

Expert guide

Understanding 48V track systems

Minimal infrastructure. Maximum flexibility

KARIZMA luce

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Why 48V track?

A 48V track system runs on low voltage.

Because of this, both the track profile and luminaires can be much smaller.

The result:

- slimmer track profiles
- compact luminaires
- clean ceiling integration

Perfect for interiors where lighting should support the design, not dominate it.



Where it works best

Because of its minimal scale, the system fits spaces where visual calm matters.

Typical applications:

- residential interiors
- hospitality concepts
- boutique retail
- galleries and exhibitions
- showrooms

The lighting remains flexible while the architecture stays quiet.



How the system works

A 48V track system cannot connect directly to mains power.

Instead, an AC/DC converter transforms
230V AC → 48V DC.

Two installation options:

- Remote converter in the ceiling or technical space
- In-track converter integrated directly into the track

Both solutions power the system while keeping the installation clean. dimming is not possible in a 48V track system.

Each luminaire manages its own dimming and control.



Dimming and control



Where the control actually happens

The AC/DC converter only powers the track.

The control electronics are inside the luminaire.

This allows individual luminaire control through:

- DALI
- Casambi

Important:

Phase-cut dimming is not possible in a 48V track system.

Special track configurations

For projects that require a custom approach, the 48V Track Mini system can be adapted into special shapes.

Available on request:

- bended tracks
- up/down suspended versions
- tubular suspended shapes

This allows the track itself to become part of the architectural design language.



Why designers choose it



A 48V track mini system combines:

- compact scale
- architectural integration
- professional lighting control

It allows designers to use track lighting in a much more refined way.

Small in size.
Big in design freedom.

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Karizmaluce.com/blog

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