

SHENZHEN KINGHELM ELECTRONIC CO., LTD.

Model: KH-MPL04B-4TJW

Product Name: 4-core module power connector

Product configuration: 4-core module power connector plug X1
4-core module power connector socket X1
Φ 3 jack X4
Screw X2

Edition: 1.0

Company Approval		
Prepared		
Checked		
Approved		

Customer Approval		
QC		
Engineering		
Development Department		

4-core module power connector plug

FEATURES

- The charging module interface and AC input interface (plugs) are designed and developed with reference to the standard of electric vehicle charging equipment set by State Grid Corporation of China.

Technical Specifications

- Working current: 40A (ϕ 3.0)
- Working voltage: 600V (AC)
- Contact resistance: $\leq 1\text{m } \Omega$
- Insulation resistance: $\geq 3000\text{m } \Omega$ (normal)
- Withstand voltage: 3000V (AC)
- Mechanical life: 500 times

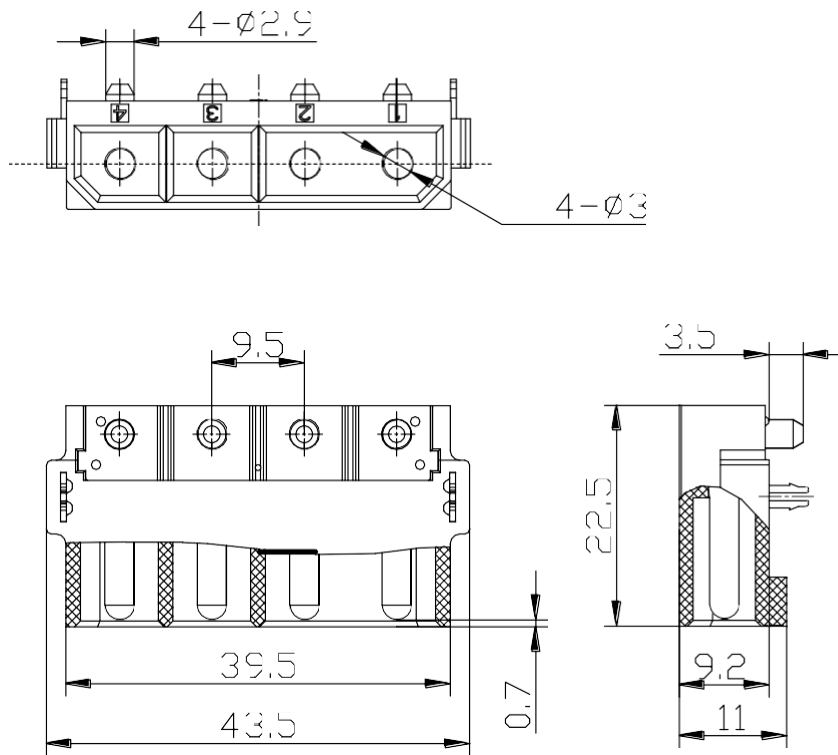
Environmental Performance

- Working temp: $-55\text{ }^{\circ}\text{C} \sim +125\text{ }^{\circ}\text{C}$
- Relative humidity: 90% \sim 95% ($40 \pm 2\text{ }^{\circ}\text{C}$)
- Vibration: 10Hz \sim 500Hz, 98m/s, instant break $\leq 1\text{US}$
- Impact: 294m/s, instant break $\leq 1\text{US}$
- Salt spray: neutral steady-state salt spray (5% NaCl) for 48h (contacts)

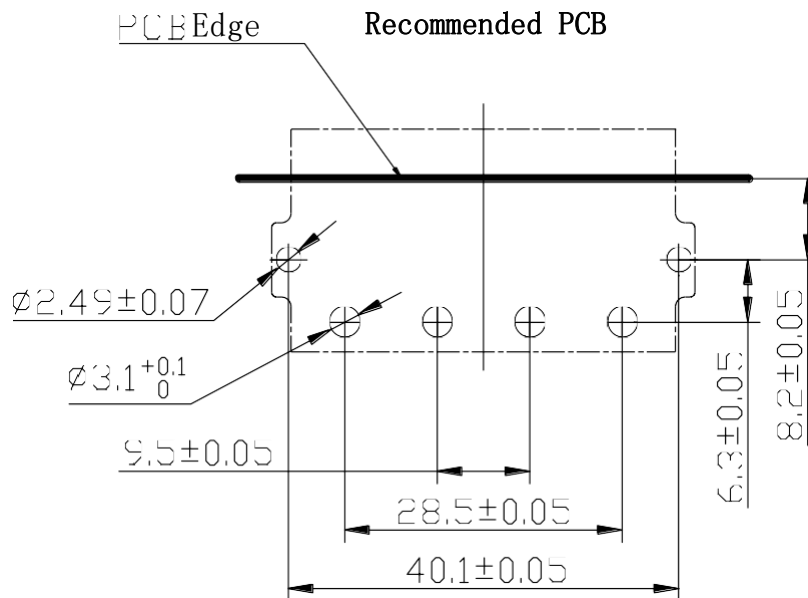
Materials and Surface Treatment

- Contact terminal: high-conductivity copper, silver-plating ($3 \sim 4\text{ } \mu\text{m}$)
- Fixed bracket: Phosphor copper, nickel-plating
- Insulator: PBT (UL94-V0 Black)
- The materials and manufacturing process are ROHS-compliant.

Appearance and installation Dimensions (unspecified tolerance shall be calculated as GB/T1804-m, unit: mm)



Recommended PCB Dimensions: (unspecified tolerance shall be calculated as $\pm 0.05\text{mm}$)



4-core module power connector socket

FEATURES

- The charging module interface and AC input interface (plugs) are designed and developed with reference to the standard of electric vehicle charging equipment set by State Grid Corporation of China.

Technical Specifications

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- Contact resistance: $\leq 1\text{m } \Omega$
- Insulation resistance: $\geq 3000\text{m } \Omega$ (normal)
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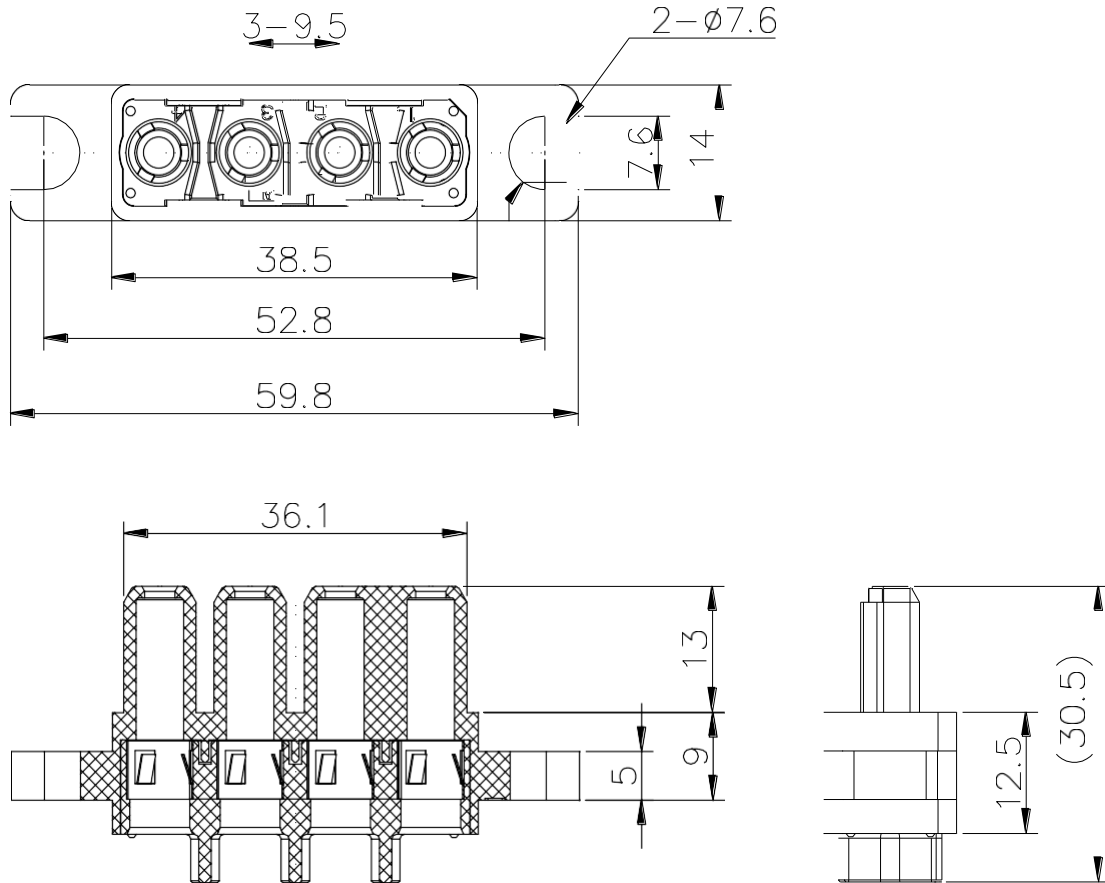
Environmental Performance

- Working temp: $-55\text{ }^{\circ}\text{C} \sim +125\text{ }^{\circ}\text{C}$
- Relative humidity: 90% \sim 95% ($40 \pm 2\text{ }^{\circ}\text{C}$)
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- Impact: 294m/s, instant break $\leq 1\text{US}$
- Salt spray: neutral steady-state salt spray (5% NaCl) for 48h (contacts)

Materials and Surface Treatment

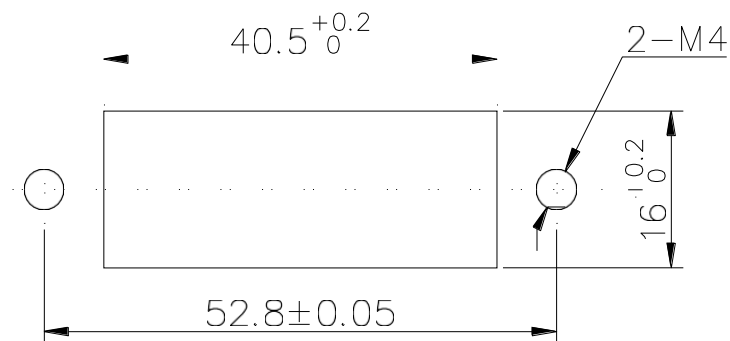
- Locating detent: beryllium copper
- Insulator: PBT (UL94-V0 Black)
- The materials and manufacturing process are ROHS-compliant.

Appearance and installation Dimensions (unspecified tolerance shall be calculated as ± 0.5 , unit: mm)



Recommended PCB Dimensions: (unspecified tolerance shall be calculated as $\pm 0.05\text{mm}$)

Recommended PCB Dimensions



φ3 Jack

FEATURES

- The charging module interface and AC input interface (plugs) are designed and developed with reference to the standard of electric vehicle charging equipment set by State Grid Corporation of China.

Technical Specification

- Working current: 40A;
- Contact resistance: $\leq 1\text{m}\Omega$;
- Mechanical life: 500 次

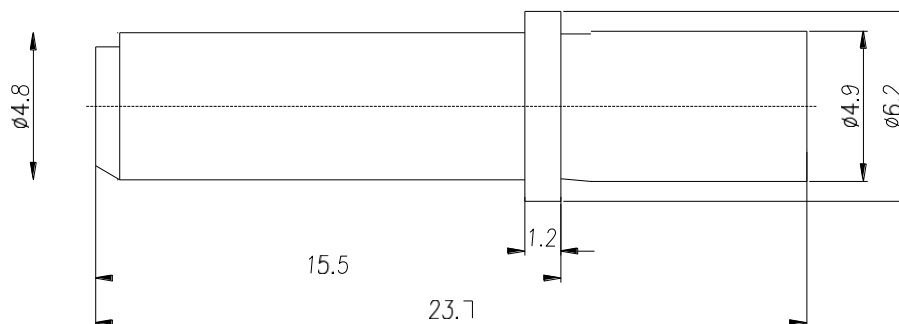
Environmental Performance

- Working temp: $-55\text{ }^{\circ}\text{C} \sim +125\text{ }^{\circ}\text{C}$
- Salt spray: neutral steady-state salt spray (5% NaCl) for 48h

Materials and Surface Treatment

- Contact terminal: back sheath made with high-conductivity copper, silver plating (3 ~ 4) μm ; Crown spring made with beryllium copper, silver plating (3 ~ 4) μm ;

Appearance and Dimensions (unspecified tolerance shall be calculated as ± 0.5 , unit: mm)



Range of crimping adapter wire: $8\text{mm}^2 \sim 10\text{mm}^2$

Mounting Screw

FEATURES

- The charging module interface and AC input interface (plugs) are designed and developed with reference to the standard of electric vehicle charging equipment set by State Grid Corporation of China. The mounting screws can be used for floating installation of MPL04b-4 and MPL11-12 connectors.

Environmental Performance

- Working temp: $-55^{\circ}\text{C} \sim +125^{\circ}\text{C}$
- Salt spray: neutral steady-state salt spray (5% NaCl) for 12h

Materials and Surface Treatment

- Mounting screw: quick-cutting iron, nickel plating

Appearance and Dimensions (unspecified tolerance shall be calculated as ± 0.5 , unit: mm)

