

Overhead Conductor Manual 3rd Edition

Your go-to guide for overhead conductors and line design

First released in 1994, Southwire's Overhead Conductor Manual has become a go-to resource for many engineers. Created as a design reference, the book consolidates basic information needed to evaluate the design, construction, and uprating of overhead transmission systems. Whether you are an entry level engineer or a seasoned professional,

this manual is a useful guide for overhead conductors and line design.

Once again, Southwire engineers have put pen to paper to update this practical desk manual with the most up-to-date industry technologies, standards, and practices.



What's New in the 3rd Edition

- Information on our innovative C7[®] Overhead Conductor
- Information on our new Max Ice[™] Overhead Conductor
- A new section on dynamic line ratings
- A detailed outline of the Alcoa Graphic Method
- Recent test data from Southwire's D.B Cofer Technology Center
- Details on creep correction
- Full color images throughout the manual
- Updated conductor tables, including new tables for C7[®] and Max Ice Overhead Conductors

A Sampling of Topics

- Introduction to basic overhead conductor concepts, including overviews of electrical and mechanical characteristics

- Sag and tension concepts and calculations
- Basic installation guidelines
- Thermal ratings of overhead conductors in steady-state and transient conditions
- Mechanical effects of high-temperature operation
- Environmental effects, including radio noise, audible noise, and electrical and magnetic fields
- Design of new transmission lines
- Voltage uprating of existing lines
- Thermal uprating of existing lines

The Overhead Conductor Manual is a guide, or a road map, for use in designing transmission lines. It is not a substitute for good engineering practices. It must be used in conjunction with applicable local, state, and federal codes and design standards, some of which may supersede recommendations in this manual.