TECHNICAL NOTE
LED Drivers – Power Supply Conditions and Electrical System Protection

Introduction

The LED drivers used in our products are designed and selected in compliance with applicable European standards and are subject to functional and quality testing.
However, the correct operation and long-term reliability of the drivers are strictly dependent on the quality of the electrical power supply and on the compliance of the electrical system to which they are connected.

Electrical Power Supply Quality

Drivers are designed to operate within the voltage, frequency and disturbance limits defined by the applicable technical standards, including CEI EN 50160 and IEC/EN 61000.
Events such as:

- transient or permanent overvoltages,
- voltage spikes,
- micro-interruptions and repeated power restorations,
- electromagnetic disturbances (EMI/RFI),
- direct or indirect lightning strikes,
- voltage backflow or induced currents,

may cause immediate or progressive damage to the electronic components of the driver, even if such damage is not immediately evident.

Electrical Installation and Protection Systems

PAN S.r.l. draws attention to the fact that, according to CEI 64-8, protection against overvoltages and the overall quality of the electrical installation are the responsibility of the system designer and installer, and not of the luminaire manufacturer.
In particular, for professional, commercial or industrial installations, the following measures are strongly recommended:

- proper grounding of the electrical system;
- use of surge protection devices (SPD) suitable for the assessed risk level;
- correct selection and sizing of circuit breakers and residual current devices;
- wiring compliant with applicable standards.

Technical Conclusion

PAN S.r.l. products are designed to operate correctly when supplied with electrical power compliant with applicable standards.
Any failures or anomalies affecting the drivers (AC 120–240V section) that are attributable to power supply disturbances or deficiencies of the electrical installation shall be considered external events and not attributable to design or manufacturing defects.

TECHNICAL NOTE

LED Drivers – Power Supply Conditions and Electrical System Protection

Introduction

The LED drivers used in our products are designed and selected in compliance with applicable European standards and are subject to functional and quality testing.
However, the correct operation and long-term reliability of the drivers are strictly dependent on the quality of the electrical power supply and on the compliance of the electrical system to which they are connected.

Electrical Power Supply Quality

Drivers are designed to operate within the voltage, frequency and disturbance limits defined by the applicable technical standards, including CEI EN 50160 and IEC/EN 61000.
Events such as:

- transient or permanent overvoltages,
- voltage spikes,
- micro-interruptions and repeated power restorations,
- electromagnetic disturbances (EMI/RFI),
- direct or indirect lightning strikes,
- voltage backflow or induced currents,

may cause immediate or progressive damage to the electronic components of the driver, even if such damage is not immediately evident.

Electrical Installation and Protection Systems

PAN S.r.l. draws attention to the fact that, according to CEI 64-8, protection against overvoltages and the overall quality of the electrical installation are the responsibility of the system designer and installer, and not of the luminaire manufacturer.
In particular, for professional, commercial or industrial installations, the following measures are strongly recommended:

- proper grounding of the electrical system;
- use of surge protection devices (SPD) suitable for the assessed risk level;
- correct selection and sizing of circuit breakers and residual current devices;

- wiring compliant with applicable standards.

Technical Conclusion

PAN S.r.l. products are designed to operate correctly when supplied with electrical power compliant with applicable standards.
Any failures or anomalies affecting the drivers (AC 120–240V section) that are attributable to power supply disturbances or deficiencies of the electrical installation shall be considered external events and not attributable to design or manufacturing defects.