



**National Standards Authority of Ireland**

**IRISH STANDARD**

**I.S. TS 50418:2004**

ICS 13.110  
31.260

**SAFETY OF MACHINERY -  
ELECTRO-SENSITIVE PROTECTIVE  
EQUIPMENT -  
PASSIVE INFRA-RED PROTECTIVE DEVICES  
(PIPDS)**

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TECHNICAL SPECIFICATION

**CLC/TS 50418**

SPECIFICATION TECHNIQUE

TECHNISCHE SPEZIFIKATION

January 2004

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ICS 13.110; 31.260

English version

**Safety of machinery -  
Electro-sensitive protective equipment -  
Passive infra-red protective devices (PIPDs)**

This Technical Specification was approved by CENELEC on 2003-11-01.

CENELEC members are required to announce the existence of this TS in the same way as for an EN and to make the TS available promptly at national level in an appropriate form. It is permissible to keep conflicting national standards in force.

CENELEC members are the national electrotechnical committees of Austria, Belgium, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

**CENELEC**

European Committee for Electrotechnical Standardization  
Comité Européen de Normalisation Electrotechnique  
Europäisches Komitee für Elektrotechnische Normung

**Central Secretariat: rue de Stassart 35, B - 1050 Brussels**

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## Foreword

This Technical Specification was prepared by the Technical Committee CENELEC TC 44X, Safety of machinery: electrotechnical aspects.

The text of the draft was submitted to the formal vote and was approved by CENELEC as CLC/TS 50418 on 2003-11-01.

This Technical Specification is to be read in conjunction with EN 61496-1:1997.

The following date was fixed:

- latest date by which the existence of the CLC/TS (doa) 2004-04-16  
has to be announced at national level

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## Contents

	Page
Introeucton.....	4
1 Scope.....	6
2 Normative references.....	6
3 Definitions .....	6
4 Functional and design requirements .....	7
4.1 Functional requirements .....	7
4.1.2 Sensing function .....	7
4.2 Design requirements .....	8
4.2.2 Fault detection requirements .....	8
4.2.12 Integrity of PIPD detection capability .....	9
4.2.13 Test pieces for type testing .....	10
4.2.14 Wavelength .....	11
4.3 Environmental requirements .....	12
4.3.5 Radiation interference .....	12
4.3.6 Obstruction of the window .....	12
5 Testing .....	12
5.2 Functional tests.....	13
5.2.1 Sensing function and detection capability .....	13
5.2.2 Response time .....	13
5.2.4 Periodic test .....	14
5.2.10 Wavelength .....	14
5.4 Environmental tests.....	14
5.4.6 Light interference .....	14
5.4.7 Thermal radiation interference.....	17
5.4.8 Pollution interference .....	18
5.4.9 Manual manipulation by covering the PIPD .....	19
6 Marking for identification and for safe use .....	19
6.1 General.....	19
7 Accompanying documents.....	20
Annex A (normative) Optional functions of the ESPE.....	27
A.9 Setting the detection zone and/or other safety-related parameters.....	27
A.9.1 Functional requirements .....	27
A.10 Selection of multiple detection zones .....	28
A.10.1 Functional requirements .....	28
A.10.2 Verification .....	28
Annex B (normative) Catalogue of single faults affecting the electrical equipment of the ESPE, to be applied as specified in 5.3 .....	29
Annex C (informative) Guidance for use of an PIPD in different applications.....	30
C.1 General.....	30
C.2 Example of the use of an PIPD on machinery for whole body presence sensing .....	31
C.3 Example of the use of an PIPD as a whole body trip device .....	33
C.4 Example of the use of an PIPD as a hand protective device .....	34
C.5 Example of the use of an PIPD on a vehicle.....	35
C.5.1 Stopping distance $s_{sd}$ .....	36
C.5.2 Response time of the system ( $t_{r,sys} * V$ ) .....	36
C.5.3 Response time of the driver ( $t_r * V$ ) .....	36

## Introduction

The Technical Specification CLC/TS 50418 has been prepared by CENELEC Technical Committee TC 44X: Safety of machinery – Electrotechnical aspects, in collaboration with IEC Technical Committee 44: Safety of machinery – Electrotechnical aspects.

This Technical Specification is to be read in conjunction with EN 61496-1 and supplements or modifies the corresponding clause in EN 61496-1.

Where a particular clause or subclause of EN 61496-1 is not mentioned in this Technical Specification, that clause or subclause applies. Where this Technical Specification states "*addition*", "*modification*" or "*replacement*", the relevant text of EN 61496-1 is to be adapted accordingly.

This document is being issued in the Technical Specification series of publications (according to the CEN/CENELEC Internal Regulations subclause 11.3) as a "prospective standard for provisional application" in the field of safety of machinery because there is an urgent need for guidance in this field. This document is not to be regarded as a "European Standard". It is proposed for provisional application so that information and experience of its use in practice may be gathered. Comments on the content of this document should be sent to the Secretary of CENELEC TC 44X.

A review of this Technical Specification will be carried out not later than 3 years after its publication with the options of

- extension for another 3 years
- conversion into a European Standard; or
- withdrawal.

An electro-sensitive protective equipment (ESPE) is applied to machinery that presents a risk of personal injury. It provides protection by causing the machine to revert to a safe condition before a person can be placed in a hazardous situation.

This Technical Specification provides general design and performance requirements of ESPEs for use over a broad range of applications. Essential features of equipment meeting the requirements of this Technical Specification are the safety-related performance provided and the built-in periodic functional checks/self-checks that are specified to ensure that this level of performance is maintained. It may be used as guidance in dedicated product standards for the safety of machinery.

This Technical Specification has been prepared as a specification of particular requirements for electro-sensitive protective equipment (ESPE) using PIPDs specifically related to machinery safety and has been developed to meet the needs of manufacturers, industrial users and safety enforcement authorities.

Each type of machine presents its own particular hazards and it is not the purpose of this Technical Specification to recommend the manner of application of the ESPE to any particular machine. The application of the ESPE should be a matter for agreement between the equipment supplier, the machine user and the enforcing authority; in this context, attention is drawn to the relevant guidance established internationally, for example ISO 12100, IEC TS 62046.

Only PIPDs designed for safety-related applications should be used as protective equipment. PIPDs use a relatively new technology which is under consideration by TC44X for possible inclusion in EN 61496. Until a product standard for PIPDs is published, care should be taken in the selection and use of these devices. It is recommended to consult the PIPD manufacturer and other sources of information about their application.

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