

TVSS Protection



Detailed Specifications for ERICO's Transient Discriminating Protection, TDX50 Series

Applications

The ERICO TDX50 Series of Transient Voltage Surge Suppressors for equipment, panel and motor protection applications are specifically designed to provide long life, even under the most adverse over-voltage conditions.

ERICO's patented Transient Discriminating™ (TD™) technology exceeds the safety requirements of UL 1449 Edition 2 and provides superior life by eliminating the common failure experienced by TVSSs under abnormal or sustained over-voltages.

The 50kA 8/20µs of surge protection meets the proposed IEEE C62.41.2 Scenario II single shot surge rating requirements for service entrance locations, Exposure 2.

The hybrid design incorporates an efficient sine wave tracking filter, which provides efficient noise attenuation to ensure even the most sensitive equipment is protected from noise and transient activity.

The NEMA-4 weather tight housing allows the TDX50 to be installed outdoors making it well suited to such applications as well/sump pumps. A flush mounting kit is also available for installing the TVSS in drywall applications.

The TDX50 is specified in full compliance with NEMA LS1 Low Voltage Surge Protection Devices. In addition, independent certified surge test reports are available.

Features

- 50kA 8/20µs protection for service entrance and branch distribution panels
- Transient Discriminating (TD) technology for long service life. Ideal for sites with poor voltage regulation
- Three built-in safety features include: TD technology, thermal protection and over-current fusing
- UL 1449 Edition 2 listed
- All modes protected
- Status indication to monitor the integrity of the internal protection for each phase
- NEMA-4 metal enclosure
- Sine wave tracking filter
- 10 year free replacement limited warranty

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VALDEZ INGENIEROS S.A DE C.V

TDX50 Series

Specifications

Operation:						
Models available TDX50-	120	240	120/240	120/208	277/480	347/600
Nominal system voltage (Vrms)	110-120	220-240	120/240	120/208 -127/220	220/380 -277/480	347/600
Distribution system	1Ph 2W+G	1Ph 2W+G	1Ph 3W+G	3Ph Y 4W+G	3Ph Y 4W+G 3Ph Y 3W+G*	3Ph Y 4W+G
Max. cont. operating voltage (Vrms)	170	275	170/340	170/295	310/536	480/830
Input frequency	50/60 Hz					
Protection:						
Max. surge current / line	50kA 8/20 μ s					
Protection modes	All modes protected via L-N, L-G and N-G					
SPD circuit description	MOV & TD technology with over-current and thermal fusing					
Short circuit current rating	65kAIC					
Performance (L-N):						
C62.41 Cat B3, 3kA 8/20 μ s / 6kV 1.2/50 μ s	510V	920V	540V	560V	1430V	1420V
C62.41 Cat C3, 10kA 8/20 μ s / 20kV 1.2/50 μ s	740V	1031V	690V	770V	1990V	1660V
Sine wave tracking filtering	-35dB	-35dB	-35dB	-35dB	-34dB	-25dB
Alarms and Indicators:						
Protection status indication	Visual - per phase					
Physical Data:						
Dimensions (W x D)	4.1" x 2.5"					
Length	4"	4"	4"	6"	6"	6"
Weight	2.2 lb.	2.2 lb.	2.2 lb.	2.7 lb.	2.7 lb.	2.7 lb.
Enclosure material	Aluminum					
Connection means	#10AWG, 24" flying leads					
Mounting method	3/4" straight nipple Optional flush mounting plate for drywall					
Environmental rating	NEMA-4					
Operating temperature	-40 to +176°F (-40 to +80°C)					
Humidity	0 - 90%					
Altitude	0 - 12,000 ft (0 - 3650m)					
Warranty	10 years					
Test Standards:						
Approvals	cULus (UL 1449 Edition 2) UL 1283 (EMI/RFI filtering) TDX50-120, 240, 120/240 & 120/208					
Surge rated to meet	ANSI/IEEE C62.41-1991 Cat A, Cat B, Cat C ANSI/IEEE C62.41.2 Scenario II, Exposure 2					



* For motor control applications the TDX50 277/480 is also applicable to "No Neutral" 480V Wye 3W+G systems.
Due to a policy of continual product development, specifications are subject to change without notice.

Ordering Information



Part Number	Description
TDX50 120	110-120V 1ph 2W+G, 50kA 8/20 μ s TVSS protector
TDX50 240	220-240V 1ph 2W+G, 50kA 8/20 μ s TVSS protector
TDX50 120/240	120/240V 1ph 3W+G, 50kA 8/20 μ s TVSS protector
TDX50 120/208	120/208V 3ph Y 4W+G, 50kA 8/20 μ s TVSS protector
TDX50 277/480	277/480V 3ph Y 3/4W+G, 50kA 8/20 μ s TVSS protector
TDX50 347/600	347/600V 3ph Y 4W+G, 50kA 8/20 μ s TVSS protector
TDX50 FP1	Single phase flush mounting plate accessory
TDX50 FP3	Three phase flush mounting plate accessory

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