

Charging Connectors for Electric Vehicles

CONNECTOR

**KW07C Series**

MB-0393-4

Oct.2024

**RoHS Compliant**



Powerlance branded EV charging connectors combine durability and high-quality performance to provide the industry's most dependable solutions.



The KW07C is an Electric Vehicle (EV) charging connector which is compatible with the CHAdeMO standard and supports a rated charging current of 200A. The product can be used in quick chargers with a rated output of 150kW.

As the charging current increases, the cables become thicker and heavier to mitigate temperature rise, making them cumbersome to handle. In order to solve this problem, this connector was developed with an emphasis on miniaturization, weight reduction, and cable flexibility, and has achieved almost the same ease of handling as an EV charging connector with a rated current of 125A. In addition, this connector has passed rigorous waterproof testing to acquire UL certification. Furthermore, the KW07C adopts an electromagnetic locking mechanism with a release button and emergency release mechanism. This locking mechanisms has been proven in the market having been adopted in other KW series connectors, so the product can be used with confidence.

The KW07C series also includes a lineup of cable specifications suitable for temporarily energizing currents in excess of the rated current.

## Application

- Quick Charger for EV (CHAdeMO protocol)

## Features

- Compliant with CHAdeMO standard
- Product structure compatible with UL and cUL certification.
- Highly reliable design using materials which various outdoor environments
- High-strength design, yet compact and light weight
- Compatible with DC 750V rated voltage
- Compatible with DC quick chargers with a rated output of 150kW (in case of charging voltage DC750V)

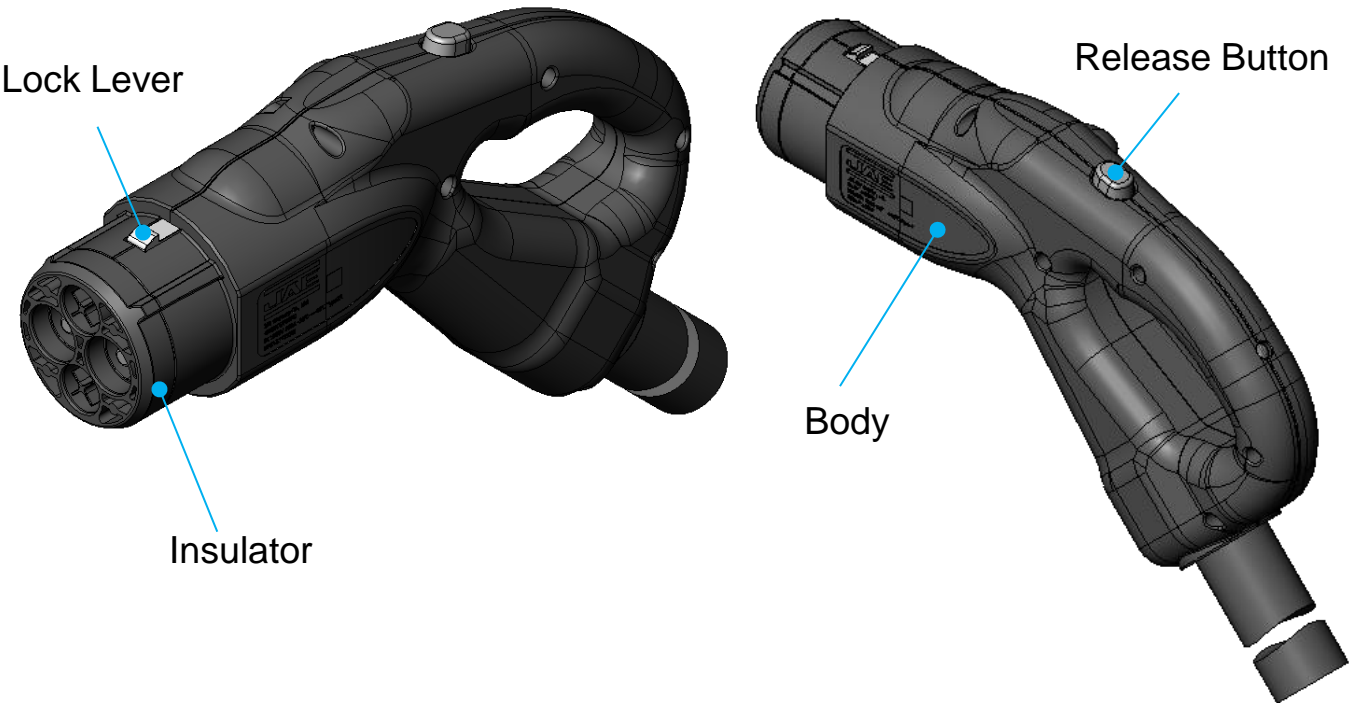
General Specifications

Number of Contacts	Power: 2 pos. GND: 1 pos. Signal: 6 pos.
Rated Current	Power: 200A <sup>1</sup> Signal: 2A
Rated Voltage	Power: DC750V Signal: DC16V max.
Insulation Resistance	100 MΩ min. (Apply DC1000V between adjacent contacts)
Dielectric Withstanding Voltage	AC 3,000Vr.m.s. (per minute)
Durability	10,000 times
Insertion Force	100N max.
Operating Temperature Range	-30 deg. C to +40 deg. C

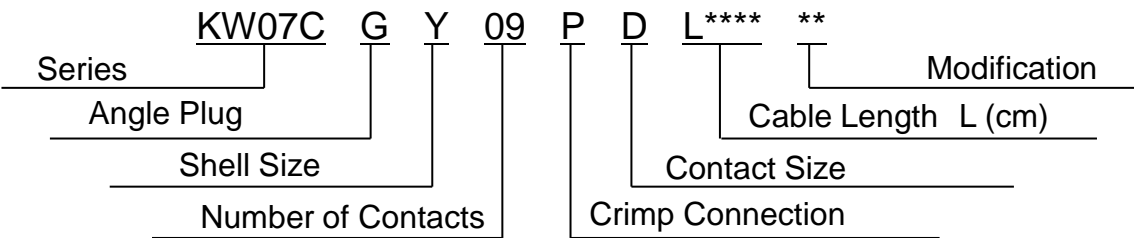
<sup>1</sup> Please contact us if higher current than the rated current is required.

Materials

Component	Material
Body	Environment Resistant Resin
Release Button	Environment Resistant Resin
Lock Lever	Stainless Steel
Insulator	Environment Resistant Resin



Ordering Information



Part Number List

■ Temperature Sensor Circuit Board Standard Products <sup>2</sup>

Standard Cable Products <sup>2</sup>					
Part Number	Cable Length	Drawing No.	Specifications	Handling Instructions	UL certified
KW07CGY09PDL0300UZ	3.0m	SJ130584	JACS-40314	JABL-40256	—
KW07CGY09PDL0350UZ	3.5m				
KW07CGY09PDL0400UZ	4.0m				
KW07CGY09PDL0450UZ	4.5m				
KW07CGY09PDL0500UZ	5.0m				
KW07CGY09PDL0550UZ	5.5m				
KW07CGY09PDL0600UZ	6.0m				
KW07CGY09PDL0650UZ	6.5m				
KW07CGY09PDL0700UZ	7.0m				
KW07CGY09PDL0750UZ	7.5m				
KW07CGY09PDL0800UZ	8.0m				

High Current Boost Cable Products <sup>2</sup>					
Part Number	Cable Length	Drawing No.	Specifications	Handling Instructions	UL certified
KW07CGY09PDL0300JZ	3.0m	SJ130585	JACS-40315	JABL-40256	—
KW07CGY09PDL0350JZ	3.5m				
KW07CGY09PDL0400JZ	4.0m				
KW07CGY09PDL0450JZ	4.5m				
KW07CGY09PDL0500JZ	5.0m				
KW07CGY09PDL0550JZ	5.5m				
KW07CGY09PDL0600JZ	6.0m				
KW07CGY09PDL0650JZ	6.5m				
KW07CGY09PDL0700JZ	7.0m				
KW07CGY09PDL0750JZ	7.5m				
KW07CGY09PDL0800JZ	8.0m				

<sup>2</sup> Please refer to the specifications (JACS) for details.

Part Number List

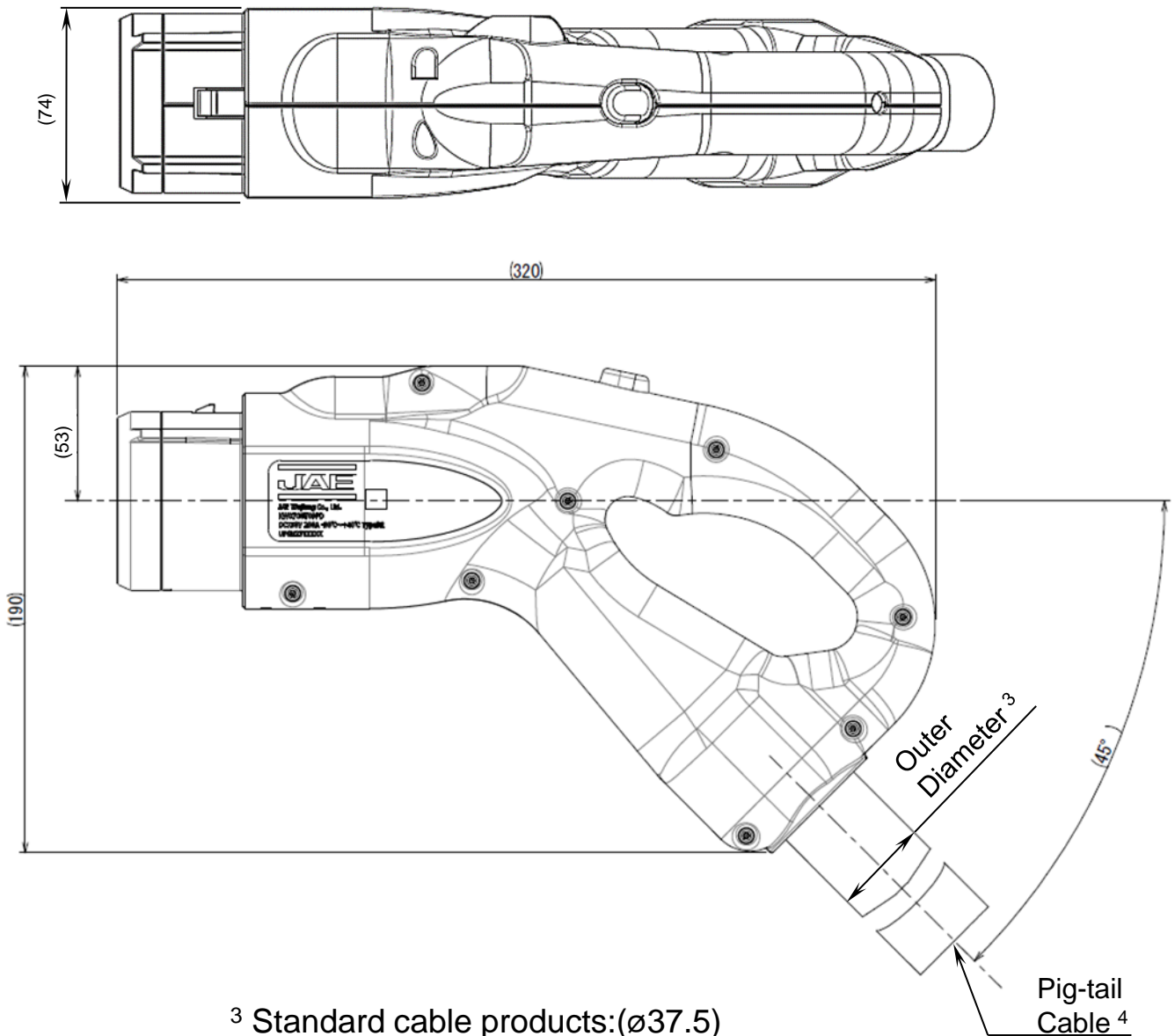
■ Temperature Sensor Circuit Board Modified Products <sup>2</sup>

Standard Cable Products <sup>2</sup>					
Part Number	Cable Length	Drawing No.	Specifications	Handling Instructions	UL certified
KW07CGY09PDL0300UP	3.0m	SJ126695	JACS-40256	J AHL-40256	✓
KW07CGY09PDL0350UP	3.5m				
KW07CGY09PDL0400UP	4.0m				
KW07CGY09PDL0450UP	4.5m				
KW07CGY09PDL0500UP	5.0m				
KW07CGY09PDL0550UP	5.5m				
KW07CGY09PDL0600UP	6.0m				
KW07CGY09PDL0650UP	6.5m				
KW07CGY09PDL0700UP	7.0m				
KW07CGY09PDL0750UP	7.5m				
KW07CGY09PDL0800UP	8.0m				

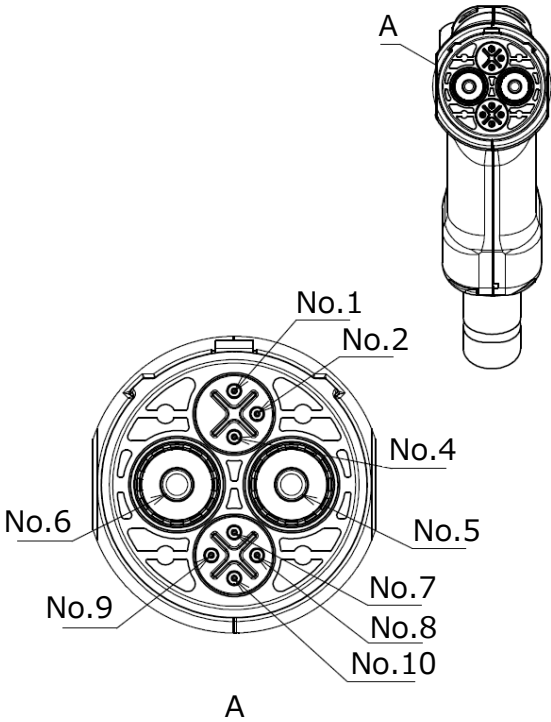
High Current Boost Cable Products <sup>2</sup>					
Part Number	Cable Length	Drawing No.	Specifications	Handling Instructions	UL certified
KW07CGY09PDL0300JH	3.0m	SJ126696	JACS-40257	J AHL-40256	—
KW07CGY09PDL0350JH	3.5m				
KW07CGY09PDL0400JH	4.0m				
KW07CGY09PDL0450JH	4.5m				
KW07CGY09PDL0500JH	5.0m				
KW07CGY09PDL0550JH	5.5m				
KW07CGY09PDL0600JH	6.0m				
KW07CGY09PDL0650JH	6.5m				
KW07CGY09PDL0700JH	7.0m				
KW07CGY09PDL0750JH	7.5m				
KW07CGY09PDL0800JH	8.0m				

<sup>2</sup> Please refer to the specifications (JACS) for details.

## Outer Dimensions



Contact Arrangement



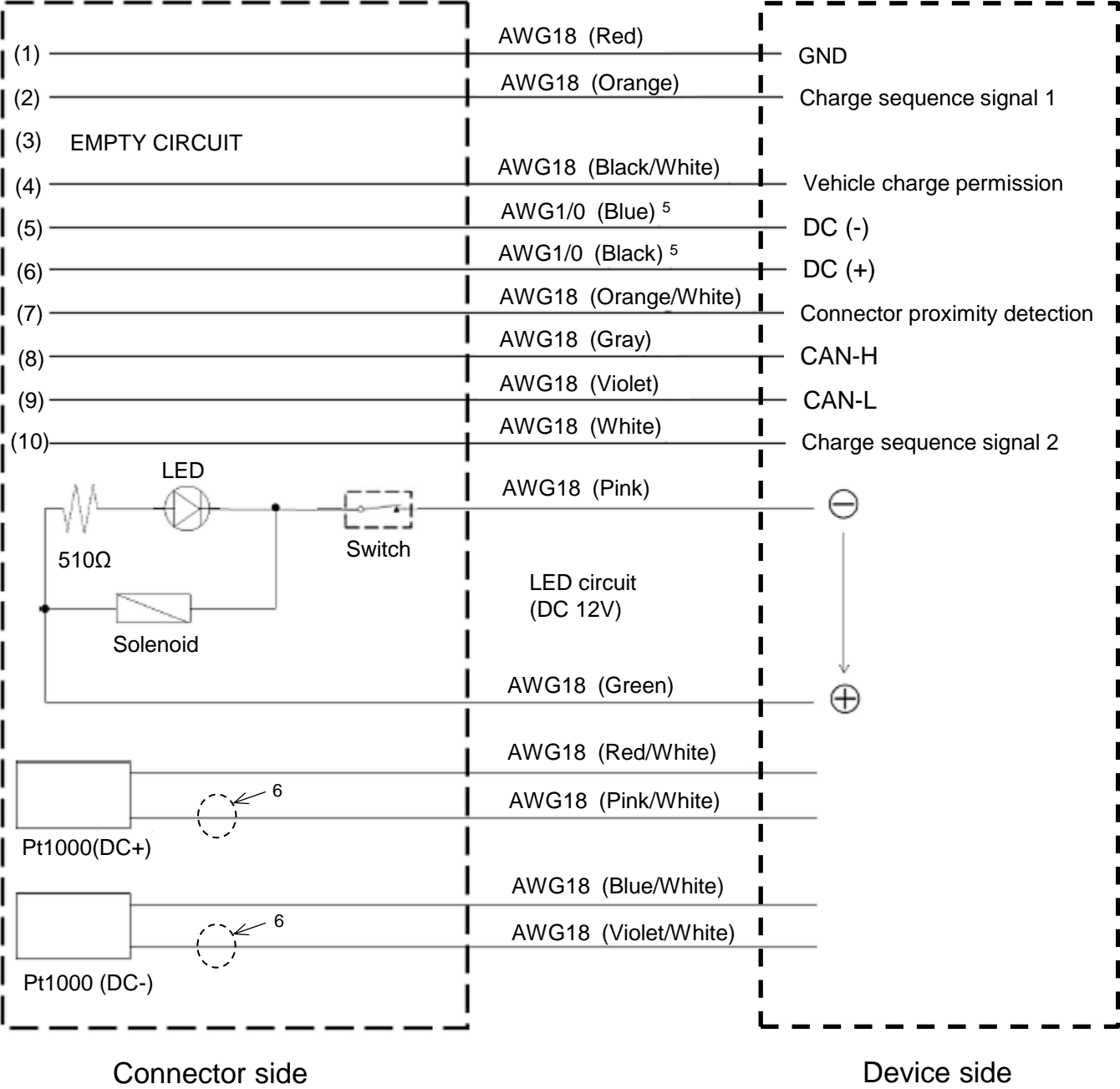
■ Standard Cable Products

No.	SIZE	WIRE COLOR
1	AWG18	Red
2	AWG18	Orange
3	(EMPTY)	-
4	AWG18	White/Black
5	AWG1/0	Blue
6	AWG1/0	Black
7	AWG18	Orange/White
8	AWG18	Gray
9	AWG18	Violet
10	AWG18	White

■ High Current Boost Cable Products

No.	SIZE	WIRE COLOR
1	AWG18	Red
2	AWG18	Orange
3	(EMPTY)	-
4	AWG18	White/Black
5	AWG2/0	Blue
6	AWG2/0	Black
7	AWG18	Orange/White
8	AWG18	Gray
9	AWG18	Violet
10	AWG18	White

Connector Circuit Diagram



<sup>5</sup> The wire size of high current boost cable is AWG 2/0.

<sup>6</sup> Resistor is installed in the temperature sensor circuit board modified products. Please refer to the specifications (JACS) for details.

Temperature Sensor Specifications

Sensor Type	Pt1000
Standards	DIN EN 60751
Recommended Measured Current	0.1 to 0.3mA
Temperature Range	-50 deg. C to +130 deg. C
Temperature Coefficient	3850ppm/K

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

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