

Sheath Voltage Limiter



Sheath voltage limiter (SVL) is a surge protective device connected between the metallic shield/sheath and ground on specially bonded cables to limit shield/sheath overvoltages during system transients.

SVL provides valuable protection to expensive HV cable systems.

EMELEC SVL features:

- metal-oxide (MO) surge arresters without gap
- PMSP DD type Ir (8/20 μ s), 10 kA, Ur: range 1.8-18 kV
- PMPP type Ir: 5 kA, Ur: 0.28 kV and 1 kV
- molded silicone housing
- High quality, safe and reliable, maintenance free
- comply with IEC 60099-4
- IPH (CESI) and VEIKI-VNL (DEKRA) type tested



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Technical Characteristics

Rated voltage, U_r : **6 kV**

Maximum continuous operating voltage, U_c : **5,1 kV**

Rated discharge current (8/20 μ s), I_r : **10 kA**

Rated short circuit current, I_{sc} : **16 kA**

Line discharge class: **1**

High current impulse (4/10 μ s): **100 kA**

Long duration current impulse (2000 μ s): **250 A**

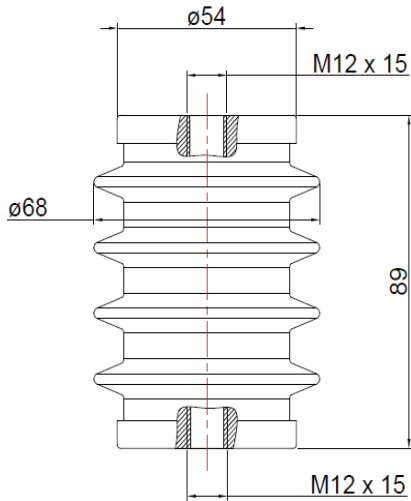
Energy absorption capability: **8,4 kJ**

Reference current: **5 mA**

Minimum reference voltage at reference current: **6,5 kV**

Minimum voltage at 1mA dc: **8,4 kV dc**

Dimensions (mm)



Arrester Housing

Housing material of arrester:
Silicone

Creepage distance of insulator:
112 mm

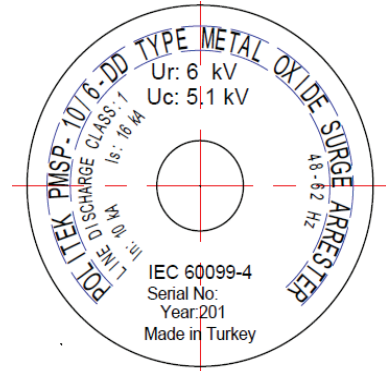
Impulse voltage withstand (1,2/50 μ s):
22,3 kV

Power frequency voltage withstand, dry:
10,3 kV

Cantilever strength M12:
220 Nm

Weight of arrester:
0,63 kg

Nameplate



Residual voltages

Steep current
impulse
(1/20 μ s)

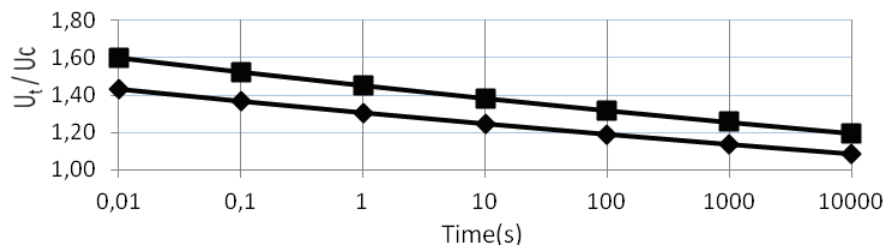
Lightning impulse voltage
(8/20 μ s)

Switching impulse voltage
(30/60 μ s)

10 kA	2,5 kA	5 kA	10 kA	20 kA	40 kA	125 A	500 A
21,0 kV	17,3 kV	18,0 kV	19,2 kV	19,6 kV	19,8 kV	14,4 kV	14,8 kV

Power Frequency Withstand Voltage versus Time Characteristic

- Without preheating and without load
- ◆ Preheated to 60 degrees centigrade and then subjected to high current



Technical Characteristics

Rated discharge current (8/20 μ s), I_r : **10 kA**

Line discharge class: **1**

Long duration current impulse (2000 μ s): **250 A**

Housing material of arrester: **Silicone**

Rated short circuit current, I_{sc} : **16 kA**

High current impulse (4/10 μ s): **100 kA**

Reference current: **5 mA**

Cantilever strength M12: **220 Nm**

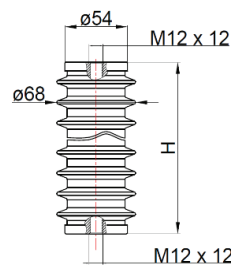
Type	Technical Characteristics					Arrester Housing			
	Rated Voltage (Ur)	Maximum Continuous Operating Voltage (Uc)	Energy Absorption Capability	Minimum Reference Voltage at Reference Current	Minimum Voltage at 1 mA dc	Creepage distance of insulator	Impulse voltage withstand (1,2/50 μ s)	Power frequency voltage withstand , dry	Weight of arrester
	kV	kV	kJ	kV	kV dc	mm	kV	kV	kg
PMSP-10/1.8-DD	1,8	1,5	2,5	2	2,5	112	22,3	10,3	0,50
PMSP-10/3-DD	3	2,6	4,2	3,3	4,2	112	22,3	10,3	0,56
PMSP-10/3.6-DD	3,6	3,1	5	3,9	5,0	112	22,3	10,3	0,56
PMSP-10/5-DD	5	4,3	7	5,4	7,0	112	22,3	10,3	0,62
PMSP-10/6-DD	6	5,1	8,4	6,5	8,4	112	22,3	10,3	0,63
PMSP-10/7-DD	7	6	9,8	7,6	9,8	112	22,3	10,3	0,70
PMSP-10/7.2-DD	7,2	6,1	10,1	8,2	10,0	112	22,3	10,3	0,70
PMSP-10/9-DD	9	7,7	12,6	9,8	12,6	175	37	17,2	0,96
PMSP-10/10-DD	10	8,5	14	10,8	14,0	175	37	17,2	1,10
PMSP-10/12-DD	12	10,2	16,8	13	16,8	252	55,5	25,8	1,25
PMSP-10/15-DD	15	12,7	21	16,3	21,0	252	55,5	25,8	1,34
PMSP-10/18-DD	18	15,3	25,2	19,8	25,0	288	66,6	31	1,50

Type	Residual Voltages								Height H (mm)
	Steep Current Impulse Voltage (1/20 μ s)	Lightning Impulse Voltage (8/20 μ s)					Switching Impulse Voltage (30/60 μ s)		
		10kA kV	2,5 kA kV	5 kA kV	10 kA kV	20 kA kV	40 kA kV	125 A kV	
PMSP-10/1.8-DD	6,3	5,2	5,4	5,8	5,9	59	4,3	4,4	89
PMSP-10/3-DD	10,5	8,7	9	9,6	9,8	9,9	7,2	7,4	89
PMSP-10/3.6-DD	12,6	10,4	10,8	11,5	11,8	11,9	8,6	8,9	89
PMSP-10/5-DD	17,5	14,4	15	16	16,3	16,5	12	12,3	89
PMSP-10/6-DD	21	17,3	18	19,2	19,6	19,8	14,4	14,8	89
PMSP-10/7-DD	24,4	20,2	21	22,4	22,9	23,1	16,8	17,3	89
PMSP-10/7.2-DD	25,1	20,8	21,6	23	23,6	23,8	17,3	17,8	89
PMSP-10/9-DD	31,4	26	27	28,8	29,4	29,7	21,6	22,2	130
PMSP-10/10-DD	34,9	28,8	30	32	32,7	33	24	24,7	130
PMSP-10/12-DD	41,9	34,6	36	38,4	39,2	39,6	28,8	29,6	177
PMSP-10/15-DD	52,4	43,2	45	48	49	49,5	36	37	177
PMSP-10/18-DD	63	52,2	54	57,6	58,8	59,4	43,2	44,4	205

Nameplate



PMSP-10/.....DD



Power Frequency Withstand Voltage versus Time Characteristics

- Without preheating and without load
- ◆ Preheated to 60 degrees centigrade and then subjected to high current

