

Highly insulating DC/DC converter with 24kV 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.

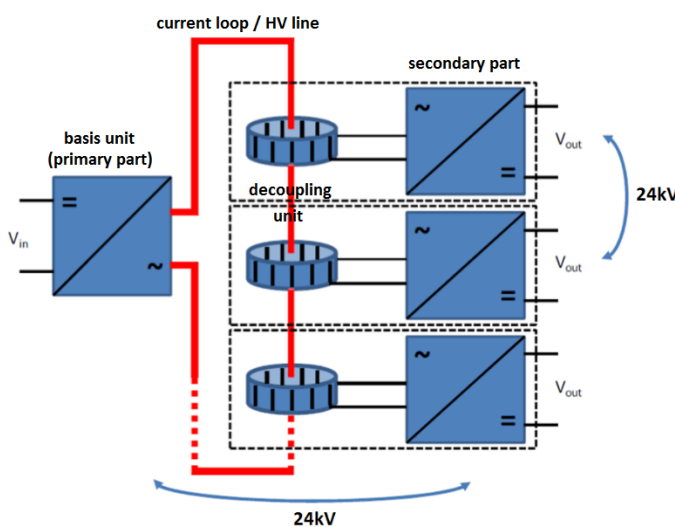


Figure 1: Functional scheme of the IPSS

Due to the ongoing energy turnaround, the development of alternative storage systems and the expansion of HVDV 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 “Inductive Power Supply System” (IPSS) is a DC voltage source characterized by high insulation strength combined with remarkable performance and system compatibility.



For further information see:



Standard functions of the IPSS:

- compact design
 - base unit: 166x 140x 100mm
 - decoupling unit: 49,5x 49,5x 32,6mm
- continuous output:
 - output power, max: 35W
 - per decoupling unit, max : 10W
- wide input voltage range: 20-125V DC
- different output voltages: 12V /15V /24V
- insulation voltage: 24kV AC
- partial discharge extinction voltage: 13kV AC (prim.-sec.)