

# SurgeFree™

**MODEL**
**200LS**

## Main Service Panel Protection

The 200LS Series provides 200,000A of surge protection for rugged and reliable protection at the main service panel. Each phase is guarded by 5 times redundant protection paths – reassuring when sensitive equipment's continuous operation is at stake. Twenty-year, no-nonsense warranty; free protection modules for life. Series features mix and match options for a customized protector at stock prices. (See below for options.)

### FEATURES

- 200LS: I peak=200,000A/Phase (8 x 20µs waveform)
- Meets UL1449 2nd Ed - 1996, NEMA LS1-1992
- Five times redundant protection paths per phase
- Employs new 40kA high headroom varistors with built in high-speed thermal disconnect
- Solid copper bus bar construction
- Field-replaceable modules
- EMI/RFI noise filtering
- Continuously monitored protection circuits
- Internal and external status indicators
- NEMA 4, Powder Coated Steel Enclosure

## Mix & Match!

**Options Available:** Internal Disconnect • Upgradable Diagnostics: Surge Event Counter, Beeper, & Status Relay (1 Form C Contacts) • NEMA 4X Enclosure • Low Impedance Micro-Z cable (8 or 10AWG) • Flush Mount Kit

Surge Current/Phase (8/20µs): 1 Event - 200kA.  
 Surge Life/Phase (8/20µs): 10,000 Events: 10kA.  
 Status Indicators: LED Status Indicators (internal & external)  
 Modes of Protection: L-N, L-G, L-L, N-G  
 Operating Altitude: 13,000ft. (4000m)  
 Temp. (Operating/Storage): -40° to +70°C/-40° to +85°C  
 Enclosure: NEMA 4, 14 gauge steel, Powder Coated  
 Dimensions: 17" x 15" x 6" (432 x 381 x 153mm)  
 Mounting: 17.75" x 13" / .313" ID - 4 holes  
 (451 x 330mm / 7.9mm ID) - 4 holes  
 Weight: 33 lbs. (15.8kg)


**I<sub>peak</sub>=200,000A**
**UL 1449, 2nd Ed. Listed**  
 Including the requirements of Feb 9, 2007

**20-Year Warranty**  
**Lifetime Module Replacement**

Filter Attenuation MIL STD 220A (50 Ohm):	120 VAC	220 VAC	240 VAC	277 VAC	347 VAC	480 VAC
	-30db	25kHz	25kHz	25kHz	50kHz	50kHz
-40db	125kHz	180kHz	180kHz	100kHz	100kHz	100kHz
-50db	210kHz	210kHz	210kHz	180kHz	170kHz	170kHz
-60db	250kHz	250kHz	250kHz	200kHz	190kHz	190kHz


**MCG Surge Protection** • Toll Free: 1-800-851-1508 • www.mcgsurge.com • E-Mail: info1@mcgsurge.com

12 Burt Drive, Deer Park, New York 11729, USA • Telephone: (631) 586-5125 • Fax: (631) 586-5120

# Specifications

- ANSI/IEEE C62.41-2002
- IEC 61643-1-1998
- UL 1449, 2nd Ed.  
including requirements  
of Feb 9, 2007

## Main Panel Protection

### Model 200LS

Model 200LS	Service	Higher Headroom MOVs VAC	UL SVR 500A 8x20 $\mu$ s	6kV (1.2x50 $\mu$ s) 3kA (8x20 $\mu$ s)	20kV (1.2x50 $\mu$ s) 10kA (8x20 $\mu$ s)
-120S	120VAC, 1 $\phi$ , 2W+Gnd	180	500	534	644
-120T	120/240VAC, 1 $\phi$ , 3W+Gnd	180	500	534	644
-120Y	120/208, 3 $\phi$ , 4W+Gnd, Wye	180	500	534	644
-220Y	220/380, 3 $\phi$ , 4W+Gnd, Wye	390	1000	1050	1212
-240Y	240/415, 3 $\phi$ , 4W+Gnd, Wye	390	1000	1050	1212
-277Y	277/480, 3 $\phi$ , 4W+Gnd, Wye	390	1000	1050	1212
-347Y	347/600, 3 $\phi$ , 4W+Gnd, Wye	460	1200	1320	1510
-240DCT*	240/120/120, 3 $\phi$ , 4W+Gnd	390/180	1000/500	1050/534	1212/644
-240D	240, 3 $\phi$ , 3W+Gnd, Delta	390	1000	1050	1212
-480D	480, 3 $\phi$ , 3W+Gnd, Delta	620	1500	1598	1802
-600D	600, 3 $\phi$ , 3W+Gnd, Delta	750	1800	1804	2018

\* High-leg Delta Center Tapped

**Energy Absorption (8/20 $\mu$ s) in joules:** 13,248 - 54,000J

**A Note On Headroom** A surge protector responds to increases in voltage. Surge protectors triggered by the nominal line voltage are undesirable, consequently headroom is always factored into surge protector design. Long duration voltage swells occur on power lines and can damage a surge protector, leaving facility equipment vulnerable. By employing higher headroom, continuity of surge protection is guaranteed. This feature is standard in MCG surge protectors. Higher headroom allows varistors to ride out voltage swells while ensuring that let-through voltage remains within CBEMA (now ITIC) guidelines. The CBEMA curve is the most accepted graph worldwide for equipment susceptibility analysis.