SVL

Sheath Voltage Limiters
CLASS 2
4kV to 10kV

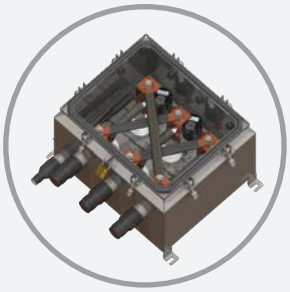
SVL's provide valuable protection to expensive cable installations. They are highly reliable and effective at managing cable sheath voltage rises and the associated power flows that can result under fault conditions.

Wide voltage rating

The range includes 4.0kV, 6.0kV, 9.0kV and 10.0kV with other voltages on request.

Various connections

Various mounting arrangements available, including pedestal and inline for indoor/ enclosure mounting.



Link box application

Primarily used in Link Boxes as a low cost method for safeguarding cable systems.

Proven design and build

Insulect SVLs have been used on major cable projects up to 800kV in globally.

Selection Guide

Generally the following must be considered:

- SVL Rated voltage must be equal to or greater than the induced sheath voltage caused by the maximum system fault current (i.e. The SVL should not conduct during normal fault conditions).
- From the cable manufacturer, obtain cable data to determine the maximum voltage withstand for an 8/20 and 4/10 microsecond lightning or switching induced voltage.
- From the SVL data characteristics table, check that the SVL selected has residual voltages less than the rating of the sheath (i.e. the SVL's main function is to protect the sheath under these conditions).

Short circuit and switching currents, as well as lighning and flashover events, may cause high voltages on the cable sheath.

These induced voltages must be calculated by the client's engineers before an SVL can be selected.

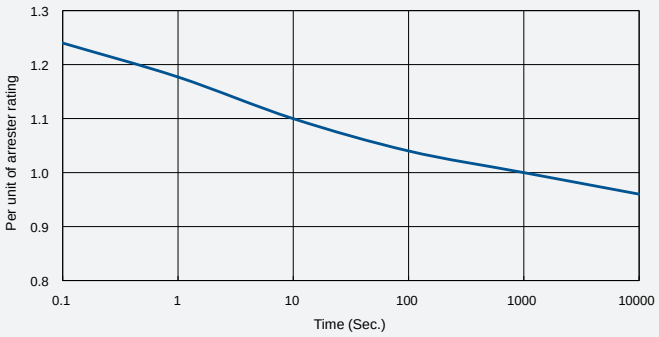
Note that all bonding cables used for earthing the sheath must also be able to withstand these voltages.

Technical Specifications*

SVL Class 2 - International Version		CA 4/10.2D	CA 6/10.2D	CA 9/10.2D	CA 10/10.2D
Rated Voltage	kV	4	6	9	10
MCOV	kV	3.2	4.8	7.2	8
Nominal Discharge Current	kA	10	10	10	10
Energy Withstand Capability	kJ	4.5kJ/kV(Ur)	4.5kJ/kV(Ur)	4.5kJ/kV(Ur)	4.5kJ/kV(Ur)
Line Discharge Class		2	2	2	2
Leakage Distance	mm	107	107	147	147
Flashover Distance	mm	107	107	147	147
Impulse Voltage at 1.2/50µs	kV	60	60	85	85
Power Frequency Voltage (Dry)	kV	35	35	60	60
Residual Voltage at Lightning Impulse Current 8/20µs at 5kA 10kA 20kA 40kA	 kV kV kV kV	 11.93 12.86 14.15 15.74	 15.90 17.15 18.87 20.98	 23.9 25.78 28.37 31.54	 29.88 32.22 35.46 39.42
Steep Lightning Current Impulse at 10kA (1/20µs)	kV	13.2	17.6	26.4	29.3
Switching Current Impulse at 500A (30/60µs)	kV	9.7	12.9	19.4	21.5
Rated Short Circuit Current	kA	50	50	50	50
Cantilever Strength	Nm	350	350	350	350
Pull Strength	N	3500	3500	3500	3500
Max Torque	Nm	78	78	78	78
Weight	kg	-	-	-	-

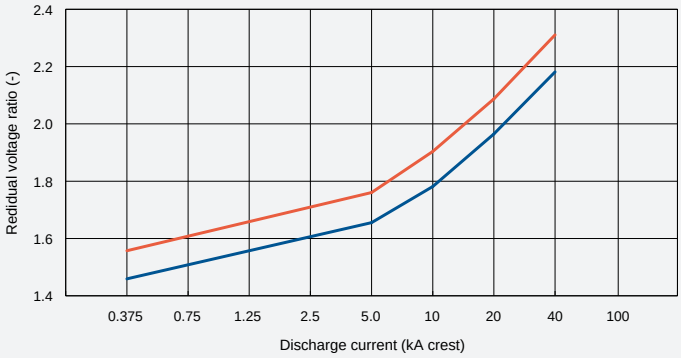
* Final specification subject to type test and engineering approval

Temporary Over Voltage (TOV) Curve



Preheated to 60°C, prestressed with 1 high current impulse 100kA

Residual Voltage Curve



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