

# Vehicle wiring harness and electrical connectors testing



**Wiring harnesses and connectors** have already become a key element in conventional vehicles as they've incorporated more and more electronic features to be included in basic glass elevators, infotainment, and car safety systems. The industry is moving **towards electrical and hybrid powered vehicles**, and the increased connectivity and driving automation is expanding this trend to a new level.

## What is wiring harness testing?

Wiring harnesses and connectors are responsible for **connecting every component** within a vehicle providing electric power and data transfer. In battery-power vehicles, these systems are split between the **low voltage system** and the **high voltage system**.

The latter are used to feed all the components involved in the electric power drive system. This includes the battery and its charging system, the electric motors, and all the related **HV components** (such as **converters, OBC, BMS, thermal systems**, etc.)

## Why Is Wiring Harness Testing Important?

The performance, flexibility, and resistance of these **wiring networks are critical** for a vehicle's functioning and need to be tested thoroughly. This ensures their reliability under different environmental conditions and operational stresses are therefore essential.

## Applus+ Laboratories Final Products and Assemblies

[Applus+ Laboratories](#) is equipped with a dedicated laboratory in Shanghai for **terminals, connectors, cables, and harness assembly** with a comprehensive set of testing capabilities, including:

- Mechanical Testing
- Vibrations Testing
- Durability Testing
- Signal Integrity (SI) Testing
- Electrical Testing
- Protection and Climatic Testing

## Applus+ Laboratories Vehicle Wiring Harness and Electrical Connectors Testing Common Standards

We can test [automotive](#) wiring products against the following industry standards:

- **Terminals:** SAE/USCAR 21, SAE/USCAR 38, IEC 60512, 31832374, VW60330, VW75174-2
- **Connectors:** SAE/USACR 2, SAE/USACR 37, SAE/USCAR 17, GMW3191, VW75174 (LV214), VW80302(LV215-1), VW80302(LV215-2), Q/JLY J7110195, Q/JLY J7111175, CTS-17.01.03.00, SMTC 3 862 001
- **Cables:** ISO 6722, SAE J1742, ISO 14572
- **Harness assemblies:** SAE/USCAR 30, QC/T 1067.1, QC/T 29106, Q/JLY J7111252, Q/JLY J7110446, SMTC 3 865 001

## Why choose Applus+ Laboratories for Vehicle Wiring Harness and Electrical Connectors Testing

Applus+ Laboratories is an **esteemed independent entity** dedicated to assisting organisations in their pursuit of continuous improvement.

We evaluate the needs of our clients, allowing our auditors, who are experts in various industry sectors, to deliver **high-value services** when evaluating your organisation's compliance.

Our professionals create **tailored certification plans** that align with the structure, processes, and activities of our clients.

With our global reach, **comprehensive product offerings**, and numerous accreditations, we are equipped to offer specialised, worldwide services that meet the specific needs of your organisation.