
2. The signal circuit contacts are supplied as standard accessories with the receptacle and do not include wires. Customers may specify the wire specification and length for crimping. Please consult our sales team for the specific part number.

MSD-HA Series Manual Service Disconnect

Main Features

- Designed for maintenance and protection of high-voltage circuit systems.
- Plug and receptacle secured with bolts for a reliable and secure connection.
- Built-in signal control contacts.
- Flexible mounting options: front or rear mounting.
- 500 A continuous current rating with low temperature rise and high reliability.



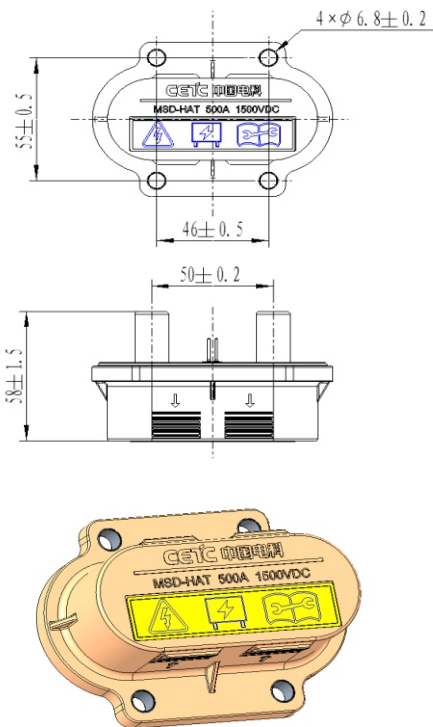
Ordering Code Example

MSD-HA	T	A	-R
			Mounting Option (for receptacle only): F - Front Mounting; R - Rear Mounting Indicates that signal terminals are included. The receptacle signal terminals are supplied as loose components. No indication means that signal terminals are not included.
			Product Type: T - Plug, Z - Receptacle
			Product Series

Overall Dimensions

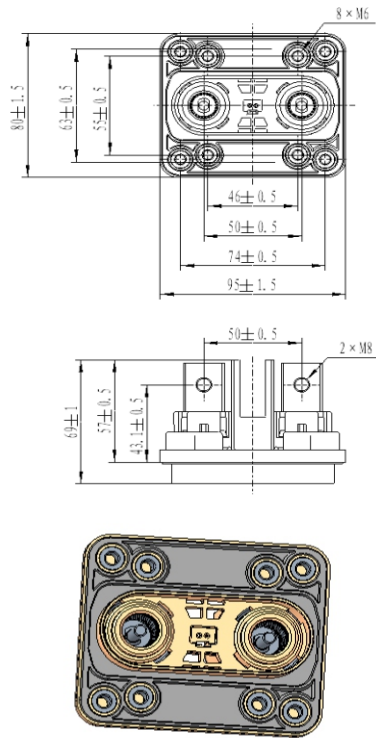
MSD-HAT(MSD PLUG)

- Outline Dimensions (mm):



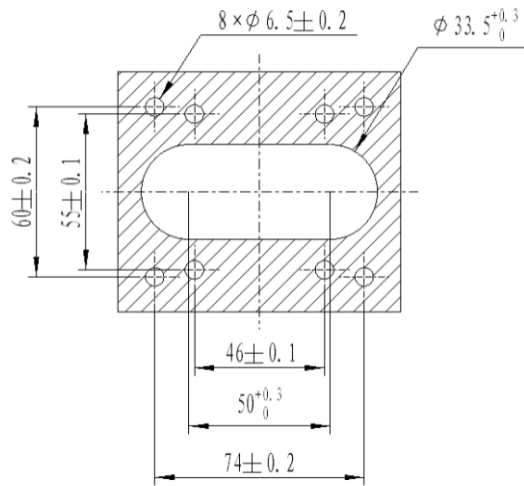
MSD-HAZ-R (MSD RECEPTACLE, REAR MOUNT)

- Rear-Mount Outline Dimensions (mm):



Panel Cutout Dimension

- Recommended Panel Cutout Dimensions (Panel Thickness: 1.5–6 mm)



推荐面板厚度≤6mm，表面粗糙度 $Ra3.2$ ，表面平面度: 0.3

Technical Data

Item	Specification
Rated Current	500A
Operating Voltage	1500VDC
Dielectric Withstand Voltage	5000VDC
Insulation Resistance	≥5000MΩ
Operating Temperature	-40°C~+125°C
Mechanical Life	500次
Protection Rating	IPX8 (mated)
Flammability Rating	UL94-V0

Notes

1. The interlock signal terminals are supplied as standard accessories with the receptacle and do not include wires. Customers may specify the crimp wire specification, wire length, terminal type at the other end, and other requirements.
2. The mounting fasteners shall be M6 screws. The screw length shall be selected according to the panel thickness.
3. The tightening torque of the receptacle mounting screws shall not exceed 8 N·m.
4. The recommended cross-sectional area of the rear busbar is ≥150 mm². The actual specification should be adjusted according to the customer's specific operating conditions.

MSD-H Series Manual Service Disconnect

Main Features

- Designed for high-voltage circuit system maintenance and short-circuit protection;
- Provides a safe and reliable solution for EV power system servicing, functioning both as a maintenance disconnect switch and a short-circuit protection device;
- Allows flexible configuration of the switch current rating by selecting different fuse specifications;
- Features a two-stage stepped opening mechanism, providing sufficient time for system response and ensuring enhanced safety during disconnection;
- Integrated with signal control pins for status monitoring;
- Supports flexible installation options, including front mounting and rear mounting.



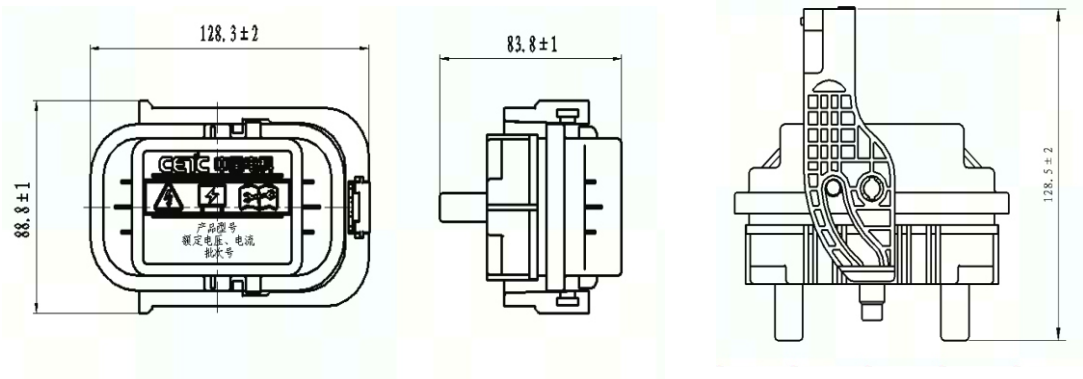
Ordering Code Example

MSD-H T - XXX - X - F			
			Mounting Option (for receptacle only): F - Front Mounting; R - Rear Mounting
			Fuse Brand (for plug only): 1 - Bussmann; 2 - Sino; 3 - Prosemi; 4 - CFriend; 5 - Chnbel; 6 - ASTM
			Fuse Rated Current (for plug only): 160A, 200A, 250A, 315A, 350A, 400A, 450A, 500A, 550A, 630A (Unit: Ampere) 000 indicates no fuse; direct busbar connection is used
			Product Type: T - Plug, Z - Receptacle
			Product Series

Overall Dimensions

MSD-HT (Manual Service Disconnect Plug)

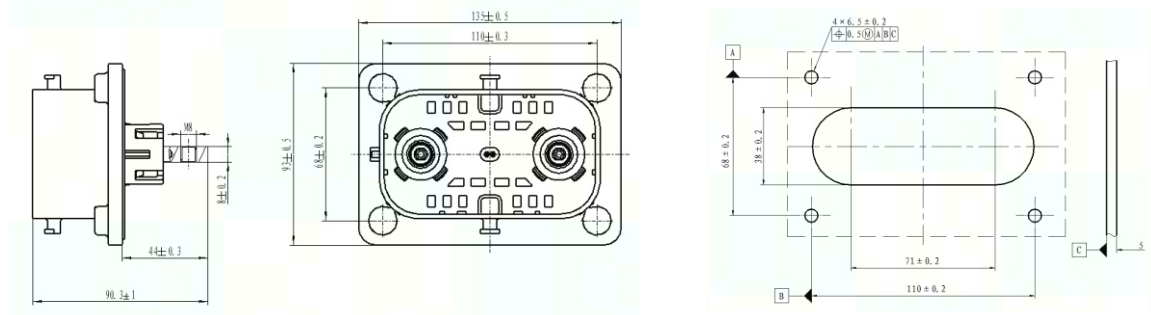
- Outline Dimensions (mm):



Overall Dimensions

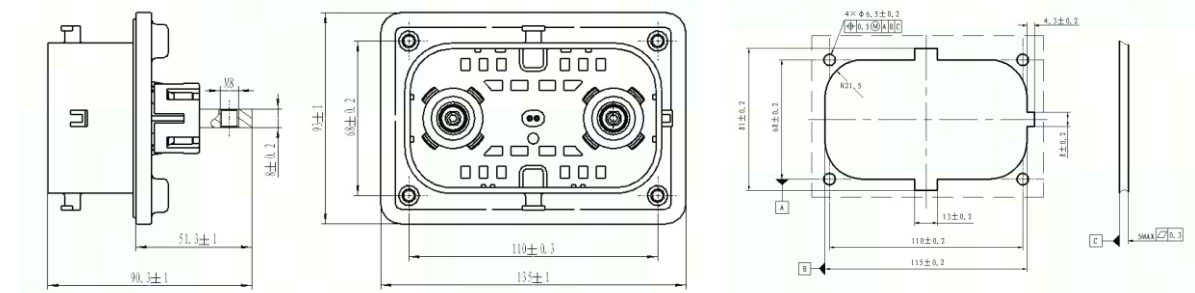
MSD-HZ-F (Manual Service Disconnect Receptacle, Front Mounting)

- Front Mounting Outline Dimensions
- Recommended Panel Cutout Dimensions (mm):



MSD-HZ-R (Manual Service Disconnect Receptacle, Rear Mounting)

- Rear Mounting Outline Dimensions
- Recommended Panel Cutout Dimensions (mm):



Technical Data

Item	Specification
Rated Current	160A ~ 630A
Operating Voltage	1000VDC (with Fuse) / 1500VDC (Direct Busbar Connection)
Dielectric Withstand Voltage	5000VDC
Insulation Resistance	≥5000MΩ
Operating Temperature	-40°C~+125°C
Mechanical Life	500 cycles
Protection Rating	IPX8 (Mated Condition)
Flammability Rating	UL94-V0

Notes

- The signal circuit connector is shipped with the receptacle-side accessory by default and does not include a cable. Customers can specify the required pressure wire specification, cable length, and terminal type on the other end.
- For continuous current operation, it is recommended that the current does not exceed 30% – 40% of the fuse rated current.
- Please consult our product engineers for specific application requirements.
- The recommended tightening torque for the receptacle mounting screws is 8 N·m.
- The receptacle is shipped with a protective cover by default. The signal terminal tail is connected with a 0.5 mm² wire.
- After product disposal, please do not discard it randomly. Dispose of the product properly in accordance with local environmental protection regulations.

MSD-Z Series Manual Service Disconnect

Main Features

- Designed for high-voltage circuit system maintenance and short-circuit protection.
- Provides safe and reliable protection during maintenance of electric vehicle and energy storage power systems, serving as both a service disconnect switch and a short-circuit protection device.
- Switch capacity can be conveniently configured by selecting the appropriate fuse rating.
- Two-stage stepped opening mechanism provides sufficient system response time.
- Built-in dual signal control contacts for reliable signal monitoring.
- Optimized thermal management effectively extends fuse service life.
- Multiple fuse ratings available to meet different application requirements.
- Flexible mounting options: front or rear mounting.



Ordering Code Example

PLUG

MSD-Z T X - XXX - X				
				Fuse Brand (for plug only): 1 - Bussmann; 2 - Sino; 3 - Prosemi; 4 - CFriend; 5 - Chnbel; 6 - ASTM
				—Fuse Rated Current (for plug only): MSD-ZT32、40、50、63、80、100、125、160、200、250、315、350、400A MSD-ZTA160、200、250、315、400、450、500、550、630A
				Product Extension Model: Blank – Rated voltage: 750 VDC; A – Rated voltage: 500 VDC (The applicable version shall be determined according to the fuse rated voltage.)
				Product Type: T - Plug
				Product Series: Medium MSD

RECEPTACLE

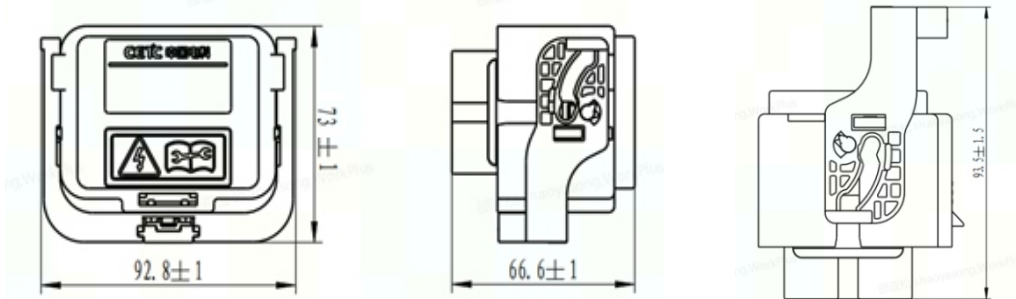
MSD-Z Z X - F/R			
			Mounting Option (for receptacle only): F - Front Mounting; R - Rear Mounting
			Product Extension Model: Blank – Rated voltage: 750 VDC; A – Rated voltage: 500 VDC; B – Rated voltage: 500 VDC (The applicable model shall be determined according to the fuse rated voltage.)
			Product Type: Z - Receptacle
			Product Series: Medium MSD

Notes:
1. MSD-ZZA and MSD-ZZB are extended variants designed for high-current applications. Compared with MSD-ZZ, both MSD-ZZA and MSD-ZZB offer lower temperature rise.
2. The difference between MSD-ZZB and MSD-ZZA lies in their overall dimensions and mounting dimensions.

Overall Dimensions

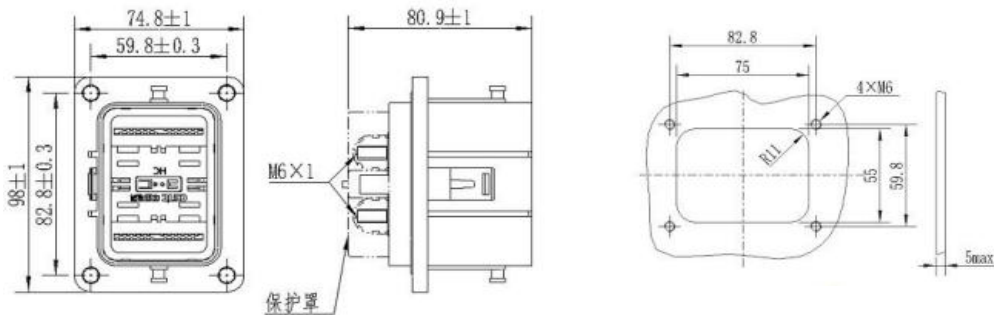
MSD-ZTA (MSD PLUG)

- Outline Dimensions (mm):



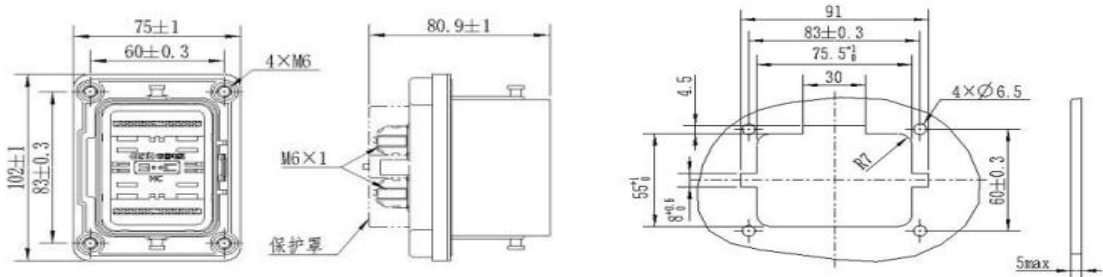
MSD-ZZ-F (MSD RECEPTACLE, Front Mount)

- Front Mounting Outline Dimensions
- Recommended Panel Cutout Dimensions (mm):



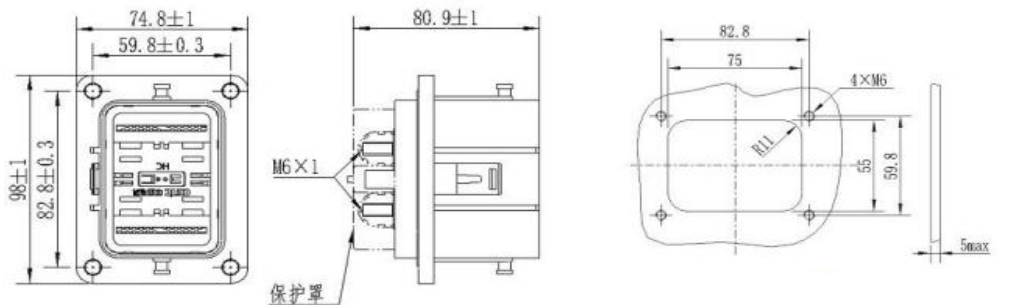
MSD-ZZ-R (MSD RECEPTACLE, Rear Mount)

- Rear Mounting Outline Dimensions
- Recommended Panel Cutout Dimensions (mm):



MSD-ZZA-F (MSD RECEPTACLE, Front Mount)

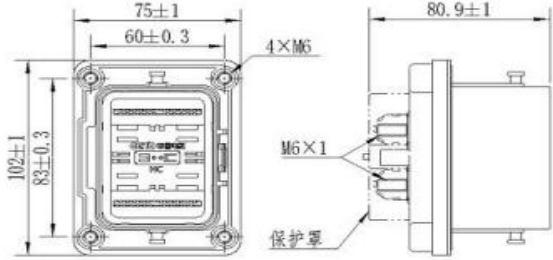
- Front Mounting Outline Dimensions
- Recommended Panel Cutout Dimensions (mm):



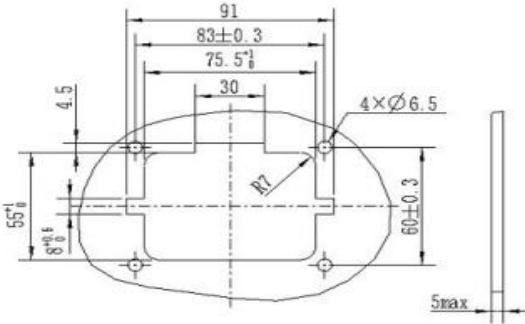
Overall Dimensions

MSD-ZZA-R (MSD RECEPTACLE, Rear Mount)

● Rear Mounting Outline Dimensions

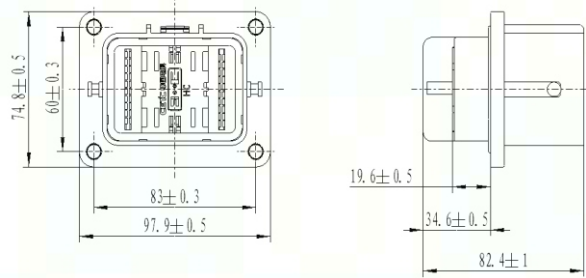


● Recommended Panel Cutout Dimensions (mm):

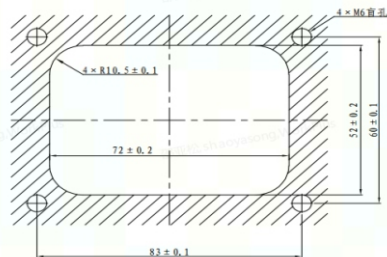


MSD-ZZB-F (MSD RECEPTACLE, Front Mount)

● Front Mounting Outline Dimensions



● Recommended Panel Cutout Dimensions (mm):



Technical Data

Item	Specification
Rated Current	630 A (Determined according to the fuse rated current)
Rated Voltage	1500 VDC (Direct Busbar Connection); 750 VDC / 500 VDC (With Fuse)
Dielectric Withstand Voltage	5000VDC
Insulation Resistance	≥5000MΩ
Operating Temperature	-40°C~+125°C
Mechanical Life	≥500次
Protection Rating	IP67 (mated)
Flammability Rating	UL94-V0

Notes

1. The signal circuit contacts are supplied as standard accessories with the receptacle and do not include wires. Customers may specify the crimp wire specification, wire length, terminal type at the other end, and other requirements.
2. For continuous operation, the recommended current is 0.3–0.4 times the fuse rated current. The cable current-carrying capacity should not exceed 3 A/mm².
3. Recommended tightening torque: M8 thread: 20 ± 0.5 N·m; M6 thread: 8 ± 0.5 N·m.
4. A dust cap for the receptacle is available as an option.