# BVL-100-45-R02

## VLD - for DC traction / VLD class 2.2 (BVL)

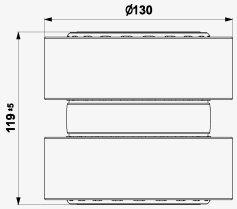
Voltage limiting device

voltage limiting device, VLD of class 2.2, type VLD-O+F, limiting of occurrence non-permissible touch voltages, equalizing of the earth potential and limiting of overvoltage of a railway system AC and DC, surge protective device SPD of type 1+2

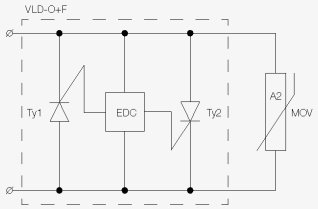
- limits non-permissible high touch voltages on non-live metal parts of a railway equipment in AC and DC railway system
- establishes temporary connection between the return circuit and the earth of the railway electric traction system, during the permissible value of voltage is exceeded
- equalizes the earth potential between the return circuit and the earth surrounding an electric and an electronics equipment and prevents their damage
- limits touch voltage and protects persons that might enter into contact with the parts affected
- eliminates high impulse overvoltages induced into the railway electric traction system or the railway equipment by a lightning strike




**Product dimensions**




**Basic circuit diagram**




| Parameter name | | Parameter value |
|---|---|---|
| Class VLD according to EN 50526-2 | | 2.2 |
| Type VLD according to EN 50122-1 | | VLD-O+F |
| Rated AC (rms) current (@ 60 min) | $I_r$ | 100 A |
| Rated DC current (@ 60min) | $I_r$ | 100 A |
| Leakage current at Uw | $I_L$ | < 50 µA |
| Non-triggering voltage | $U_w$ | 36.00 V |
| Maximal short time DC withstand current (@ 30 ms) | $I_w$ | 16.00 kA |
| Maximal short time DC withstand current (@ 100 ms) | $I_w$ | 9.00 kA |
| Short time AC (rms) withstand current (@ 36 ms) | $I_w$ | 15.00 kA |

| | | |
|---|---|---|
| High charge impulse (10/350) | $I_{imp-hc}$ | 35.00 kA |
| Lightning current impulse (8/20) | $I_{imp-n}$ | 50.00 kA |
| High current impulse (8/20) | $I_{imp-high}$ | 75.00 kA |
| Nominal triggering voltage | $U_{Tn}$ | 45.00 V |
| Maximal residual voltage at Iimp-n | $U_{RES}$ | 700.00 V |
| Maximal residual voltage at Ir | $U_{RES}$ | 1.20 V |
| Maximal residual voltage at Iw | $U_{RES}$ | 7.00 V |
| Instantaneous triggering voltage | $U_{Ti}$ | 45.00 V |
| Response time @ lightning current | | 25 ns |
| Response time of thyristors | $T_R$ | < 1,5 ms |
| Degree of protection | | IP 67 |
| Range of ambient temperatures (min/max) | | -40 / 70 °C |
| According to standard | | EN 50122-1, EN 50526-2 |
| Weight | | 2.90 kg |
| ETIM Class | | EC003621 |
| Customs tariff number | | 85301000 |
| EAN | | 8595090567134 |
| Order number | | A06713 |