

Semiconductor Relay Module

Mass-
Produced
Product
Scheduled to be
installed in 2025

Power saving and weight reduction by using semiconductors for relays, and achieves fuseless design with our unique wire protection logic, improving flexibility in installation

Background or Challenges

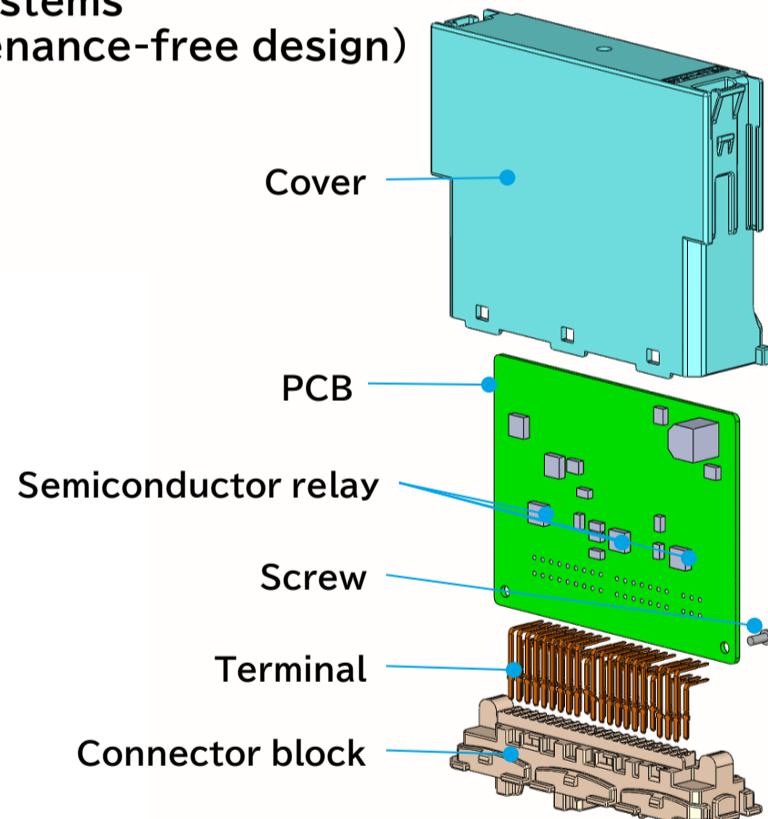
Downsized power distribution BOXes are required due to reduced mounting space

Solutions to Challenges or Features

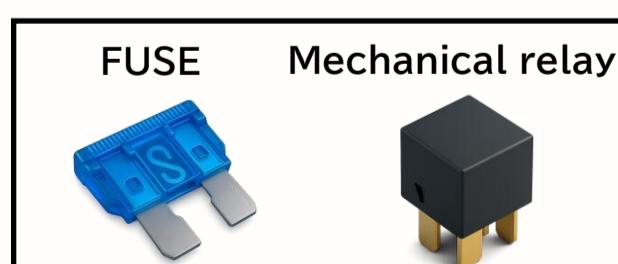
- 1 Smaller and lighter power distribution BOXes by using semiconductor relays
- 2 Achieves fuseless design using our unique wire protection logic
- 3 Improves layout flexibility with fuseless systems
(No need to replace FUSE, enabling maintenance-free design)

Main performance, specifications/structure

Power supply voltage	8V to 16V
Operating temperature	-40°C to +85°C
Input	4 circuits
Output	IPD 8 circuits External RLY 6 circuits
Communication circuit	1CH (CAN)
Others	Fuseless ECE R48 (PWM output) compatible

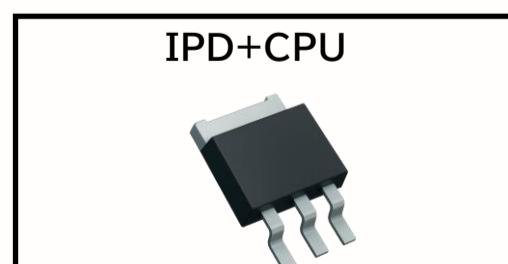


FUSE + Mechanical relay



Power consumption: 0.2W + 1.25W = 1.45[W]
Weight: 0.4g + 14.0g = 14.4[g]

Semiconductor fuse (IPD+CPU)



Power consumption: 0.25[W]
Weight: 1.0[g]