

STOCK CODE: 300351

CONNECTION TO FUTURE



# YGC - ROLLING STOCK AND INDUSTRY CONNECTOR HANDBOOK



# Content



**External Vehicle Connector**



**Internal Vehicle Connector**



**Dual-Purpose Vehicle Connector**



**New Energy connectors**

# External Vehicle Connector

## External Vehicle Connector Series



- E-Coupler Series
- External Power Supply Connector
- EMY Motor Connector Series
- GTC Series Electrical Connector
- Push-pull Series Electrical Connector
- CIR Series Electrical Connector
- Vehicle Heavy Loading Series Electrical Connector

# External Vehicle Connector--E-Coupler Series



## Product Series

City Railway: 32 pin, 40pin, 50 pin, 70 pin

EMU series : 75 pin, 98 pin, 140 pin, 196 pin

## Applications

Applied to the re-connection between trains, which achieves:

- 1) Control signal transmission between trains;
- 2) Support 100M, 1000M and 10G Ethernet signal transmission;
- 3) Power transmission up to 350A.

# External Vehicle Connector--External Power Supply Connector



## Product Series

Direct Current : 350A, 400A, 450A, 530A

Alternating Current : 350A, 400A, 450A

## Applications

Applied to the external power supply access during the repair and maintenance of rolling stock. It is suitable for the power supply system up to 1500VDC and 500VAC. According to customized requirements, cover protection, conduction confirmation or interlock protection is available as extra feature.

# External Vehicle Connector--**EMY Motor Connector Series**



## Product Series

Circular Series : 200A, 240A, 300A

Rectangular Series: 200A, 240A, 300A

## Applications

The circular product employs a quick bayonet connection with a secondary locking mechanism, while the rectangular version utilizes a threaded connection. It is primarily used in the motors of various equipment, with a high current overload capacity and voltage resistance. The structure is reliable, and it offers excellent protective performance.

# External Vehicle Connector--GTC Series



## Product Series

5 pin – 85 pin GTCM Control Series

5 pin – 19 pin GTCF Fiber Series

100M, 1000M, 10G single/multiple pin GTCN network

Single/multiple pin GTCH HV Series

## Applications

The product features a quick bayonet connection equipped with a secondary locking mechanism, ensuring high reliability and meeting the stringent requirements for use in harsh external vehicular environments.

# External Vehicle Connector--Push-pull Series Electrical Connector



## Product Series

TYL – Control Series, 2/3/4/5/7 pin

TYH – HV Series, 150A, 300A, 450A, 600A

## Applications

Utilizing a push-pull quick-locking mechanism, it is suitable for connection and separation in confined spaces, with the high-voltage series capable of withstanding a maximum working voltage of up to 1500V.

# External Vehicle Connector--CIR Series Electrical Connector



## Product Series

5 pin, 10 pin, 17 pin, 26 pin

## Applications

The product lineup complies with the specifications of MIL-5015, featuring a quick bayonet connection and an insulator made of rubber material, which ensures high reliability. It is particularly suitable for the connection and transmission of control signals that require potting.

# External Vehicle Connector--**Vehicle Heavy Loading Series**



## Product Series

18 pin, 24 pin, 27 pin, 35 pin, 37 pin

## Applications

The product is designed for external heavy coupling connections between rail vehicles, enabling the transmission of control signals and network signals.

# Internal Vehicle Connector

## Internal Vehicle Connector Series



- DSC Series Electrical Connector
- DSL Series Electrical Connector
- CD4 Series Electrical Connector
- QX Series Electrical Connector
- D-SUB Series Electrical Connector
- DBK Board Connector
- DSN Series Electrical Connector
- QLE Series Electrical Connector

# Internal Vehicle Connector--DSC Series Electrical Connector



## Product Series

Power Type – 15 pin, 19 pin

Signal Type – 32 pin, 48 pin, 96 pin

## Applications

Suitable for the connection and transmission of cabinet machine control signals.

# Internal Vehicle Connector--DSL Series Electrical Connector



## Product Series

V Series – VA, VB, VC, VE

B Series

## Applications

Suitable for the connection and transmission of cabinet machine control signals.

# Internal Vehicle Connector--CD4 Series Electrical Connector



## Product Series

A Series – 27 pin, 8+26 pin, 44 pin, 50 pin

B Series – 30 pin, 44 pin

## Applications

Suitable for the connection and transmission of cabinet machine control signals.

# Internal Vehicle Connector--QX Series Electrical Connector



## Product Series

32 pin, 52 pin

## Applications

Suitable for the connection and transmission of cabinet machine control signals.

# Internal Vehicle Connector--D-sub Series Electrical Connector

## Product Series

Signal Series – 9 pin, 15 pin, 25 pin, 37 pin, 50 pin, etc

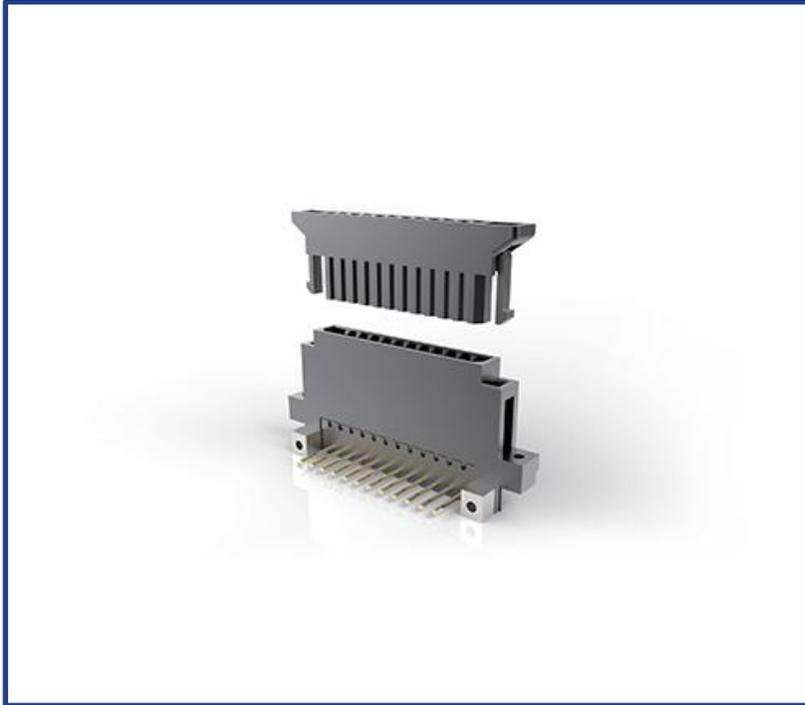
Power Series – 2W2, 3W3, 5W5

## Applications

It features a variety of models and contact components, capable of meeting the connection and transmission needs for networks, signals, and power. It is applied in onboard signal equipment cabinets, PIS systems, and more.



# Internal Vehicle Connector--DBK Board Connector



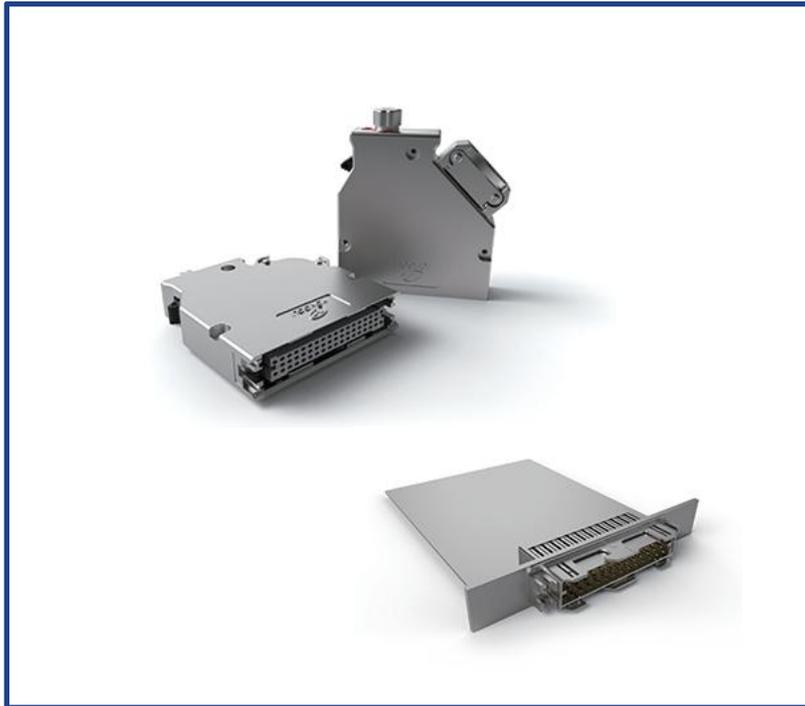
## Product Series

4 pin, 8 pin, 12 pin

## Applications

Suitable for power connections between wires and boards within cabinets, with the current not exceeding 10A.

# Internal Vehicle Connector--**DSN Series Electrical Connector**



## Product Series

41 pin, 52 pin

## Applications

Suitable for the connection and transmission of cabinet machine control signals.

# Internal Vehicle Connector--**QLE Series Electrical Connector**

## Product Series

4 pin, 5 pin, 8 pin, 8X pin

## Applications

Featuring a quick push-pull locking mechanism, the product range complies with the IEC 61076-2-101 standard. It is suitable for in-vehicle control and network connections and transmission, capable of supporting 100M, 1000M and 10G Ethernet applications.



# Dual-Purpose Vehicle Connector

## Dual-Purpose Vehicle Connector Series



- Vehicle Heavy-Duty Series Electrical Connector
- QAL Series Electrical Connector
- QS Series Electrical Connector
- QB Series Electrical Connector
- M23 Series Electrical Connector
- M40 Series Electrical Connector
- Fluid Connector
- M12 Series Electrical Connector

# Dual-Purpose Vehicle Connector--HDC Series



## Product Series

HDC-HQ, HDC-HD, HDC-HE, HDC-HM, etc, ranging from 2 pin to 216 pin.

## Applications

The Heavy-Duty series connectors(HDC) are widely utilized in fields such as rail transportation, wind power generation, and industrial control. This series has robust modular capabilities, allowing for the integration of various functional components such as power, control, communication, fiber optics, gas, and fluid into a single unit as required.

# Dual-Purpose Vehicle Connector--QAL Series



## Product Series

3 pin, 6 pin, 7 pin, 10 pin, 12 pin, 14 pin, 19 pin, 37 pin,  
60 pin, 85 pin

## Applications

The product range complies with the MIL-5015 standard, featuring a quick bayonet connection, and is suitable for the connection and transmission of control signals throughout the vehicle.

# Dual-Purpose Vehicle Connector--**QS Series**



## Product Series

2 pin, 3 pin, 5 pin, 7 pin, 10 pin, 12 pin, 19 pin, etc

## Applications

Featuring internal bayonet quick-lock mechanism. Suitable for the connection and transmission of low-current control signals.

# Dual-Purpose Vehicle Connector--QB Series



## Product Series

Φ1 Series – 3 pin, 7 pin, 9 pin, 19 pin

Φ1.6 Series – 3 pin, 5 pin, 7 pin, 9 pin

Φ2.4 Series – 2 pin, 4 pin

## Applications

Featuring the bayonet quick-lock mechanism, with a five-key foolproof design. Suitable for the connection and transmission of power and control signals with currents less than 20A.

# Dual-Purpose Vehicle Connector--M23 Series



## Product Series

M23 Signal – 12 pin, 17 pin

M23 High Load – 4+3 pin

## Applications

The products are mainly used in wind turbine pitch motor encoders, industrial robot signal communication, and wind turbine pitch motor power systems, etc. It features a compact size and simple operation.

# Dual-Purpose Vehicle Connector--M40 Series



## Product Series

4+3 pin

## Applications

The products are primarily utilized in the field of wind power generation, serving as power connectors for wind turbine pitch motors. They are available in various configurations, including threaded connections and quick-lock mechanisms.

# Dual-Purpose Vehicle Connector--M12 Series



## Product Series

4 pin, 5 pin, 8 pin, 8X pin

## Applications

Utilizing an M12 threaded locking connection, the product range complies with the IEC 61076-2-101 standard. It is suitable for in-vehicle control and network connections and transmission, capable of supporting 100M, 1000M and 10G Ethernet applications.

# Dual-Purpose Vehicle Connector--Fluid Connector

## Product Series

LTF/LTFP Series Blind-mate Connector

LTA/LTAX Series Bayonet Connector

LTC Series Push-pull Connector

## Applications

To establish or disengage fluid communication. Enable the rapid connection and disconnection of fluid transmission channels (such as between pipelines, between boards, or between pipelines and equipment) without the need for tools, thereby offering dual sealing capabilities.



# New Energy Products



- New Energy Connector
- Charging Product
- Energy Storage Connector

# New Engergy Connectors – Connector Application Sketch

batteries/motors high current connectors



wire harness



OBC low current connector



MSD



PDU/BDU/junction box



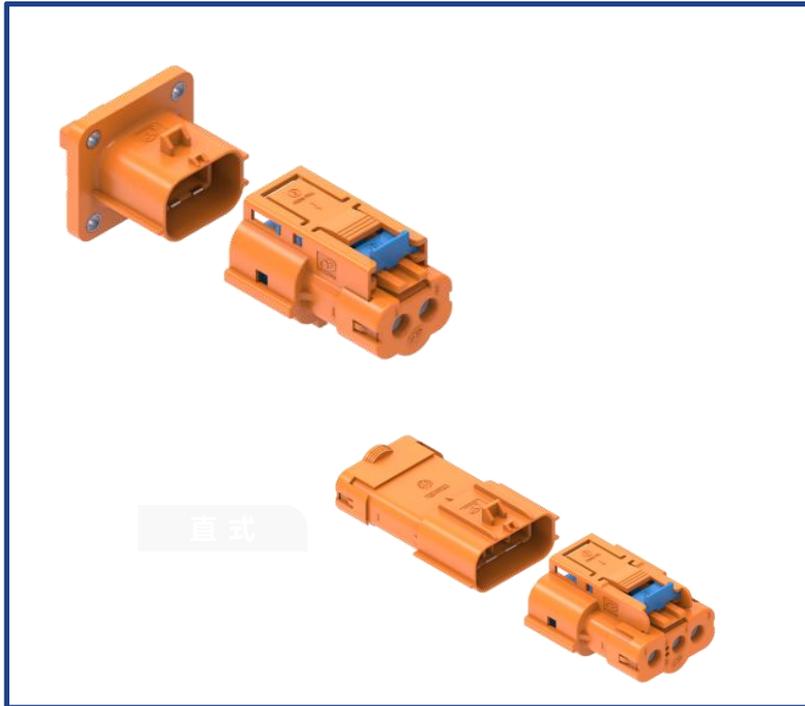
compressor/PTC connector



vehicle-mounted discharge panel



# Typical New Energy Connector--YGEV2 Series



**Rated Current**

**16-20A**

**Rated Voltage**

**800V**

**Ambient Temperature**

**-40-125°C**

**Protection Level**

**IP67&IP6K9K、 IPXXB**

**Circuits Number**

**2 - 3**

**Feature**

**360° Individual Shielding**

**Stamping Contacts**

**2.5mm<sup>2</sup>、 4mm<sup>2</sup>、 6mm<sup>2</sup>**

**Application**

**AC compressor、 PTC、  
Charging Equipment、 DCDC、  
HV Box/Cabinet**

# Typical New Energy Connector--YGEV4 Series



**Rated Current**

**16-40A**

**Rated Voltage**

**800V**

**Ambient  
Temperature**

**-40-125°C**

**Protection Level**

**IP67&IP6K9K、 IPXXB**

**Circuits Number**

**2 - 4**

**Feature**

**360° Individual Shielding**

**Stamping Contacts**

**35mm<sup>2</sup>、 50mm<sup>2</sup>**

**Application**

**AC compressor、 PTC、  
Charging Equipment、 DCDC、**

**HV Box/Cabinet**

# Typical New Energy Connector--YGEV5 Series



**Rated Current**

**200-300A**

**Rated Voltage**

**1000V**

**Ambient  
Temperature**

**-40-140°C**

**Protection Level**

**IP67&IP6K9K、 IPXXB**

**Circuits Number**

**2**

**Feature**

**360° Individual Shielding  
Stamping Contacts  
50mm<sup>2</sup>、 70mm<sup>2</sup>**

**Application**

**MCU, Battery pack,  
high-voltage box, etc**

# Typical New Energy Connector--YGEV6 Series



**Rated Current**

**300-400A**

**Rated Voltage**

**1000V DC**

**Ambient  
Temperature**

**-40-140°C**

**Protection Level**

**IP67&IP6K9K、 IPXXB**

**Circuits Number**

**2**

**Feature**

**360° Individual Shielding**

**Stamping Contacts**

**70mm<sup>2</sup>、 95mm<sup>2</sup>**

**Application**

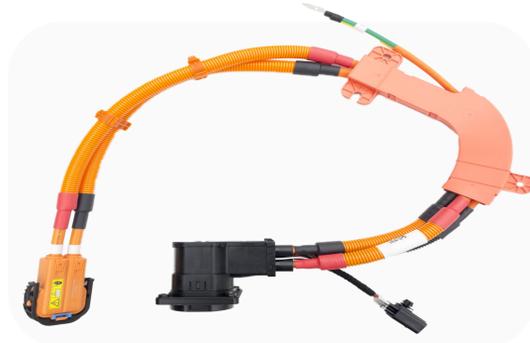
**MCU, Battery pack,  
high-voltage box, etc**

# Typical New Energy Connector--Customized Connector Cable Assembly

## ◆Customized Cable Assembly:



AC Vehicle Inlet Cable Assembly



DC Vehicle Inlet Cable Assembly



AC/DC Hybrid Vehicle Inlet Cable Assembly



DC Bus Cable Assembly



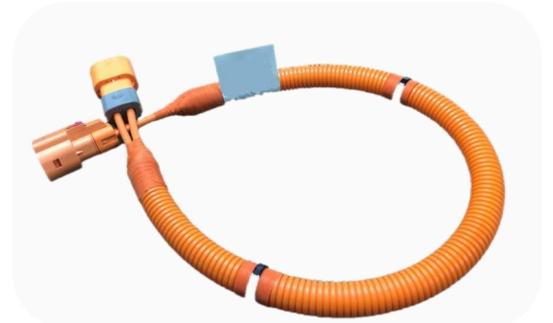
3-Phase Motor Cable Assembly



Air Conditioner Cable Assembly



MCU Cable Assembly



Heater Cable Assembly

# Charging Products – Application Sketch

Inlet, sockets & accessories



DC Charger



AC Charger



Mode 2 charger with control box



Discharge series



Liquid cooling integrated system



# Charging Product--MCS Charging System



**Rated Current**

**1000-1500A DC**

**Rated Voltage**

**1000-1500V DC**

**Ambient Temperature**

**-30-50°C**

**Protection Level**

**IP44, IP54、 IP67**

**Life Cycles**

**>10000**

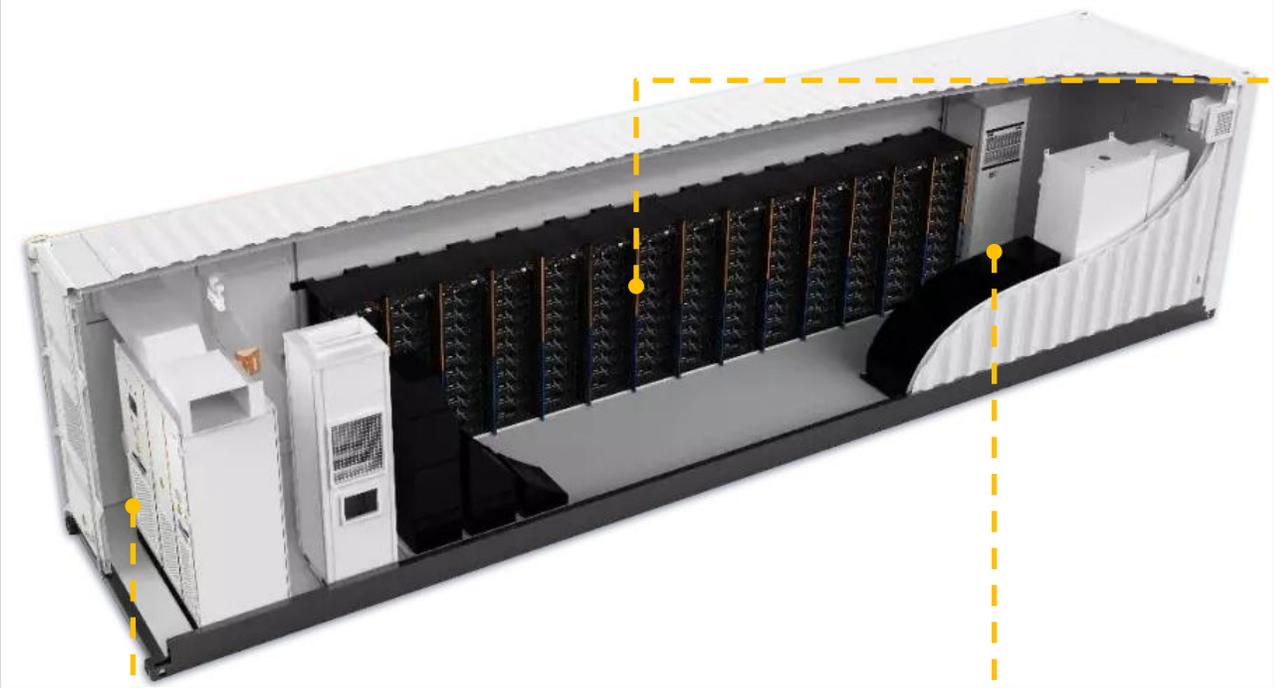
**Feature**

**Mode 4, Connection Type C  
UL94-V0, Liquid Cooling**

**Application**

**Track, Vessel, Mining Machinery,  
Railway etc.**

# Energy Storage Connectors -- Application Sketch



Cell Pack & BMS



EMS



PCS



# Typical Energy Storage Connector--ESS HP



**Rated Current**

**80-400A**

**Rated Voltage**

**AC 1500V**

**Dielectric Strength**

**6800V AC**

**Protection Level**

**IP67 & IP54**

**Temperature Rising**

**30 K**

**Feature**

**360° Mating /  
Rapid Unmating / Low Cost**

**Application**

**Power transmission of energy  
storage battery module**

# Typical Energy Storage Connector--ESC-TB



**Rated Current**

**200-350A**

**Rated Voltage**

**AC 800 \*1500V**

**Dielectric Strength**

**AC 3000--6800V AC**

**Protection Level**

**IP20**

**Temperature Rising**

**45 K**

**Feature**

**Thread Locking, Rapld to  
connctt to wire**

**Application**

**Power transmission of energy  
storage battery module**

*YONGGUI*

CONNECTION TO FUTURE