

# IEEE Standard for Definite-Purpose Switching Devices for Use in Metal-Enclosed Low-Voltage (600 V AC and Below) Power Circuit Breaker Switchgear

IEEE Power and Energy Society

Sponsored by the  
Switchgear Committee

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IEEE  
3 Park Avenue  
New York, NY 10016-5997  
USA

**IEEE Std C37.13.1™-2016**  
(Revision of  
IEEE Std C37.13.1-2006)

# **IEEE Standard for Definite-Purpose Switching Devices for Use in Metal-Enclosed Low-Voltage (600 V AC and Below) Power Circuit Breaker Switchgear**

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**Switchgear Committee**  
of the  
**IEEE Power and Energy Society**

Approved 30 June 2016

**IEEE-SA Standards Board**

**Abstract:** Definite-purpose switching devices for use in metal-enclosed low-voltage power circuit breaker switchgear are covered in this standard. The switching devices are fused, drawout type, three-pole construction, with one or more rated maximum ac voltages of 600 V, 508 V, and 254 V for application on systems having nominal ac voltages of 600 V, 480 V, and 240 V. The switching devices are power operated with integral or separately mounted overcurrent protective devices. Service conditions, ratings, functional components, temperature limitations and classifications of insulating materials, insulation (dielectric) withstand voltage requirements, test procedures, and application are addressed in this standard. The switching devices are normally used in applications that require frequency of operation greater than normal operations expected of low-voltage power circuit breakers.

**Keywords:** definite-purpose switching device, IEEE C37.13.1™, low-voltage ac power circuit breaker

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**Dan Hrcncir, *Chair***  
**Dean Sigmon, *Vice Chair***

Clint Carne	Lou Grahor	Allan Morse
David Dunne	Thomas Hawkins	Darryl Moser
Douglas J. Edwards	Jeffrey Hidaka	Richard Rohr
Mike Flack	Art Jur	Paul Sullivan
Keith Flowers	Mike Lafond	Rob Warren

The following members of the individual balloting committee voted on this standard. Balloters may have voted for approval, disapproval, or abstention.

Paul Barnhart	Jeffrey Hidaka	Shawn Patterson
William Bloethe	Dan Hrcncir	Christopher Petrola
Ted Burse	David Jackson	Iulian Profir
William Byrd	Richard Jackson	Michael Roberts
Eldridge Byron	John Kay	Timothy Robirds
Paul Cardinal	Yuri Khersonsky	Thomas Rozek
Glenn Davis	Boris Kogan	Bartien Sayogo
Stephen DeRoche	Jim Kulchisky	Michael Sigmon
Gary Donner	Ed Larsen	Jeremy Smith
David Dunne	Frank Mayle	Jerry Smith
Douglas J. Edwards	William McBride	Paul Sullivan
Ronald Esco	Charles Morse	Donald Swing
Keith Flowers	Darryl Moser	David Tepen
Mietek Glinkowski	Jerry Murphy	John Vergis
Edwin Goodwin	Dennis Neitzel	John Wang
Lou Grahor	Michael Newman	Kenneth White
Randall Groves	Nick S. A. Nikjoo	Iain Wright
Thomas Hawkins	T. W. Olsen	Larry Yonce
Jeffrey Helzer		Jian Yu

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Stephen Dukes	Joseph L. Koepfinger*	Howard Wolfman
Jianbin Fan	Hung Ling	Don Wright
J. Travis Griffith	Kevin Lu	Yu Yuan
Gary Hoffman	Annette D. Reilly	Daidi Zhong
	Gary Robinson	

\*Member Emeritus

## Introduction

This introduction is not part of IEEE Std C37.13.1-2016, IEEE Standard for Definite-Purpose Switching Devices for Use in Metal-Enclosed Low-Voltage (600 V AC and Below) Power Circuit Breaker Switchgear.

IEEE Std C37.13.1-2006 was written specifically to provide requirements for switching devices other than low-voltage power circuit breakers installed in low-voltage power circuit breaker switchgear. Definite-purpose switching (DPS) device in this standard is defined as a switching device used on a frame in a manner similar to a power circuit breaker and installed in low-voltage power circuit breaker switchgear.

This standard was developed because several incidents in the industry indicated that switching devices (i.e., switching devices utilizing contactors) were being improperly designed, applied, and installed in low-voltage power circuit breaker switchgear.

This standard is limited to DPS devices using contactors protected by current-limiting fuses. Additional types of DPS devices may be addressed in future editions of this standard.

This standard has been revised to reflect needed technical changes that have been suggested since the original edition was published in 2006. Major editorial and technical changes have been incorporated. The more significant changes include the following:

- IEEE Std C37.13.1a™-2010 has been incorporated into this revision.
- Equipment voltage rating was added to the title of the standard.
- For clarification purposes, “LV” (low voltage) was added to all instances of the acronym “DPS” (definite-purpose switching).
- References to IEEE Std C37.16™ have been replaced by references to IEEE Std C37.13™.
- Dates (i.e., year of approval) were removed from all referenced standards.

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# IEEE Standard for Definite-Purpose Switching Devices for Use in Metal-Enclosed Low-Voltage (600 V AC and Below) Power Circuit Breaker Switchgear

## 1. Overview

### 1.1 Scope

This standard provides requirements for low-voltage (600 V ac and below) definite-purpose switching (LV-DPS) devices (other than power circuit breakers) for use in metal-enclosed low-voltage power circuit breaker switchgear described in IEEE Std C37.20.1<sup>TM</sup>.<sup>1</sup> These switching devices may be used in motor control or other repetitive duty applications and have the following characteristics:

- a) Drawout type, three-pole construction
- b) Integral current-limiting fuses for short-circuit protection
- c) Power operated, with integral or separately mounted overcurrent protective devices

In this standard, the term “LV-DPS device” denotes a low-voltage definite-purpose switching device conforming to the requirements of this standard.

### 1.2 Purpose

This standard provides guidance in evaluating switching devices (other than low-voltage power circuit breakers conforming to IEEE Std C37.13<sup>TM</sup>) that are intended to be applied in metal-enclosed low-voltage power circuit breaker switchgear.

## 2. Normative references

The following referenced documents are indispensable for the application of this document (i.e., they must be understood and used, so each referenced document is cited in text and its relationship to this document is explained). For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments or corrigenda) applies.

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<sup>1</sup>For information on references, see [Clause 2](#).