

Australian Standard™

Safeguarding of machinery

**Part 4: Installation and
commissioning requirements
for electro-sensitive systems—
Pressure sensitive devices**

This Australian Standard was prepared by Committee SF/41, General Principles for the Guarding of Machinery. It was approved on behalf of the Council of Standards Australia on 29 May 1998 and published on 5 August 1998.

The following interests are represented on Committee SF/41:

Australian Chamber of Commerce and Industry
Australian Manufacturing Workers Union
Department for Industrial Affairs, S.A.
Department of Training and Industrial Relations, Qld
Electricity Supply Association of Australia
Ergonomics Society of Australia
Federal Chamber of Automotive Industries
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Originated as part of AS 4024.2(Int)—1992.
Revised and redesignated in part as AS 4024.4—1998.

PREFACE

This Standard was prepared by the Standards Australia Committee SF/41, General Principles for the Guarding of Machinery as a revision of, in part, AS 4024.2(Int)—1992 *Safeguarding of machinery, Part 2: Presence sensing systems*.

During the preparation of this Standard the Committee considered work emanating from the European Community (CEN). Since many European Standards are becoming de facto international Standards, or are being adopted as International Standards by ISO, the Committee decided to use the draft European Standards prEN 999, *Safety of machinery—The positioning of protective equipment in respect of approach speeds of parts of the human body*, prEN 1760.1, *Safety of machinery—Pressure sensitive protective devices—Part 1: General principles for the design and testing of pressure sensing mats and pressure sensing floors* and prEN 1760.2, *Safety of machinery—Pressure sensitive protective devices—Part 2: General principles for the design and testing of pressure sensitive edges and pressure sensitive bars*.

Pressure-sensitive devices are used in a wide range of applications and are subjected to different conditions of use; for example, they are exposed to extremes of loading and to electrical, physical and chemical environments.

A pressure-sensitive device is interfaced with the machine control to provide a signal so that the machine will go to a safe condition.

The terms 'normative' and 'informative' have been used in this Standard to define the application of the appendix to which they apply. A 'normative' appendix is an integral part of a Standard, whereas an 'informative' appendix is only for information and guidance.

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STANDARDS AUSTRALIA

Australian Standard
Safeguarding of machinery**Part 4: Installation and commissioning requirements for electro-sensitive systems—Pressure-sensitive devices**

SECTION 1 SCOPE AND GENERAL

1.1 SCOPE This Standard specifies the installation and commissioning requirements for pressure-sensitive fixed mats, floors, edges and bars that will be used with plants and machinery. Where safety devices are to be used in other situations, such as the protection of children or in exposed places with wide temperature limits, the Standard is not comprehensive and requires adaption or extension.

The Standard covers pressure-sensitive fixed mats, floors, edges and bars regardless of the type of energy used, e.g. electrical, hydraulic, pneumatic or mechanical.

This Standard does not apply to protective equipment that is intended to be moved, without tools, nearer to the danger zone than the calculated safety distance.

This Standard is not intended to provide a detailed account of methods for analysing hazards and estimating risks.

Protection against the risks from mechanical hazards arising from the ejection of solid or fluid materials and non-mechanical hazards such as toxic emissions, electricity or radiation are not covered by the Standard.

1.2 OBJECTIVE The objective of this Standard is to enable designers, manufacturers, suppliers, employers and users of machinery to minimize the risks to the health and safety of employees and others working with or otherwise near plant.

1.3 APPLICATION This Standard is intended for use by those who design, manufacture, supply, install or use machinery-guarding or safety devices. It applies to pressure-sensitive mats and floors for general use, where persons having a mass greater than 30 kg are present. It may also be used where persons having a mass not less than 15 kg may be present. It does not apply to those instances where pressure-sensitive mats and floors are used where persons having a mass of less than 15 kg are present.

It applies where pressure-sensitive edges and bars are used to either detect the presence of persons who may be exposed to contact with hazardous moving parts or who may approach too close to a danger zone.

1.4 REFERENCED DOCUMENT The following document is referred to in this Standard:

- AS
4024 Safeguarding of machinery
4024.1 Part 1: General principles