Bantam Clean Power

www.bantamcleanpower.com

Patented Technology that Protects Line, Neutral and Ground

Bantam Applications

Industrial & Production Equipment

Vanguard

Symptoms:

A US manufacturing company using 13 robotic ultrasonic welders was experiencing problems in communication and timing between robots and the welding heads. Repeated re-wiring and software changes did not solve the problem, so electrical disturbances were suspected.

Cause:

Linear and non-linear equipment were sharing the same electrical distribution infrastructure and these devices contribute to poor power quality, primarily surges, spikes, harmonics, noise and impedance characteristics to the common power system. Both Linear and non-linear systems were experiencing the affects of this shared poor quality power.

Cost:

Process errors resulted in poor quality output, increased scrap, inefficient production rates, extended lead times and in-accurate scheduling. Maintenance, trouble shooting, corrective action/root cause analysis and software engineering costs were reoccurring. Customer dissatisfaction was an intangible cost.

Solution:

A custom configuration using the Bantam technology conditioned the power going to each robotic and electronic system. Both systems were protected from surges, spikes, errant frequencies and harmonics. The Bantam technology also provided a stable ground reference to ensure accurate data interpretation, and power factor correction for capacitive reactance.

Savings:

The poor power problems and symptoms stopped. After over a year of continuous operation, the robots and controllers did not experience any disruptions due to poor quality power. Production efficiency, on time delivery, and quality improved. Quality and engineering costs were diverted to new projects.

Surge Protection ● Power Conditioning & Filter ● Stable Ground Reference
Harmonic Attenuation ● Power Factor Correction ● Hacker Protection

Contact: Lodestone/Digilant, 4769 E. Wesley Drive, Anaheim CA 92807 • (714)-970-0900

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Performance Comparison

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Other Products — Compare Surge Protection — Bantam

MOV's alone or MOV's with traditional inductors block surges and spikes on line and neutral, and dump excess energy to ground, but degrade with each surge and spike event and may not survive a significant event like a lightning strike. Effectiveness grade when new: A to C, Effectiveness grade not-new: C to F. (Needs to be replaced after significant surge event.)
Cost range: $25 to $80.

Patented circuit is always energized, anticipating surge and spike energy on line, neutral and ground. Energy is absorbed into magnetic fields, conditioned and recycled as clean energy without dumping to ground. Will absorb and dissipate over 1000 significant surge events (lightning strikes) with no degradation to Bantam or protected device, and has a useful life of over 10 years.
Effectiveness grade when new: A, Effectiveness grade not-new: A

Other Products — Compare Power Conditioning — Bantam

Power conditioning and regulating devices use transformers in combination with other components to ensure that optimum energy and frequency is delivered to sensitive devices. Often these devices will regulate voltage by chopping the sign wave. These devices can include surge protection and harmonic filtering.
Effectiveness grade: B+ to C. Additional cost range: $60 to $200

The same balanced circuit and magnetic field that absorbs and recycles power surges and spikes also conditions power, ensuring your device only experiences the optimum voltage, current, and frequency.
Effectiveness grade: B+,

Other Products — Compare Harmonic Attenuation — Bantam

A wide range of frequencies can exist in power circuits. Broad frequency filtering requires several frequency specific transformers to dampen these errant frequencies. Existing products will provide staged solutions depending on the frequencies to be filtered. Effectiveness grade over a narrow frequency range: A to B. Effectiveness across a wide range of frequencies: C+ to D. Additional Cost Range: $60 to $200

The patented technology in the Bantam (same circuit in the above examples) is a very effective bi-directional full spectrum filter from 50Khz to 2Ghz with 30dB reduction on line and neutral, and 40dB on ground. It captures and re-cycles most harmonic content (100% over the 50th harmonic) and filters EMI and RFI. Effectiveness grade per frequency range: B+.
Effectiveness grade across a wide range of frequencies: B+.

Other Products — Compare Stable Ground — Bantam

Protection on the power circuit ground is generally not available since other technology often dumps surges and spikes to the ground. Other versions protect ground by automatically cutting off power to line, neutral and ground until the threat is gone (requiring a battery back-up system). An alternative is to install expensive isolated ground circuit conduit that connects a computing device back to (hopefully clean) earth ground. Effectiveness grade: D.
Additional Cost $50-$75 (Isolated Ground, $300-$800)

Computing devices use the power circuit ground as a reference for 1's and 0's in digital code. Surges, spikes, errant frequencies, noise, EMI/RFI and harmonics on the ground can make a 0 look like a 1 and corrupt code. Bantam's technology (same circuit in the above examples) protects and filters the power circuit ground, along with the line and neutral. Digital code has a stable reference, power is not cut, and no isolated ground is needed. Effectiveness grade: A.

Other Products — Compare Ground Intrusion — Bantam

Intrusion and infiltration through the power ground is a recent concern described in the Cyber Protection literature under Tempest, Power Line Exploit (PLE), and Red Power. Non-Bantam technology power surge and conditioning devices do not protect against ground intrusion.
Effectiveness grade: F. Cost: $0

The patented technology in the Bantam (same circuit in the above examples) effectively filters line, neutral and ground, and eliminates computer operation "reflection frequencies" from the ground signals exiting a device. Effectiveness grade: A.

Other Products — Compare Power Factor — Bantam

Non-Bantam technology Power Factor Correction requires a combination of capacitors and inductors to correct inefficiencies that waste power and increase component stress and heat. This capability is usually an add-on to products described above. Effectiveness grade range A to C.
Additional Cost: $60 to $100.

The patented technology in the Bantam (same circuit in the above examples) is an inductive device and will improve capacitive power factor efficiencies by 40%. The Bantam will not improve inductive power factor inefficiencies. Capacitive Power Factor Correction
Effectiveness grade: A.

Min $255 to $655 (Not Including $300-$800 Isolated Ground) — Compare Total Costs — MSRP $114.50 One Patented Circuit, Multiple Capabilities

Revolutionary Performance • One Technology • One Product • One Low Price

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