

Introduction

Proper grounding keeps the gremlins out of automation and controls, when appropriate installation practices are followed. Here are 10 tips for better grounding.

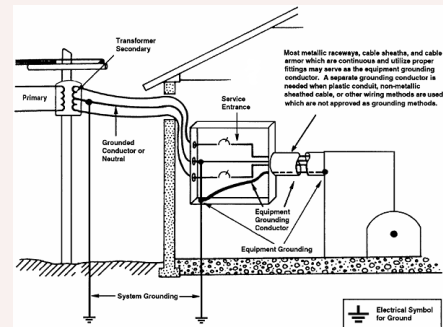
Proper grounding keeps the gremlins out of automation and controls, when appropriate installation practices are followed. Here are 10 tips for better grounding, summarized from "Control System Power and Grounding Better Practice," a book published by Control Engineering, Elsevier/Newnes, and Reed Business Information, and written by David Brown, David Harrold, and Roger Hope.

<http://www.controleng.com/search/search-single-display/10-tips-for-better-grounding/61c6363ad24fde3568b64f91c9171e96.html>

Tips

- 1) Control system ac power should be supplied from a distribution system that's separate from other equipment and uses.
- 2) The power source should be designed to accommodate initial inrush currents that can last up to 10 cycles.
- 3) Control system ac power should be supplied through an isolation transformer or uninterruptible power supply (UPS).
- 4) Control system ac ground should be established at or near the isolation transformer or UPS.
- 5) Control system workstation ac power should be routed to a dedicated receptacle.
- 6) When connecting field device power to several I/O interface carriers, barrier strips should be used.
- 7) When ac and dc input are connected to the same terminal block, the block must be marked with appropriate warning labels.
- 8) The ac ground wire should be the same or one size larger than the current-carrying conductors.
- 9) Leaving a little extra exposed wire or using a terminal lug are ways to provide test points.
- 10) Electrical resistance of an earth ground system must be tested to ensure the ground meets control system manufacturer requirement

Electrical Grounding



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