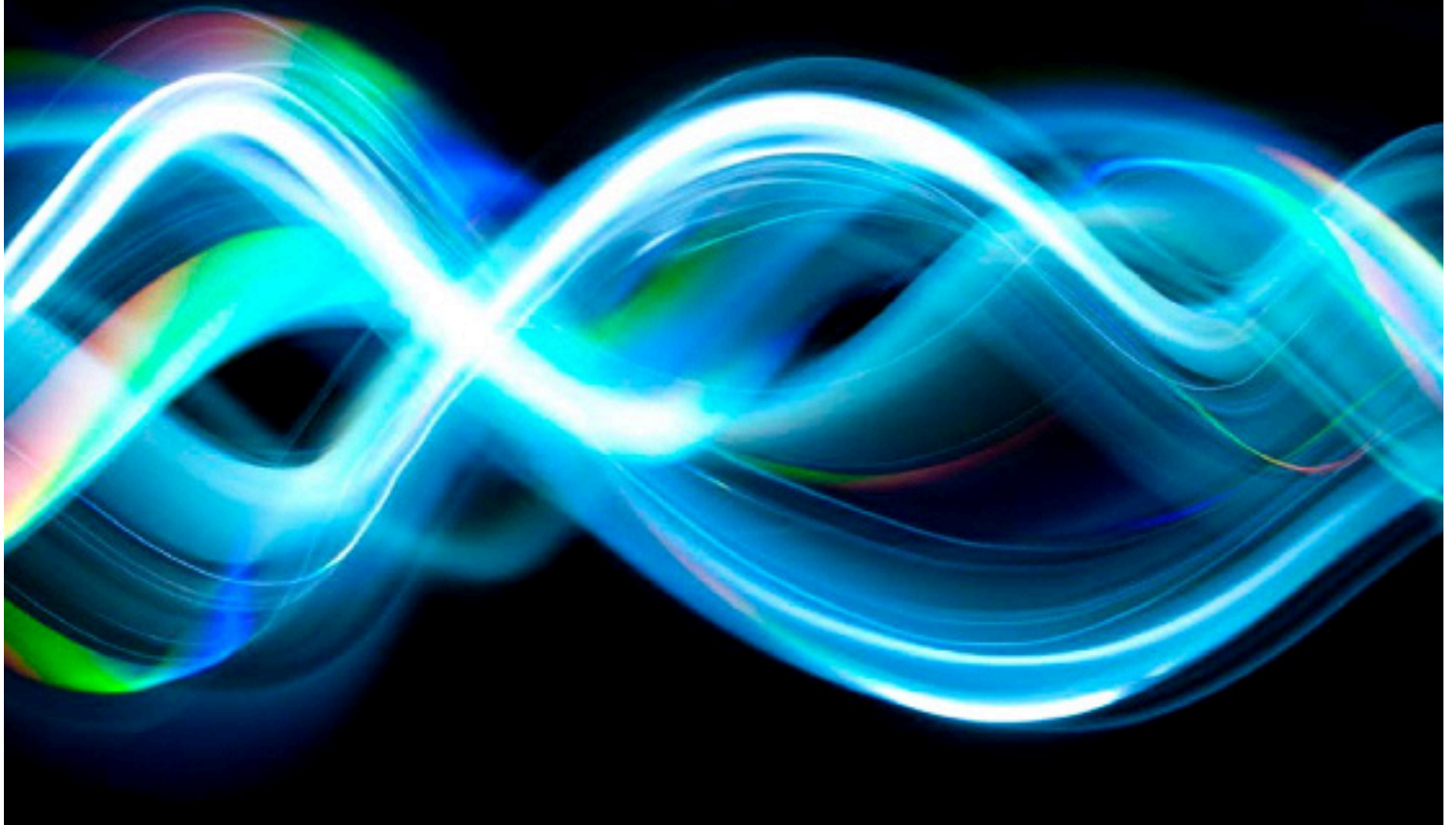


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IEEE Std 3003.1™-2019

Recommended Practice
for System Grounding of
Industrial and Commercial
Power Systems



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IEEE Recommended Practice for System Grounding of Industrial and Commercial Power Systems

Developed by the

Industrial and Commercial Power Systems Standards Development Committee
of the
IEEE Industry Applications Society

Approved 13 June 2019

IEEE SA Standards Board

Abstract: Discussed in this recommended practice is the system grounding of industrial and commercial power systems. The recommended practices in this document are intended to provide explanations of how electrical systems operate. It can also be an aid to all engineers responsible for the electrical design of industrial and commercial power systems.

Keywords: effectively grounded, ground, grounding system, high resistance ground, IEEE 3003.1™, neutral

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This introduction is not part of 3003.1–2019, IEEE Recommended Practice for System Grounding of Industrial and Commercial Power systems.

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When this project is completed, the technical material included in the 13 "color books" will be included in a series of new standards. Approximately 60 "dot" standards, organized into the following categories, will provide in-depth treatment of many of the topics formerly covered in the color books:

- Power Systems Design (3001 series)
- Power Systems Analysis (3002 series)
- Power Systems Grounding and Bonding (3003 series)
- Protection and Coordination (3004 series)
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- Power Systems Reliability (3006 series)
- Power Systems Maintenance, Operations, and Safety (3007 series)

In many cases, the material in a "dot" standard comes from a particular chapter of a particular color book. In other cases, material from several color books has been combined into a new "dot" standard. The material in this recommended practice largely comes from Chapter 1 of IEEE Std 142™-2007.

IEEE Std 3003.1™

This recommended practice covers the system grounding of industrial and commercial power systems. It is likely to be of greatest value to the power-oriented engineer with limited experience in this area. It can also be an aid to all engineers responsible for the electrical design of industrial and commercial power systems.

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