

ZoneDefender Pro Series

Quality surge protection for a wide variety of industrial, institutional and commercial electrical panel applications. The impressive range of models available make the feature-rich ZoneDefender Pro ideally suited for any application where high quality, non-modular protection solutions are desired.



Features

- **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 rating: 200k AIC**
- **UL 1449 3rd Edition Listed**
- **10 year warranty**

Specifications

Maximum surge current (I_{max})

80kA/100kA/120kA (8/20 μ s)
160kA/200kA/240kA (8/20 μ 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 μ s)

Rated 1 impulse
10,000A >6,500 Impulses
100A infinite

Long duration current pulse (10/1,000 μ s) 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, 12 and 13 (IP60)

Terminals

#10 AWG (5mm²) & #8 AWG (8mm²)

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

Audible Alarm

90dB

EMI/RFI Attenuation

-75dB maximum 100kHz to 100MHz

Weight

From 5.2 lbs (2.34Kg)

Dimensions

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

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

Ratings in compliance with IEC 61643-1

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.

Options

NEMA 3, 3R, 4, 4X (IP66) outdoor enclosure Add suffix "-O"

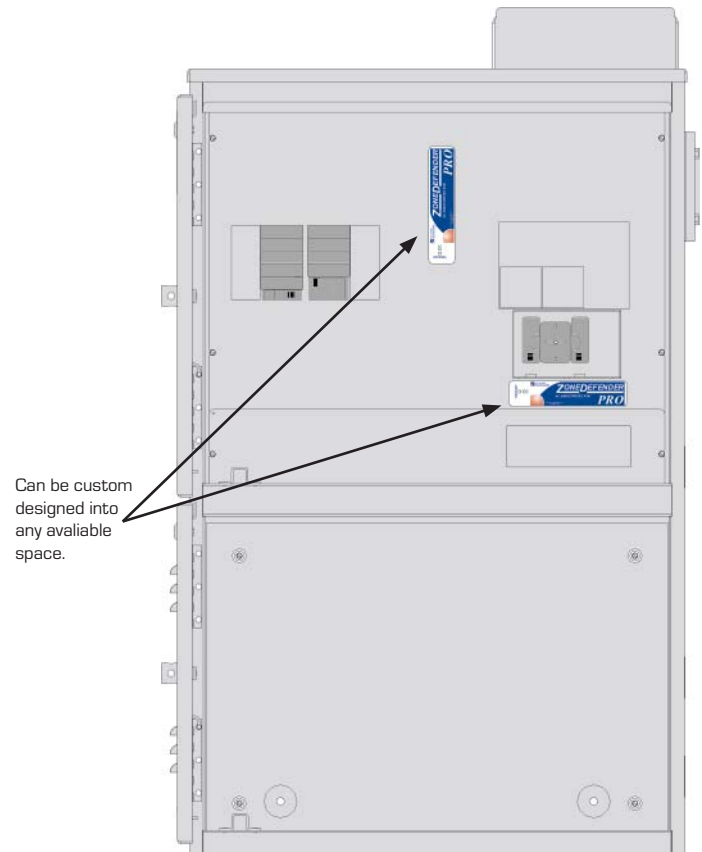
Flush Mount Bracket (see figure 2)
Order #16000

Small size makes integration into custom equipment a breeze.

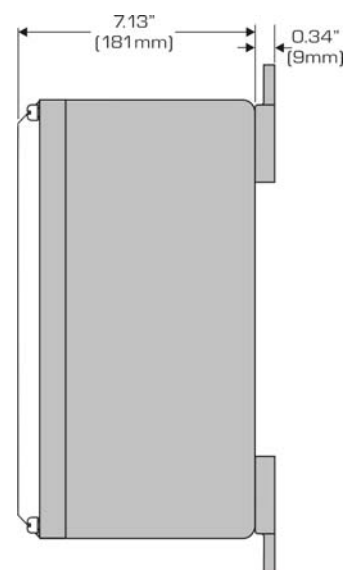
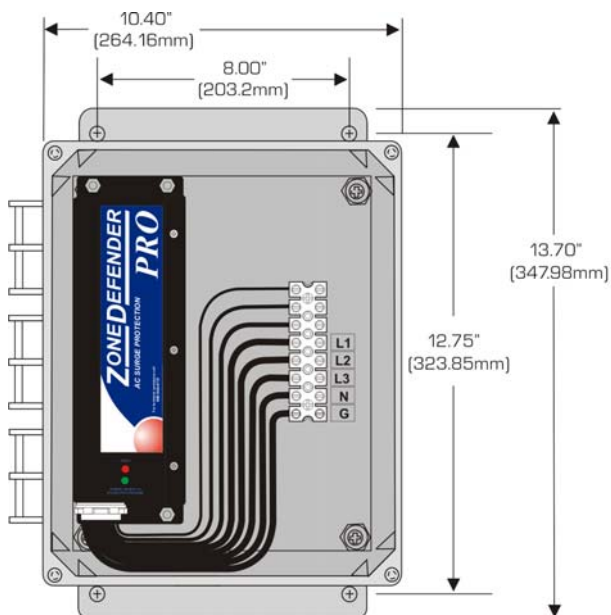
ZoneDefender PRO saves money by facilitating smaller AC power cabinets. Once the ZoneDefender Pro has been engineered in, there is no re-engineering needed to meet customers changing surge capacity requirements.

Great for:

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



Optional Outdoor Enclosure



- ◆ NEMA 3, 3R, 4, 4X (IP66) rated
To order: Add suffix "- O"

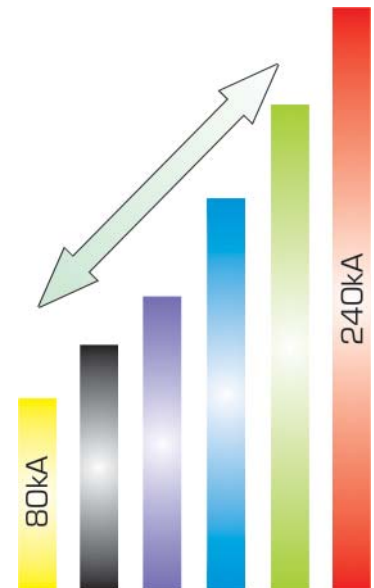
Advanced indication and monitoring



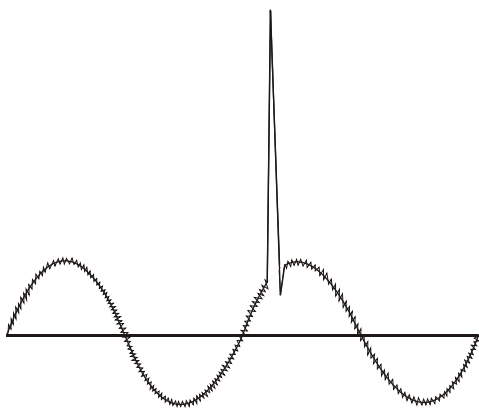
- Red LED = Fault warning
Advanced circuitry monitors every suppression component in the ZoneDefender PRO.
 - Green LED = Protection operational and ground present
Assures user that full protection is present. Advanced circuitry continuously monitors the presence of a ground connection.
- 🔊 Any fault in the unit triggers an audible alarm. Great for units hidden from view.
- 🔌 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 (9.3" x 3.0") for all six (6) surge capacity types.



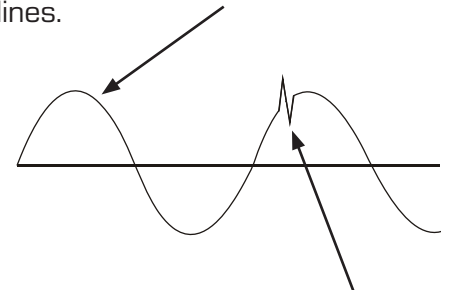
Precise power protection



Before ZoneDefender PRO



High performance EMI/RFI Filter attenuates noise on AC power lines.



State-of-the-art surge protection reduces transient voltages to harmless levels.

After ZoneDefender PRO

Model	Working voltage (V)	UL SVR 2nd Edition (V)	UL VPR 3rd Edition (V)	Limiting voltage		Up (kV)	Ringwave @200A (V)	Phase types
				@ 3kA (V)	@10kA (In) (V)			
80kA versions								
ZD16100	120/240	400	500	470	780	0.8	60	Split phase 3 wire
ZD16101	120/208	400	500	470	780	0.8	60	Three phase 4 wire WYE
ZD16104	277/480	800	1000	890	1200	1.2	75	Three phase 4 wire WYE
ZD16107	220/380	800	1000	890	1200	1.2	75	Three phase 4 wire WYE
ZD16108	240/415	800	1000	890	1200	1.2	75	Three phase 4 wire WYE
100kA versions								
ZD16200	120/240	400	500	470	780	0.8	60	Split phase 3 wire
ZD16201	120/208	400	500	470	780	0.8	60	Three phase 4 wire WYE
ZD16202	120/240	400/800	500/1000	470/890	780/1200	0.8/1.2	60/75	Three phase 4 wire Delta
ZD16204	277/480	800	1000	890	1200	1.2	75	Three phase 4 wire WYE
ZD16207	220/380	800	1000	890	1200	1.2	75	Three phase 4 wire WYE
ZD16208	240/415	800	1000	890	1200	1.2	75	Three phase 4 wire WYE
120kA versions								
ZD16300	120/240	400	500	470	780	0.8	60	Split phase 3 wire
ZD16301	120/208	400	500	470	780	0.8	60	Three phase 4 wire WYE
ZD16302	120/240	400/800	500/1000	470/890	780/1200	0.8/1.2	60/75	Three phase 4 wire Delta
ZD16304	277/480	800	1000	890	1200	1.2	75	Three phase 4 wire WYE
ZD16307	220/380	800	1000	890	1200	1.2	75	Three phase 4 wire WYE
ZD16308	240/415	800	1000	890	1200	1.2	75	Three phase 4 wire WYE
160kA versions								
ZD16400	120/240	400	500	430	650	0.7	50	Split phase 3-wire
ZD16401	120/208	400	500	430	650	0.7	50	Three phase 4-wire WYE
ZD16402	120/240	400/800	500/1000	430/770	650/1180	0.7/1.2	50/68	Three phase 4 wire Delta
ZD16404	277/480	800	1000	770	1180	1.2	68	Three phase 4-wire WYE
ZD16407	220/380	800	1000	770	1180	1.2	68	Three phase 4-wire WYE
ZD16408	240/415	800	1000	770	1180	1.2	68	Three phase 4-wire WYE
200kA versions								
ZD16500	120/240	400	500	430	650	0.7	50	Split phase 3-wire
ZD16501	120/208	400	500	430	650	0.7	50	Three phase 4-wire WYE
ZD16502	120/240	400/800	500/1000	430/770	650/1180	0.7/1.2	50/68	Three phase 4 wire Delta
ZD16504	277/480	800	1000	770	1180	1.2	68	Three phase 4-wire WYE
ZD16507	220/380	800	1000	770	1180	1.2	68	Three phase 4-wire WYE
ZD16508	240/415	800	1000	770	1180	1.2	68	Three phase 4-wire WYE
240kA versions								
ZD16600	120/240	400	500	430	650	0.7	50	Split phase 3-wire
ZD16601	120/208	400	500	430	650	0.7	50	Three phase 4-wire WYE
ZD16602	120/240	400/800	500/1000	430/770	650/1180	7/1.2	50/68	Three phase 4 wire Delta
ZD16604	277/480	800	1000	770	1180	1.2	68	Three phase 4-wire WYE
ZD16607	220/380	800	1000	770	1180	1.2	68	Three phase 4-wire WYE
ZD16608	240/415	800	1000	770	1180	1.2	68	Three phase 4-wire WYE

*8/20µs waveform — Tested as per ANSI/IEEE C62.45 and ANSI/IEEE C61.41

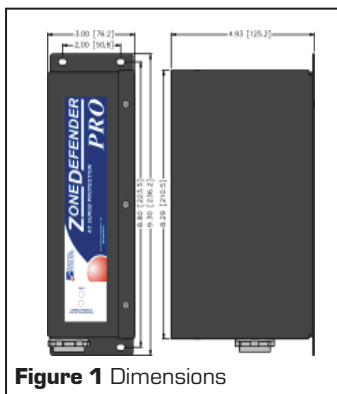


Figure 1 Dimensions

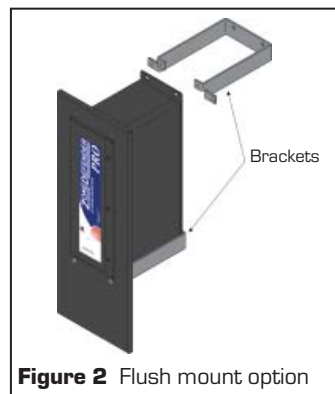


Figure 2 Flush mount option

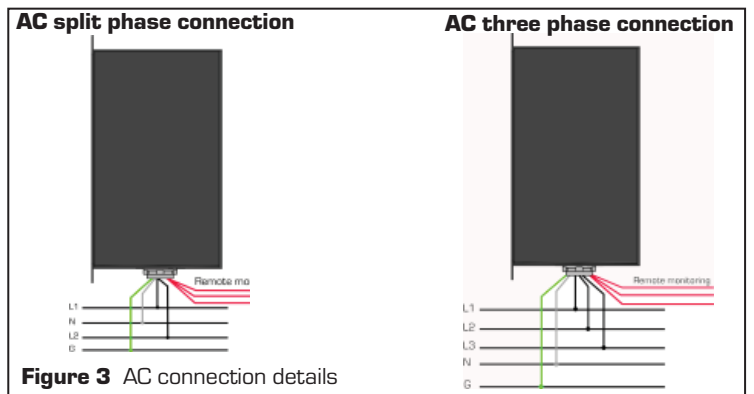


Figure 3 AC connection details

Approvals

For more information please contact your local MTL sales office:

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Local sales office information is also available on our web site at: www.mtlsurge.com/support/distribution/index.htm

Country	Standard/Authority	Approved for	Product
Europe	EN60950 EN61000-6-2	AC power product	ZoneDefender PRO
Global	IEC 61643-1	Class II	ZoneDefender PRO
United States Canada	UL 1449 3rd Edition Listed [C-UL US Listed]	AC power product	ZoneDefender PRO

