

An American National Standard

IEEE Standard for Relays and Relay Systems Associated with Electric Power Apparatus

Sponsor
**Power System Relaying Committee
of the
IEEE Power Engineering Society**

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Abstract: ANSI/IEEE C37.90-1989, *IEEE Standard for Relays and Relay Systems Associated with Electric Power Apparatus*, applies to relay systems that protect and control apparatus that generate, distribute and use electrical power. This standard defines service conditions and specifies relay performance requirements and performance information that relay manufacturers shall provide.

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Foreword

(This Foreword is not a part of ANSI/IEEE C37.90-1989, IEEE Standard for Relays and Relay Systems Associated with Electric Power Apparatus.)

This revision of ANSI/IEEE C37.90-1978 (Reaffirmed 1982), IEEE Standard for Relays and Relay Systems Associated with Electric Power Apparatus contains significant changes in content and organization as described below.

- 1) The section on classification of relays, relay systems, and related terminology has been substantially reduced on the basis that ANSI/IEEE C37.100-1981, IEEE Standard Definitions for Power Switchgear, is now the principal reference source for definitions of relay terms in the power switchgear field. Distance relay definitions have been revised and submitted for inclusion in ANSI/IEEE C37.100.
- 2) Significant changes and reorganization have been made in Section 6., Ratings, and Section 8., Dielectric Tests.
- 3) The detailed requirements and procedures for the Surge Withstand Capability Test, called for in Section 9., have been moved to a separate document, ANSI/IEEE C37.90.1-1989, IEEE Standard Surge Withstand Capability (SWC) Tests for Protective Relays and Relay Systems.

In preparing this standard, consideration has been given to the work of other committees, and especially to international standards that have been published or that are under preparation by Technical Committee 41 of the International Electrotechnical Commission (IEC).

Related ANSI/IEEE documents are listed below, and are available individually (see footnote at bottom of page 7 for sources), or collected in IEEE Guides and Standards for Protective Relaying Systems.

C37.90.1-1989, Standard Surge Withstand Capability (SWC) Tests for Protective Relays and Relay Systems

C37.90.2-1988, Trial-Use Standard Withstand Capability of Relay Systems to Radiated Electromagnetic Interference from Transceivers

C37.91-1985, Guide for Protective Relay Applications to Power Transformers

C37.93-1987, Guide for Power System Protective Relay Applications of Audio Tones Over Telephone Channels

C37.95-1989, Guide for Protective Relaying of Utility-Consumer Interconnections

C37.96-1988, Guide for AC Motor Protection

C37.97-1979, Guide for Protective Relay Applications to Power System Buses

C37.98-1987, Standard Seismic Testing of Relays

C37.99-1980, Guide for Protection of Shunt Capacitor Banks

C37.101-1985, Guide for Generator Ground Protection

C37.102-1987, Guide for AC Generator Protection

C37.105-1987, Standard for Qualifying Class IE Protective Relays and Auxiliaries for Nuclear Power Generating Stations

C37.106-1987, Guide for Abnormal-Frequency Protection for Power Generating Plants

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C37.108-1989, Guide for the Protection of Network Transformers¹

C37.109-1989, Guide for the Protection of Shunt Reactors¹

C57.13.1-1981, Guide for Field Testing of Relaying Current Transformers

C57.13.2-1986, American National Standard for Conformance Test Procedures for Instrument Transformers¹

C57.13.3-1983, Guide for the Grounding of Instrument Transformer Secondary Circuits and Cases

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R. W. Beckwith
J. W. Chadwick, Jr.
D. M. Clark

K. J. Khunkhun
J. R. Linders
W. J. Marsh, Jr.
W. M. Mello

L. Scharf
C. L. Wagner

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W. J. Marsh, Jr.
W. M. Mello

G. D. Rockefeller
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¹This document is not in the collection, IEEE Guides and Standards for Protective Relaying Systems.

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