



IEEE Guide for Selection of Valve-Regulated Lead-Acid (VRLA) Batteries for Stationary Applications

IEEE Power Engineering Society

Sponsored by the
Stationary Batteries Committee



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IEEE Power Engineering Society

Approved 27 September 2007
IEEE-SA Standards Board

Abstract: This guide describes methods for selecting the appropriate type of valve-regulated, immobilized-electrolyte, recombinant lead-acid battery for any of a variety of stationary float applications. The purpose of this document is to ensure that the reader is aware of all significant issues that should be considered when selecting VRLA batteries, so that the user might make an informed decision.

Keywords: absorbed glass mat, battery selection, gelled electrolyte, immobilized electrolyte, oxygen recombination, stationary applications, valve-regulated lead-acid (VRLA) batteries

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Introduction

This introduction is not part of IEEE Std 1189, IEEE Guide for Selection of Valve-Regulated Lead-Acid (VRLA) Batteries for Stationary Applications.

Valve-regulated lead-acid (VRLA) batteries are playing an ever-increasing role in control and power systems, for stationary reserve use in electric utilities, telecommunications, and uninterruptible power systems. In many cases, VRLA batteries are being substituted for vented lead-acid batteries. Their use is also expanding into many other applications where their unique characteristics appear attractive. Both gelled electrolyte and absorbed electrolyte VRLA designs, covering a range of sizes and capacities, are now available for use in many traditional and nontraditional battery applications. This guide fulfills the need within the industry to provide common understanding on VRLA cells and is applicable to all installations and battery sizes.

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