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**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB/Z 116.2-2026

**Photovoltaic direct-driven appliance controllers - Part 2:
Operation modes and graphic display**

光伏直驱电器控制器 第2部分：运行模式和显示要求

(English Translation)

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Table of Contents

Preface

Introduction

1 Scope

2 Normative References

3 Terms and Definitions

4 Equipment Configuration and Operating Mode

4.1 Equipment Configuration

4.2 Power Flow Direction

4.3 Operating Mode

4.4 Overview of Typical Equipment Configuration and Operation Modes

5 Graphical Display

5.1 Overview

5.2 Display Information

Foreword

This document is a standard or guiding technical document.

This document complies with the provisions of GB/T 1.1-2020 "Standardization Work Guidelines Part 1: Structure and Drafting Rules of Standardization Documents". Drafting.

This document is Part 2 of GB/T (Z)116 "Photovoltaic Direct Drive Electrical Controllers". GB/T (Z)116 has already published the following parts.

---Part 2: Operating Mode and Display Requirements.

This document is equivalent to IEC TS63349-2:2022 "Photovoltaic direct drive electrical controllers - Part 2: Operating modes and display requirements".

The document type has been changed from an IEC technical specification to a national standardization guidance technical document of my country.

Introduction

GB/T (Z)116 sets forth general requirements for the functional, performance, and reliability of photovoltaic direct-drive electrical controllers, as well as... The operating modes and display requirements of photovoltaic direct-drive electrical controllers, and their design, development, testing, certification, and production.

This is intended to provide guidance. GB/T (Z)116 is proposed to consist of the following parts.

---Part 1: General Requirements. This section specifies the functional, performance, and reliability requirements for photovoltaic direct-drive electrical controllers.

---Part 2: Operating Modes and Display Requirements. The purpose is to help understand the operating modes of photovoltaic direct-drive electrical controllers and clarify the overall requirements.

The display requirements are specified, and a display example is provided.

1 Scope

This document specifies the operating modes and display requirements for photovoltaic direct-drive electrical controllers. The user-facing display of the photovoltaic direct-drive electrical controller is also specified.

The interface uses easy-to-understand graphics to display the real-time operating mode of the photovoltaic direct-drive electrical appliances, including the installation and control of the photovoltaic direct-drive electrical appliance system.

The system includes a list of monitoring and control equipment, power generation equipment and cumulative power generation, and power consumption equipment and cumulative electricity consumption. This can stimulate users' interest in new energy sources.

It is fun and helps users understand and use new energy more easily.

The GB/T (Z)116 series standards apply to photovoltaic direct-drive electrical controllers, which can be used in various photovoltaic direct-drive electrical systems.

Appliances, including air conditioners, water pumps, refrigerators, etc. The GB/T (Z)116 series standards only include requirements for photovoltaic direct-drive electrical controllers.

Requirements for electrical appliances are specified in electrical appliance standards. For example, SAC/TC46 specifies the performance requirements for household and similar electrical appliances. Safety.

2 Normative references

The contents of the following documents, through normative references within the text, constitute essential provisions of this document. Dated citations are not included.

For references to documents, only the version corresponding to that date applies to this document; for undated references, the latest version (including all amendments) applies.

This document.

Note: GB/T 2297-2025 Terminology for Solar Photovoltaic Energy Systems (IEC TS61836:2025, NEQ)

IEC 61850-7-420 Electric power automation communication networks and systems - Part 7-420. Basic communication architectures for distributed energy systems

IEC 63349-1 Photovoltaic direct-driven appliance controllers - Part 1: General requirements

3 Terms and Definitions

The terms and definitions defined in IEC TS61836 and IEC 63349-1, as well as the following terms and definitions, apply to this document.

The URLs for the terminology databases maintained by ISO and IEC for standardization are as follows.

3.1 Photovoltaic direct-driven appliance controller

Used for converting and managing the energy flow between real-time power sources such as photovoltaic arrays, power grids, and energy storage, and electrical loads (e.g., air conditioners, refrigerators). Controller.

3.2 Equipment configuration

A combination of equipment installed in a photovoltaic direct-drive electrical system.