VCL NEMA

Monopolar Class II SPD (IEC 61.643-1) with Metal Oxide Varistor (MOV) technology associated to a thermal (overtemperature) and an electrical (overcurrent) protection device.

- Supportability to 5 kA short-circuit current;
- 35 DIN rail standard and also the possibility of fixation by NEMA standard grips;
- Exclusive additional model for installation between neutral (N) and the protection conductor (PE)

VCL NEMA N/PE

VCL NEMA

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 (VCL NEMA N/PE) in distribution or control boards.

VCL NEMA 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 80 kA at 8/20 μs waveform.
It is provided with internal disconnector 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 luminous signaling system, by means of LED indicator, that shows the status of operation. 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 NEMA's fixing system is simple and fast, been done on standard 35 mm DIN rail (European Standard) or by NEMA grips (American Standard).
VCL NEMA has a thermoplastic isolating housing, fireless propagating and with V-0 flammability degree, according to UL 94.

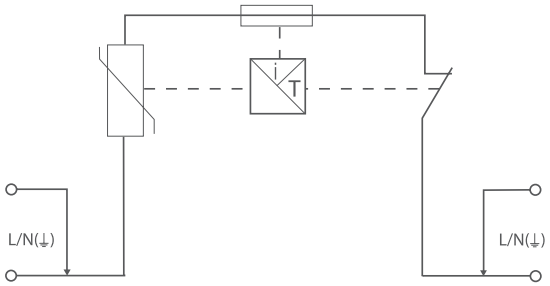
Characteristics	Un.	VCL NEMA
Standards	-	IEC 61643-1 / UL 1449
Response time	ns	< 25
Thermal protection	-	yes
Back-up fuse	A	63...100 - gL/gG Class
Maximum short-circuit current without back-up fuse	kA	5
Operation temperature	°C	-40....+80
Cross-section	mm^2	4...25
Mounting type	-	35 DIN rail or NEMA 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.	NA
Dimension	mm	109 x 68 x 25
Remote signaling	-	NA

Performance Characteristics:

VCL SLIM	Maximum Continuous Operation Voltage		Nominal Current at 8/20 μs	Maximum Surge Current at 8/20 μs	Maximum Energy Absorption at 10/1000μs	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 175V 08KA	175 V	225 V	3 kA	8 kA	210 J	1.0 W	270 V	0.45 kV	0.6 kV	80
VCL 175V 40KA	175 V	225 V	15 kA	40 kA	840 J	1.4 W	270 V	1.20 kV	0.6 kV	100
VCL 175V 80KA	175 V	225 V	30 kA	80 kA	1680 J	1.4 W	270 V	1.20 kV	0.5 kV	115
VCL 275V 08KA	275 V	350 V	3 kA	8 kA	330 J	1.0 W	430 V	0.71 kV	0.95 kV	85
VCL 275V 40KA	275 V	350 V	15 kA	40 kA	1280 J	1.4 W	430 V	1.50 kV	1.00 kV	105
VCL 275V 80KA	275 V	350 V	30 kA	80 kA	2560 J	1.4 W	430 V	1.50 kV	0.90 kV	125
VCL 440V 08KA	440 V	615 V	3 kA	8 kA	185 J *	1.0 W	750 V	1.18 kV	1.70 kV	85
VCL 440V 40KA	440 V	615 V	15 kA	40 kA	1930 J	1.4 W	750 V	2.5 kV	1.90 kV	115
VCL 440V 80KA	440 V	615 V	30 kA	80 kA	3431 J	1.4 W	750 V	2.5 kV	1.70 kV	145
VCL N-PE	275 V	350 V	15 kA	40 kA	1280 J	1.4 W	270 V	1.50 kV	0.6 kV	105

* Maximum absorbed energy in 2 ms.

Electrical Circuit:



Mechanical Drawing: