

# 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

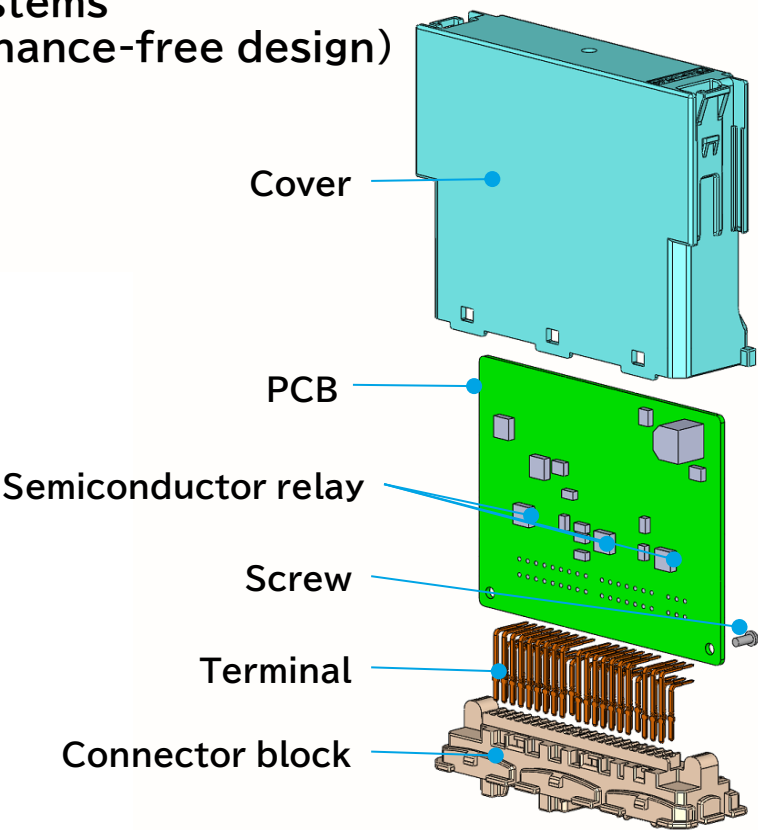
Downsized power distribution BOXes are required due to reduced mounting space

## Solutions to Challenges or Features

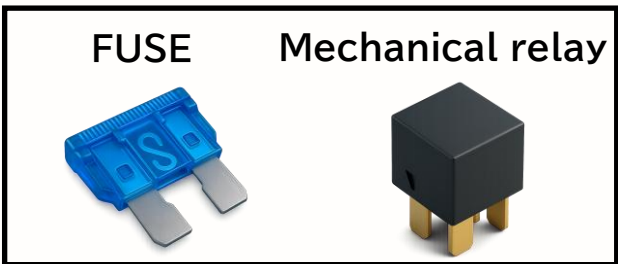
- 1 Smaller and lighter power distribution BOXes by using semiconductor relays
- 2 Achieves fuseless design using our unique wire protection logic
- 3 Improves layout flexibility with fuseless systems  
(No need to replace FUSE, enabling maintenance-free design)

### Main performance, specifications/stucture

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

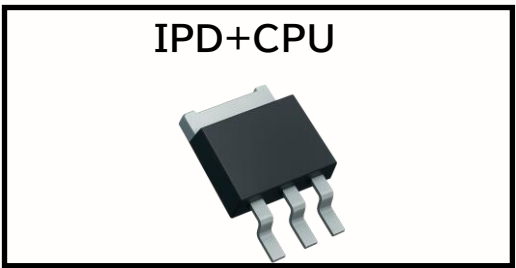


### FUSE + Mechanical relay



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]