Direct Connection Terminal Block between Devices: Self-aligning Connector

Under development

Simplifies assembly of units such as e-Axle (contributing to automation)
Terminal block that completes electrical connection of inverter and motor during installation
Eliminates connection work and service holes by using male-female mating terminals

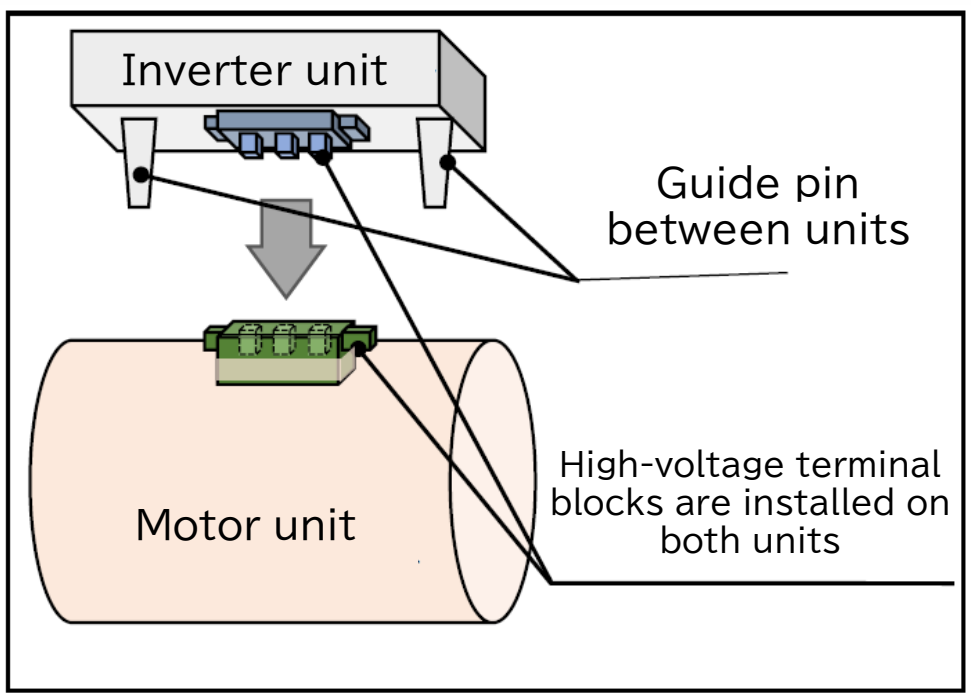
Background or Assignment

Contributes to unit design based on absorption of assembly tolerance using terminal block.
Terminal block absorbs misalignment (approx. ±0.8mm in X and Y directions) between cases, enabling proper connection.

Solutions to Challenges

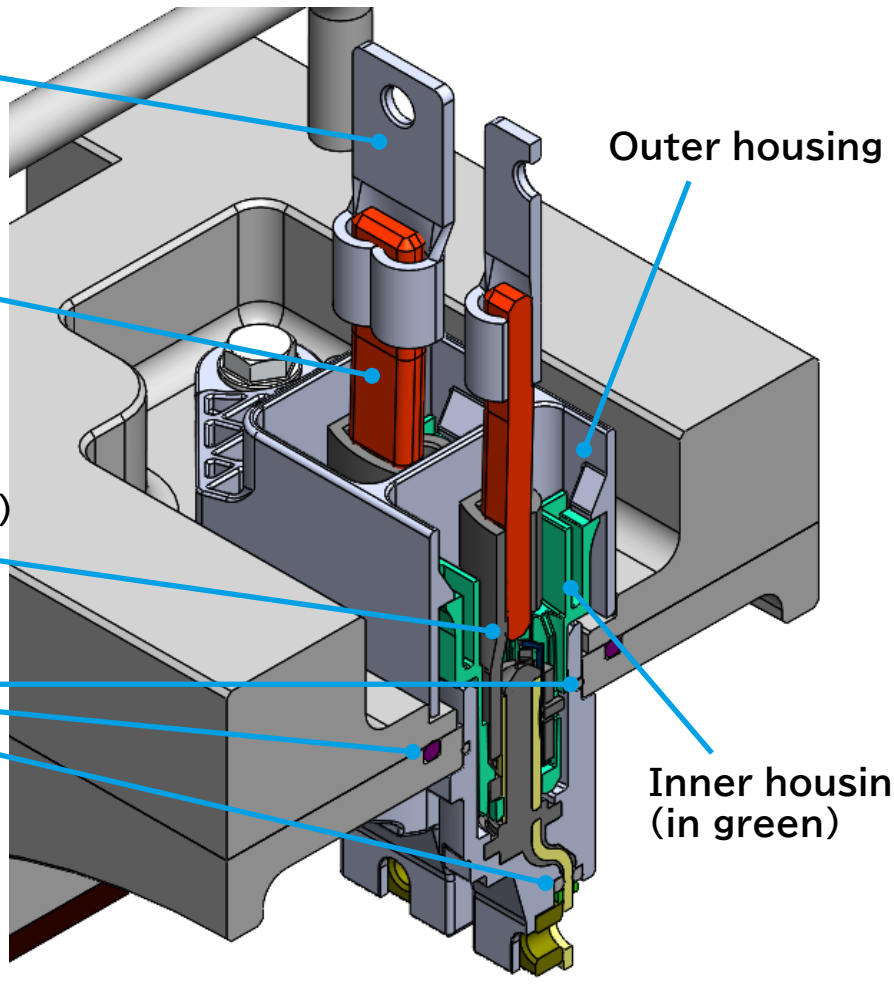
Main performance, specifications, and structure

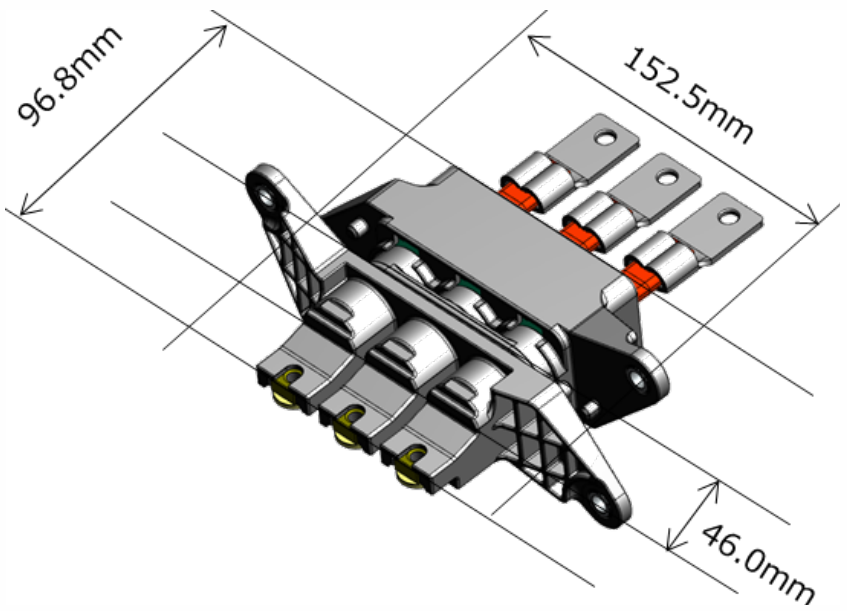
1. Increases product compatibility by providing flexibility in the positioning of LA terminals
2. Enables significant tolerance absorption by using a flexible braided conductor structure. For example, variations can be achieved using resin attachments (straight or L-shaped).
3. Uses round-pin terminals with vibration resistance (proven in mass production and onging adoption)
4. Compatible with oil-cooled motor with a waterproof and oil-proof structure using a gasket



Example of Yazaki's development item

The connector is separated into inner housing and outer housing with a braided conductor, enabling each terminal to independently absorb assembly tolerances





YAZAKI