



RM-VS210 Series

5500 E. Loop 820 S #205 / Ft. Worth, TX 76119
817.483.8497/Fax:817.572.2242
+1.817.383.6956 - www.sinetamer.com



Key Features

- Industry Leading Measured Limiting Voltage (let-through) Performance
- Local & Remote Diagnostics
- Component-Level, Thermal Disconnect
- Multi-stage Hybrid Frequency Attenuation Circuit
- 100kA per phase protection

Application: The **RM-VS210xxx** is intended for general load applications ranging from individual equipment disconnect to service entrances. This device is one of the most versatile surge protective devices on the market with superior performance specs.

ANSI/IEEE C62.41.1 & C62.41.2-2002 environments: Suitable for Categories: A, B & C (Most Severe Electrical Environments)

IEC Environments: Suitable for use in IEC 61643-11 environments

Circuit Topology: Parallel configured **Frequency Attenuation Network and Optimal Response Circuitry™** circuit design incorporating component-level, thermal disconnectors.

Protection Modes: Industry-best practice of dedicated protection components for all operational modes of the electrical system. **L-L, L-N, N-G and L-G**

Input Power: 50-60 Hz

Temperature Rating: Up to 80°C

Standard Enclosure: NEMA 1 Rated Standard Enclosure
(Other enclosure options available see pg. 2)

Nominal Discharge Current (I_n) Rating: 20 kA

Diagnostics: Green LED's, one per phase, normally on. A wide range of optional diagnostics is available (see page two for details).

Circuit Interrupt: Internal component-level, thermal disconnect

Short Circuit Current Rating: 200 Kaic

Warranty: 15 Years

Product Qualifications:

Listed to ANSI/UL 1449 (4th Edition) by UL. ML record: E363345;
CSA file: 259700 (units up to 600 vac)
ISO 9001-2008 Certified Manufacturing Facility

Available Options

AC = Internal Audible Alarm w/ test button, mute switch and red LED

C = Form C dry relay contacts

D1 (CSA) = Integral, non-fused disconnect switch (TVSS unit mounts inside)

D3 (CSA) = Same as **D1**, except no external handle

E1 = Hub on side of enclosure

LP = Remote LED indicators in individual NEMA 4X housings

M = NEMA 12 Steel Enclosure

P = Flush Mount Plate

S = Surge counter w/ reset button

W = NEMA 4 Steel Enclosure

X = NEMA 4X Composite Enclosure (Box-in-box)

X1 = NEMA 4X Composite Enclosure with Clear Lid (Box-in-box)

X2 = NEMA 1, 2, 3, 3S, 4, 4X and 12 Composite Enclosure

XS = NEMA 4X Stainless Steel Enclosure

External Accessories: **EACS** = Externally mounted diagnostic module, combines **AC**, **C**, and **S** options
(Also available: **EAC**, **EC**, **ECS**, and **ES**) Other options may be available upon request.

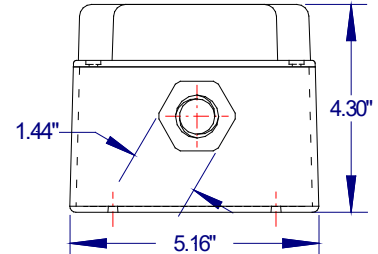
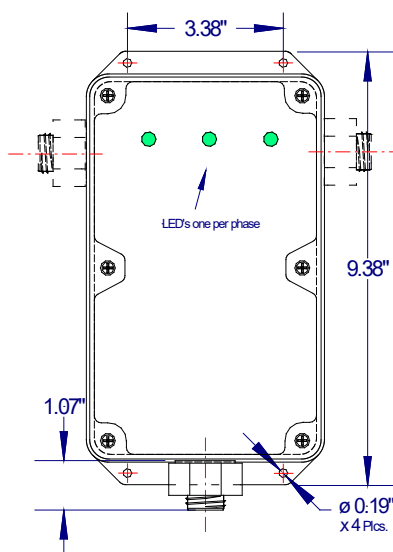
Voltage Code*	Circuit Type	Peak Surge Current	MCOV	ANSI/IEEE C62.41.1™-2002, C62.41.2™-2002, C62.45™-2002, and C62.62™-2010 Measured Limiting Voltages (tested with 6 inches of lead length external to the enclosure per Clauses 6.1.1 of C62.62™-2010 and 37.4.4 of ANSI/UL 1449-2006)		
				Test Mode	Cat A, 30 Ω 100 kHz Ring Wave 2 kV / 67 A @ 270° Phase Angle	Category C (High) 10 kA 8/20 Current Driven Test†
1P1	120 V, Single Ø (2 wire + ground)	50 kA L-N 50 kA L-G 50 kA N-G 150 kA Total	150 V 150 V 150 V	L-N L-G N-G	27 V 46 V 45 V	1,068 V 1,048 V 1,431 V
1P2	220 V, Single Ø 230 V, Single Ø 240 V, Single Ø (2 wire + ground)	50 kA L-N 50 kA L-G 50 kA N-G 150 kA Total	320 V 320 V 320 V	L-N L-G N-G	57 V 76 V 57 V	1,334 V 1,304 V 1,721 V
3Y1	120/208 V 3Ø Wye (4 wire + ground)	50 kA L-N 50 kA L-L 50 kA L-G 50 kA N-G 500kA Total	150 V 300 V 150 V 150 V	L-N L-L L-G N-G	27 V 38 V 46 V 45 V	1,068 V 1,381 V 1,048 V 1,431 V
3Y2 3Y22 3Y23 3Y24	277/480 V 3Ø Wye 220/380 V 3Ø Wye 230/400 V 3Ø Wye 240/415 V 3Ø Wye (4 wire + ground)	50 kA L-N 50 kA L-L 50 kA L-G 50 kA N-G 500 kA Total	320 V 550 V 320 V 320 V	L-N L-L L-G N-G	57 V 104 V 76 V 57 V	1,334 V 1,981 V 1,304 V 1,721 V
3Y3	347/600 V 3Ø Wye (4 wire + ground)	50 kA L-N 50 kA L-L 50 kA L-G 50 kA N-G 500 kA Total	420 V 680 V 420 V 420 V	L-N L-L L-G N-G	51 V 126 V 75 V 52 V	1,613 V 2,338 V 1,547 V 1,609 V
3N2	240 V 3Ø Delta (NN) (3 wire + ground)	50 kA L-L 50 kA L-G 300 kA Total	320 V 320 V	L-L L-G	60 V N/A	1,381 V 1,304 V
3N4	480 V 3Ø Delta (NN) (3 wire + ground)	50 kA L-L 50 kA L-G 300 kA Total	550 V 550 V	L-L L-G	104 V N/A	1,981 V 2,144 V
3N6	600 V 3Ø Delta (NN) (3 wire + ground)	50 kA L-L 50 kA L-G 300 kA Total	650 V 650 V	L-L L-G	176 V N/A	2338 V 2465 V
3N7	690 V 3Ø Delta (NN) (3 wire + ground)	50 kA L-L 50 kA L-G 300 kA Total	800 V 800 V	L-L L-G	195 V N/A	3053 V 2643 V
3N8	800 V 3Ø Delta (NN) (3 wire + ground)	50 kA L-L 50 kA L-G 300 kA Total	950 V 950 V	L-L L-G	205 V N/A	3253 V 2843 V

Measured Limiting Voltage (MLV) Test Parameters: Positive polarity, Category A: Line power applied, Category C: No line power applied, Voltages are peak (±10%). Measured Limiting Voltages are measured from the insertion point on the sine wave to the peak of the surge for powered tests. Each phase is the average of the modes within that mode of protection. In order to duplicate the results, the specified mode of protection must be tested in all modes (except N-G) and averaged together. (Individual mode or shot results may vary by more than 10%. Scope Settings: Time Base = 10 microseconds per division, Sampling Rate = 2.5 GigaSamples/sec, Bandwidth = 400 MHz (200 MHz for Cat C), Probes: Tektronix P5100/P6015A. These settings help to assure MLV results are accurate). All tests performed with 6" lead length (external to the enclosure), simulating actual installed performance. The MLVs reported above are certified by Third-Party, Independent Testing. Individual test reports are available upon request.

† Category C High, 10 kA is equivalent to the MLV recorded during the Nominal Discharge Current (I_n) Test from C62.62™-2010 and ANSI/UL 1449-2006.

Circuit Connection: #10 AWG wire (pre-installed)
Dimensions below are on the standard enclosure.

Enclosure Dimensions				
Inches (mm)	Standard Model	Enclosure Options		
		M	W	X
A	8.25 (210)	10.00 (254)	10.00 (254)	12.00 (305)
B	5.00 (127)	8.00 (204)	8.00 (204)	10.50 (267)
C	3.00 (77)	4.00 (102)	4.00 (102)	6.00 (153)
D	9.37 (238)	11.50 (293)	11.50 (293)	12.50 (318)
E	9.48 (242)	12.00 (305)	12.00 (305)	13.23 (337)
F	6.23 (159)	9.00 (229)	9.00 (229)	11.73 (299)
G	8.87 (226)	10.75 (274)	10.75 (274)	12.00 (305)
H	3.37 (86)	6.00 (153)	6.00 (153)	8.00 (204)
Type	NEMA 1 ABS	NEMA 12 Steel	NEMA 4 Steel	NEMA 4X Composite
lbs (kg)	5 (2.27)	14 (6.36)	14 (6.36)	11 (4.99)



Green LED status indicators, beneath overlay, one per phase, normally on.
Pre-installed 3/4" hub locations for standard, M and W models:
Side (E1 option)
Side (E11 option)
End (normal location)
Mounting hub for X enclosure option is placed at time of installation (3/4" hub provided)

*Other voltage configurations may be available. Contact your sales representative for additional assistance