



COSINE DEVELOPMENTS

LEADERS IN LIGHTING TECHNOLOGY

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Why capacitive coupled battery charging is illegal

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There have been numerous products flooding the lighting market that utilize capacitive coupled mains battery charging circuits in which to charge batteries. This is highly illegal as there is a very high risk of shock when replacing the battery of the inverter – possibly leading to death.

Please see the below standards:

1. VC 8055

VC 8055 is a **compulsory specification** for electrical and electronic apparatus which is published in the Government Gazette (31 October 2014). It states that: **“Emergency luminaires shall comply with SANS 1464:22”**. SANS 1464:22 deals with the safety and performance of the emergency luminaires. It prescribes marking, reliability, electrical safety, photometric performance and battery charging requirements.

2. SANS 1464 Part 22

The general test requirements in this document refer to **SANS 61558-1** which specifies, *inter alia*, insulation between mains and battery terminals. This is an important safety requirement as cheaper (and now illegal) charging systems can present mains on the battery terminals which could cause electrocution.

***This means that all capacitor charging circuits are now illegal.
Failure to comply is prosecutable by fines and/or jail terms.***

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