Australian Standard™

Safeguarding of machinery

Part 5: Manufacturing and testing 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

Metal Trades Industry Association of Australia

National Safety Council of Australia

Safety Institute of Australia

Tractor and Machinery Association of Australia

University of Melbourne

Victorian WorkCover Authority

WorkCover New South Wales

WorkSafe Western Australia

This Standard was issued in draft form for comment as DR 97422.

Australian Standard™

Safeguarding of machinery

Part 5: Manufacturing and testing requirements for electro-sensitive systems— Pressure-sensitive devices

Originated as part of AS 4024.2(Int)—1992.
Revised and redesignated in part as AS 4024.5—1998.

Published by Standards Australia
(Standards Association of Australia)
1 The Crescent, Homebush, NSW 2140

ISBN 0 7337 2056 0

PREFACE

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

During the preparation of this Standard the Committee considered two documents emanating from the European Committee for Standardization, (CEN) which have also been circulated as Committee Drafts by the International Organization for Standardization (ISO). These documents are prEN 1760.1, *Safety of machinery—Pressure sensitive protective devices* Part 1: *General principles for the design and testing of pressure sensing mats and 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.*

The Standard was developed because of the increasing use in industry of pressure-sensitive devices as a means of safeguarding certain types of machinery. By making use of existing documents on the subject matter, the Committee is seeking to minimize the cost to industry which will use this type of protective device.

Standards Australia has a policy of adopting an International Standard where it is possible to do so. It is likely therefore, that when the above European Standards are published and adopted as International Standards, that they will be adopted as Australian Standards during a review of this Standard.

The term ‘normative’ has been used in this Standard to define the application of the appendix to which it applies. A ‘normative’ appendix is an integral part of a Standard.

CONTENTS

Page

STANDARDS AUSTRALIA

Australian Standard

Safeguarding of machinery

Part 5: Manufacturing and testing requirements for electro-sensitive systems—Pressure-sensitive devices

SECTION 1 SCOPE AND GENERAL

1.1 SCOPE This Standard specifies the manufacturing and testing requirements for pressure-sensitive devices i.e. mats, floors, edges and bars, used to detect persons or parts of persons who may be exposed to contact with hazardous moving parts or may be too near a hazardous location.

Information for manufacturers relating to design of pressure-sensitive systems is given in Appendix A.

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 machinery.

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 also applies 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 DOCUMENTS The following documents are referred to in this Standard:

AS	
1099	Basic environmental testing procedures for electrotechnology
1099.2.3	Part 2.3: Tests—Test Ca—Damp heat, steady state
1543	Electrical equipment of industrial machines
1939	Degrees of protection provided by enclosures for electrical equipment (IP Code)
4024	Safeguarding of machinery
4024.1	Part 1: General principles
4024.4	Part 4: Installation and commissioning requirements for electro-sensitive systems—Pressure-sensitive devices
IEC	
60068	Basic environmental testing procedures
60068-2-6	Part 2-6: Tests—Test Fc: Vibration (sinusoidal)
60068-2-14	Part 2-14: Tests—Test N: Change in temperature
60068-2-29	Part 2-29: Tests—Test Eb and guidance: Bump