

## Are you driving or charging?

### Fast charging but safe - insulation monitoring in DC charging stations

The number of electric vehicles is constantly increasing and will grow even faster in the future. This will also help to expand the charging station infrastructure, as DC charging stations are the first choice when electric vehicles need to be charged in the shortest possible time. Electrical safety must be ensured during the charging process. For this purpose, an unearthed DC power supply system (IT system) with insulation monitoring by an insulation monitoring device (IMD) is installed. The user must never be exposed to high voltages (up to 1000 V) at any time. DOLD has developed an intelligent solution for insulation monitoring especially for DC charging stations.

The insulation monitor RN 5897/020 of the VARIMETER IMD family is used especially for DC charging stations according to the IEC/EN 61851-23 standard and monitors the charging process from the charging station into the vehicle. The device is characterised by the short response delay of  $\leq 1s$ , a nominal voltage up to DC 1000 V with an additional coupling device and the detection of asymmetrical as well as symmetrical insulation faults. The integrated voltage measurement ensures reliable determination of the insulation resistance in the IT system. The insulation monitor also has a self-test. This takes place automatically after power-on and after every full operating hour.

In addition to monitoring DC charging stations, the insulation monitor RN 5897/020 can also be used to monitor unearthed AC, DC, AC/DC system, UPS systems, networks with frequency converters or DC drives, battery networks and mobile power generators.



#### 1.700 Zeichen (inkl. Leerzeichen)

We would be very pleased about a free publication of the text and the pictures.

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