

Highly insulating DC/DC converter with 50kV insulation voltage

Particularly in the sector for medium voltage applications highly insulated auxiliary power supplies are indispensable due to high potential differences between the reference potential of power semiconductors or measuring systems and the earthing point. Standard components for this challenging task are hardly available.

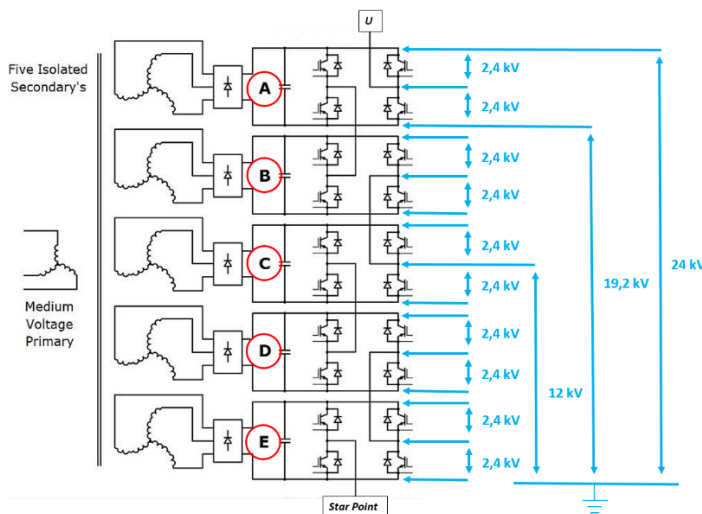


Figure 1: Potential differences in a medium voltage switch

Due to the ongoing energy turnaround, the development of alternative storage systems and the expansion of HVDC facilities, the demand for semiconductor switches and converters in the medium voltage sector is growing. In order to establish the required high blocking voltages for power electronic equipment used within this sector, the series connection of semiconductors becomes mandatory. Each semiconductor is provided with its own drive unit. According to the circuit structure, these are at different potentials to earth.

As a result potential differences of several thousand volts have to be handled by the insulation of the power supply. Power supplies that can provide such high insulation voltages are hardly available on the market.

The GvA Power Electronics GmbH offers a simple, flexible and compact solution for supplying the control units and measuring systems. The “GvA Power Supply System” (GPSS) is a DC voltage source characterized by high insulation strength combined with remarkable performance and efficiency.



For more information see:



Standard functions of the GPSS:

- compact design: 73 x 200 x 165mm
- two separate outputs
- continuous output: 150W per channel
- typical output voltage: 35V DC
- typical supply voltage: 24V DC
- maximum efficiency: 94%
- insulation voltage: 50kV AC
- partial discharge extinction voltage: 21kV AC (prim.-sec.)
14kV AC (sec. -sec.)