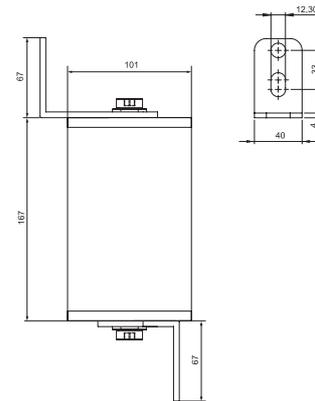
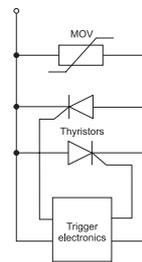


LOW VOLTAGE LIMITER ALVL 120

outdoor and indoor use



Basic circuit diagram



ALVL 60 and ALVL 120 – low voltage limiters, recoverable VLD of 2.2 class (bi-directional), VLD-0+F type, used primarily in DC traction systems to protect against electric shock when touching non-live metal parts of structures or in AC power supply systems. They are used to effectively protect persons, who may come into contact with these parts during lightning strikes or in case of a defect of the traction power line. In case of a failure due to connection between live part of traction power supply system and the conductive part accidentally connected to the return circuit, the limiter protects against impermissible touch voltage by becoming conductive and causing cut-off of the current flow. According to EN 50122-1:2011 this type of limiter is recommended mainly for the connection between the protected part and return circuit in the overhead line zones (or pantograph zones) that may be in contact with the conductors or damaged current collector, then on the support structures of pylons which can become live due to an insulation failure. If overvoltage occurs for a longer period of time (milliseconds up to hours) the thyristors fire to limit touch voltage value.

As soon as the overvoltage condition ends, the thyristors cut off the current flow and the original condition is restored. ALVL consists of MOV varistors, high-power thyristors and electronic components (differential delay element), which within about 1 msec can activate both in-built high-power thyristors. Such activation corresponds to the voltage drop across the varistor. Based on varistor polarity, the corresponding thyristor is being activated and the current flowing through the activated varistor, now starts to flow through the thyristor. The limiter is designed in a way enabling transmitting of high temperatures rising inside the equipment into the aluminium structure. The ALVL limiters are maintenance free, have high insulation resistance value ($k\Omega$) and high protection capability. The housing is made of silicone caoutchouc which has a great resistance to surface creepage currents and electric arc. It has a hydrophobic properties and shows excellent resistance to weathering, contamination, UV light as well as harsh treatment and mechanical damage.

Type		ALVL 60	ALVL 120
Class to EN 50526-2		2.2	
Non-triggering voltage	U_w	48 V AC	96 V AC
Nominal triggering voltage	U_s	< 70 V DC	120 V DC
Technical data of built-in metal-oxide varistors		acc. to EN 61643-11:2012 and EN 60099-4:2014	
Max. nominal discharge current for class II test (8/20)	I_n	40 kA (8/20 μ s)	
Impulse discharge current for class I test (10/350)	I_{imp}	8 kA (10/350 μ s)	10 kA (10/350 μ s)
Maximum continuous operating voltage	U_c	60 V AC	115 V AC
Voltage protection level	U_p	< 700 V	< 900 V
Protection type		IP65	
Operating temperature range	ϑ	- 40 °C ÷ + 55 °C	
Height / diameter (without accessories)	h	167 mm / 101 mm	
Weight	m	2,1 kg	2,35 kg
Encapsulation		silicon rubber	
Article number		50807	50806

This product is supplied together with an integrated bracket, enabling direct mounting of the limiter to the metal structure being protected (post, wall or flange). The recommended installation position is bracket up.