

#### Charging Connectors Compatible with The Type-2 CCS EV Fast Charging Standard

# **KW04 Series**

CONNECTOR MB-0352-2 January 2020

## **RoHS** Compliant



#### Outline

The KW04 Series is an EV charging connector compatible with the Type-2 CCS (Combined Charging System) electric vehicle fast charging standard. The product meets the European Conformity safety standards and is CE certified.

Charging connectors that have reached their product life span have to be totally replaced. The KW04 has been designed in a way that allows for replacement of the plug interface only. Replacement of the interface can be done while the cable is attached to the charge unit.

In addition, as a safety precaution, a double insulation structure has been adopted to protect the live part inside the connector from water intrusion, so that a short circuit will not occur even if the exterior is breached or damaged in anyway by unexpected accidents.

#### Features

- Compatible with the fast-charging standard Type-2 CCS
- CE-Marking (IEC62196-3 Compliance, Certification Organization: TüV Rheinland)
- · Structure with replaceable mating area
- Safety design with waterproof protection of live parts inside the connector
- Highly reliable design using highly environmentally resistant materials

#### Applications

Fast charger for Electric Vehicles (Type-2 CCS compatible, Charging mode: Mode 4)

General Specifications

Number of Contacts	2 positions for power supply, 1 position for Protective earth, 2 positions for signal	
Rated Current	150A / 200A (Note 1) for power supply, 2A for signal	
Rated Voltage	DC1000V for power supply, AC30V for signal	
Insulation Resistance	5MΩ min. (Apply DC1000V between adjacent contacts.)	
Dielectric Withstanding Voltage	AC 3,000V / 1 minute	
Durability	10,000 times	
Insertion Force	100N max.	
Operating Temperature Range	-30° C ~ +50° C	

Note 1) Products with rated currents of 150A and 200A are available.

Materials and Finishes		
Component	Material	
Front Insulator	Weather resistant resin	
Body	Weather resistant resin	





Note 2) Replacement kit is a kit containing the below items from 1) to 6). Note 3) Screw kit is a kit containing only the small parts. (from items 2) to 5)).



Outer Dimensions







### Arrangements



Arrangeme	ents	Terminal Number	Wire Outer Color	Wire Size
CP		1	Orange	0.75SQ
PP		2	Blue	0.75SQ
PE		3	Green & Yellow	16SQ (KW04GY05PDLXXXXP)
				35SQ (KW04GY05PDLXXXXH)
DC+		4	Red	35SQ (KW04GY05PDLXXXXP)
				70SQ (KW04GY05PDLXXXXH)
DC-		5	Black	35SQ (KW04GY05PDLXXXXP)
				70SQ (KW04GY05PDLXXXXH)
Thermistor (DC+)	+	6	Purple	0.75SQ
	-	7	White	0.75SQ
Thermistor (DC-)	+	8	Brown	0.75SQ
	-	9	Gray	0.75SQ

**Temperature Sensor Specifications** 

Sensor Type	Thermistor	
Heat Dissipation Constant	1.2mW / °C	
B Constant	2240K	
Temperature Range (25°C / 50°C)	-40°C ~ +200°C	
Resistance Value (25°C)	17.1kΩ	
Shutdown Temperature	90 °C (equivalent to 4.43k $\Omega$ thermistor value)	

#### Notice:

1. The values specified in this brochure are only for reference. The products and their specifications are subject to change without notice. Contact our sales staff for further information before considering or ordering any of our products. For purchase, a product specification must be agreed upon.

2. Users are requested to provide protection circuits and redundancy circuits to ensure safety of the equipment, and sufficiently review the suitability of JAE's products to the equipment.

3. The products presented in this brochure are designed for the uses recommended below.

We strongly suggest you contact our sales staff when considering use of any of the products in any other way than the recommended applications or for a specific use that requires an extremely high reliability.

(1) Applications that require consultation:

(i) Please contact us if you are considering use involving a quality assurance program that you specify or that is peculiar to the industry, such as:

Automotive electrical components, train control, telecommunications devices (mainline), traffic light control, electric power, combustion control, fire prevention or security systems, disaster prevention equipment, etc.

(ii) We may separately give you our support with a quality assurance program that you specify, when you think of a use such as : Aviation or space equipment, submarine repeaters, nuclear power control systems, medical equipment for life support, etc.

(2) Recommended applications include:

Computers, office appliances, telecommunications devices (terminals, mobile units), measuring equipment, audiovisual equipment, home electric appliances, factory automation equipment, etc.

**Japan Aviation Electronics Industry, Limited** 

Product Marketing Division Aobadai Building, 3-1-19, Aobadai, Meguro-ku, Tokyo 153-8539 Phone: +81-3-3780-2882 FAX: +81-3-3780-2946

\* The specifications in this brochure are subject to change without notice. Please contact JAE for information.