AS/NZS 4024.1901:2014
EN 894-1:1997+A1:2008

AS/NZS 4024.1901:2014

Australian/New Zealand Standard™

Safety of machinery

Part 1901: Displays, controls, actuators and signals—Ergonomic requirements for the design of displays and control actuators—General principles for human interactions with displays and control actuators

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This Joint Australian/New Zealand Standard was prepared by Joint Technical Committee SF-041, General Principles for the Guarding of Machinery. It was approved on behalf of the Council of Standards Australia on 5 June 2014 and on behalf of the Council of Standards New Zealand on 24 April 2014.
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The following are represented on Committee SF-041:

Australian Chamber of Commerce and Industry
Australian Industry Group
Australian Manufacturing Workers Union
Department of Mines and Petroleum, WA
Department of the Premier and Cabinet, SA
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Federal Chamber of Automotive Industries
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Part 1901: Displays, controls, actuators and signals—Ergonomic requirements for the design of displays and control actuators—General principles for human interactions with displays and control actuators

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PREFACE

This Standard was prepared by the Joint Standards Australia/Standards New Zealand Committee SF-041, General Principles for the Guarding of Machinery, to supersede AS 4024.1901—2006.

It is emphasized that this Standard is part of the AS(/NZS) 4024.1 series and it is imperative that it is used in conjunction with other applicable parts of the series. A complete listing of all current parts of the AS(/NZS) 4024.1 series can be found at the Standards Australia website <www.standards.org.au> and in AS/NZS 4024.1100, *Safety of machinery*, Part 1100: *Application Guide*.

The objective of this Standard is to specify the general principle for human interaction with displays and control actuators, to minimize operator errors, and to ensure an efficient interaction between the operator and the equipment.

This Standard is identical with, and has been reproduced from EN 894-1:1997, *Safety of machinery—Ergonomics requirements for the design of displays and control actuators*, Part 1: *General principles for human interactions with displays and control actuators,* and its Amendment A1 (2008). The start and finish of text introduced or altered by amendment is indicated in the text by tags 〈A1〉 〈A1〉.

As this Standard is reproduced from an International Standard, the following applies:

(a) In the source text 'this European Standard' should read 'this Australian/New Zealand Standard'.

(b) A full point substitutes for a comma when referring to a decimal marker.

References to International Standards should be replaced by references to Australian or Australian/New Zealand Standards, as follows:

Reference to International Standard		*Australian/New Zealand Standard*	
EN		AS/NZS	
292	Safety of machinery—Basic concepts, general principles for design	4024	Safety of machinery
292-1	Part 1: Basic terminology, methodology	4024.1201	Part 1201: General principles for design—Risk assessment and risk reduction
292-2	Part 2: Technical principles and specifications	4024.1201	Part 1201: General principles for design—Risk assessment and risk reduction
418	Safety of machinery—Emergency stop equipment, functional aspects—Principles for design	4024.1604	Part 1604: Design of controls, interlocks and guarding—Emergency stop—Principles for design
prEN			
894	Safety of machinery—Ergonomics requirements for the design of displays and control actuators		
894-2	Part 2: Displays	4024.1902	Displays, controls, actuators and signals—Ergonomic requirements for the design of displays and control actuators—Displays
894-3	Part 3: Control actuators	4024.1903	Displays, controls, actuators and signals—Ergonomic requirements for the design of displays and control actuators—Control actuators

The term 'informative' has been used in this Standard to define the application of the annex to which it applies. An 'informative' annex is only for information and guidance.

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AUSTRALIAN/NEW ZEALAND STANDARD

Safety of machinery

Part 1901:
Displays, controls, actuators and signals—Ergonomic requirements for the design of displays and control actuators—General principles for human interactions with displays and control actuators

Introduction

This standard has been prepared to be a harmonized standard in the sense of the Machinery Directive and associated EFTA regulations.

1 Scope

This European Standard applies to the design of displays and control actuators on machinery. It specifies general principles for human interaction with displays and control actuators, to minimise operator errors and to ensure an efficient interaction between the operator and the equipment. It is particularly important to observe these principles when an operator error may lead to injury or damage to health.

2 Normative references

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated reference subsequent amendments to, or revisions of, any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies.

EN 292-1, *Safety of machinery - Basic concepts, general principles for design - Part 1: Basic terminology, methodology.*

EN 292-2, *Safety of machinery - Basic concepts, general principles for design - Part 2: Technical principles and specifications.*

EN 418, *Safety of machinery – Emergency stop equipment, functional aspects – Principles for design.*

EN 614-1, *Safety of machinery – Ergonomics design principles – Part 1: Terminology and general principles.*

prEN 894-2, *Safety of machinery – Ergonomics requirements for the design of displays and control actuators – Part 2: Displays.*

prEN 894-3, *Safety of machinery – Ergonomics requirements for the design of displays and control actuators – Part 3: Control actuators.*

EN ISO 9241-10, *Ergonomic requirements for office work with visual display terminals (VDTs) – Part 10: Dialogue principles.*

3 Definitions

For the purposes of this European Standard, the following definitions apply:

3.1
control actuator
the part of the control actuating system that is directly actuated by the operator, e.g. by applying pressure