

HGS 150RW 250 V / 500 V Voltage limiting device (VLD)

This voltage limiting device (VLD) is designed to protect electrically conductive parts and structures of the overhead contact line against impermissible touch voltage in case of any fault whilst it serves as a galvanic separation unit isolating protected parts from the track return system. This voltage limiting device (VLD) establishes a conductive connection of protected parts with the track return system when a voltage higher than the voltage limiting device (VLD) igniting voltage appears. Parts being protected are electrically conductive parts and structures of an overhead contact line and other conductive parts in area of overhead contact line and current collector as stipulated in EN 50122-1.

The voltage limiting device (VLD) is based on a high-rupturing capacity (H.R.C.) surge voltage protector (SVP) with a compressed-gas filling having a specified ignition voltage.

This surge voltage protector (SVP) is non-exchangeable.

The voltage limiting device (VLD) is fixed to the protected part by two bolts to improve the system reliability.

The voltage-current characteristic of this voltage limiting device (VLD) is the same for positive as well as negative voltage polarity. The voltage limiting device (VLD) is designed to be installed in outdoor environment having all and any climatic effects of the temperate zone (snow, rain, humidity, frost, solar radiation, active oxygen, dust) – AB8 according to HD 360364-5-51 (mod IEC 60364-5-51).

Type of construction, main dimensions, connecting terminals for each mounting alternative, and other details are shown in the producer's specification TP-EŽ-02/2009.

Technical Specifications

Type	HGS 150RW 250 V / 500 V
Manufactured in compliance with following standards	EN 61643-11, EN 50526-1 and 2, EN 50112-1
Type acc. EN 50112-1	F
Class acc EN 50526-2	1
Ignition voltage	150 V ÷ 250 V, 300 V ÷ 500 V
Pulsed breakdown voltage at 5 kV/μs (wave 1,2/50 μs). For 99 % of measured values	<1200 V
Max. discharge current I_{max} (8/20μs)	200 kA
Rated (nominal) discharge current I_n (8/20μs)	100 kA
Impulse current I_{imp} (10/350 μs)	150 kA
Charge	75 As
Specific energy	5500 kJ/Ω
Rated withstand current	8 kA/100 msec (AC-mode) 20 kA/30 msec (DC-mode)
Insulation resistance at 100V DC	>1 GΩ
Capacity at 1 MHz	<5 pF
Recommended conductor cross-section	ČSN 33 1500 ed.2
Protection provided by enclosure	IP 66
Operation and storage temperature	-50 ÷ +40 °C



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