



Wiremold

## ZoneMaster® Series Surge Protection Devices

### New Improved ZoneMaster® Series Configurable Hard-Wired Surge Protection Devices

**Wiremold®** ZoneMaster® Series Surge Protection Devices are fully configurable panel protection solutions that protect your facility from the destructive effects of power surges. New and improved with a complete range of options including a fused disconnect, noise filter and remote monitoring capabilities, all ZoneMaster models also now comply with UL1449, Third Edition.


You can easily tailor a ZoneMaster Series solution to provide surge protection for basic or the most advanced applications for all standard electrical service voltages. Units are available for subpanel protection starting at 100kA, and ranging up to 400kA protection for main distribution panels.

ZoneMaster Series configurable hard-wired surge protection devices are an integral part of the Sentrex Zoned Approach to whole building protection.



ZoneMaster 340

#### FEATURES & BENEFITS

- Up to 400kA maximum surge current protection.
- All mode protection standard on all units.
- Replaceable bolt-in modules.
- ZoneMaster PRO Series Surge Protection Devices use a NEMA 3S, 4, 12, 13 metal enclosure.
- Integrated diagnostics. Each module provides visual indication of its operating status.
- Massive large block MOVs. Each module contains two independent large block MOVs, each consisting of dual 40mm MOVs. This configuration far exceeds the capability of 20mm MOVs in parallel to manage long duration surges.
- Dual short circuit and thermal fusing.
- Low impedance construction.
- Eutectic alloy thermal fuse. Passes UL1449 Third Edition standards. Also withstands lightning surge currents.
- Surge counter standard on ZoneMaster PRO Models.
- No standard thermal cutouts. Standard thermal cutouts can fail at surge currents as low as 10kA.
- Neutral-to-ground protection module with leakage indicators.
- Low let-through performance with high current impulse.
- NO/NC dry contacts.
- Ten-Year Product Warranty. Legrand/Wiremold will replace any defective/failed unit or module free of charge (labor and site preparation excluded) for a period of ten years.
- UL1449 Third Edition Listed.
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#### AVAILABLE OPTIONS

- Remote monitoring unit.
- Fused disconnect.
- EMI/RFI noise filter.
- Flush mount cover.

*(See inside for more details.)*

## Hard Wired Surge Protection Selection Matrix



S = Standard  
O = Optional

### Hard Wired Surge Protection Units

Electrical Service	ZM 400 400kA	ZM Pro 400 400kA	ZM 340 340kA	ZM Pro 340 340kA	ZM 200 200kA	ZM Pro 200 200kA	ZS 100 100kA
120/240V, Single Ø	ZE120T	ZEM120T	ZC120T	ZCM120T	ZB120T	ZBM120T	ZA120T
120/208V, 3Ø Wye	ZE120Y	ZEM120Y	ZC120Y	ZCM120Y	ZB120Y	ZBM120Y	ZA120Y
277/480V, 3Ø Wye	ZE277Y	ZEM277Y	ZC277Y	ZCM277Y	ZB277Y	ZBM277Y	ZA277Y
OPTIONS							
A – Remote Alarm*	O	O**	O	O**	O	O**	O
B – Filter	O	O	O	O	O	O	O
F – Fused Disconnect	N/A	O	N/A	O	N/A	O	N/A
G – Flush Mount	N/A	O	N/A	O	N/A	O	O
H – NEMA 4 Enclosure	S	O	S	O	S	O	S

\* Available separately as Catalog No. ZHRMU.

\*\* PRO units include standard internal alarm. Remote alarm option extra.

### How to Create a Part Number

1. Select base part number by choosing kA and Electrical Service.
2. Select options if desired (options marked as standard are not incorporated into the part number).
3. Part number is BASE number, followed by HYPHEN, followed by OPTIONS in alphabetical order.

#### SAMPLE

**340kA for 120/240V  
with Remote Alarm  
and Filter**

**Part# ZC120T-AB**

#### SAMPLE

**200kA PRO Unit for  
277/480V  
with Remote Alarm**

**Part# ZBM277Y-A**

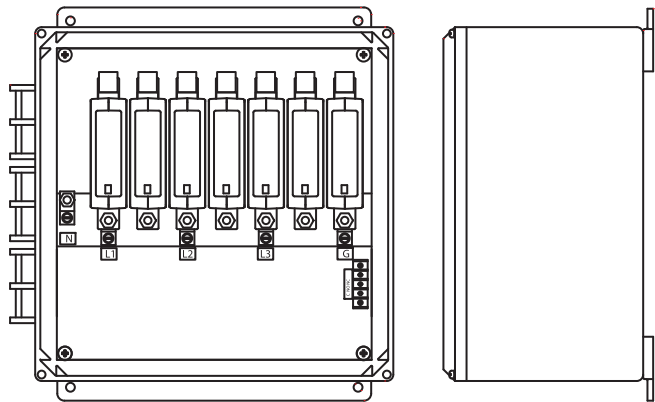
#### SAMPLE

**100kA for 120/208V  
No Options Selected**

**Part# ZA120Y**

# ZoneMaster 400

The ZoneMaster Series is designed to protect a high-exposure main service entrance against the most extreme transient environment. Dual protection circuits provide redundancy ensuring the site is always protected. Engineered to provide decades of uninterrupted surge protection, the ZoneMaster 400 provides the lowest suppression voltages available and full protection in all models (L-N, L-G, L-L, and N-G).



## ZoneMaster 400 Options

- Remote monitoring unit.
- EMI/RFI noise filter. Noise attenuation -75dB maximum 100 kHz to 100 MHz.

See page 17 for complete specifications on options.

### Mechanical Specifications:

ZoneMaster Pro 400 is 20% to 50% smaller in size than other protectors claiming similar performance. Small size means easier installation and a better installation since the protector can often be located closer to the panel thereby minimizing the effect of connecting lead length.

- Enclosure:

Durable, lightweight, corrosion resistant high impact plastic. Ultraviolet stabilized UL94-5V rated. NEMA 1, 2, 3, 3S, 4, 4X, 12 and 13. Transparent cover for maximum visibility and safety.
- Dimensions:

12.4" x 13.7" x 7.3" [315mm x 348mm x 185mm]
- Weight:

Approx. 12.5 lbs. (5.7 kg)
- Operating Environment:

-40°C to 85°C, 95% relative humidity (non-condensing)
- Construction:

Low impedance assembly. Modules are bolted (1/4" bolts) to a large surge return plate to minimize transient impedance and suppression voltage.
- Terminal Lugs:

#2 AWG max wire size
- Mounting:

0.31" [8mm] diameter holes. Enclosure can be easily drilled for conduit/cable access.

### Electrical Specifications

	MAXIMUM SURGE CURRENT FOR EACH PROTECTION MODE				MAXIMUM SURGE CURRENT PER PHASE
	L-N	L-G	L-L	N-G	
ZONEMASTER 400	200,000A	200,000A	400,000A	200,000A	400,000A

## ZoneMaster 400 Specifications (continued)

### Electrical Specifications:

<b>Maximum Continuous Operating Voltage:</b>	See table below
<b>Remote Indication Contacts:</b>	NO/NC, 125VAC, 2A rated
<b>Module Diagnostics:</b>	Protection present – Green LED lit. Fault warning – Red LED lit. High voltage neutral to ground – Red & Green LEDs lit.
<b>Protection Technology:</b>	Patented large block, three terminal MOVs.
<b>Module Protection:</b>	Dual thermal and short circuit fusing mechanisms; UL94-5V rated plastic enclosure.
<b>Short Circuit Current Rating:</b>	100k AIC.
<b>Redundant Protection Stages in all Modes:</b>	Each module contains dual independent redundant protection circuits.
<b>Nominal Discharge Current (<math>I_n</math>):</b>	10kA.

### Duty Cycle Performance (Surge Life)

	MAXIMUM SURGE CURRENT PER MODE	REPETITIVE SURGE CURRENT ( $\geq 4$ IMPULSES PER MODE)	MAXIMUM NUMBER OF CURRENT IMPULSE AT 10,000 (8/20)	LONG DURATION SURGE CURRENT (10/1,000 $\mu$ S)
ZONEMASTER 400	200,000A	100,000A	8,000	3,600A

### Surge Protection Performance:

The key performance parameter of any surge protector is how well it controls surges. At the service entrance and main panel, the lower the voltage let-through to the facility the better the protection. A high let-through voltage at the facility entrance will stress other equipment and small surge protectors located within the facility.

### 120V Models

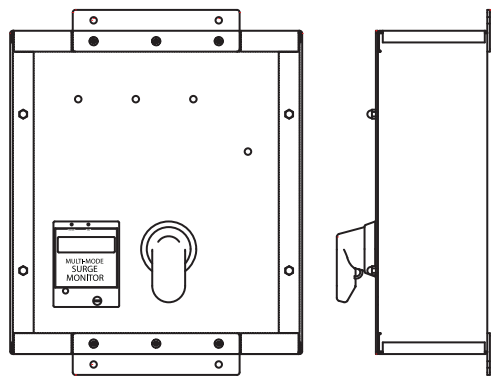
	UL1449 VOLTAGE PROTECTION LEVEL				MAXIMUM CONTINUOUS OPERATING VOLTAGE (MCOV)			
PRODUCT SERIES	L-N	L-G	L-L	N-G	L-N	L-G	L-L	N-G
ZE120T 120/240V	700V	600V	1000V	700V	127V	127V	254V	127V
ZE120Y 120/208V	700V	600V	1000V	700V	127V	127V	220V	127V

### 277V Models

	UL1449 VOLTAGE PROTECTION LEVEL				MAXIMUM CONTINUOUS OPERATING VOLTAGE (MCOV)			
PRODUCT SERIES	L-N	L-G	L-L	N-G	L-N	L-G	L-L	N-G
ZE277Y 277/480V	1200V	1200V	1800V	1200V	293V	293V	508V	293V

# ZoneMaster PRO 400

The ZoneMaster PRO 400 Series provides the same extreme protection as the ZoneMaster 400 but uses a durable steel enclosure and comes standard with a surge counter, front monitor, and audible alarm.



## ZoneMaster PRO 400 Options

- Remote monitoring unit.
- Fused Disconnect.
- NEMA 4 Enclosure.
- EMI/RFI noise filter. Noise attenuation -75dB maximum 100 kHz to 100 MHz.
- Flush Mount.

See page 17 for complete specifications on options.

### Mechanical Specifications:

ZoneMaster PRO 400 is 20% to 50% smaller in size than other protectors claiming similar performance. Small size means easier installation and a better installation since the protector can often be located closer to the panel thereby minimizing the effect of connecting lead length.

- Enclosure:** Durable, painted steel. NEMA 1, 2.
- Dimensions:** 17.5" x 14" x 5.47" [445mm x 356mm x 139mm] without disconnect.  
17.5" x 14" x 7.30" [445mm x 356mm x 186mm] with disconnect.
- Weight:** Approx. 25.4 lbs. (11.5 kg)
- Operating Environment:** -40°C to 85°C, 95% relative humidity (non-condensing)
- Construction:** Ultra low impedance assembly. Modules are bolted to a corrosion resistant, tin plated copper bus bar. No plug-in modules in the surge path.
- Terminal Lugs:** #2 AWG max wire size
- Mounting:** 0.31" [8mm] diameter holes. Enclosure can be easily drilled for conduit/cable access.
- Module Replacement:** Power should be disconnected prior to module replacement. Remove 1/4" nuts, unplug remote indication connector and remove module. Estimated replacement time: 2 minutes.

Electrical Specifications					
	MAXIMUM SURGE CURRENT FOR EACH PROTECTION MODE				MAXIMUM SURGE CURRENT PER PHASE
	L-N	L-G	L-L	N-G	
ZONEMASTER PRO 400	200,000A	200,000A	400,000A	200,000A	400,000A

## ZoneMaster PRO 400 Specifications (continued)

### Electrical Specifications:

<b>Maximum Continuous Operating Voltage:</b>	See table below
<b>Remote Indication Contacts:</b>	NO/NC, 125VAC, 2A rated
<b>Module Diagnostics:</b>	Protection present – Green LED lit. Fault warning – Red LED lit. High voltage neutral to ground – Red & Green LEDs lit.
<b>Protection Technology:</b>	Patented large block, three terminal MOVs.
<b>Module Protection:</b>	Dual thermal and short circuit fusing mechanisms; UL94-5V rated plastic enclosure.
<b>Short Circuit Current Rating:</b>	100k AIC.
<b>Redundant Protection Stages in all Modes:</b>	Each module contains dual independent redundant protection circuits.
<b>Nominal Discharge Current (<math>I_n</math>):</b>	10kA.

### Duty Cycle Performance (Surge Life)

	MAXIMUM SURGE CURRENT PER MODE	REPETITIVE SURGE CURRENT ( $\geq 4$ IMPULSES PER MODE)	MAXIMUM NUMBER OF CURRENT IMPULSE AT 10,000 (8/20)	LONG DURATION SURGE CURRENT (10/1,000 $\mu$ S)
ZONEMASTER PRO 400	200,000A	100,000A	8,000	3,600A

### Surge Protection Performance:

The key performance parameter of any surge protector is how well it controls surges. At the service entrance and main panel, the lower the voltage let-through to the facility the better the protection. A high let-through voltage at the facility entrance will stress other equipment and small surge protectors located within the facility.

### 120V Models

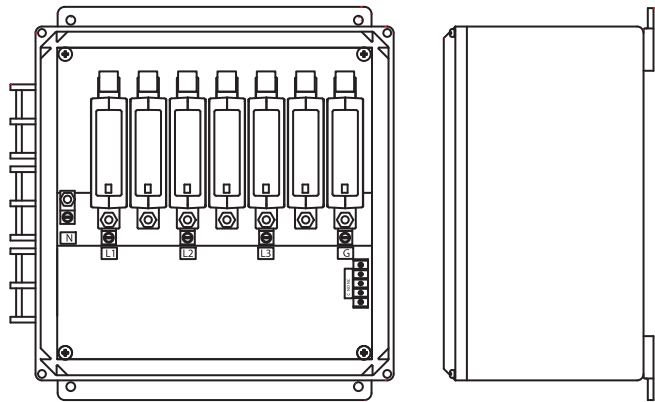
	UL1449 VOLTAGE PROTECTION LEVEL				MAXIMUM CONTINUOUS OPERATING VOLTAGE (MCOV)			
PRODUCT SERIES	L-N	L-G	L-L	N-G	L-N	L-G	L-L	N-G
ZEM120T 120/240V	800V	700V	1000V	600V	127V	127V	254V	127V
ZEM120Y 120/208V	800V	700V	1000V	600V	127V	127V	220V	127V

### 277V Models

	UL1449 VOLTAGE PROTECTION LEVEL				MAXIMUM CONTINUOUS OPERATING VOLTAGE (MCOV)			
PRODUCT SERIES	L-N	L-G	L-L	N-G	L-N	L-G	L-L	N-G
ZEM277Y 277/480V	1200V	1200V	1800V	1000V	293V	293V	508V	293V

# ZoneMaster 340

The ZoneMaster Series is engineered to withstand the most severe transient environment at large service entrance or distribution panels, and provide decades of uninterrupted surge protection. Dual protection circuits provide redundancy ensuring the site is always protected. The ZoneMaster 340 provides the lowest suppression voltages available, 170kA surge capacity per mode, as well as full protection in all models (L-N, L-G, L-L, and N-G).



## ZoneMaster 340 Options

- Remote monitoring unit.
- EMI/RFI noise filter. Noise attenuation -75dB maximum 100 kHz to 100 MHz.

See page 17 for complete specifications on options.

### Mechanical Specifications:

- Enclosure:** Durable, lightweight, corrosion resistant high impact plastic. Ultraviolet stabilized UL94-5V rated. NEMA 1, 2, 3, 3S, 4, 4X, 12 and 13. Transparent cover for maximum visibility and safety.
- Dimensions:** 12.4" x 13.7" x 7.3" [315mm x 348mm x 185mm]
- Weight:** Approx. 12.5 lbs. (5.7 kg)
- Operating Environment:** -40°C to 85°C, 95% relative humidity (non-condensing)
- Construction:** Low impedance assembly. Modules are bolted (1/4" bolts) to a large surge return plate to minimize transient impedance and suppression voltage.
- Terminal Lugs:** #2 AWG max wire size
- Mounting:** 0.31" [8mm] diameter holes. Enclosure can be easily drilled for conduit/cable access.

Electrical Specifications					
	MAXIMUM SURGE CURRENT FOR EACH PROTECTION MODE				MAXIMUM SURGE CURRENT PER PHASE
	L-N	L-G	L-L	N-G	
ZONEMASTER 340	170,000A	170,000A	340,000A	170,000A	340,000A

## ZoneMaster 340 Specifications (continued)

### Electrical Specifications:

<b>Maximum Continuous Operating Voltage:</b>	See table below
<b>Remote Indication Contacts:</b>	NO/NC, 125VAC, 2A rated
<b>Module Diagnostics:</b>	Protection present – Green LED lit. Fault warning – Red LED lit. High voltage neutral to ground – Red & Green LEDs lit.
<b>Protection Technology:</b>	Patented large block, three terminal MOVs.
<b>Module Protection:</b>	Dual thermal and short circuit fusing mechanisms; UL94-5V rated plastic enclosure.
<b>Short Circuit Current Rating:</b>	100k AIC.
<b>Redundant Protection Stages in all Modes:</b>	Each module contains dual independent redundant protection circuits.
<b>Nominal Discharge Current (<math>I_n</math>):</b>	10kA.

### Duty Cycle Performance (Surge Life)

	MAXIMUM SURGE CURRENT PER MODE	REPETITIVE SURGE CURRENT ( $\geq 4$ IMPULSES PER MODE)	MAXIMUM NUMBER OF CURRENT IMPULSE AT 10,000 (8/20)	LONG DURATION SURGE CURRENT (10/1,000 $\mu$ S)
ZONEMASTER 340	170,000A	100,000A	8,000	3,600A

### Surge Protection Performance:

The key performance parameter of any surge protector is how well it controls surges. At the service entrance and main panel, the lower the voltage let-through to the facility the better the protection. A high let-through voltage at the facility entrance will stress other equipment and small surge protectors located within the facility.

### 120V Models

	UL1449 VOLTAGE PROTECTION LEVEL				MAXIMUM CONTINUOUS OPERATING VOLTAGE (MCOV)			
PRODUCT SERIES	L-N	L-G	L-L	N-G	L-N	L-G	L-L	N-G
ZC120T 120/240V	700V	600V	1000V	700V	127V	127V	254V	127V
ZC120Y 120/208V	700V	600V	1000V	700V	127V	127V	220V	127V

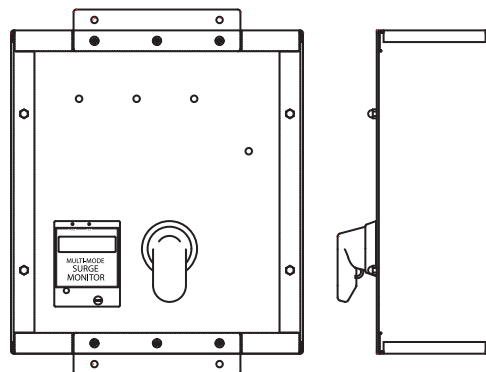
### 277V Models

	UL1449 VOLTAGE PROTECTION LEVEL				MAXIMUM CONTINUOUS OPERATING VOLTAGE (MCOV)			
PRODUCT SERIES	L-N	L-G	L-L	N-G	L-N	L-G	L-L	N-G
ZC277Y 277/480V	1200V	1200V	1800V	1200V	293V	293V	508V	293V



# ZoneMaster PRO 340

The ZoneMaster PRO 340 Series provides the same extreme protection as the ZoneMaster 340 but uses a durable steel enclosure and comes standard with a surge counter, front monitor, and audible alarm.



## ZoneMaster PRO 340 Options

- Remote monitoring unit.
- Fused Disconnect.
- NEMA 4 Enclosure.
- EMI/RFI noise filter. Noise attenuation -75dB maximum 100 kHz to 100 MHz.
- Flush Mount.

See page 17 for complete specifications on options.

### Mechanical Specifications:

- Enclosure:** Durable, painted steel. NEMA 1, 2.
- Dimensions:** 17.5" x 14" x 5.47" [445mm x 356mm x 139mm] without disconnect.  
17.5" x 14" x 7.30" [445mm x 356mm x 186mm] with disconnect.
- Weight:** Approx. 25.4 lbs. (11.5 kg)
- Operating Environment:** -40°C to 85°C, 95% relative humidity (non-condensing)
- Construction:** Ultra low impedance assembly. Modules are bolted to a corrosion resistant, tin plated copper bus bar. No plug-in modules in the surge path.
- Terminal Lugs:** #2 AWG max wire size
- Mounting:** 0.31" [8mm] diameter holes. Enclosure can be easily drilled for conduit/cable access.
- Module Replacement:** Power should be disconnected prior to module replacement. Remove 1/4" nuts, unplug remote indication connector and remove module. Estimated replacement time: 2 minutes.

### Electrical Specifications

	MAXIMUM SURGE CURRENT FOR EACH PROTECTION MODE				MAXIMUM SURGE CURRENT PER PHASE
	L-N	L-G	L-L	N-G	
ZONEMASTER PRO 340	170,000A	170,000A	340,000A	170,000A	340,000A

## ZoneMaster PRO 340 Specifications (continued)

### Electrical Specifications:

<b>Maximum Continuous Operating Voltage:</b>	See table below
<b>Remote Indication Contacts:</b>	NO/NC, 125VAC, 2A rated
<b>Module Diagnostics:</b>	Protection present – Green LED lit. Fault warning – Red LED lit. High voltage neutral to ground – Red & Green LEDs lit.
<b>Protection Technology:</b>	Patented large block, three terminal MOVs.
<b>Module Protection:</b>	Dual thermal and short circuit fusing mechanisms; UL94-5V rated plastic enclosure.
<b>Short Circuit Current Rating:</b>	100k AIC.
<b>Redundant Protection Stages in all Modes:</b>	Each module contains dual independent redundant protection circuits.
<b>Nominal Discharge Current (<math>I_n</math>):</b>	10kA.

### Duty Cycle Performance (Surge Life)

	MAXIMUM SURGE CURRENT PER MODE	REPETITIVE SURGE CURRENT ( $\geq 4$ IMPULSES PER MODE)	MAXIMUM NUMBER OF CURRENT IMPULSE AT 10,000 (8/20)	LONG DURATION SURGE CURRENT (10/1,000 $\mu$ S)
ZONEMASTER PRO 340	170,000A	100,000A	8,000	3,600A

### Surge Protection Performance:

The key performance parameter of any surge protector is how well it controls surges. At the service entrance and main panel, the lower the voltage let-through to the facility the better the protection. A high let-through voltage at the facility entrance will stress other equipment and small surge protectors located within the facility.

### 120V Models

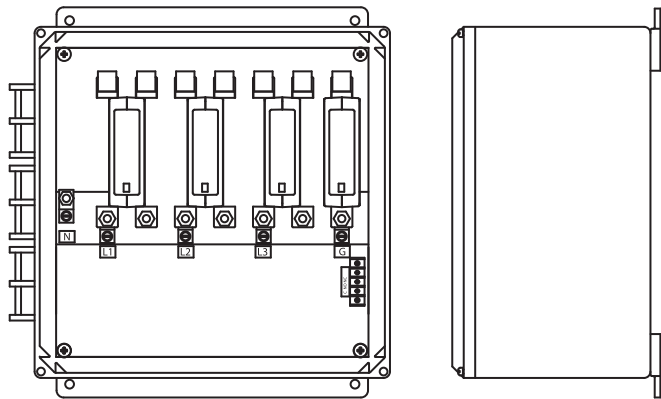
PRODUCT SERIES	UL1449 VOLTAGE PROTECTION LEVEL				MAXIMUM CONTINUOUS OPERATING VOLTAGE (MCOV)			
	L-N	L-G	L-L	N-G	L-N	L-G	L-L	N-G
ZCM120T 120/240V	800V	700V	1000V	600V	127V	127V	254V	127V
ZCM120Y 120/208V	800V	700V	1000V	600V	127V	127V	220V	127V

### 277V Models

PRODUCT SERIES	UL1449 VOLTAGE PROTECTION LEVEL				MAXIMUM CONTINUOUS OPERATING VOLTAGE (MCOV)			
	L-N	L-G	L-L	N-G	L-N	L-G	L-L	N-G
ZCM277Y 277/480V	1200V	1200V	1800V	1000V	293V	293V	508V	293V

# ZoneMaster 200

The ZoneMaster 200 Series is engineered to withstand the most severe transient environment at large service entrance or distribution panels, and provide decades of uninterrupted surge protection. Dual protection circuits provide redundancy ensuring the site is always protected. The ZoneMaster 200 provides the lowest suppression voltages available, 100kA surge capacity per mode, as well as full protection in all models (L-N, L-G, L-L, and N-G).



## ZoneMaster 200 Options

- Remote monitoring unit.
- EMI/RFI noise filter. Noise attenuation -75dB maximum 100 kHz to 100 MHz.

See page 17 for complete specifications on options.

### Mechanical Specifications:

- Enclosure:

Durable, lightweight, corrosion resistant high impact plastic. Ultraviolet stabilized UL94-5V rated. NEMA 1, 2, 3, 3S, 4, 4X, 12 and 13. Transparent cover for maximum visibility and safety.
- Dimensions:

12.4" x 13.7" x 7.3" [315mm x 348mm x 185mm]
- Weight:

Approx. 10.5 lbs. (4.8 kg)
- Operating Environment:

-40°C to 85°C, 95% relative humidity (non-condensing)
- Construction:

Low impedance assembly. Modules are bolted (1/4" bolts) to a large surge return plate to minimize transient impedance and suppression voltage.
- Terminal Lugs:

#2 AWG max wire size
- Mounting:

0.31" [8mm] diameter holes. Enclosure can be easily drilled for conduit/cable access.

Electrical Specifications					
	MAXIMUM SURGE CURRENT FOR EACH PROTECTION MODE				MAXIMUM SURGE CURRENT PER PHASE
	L-N	L-G	L-L	N-G	
ZONEMASTER 200	100,000A	100,000A	200,000A	100,000A	200,000A

## ZoneMaster 200 Specifications (continued)

### Electrical Specifications:

<b>Maximum Continuous Operating Voltage:</b>	See table below
<b>Remote Indication Contacts:</b>	NO/NC, 125VAC, 2A rated
<b>Module Diagnostics:</b>	Protection present – Green LED lit. Fault warning – Red LED lit. High voltage neutral to ground – Red & Green LEDs lit.
<b>Protection Technology:</b>	Patented large block, three terminal MOVs.
<b>Module Protection:</b>	Dual thermal and short circuit fusing mechanisms; UL94-5V rated plastic enclosure.
<b>Short Circuit Current Rating:</b>	100k AIC.
<b>Redundant Protection Stages in all Modes:</b>	Each module contains dual independent redundant protection circuits.
<b>Nominal Discharge Current (<math>I_n</math>):</b>	10kA.

### Duty Cycle Performance (Surge Life)

	MAXIMUM SURGE CURRENT PER MODE	REPETITIVE SURGE CURRENT ( $\geq 4$ IMPULSES PER MODE)	MAXIMUM NUMBER OF CURRENT IMPULSE AT 10,000 (8/20)	LONG DURATION SURGE CURRENT (10/1,000 $\mu$ S)
ZONEMASTER 200	100,000A	100,000A	8,000	3,600A

### Surge Protection Performance:

The key performance parameter of any surge protector is how well it controls surges. At the service entrance and main panel, the lower the voltage let-through to the facility the better the protection. A high let-through voltage at the facility entrance will stress other equipment and small surge protectors located within the facility.

### 120V Models

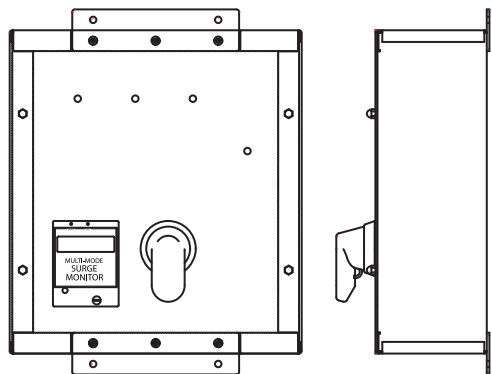
	UL1449 VOLTAGE PROTECTION LEVEL				MAXIMUM CONTINUOUS OPERATING VOLTAGE (MCOV)			
PRODUCT SERIES	L-N	L-G	L-L	N-G	L-N	L-G	L-L	N-G
ZB120T 120/240V	700V	700V	1000V	700V	127V	127V	254V	127V
ZB120Y 120/208V	700V	700V	1000V	700V	127V	127V	220V	127V

### 277V Models

	UL1449 VOLTAGE PROTECTION LEVEL				MAXIMUM CONTINUOUS OPERATING VOLTAGE (MCOV)			
PRODUCT SERIES	L-N	L-G	L-L	N-G	L-N	L-G	L-L	N-G
ZB277Y 277/480V	1200V	1200V	1800V	1200V	293V	293V	508V	293V

# ZoneMaster PRO 200

The ZoneMaster PRO 200 Series provides the same extreme protection as the ZoneMaster 200 but uses a durable steel enclosure and comes standard with a surge counter, front monitor, and audible alarm.



## ZoneMaster PRO 200 Options

- Remote monitoring unit.
- Fused Disconnect.
- NEMA 4 Enclosure.
- EMI/RFI noise filter. Noise attenuation -75dB maximum 100 kHz to 100 MHz.
- Flush Mount.

See page 17 for complete specifications on options.

### Mechanical Specifications:

- Enclosure:

Durable, painted steel. NEMA 1, 2.
- Dimensions:

17.5" x 14" x 5.47" [445mm x 356mm x 139mm] without disconnect.  
17.5" x 14" x 7.30" [445mm x 356mm x 186mm] with disconnect.
- Weight:

Approx. 25.4 lbs. (11.5 kg)
- Operating Environment:

-40°C to 85°C, 95% relative humidity (non-condensing)
- Construction:

Ultra low impedance assembly. Modules are bolted to a corrosion resistant, tin plated copper bus bar. No plug-in modules in the surge path.
- Terminal Lugs:

#2 AWG max wire size
- Mounting:

0.31" [8mm] diameter holes. Enclosure can be easily drilled for conduit/cable access.
- Module Replacement:

Power should be disconnected prior to module replacement. Remove 1/4" nuts, unplug remote indication connector and remove module. Estimated replacement time: 2 minutes.

Electrical Specifications					
	MAXIMUM SURGE CURRENT FOR EACH PROTECTION MODE				MAXIMUM SURGE CURRENT PER PHASE
	L-N	L-G	L-L	N-G	
ZONEMASTER PRO 200	100,000A	100,000A	200,000A	100,000A	200,000A

## ZoneMaster PRO 200 Specifications (continued)

### Electrical Specifications:

<b>Maximum Continuous Operating Voltage:</b>	See table below
<b>Remote Indication Contacts:</b>	NO/NC, 125VAC, 2A rated
<b>Module Diagnostics:</b>	Protection present – Green LED lit. Fault warning – Red LED lit. High voltage neutral to ground – Red & Green LEDs lit.
<b>Protection Technology:</b>	Patented large block, three terminal MOVs.
<b>Module Protection:</b>	Dual thermal and short circuit fusing mechanisms; UL94-5V rated plastic enclosure.
<b>Short Circuit Current Rating:</b>	100k AIC.
<b>Redundant Protection Stages in all Modes:</b>	Each module contains dual independent redundant protection circuits.
<b>Nominal Discharge Current (<math>I_n</math>):</b>	10kA.

### Duty Cycle Performance (Surge Life)

	MAXIMUM SURGE CURRENT PER MODE	REPETITIVE SURGE CURRENT ( $\geq 4$ IMPULSES PER MODE)	MAXIMUM NUMBER OF CURRENT IMPULSE AT 10,000 (8/20)	LONG DURATION SURGE CURRENT (10/1,000 $\mu$ S)
ZONEMASTER PRO 200	100,000A	100,000A	8,000	3,600A

### Surge Protection Performance:

The key performance parameter of any surge protector is how well it controls surges. At the service entrance and main panel, the lower the voltage let-through to the facility the better the protection. A high let-through voltage at the facility entrance will stress other equipment and small surge protectors located within the facility.

### 120V Models

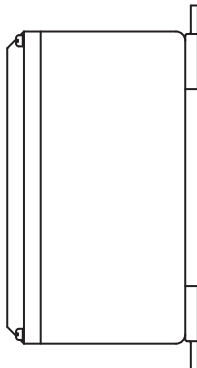
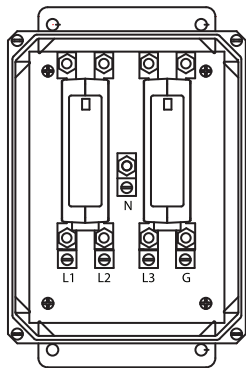
	UL1449 VOLTAGE PROTECTION LEVEL				MAXIMUM CONTINUOUS OPERATING VOLTAGE (MCOV)			
PRODUCT SERIES	L-N	L-G	L-L	N-G	L-N	L-G	L-L	N-G
ZBM120T 120/240V	700V	700V	1000V	600V	127V	127V	254V	127V
ZBM120Y 120/208V	700V	700V	1000V	600V	127V	127V	220V	127V

### 277V Models

	UL1449 VOLTAGE PROTECTION LEVEL				MAXIMUM CONTINUOUS OPERATING VOLTAGE (MCOV)			
PRODUCT SERIES	L-N	L-G	L-L	N-G	L-N	L-G	L-L	N-G
ZBM277Y 277/480V	1200V	1200V	1800V	1000V	293V	293V	508V	293V

# ZoneSentinel® 100

Engineered specifically for application at distribution boards and small service entrance locations., ZoneSentinel® provides cost effective, high capacity surge protection. When used at a local panel, in combination with a ZoneMaster at the service entrance, ZoneSentinel provides the lowest suppression voltages available today, as well as full protection in all ten models (L-N, L-G, L-L, and N-G).



## ZoneSentinel 100 Options

- Remote monitoring unit.
- EMI/RFI noise filter. Noise attenuation -75dB maximum 100 kHz to 100 MHz.

See page 17 for complete specifications on options.

### Mechanical Specifications:

- Enclosure:

Durable, lightweight, corrosion resistant high impact plastic. Ultraviolet stabilized UL94-5V rated. NEMA 1, 2, 3, 3S, 4, 4X, 12 and 13. Transparent cover for maximum visibility and safety.
- Dimensions:

9.7" x 6.4" x 5.1" [246mm x 163mm x 130mm]
- Weight:

Approx. 4 lbs. (1.8 kg)
- Operating Environment:

-40°C to 85°C, 95% relative humidity (non-condensing)
- Construction:

Low impedance assembly. Modules are bolted (1/4" bolts) to a large surge return plate to minimize transient impedance and suppression voltage.
- Terminal Lugs:

#2 AWG max wire size
- Mounting:

0.31" [8mm] diameter holes. Enclosure can be easily drilled for conduit/cable access.

Electrical Specifications					
	MAXIMUM SURGE CURRENT FOR EACH PROTECTION MODE				MAXIMUM SURGE CURRENT PER PHASE
	L-N	L-G	L-L	N-G	
ZONESENTINEL 100	50,000A	50,000A	100,000A	50,000A	100,000A

## ZoneSentinel 100 Specifications (continued)

### Electrical Specifications:

<b>Maximum Continuous Operating Voltage:</b>	See table below
<b>Remote Indication Contacts:</b>	NO/NC, 125VAC, 2A rated
<b>Module Diagnostics:</b>	Protection present – Green LED lit. Fault warning – Red LED lit. High voltage neutral to ground – Red & Green LEDs lit.
<b>Protection Technology:</b>	Patented large block, three terminal MOVs.
<b>Module Protection:</b>	Dual thermal and short circuit fusing mechanisms; UL94-5V rated plastic enclosure.
<b>Short Circuit Current Rating:</b>	100k AIC.
<b>Redundant Protection Stages in all Modes:</b>	Each module contains dual independent redundant protection circuits.
<b>Nominal Discharge Current (<math>I_n</math>):</b>	10kA.

### Duty Cycle Performance (Surge Life)

	MAXIMUM SURGE CURRENT PER MODE	REPETITIVE SURGE CURRENT ( $\geq 4$ IMPULSES PER MODE)	MAXIMUM NUMBER OF CURRENT IMPULSE AT 10,000 (8/20)	LONG DURATION SURGE CURRENT (10/1,000 $\mu$ S)
ZONESENTINEL 100	50,000A	50,000A	6,000	3,600A

### Surge Protection Performance:

The key performance parameter of any surge protector is how well it controls surges. At the service entrance and main panel, the lower the voltage let-through to the facility the better the protection. A high let-through voltage at the facility entrance will stress other equipment and small surge protectors located within the facility.

### 120V Models




PRODUCT SERIES	UL1449 VOLTAGE PROTECTION LEVEL				MAXIMUM CONTINUOUS OPERATING VOLTAGE (MCOV)			
	L-N	L-G	L-L	N-G	L-N	L-G	L-L	N-G
ZA120T 120/240V	600V	700V	1000V	600V	140V	140V	280V	140V
ZA120Y 120/208V	600V	700V	1000V	600V	140V	140V	280V	140V

### 277V Models

PRODUCT SERIES	UL1449 VOLTAGE PROTECTION LEVEL				MAXIMUM CONTINUOUS OPERATING VOLTAGE (MCOV)			
	L-N	L-G	L-L	N-G	L-N	L-G	L-L	N-G
ZA277Y 277/480V	1200V	1200V	1800V	1000V	320V	320V	640V	320V



## Options

Product	Description/Specifications
<b>Remote Monitoring Unit</b>  	<p>Offers clear audio/visual indication of the status of the surge suppressor unit. The RMU can be installed adjacent to the suppressor or as a remote installation. Can also be used as a standalone diagnostic device using NO/NC dry contacts. Powered by 2 AA alkaline batteries (included) which will power the unit for approximately 2 years. Unit connects with with Cat5 cable (not included).</p> <ul style="list-style-type: none"> <li>Unit can be ordered separately to supplement existing installations using Part No. ZHRMU</li> </ul> <p><b>SPECIFICATIONS</b></p> <p><b>Dimensions:</b> 5.4" x 2.6" x 1.3" [13.7mm x 6.6mm x 3.3mm]</p> <p><b>Weight:</b> Approx. 0.35lb [0.16kg] including batteries.</p> <p><b>Protection Indication:</b> Bright green LED: Illuminated, flashing</p> <p><b>Fault Indication:</b> Audible alarm. Bright red LED: Illuminated</p> <p><b>Test Functions:</b> Switch tests audible alarm (checks monitoring circuitry)</p> <p><b>Silent Function:</b> Switch silences audible alarm</p> <p><b>Connections:</b> Accepts wires up to #14 AWG (Cat5 recommended)</p>
<b>Extended Range Power Filter</b>   	<p>Unique ultra high performance, bi-directional filter eliminates a broad range of load or line generated high frequency noise.</p> <p><b>ELECTRICAL SPECIFICATIONS</b></p> <p><b>EMI/RFI Noise Attenuation:</b> -75dB Maximum 100 kHz to 100 MHz</p> <p><b>Maximum Operating Voltage (L-N):</b> 400VAC Rated</p> <p><b>Peak Let-Through Voltage (ANSI/IEEE C62.41 Cat B3 6kV Ringwave):</b> 200V</p> <p><b>Agency Approval:</b> UL1283 Listed</p> <p><b>Sinewave Tracking:</b> Controls transients at any point on the sinewave</p>
<b>Fused Disconnect</b>	Fused disconnect features 200,000 AIC fusing.

### ZoneMaster Replacement Modules

UNIT CAT. NO.	MODULE CAT. NO.	MODULE DESCRIPTION	QUANTITY USED	MODE USED
ZEM120T/ZE120T	81144A	ZoneMaster ZE/ZC Module 120V L-N	2	L-N
	81145A	ZoneMaster ZE/ZC Module 120V L-G	2	L-G
	81148A	ZoneMaster ZE/ZC/ZB Module 120V N-G	1	N-G
ZEM120Y/ZE120Y	81144A	ZoneMaster ZE/ZC Module 120V L-N	3	L-N
	81145A	ZoneMaster ZE/ZC Module 120V L-G	3	L-G
	81148A	ZoneMaster ZE/ZC/ZB Module 120V N-G	1	N-G
ZEM277Y/ZE277Y	81146A	ZoneMaster ZE/ZC Module 277V L-N	3	L-N
	81147A	ZoneMaster ZE/ZC Module 277V L-G	3	L-G
	81149A	ZoneMaster ZE/ZC/ZB Module 277V N-G	1	N-G
ZCM120T/ZC120T	81144A	ZoneMaster ZE/ZC Module 120V L-N	2	L-N
	81145A	ZoneMaster ZE/ZC Module 120V L-G	2	L-G
	81148A	ZoneMaster ZE/ZC/ZB Module 120V N-G	1	N-G
ZCM120Y/ZC120Y	81144A	ZoneMaster ZE/ZC Module 120V L-N	3	L-N
	81145A	ZoneMaster ZE/ZC Module 120V L-G	3	L-G
	81148A	ZoneMaster ZE/ZC/ZB Module 120V N-G	1	N-G
ZCM277Y/ZC277Y	81146A	ZoneMaster ZE/ZC Module 277V L-N	3	L-N
	81147A	ZoneMaster ZE/ZC Module 277V L-G	3	L-G
	81149A	ZoneMaster ZE/ZC/ZB Module 277V N-G	1	N-G
ZBM120T/ZB120T	81148A	ZoneMaster ZE/ZC/ZB Module 120V N-G	1	N-G
	81173A	ZoneMaster ZB Module 120V L-N/L-G	2	L-N/L-G
ZBM120Y/ZB120Y	81148A	ZoneMaster ZE/ZC/ZB Module 120V N-G	1	N-G
	81173A	ZoneMaster ZB Module 120V L-N/L-G	3	L-N/L-G
ZBM277Y/ZB277Y	81149A	ZoneMaster ZE/ZC/ZB Module 277V N-G	1	N-G
	81174A	ZoneMaster ZB Module 277V L-N/L-G	3	L-N/L-G
ZA120T	81170A	ZoneSentinel ZA Module 120V L-N/L-G	1	L-N/L-G
	81175A	ZoneSentinel ZA Module 120V L-N/N-G	1	L-N/N-G
ZA120Y	81170A	ZoneSentinel ZA Module 120V L-N/L-G	1	L-N/L-G
	81173A	ZoneSentinel ZA Module 120V L-N/N-G	1	L-N/N-G
ZA277Y	81171A	ZoneSentinel ZA Module 277V L-N/L-G	1	L-N/L-G
	81174A	ZoneSentinel ZA Module 277V L-N/N-G	1	L-N/N-G





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