



The LoadGuard is engineered for hard-wired installation within or adjacent to electrical loads such as outdoor lighting, robotics, process automation systems, motors, HVAC systems, pumps, heaters, programmable logic controllers and other point-of-use applications. Compact and powerful, the LoadGuard protects these and other individual components from damaging electrical transients, high-frequency noise and high-energy disturbances. LoadGuard provides 50kA of surge protection for loads up to 24 amps.

## PRODUCT SPECIFICATIONS

### General Specifications

Maximum Surge Current Rating	50kA Per Mode
Voltage (Single-Phase Applications)	120, 220 or 277
Voltage (3-Wire + Ground Applications)	220/380 or 277/480
Voltage (Split-Phase Applications)	120/240
Safety Listings	Listed by ETL to UL 1449 4th Edition, Type 4 for Type 2 SPD applications, cUL, and UL 1283 / Compliant to IEEE C62.41.1-2002, C62.41.2-2002 and C62.45-2002 / NFPA 70 [NEC], Article 285 / RoHS Compliant / CE, IEC 61643-11-2011 / EMC Directive 2004/108/EC
Product Design	Individually fused MOVs UL 1283 EMI/RFI filter
Ampacity Rating	24A
Dimensions	5.8"W x 4"H x 1.875"D
Weight	2.25 lbs.
Enclosure Type	Nonmetallic
Operating Environment	-40°F to 140°F (-40°C to 60°C) 5% – 95% Non-Condensing Humidity
Connection Method	Series/in-line; Terminal Block Termination
Connection Means	#8 Screws
Protection Modes	3 or 6
Warranty	5 Years

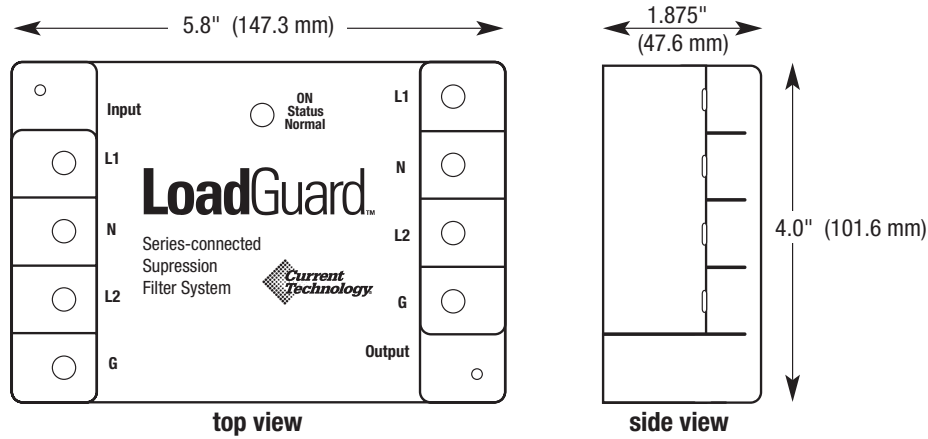
*Short circuit current rating 65kAIC using a 30A max. circuit breaker*

Input Voltages	Phase	Load Current Ratings (A)	Line Frequency Range (Hz)
120V	1	24	50-60
120/240V	Split-Phase	24	50-60
220V	1	24	50-60
220/380V	2 or 3	24	50-60
277V	1	24	50-60
277/480V	2 or 3	24	50-60

## MODEL NUMBER SCHEME

E.g.: MSU-050-120/240-2G-24A-6

MSU	050	120/240	2G	24A	6
Model	kA Rating	Voltage	Configuration	Load Current	Modes of Protection
<b>kA/mode</b>		<b>Configuration</b>			
050kA		1G 1 Phase, Grounded			
		2G 2 Phase, Grounded, Split Phase			
		3Y 3 Phase, Grounded Wye			
		3R 3 Phase, Grounded High Resistance			
		3H 3 Phase, Grounded, High Leg Delta			
		3D 3 Phase, Grounded Delta			
<b>Voltage</b>		<b>Load Current</b>			
208 120/208		24A			
240 120/240					
380 220/380					
480 277/480					
		<b>Modes of Protection</b>			
		3 or 6			



## HIGH-FREQUENCY NOISE FILTRATION

Model No.	Voltage	Mode	1KHz	10KHz	100KHz	1MHz	10MHz	100MHz
MSU50-120-1G-24A-3	120	L-N	6 dB	16 dB	42 dB	25 dB	21 dB	36 dB
MSU50-120/240-2G-24A-6	120/240	L-G	6 dB	6 dB	16 dB	55 dB	81 dB	80 dB
MSU50-220-1G-24A-3	220	L-N	6 dB	16 dB	42 dB	25 dB	21 dB	36 dB
MSU50-220/380-2G-24A-6	220/380	L-G	6 dB	6 dB	16 dB	55 dB	81 dB	80 dB
MSU50-277-1G-24A-3	277	L-N	6 dB	16 dB	42 dB	25 dB	21 dB	36 dB
MSU50-277/480-2G-24A-6	277/480	L-G	6 dB	6 dB	8 dB	36 dB	82 dB	81 dB

This table represents select LoadGuard configurations. Inquire about additional voltages.

## LOADGUARD PERFORMANCE DATA

Model No.	System Voltage (VAC)	Current (A)	Phase 1 or 2	MCOV / Uc (V)				VPR / VPL (Up)				I-n (kA)
				L-N	L-G	N-G	L-L	L-N	L-G	N-G	L-L	
MSU50-120-1G-24A-3	120	24A	1	150	300	150	N/A	800	800	800	N/A	20
MSU50-120/240-2G-24A-6	120/240	24A	2	150	300	150	300	800	N/A	800	1200	20
MSU50-220-1G-24A-3	220	24A	1	320	552	320	N/A	1200	1200	1000	N/A	20
MSU50-220/380-2G-24A-6	220/380	24A	2	320	552	320	552	1200	N/A	1000	2000	20
MSU50-277-1G-24A-3	277	24A	1	320	552	320	N/A	1200	1200	1000	N/A	20
MSU50-277/480-2G-24A-6	277/480	24A	2	320	552	320	552	1200	N/A	1000	2000	20



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