



AEGIS® HF Ground Straps Ensure Effective Grounding of High-Frequency Currents

Best Practices by Motor and Drive Manufacturers

what the experts say...

ABB Technical Guide No. 5

"Add high frequency bonding connections between the installations and known earth reference points to equalize the potential of affected items, using braided straps of copper..."

"This must be made at the points where discontinuity between the earth level of the inverter and that of the motor is suspected. Additionally it may be necessary to equalize the potential between the frames of the motor and the driven machinery to short the current path through the motor and the driven machine bearings."

Allen Bradley Publication 1770-4.1, Application Data, Industrial Automation Wiring and Grounding Guidelines

"In addition to making good connections through each bolt or stud, use either 1-inch copper braid... to connect each chassis, enclosure and central ground bus mounted on the back-panel."

Nidec Motor Corporation Technical White Paper: Increased Reports of Bearing Damage in AC Motors Operating from Modern PWM VFD's

"One approach that simplifies the solution is to utilize the following components: Proper grounding connection points, proper grounding cables and bonding straps for high frequency conditions and proper termination devices for high frequencies..."

Danfoss Engineering Guide – HVAC & Refrigeration applications – Facility services design and project engineering of electrical drives

"A large conductor surface area for draining high-frequency currents can be obtained by using fine stranded wire, such as ... using special earthing straps or cables."

"Braided earthing straps are often used nowadays in practice..."

"Note: System earthing has a substantial effect on smooth, trouble-free facility operation. Ground loops must be avoided. Good potential equalization is essential."

Baldor INDUSTRY WHITE PAPER Inverter-Driven Induction Motors Shaft and Bearing Current Solutions

"Proper grounding of the motor frame is also important. ... ground straps should also be connected between the motor frame and the driven load equipment frame to allow a low impedance, alternate path for shaft currents."

"High frequency ground strap impedance is lowest for straps with fine conductors and the largest width to length ratio."

"In all cases, ground straps should be connected directly metal to metal (not through a painted surface) to provide the lowest impedance path for high frequency currents."