

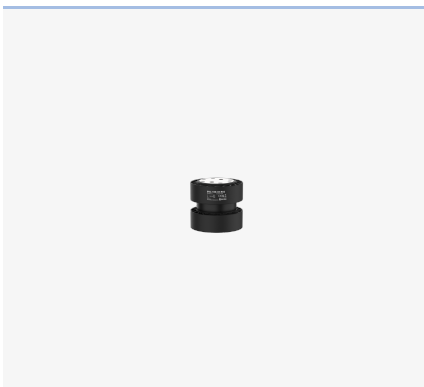
# BVL-100-45-R02

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

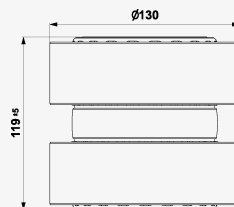
Voltage limiting device

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

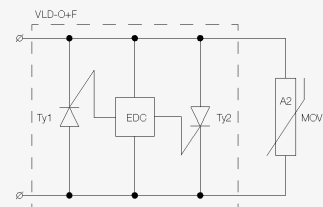
- limits non-permissible high touch voltages on non-live metal parts of a railway equipment in AC and DC railway system
- establishes temporary connection between the return circuit and the earth of the railway electric traction system, during the permissible value of voltage is exceeded
- equalizes 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 $U_w$                           | $I_L$ | < 50 $\mu$ A    |
| Non-triggering voltage                             | $U_w$ | 36.00 V         |
| Maximal short time DC withstand current (@ 30 ms)  | $I_w$ | 16.0 kA         |
| Maximal short time DC withstand current (@ 100 ms) | $I_w$ | 9.0 kA          |
| Short time AC (rms) withstand current (@ 36 ms)    | $I_w$ | 15.0 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 $I_{imp-n}$ | $U_{RES}$      | 700.00 V               |
| Maximal residual voltage at $I_r$       | $U_{RES}$      | 1.20 V                 |
| Maximal residual voltage at $I_w$       | $U_{RES}$      | 5.00 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                 |