

# SurgeFree™

## MODELS

### 402XT • 202XT

## Building Entry Protection

The Surge Free 402XT/202XT are brute force protectors designed for installation at the entrance of large, Cat. C facilities. Manufactured with the rock-solid reliability found in all MCG protectors, the XT series offers extraordinary performance in diverting damaging transients. All models include an internal disconnect switch and a ten-year warranty.

## FEATURES

- 402XT: Ip=400kA, 8x20µs. 202XT: Ip=200kA, 8x20µs.
- Independent lab tested modules. Rated at 200kA (8x20µs each.)
- Meets NEMA LS 1-1992.
- Redundant modular protection withstands multiple lightning strikes. Uses 40mm MOVs.
- Solid copper bus bar construction for minimal impedance and enhanced current sharing.
- High performance, low inductance Micro-Z™ installed cable.
- Field-replaceable protection modules for on-site maintenance.
- At-a-glance monitoring system: Transient event counter, time and date of last transient event, LED protection status indicators, audible alarm (with mute switch), and surge protected remote relay contacts.
- Filtering standard on all XT models.
- Low impedance, internal high current disconnect switch.

Surge Current/Phase (8/20µs): 1 Event - 402XT: 400kA. 202XT: 200kA.  
 Surge Life/Phase (8/20µs): 10,000 Events: 402XT: 15kA, 202XT: 10kA.  
 Status Indicators: LED Bar Graph  
 Event Counter with Date/Time Indicator  
 Audible Alarm with Mute Switch,  
 Protected Remote Alarm Dry Contacts

Modes of Protection: L-N, L-G, L-L, N-G  
 Operating Altitude: 13,000ft. (4000m)  
 Temp. (Operating/Storage): -40° to +70°C/-40° to +85°C  
 Enclosure: NEMA 4, 14 gauge steel  
 Dimensions for 402XT & 202XT: 12" x 18" x 8.5" (305 x 457 x 216mm)  
 Mounting for 402XT & 202XT: 8" x 18.75".31"ID - 4 holes  
 (203 x 476mm/8mm ID)  
 Micro-Z Cable Connection: #10 AWG/.102" OD (2.6mm)  
 Micro-Z Cable Length: 8ft. (2.44M)  
 Weight (402XT): 42 lbs. (19.1kg)  
 Weight (202XT): 39 lbs. (17.7kg)

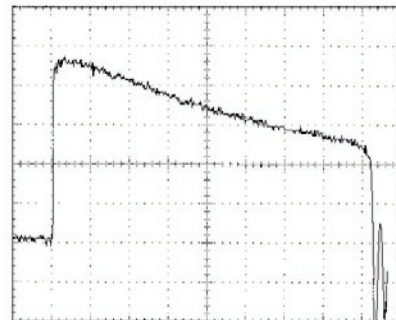


**Ipeak=400,000A / 200,000A**

## WARRANTY

**10-Year Warranty on Unit,  
Lifetime on Modules.**

Filter Attenuation	120VAC	240VAC	277VAC
MIL STD 220A (50 Ohm):	120VAC	240VAC	277VAC
-30db	50kHz	50kHz	25kHz
-40db	125kHz	180kHz	100kHz
-50db	210kHz	210kHz	180kHz
-60db	250kHz	250kHz	200kHz



Shown here is a typical clamp waveform of the Model 402XT.

# Specifications

- ANSI/IEEE C62.41-1996
- IEC 61643-1-1998
- UL 1449, 2nd Edition
- NEMA LS-1-1992

## Model 402XT

Model 402XT	Part No.	Service	20kV, 1.2/50 $\mu$ s; 10kA, 8/20 $\mu$ s				
			Higher Headroom MOVs	UL1449 500A $\ddagger$	SPD+ Cable		
			VAC	Clamp V	SPD Clamp V	Let-Thru V 1.0 ft.	Let-Thru V 2.0 ft.
-120T	445-402-11	120/240VAC, 1 $\phi$ , 3W+Gnd	180	500	552	747	893
-120Y	445-402-45	120/208, 3 $\phi$ , 4W+Gnd, Wye	180	500	552	747	893
-220Y	445-402-41	220/380, 3 $\phi$ , 4W+Gnd, Wye	390	1000	1096	1288	1432
-240Y	445-402-42	240/415, 3 $\phi$ , 4W+Gnd, Wye	390	1000	1096	1288	1432
-240D	445-402-30	240, 3 $\phi$ , 3W+Gnd, Delta	390	1000	1096	1288	1432
-240DCT*	445-402-20	240/120/120, 3 $\phi$ , 4W+Gnd	390/180	1000/500	1096/552	1288/747	1432/893
-277Y	445-402-43	277/480, 3 $\phi$ , 4W+Gnd, Wye	390	1000	1096	1288	1432
-347Y	445-402-44	347/600, 3 $\phi$ , 4W+Gnd, Wye	460	1200	1136	1324	1466
-480D	445-402-31	480, 3 $\phi$ , 3W+Gnd, Delta	620	1500	1860	1878	1892
-600D	445-402-32	600, 3 $\phi$ , 3W+Gnd, Delta	750	1800	1896	2072	2204

\* High-leg Delta Center Tapped

**Energy Absorption (8/20 $\mu$ s) in joules:** 24,300j - 108,000j

## Model 202XT

Model 202XT	Part No.	Service	20kV, 1.2/50 $\mu$ s; 10kA, 8/20 $\mu$ s				
			Higher Headroom MOVs	UL1449 500A $\ddagger$	SPD+ Cable		
			VAC	Clamp V	SPD Clamp V	Let-Thru V 1.0 ft.	Let-Thru V 2.0 ft.
-120T	445-202-11	120/240VAC, 1 $\phi$ , 3W+Gnd	180	500	640	835	981
-120Y	445-202-45	120/208, 3 $\phi$ , 4W+Gnd, Wye	180	500	640	835	981
-220Y	445-202-41	220/380, 3 $\phi$ , 4W+Gnd, Wye	390	1000	1256	1448	1592
-240Y	445-202-42	240/415, 3 $\phi$ , 4W+Gnd, Wye	390	1000	1256	1448	1592
-240D	445-202-30	240, 3 $\phi$ , 3W+Gnd, Delta	390	1000	1256	1448	1592
-240DCT*	445-202-20	240/120/120, 3 $\phi$ , 4W+Gnd	390/180	1000/500	1256/640	1448/835	1592/981
-277Y	445-202-43	277/480, 3 $\phi$ , 4W+Gnd, Wye	390	1000	1256	1448	1592
-347Y	445-202-44	347/600, 3 $\phi$ , 4W+Gnd, Wye	460	1200	1280	1468	1610
-480D	445-202-31	480, 3 $\phi$ , 3W+Gnd, Delta	620	1500	2030	2048	2062
-600D	445-202-32	600, 3 $\phi$ , 3W+Gnd, Delta	750	1800	2056	2232	2364

\* High-leg Delta Center Tapped

**Energy Absorption (8/20 $\mu$ s) in joules:** 13,200j - 54,000j

$\ddagger$  UL 1449, 500A Test: A UL test setup (6" of cabling and low 500A, 8/20 $\mu$ s current waveform) to allow clamping voltage comparisons between SPD's made by different manufacturers. Since a protector in the field will experience a greater surge of transient energy, the low peak current of 500A does not properly reflect an SPD's true clamping capability and hence is of limited value.