

Branch Circuits

Advanced power protection at the service panel



Have you ever wanted complete surge elimination and power conditioning at the branch circuit level, eliminating the need for additional protection downstream? We have the solution.

The SurgeX Branch Circuit product line provides guaranteed surge elimination and conditioning for audio, video, and mission critical equipment at the service panel. Available in three configurations, our unique solutions are built with professional-grade NEMA magnetic shielding steel enclosures that meet code for use at the service entrance, sub-panels, and in-ceiling plenums.

They are engineered with Advanced Series Mode surge elimination and power conditioning technologies to provide top-of-the-line protection. Superior to conventional MOV circuitry or MOV-hybrid designs, they completely eliminate surge energy up to 6,000 Volts without producing harmful side effects such as ground contamination or common-mode disturbances. Completely non-sacrificial and never needing reset, they provide the most reliable protection available.




Our branch circuit line also features both common mode and normal mode impedance tolerant EMI/RFI filtering, and SurgeX ICE (Inrush Current Elimination) for a complete power conditioning solution.

Features:

- NEMA rated magnetic shielding steel enclosure
- Advanced Series Mode[®] surge elimination
- Impedance Tolerant[®] EMI/RFI filtering
- SurgeX ICE[®] (Inrush Current Elimination) (SX-20NE-RT)
- Remote turn-on (SX-20NE-RT)
- Self-circuit with visual indicator (SX-20NE-RT)



Inside the PF-420

| | Model Number | Description |
|---|--------------|---|
|  | PF-420 | Branch Circuit Surge Eliminator, multi circuit, 20A/120V |
|  | SX-20NE-RT | Branch Circuit Surge Eliminator with Remote Control, single circuit, 20A/120V |
|  | SX-20NE | Branch Circuit Surge Eliminator, single circuit, 20A/120V |

Branch Circuits

| Technical Specifications | PF-420 | SX-20NE-RT | SX-20NE |
|---|--|---|--|
| Load Rating: | 20 Amps per circuit @ 120 Volts (80 Amps total) | 20 Amps @ 120 Volts | 20 Amps @ 120 Volts |
| Power Requirement (no load) | 15 watts per circuit | 15 watts per circuit | 15 watts per circuit |
| Surge Let- Through Voltage (6000-volt surge) | 0 Volts | 0 Volts | 0 Volts |
| UL 1449 Adjunct Classification Test Results | 1000 surges, 6000 Volts, 3000 Amps, B3 pulse; Measured suppressed voltage: 170 Volts; no failures. | 1000 surges, 6000 Volts, 3000 Amps, B3 pulse; Measured suppressed voltage: 170 Volts; no failures. | 1000 surges, 6000 Volts, 3000 Amps, B3 pulse; Measured suppressed voltage: 170 Volts; no failures. |
| Federal Guidelines | Grade A, Class 1, Mode 1 (CID A-A-55818) | Grade A, Class 1, Mode 1 (CID A-A-55818) | Grade A, Class 1, Mode 1 (CID A-A-55818) |
| EMI/RFI Filter, Normal Mode (50-ohm load) | 40 dB @ 100 kHz; 50 dB @ 300 kHz; 50 dB @ 3 MHz; 50 dB @ 30 MHz | 40 dB @ 100 kHz; 50 dB @ 300 kHz; 50 dB @ 3 MHz; 50 dB @ 30 MHz | 40 dB @ 100 kHz; 50 dB @ 300 kHz; 50 dB @ 3 MHz; 50 dB @ 30 MHz |
| EMI/RFI Filter, Common Mode (50-ohm load) | 18 dB @ 300 kHz; 30 dB @ 1 MHz; 50 dB @ 5 MHz; 50 dB @ 20 MHz | 18 dB @ 300 kHz; 30 dB @ 1 MHz; 50 dB @ 5 MHz; 50 dB @ 20 MHz | 18 dB @ 300 kHz; 30 dB @ 1 MHz; 50 dB @ 5 MHz; 50 dB @ 20 MHz |
| Maximum Applied Surge Voltage | 6000 Volts* | 6000 Volts* | 6000 Volts* |
| Maximum Applied Surge Current | Unlimited, due to current limiting* | Unlimited, due to current limiting* | Unlimited, due to current limiting* |
| Maximum Applied Surge Energy | Unlimited, due to current limiting* | Unlimited, due to current limiting* | Unlimited, due to current limiting* |
| Endurance (C62.41-1991 Category B3 pulses) | 1 kV>500,000; 3 kV>10,000; 6 kV>1000 | 1 kV>500,000; 3 kV>10,000; 6 kV>1000 | 1 kV>500,000; 3 kV>10,000; 6 kV>1000 |
| Maximum Load Inrush Current During Power-up | N/A | 1000 Joules | N/A |
| Remote Turn-on Applied Voltage Range | N/A | 5 to 30 Volts DC | N/A |
| Remote Turn-on Current Draw | N/A | Contact Closure: 3 mA 5 V DC Applied Voltage: 1 mA 12 V DC Applied Voltage: 2.5 mA 24 V DC Applied Voltage: 5 mA | N/A |
| Auxiliary Relay Contact Rating | N/A | 30 Volts at 1 Amp | N/A |
| LED Output | 12 volts DC, maximum 20 mA (resistor required) | 12 volts DC, maximum 20 mA (resistor required) | 12 volts DC, maximum 20 mA (resistor required) |
| Dimensions | 16.0" H x 12.0" W x 4.0" D (40.6 x 30.5 x 10.2 cm) | 12.0" H x 12.0" W x 4.0" D (30.5 x 30.5 x 10.2 cm) | 10.0" H x 8.0" W x 4.0" D (25.4 x 20.3 x 10.1 cm) |
| Weight | 30 lbs (13.6 kg) | 12 lbs (5.45 kg) | 9 lbs (4.0 kg) |
| Temperature Range | 5° to 35° C | 5° to 35° C | 5° to 35° C |
| Humidity Range | 5% to 95% R.H., non-condensing | 5% to 95% R.H., non-condensing | 5% to 95% R.H., non-condensing |
| Agency Listings | ETL and cETL (UL 1449, 2nd edition; CSA C22.2 No.8-M1986, R2000) | ETL and cETL (UL 1449, 2nd edition; CSA C22.2 No.8-M1986, R2000) | ETL and cETL (UL 1449, 2nd edition; CSA C22.2 No.8-M1986, R2000) |

*1.2 x 50 µs pulse, industry standard combination wave surge, as per IEEE C62.41

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Specifications subject to change without notice.