



# EXCEL | MATE MSD

**Manual Service Disconnect** 



# CONTENTS

PDC
PRODUCT DIMENSIONS
MCMSD 8
PRODUCT DIMENSIONS
MINI MSD
PRODUCT DIMENSIONS
MSDE
PRODUCT DIMENSIONS & HOW TO ORDER   MSDE 15
MINI MSD V
HOW TO ORDER   MINI MSD V
MINI MSD FUSE BOX
PRODUCT DIMENSIONS
MSD
PRODUCT DIMENSIONS
MSD V
HOW TO ORDER   MSD V
MSD XL
PRODUCT DIMENSIONS
CHD SERIES - CHD14 2-PIN <b>SHUNT</b>

# EXCEL|MATE MSD

# EXCEL|MATE PDC - TECHNICAL CHARACTERISTICS





# **KEY FEATURE**

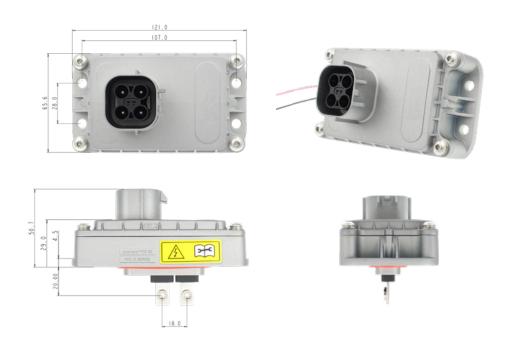
Waterproof (unmated socket): IP67

# **DESCRIPTION**

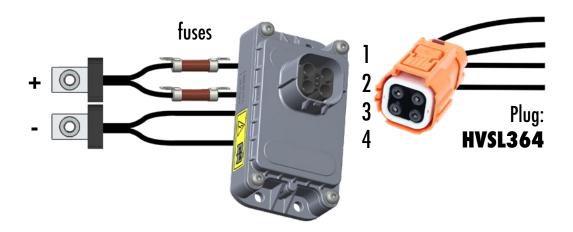
This Power Distribution Connector (PDC) finds its best use in the case where the PDU is already fully integrated into the Battery Pack. Without a PDC, we would need to entirely disassemble the Battery Pack to replace a blown fuse. However, using a PDC with removable fuses makes the replacement of blown fuses much more accessible and effortless.

ELECTRICAL			
Fuse:	15A, 20A, 25A, 30A, 35A, 40A, 50A, 60A		
Rated current:	8A to 32A		
Rated voltage:	500V, 750V, 1000V		
Wire range:	2.5, 4, and 6 mm <sup>2</sup>		
ENVIRONMENTAL			
Ambient temperature:	40 to 70°C		
Waterproof (mated):	IP67, IP6K9K		
Waterproof (unmated socket):	IP67		
MATERIAL			
Housing:	Metallic		



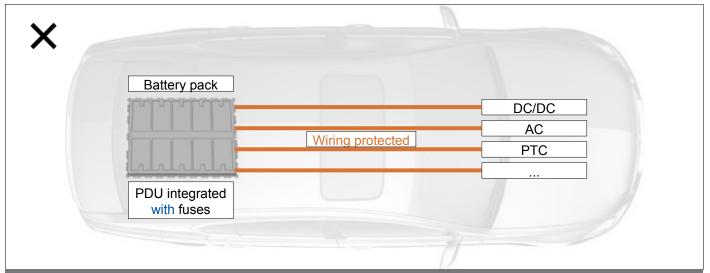






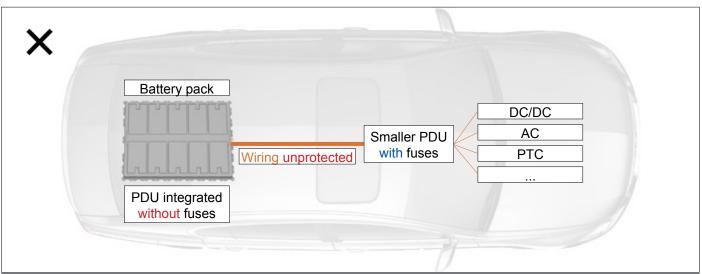
Basically, the PDC is a mini PDU-like type of connector!

#### Basic structure



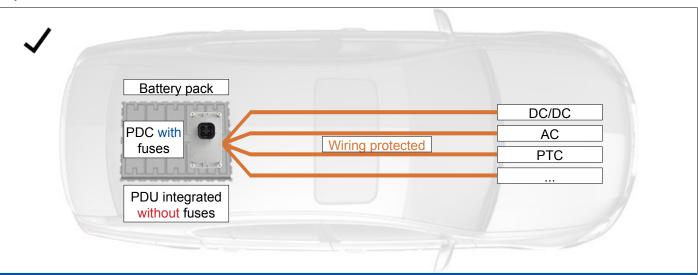
This structure **safely** secures the wiring, but once a fuse blows, its replacement requires a **complex** disassembly of the whole battery pack.

#### Workground structure

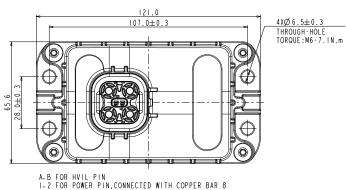


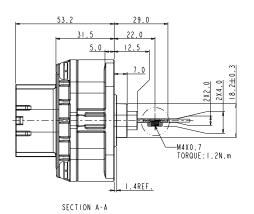
This workaround structure allows for an **easier** replacement of the fuses, which are placed in an external additional PDU. However, the wiring between the battery pack and this added PDU is **unprotected**.

# Optimized structure

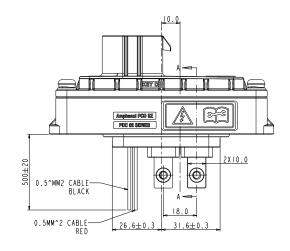


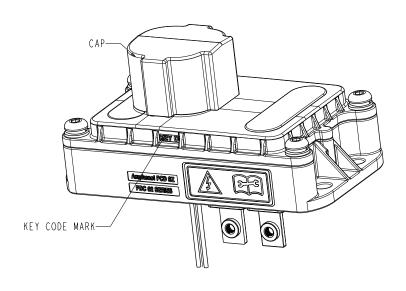
By adding a PDC connector to the battery pack, this optimized structure benefits from both a successfully protected wiring as well as an easy and effortless replacement of its fuses.



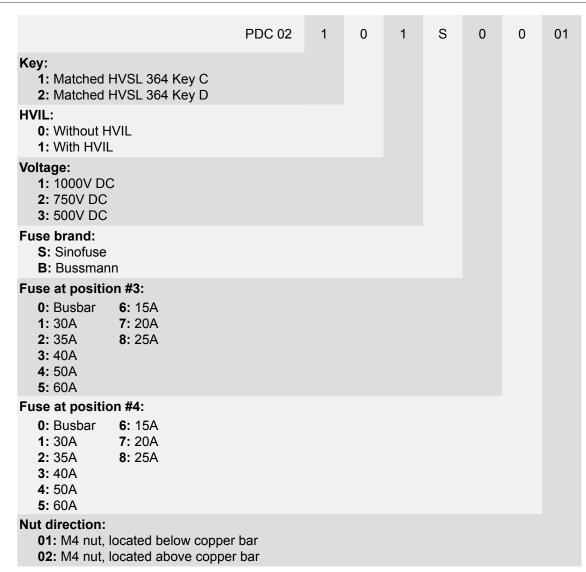


A.B FOR HVIL PIN
1.2 FOR POWER PIN, CONNECTED WITH COPPER BAR 8
3.4 FOR POWER PIN, CONNECTED WITH COPPER BAR 7, CONTAINED FUSE



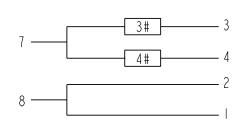


# HOW TO ORDER - EXCEL|MATE PDC



#### Remarks:

- 1. When a single fuse is loaded, the other hole can be loaded with copper bars.
- 2. When two fuses are loaded, the same brand of fuses shall be selected.



RATING VOLTAGE	SINOFUSE	BUSSMANN
	30A	35A
10007	40A	40A
	50A	50A
	I 5 A	I5A
	20A	20A
	25A	25A
750V	30A	30A
	40 A	40A
	50A	50A
	N/A	60A
		15A
		20A
		25A
500V	N/A	30A
		40A
		50A
		60A

POSITIONS 3# AND 4# CAN CARRY BUS BAR OR FUSES

# EXCEL|MATE MCMSD - TECHNICAL CHARACTERISTICS





# **KEY FEATURE**

IP2XB (Socket): Yes

# **DESCRIPTION**

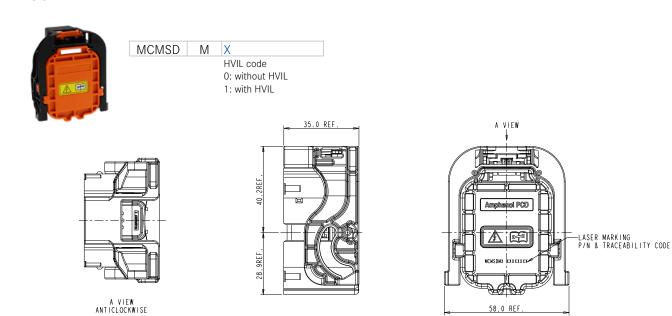
**MC**MSD is an Electric Vehicle-friendly connector that has been mainly designed for Energy Storage.

MECHANICAL			
Mating cycles	≥ 50 cycles		
ELECTRICAL			
Rated current:	350A@ ambient temperature 70°C		
Rated voltage:	1500V (DC)		
Insulation resistance:	200 MΩ Min		
Dielectric withstanding voltage:	4000V AC		
ENVIRONMENTAL			
Ambient temperature:	-40 to 70°C		
Operating temperature:	-40 to 125°C		
Waterproof (mated):	IP67, IP6K9K		
Touch-proof:	IP2XB		
STANDARDS			
RoHS			



Receptacle's cap

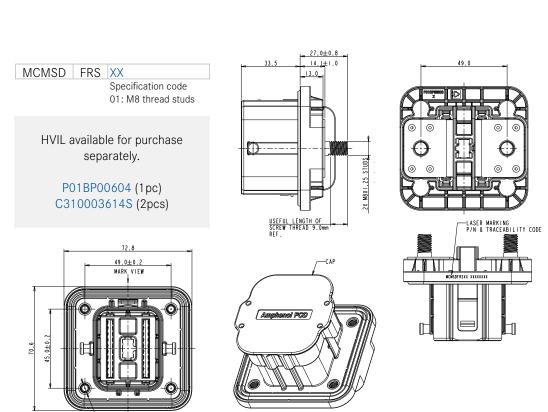
# **PLUG**



4X M5X0.8 NUT

#### **RECEPTACLE**





58.0 REF



**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**

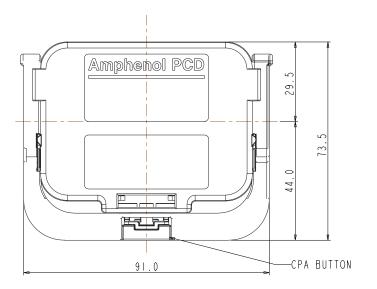
It is a tool-free solution for disconnecting the internal high voltage battery pack and protecting it from short circuit.

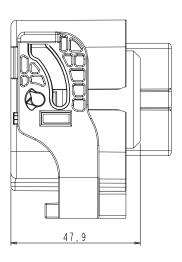
MECHANICAL

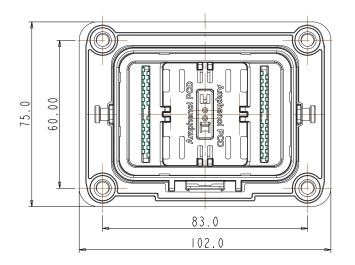
Mating cycles	≥ 50 cycles		
ELECTRICAL			
Fuse specification	up to 400A		
With fuse:			
Rated current	Current is approximately 1/3 the fuse rating (170A Max)		
Rated voltage	600 <b>V</b> to 700V DC		
With shunt:			
Rated current	170A Max		
Rated voltage	1500V DC Max		

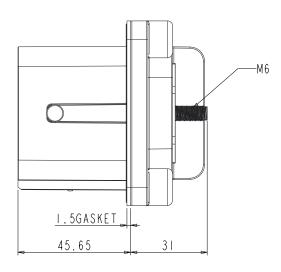
ENVIRONMENTAL		
Protection degree	IP67, IP6K9K (mated)	
Ambient temperature	-40°C to 70°C	
Storage temperature	-40°C to 85°C	
Operating temperature	-40°C to 125°C	
Flammability	UL94V0	

STANDARDS		
USCAR-2		
USCAR-37		
LV-215		
RoHS		

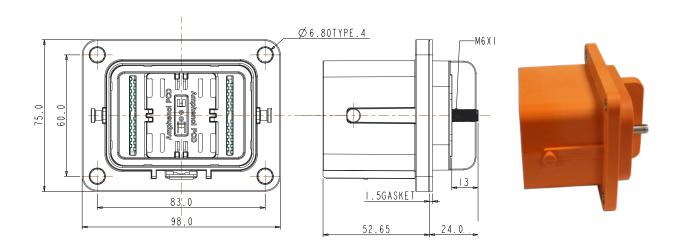




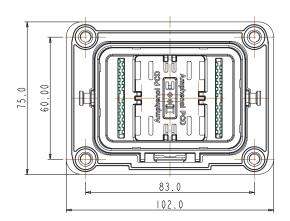


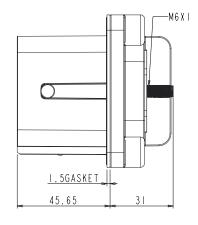


# FRONT MOUNTED



# **REAR MOUNTED**





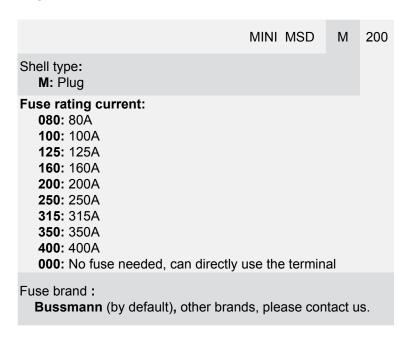


DUST CAP AVAILABLE: P/N: C270006809

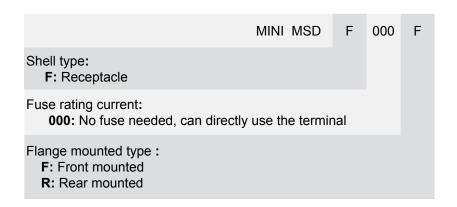




# Plug



# Receptacle







# **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

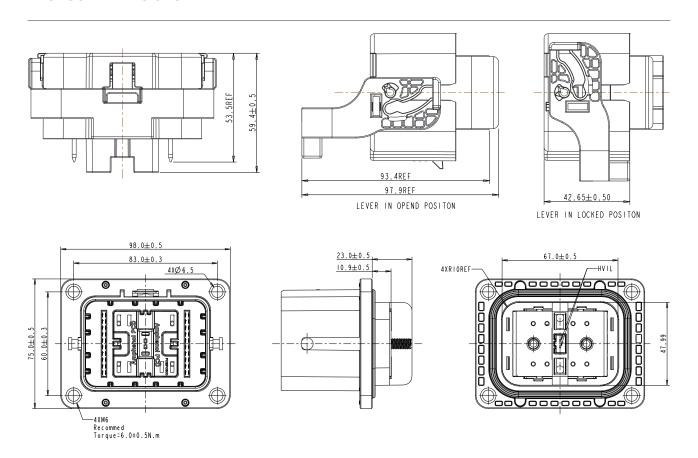
LV-215

RoHS

# **APPLICATION**

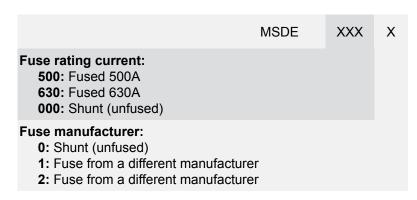
It is a tool-free solution for disconnecting the internal high voltage battery pack and protecting it from short circuit.

MECHANICAL			
Mating cycles	≥ 50 cycles		
ELECTRICAL			
Fuse specification	up to 630A		
With fuse:			
Rated current	Current is approximately 1/3 the fuse rating (170A Max)		
Rated voltage	500V DC		
With shunt:			
Rated current	350A Max		
Rated voltage	500V DC Max		
EN\	/IRONMENTAL		
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		
Flammability	UL94V0		
S	TANDARDS		
USCAR-2			
USCAR-37			

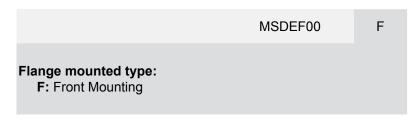


# HOW TO ORDER - EXCELIMATE MSDE

#### Plug



# Receptacle: Front Mounted Socket





# **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		

ELECTRICAL			
up to 400A			
Current is approximately 1/3 the fuse rating (220A Max)			
750V DC			
220A Max			
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		
Flammability	UL94V0		
STANDARDS			
USCAR-2			
USCAR-37			
LV-215			

# **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

RoHS

# HOW TO ORDER - EXCEL|MATE MINI MSD V

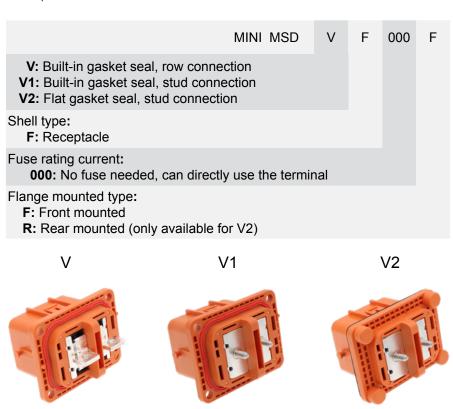
Plug: With fuse

	MINI N	/ISD	М	2002
Shell type: M: Plug				
Fuse rating current: 0802: 80A 1002: 100A 1252: 125A 1602: 160A 2002: 200A 2502: 250A 3152: 315A 3502: 350A 4002: 400A				
Fuse brand: <b>Bussmann</b> (by default), other	brands, plea	se con	tact ι	JS.

Plug: With shunt

	MINI MSE	VM	000
Shell type: <b>VM</b> : Plug, shunt			
000: No fuse needed, can directly	use the term	inal	

# Receptacle



# EXCEL|MATE MINI MSD FUSE BOX - TECHNICAL CHARACTERISTICS







# **KEY FEATURES**

Small in size Removable housing

# DESCRIPTION

• Small in size

Seal ring material

Removable housing

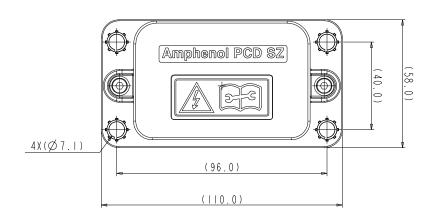
ELECTRICAL
With fuse

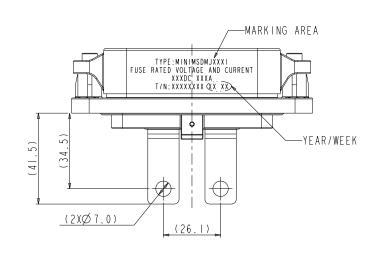
Version T (plugged version):	
80A to 315A	700V DC
350A & 400A	600V DC

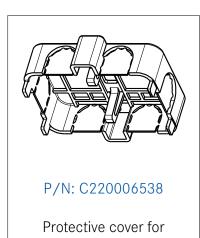
Version J (screwed version):		on):
	80A to 350A	750V DC
	400A	700V DC

ENVIRONMENTAL	
Protection degree	IP67
·	
MATERIAL	
Plastic shell material	PA66+GF
Terminal Material	Copper Alloy

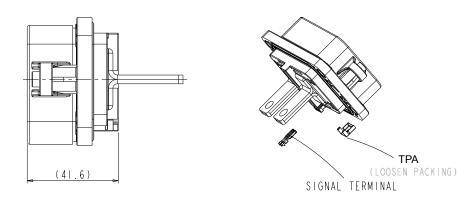
Silicone rubber







Protective cover for MINI MSD T available to purchase separately.



Signal Terminal (C310003614S) is available for purchase separately.



# Version T (plugged version):



	MINI	MSD T	080	1
Fuse rating current:				
<b>080</b> : 80A				
<b>100</b> : 100A				
<b>125</b> : 125A				
<b>160</b> : 160A				
<b>200</b> : 200A				
<b>250</b> : 250A				
<b>315</b> : 315A				
3 <b>50</b> : 350A				
<b>400</b> : 400A				
1: Bussmann				
2: Sinofuse				



# **Version** J (screwed version):



	MINI	MSD J	080	4
Fuse rating current:				
<b>080</b> : 80A				
<b>100</b> : 100A				
<b>125</b> : 125A				
<b>160</b> : 160A				
<b>200</b> : 200A				
<b>250</b> : 250A				
<b>315</b> : 315A				
3 <b>50:</b> 350A				
<b>400</b> : 400A				
4: Sinofuse				



# **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

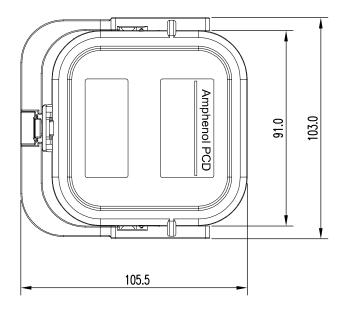
Various fuse ratings

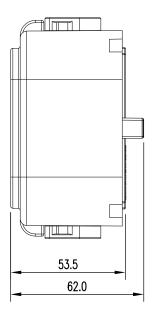
Receptacle can be front or rear mounted

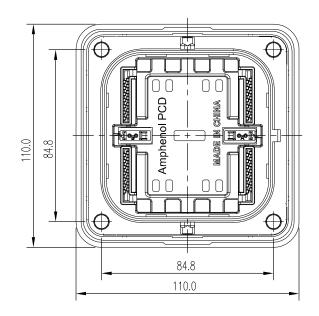
# APPLICATION

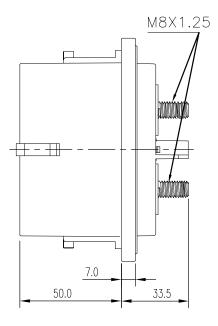
It is a tool-free solution for disconnecting the internal high voltage battery pack and protecting it from short circuit.

MECHANICAL			
Mating cycles	≥ 50 cycles		
ELECTRICAL			
Fuse specification	up to 630A		
With fuse:	With fuse:		
Rated current	Current is approximately 1/3 the fuse rating		
Rated voltage	500V DC to 600V DC		
With shunt:			
Rated current	260A Max @ Ambient 70°C		
Rated voltage	1000V DC Max		
ENVIRC	NMENTAL		
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		
Flammability	UL94V0		
STANDARDS			
USCAR-2			
USCAR-37			
LV-215			

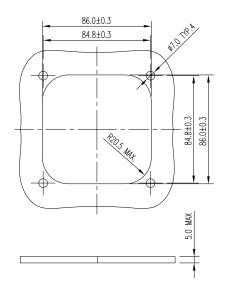






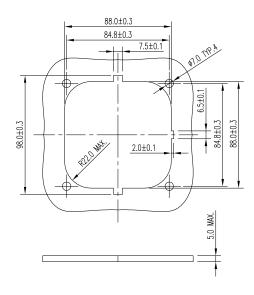


# FRONT MOUNTED





# **REAR MOUNTED**





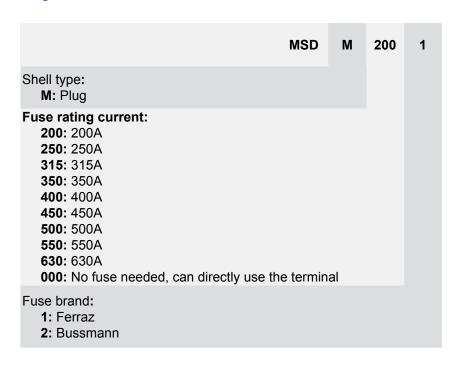
DUST CAP AVAILABLE P/N: C270006810



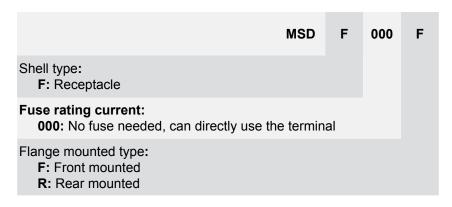


# HOW TO ORDER - EXCELIMATE MSD

# Plug



# Receptacle



# 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

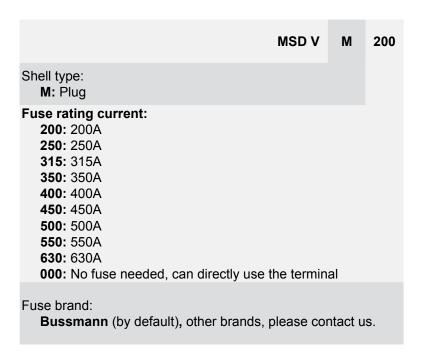
Receptacle can be front or rear mounted

# **APPLICATION**

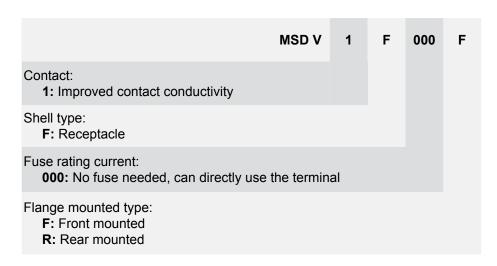
It is a tool-free solution for disconnecting the internal high voltage battery pack and protecting it from short circuit.

MECHANICAL		
Mating cycles	≥ 50 cycles	
ELECTRICAL		
Fuse specification	up to 630A	
With fuse:		
Rated current	Current is approximately 1/3 the fuse rating	
Rated voltage	800V DC	
With shunt:		
Rated current	260A Max @ Ambient 70°C	
Rated voltage	1000V DC Max	
ENVIRC	NMENTAL	
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	
Flammability	UL94V0	
STANDARDS		
USCAR-2		
USCAR-37		
LV-215		
RoHS		

# Plug



# Receptacle



# EXCELIMATE MSD XL - TECHNICAL CHARACTERISTICS



# **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		
up to 630A		
With fuse:		
300A		
1000V DC		
With shunt:		
350A		
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	
Flammability	UL94V0	
OTANDADDO		

STANDARDS				
USCAR-2				
USCAR-37				
LV-215				
RoHS				

# **KEY FEATURES**

1 x integrated internal HVIL

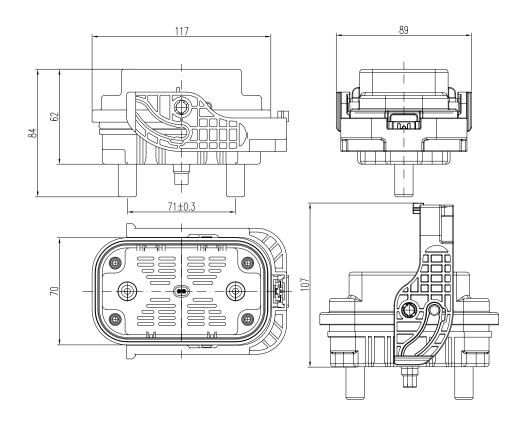
Unique cooling structure

High current contacts with Amphenol Radsok technology

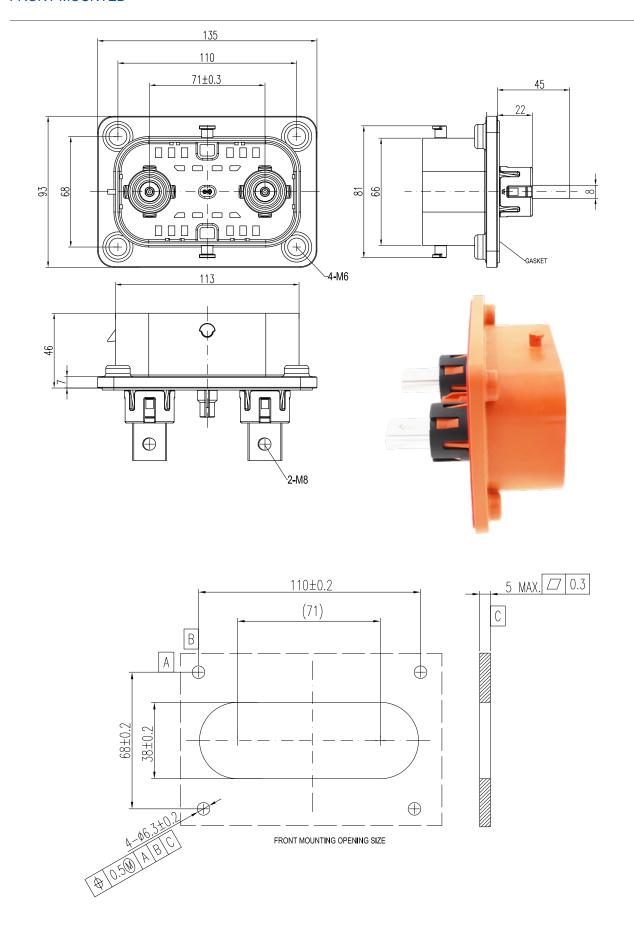
No tools required to unmate

Various fuse ratings

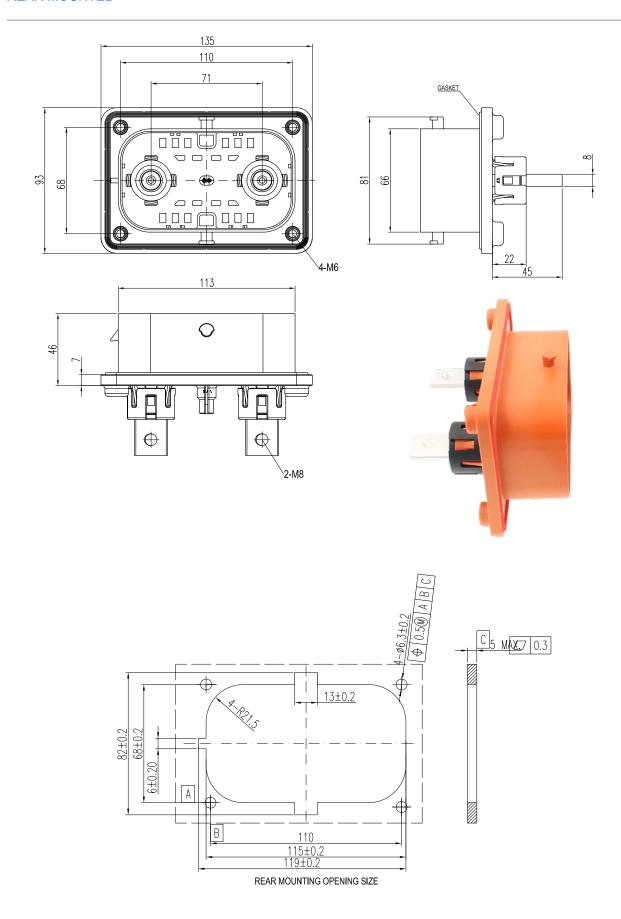
Receptacle can be front or rear mounted



# FRONT MOUNTED

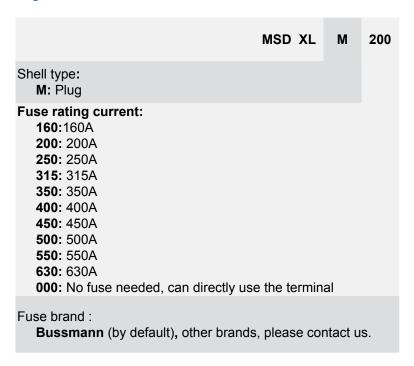


# **REAR MOUNTED**

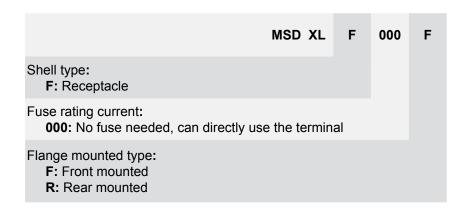


# HOW TO ORDER - EXCEL|MATE MSD XL

# Plug



# Receptacle

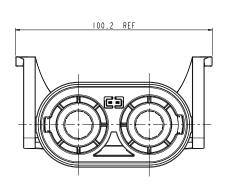


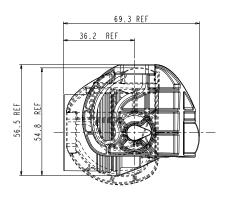
# CHD SERIES - CHD14 2-PIN SHUNT

# PLUG



CHD 14 06 2 N 1 1 SC	-	with power terminal & with HVIL
CHD 14 06 2 N 0 0 SC	<b>&gt;</b>	without power terminal & without HVIL

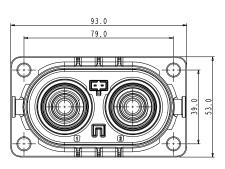


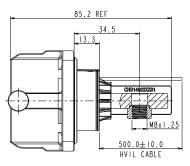


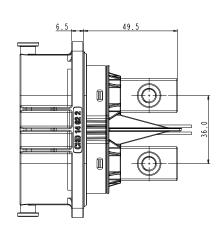
# RECEPTACLE



CHD	14	02 2	X	X	01
			A: coding A	0: without HVIL	
			B: coding B	1: with HVIL	
			C: coding C		









# Amphenol PCD Shenzhen

Building C Dagang Industrial Zone Guangming District Shenzhen 518132 China

Tel.: +86 755-8173-8000

Email: inquiry@amphenolpcd.com.cn

www.amphenolpcd.com.cn



#### Notes:

Amphenol PCD Shenzhen has made every effort to ensure that the information contained in this catalog is accurate at the time of publication. Specifications or information stated in this publication are subject to change without notice.

Amphenol PCD Shenzhen reserves the right to clarify this catalog.