



## ZoneDefender Pro Series

The most compact,  
powerful, feature-rich AC  
surge protector available

- 80kA to 240kA surge current rating per phase
- Includes high-performance EMI/RFI filtering
- LED status indication via solid state diagnostics plus remote indication contacts
- Built-in audible alarm
- Thermal and short circuit fusing
- Short circuit current rating: 200k AIC
- UL 1449 3rd Edition Listed
- 10 year product warranty
- UL1449 Type 2 SPD, In=20kA



The ZoneDefender PRO Series is a versatile, high performance surge protector designed for use in a wide variety of industrial, institutional and commercial applications. The ZoneDefender PRO is the most compact, powerful, feature-rich surge protector on the market today. State-of-the-art circuitry protects equipment from high frequency noise as well as from damaging electrical transients and high-energy disturbances. In addition, the ZoneDefender PRO Series offers cost-effective high capacity protection along with application versatility; features which make the Series the ultimate surge protection solution.

ZoneDefender PRO units provide protection between Line to Neutral, Line to Ground, Line to Line and Neutral to Ground. Utilizing Metal Oxide Varistor (MOV) technology, the ZoneDefender PRO's protection circuits are highly reliable, dual-redundant varistor networks ensuring your site is never unprotected. Fully automatic in operation, ZoneDefender PRO reacts immediately, clamping voltage surges without causing undue leakage losses under normal operation. No operator intervention is required, ZoneDefender PRO resets automatically and is maintenance free.

Suitable for all AC power applications, ZoneDefender PRO devices provide protection for AC power supplies with no restriction to the amount of load current.

Thermal fusing is incorporated into each ZoneDefender PRO as an additional safety feature. Short circuit protection with 200kA AIC rating is also supplied, as standard, for added peace of mind.

ZoneDefender PRO offers an LED status indication allowing each varistor network to be continually monitored and indicated by LEDs on the front panel of the device. In addition, remote monitoring is enabled by the unit's remote indication contacts.

Installation is simple - the ZoneDefender PRO devices can be easily surface or nipple mounted.

The ZoneDefender PRO Series is UL 1449 3rd Edition Listed and boasts an unrivaled 10 year 'no questions asked' manufacturers product warranty. ZoneDefender PRO devices also exceed the requirements of ANSI/IEEE C62.45 and ANSI/IEEE C62.41.

Meets UL96A installation requirements for lightning protection systems for master label certification.



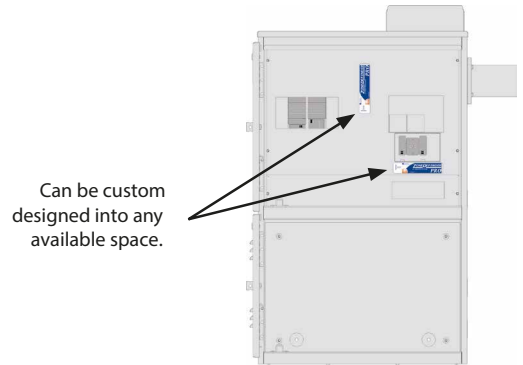
**QUITO: Elia Liut N45-26 y Edmundo Chiriboga Telf: 02 3936 400 CELULAR: 09 9610 8549**  
**GUAYAQUIL: Vernaza Norte Mz. 13 Solar 22 Telf: 04 2596 400 CELULAR: 09 8929 9999**  
**CUENCA: Luis Moscoso s/n y Manuel Ignacio Ochoa Telf: 07 2854 045 CELULAR: 09 9570 0700**

### SMALL SIZE MAKES INTEGRATION INTO CUSTOM EQUIPMENT A BREEZE

ZoneDefender PRO saves money by facilitating smaller AC power cabinets. Once the ZoneDefender Pro has been engineered in, there is no re-engineering needed to meet customers changing surge capacity requirements.

Great for:

- Telecom power distribution cabinets
- Industrial control panels
- Motor drive panels
- Automatic transfer switch
- Facility distribution panels



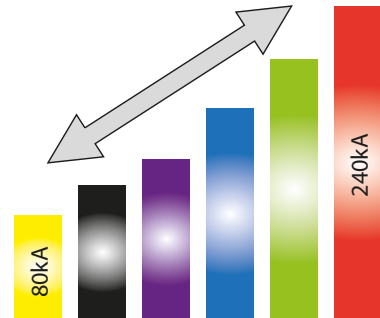
### ADVANCED INDICATION AND MONITORING



- **Red LED = Fault warning**  
Advanced circuitry monitors every suppression component in the ZoneDefender PRO.
- **Green LED = Protection operational and ground present**  
Assures user that full protection is present. Advanced circuitry continuously monitors the presence of a ground connection.
- **Speaker icon**  
Any fault in the unit triggers an audible alarm. Great for units hidden from view.
- **Switch icon**  
Normally open, normally closed, voltage free contacts are a standard feature on all ZoneDefender PROs.

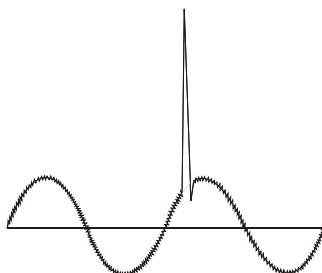
### POWERFUL SURGE PROTECTION

- Surge capacity options to cover every requirement and budget .
- An unmatched range of surge current capacities available in the same compact package.
- The same small footprint ( 236mm x 76mm ) for all six (6) surge capacity types.

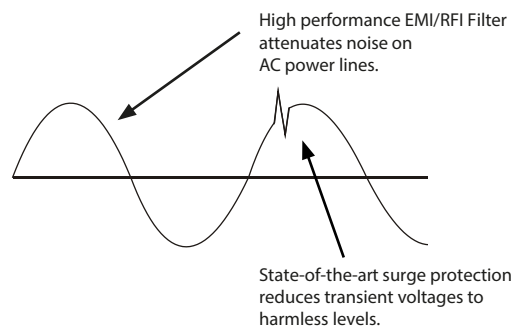


### PRECISE POWER PROTECTION

Before ZoneDefender PRO



After ZoneDefender PRO



# EPS 901-104\_ZD Pro

April 2015

| Model          | Working voltage<br>(V) | UL1449<br>VPR<br>3rd Edition<br>(V) | Limiting voltage |                                | U <sub>p</sub><br>(kV) | Ringwave<br>@200A<br>(V) | Phase types              |
|----------------|------------------------|-------------------------------------|------------------|--------------------------------|------------------------|--------------------------|--------------------------|
|                |                        |                                     | @ 3kA<br>(V)     | @10Ka (I <sub>n</sub> )<br>(V) |                        |                          |                          |
| 80kA versions  |                        |                                     |                  |                                |                        |                          |                          |
| ZD16100        | 120/240                | 500                                 | 470              | 780                            | 0.8                    | 60                       | Split phase 3 wire       |
| ZD16101        | 120/208                | 500                                 | 470              | 780                            | 0.8                    | 60                       | Three phase 4 wire WYE   |
| ZD16104        | 277/480                | 1200                                | 890              | 1200                           | 1.2                    | 75                       | Three phase 4 wire WYE   |
| ZD16107        | 220/380                | 1200                                | 890              | 1200                           | 1.2                    | 75                       | Three phase 4 wire WYE   |
| ZD16108        | 240/415                | 1200                                | 890              | 1200                           | 1.2                    | 75                       | Three phase 4 wire WYE   |
| 100kA versions |                        |                                     |                  |                                |                        |                          |                          |
| ZD16200        | 120/240                | 500                                 | 470              | 780                            | 0.8                    | 60                       | Split phase 3 wire       |
| ZD16201        | 120/208                | 500                                 | 470              | 780                            | 0.8                    | 60                       | Three phase 4 wire WYE   |
| ZD16202        | 120/240                | 500/1200                            | 470/890          | 780/1200                       | 0.8/1.2                | 60/75                    | Three phase 4 wire Delta |
| ZD16204        | 277/480                | 1200                                | 890              | 1200                           | 1.2                    | 75                       | Three phase 4 wire WYE   |
| ZD16207        | 220/380                | 1200                                | 890              | 1200                           | 1.2                    | 75                       | Three phase 4 wire WYE   |
| ZD16208        | 240/415                | 1200                                | 890              | 1200                           | 1.2                    | 75                       | Three phase 4 wire WYE   |
| 120kA versions |                        |                                     |                  |                                |                        |                          |                          |
| ZD16300        | 120/240                | 500                                 | 470              | 780                            | 0.8                    | 60                       | Split phase 3 wire       |
| ZD16301        | 120/208                | 500                                 | 470              | 780                            | 0.8                    | 60                       | Three phase 4 wire WYE   |
| ZD16302        | 120/240                | 500/1200                            | 470/890          | 780/1200                       | 0.8/1.2                | 60/75                    | Three phase 4 wire Delta |
| ZD16304        | 277/480                | 1200                                | 890              | 1200                           | 1.2                    | 75                       | Three phase 4 wire WYE   |
| ZD16307        | 220/380                | 1200                                | 890              | 1200                           | 1.2                    | 75                       | Three phase 4 wire WYE   |
| ZD16308        | 240/415                | 1200                                | 890              | 1200                           | 1.2                    | 75                       | Three phase 4 wire WYE   |
| 160kA versions |                        |                                     |                  |                                |                        |                          |                          |
| ZD16400        | 120/240                | 500                                 | 430              | 650                            | 0.7                    | 50                       | Split phase 3-wire       |
| ZD16401        | 120/208                | 500                                 | 430              | 650                            | 0.7                    | 50                       | Three phase 4-wire WYE   |
| ZD16402        | 120/240                | 500/1200                            | 430/770          | 650/1180                       | 0.7/1.2                | 50/68                    | Three phase 4 wire Delta |
| ZD16404        | 277/480                | 1200                                | 770              | 1180                           | 1.2                    | 68                       | Three phase 4-wire WYE   |
| ZD16407        | 220/380                | 1200                                | 770              | 1180                           | 1.2                    | 68                       | Three phase 4-wire WYE   |
| ZD16408        | 240/415                | 1200                                | 770              | 1180                           | 1.2                    | 68                       | Three phase 4-wire WYE   |
| 200kA versions |                        |                                     |                  |                                |                        |                          |                          |
| ZD16500        | 120/240                | 500                                 | 430              | 650                            | 0.7                    | 50                       | Split phase 3-wire       |
| ZD16501        | 120/208                | 500                                 | 430              | 650                            | 0.7                    | 50                       | Three phase 4-wire WYE   |
| ZD16502        | 120/240                | 500/1200                            | 430/770          | 650/1180                       | 0.7/1.2                | 50/68                    | Three phase 4 wire Delta |
| ZD16504        | 277/480                | 1200                                | 770              | 1180                           | 1.2                    | 68                       | Three phase 4-wire WYE   |
| ZD16507        | 220/380                | 1200                                | 770              | 1180                           | 1.2                    | 68                       | Three phase 4-wire WYE   |
| ZD16508        | 240/415                | 1200                                | 770              | 1180                           | 1.2                    | 68                       | Three phase 4-wire WYE   |
| 240kA versions |                        |                                     |                  |                                |                        |                          |                          |
| ZD16600        | 120/240                | 500                                 | 430              | 650                            | 0.7                    | 50                       | Split phase 3-wire       |
| ZD16601        | 120/208                | 500                                 | 430              | 650                            | 0.7                    | 50                       | Three phase 4-wire WYE   |
| ZD16602        | 120/240                | 500/1200                            | 430/770          | 650/1180                       | 0.7/1.2                | 50/68                    | Three phase 4 wire Delta |
| ZD16604        | 277/480                | 1200                                | 770              | 1180                           | 1.2                    | 68                       | Three phase 4-wire WYE   |
| ZD16607        | 220/380                | 1200                                | 770              | 1180                           | 1.2                    | 68                       | Three phase 4-wire WYE   |
| ZD16608        | 240/415                | 1200                                | 770              | 1180                           | 1.2                    | 68                       | Three phase 4-wire WYE   |

# EPS 901-104\_ZD Pro

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## SPECIFICATION

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

Maximum surge current ( $I_{max}$ )  
 80kA/100kA/120kA (8/20 $\mu$ s)  
 160kA/200kA/240kA (8/20 $\mu$ s)

Maximum continuous operating voltage  
 120/240 versions 140Vac  
 120/208 versions 140Vac  
 277/480 versions 320Vac  
 220/380 versions 300Vac  
 240/415 versions 300Vac

Lines protected AC  
 L-N, L-G, L-L, N-G

Duty cycle performance (8/20 $\mu$ s)  
 Rated 1 impulse  
 10,000A >6,500 impulses  
 100A infinite

Long duration current pulse (10/1,000 $\mu$ s) capability  
 3,600A (tested)

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

Humidity  
 95% RH (non-condensing)

Enclosure  
 NEMA 1, 2, 3, 3R, 4, 4X, 12 and 13 (IP66)

Terminals  
 #10 AWG (5mm<sup>2</sup>) & #8 AWG (8mm<sup>2</sup>)

Mounting  
 Surface mount by 0.21" (5mm) diameter holes

Remote contacts  
 Form C (NC, NO, C) 60W DC, 120VA AC, 3A max.

### Indication

|                             |   |   |
|-----------------------------|---|---|
| Green LED on<br>Red LED off | } | Power protection in all modes,<br>all phases                                  |
| Green LED off<br>Red LED on |   | Protection fault (remote<br>indication alarm via contacts &<br>audible alarm) |
| Green LED on<br>Red LED on  | } | Neutral/ground fault<br>(voltage potential)                                   |

Audible Alarm  
 90dB

EMI/RFI Attenuation  
 -75dB maximum 100kHz to 100MHz

Weight  
 From 2.34Kg (5.2 lbs)

Dimensions  
 236mm x 76mm x 125mm  
 (9.30" x 3.00" x 4.93")

SCCR Rating  
 Suitable for use on a circuit capable of  
 delivering not more than 200,000 rms  
 symmetrical Amperes, 480V max

EMC compliance  
 BS EN 61326-1:2006  
 IEC 61643-11:2011

Ratings in compliance with IEC 61643-11  
 $I_{max}$  = 80kA, 100kA, 120kA  
 $I_{imp}$  = 6kA (10/350)\*  
 $I_{max}$  = 160kA, 200kA, 240kA  
 $I_{imp}$  = 10kA (10/350)\*

\*All current results are per phase.

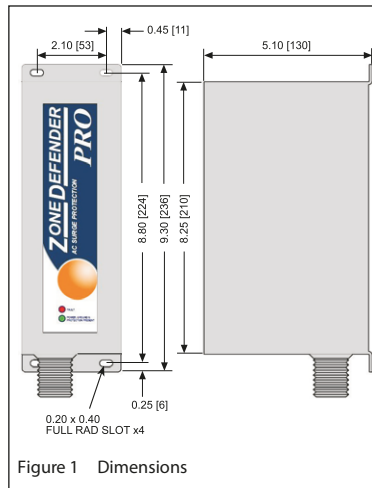


Figure 1 Dimensions

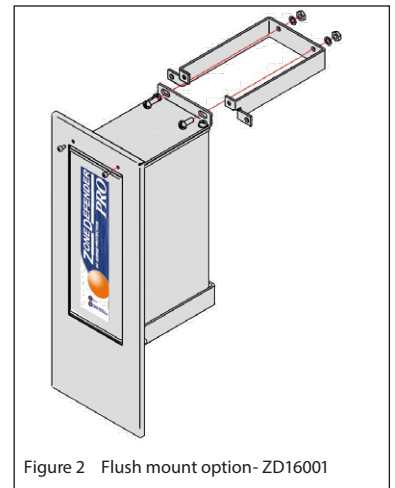


Figure 2 Flush mount option - ZD16001

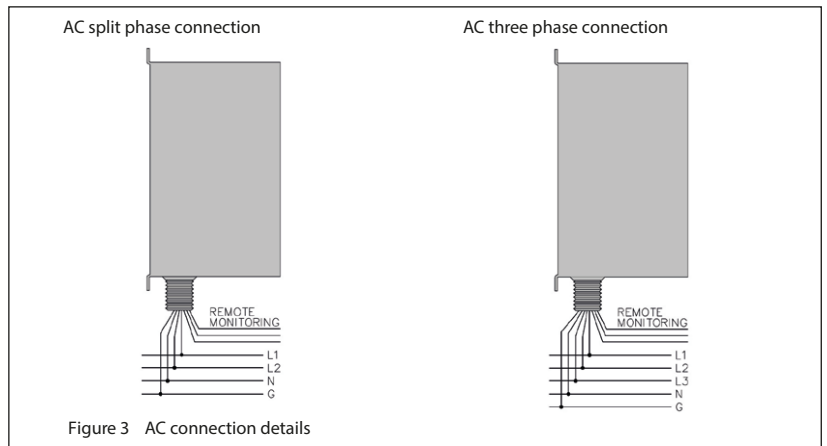


Figure 3 AC connection details

## APPROVALS

| Country       | Standard/Authority                             | Approved for     | Product          |
|---------------|--|------------------|------------------|
| Global        | IEC 61643-11                                   | Class II         | ZoneDefender PRO |
| USA<br>Canada | UL 1449 3rd Edition Listed<br>(C-UL US Listed) | AC power product | ZoneDefender PRO |



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