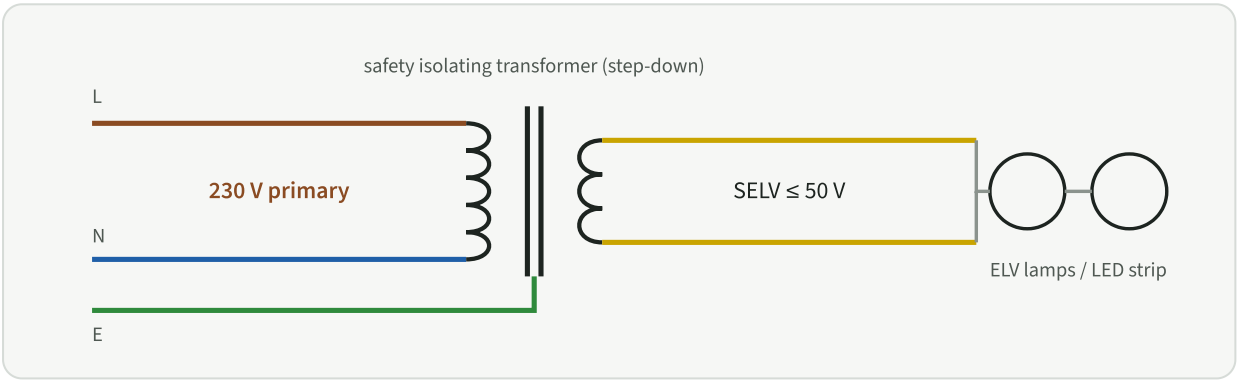
ELV AND SELV LIGHTING

WHAT COUNTS AS EXTRA-LOW VOLTAGE?

ELV	**Extra-low voltage**: not exceeding **50 V AC** or **120 V ripple-free DC**. "Ripple-free" means a perfectly smooth DC line, not half-wave humps.
LV	**Low voltage**: above ELV, up to **1000 V AC** (1500 V DC). The 230/400 V mains is LV.
SELV	**Separated** extra-low voltage, supplied through a **safety isolating transformer**, e.g. 230 V in, 12 V (≤ 50 V) out.



- **Where you'll see it:** under-cabinet and LED strip lighting, track lighting, media walls and garden lighting.
- ELV isn't automatically safe. You still need the right protective measures and must consider the environment.
- **Why the grid steps voltage up:** for the same power, higher voltage means less current, so less voltage drop over long distances. That allows thinner cables and fewer transformers.
- Transformer types include step-up and step-down (voltage), current, power and isolating.

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