

Multi-circuit Surge Suppressor - 20A Hardwired

Description:

ACSP20 Series assemblies are ETL listed multi 20A circuit surge suppressors with up to six 20A circuits per assembly. The assemblies are ideal for protecting sensitive equipment used in telecommunications, security, fire, audio/visual, broadcast, sound recording and reinforcement, DSP, data storage, test & monitoring, process control, as well as business/retail computers and point of sale terminals.

Versatile, multi-circuit assemblies may be used as stand-alone surge suppressors or in conjunction with an AC loadcenter to provide protection to specific circuits. For large installations, more than one assembly may be connected to a single loadcenter. Additionally, the assemblies may be used with Lowell's sequentially controlled AC loadcenters (Series ACLC) to provide time sequenced power activation/deactivation with the added protection of surge suppression at the main box (see installation example on page 3).

The multi-circuit assemblies are available with two, three, four, five or six 20A circuit modules installed in a 14"H x 14.3"W x 4"D enclosure with screw terminal outputs, knockouts on all sides, assorted bushings to protect wiring, front cover and an end cover kit for use in stand-alone applications. The front cover is punched to expose each module's three LEDs that provide visual circuit status indication without opening the device. For future expansion needs, a 20A circuit surge suppressor module is available; order Model ACSP20M. A maximum of six modules will fit in each enclosure.

The 20A surge suppressor in Series ACSP20 is ETL Listed (1449-3) and endurance tested. It meets ANSI C62.41 and protects Line to Neutral without ground wire contamination. It is ideal for protecting sensitive equipment from transient voltages, spikes and surges. Far exceeding UL requirements, these suppressors defeat surges up to 72,000 amps using Lowell's Triple Clamping Redundancy™ (TCR) technology and have a response time of less than 5 nanoseconds. Additionally, the surge suppressor ensures reliable performance of connected analog or digital equipment through Transient Noise Reduction (filtering) of 25dB@100kHz, 50dB@1MHz.

Features:

- Surge suppressor with multiple 20A circuits.
- Protects Line to Neutral - No ground wire contamination.
- Defeats surges up to 72,000A using Lowell's Triple Clamping Redundancy™ (TCR) technology.
- May be used as a stand-alone surge suppressor or with an AC loadcenter.
- ETL Listed, UL1449 3rd Edition Compliant
- ANSI C62.41 Compliant
- Made in the USA
- Ten Year Warranty



Model ACSP20-6C shown

Specifications

Performance

Operating Voltage/ Current	120 VAC nominal / 20A
Maximum Surge Current	72,000A (exceeds UL1449-3 6000V, 3000A).
Initial Clamping Voltage	205V, UL rating 330V
Endurance	IEEE C62.41-1991, B3 (C1), Pulses (lifetime): 1kv≥1,000,000; 3kv≥100,000; 6kv≥5000
Transient Noise Reduction	25dB@100kHz, 50dB@1MHz
Response Time	Less than 5 nanoseconds
Protection Mode	Line to neutral, zero ground leakage
UL1449-2 Adjunct Results	1000 surges, 6000 volts, 3000A, C1 and B3 waveforms (IEEE C62.41), No failures
Diagnostic LED's	Top (Green): On = Ground verified, Center (Green): On = Protection active, Bottom (Red): On = Protection reduced*
Applicable Standards	IEEE standard 587-80 A & B, IEEE standard C62.41-1991, IEC 1000-4-5-1995 (IEC 801-5).
Safety Agency Approvals	ETL Listed, UL1449 3rd Edition; US and Canada

Mechanical

Dimensions	14"Hx14.3"Hx4"D
Weight	ACSP20-2C = 9lbs, ACSP20-3C = 9.75lbs, ACSP20-4C = 10.5lbs, ACSP20-5C = 11.25lbs, ACSP20-6C = 12lbs.
Input Connections	Hardwired pigtail leads, 12 gauge minimum.
Output Connections	3-Point terminal block
Chassis	Galvanized steel box and coverplate finished in black powder epoxy paint
Mounting Options	Open side mounts to an AC loadcenter or is closed using End Cover Kit (included) in stand-alone applications.

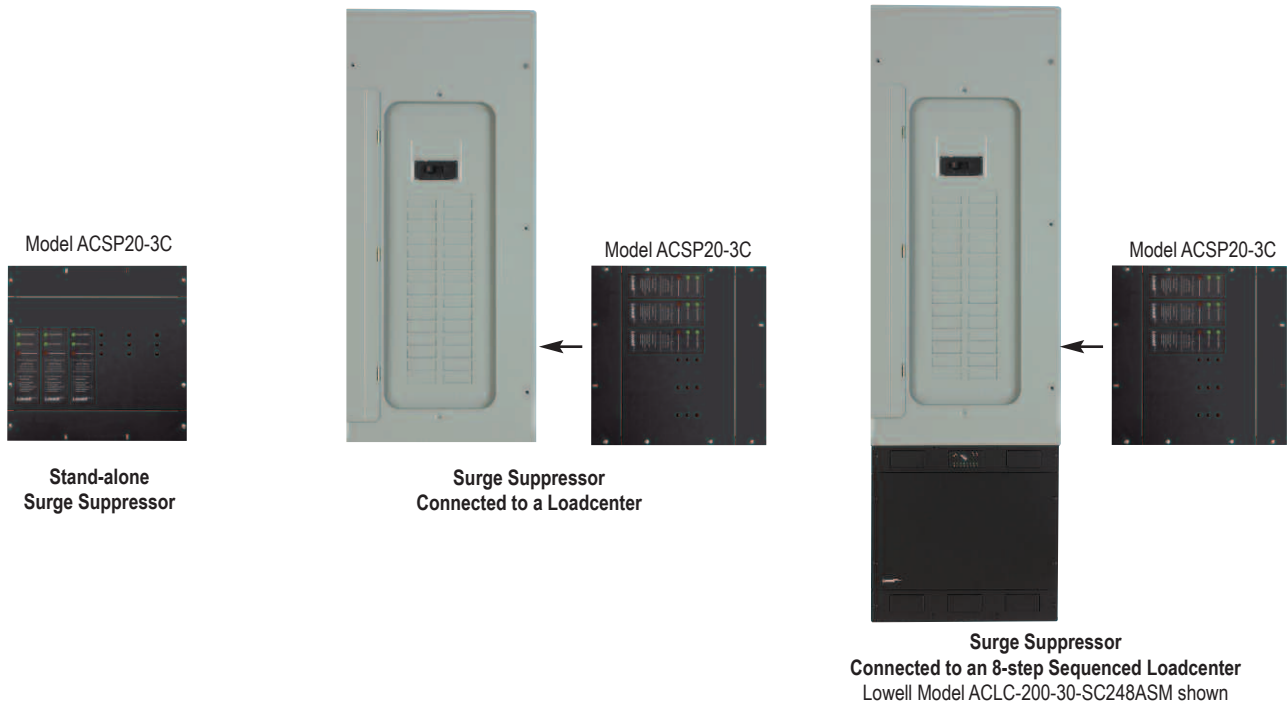
*Lowell's Triple Clamping Redundancy TCR™ is exactly that - triple clamping for triple protection. This means that if one section of the suppressor has 'reduced protection', there are two additional sections available to safeguard equipment. The Ground Verified (Green LED), Protection Active (Green LED) should always be ON and the Reduced Protection (Red LED) should be OFF. In the unlikely event the Red LED illuminates; full suppression capability is NOT immediately or even necessarily compromised. The red LED indicates the Overall Life Expectancy of the unit MAY be reduced. Contact Lowell for repair or replacement under Lowell's TEN YEAR WARRANTY.

Assembly Model	Description	Circuit Qty Installed	Enclosure Size	Extra Circuit (Order separately)	Compatible with loadcenter
ACSP20-2C	Multi-circuit surge suppressor	(2) 20A circuits	14"Hx14.3"Hx4"D	ACSP20M	ACLC Series*
ACSP20-3C	Multi-circuit surge suppressor	(3) 20A circuits	14"Hx14.3"Hx4"D	ACSP20M	ACLC Series*
ACSP20-4C	Multi-circuit surge suppressor	(4) 20A circuits	14"Hx14.3"Hx4"D	ACSP20M	ACLC Series*
ACSP20-5C	Multi-circuit surge suppressor	(5) 20A circuits	14"Hx14.3"Hx4"D	ACSP20M	ACLC Series*
ACSP20-6C	Multi-circuit surge suppressor	(6) 20A circuits	14"Hx14.3"Hx4"D	-	ACLC Series*
ACSP20M	Extra circuit plug-in module - (1) 20A surge suppressor (no enclosure)				

*ACLC Series time sequenced loadcenters include choice of Cutler Hammer loadcenter packaged with a 24 circuit 8-step sequencer with multiple switches, transformer and accessories.

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Applications: Stand-alone, connected to a Loadcenter, or to a Sequenced Loadcenter



A & E Specifications:

The surge protection device with multiple 20A circuits shall be Lowell Series ACSP20. The Model shall be _____ (ACSP20-2C, ACSP20-3C, ACSP20-4C, ACSP20-5C, ACSP20-6C) and shall have _____ (2, 3, 4, 5, 6) 20A circuits installed. The surge suppressor assembly shall be ETL listed (1449-3) and endurance tested. It shall meet ANSI C62.41 and protect Line to Neutral without ground wire contamination. It shall be capable of protecting audio, video, broadcast, computer, DSP, sound recording and reinforcement equipment from transient voltages, spikes and surges. It shall include Lowell's Triple Clamping Redundancy™ (TCR) technology to defeat surges up to 72,000 amps and have a response time of less than 5 nanoseconds. It shall include Transient Noise Reduction (filtering) of 25dB@100kHz, 50dB@1MHz.

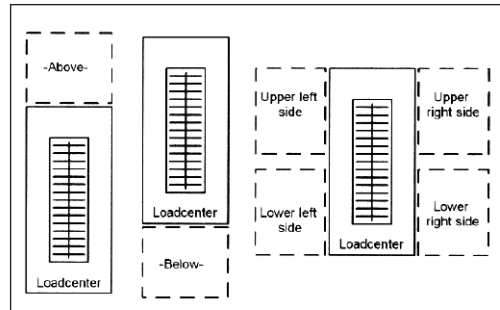
The front shall include three LED's per circuit with LED openings in the cover and labeling for visual ground verification and diagnostics without opening the assembly.

The assembly shall install to an AC loadcenter, time sequenced loadcenter such as Lowell's ACLC Series, or install as a stand-alone device. Stand-alone applications shall require the open end of the enclosure to be covered using the supplied end cover kit.

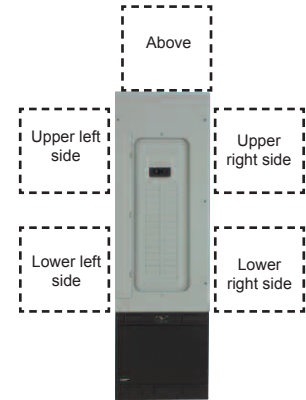
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Installation Example

BEFORE BEGINNING, PLEASE CHECK WITH LOCAL TRADE REGULATIONS. Some or all of the following installation may have to be performed by a 'qualified' electrician. Please consult with Authority Having Jurisdiction (AHJ) and/or the General Contractor if there are questions.



Mounting locations to a loadcenter



Mounting location to
Sequenced loadcenter system
ACLC-200-30-SC248ASM

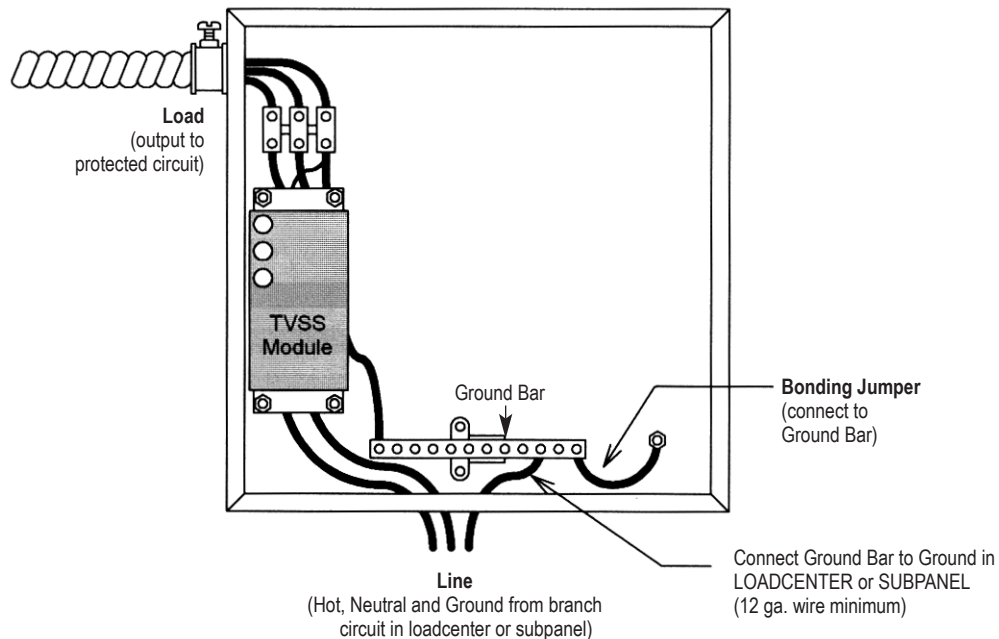
Stand-alone Installation

To facilitate stand-alone applications (not connected to a loadcenter), the ACSP20 Series includes an 'End Cover Kit' to close the open side of the enclosure. Wiring diagram is shown below.

Loadcenter Installation

For installation convenience, the ACSP20 Series can be mounted to a loadcenter in a variety of locations as shown above. Additionally, more than one assembly can be connected to a single loadcenter or to Lowell's Sequenced Loadcenter System (ACLC Series). Note: The open side of the ACSP20 Series enclosure must be installed against the side of the loadcenter. When location is determined, remove the appropriate knockouts in the loadcenter and install the bushings (provided/required) to protect wiring between the loadcenter and the ACSP20 Series surge suppressor assembly. Wiring diagram shown below.

Wiring Diagram - Standard

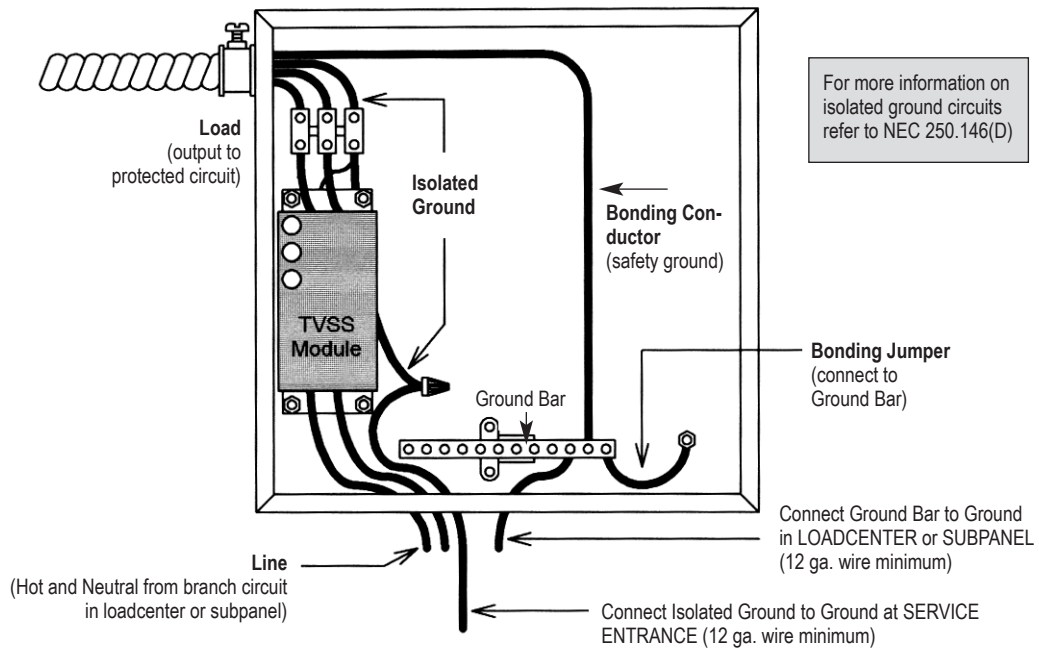


Standard Wiring

(One circuit shown. Connect remaining circuits the same)

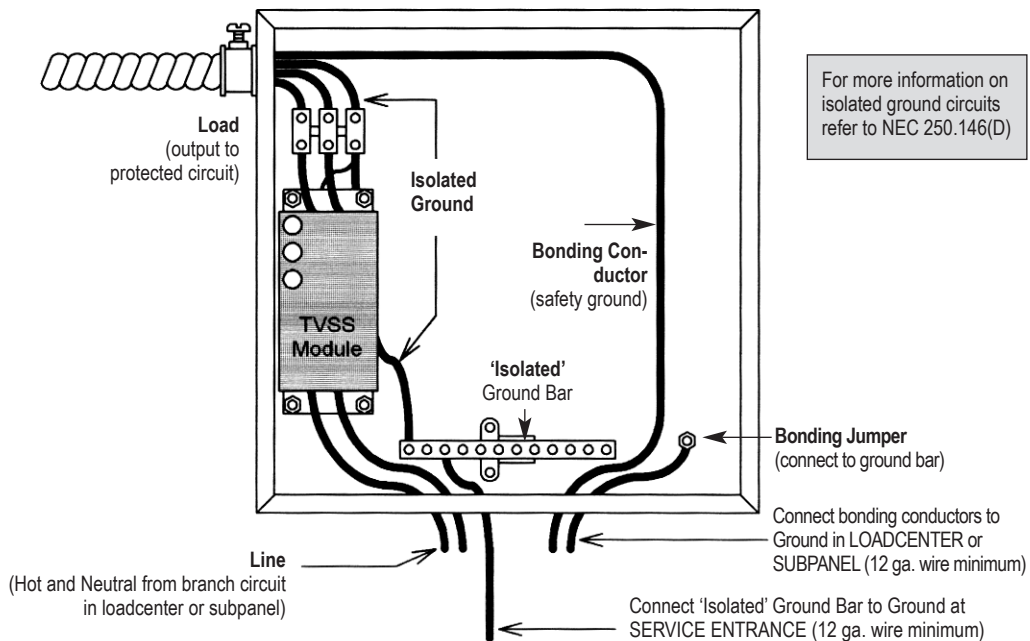
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Wiring Diagram - Isolated Ground



Isolated Ground Wiring
(One circuit shown. Connect remaining circuits the same)

Wiring Diagram - Isolated Ground (Alternate Method)



Isolated Ground Wiring (Alternate Method)
(One circuit shown. Connect remaining circuits the same)