

VCL SP

Monopolar Class II SPD (IEC 61643-1) with Metal Oxide Varistor (MOV) technology associated to a thermal (overtemperature) and an electrical (overcurrent) protection device.

- Plug and base system;
- Supportability to 5 kA short-circuit current;
- 35 DIN rail standard and also the possibility of fixation by NEMA standard grips;
- Direct connection to electrical bus at IEC or NEMA standard distribution boards;
- Optional remote signaling.

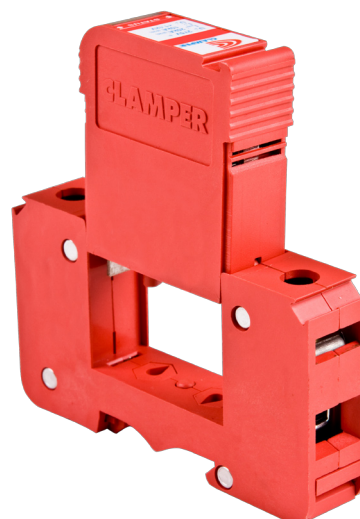
Applications

Protection of electronic and professional equipments directly connected to the electric power lines against overvoltages originated by atmospheric discharge (lightning) or electrical switching of power lines.

Suitable for installation between line and neutral, line and ground or between neutral and ground in distribution or control boards.

VCL SP is a monopolar Class II SPD, a voltage limiter device type, made of Metal Oxide Varistor (MOV Technology), with surge current drain capacity up to 45 kA at 8/20 μ s waveform.

It is provided with internal disconnecter to cut off the SPD from the electric line at the end of its lifetime or if an electrical disturbance occurs beyond its capacity to support it and a mechanical signaling system, by means of ON and OFF service indicator, that shows the status of operation. It can also be optionally made with reverse electrical contact for remote signaling.



For many times it may actuate without the need of substitution. Its modular conception makes easy to connect many SPD together in a single mounting plan, directly or not to the electrical bus, as well as to other components of the electric circuit distribution boards. VCL SP's fixing system is simple and fast, been done on standard 35 mm DIN rail (European Standard) or by NEMA grips (American Standard).

VCL SP has a thermoplastic isolating housing, fireless propagating and with V-0 flammability degree, according to UL 94.

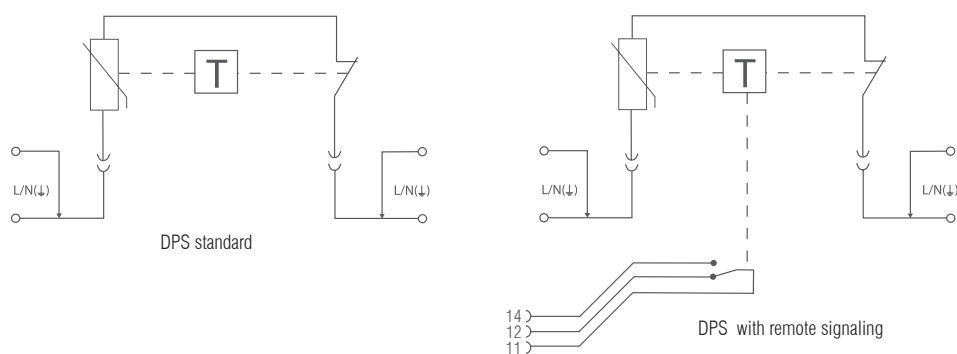
Characteristics	Un.	VCL SP
Standards	-	IEC 61643-1 / UL 1449
Response time	ns	< 25
Thermal protection	-	yes
Back-up fuse	A	125 gL/gG Class
Maximum short-circuit current without back-up fuse	kA	NA
Operation temperature	°C	-40.... +80
Cross-section	mm ²	4...25
Mounting type	-	35 DIN rail or NEMA grips
Protection type acc. to IEC 60 529/ EN 60 529	IP	20
Housing	-	Reinforced Polyamide box with glass fiber UL 94 V-0
DIN 43 880 Dimension	Mod.	1
Dimension	mm	90.6 x 66 x 17.5
Remote signaling		Optional
Contacts' characteristics	-	120 VAC/1A 24VDC/1A
Cross-section	mm ²	0.5...1.5
Weight	g	4

Performance Characteristics:

VCL SP	Maximum Continuous Operation Voltage		Nominal Current at 8/20 μ s	Maximum Surge Current at 8/20 μ s	Maximum Energy Absorption at 10/1000 μ s	Maximum Dissipation Power	Reference Voltage	Protection Level	Residual Voltage at 5 kA	Weight
Model	U _c		I _N	I _{MAX}	W _{MAX}	P _{MAX}	U _{REF}	U _p	U _{RES}	g
	AC	DC								
VCL SP 75V 20KA	75 V	100 V	10 kA	20 kA	145 J	1,0 W	120 V	0,4 kV	0,33 kV	85
VCL SP 75V 30KA	75 V	100 V	10 kA	30 kA	280 J	1,2 W	120 V	0,5 kV	0,33 kV	95
VCL SP 75V 45KA	75 V	100 V	20 kA	45 kA	340 J	1,4 W	120 V	0,6 kV	0,30 kV	100
VCL SP 175V 20KA	175 V	225 V	10 kA	20 kA	350 J	1,0 W	270 V	0,8 kV	0,70 kV	99
VCL SP 175V 30KA	175 V	225 V	10 kA	30 kA	700 J	1,2 W	270 V	0,8 kV	0,60 kV	102
VCL SP 175V 45KA	175 V	225 V	20 kA	45 kA	840 J	1,4 W	270 V	1,2 kV	0,60 kV	105
VCL SP 275V 20KA	275 V	350 V	10 kA	20 kA	530 J	1,0 W	430 V	1,2 kV	1,10 kV	103
VCL SP 275V 30KA	275 V	350 V	10 kA	30 kA	1060 J	1,2 W	430 V	1,3 kV	1,00 kV	107
VCL SP 275V 45KA	275 V	350 V	20 kA	45 kA	1280 J	1,4W	430 V	1,5 kV	1,00 kV	113
VCL SP 320V 20KA	320 V	420 V	10 kA	20 kA	680 J	1,0 W	510 V	1,5 kV	1,30 kV	95
VCL SP 320V 30KA	320 V	420 V	10 kA	30 kA	1350 J	1,2 W	510 V	1,5 kV	1,30 kV	102
VCL SP 320V 45KA	320 V	420 V	20 kA	45 kA	1620 J	1,4 W	510 V	1,8 kV	1,30 kV	110
VCL SP 385V 20KA	385 V	505 V	10 kA	20 kA	1025 J	1,0 W	620 V	1,8 kV	1,50 kV	102
VCL SP 385V 30KA	385 V	505 V	10 kA	30 kA	1390 J	1,2 W	620 V	1,7 kV	1,50 kV	110
VCL SP 385V 45KA	385 V	505 V	20 kA	45 kA	1660 J	1,4 W	620 V	2,0 kV	1,50 kV	117
VCL SP 460V 20KA	460 V	615 V	10 kA	20 kA	810 J	1,0 W	750 V	2,5 kV	2,00 kV	106
VCL SP 460V 30KA	460 V	615 V	10 kA	30 kA	1610 J	1,2 W	750 V	2,5 kV	1,90 kV	115
VCL SP 460V 45KA	460 V	615 V	20 kA	45 kA	1930 J	1,4 W	750 V	2,5 kV	1,90 kV	126

NOTE: In order to specify the VCL SP with REMOTE SIGNALING, just put "SR" together with the name of the product.
Example.: VCL SP xxxV xxkA /SR

Electrical Circuit:



Mechanical Drawing:

