

EN

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Answer given by Executive Vice-President Séjourné
on behalf of the European Commission
(22.10.2025)

The Low Voltage Directive 2014/35/EU (LVD)¹ sets the safety objectives for ‘protection against hazards arising from the electrical equipment’ (point 2 of Annex I), which cover risks associated with stray currents resulting from Pulse Width Modulation (PWM).

Manufacturers must comply with the safety objectives set in the LVD, i.e. any equipment using PWM must meet the essential safety requirements before being placed on the market.

Currently, there are several harmonised standards in support of the LVD that address various aspects of electrical safety, which inherently cover risks associated with stray currents.

For example, EN 60335-1 incorporates limits for leakage currents.

No particular issues with stray currents (or leakage currents) and PWM thus far have been brought to the Commission’s attention by responsible market surveillance authorities of the Member States.

The Commission is open to receive more detailed information or specific examples of issues that may have been encountered, and it is willing to seek information or data on the subject matter through the relevant expert group and administrative cooperation committee of Member States.

In addition, it is to be noted that concerning the Electromagnetic Compatibility Directive 2014/30/EU², the evaluation published in 2021 did not bring up any issues relating to stray currents.

¹ <https://eur-lex.europa.eu/eli/dir/2014/35/oj>.

² <https://eur-lex.europa.eu/eli/dir/2014/30/oj/eng>.