

Features & Benefits

- UL Listed 1449-2 Adjunct.
- ANSI C62.41 Compliant.
- GSA Grade **A** - Mode **1** - Class **1** Endurance tested.
- Protects Line to Neutral - No ground wire contamination.
- Defeats surges up to 72,000A using Lowell's TCR (*Triple Clamping Redundancy™*) technology.
- Includes (2) duplex outlets (standard or isolated ground).
- Outlets on patented 90° rotating plates for front or side access.
- Easy rear rack installation.

Description

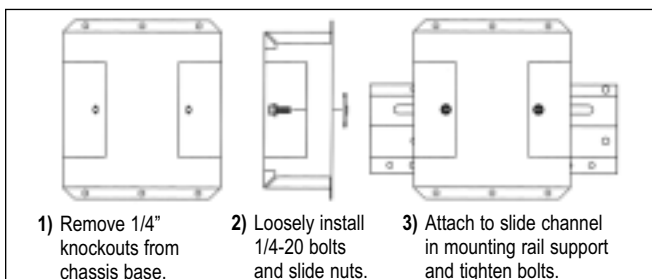
Lowell 20A single-circuit ACSP2004 and isolated ground version ACSP2004-IG surge suppressors are UL Listed (1449-2) and endurance tested to meet government GSA Grade **A** - Mode **1** - Class **1** requirements for surge suppressors.

Model ACSP2004 and ACSP2004-IG meet ANSI C62.41 and protect line to neutral without ground wire contamination. The compact design rear mounts easily into a rack making it ideal for protecting audio, video, broadcast, computer, DSP, sound recording and reinforcement 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 ACSP2004 and ACSP2004-IG ensure reliable performance of connected analog or digital equipment through Transient Noise Reduction (filtering) of 25dB@100kHz, 50dB@1MHz.

Model ACSP2004 and ACSP2004-IG are 7"W x 8"H x 3"D and feature two standard duplex and isolated ground duplex outlets respectively. For plug-in convenience in a crowded rack, outlets are mounted on 90° plates (US Patent# D535178S) that can be rotated for front or side access. Outlet plates may also be replaced with blank 90° plates (provided) for clean hardware applications. The front includes three LED's for visual ground verification and diagnostics.

A & E Specifications

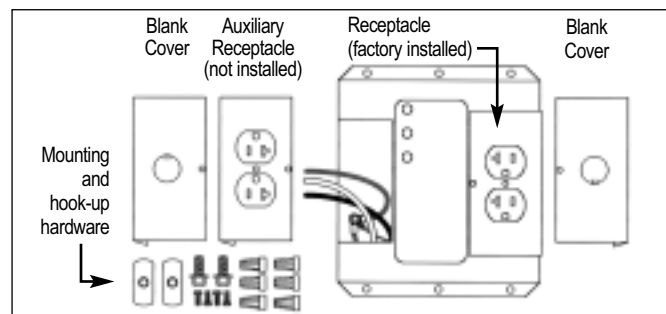
The 20A single circuit surge protection device shall be Lowell Model ACSP2004 with (2) duplex outlets or ACSP2004-IG with (2) duplex isolated ground outlets. It shall be UL Listed (1449-2) and endurance tested to meet government GSA Grade **A** - Mode **1** - Class **1** requirements for surge suppressors. 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 unit shall rack mount and include (2) duplex outlets mounted on 90° plates that can be rotated for front or side access plus blank plates for hardwire applications. The front shall include three LED's for visual ground verification and diagnostics.



ACSP2004 and ACSP2004IG Installation to Rack Mounting Rail Supports



ACSP2004-IG (isolated Ground Duplex) ACSP2004 (Standard Duplex)



ACSP2004 and ACSP2004-IG Carton Contents

Specifications

Performance

Operating Voltage	0-130 VAC nominal
Operating Current	20A hardwired, 16A w/receptacles(s) per NEC 210.21(B)(2), 210.23(A)(1).
Maximum Surge Current	72,000A (exceeds UL1449-2 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
Federal GSA specs (1996)	Grade A, Class 1, Mode 1
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	Underwriter's Laboratories (US and Canada).

Mechanical

Dimensions	7"W x 8"H x 3"D
Weight	5 lbs.
Input Connections	Hardwired pigtail leads, 12 gauge minimum.
Output Connections	(2) Duplex receptacles mounted on 90° rotatable plates or hardwire pigtail leads (2) blank 90° cover plates are included for hardwire use.
Chassis	Steel with black powder epoxy paint finish.
Mounting Options	Compact for rear rack installation to mounting rail supports or solid surface using flanges.

*Lowell's Triple Clamping Redundancy is exactly that - triple clamping. This means that if one section of the suppressor has 'reduced protection', there are two additional sections available to provide protection. Device is endurance tested: Grade A, Class 1, Mode 1.



ACSP2004, ACSP2004-IG

20A Single-circuit Surge Suppressors / Power Conditioners (continued)

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Typical Wiring ACSP2004

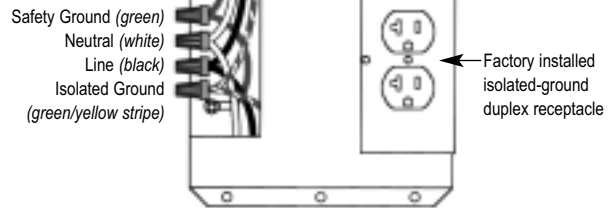
- 1) Connect input (line) to pigtails. Any knock-out may be utilized.
- 2) Install blank cover.



ACSP2004 wiring using only factory-installed receptacle

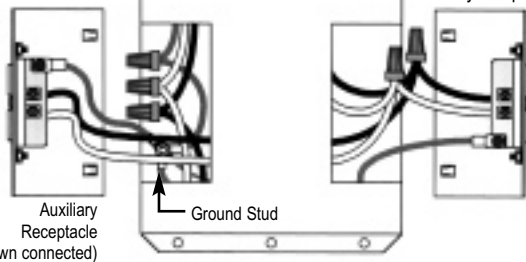
Typical Wiring ACSP2004-IG (isolated ground)

- 1) Connect input (line) to pigtails. Any knock-out may be utilized.
- 2) Install blank cover.



ACSP2004-IG wiring using only factory-installed IG receptacle

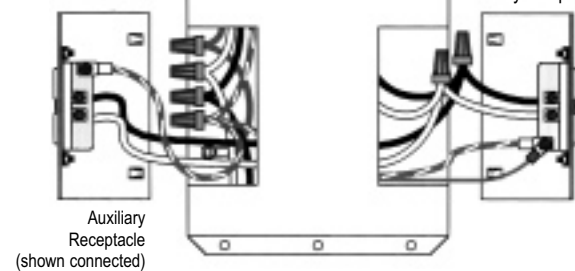
- 1) Secure all ground (green) wires to ground stud.
- 2) Cut leads to factory installed receptacle. Splice in leads from auxiliary receptacle.



Alternate Method: Remove receptacle from plate. Connect auxiliary receptacle leads to screw terminals. Re-install receptacle to plate.

ACSP2004 wiring using factory-installed receptacle + auxiliary receptacle

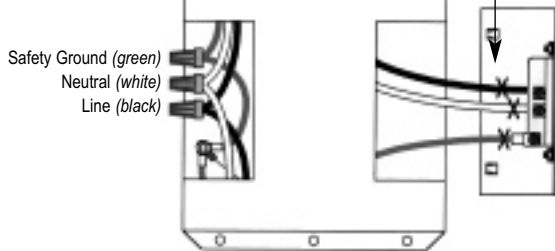
- 1) Cut leads to factory installed receptacle. Splice in leads from auxiliary receptacle.



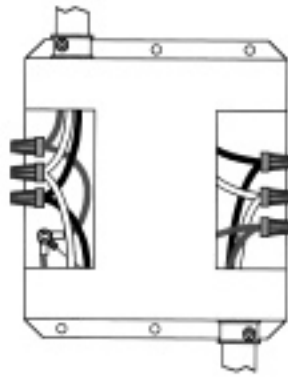
Alternate Method: Remove receptacle from plate. Connect auxiliary receptacle leads to screw terminals. Re-install receptacle to plate.

ACSP2004-IG wiring using factory-installed IG receptacle + auxiliary IG receptacle

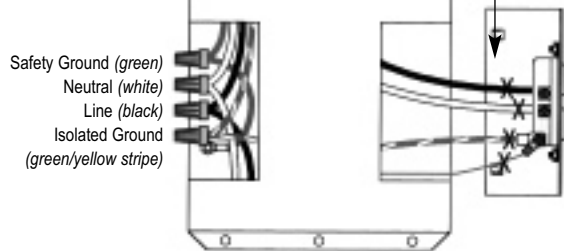
- 1) Connect input (line) to pigtails. Any knock-out may be utilized.
- 2) Cut or disconnect wires to factory installed receptacle.



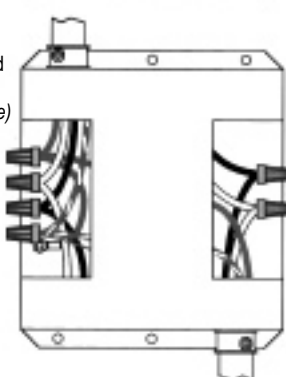
- 3) Connect load (output). Any knockout may be utilized.
- 4) Install blank cover on each side.



- 1) Connect input (line) to pigtails. Any knock-out may be utilized.
- 2) Cut or disconnect wires to factory installed receptacle.



- 3) Connect safety ground (green) and isolated ground (green/yellow stripe) from load side.
- 4) Connect Green wire from board to isolated ground.



- 5) Connect load (output). Any knockout may be utilized.
- 6) Install blank cover on each side.

ACSP2004 wiring for permanent (hardwire) installation (no receptacles)

ACSP2004-IG wiring for permanent (hardwire) installation (no receptacles)

AC Rackmount 19" EIA

AC Strips Rackmount Vertical

AC Loadcenters (sequenced)



AC Surge Protection / Filtering

AC Remotely Controlled

Low Voltage Sequencers Accessories

Single Circuit Surge