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Shortest possible  
cable and wire lengths  
on the LV level



# The feed should be as close as possible to the load center

The simplest method: Determining the average line length

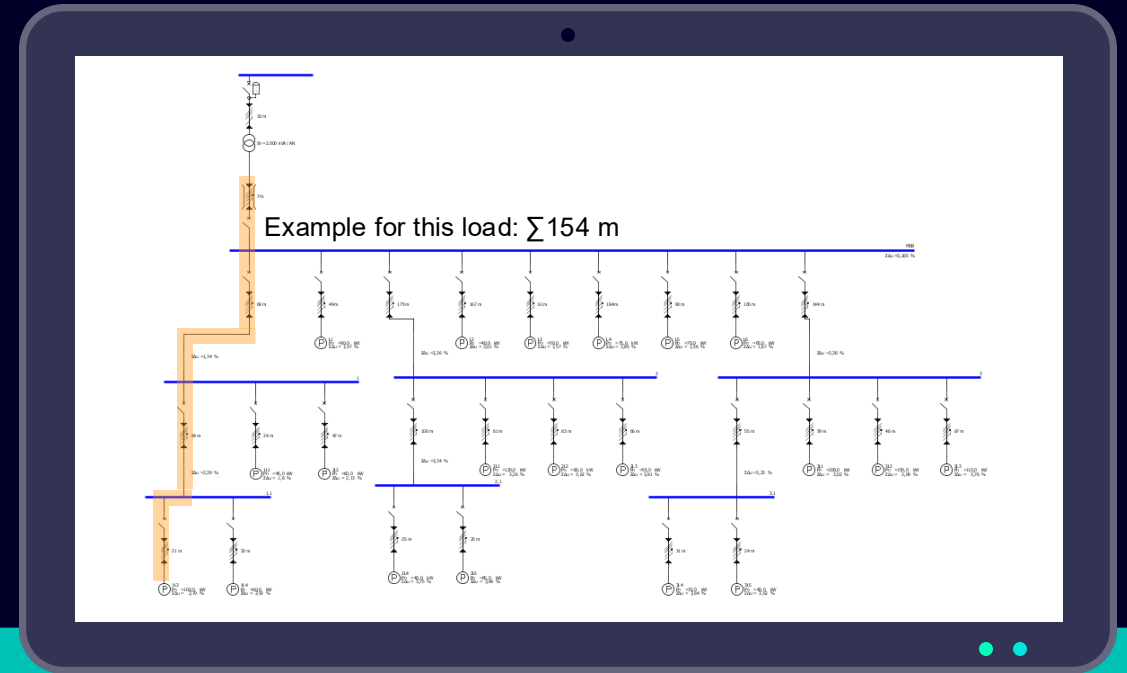
Cable and line routes at low voltage level carry a potential for losses; they should be kept as short as possible.

Placing transformers and main/sub-distribution boards close to consumers leads to shorter cable lengths.

The assessment of route lengths within the power distribution can be evaluated according to the point system of IEC 60364-8-1.

The principle is: The shorter the cable lengths, the higher the energy efficiency.

The average route length can be easily determined using SIMARIS design and its integrated 3D method..



Graphic and values from SIMARIS design



## Advantage of this method:

The **actual line lengths**, including the 3-dimensional, complex routing are used, which are also required for short-circuit conditions / cable cross-section, selectivity and backup.

# Evaluation of average line length through Efficiency Guide for shorter cable and wire lengths

- SIMARIS design contains the necessary data for the energy efficiency classification of buildings.
- The data can be exported from SIMARIS design and then imported into the Efficiency Guide.
- The Efficiency Guide evaluates the average line length to optimize energy efficiency:

**1** Supported analysis and evaluation of measures

**2** Identification of improvement potential

**3** Live adjustment of current assessment

**4** Output of documentation

