TR7000

Transient Voltage Surge Suppressors

imagination at work

Overview

It is a fact that transient voltage surges from both external and internal sources directly affect the performance and life expectancy of electronic equipment. From electronic lighting ballasts to computer servers, if there is a printed circuit board inside, it is susceptible to transient voltage surge damage. As microprocessors and components that make up this equipment grow smaller and faster with each new generation, their susceptibility to transient voltage surge damage becomes ever greater.

The full-featured TR 7000 series with its advanced monitoring, disconnect and enclosure options has been designed to handle the highest levels of surge activity found in the most demanding commercial and industrial facilities. These units are ideal for both new and retrofit applications where performance cannot be compromised.

Available in ratings from 65kA - 300kA per mode, (130kA - 600kA per phase) the TR 7000 series is the perfect surge suppression product for protecting critical sensitive electronic equipment throughout your facility.

Recommended installation locations are service entrance and primary and secondary distribution. The TR 7000 Series has been third party tested to the ANSI/IEEE C3 (10kA 8 x 20 µs) service entrance level transient surges including all components. The entire TR 7000 line up has been engineered to the highest standards and is designed for rigorous duty and long life as evidenced in our outstanding minimum repetitive surge current capacity test results.

GE engineers, designs and builds these transient voltage surge suppressors in our state of the art lab and production facilities. Extensive testing is performed at GE and 3rd party labs across North America. Production is carried out at our ISO 9001 certified factory utilizing six sigma methodologies and lean manufacturing processes in Bonham, Texas.

Minimum Repetitive Surge Current Capacity

(Per ANSI/IEEE C62.41-1991 and ANSI/IEEE C62.45-1992)

The TR 7000 Series is capable of surviving the following impulses, at one-minute intervals, without failure and with less than 10% change in protective characteristics.

- **20,000** Category C3 impulses 20kV/10kA, 8x20µs for 120-300kA rated devices
- **5,000** Category C3 impulses 20kV/10kA, 8x20µs for 65-100kA rated devices
- **5,000** 500V/2kA, 10x1000µs long wave impulses for all TR 7000 devices

Recommended Applications

- Service Entrance
- Distribution Equipment
- Branch Panel
- New Construction and Retrofits
- System Expansions

Benefits & Features

- The TR 7000 provides maximum surge protection with outstanding clamping characteristics for ultra high, high, medium and low exposure locations with the use of industrial-grade MOV architecture and state-of-the-art engineering,
- 3rd party tested up to 200kA per mode per NEMA LS1 including fuses in the surge path
- Fast rise-times, high frequency transients and electrical line noise are reduced with standard EMI / RFI filtering technology.
- Maximum installation flexibility is achieved in the TR 7000 through its high surge suppression kA to small footprint ratio - one of the best in its class.
- 10 Modes of protection (L-N, L-G, N-G, L-L)
- Green operational LEDs with Red service LED
- NO/NC Form C Dry Contacts for remote monitoring
- Industrial sized MOV technology
- Patented Thermal Fuse Technology US patent # 6,282,073 combined with 200kAIC surge rated fuses
- 5 year standard warranty (10 year optional)
- Audible alarm with push-to-test switch, Enable/Disable function
- Optional 200 kA surge rated disconnect
- NEMA 1, 12, 4 and 4X enclosures available
- Surface and flushmount-style enclosures

Standards

- UL1449 (2nd Edition), UL 1283, CSA C22.2 (cUL)
- ANSI/IEEE C62.41 - 1991 (R1995), C62.45 - 2002
- NEMA LS-1 - 1992 (R2000)
- MIL-STD-220B
- ANSI/NFPA70
- NEC (Article 285)

Operating Frequency	50/60 Hz
Connection	6 to 2/0 AWG Lugs, Parallel Connected
Operating Temperature	-40 C to +65 C
Operating Humidity	0% to 95% Non-Condensing
Weight by Enclosure	(WMN1D) 55 lbs., (WMN12S, 12F, 4S, 4D) 37 lbs., (WMN4X) 40 lbs.

Technical Specifications

Catalog # **TR7** _ _ _ _ _ _ _ **WMN*** **Example: TR7277Y250WMN1D**

	Nominal Voltage (Vrms) (50/60 Hz)	System Voltage Configuration	Suppressed Voltage Rating UL 1449 2nd Edition L-N	/ L-G	/ N-G	MCOV (50/60 Hz) Max. Continuous Operating Voltage
120S	120/240	1 Ph, 3 W + G	400	/ 400	/ 400	150V
120Y	120Y/208	3 Ph, 4 W + G	400	/ 400	/ 400	150V
220Y	220Y/380	3 Ph, 4 W + G	800	/ 800	/ 800	320V
240Y	240Y/415	3 Ph, 4 W + G	800	/ 800	/ 800	320V
277Y	277Y/480	3 Ph, 4 W + G	800	/ 800	/ 800	320V
347Y	347Y/600	3 Ph, 4 W + G	1000	/ 1000	/ 900	420V
240D	240 Delta	3 Ph, 3 W	-	/ 800	/ -	270V
480D	480 Delta	3 Ph, 3 W	-	/ 1500	/ -	550V
600D	600 Delta	3 Ph, 3 W	-	/ 1500	/ -	625V
240H	120/240 Delta HL	3 Ph, 4 W + G	400/700	/ 400/700	/ 400	See Note

	Maximum Surge Current Capacity
065	65kA mode 130kA phase
080	80kA mode 160kA phase
125	125kA mode 250kA phase
150	150kA mode 300kA phase
200	200kA mode 400kA phase
250	250kA mode 500kA phase
300	300kA mode 600kA phase

Phase Rating = (L-N + L-G)

Note: 150V (L-N/G) Phase A&C
270V (L-N-G) Phase B

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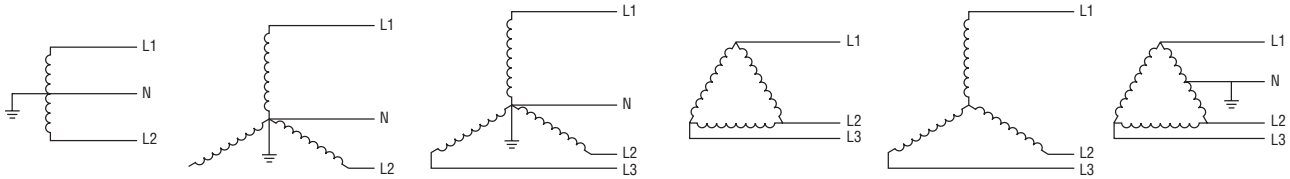
Suffix	NEMA Enclosure	Description	Mounting	Disconnect
1D	1	Painted Steel	Surface	Yes
12S	12	Painted Steel	Surface	No
12F	12	Painted Steel	Flush	No
4D	4X	Fiberglass	Surface	Yes
4S	4X	Painted Steel	Surface	No
4X	4X	Stainless Steel	Surface	No

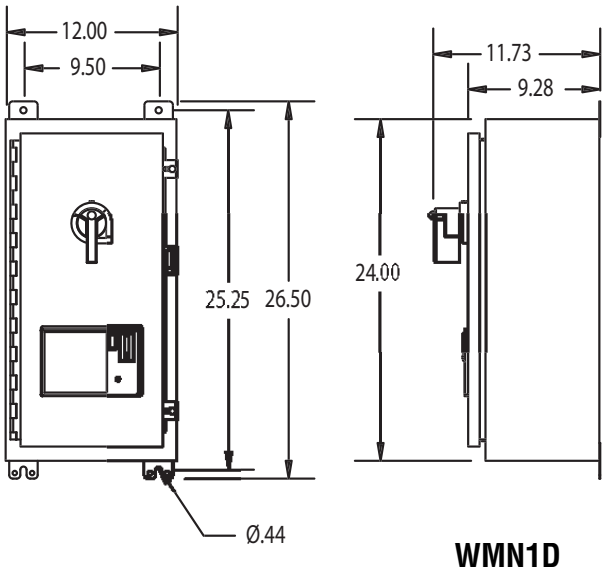
Model	Nominal Voltage (50/60Hz)	Max. Continuous Operating Voltage	System Voltage Configuration	Source Configuration
120S	120 / 208-240V	150V (L-N / L-G)	Single Phase, 3 Wire + Ground	A
			Dual Phase 3 Wire + Ground	B
120Y	120 / 208V	150V (L-N / L-G)	Three Phase WYE, 4 Wire + Ground	C
220Y	220 / 380V	320V (L-N / L-G)		
240Y	240 / 415V	320V (L-N / L-G)		
277Y	277 / 480V	320V (L-N / L-G)		
347Y	347 / 600V	420V (L-N / L-G)		
240D	240V	270V (L-G)	Three Phase Delta, 3 Wire	D
480D	480V	550V (L-G)	Three Phase WYE, 3 Wire	E
600D	600V	625V (L-G)		
240H	120 / 240V	150V (L-N / L-G) Phase A&C	Three Phase Delta Hi-Leg, 4 Wire + Ground	F
		270V (L-N / L-G) Phase B		



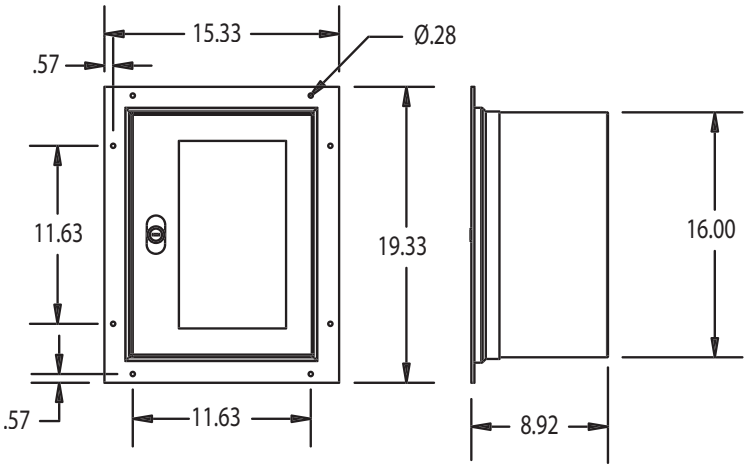
A B C D E F

TR7000 Series Wallmount Dimensions

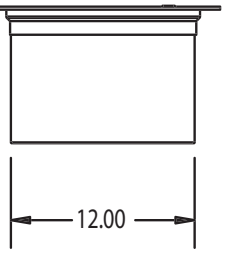
(Expressed in inches)

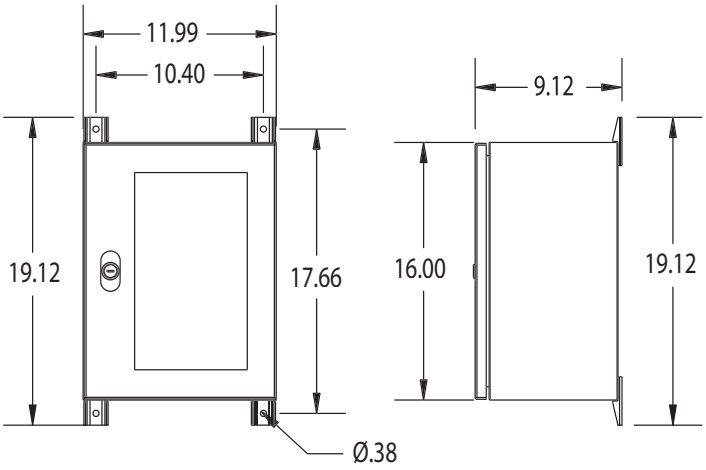


WMN1D

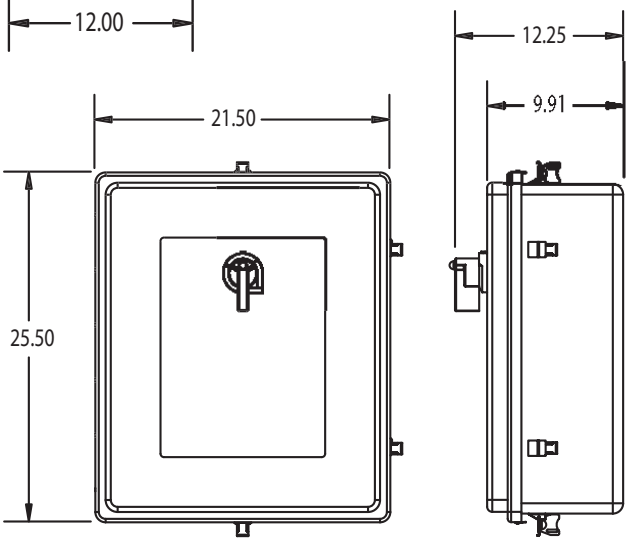


WMN12F





WMN12S
WMN4S
WMN4X



WMN4D

USA

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