

Automatic Rescue Device (For Lift)

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Abstract: *This research presents an Automatic Rescue Device (ARD), a specialized safety system designed to ensure safe passenger evacuation from elevators during power failures. The ARD has Auto Level Sense Technology, which makes the elevator cabin stop near the floor level before the doors open. This feature helps prevent passengers from getting trapped. The device uses MOSFET/IGBT inverter technology along with a multi-stage battery charging system. This combination provides reliable performance and extends battery life. It continuously monitors grid supply conditions and automatically switches to inverter mode during outages, delivering power just long enough for safe evacuation before shutting down. Suitable for various types and capacities of elevators, this ARD provides a practical and effective solution in areas prone to power interruptions. Experimental testing confirms its quick response, efficient operation, and improved safety compared to traditional lift backup solutions. Future improvements will focus on integrating remote monitoring and better alert systems.*

Keywords: *Automatic Rescue Device.*

