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

GB/T 46746-2025

**Insulation fault locating devices for marine low-voltage power
systems**

船舶低压电力系统绝缘故障定位装置

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Table of Contents

- 1 Scope
- 2 Normative references
- 3 Terms and Definitions
- 4 Symbols and Abbreviations
- 5 Requirements
- 7 Inspection Rules
- 8 Insulation monitoring devices in IT systems
- 9 Insulation fault location equipment in IT systems

Foreword

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. Please note that some content in this document may involve patents. The issuing organization of this document assumes no responsibility for identifying patents. This document was proposed and is under the jurisdiction of the National Technical Committee on Standardization of Marine Electrical and Electronic Equipment (SAC/TC531). This document was drafted by: Shanghai Ship Research and Design Institute, Zhenjiang Cernic Automation Co., Ltd., and China State Shipbuilding Corporation Limited. Research Institute No. 704. The main drafters of this document are: Le Xiaolong, Wu Zhihua, Chen Shi, Tian Xin, Qu Jipeng, Zhao Xiang, Li Jianbin, Weng Shuang, Zhang Qixin, and Liu Lihong. Liu Hongliang, Xie Jiachun, Xie Min, Xu Zhengxiang. Ship low-voltage power system insulation fault location device

1 Scope

GB/T 46746-2025 is the Chinese national standard covering finding an earth fault on a ship - the network is deliberately unearthed so that the first fault does not trip anything, which means it has to be located while everything keeps running, and this is the device that does it. First edition. It was issued on 2 December 2025 and has been in force since 1 July 2026, as a first edition. The document is under the responsibility of the Standardization Administration of China. This page is published from the official record of the 2025 edition; the clause text of a standard this recent is not yet in circulation, and the figures, limits and tables it contains are those of the document itself, delivered in full with the English translation.

This document specifies the requirements, inspection rules, packaging, transportation, and storage technical specifications for insulation fault location devices for shipboard low-voltage electrical systems. The question describes the corresponding experimental methods. This document applies to ungrounded neutral (IT) systems on ships with AC voltage not exceeding 1000V and DC voltage not exceeding 1500V. Insulation fault location device.

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.

GB/T 16935.1-2023 Insulation Coordination of Equipment in Low-Voltage Power Supply Systems - Part

3 Terms and Definitions

The terms and definitions defined in GB/T 18216.8 and GB/T 18216.9, as well as the following terms and definitions, apply to this document.

3.1 A system used to monitor the operating status of all equipment on the ship in real time, collect data, and issue alarms in case of abnormalities.

3.2 An automated management system used for monitoring and controlling ships, offshore platforms, or industrial power systems.

8 Insulation monitoring devices in IT systems

GB/T 18216.9 Tests and measurements of electrical safety protection measures for low-voltage power distribution systems below 1000V AC and 1500V DC. Measurement or monitoring equipment, Part

9 Insulation fault location equipment in IT systems

IEC 61557-8.2014 Tests for electrical safety protection of low-voltage power distribution systems below 1000V AC and 1500V DC.

IEC 61557-9.2023 Tests of electrical safety protection measures for low-voltage power distribution systems below 1000V AC and 1500V DC. GD019-2024 Guidelines for Type Approval Testing of Electrical and Electronic Products