

160,000 AMP PANEL PROTECTION

EFI Electronics Titan 160M delivers specification grade performance and features at an affordable price. This multi-phase protection system provides protection for critical electrical equipment. The compact design of the Titan 160M allows protection to be installed adjacent to power panels in a compact yet durable design.

Compliant with UL 1449 2nd Edition requirements dated February 9, 2007.



APPLICATIONS

The Titan 160M is a versatile and compact surge protection device designed to provide high quality protection for a wide variety of commercial, industrial or institutional applications. The Titan 160M is excellent as a component in a suppression network or as a standalone protector.

SUPERIOR PERFORMANCE

The Titan 160M utilizes a high energy suppression circuit which provides 160,000 peak amps of surge current rating per phase along with EFI Electronics sine wave tracking circuitry to provide up to -30 dB of noise attenuation (Wye configuration only). And with the addition of fault current fusing, the Titan 160M is able to survive abuse that will destroy a lower class suppression device.

The EFI Electronics Titan 160M provides reliable operation by incorporating EFI's latest improvements. Each surge suppression mode is individually fused and the product is contained in a NEMA 3R/12 metallic housing for maximum performance. The Titan 160M has been tested and is UL and cUL listed.

EASY INSTALLATION

The EFI Electronics Titan 160M mounts adjacent to the panel through a conduit connection and as close to the circuit breaker as possible in order to reduce lead lengths and improve protection.

FEATURES	ADVANTAGES	BENEFITS
MODULAR DESIGN	Allows quick and easy replacement of damaged surge models	Prevents operating without protection and eliminates costly labor expenses
160,000 PEAK AMP CAPACITY	Provides protection against high energy lightning strikes	Keeps valuable electronics safe even in the worst electrical conditions
SINE WAVE TRACKER™ CIRCUITRY	Suppresses transients closer to the sine wave	Improves protection to the equipment
LED STATUS INDICATION	Provides visual indication of suppressor status	Allows immediate response if suppressor is damaged
SUPPRESSION STATUS ALARM	Immediate alarm if suppression is damaged	Prevents operating without protection
THERMAL FUSING	Thermal fuse capable of extreme surge currents	Provides reliable operation and prevents dangerous thermal runaway when MOV's are damaged

TITAN® 160M Product Specifications



PERFORMANCE

Maximum Surge Current	160 kA/phase
Short Circuit Current Rating	200 kA, 600 V Maximum
Sine Wave Tracking	Yes (Wye units)
EMI/RFI Noise Rejection	Up to -30 dB
Fault Current Fusing	200 kAIC

MECHANICAL DESCRIPTION

Dimensions	see diagrams
Weight	
Wye w/o disconnect	19.2 lbs (8.7 kg)
Delta w/o disconnect	28.5 lbs (12.9 kg)
Wye w/ disconnect	44.5 lbs (20.2 kg)
Delta w/ disconnect	31.6 lbs (14.3 kg)

MECHANICAL DESCRIPTION CONT'D

Enclosure	Nema 3R/12
Connecting Terminals	#12 to #2 AWG
Mounting Method	Parallel
Thermal Fusing	Yes
Operating Frequency	50/60 Hz
Circuit Type	Parallel
Operating Temperature	-40° to +149° F (-40° to +65° C)
Storage Temperature	-40° to +149° F (-40° to +65° C)
Operating Altitude	Sea level to 12,000 feet (3,658 meters)

WARRANTY

10 years on Product

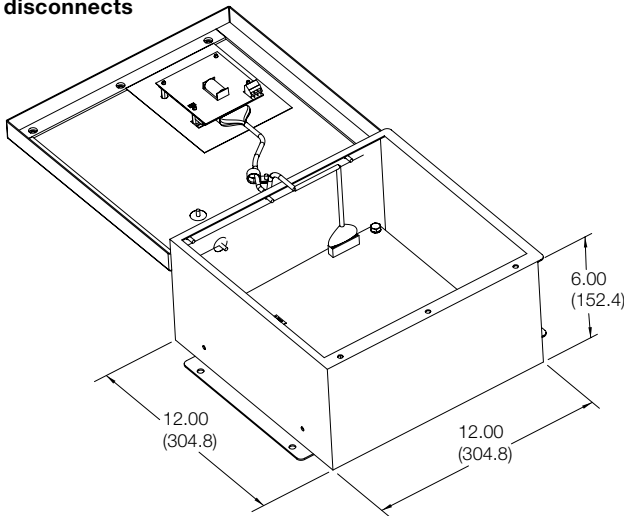
DIAGNOSTICS

Standard	Push to Test Diagnostics, Red & Green Status LED's (Internal redundant Status LED's per Phase will be Blue for Delta configurations & Green for Wye and Split Phase configurations), Dry Contacts, Audible Alarm, Surge Counter
Optional	Safety Disconnect Switch; Flush Mount, (for panel sizes 12"x12"x 6", and 16"x 20"x 6" only)

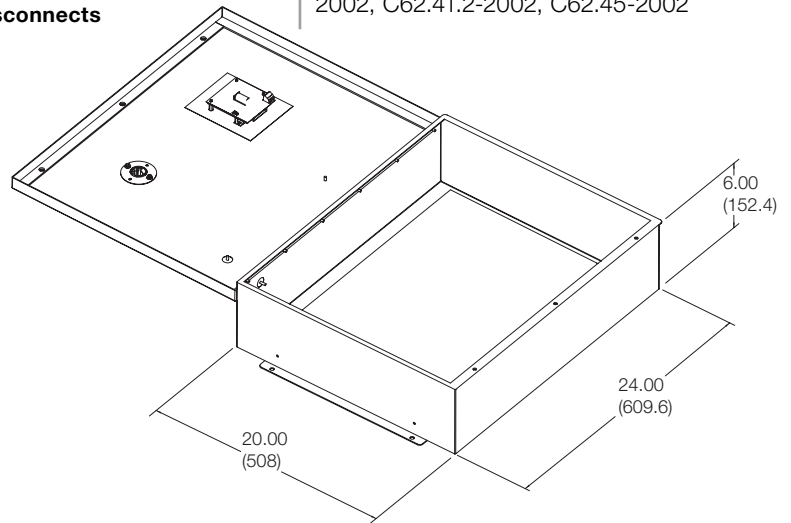
SAFETY APPROVALS

cULus 1449 2nd Edition, 2007 requirements, cUL, UL 1283 (wye products only), CSA C22.2 No.8- M1986, IEEE C62.41.1-2002, C62.41.2-2002, C62.45-2002

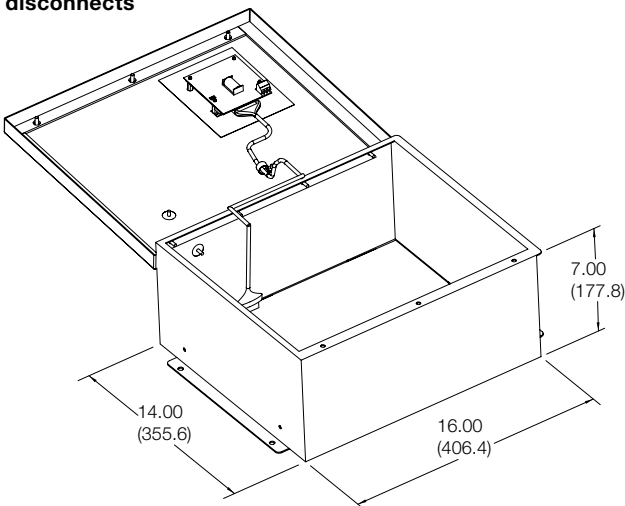
Wye products without disconnects



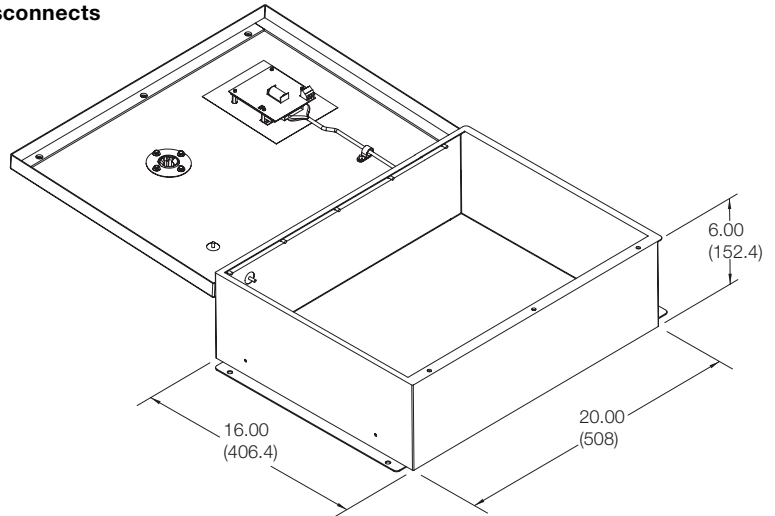
Wye products with disconnects



Delta products without disconnects



Delta products with disconnects



TITAN® 160M Product Specifications



TITAN 160M SYSTEM DESCRIPTION				UL 1449 2-nd EDITION				
160kA/Phase	Service Voltage	Configuration	Model Number	MCOV	L-N	L-G	N-G	L-L
	120/240 wye (Single Phase)	1Ph. Wye 3-wire +G	160M120/240Y	150	400	400	400	800
	120/208 wye	3Ph. Wye 4-wire +G	160M120/208Y	150	400	400	400	800
	208 delta high resistance ground	3Ph. Wye/Delta 3-wire HRG	160M208HRG	300	N/A	N/A	N/A	900
	220/380 wye	3Ph. Wye 4-wire +G	160M220/380Y	320	800	800	800	1500
	230/400 wye	3Ph. Wye 4-wire +G	160M230/400Y	320	800	800	800	1500
	240/120 delta split phase	3Ph. Delta 4-wire +G 'High Leg'	160M240/120SP	275/150	800/400	800/400	400	1500/800
	240 delta corner ground	3Ph. Delta 3-wire Corner Gnd	160M240D	300	N/A	N/A	N/A	900
	240 delta ungrounded	3Ph. Delta 3-wire Ungrounded	160M240U	300	N/A	N/A	N/A	900
	277/480 wye	3Ph. Wye 4-wire +G	160M277/480Y	320	800	800	800	1500
	480 delta high resistance ground	3Ph. Wye/Delta 3-wire HRG	160M480HRG	640	N/A	N/A	N/A	1500
	480 delta corner ground	3Ph. Delta 3-wire Corner Gnd	160M480D	640	N/A	N/A	N/A	1500
	480 delta ungrounded	3Ph. Delta 3-wire Ungrounded	160M480U	640	N/A	N/A	N/A	1500
	347/600 wye	3Ph. Wye 4-wire +G	160M347/600Y	420	1200	1200	1200	2000
	600 delta high resistance ground	3Ph. Wye/Delta 3-wire HRG	160M600HRG	840	N/A	N/A	N/A	2000
	600 delta corner ground	3Ph. Delta 3-wire Corner Gnd	160M600D	840	N/A	N/A	N/A	2000
	600 delta ungrounded	3Ph. Delta 3-wire Ungrounded	160M600U	840	N/A	N/A	N/A	2000

NOTE: 160M units come standard with Surge Counter
 When ordering Disconnect Option, add suffix -D to the Model Number. (Ex. 160M120/240Y-D)

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