



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 twenty-year warranty.

FEATURES

- 402XT: $I_p=400\text{kA}$, $8 \times 20\mu\text{s}$. 202XT: $I_p=200\text{kA}$, $8 \times 20\mu\text{s}$
- Independent lab tested modules. Rated at 200kA ($8 \times 20\mu\text{s}$ each.)
- Meets NEMA LS 1-1992
- Redundant modular protection withstands multiple lightning strikes. Uses 40kA 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
- Multiple, heavy-duty surge current pathways
- At-a-glance monitoring system: Transient event counter, time and date of last transient event, LED indicators show protection status, audible alarm with mute switch, and remote relay contacts (surge protected). Filtering standard
- on all XT models.
- NEMA 4, Powder Coated Steel Enclosure



UL 1449, 3rd Ed. Listed

20-Year Warranty
Lifetime Module Replacement

Filter Attenuation

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

SPD Type:	Type 2
I_n :	20kA
Maximum Continuous Operating VAC (MCOV):	115% Rated Line Voltage
Varistor MCOV:	125% Rated Line Voltage Minimum (standard models w/o "-xxxV" suffix)
Varistor MCOV:	115% Rated Line Voltage Minimum (models w/ "-xxxV" suffix)
SCCR:	Up to 100kA AIC
Surge Current/Phase (8/20 μs):	1 Event - 402XT: 400kA, 202XT: 200kA.
Surge Life/Phase (8/20 μs):	10,000 Events - 402XT: 15kA, 202XT: 10kA
Surge Current/Mode (8/20 μs), 402XT:	L-N: 240kA; L-G: 160kA; N-G: 120kA; L-L: 400kA
Surge Current/Mode (8/20 μs), 202XT:	L-N: 120kA; L-G: 80kA; N-G: 120kA; L-L: 200kA
Surge Current/Mode (8/20 μs), 402XT (Delta):	L-L: 400kA; L-G: 400kA
Surge Current/Mode (8/20 μs), 202XT (Delta):	L-L: 200kA; L-G: 200kA
Response Time:	<5ns
Status Indicators:	LED Bar Graph, Event Counter, Audible Alarm, Protected Dry Contacts
Operating Altitude:	13,000ft. (4000m)
Temp. (Operating/Storage):	-40° to +70°C/-40° to +85°C
Enclosure:	NEMA 4, 14 gauge steel, powder coated
Dimensions for 402XT & 202XT:	12" x 18" x 8.5" (305mm x 457mm x 216mm)
Mounting for 402XT & 202XT:	8" x 18.75"/.313" ID - 4 holes (203 x 476mm/8mm ID - 4 holes)
Micro-Z Cable Connection:	#10 AWG (5.27mm ²)/.128 OD (3.4mm) 8ft. length (2.43m)
Conduit Connector:	1" Rain tight hub
Weight:	402XT: 42 lbs., (19.1kg); 202XT: 39 lbs., (17.7kg)
UL File Number:	E322161
UL Certification:	UL Listed to 1449 3 rd Edition UL96A Lightning Protection Master Label Compliant
ARRA Certification:	Complies with ARRA 1605 requirements



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Specifications

- ANSI/IEEE C62.41-2002
- IEC 61643-1-1998
- UL 1449, 3rd Ed.

Model 402XT

Model	Service	VPR L-N	VPR L-G	VPR N-G	VPR L-L	20kV, 1.2/50µs 10kA, 8/20µs L-N**
-120T -140	120/240VAC, 1φ, 3W+Gnd	800	800	700	1200	495
-120T	120/240VAC, 1φ, 3W+Gnd	900	900	700	1200	552
-120Y -140	120/208VAC, 3φ, 4W+Gnd, Wye	800	800	700	1200	495
-120Y	120/208VAC, 3φ, 4W+Gnd, Wye	900	900	700	1200	552
-240DCT*	240/120/120VAC, 3φ, 4W+Gnd	900/1500	900/1500	1200	1200/2500	552/1096
-220Y	220/380VAC, 3φ, 4W+Gnd, Wye	1500	1500	1200	2500	1096
-240Y	240/415VAC, 3φ, 4W+Gnd, Wye	1500	1500	1200	2500	1096
-277Y	277/480VAC, 3φ, 4W+Gnd, Wye	1500	1500	1200	2500	1096
-240D	240VAC, 3φ, 3W+Gnd, Delta	n/a	1500	n/a	2500	1096 (L-G)

* High-leg Delta Center Tapped
 ** Actual Measurements w/ 6" Lead Length

Energy Absorption (8/20µs) in joules: 19,000J - 108,000J

Model 202XT

Model	Service	VPR L-N	VPR L-G	VPR N-G	VPR L-L	20kV, 1.2/50µs 10kA, 8/20µs L-N**
-120T -140	120/240VAC, 1φ, 3W+Gnd	800	900	700	1200	590
-120T	120/240VAC, 1φ, 3W+Gnd	800	900	700	1200	640
-120Y -140	120/208VAC, 3φ, 4W+Gnd, Wye	800	900	700	1200	590
-120Y	120/208VAC, 3φ, 4W+Gnd, Wye	800	900	700	1200	640
-240DCT*	240/120/120VAC, 3φ, 4W+Gnd	800/1500	900/1500	1200	1200/2500	640
-220Y	220/380VAC, 3φ, 4W+Gnd, Wye	1500	1500	1200	2500	640/1256
-240Y	240/415VAC, 3φ, 4W+Gnd, Wye	1500	1500	1200	2500	1256
-277Y	277/480VAC, 3φ, 4W+Gnd, Wye	1500	1500	1200	2500	1256
-240D	240VAC, 3φ, 3W+Gnd, Delta	n/a	1500	n/a	2500	1256 (L-G)

* High-leg Delta Center Tapped
 ** Actual Measurements w/ 6" Lead Length

Energy Absorption (8/20µs) in joules: 9,000J - 54,000J

A Note On Headroom A surge protector responds to increases in voltage. Surge protectors triggered by the nominal line voltage are undesirable, consequently headroom is always factored into surge protector design. Long duration voltage swells occur on power lines and can damage a surge protector, leaving facility equipment vulnerable. By employing higher headroom, continuity of surge protection is guaranteed. This feature is standard in MCG surge protectors. Higher headroom allows varistors to ride out voltage swells while ensuring that let-through voltage remains within CBEMA (now ITIC) guidelines. The CBEMA curve is the most accepted graph worldwide for equipment susceptibility analysis.

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