

Connector Line-up for Power Storage

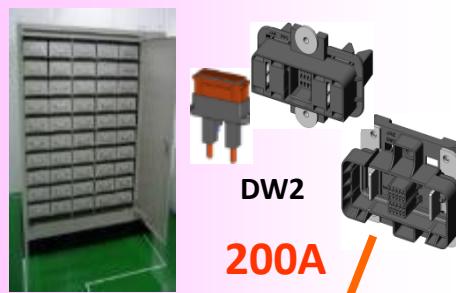
Technology to Inspire Innovation

Large-scale power storage battery (>25kWh)
Plant, Building, etc



DW1
500A

Mid-range power storage battery (10-25kWh)
Industrial, Office, etc



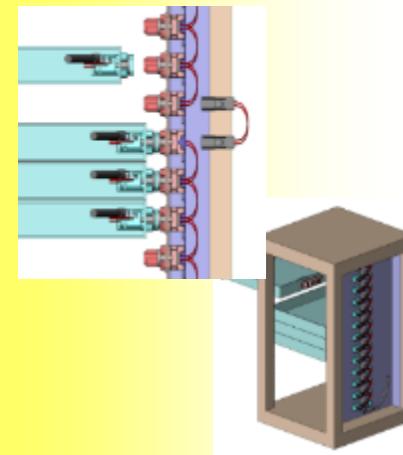
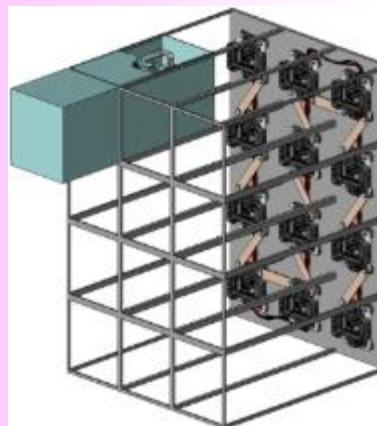
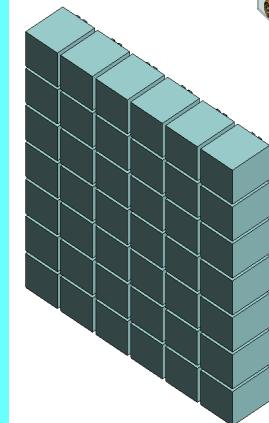
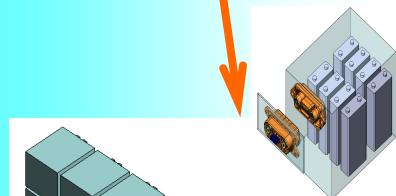
DW2
200A

Rechargeable battery (<10kWh)
Residential, Commercial, etc



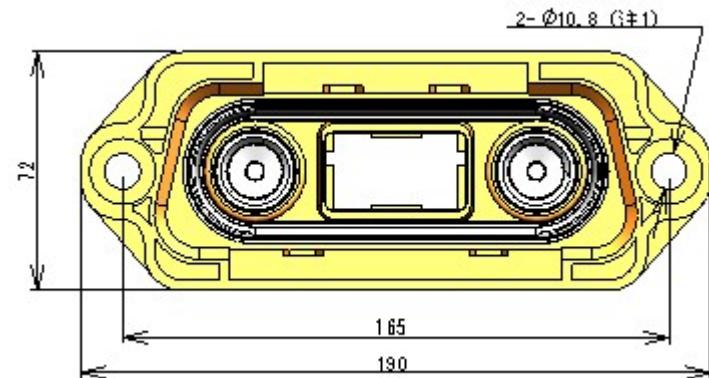
DW3
150A

For 1U rack (19 inch)

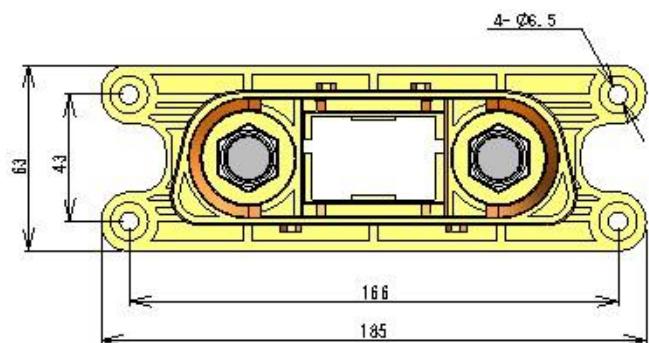


Power pins	2
Signal pins	20
Rated current	Power 500 A
	Signal 2 A
Rated voltage	Power 600 V
	Signal 100 V
Overvoltage category	4
Pollution grade	3
Temperature increase at power portion	45 C
Ambient temperature	-25 to +60 C
Allowable temp at power portion	105 C

Receptacle



Plug

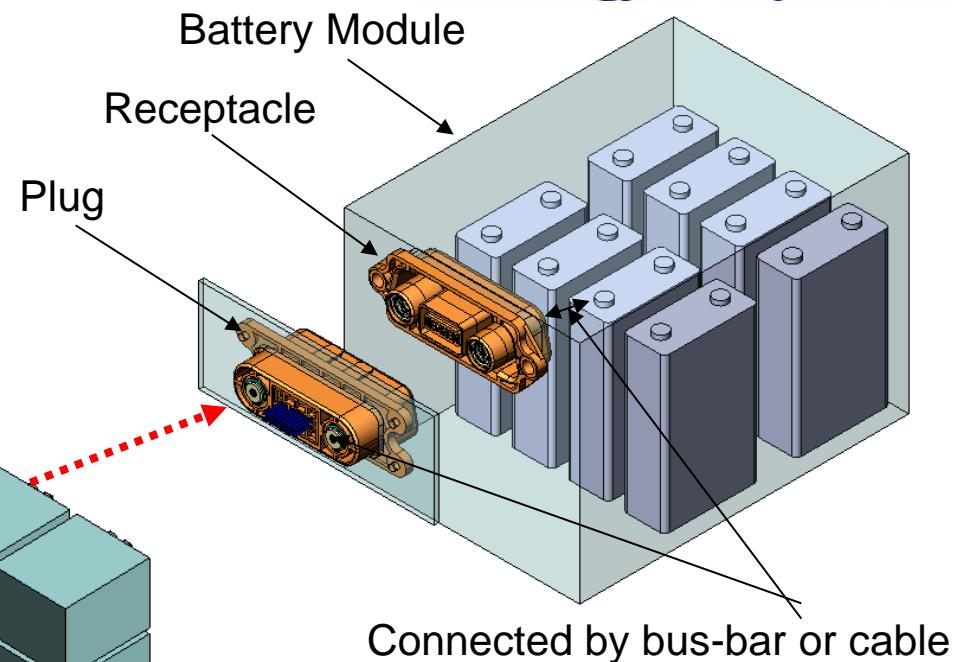
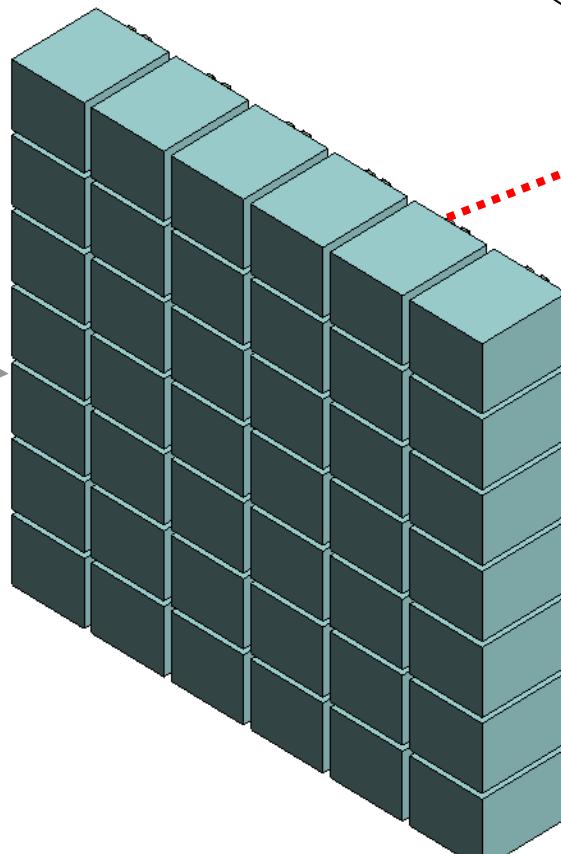


DW1 Application Example

JAE

Technology to Inspire Innovation

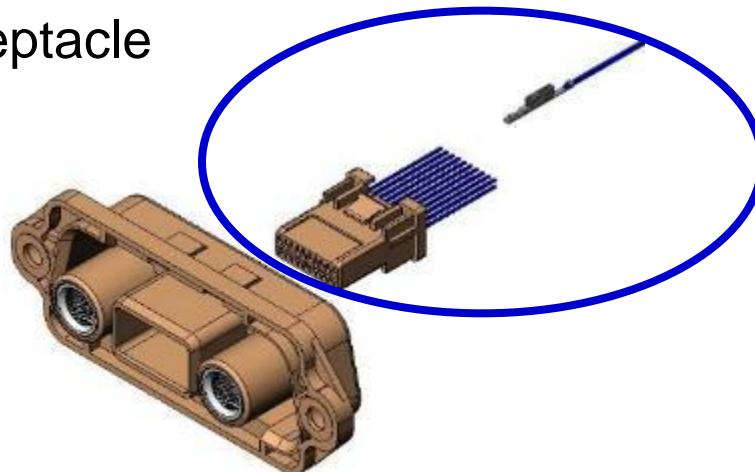
Large-scale Power Storage



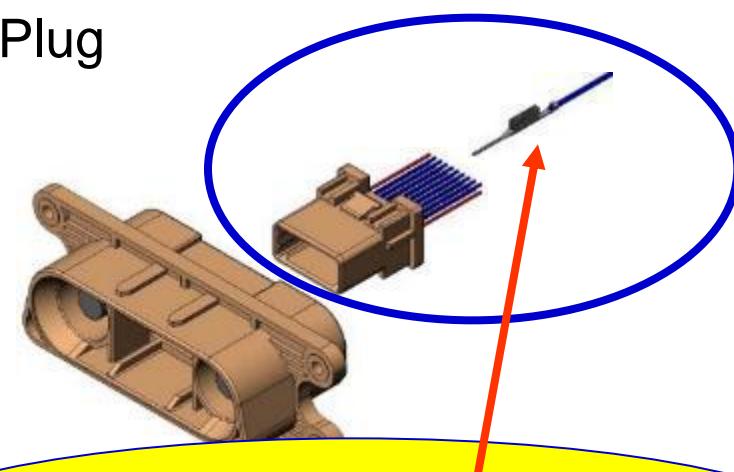
Battery Module mounting image

Rack and Panel

Receptacle

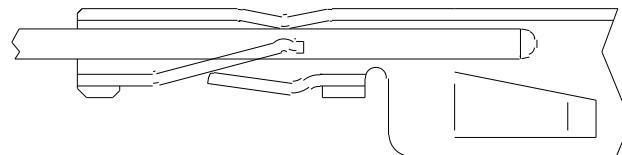


Plug



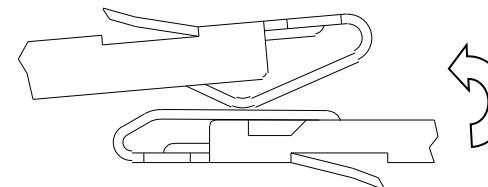
Stepped mating with a
1.5mm recessed contact line

Box-type
Contact Structure



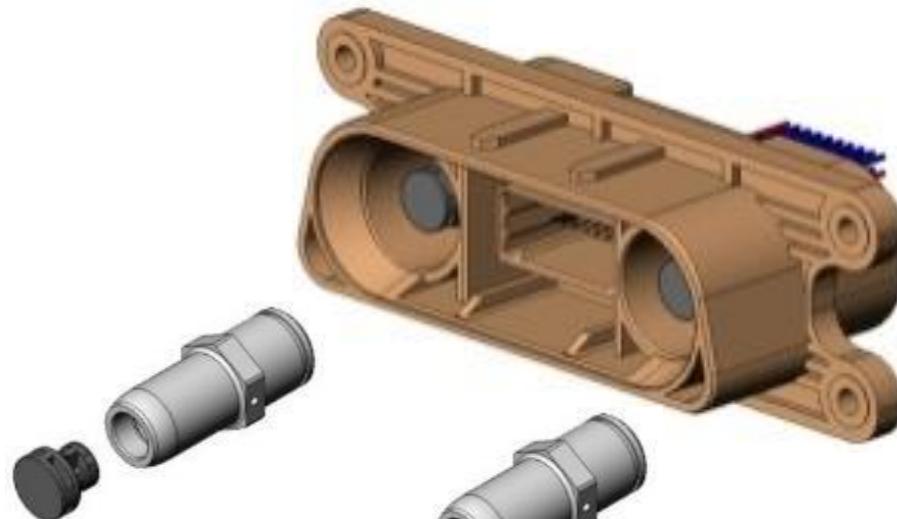
2-point contact → Steady Connection

Better than inferior bellows-type
1 point contact → weak with dust



Same concept as high-reliability automotive contacts

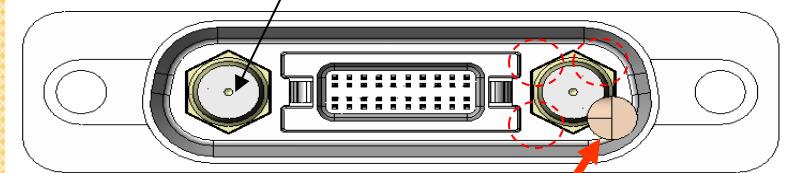
Plug



Guard Cap

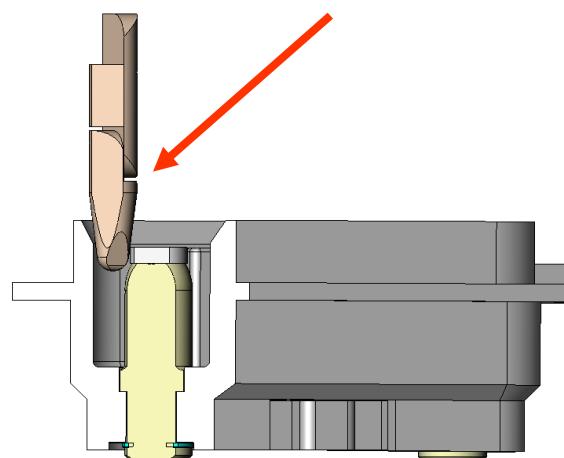
Details

Guard Cap



Electrical Appliance and Material Safety
(J60950)

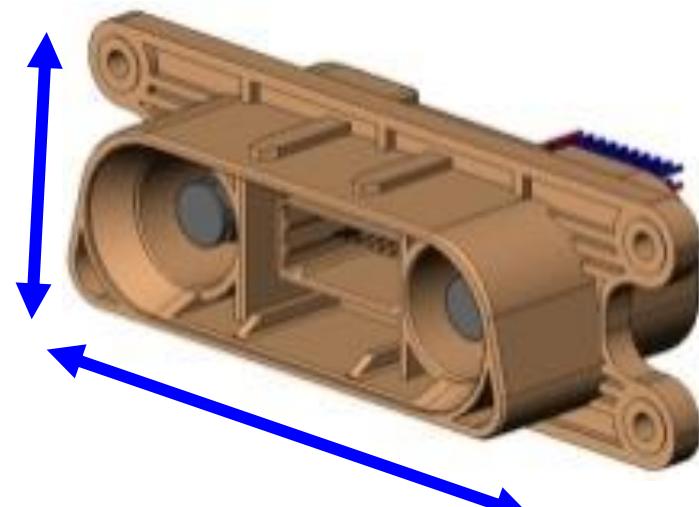
Finger test cleared ($\varphi 12\text{mm}$)



Receptacle



Plug



Shoulder Bolt

Floating Range
2.75mm, two-axis

Single robust insulator

DW2 Mid-Range Power Series



Technology to Inspire Innovation

Large-scale power
storage battery
(>25kWh)
Plant, Building, etc



DW1
500A

Mid-range power
storage battery
(10-25kWh)
Industrial, Office, etc

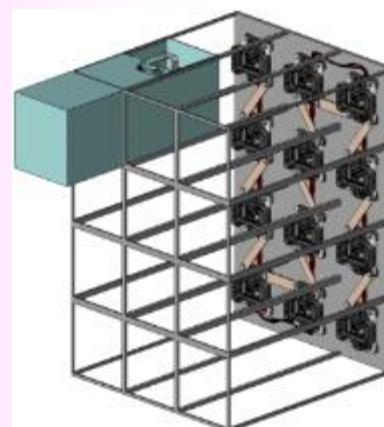
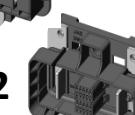


DW2
200A

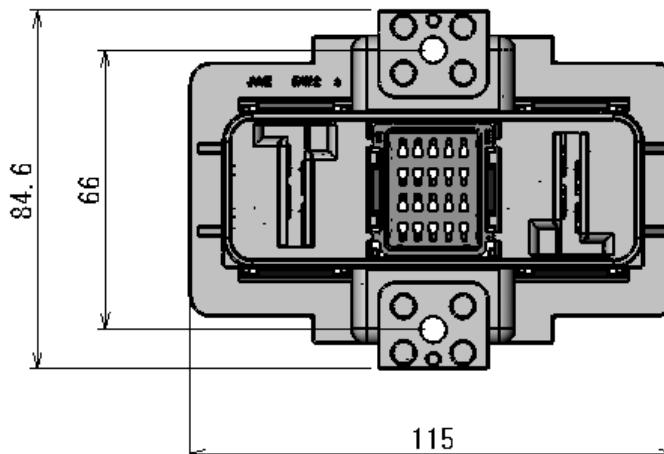
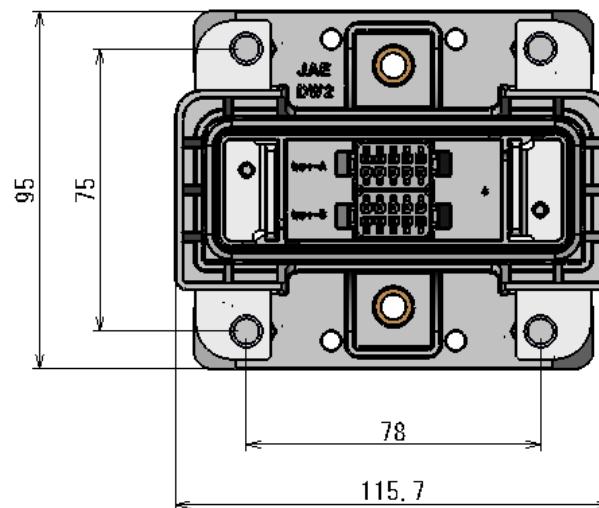
Rechargeable
battery
Residential,
Commercial, etc



DW3
150A



Power pins	2
Signal pins	20
Rated current	Power 200 A
	Signal 2 A
Rated voltage	Power 1000 V
	Signal 100 V
Overvoltage category	4
Pollution grade	3
Temperature increase at power portion	45 C
Ambient temperature	-25 to +60 C
Allowable temperature at power portion	105 C

Movable side (battery side)**Fixed side (panel side)**

DW2 Application Example

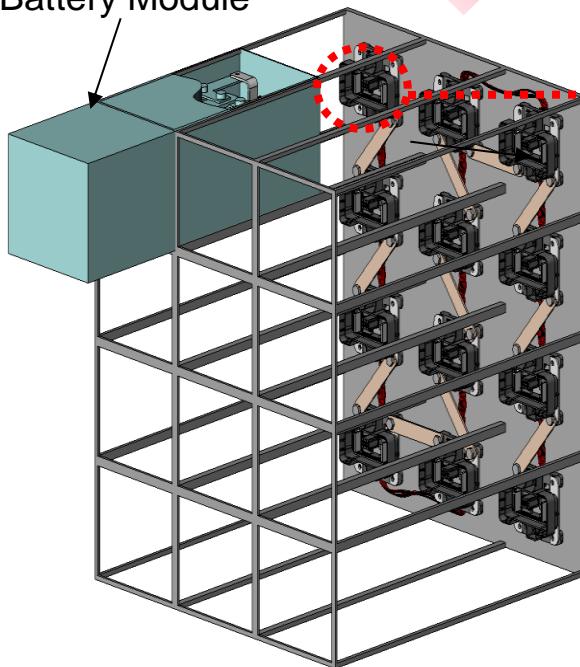
JAE

Technology to Inspire Innovation

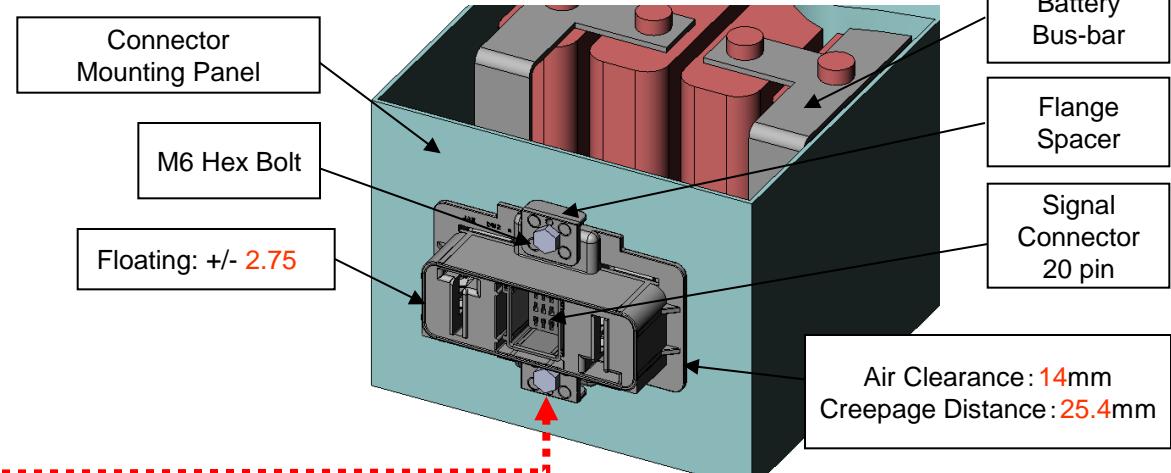
Mid-range Power Storage



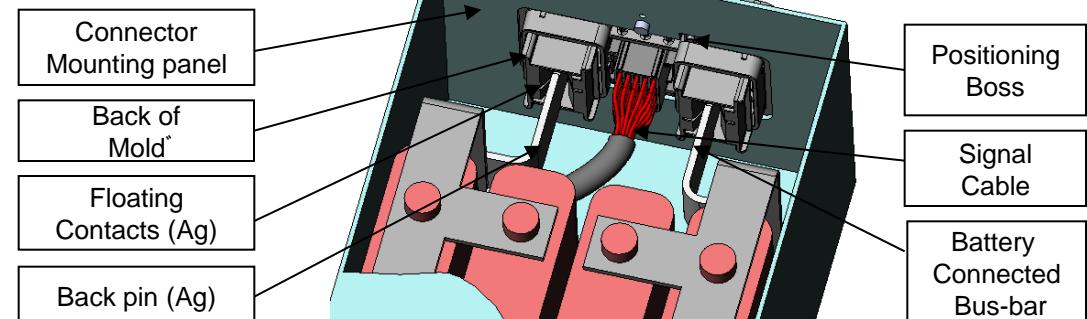
Battery Module



Rack and Panel



Battery Module Exterior

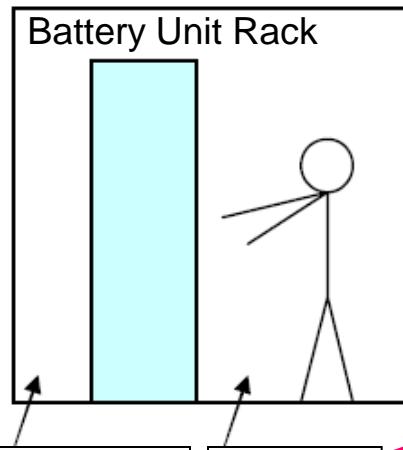


Battery Module Interior

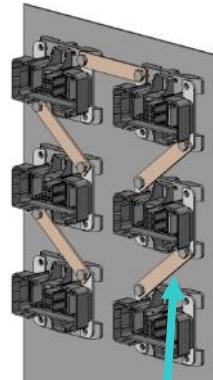
DW2 Mounting Features

JAE

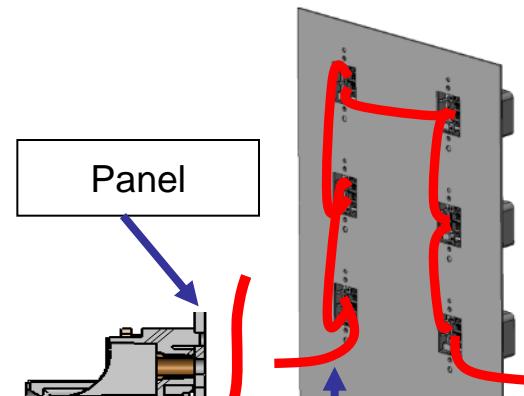
Technology to Inspire Innovation



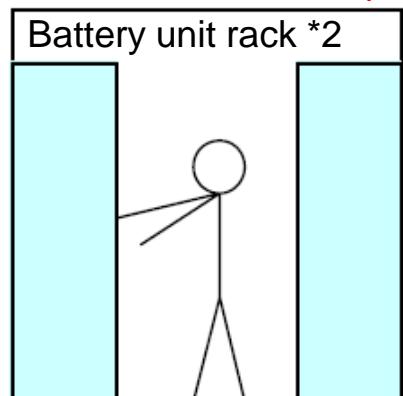
Connector side



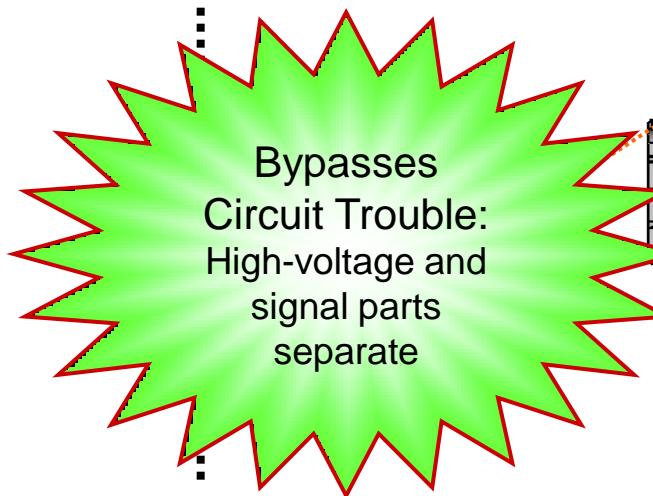
Back of Panel



Conerves Space:
Maintenance
possible from the
front side



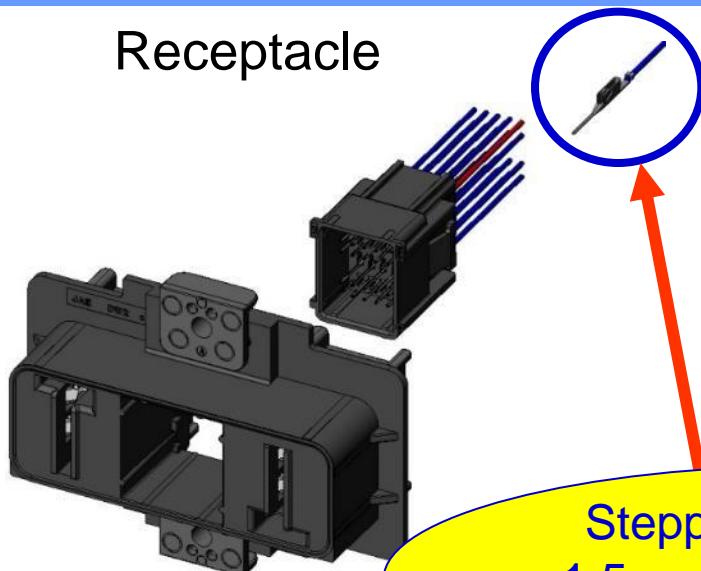
Bypasses
Circuit Trouble:
High-voltage and
signal parts
separate



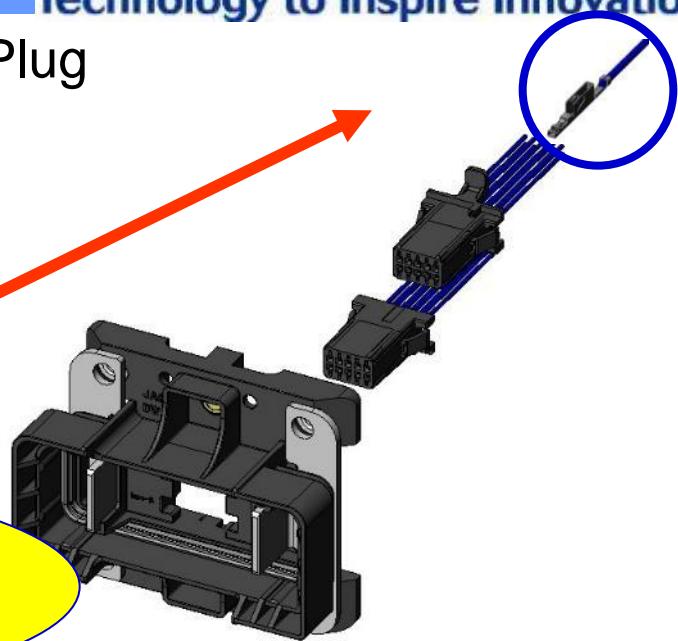
Cross-section

2 racks possible by placing the
racks flat against the walls

Receptacle

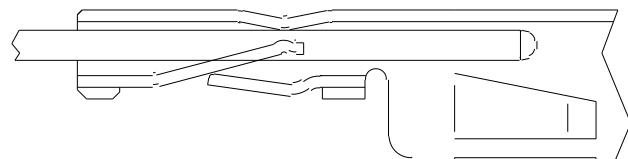


Plug



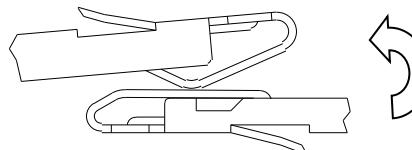
Stepped mating with a
1.5mm recessed contact
line

Box-type Socket Contact Structure



2-point contact → Steady Connection

Better than inferior bellows-type
1-point contact → weak with and dust

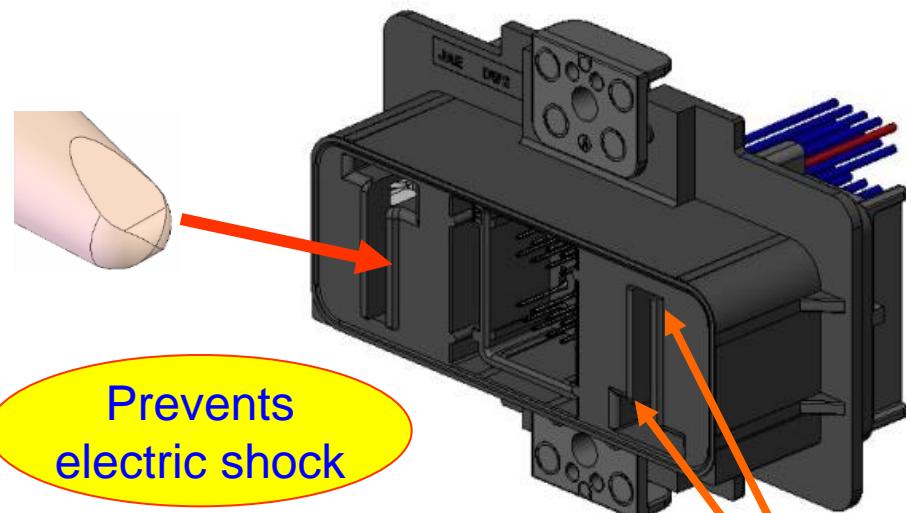


Same concept as high-reliability automotive contacts

Power contact: rated at 200A

Flame retardant 94-V0

Receptacle



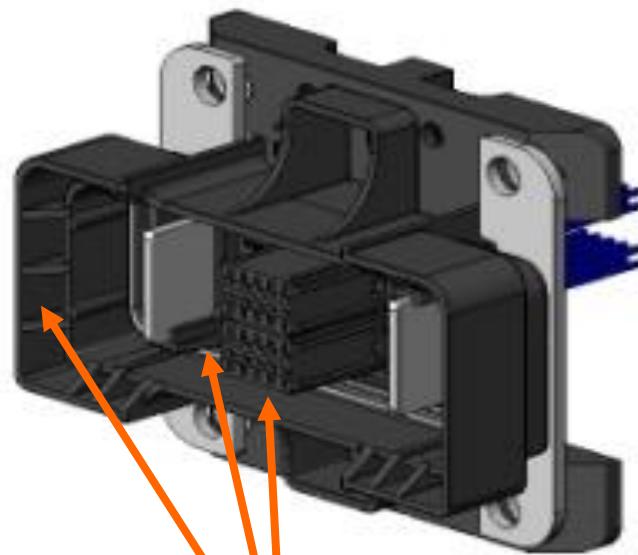
Electrical Appliance and Material Safety (J60950)

Finger test cleared ($\phi 12\text{mm}$)

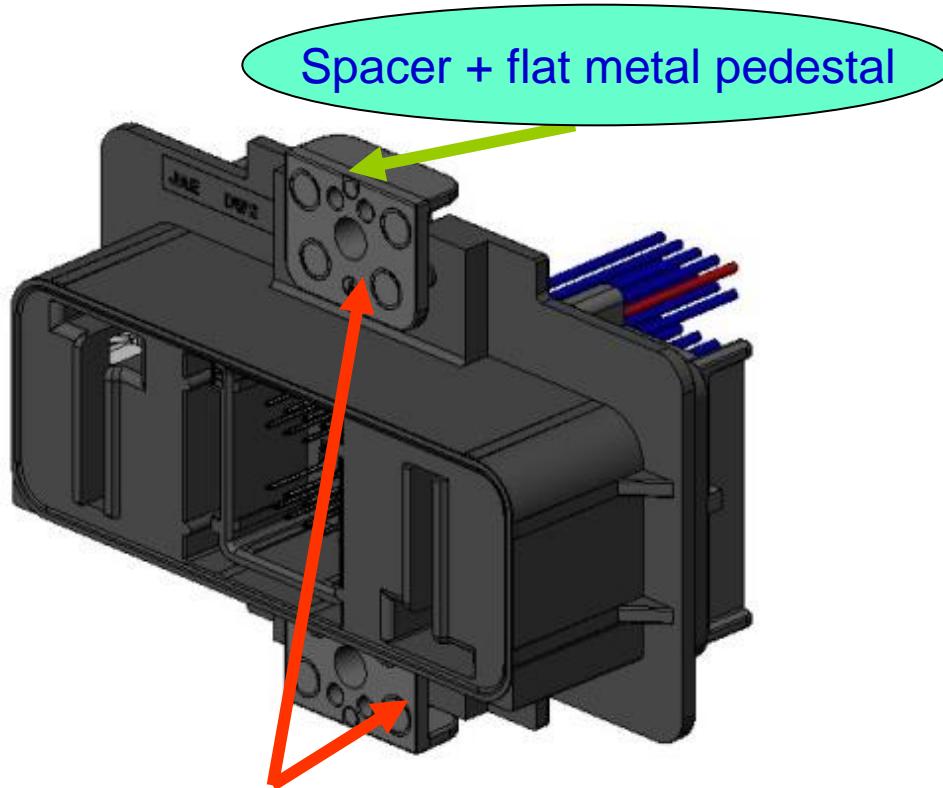
4-point contact

Mold and rubber: 94-V0

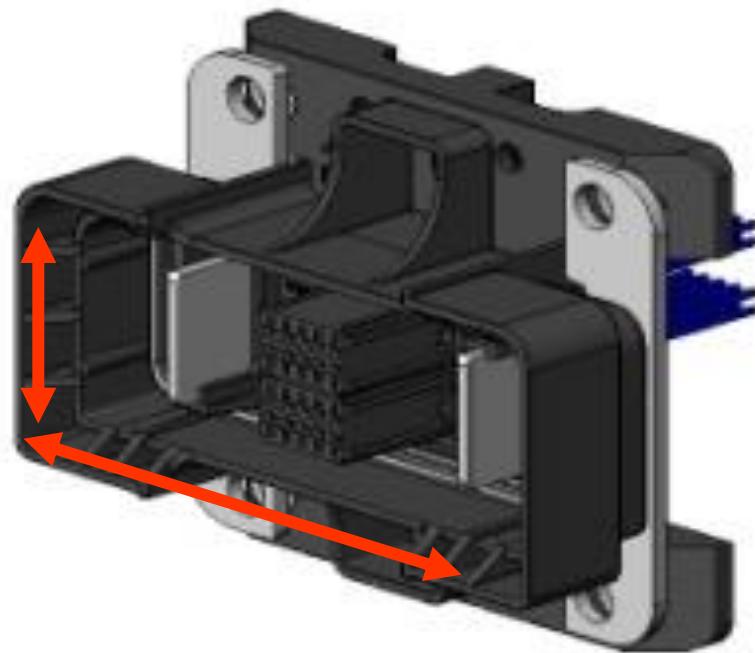
Plug



Receptacle



Plug



Floating range: +/- 2.75mm

Mating guide: 6.30mm

Single robust insulator, easy mating guide

DW3 Rechargeable Battery Series



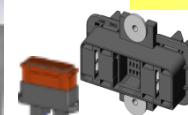
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Mid-range power
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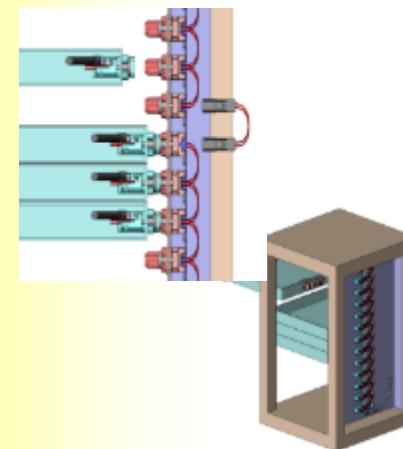
DW2
200A

Rechargeable
battery
Residential,
Commercial, etc



DW3
150A

For 1U rack
(19 inch)



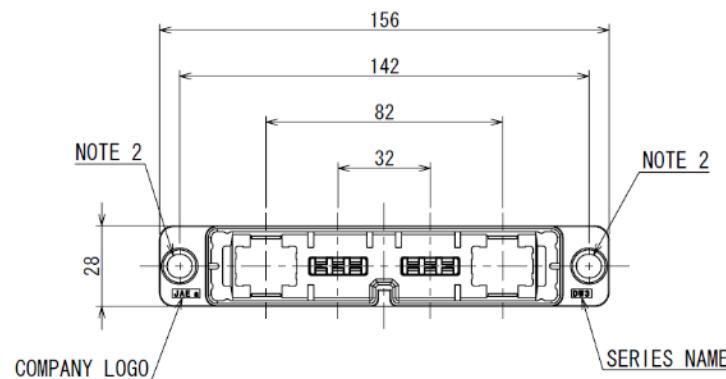
DW3 Specifications



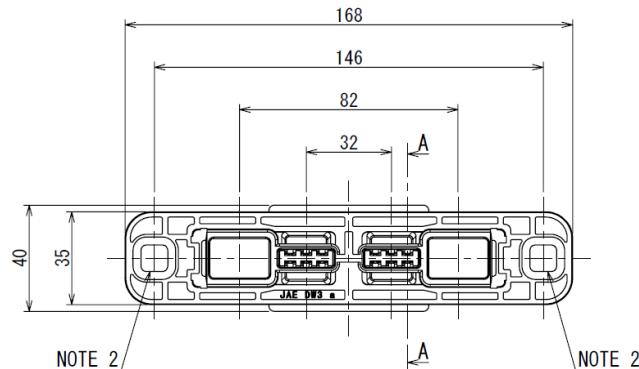
Technology to Inspire Innovation

Item	Power	Signal
Pin count	2 pins	24 pins
Rated current	150 A	2 A
Rated voltage	1,000 V	100 V
Contact resistance	Initial: Max. 0.2	Initial: Max. 20 After evaluation: Max. 30
Cable	Bus bar: Width 15 +/- 1mm Thickness 3 +/- 0.1mm	AWG22 (0.3mm ²) Outer diameter of coated cable: 1.5mm
Durability	100 times	
Overvoltage category	4	
Pollution grade	3	
Ambient temperature	-25 to 60 C	
Temperature increase at power contact	Max. 45 C	
Allowable temperature at power contact	Max. 105 C	

Receptacle



Plug

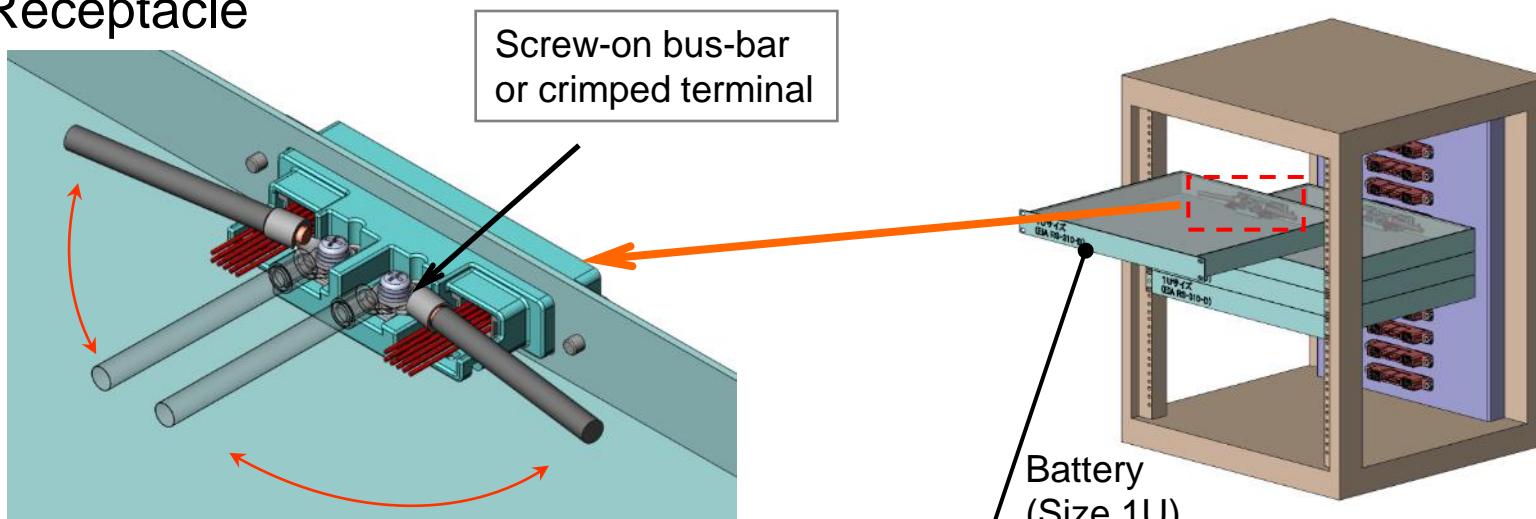


DW3 Application Example

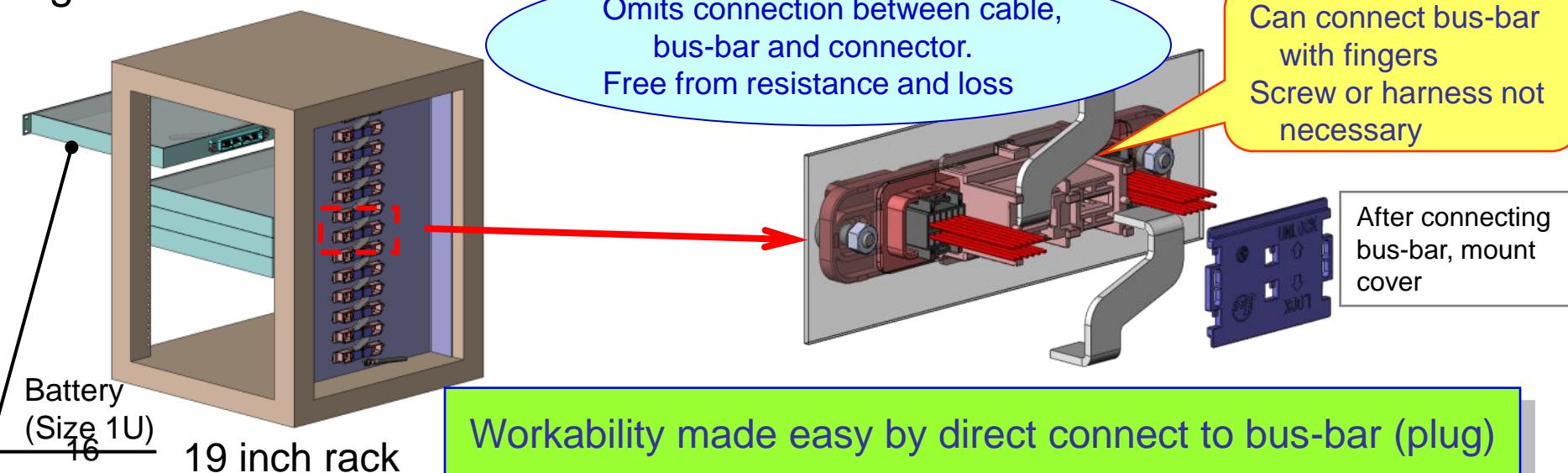


Technology to Inspire Innovation

Receptacle



Plug

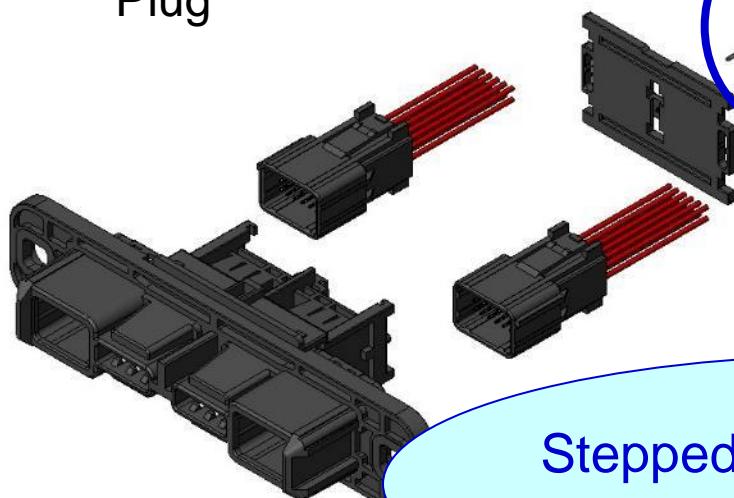


DW3 Signal Contacts

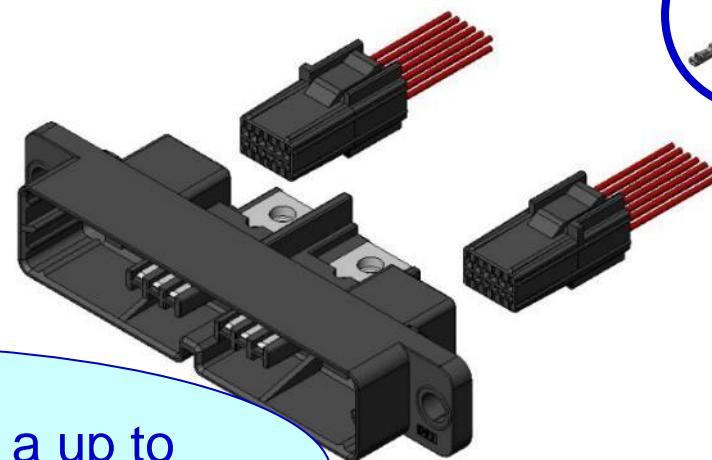


Technology to Inspire Innovation

Plug

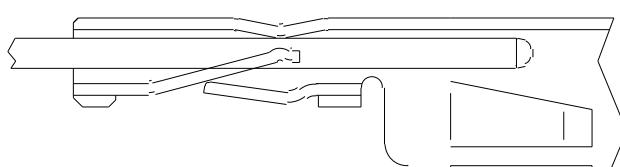


Receptacle



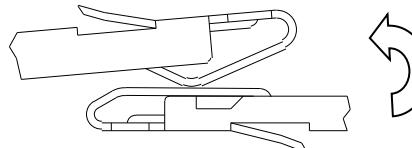
Stepped mating with a up to
4.0mm contact spacing

Box-type Socket Contact Structure



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Better than inferior bellows-type
1-point contact → weak with and dust

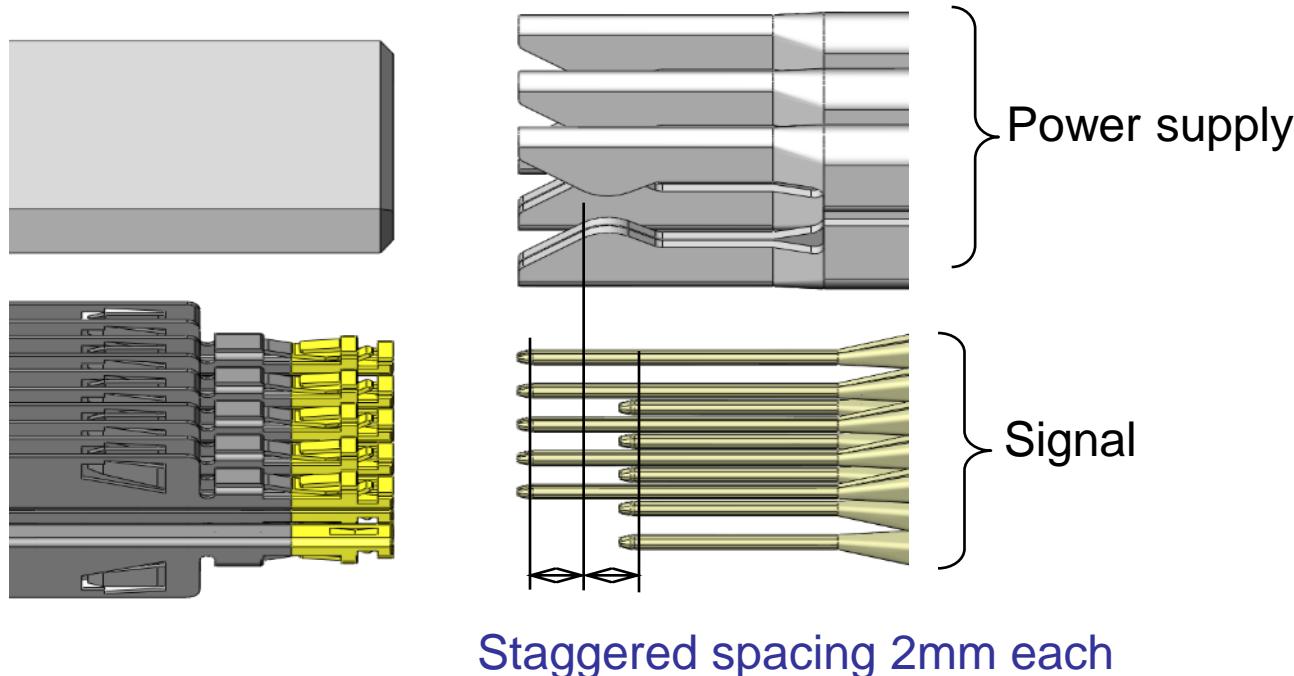


Same concept as high-reliability automotive contacts

DW3 3-Step Mating Sequence



Technology to Inspire Innovation



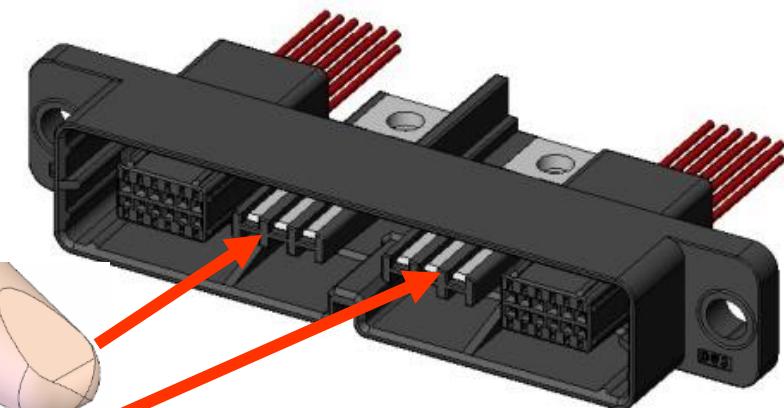
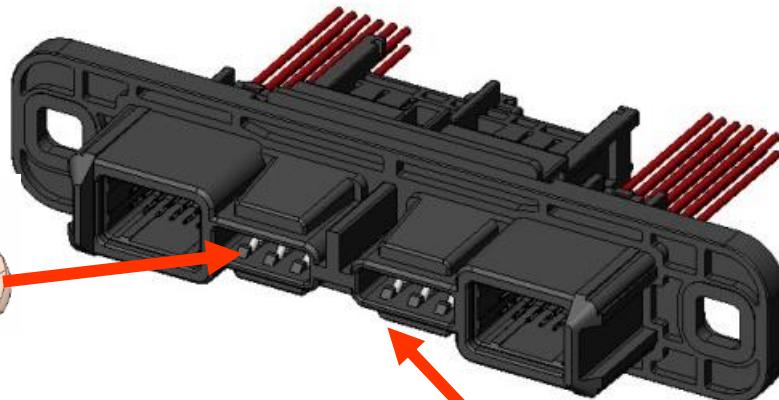
3-step sequence available by using different pin lengths

- 1) Start connecting → Power connect → Complete connection
- 2) Start unplug → Power unplug → Complete unplug

3-steps sequential signal pin

Plug

Receptacle



Electrical Appliance and
Material Safety (J60950)

Finger test cleared ($\phi 12\text{mm}$)

Prevents
electric shock

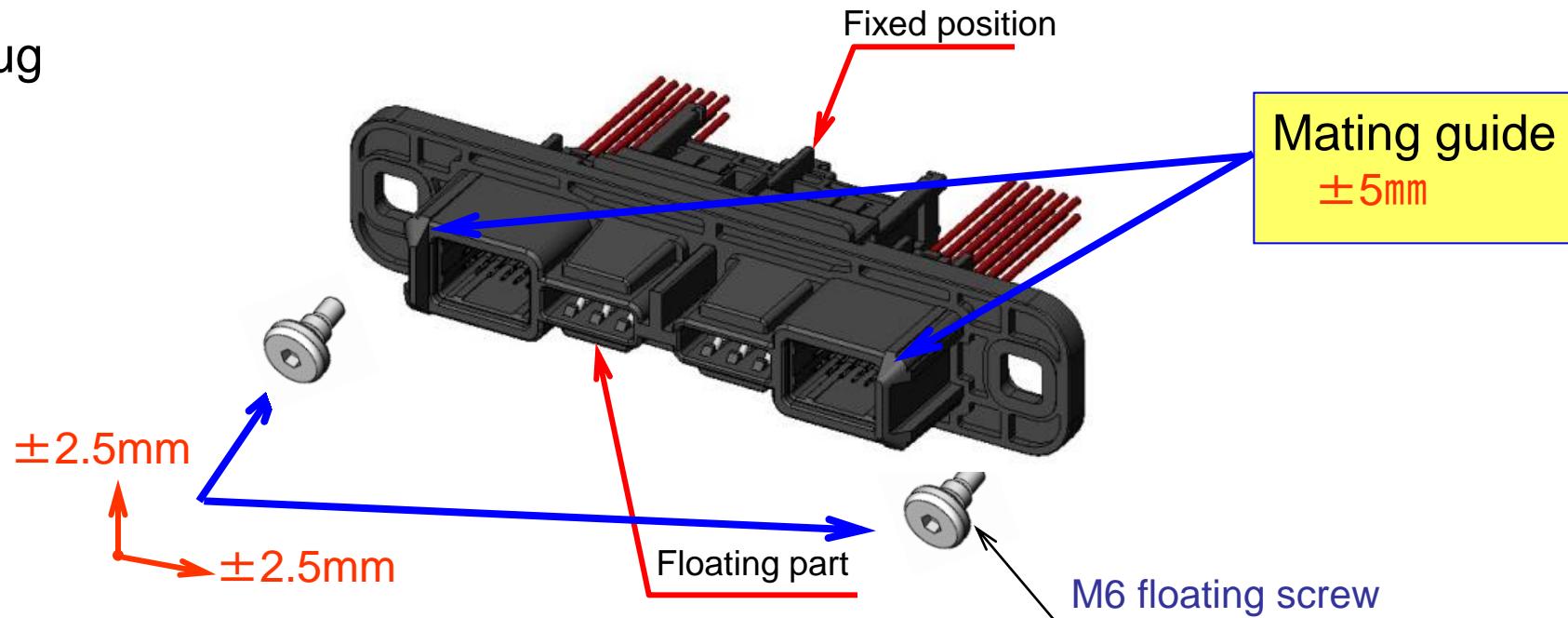
Both plug and receptacle have shock prevention design

DW3 Floating Range, Connection Guide



Technology to Inspire Innovation

Plug



Floating range
±2.5mm

Acceptable position gap ±2.0mm between fixed position and center of mounted panel

No need to use expensive high-accuracy racks