MTL ZoneSentinel range

100kA surge capacity for distribution boards and small service entrance locations

- **Enhanced redundancy built into each module**
- **Thermal and short circuit fusing**
- **Replaceable bolt-in modules**
- **UL 1449 3rd Edition Listed**
- **Type 1 and Type 2 Models**
- **15 year product warranty**

The ZoneSentinel range is engineered specifically for application at distribution boards and small service entrance locations. ZoneSentinel devices provide cost effective, high capacity power surge protection and, when used at a local panel in combination with a ZoneMaster at the service entrance, provide the lowest suppression voltages available today.

ZoneSentinel units offer a 100kA surge handling capability with protection be-tween Line to Neutral, Line to Ground, Line to Line and Neutral to Ground and no restriction to the amount of load current. Thermal and short circuit fusing mechanisms are also included as an additional safety feature.

ZoneSentinel is modular in construction with individual modules bolted to a large surge return plate to minimize transient impedance. These modules, with a UL 94-5 rated plastic casing, are supplied mounted within a durable, corrosion resistant, NEMA 4X rated enclosure which can easily be drilled for cable access. ZoneSentinel units are easy to wall mount and flush mounting is also an option, should this be required. Individual modules are available upon request.

LED status indication is supplied with ZoneSentinel units as standard- normally open/normally closed contacts change state to indicate a fault. These contacts can be employed in a variety of applications from turning on lights remote from the surge protector, to interfacing with intelligent building management systems.

An optional remote monitoring unit is available for the ZoneSentinel range, capable of monitoring the status of all panel mounted surge protectors in the facility. This unit provides audio and visual indication of protector status in one compact wall mounting case. Other features of the remote monitoring unit include a test switch which checks the monitoring circuitry and an audio alarm silence switch.

The optional power filter, for the Type 2 ZoneSentinel range, which is tested to ANSI/IEEE C62.41 and is UL 1283 listed, has a noise attenuation of just 75dB at 100KHz to 100MHz. The filter module will attenuate 6kV transients down to a mere 200V without the support of other surge components.

All ZoneSentinel units are UL 1449 3rd Edition Listed. Models with 20kA I_n ratings meet UL96A Master Label requirements.

Powering Business Worldwide

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SPECIFICATION

All figures typical at 77°F (25°C) unless otherwise stated

Maximum continuous operating voltage
120V — 140Vac
277V — 320Vac

Lines protected
L-N 50kA, L-G 50kA, L-L 100kA, N-G 50kA

Duty cycle performance (8/20µs)
50,000A >4 impulses
10,000A >6,000 impulses
100A infinite

Impulse current for class I (I_{imp})
20kA (10/350µs)

Long duration current pulse (10/1,000µs) capability
3,600A (tested)

Ambient temperature limits
-40°F to +185°F (working)
-40°C to +85°C (working)

Humidity
95% RH (non-condensing)

Enclosure
NEMA 1, 2, 3, 3S, 4, 4X, 12 & 13 (IP66)

Terminals
2 AWG (32mm^2)

Mounting
Surface mount by 0.31" (8mm) diameter holes

Indication
Continuous visual status monitoring
Green LED Lit = Full protection
Red LED Lit = Reduced (Standby) OR No protection
Green LED out = No power to protector

Remote contacts
NO/NC

Weight
4 lbs (1.8Kg)

Dimensions
Enclosure – see Figure 1

EMC compliance
BS EN 60950: 1992
BS EN 61000-6-2: 1999

EMI/RFI POWER FILTER - TYPE 2 MODELS ONLY

Limiting voltage
200V (@ 3kA 8/20µs)

Maximum attenuation (typical)
-75dB (100kHZ to 100MHz)

OPTIONAL REMOTE MONITORING UNIT

ZM11101 — Battery operated

TO ORDER SPECIFY -

Model number - as per table

Add suffix F for flush mount options

(The X suffix indicates an EMI/RFI filter - standard on Type 2 models - not available on Type 1 models)

Model	Maximum surge current I_{max} (kA)	Working Voltage (V)	UL1449 Product Type	I_n	Short Circuit Current Rating (SCCR)	UL 3rd Edition VPR (V)	Limiting Voltage		Phase Types
							@3kA	@10kA	
ZS12100	100	120/240 Split	Type 1	20kA	200kA	600	456V	550V	Split phase 3-wire
ZS12101	100	120/208	Type 1	20kA	200kA	600	456V	550V	Three phase 4-wire
ZS12102	100	120/240 HL	Type1	20kA	200kA	600 1200	456V 825V	550V 950V	Three phase 4-wire High Leg Delta
ZS12104	100	277/480	Type 1	10kA	200kA	1200	825V	950V	Three phase 4-wire
ZS12107	100	220/380	Type 1	10kA	200kA	1200	825V	950V	Three phase 4-wire
ZS12108	100	240/415	Type 1	10kA	200kA	1200	825V	950V	Three phase 4-wire
ZS12100X	100	120/240 Split	Type 2	10kA	100kA	600	456V	550V	Split phase 3-wire
ZS12101X	100	120/208	Type 2	10kA	100kA	600	456V	550V	Three phase 4-wire
ZS12102X	100	120/240 HL	Type2	10kA	100kA	600 1200	456V 825V	550V 950V	Three phase 4-wire High Leg Delta
ZS12104X	100	277/480	Type 2	10kA	100kA	1200	825V	950V	Three phase 4-wire
ZS12107X	100	220/380	Type 2	10kA	100kA	1200	825V	950V	Three phase 4-wire
ZS12108X	100	240/415	Type 2	10kA	100kA	1200	825V	950V	Three phase 4-wire

* Tested as per ANSI/IEEE C62.45; IEC 61643-1 U_{oc} = 6kV
Filter option not available with Type 1 models

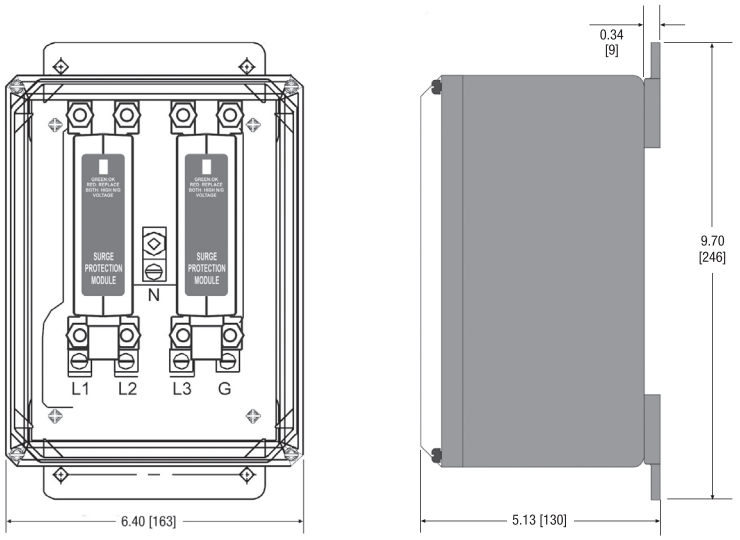

Figure 1 Dimensions

APPROVALS

Country	Standard/Authority	Approved for	Product
United States	UL1449 3rd Edition / UL	AC power product	ZS12100, ZS12101,ZS12102, ZS12104, ZS12107, ZS12108
United States & Canada	UL1449 3rd Edition / UL	AC power product	ZS12100X, ZS12101X,ZS12102X, ZS12104X, ZS12107X, ZS12108X

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