

**SELF-POWERED
EMERGENCY LIGHTS
AND SIGNS**
MAKE YOUR AIRCRAFT SAFE AND
ECONOMIC



CHARACTERISTICS

Emergency lighting is a vital element of any aircraft's cabin safety system. Traditionally, this functionality has relied on decentralized power supplies, known as emergency power supply units. Because aviation regulations allow a maximum failure rate of only 25%, extensive cabling – combined with redundancy and route segregation – has been necessary to meet safety requirements. With Diehl Aviation's innovative approach, this architecture becomes significantly simpler and more efficient. By combining advanced circuit technologies with modern supercapacitors, the decentralized power supply can now be integrated directly into the emergency lights and signs themselves. Each unit includes its own built-in energy buffer, enabling autonomous operation for the required 10 minutes in case of a power-loss. Communication with the flight deck is ensured through discrete wiring, wireless solutions, or bus systems, allowing flexible integration into different aircraft platforms and customer environments. This Self Powered Emergency Light and Sign technology has been developed by Diehl Aviation as part of an advanced Research & Technology program and is now ready for real-world implementation.

BENEFITS

- Lower maintenance costs through extended component lifespan and reduced system weight
- Full design flexibility for next-generation cabin concepts and integration layouts
- Ready for digital cabins thanks to wireless/bus compatibility
- Higher operational safety through fully autonomous emergency functionality
- Significantly longer lifespan – extended replacement cycle of 7 years
- Reduced material usage, with no reliance on rare earth elements
- Lower CO₂ footprint due to fewer replacements and minimized maintenance efforts