AS/NZS 60255.127:2025

Australian/New Zealand Standard™

Measuring relays and protection equipment

Part 127: Functional requirements for over/under voltage protection (IEC 60255-127:2010 (ED. 1.0) MOD)

AS/NZS 60255.127:2025

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The following are represented on Committee EL-042:

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First published as AS/NZS 60255.127:2025.

Preface

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee EL-042, Renewable Energy Power Supply Systems and Equipment.

The objective of this document is to specify minimum requirements for over/under voltage relays. This document includes specification of the protection function, measurement characteristics and time delay characteristics.

This document defines the influencing factors that affect the accuracy under steady-state conditions and performance characteristics during dynamic conditions. The test methodologies for verifying performance characteristics and accuracy are also included in this document.

The general requirements for measuring relays and protection equipment are specified in AS/NZS 60255.1.

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FOREWORD

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International Standard IEC 60255-127 has been prepared by IEC technical committee 95: Measuring relays and protection equipment.

The text of this standard is based on the following documents:

CDV	Report on voting
95/254/CDV	95/261/RVC

Full information on the voting for the approval of this standard can be found in the report on voting indicated in the above table.

This publication has been drafted in accordance with the ISO/IEC Directives, Part 2.

A list of all parts of the IEC 60255 series can be found, under the general title *Measuring relays and protection equipment*, on the IEC website.

The committee has decided that the contents of this publication will remain unchanged until the stability date indicated on the IEC web site under "http://webstore.iec.ch" in the data related to the specific publication. At this date, the publication will be

- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
- amended.

Australian/New Zealand Standard

Measuring relays and protection equipment

Part 127: Functional requirements for over/under voltage protection (IEC 60255-127:2010 (ED. 1.0) MOD)

1 Scope

This part of IEC 60255 specifies minimum requirements for over/under voltage relays. The standard includes specification of the protection function, measurement characteristics and time delay characteristics.

This standard defines the influencing factors that affect the accuracy under steady state conditions and performance characteristics during dynamic conditions. The test methodologies for verifying performance characteristics and accuracy are also included in this standard.

The over/under voltage functions covered by this standard are as follows:

	IEEE/ANSI C37.2	**IEC 61850-7-4**
	Function numbers	**Logical nodes**
Phase undervoltage protection	27	PTUV
Positive sequence undervoltage protection	27D	PTUV
Phase overvoltage protection	59	PTOV
Residual/zero-sequence overvoltage protection	59N/59G	PTOV
Negative sequence/ unbalance overvoltage protection	47	PTOV

The general requirements for measuring relays and protection equipment are specified in IEC 60255-1.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

NATIONAL VARIATIONS

1. After the first paragraph, *add* the following:

The Australian/New Zealand Standards listed below are modified adoptions of, or not equivalent to, the IEC normative references and are required for the application of this document. All references in the source text to those IEC normative references shall be replaced by references to the corresponding Australian or Australian/New Zealand Standards.

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2. *Delete* "IEC 60255-1, Measuring relays and protection equipment — *Part 1: Common requirements"* and *replace* with the following

AS/NZS 60255.1, *Measuring relays and protection equipment — Part 1: Common requirements (IEC 60255-1:2022 (ED. 2.0) MOD)*

IEC 60044 (all parts), *Instrument transformers*