

# SURGEX®

THE WORLD LEADER IN  
POWER CONDITIONING TECHNOLOGIES



# SX20 NE/RT

## SURGE ELIMINATOR & POWER CONDITIONER

- **Advanced Series Mode®** Surge Protection
- **SurgeX ICE®** Inrush Current Elimination
- **Impedance Tolerant®** EMI/RFI Filtering

The SurgeX SX20 NE/RT has remote control capability for use in AC power distribution systems and can be interfaced with a sequential controller such as the SurgeX SEQ. The unit can be controlled with an applied voltage (5-30 vdc) or a contact closure switch connected to the Phoenix connector terminal block. The connector can also be used to cascade multiple units or provide status to a central controller.

The SX20 NE/RT provides guaranteed surge protection and power conditioning for audio, video, broadcast and computer equipment. The units are 20-amp load-capable, 12" x 12" x 4" NEMA enclosures and meet code for use at the service entrance, sub-panels and in ceiling plenums.

The unit features both common mode and normal mode *Impedance Tolerant* EMI/RFI filtering as well as *SurgeX ICE* -Inrush Current Elimination for a comprehensive power condi-

tioning solution.

SurgeX *Advanced Series Mode* technology is superior to conventional MOV circuitry or MOV-Hybrid designs and is completely non-sacrificial. Our zero let-through technology provides the most reliable protection available. It stops all surges up to 6,000 volts (unlimited surge current) without producing harmful side effects such as ground contamination or common-mode disturbances.



**SURGEX ICE®**  
Inrush Current Elimination

# SURGEX®

Professional AC Power Products

[www.surgex.com](http://www.surgex.com)

10-YEAR WARRANTY

# SX20 NE/RT

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### SPECIFICATIONS

**Load Rating:** 20 amps @ 120 volts.  
**Power Requirement (no load):** 15 watts.  
**Surge Let-Through Voltage (6000-volt surge):** 0 volts.  
**UL 1449 Adjunct Classification Test Results:** 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).  
**EMI/RFI Filter, Normal Mode (50-ohm load):** 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  
**Maximum Applied Surge Voltage:** 6000 volts.\*  
**Maximum Applied Surge Current:** Unlimited, due to current limiting.\*  
**Maximum Applied Surge Energy:** Unlimited, due to current limiting.\*  
**Endurance (C62.41-1991 Category B3 pulses):** 1 kV>500,000; 3 kV>10,000; 6 kV>1000.  
**Undervoltage Shutdown:** 90 volts (resume at 100 v)  
**Overvoltage Shutdown:** 145 volts (resume at 135 v)  
**Maximum Load Inrush Current During Power-up:** 1000 Joules  
**Remote Turn-on Applied Voltage Range:** 5 to 30 volts DC  
**Remote Turn-on Current Draw:**  
**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  
**Auxiliary Relay Contact Rating:** 30 Volts at 1 Amp  
**LED Output:** 12 volts DC, maximum 20 mA (resistor required)  
**Dimensions:** 12.0" H x 12.0" W x 4.0" D (30.5 x 30.5 x 10.2 cm)  
**Weight:** 12 lbs (5.45 kg)  
**Temperature Range:** 5° to 35° C  
**Humidity Range:** 5% to 95% R.H., non-condensing.  
**Agency Listings:** ETL and cETL (UL 1449, 2nd edition; CSA C22.2 No.8-M1986, R2000)

\*1.2 x 50  $\mu$ s pulse, industry standard combination wave surge, as per IEEE C62.41.

**NO  
MOVs**



### TECHNICAL DESCRIPTION

The SX20 NE/RT shall be housed in a magnetic shielding NEMA steel enclosure. It shall operate from 120 volts AC and have a barrier strip accessible through knock-outs in the enclosure for hardwiring power input and output connections. Overall dimensions shall be 12.0" H x 12.0" W x 4.0" D. Weight shall be 12.0 pounds.

The unit shall have remote turn-on capabilities enabled by a hardwired connection to a separate terminal block within the enclosure. Remote turn-on and turn-off shall be activated by either a contact closure or applied DC voltage. There shall be an output voltage source for connection to a remote LED status indicator and a relay output for control and cascading.

The SX20 NE/RT shall have a load rating of 20 amps at 120 volts, a self-test circuit with visual indicator and provide EMI/RFI filtering. It shall meet Federal Grade A, Class 1, Mode 1 guidelines for powerline surge suppressors and withstand at least 1000 occurrences of surge pulse voltages up to 6000 volts.

### FEATURES

- Magnetic shielding steel enclosure
- Advanced *Series Mode* surge protection
- Advanced *Impedance Tolerant* EMI/RFI filtering
- *SurgeX ICE* inrush current elimination technology
- Remote turn-on
- Self-test circuit with visual indicator
- 10-year warranty
- **Made in U.S.A.**

**SURGEX<sup>®</sup>**

Professional AC Power Products

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Specifications subject to change without notice. *SurgeX* is a division of New Frontier Electronics Inc.

This product, including its components and/or processes carried out thereby, are covered by one or more of the following:  
U.S. Pat. No. 4,870,534; 4,870,528; 6,728,089; 6,744,613; 7,068,487. Can. Pat. No. 1,333,191; 1,332,439. Other Patents Pending.