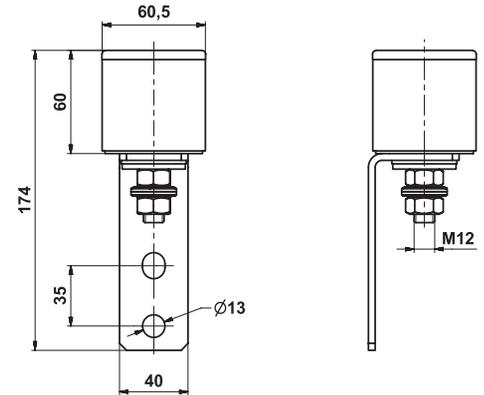


## Low voltage limiter for railway application



**HGS100 RW 250V**



It is range of voltage limiters designed for overvoltage protection of personnel and equipment in DC and AC rail traction systems. It is recommended to install this limiter between the current return path and non-electrified parts of structures laying adjacent to the rails. Internal construction of HGS is based at application of high power gas-filled gas discharge tube (GDT), which is built in to stainless steel box. In case of overvoltage, HGS100 RW 250V generates a durable conductive path between the overloaded area and the railway's substation. This results in increased current loads that are sensed at the substation, tripping the safety switch and thus protecting personnel and equipment. In addition, all overvoltages generated by lightning are effectively limited by Hakel's internal construction of HGS100 RW 250V. All requirements given by EN 50122-1 and IEC 61643-1/A11 relating to electrical safety earthing for this specific use are also fulfilled.

| Type  | HGS100 RW 250V                                   |
|---|--|
| Examinations according to   | IEC 61643-11/A11, EN 50122-1                     |
| DC Spark-Over Voltage <sup>1)</sup>   | 200 ÷ 300 V                                      |
| AC Spark-Over Voltage   | > 175 V <sub>rms</sub>                           |
| Impulse Spark-Over Voltage at 5 kV/μs - for 99% of measured values (wave 1,2/50 μs, 6 kV) | < 1000 V   |
| Max. Impulse Discharge Current I <sub>max</sub> (8/20 μs)                                 | 200 kA   |
| Nominal Impulse Discharge Current I <sub>n</sub> (8/20 μs)                                | 100 kA   |
| Max. Lightning Impulse Current I <sub>imp</sub> (10/350 μs)                               | 150 kA   |
| Charge  | 75 As  |
| Specific Energy   | 5500 kJ/Ω  |
| Rated withstand current   | up to 8 kA <sub>rms</sub> / 100 msec (AC - mode) |
|   | up to 20kA / 30 msec (DC - mode)                 |
| Behaviour after substantial overloading   | internal short circuit inside HGS body           |
| Insulation Resistance at 100 VDC  | > 1 GΩ   |
| Capacitance at 1 MHz  | < 5 pF   |
| Housing   | IP66   |
| Operating and Storage Temperature   | - 40 ÷ + 90°C                                    |
| Weight  | 950 g  |
| Climatic Category (IEC 60068-1)   | 40/90/21   |
| Article number  | 10 003   |

<sup>1)</sup> In ionised mode

Terms in accordance with ITU-T Rec. K-12, DIN 57845/VDE 0845 and EN 61643-11:2011