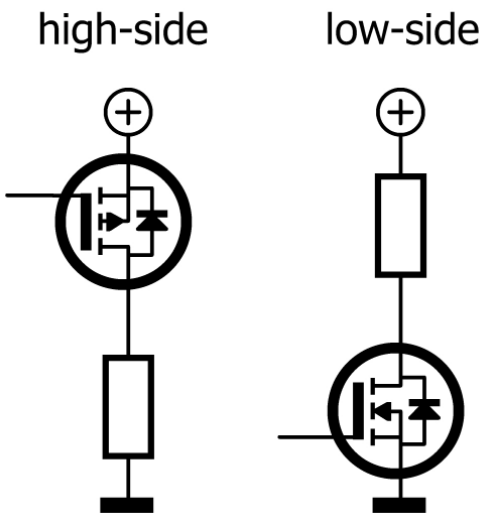
High-Side vs Low-Side Switching

Differences



High-side and low-side switching are two different approaches for connecting the switch (often a transistor) with respect to the load and the ground. In the case of high-side switching the switch is placed between the positive power line and the load. While for low-side switching, the switch is placed between the load and the ground.

Use Cases

1. High-Side Switching:

- High-side switching is useful in cases where it is safer to disconnect the load from the battery than from ground. For example, in cars or machines where most of the structure is connected to the ground.
- This method is preferred for applications requiring a stable ground reference when the load is off.

2. Low-Side Switching:

- Low-side switching is preferred for low-power, and cost-efficient applications.
- This method is suitable for controlling simple loads like lamps, LEDs, or heaters, where switching on the ground side is sufficient.