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Australian STANDARD®

STANDARDS Australia

Earth-moving machinery — Electrical wires and cables — Principles of identification and marking



AS ISO 9247:2021

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Construction and Mining Equipment Industry Group
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Department of Resources, Qld
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Preface

This Standard was prepared by the Standards Australia Committee ME-063, Earthmoving Equipment.

The objective of this document is to specify the fundamental items of an identification code system and marking for electrical wires and cables used to connect components in the electrical circuits of earth-moving machines.

This document does not cover the wires and cables located within electrical components, e.g. alternator (a.c. generator), relay instrument.

This document applies to earth-moving machinery as defined in ISO 6165.

This document is identical with, and has been reproduced from, ISO 9247:1990, *Earth-moving machinery — Electrical wires and cables — Principles of identification and marking,* and its Amendment 1 (1998), which has been added at the end of the source text.

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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

International Standard ISO 9247 and Amendment 1 was prepared by Technical Committee ISO/TC 127, *Earth-moving machinery.*

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Introduction

The code identification system presented in this International Standard is a means of facilitating assembly, servicing, trouble-shooting and restoration of electrical circuits within earth-moving machines.

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NOTES

Australian Standard®

Earth-moving machinery — Electrical wires and cables — Principles of identification and marking

1 Scope

This International Standard specifies the fundamental items of an identification code system and marking for electrical wires and cables used to connect components in the electrical circuits of earth-moving machines.

It does not cover the wires and cables located within electrical components, e.g. alternator (a.c. generator), relay instrument.

This International Standard applies to earth-moving machinery as defined in ISO 6165.

2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this International Standard. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO 6165:1987, *Earth-moving machinery — Basic types — Vocabulary.*

ISO 6749:1984, *Earth-moving machinery — Preservation and storage.*

3 Definitions

For the purposes of this International Standard, the following definitions apply.

3.1
electrical circuit
Number of electrical components connected by cables, leading from the electrical energy source to the functional component(s) and back to the energy source.

3.2
electrical component
Self-contained element intended to store, generate, distribute, alter or consume electrical energy or effect an electrical junction.

3.3
electrical cable
Insulated stranded electrical conductor used to establish a single current path.

3.4
electrical wire
Insulated non-stranded electrical conductor used to establish a single current path.

4 Coding system of electrical wires and cables

Wires and cables shall be identified by numbers, colour, letter symbols or combinations of these, as specified in 4.1 to 4.4.

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