BVL-50-120-R02

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

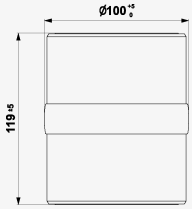
Voltage limiting device

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

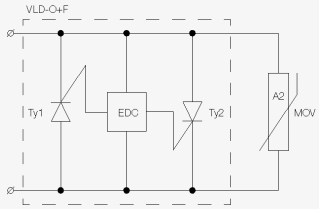
- limits non-permissible high touch voltages on non-live metal parts of a railway equipment in AC and DC railway system
- establishes temporary connection between the return circuit and the earth of the railway electric traction system, during the permissible value of voltage is exceeded
- equalizes 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	50 A
Rated DC current (@ 60min)	I_r	50 A
Leakage current at Uw	I_L	< 120 µA
Non-triggering voltage	U_w	100.00 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}	120.00 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}	120.00 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		2.10 kg
ETIM Class		EC003621
Customs tariff number		85301000
EAN		8595090567127
Order number		A06712