SLOVENSKI STANDARD
SIST EN IEC 63180:2021

01-januar-2021

Metode merjenja in deklariranje območja zaznavanja detektorjev - Pasivni infrardeči javljalniki zaznavanja večjih in manjših gibov (IEC 63180:2020)

Methods of measurement and declaration of the detection range of detectors - Passive infrared detectors for major and minor motion detection (IEC 63180:2020)

Verfahren für die Bestimmung der Funktionalität von Meldern - Passive Infrarotmelder für die Bewegungs- und Präsenzmeldung (IEC 63180:2020)

Méthodes de mesure et qualification de la plage de détection des détecteurs - Détecteurs infrarouges passifs pour la détection de mouvements de forte et de faible amplitude (IEC 63180:2020)

Ta slovenski standard je istoveten z: **EN IEC 63180:2020**

ICS:

13.320	Alarmni in opozorilni sistemi	Alarm and warning systems
29.120.40	Stikala	Switches
97.120	Avtomatske krmilne naprave za dom	Automatic controls for household use

SIST EN IEC 63180:2021 **en,fr,de**

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN IEC 63180

August 2020

ICS 29.120.40

English Version

Methods of measurement and declaration of the detection range of detectors - Passive infrared detectors for major and minor motion detection (IEC 63180:2020)

Méthodes de mesure et qualification de la plage de détection des détecteurs - Détecteurs infrarouges passifs pour la détection de mouvements de forte et de faible amplitude
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Verfahren für die Bestimmung der Funktionalität von Meldern - Passive Infrarotmelder für die Bewegungs- und Präsenzmeldung
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European Committee for Electrotechnical Standardization
Comité Européen de Normalisation Electrotechnique
Europäisches Komitee für Elektrotechnische Normung

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

European foreword

The text of document 23B/1319/FDIS, future edition 1 of IEC 63180, prepared by SC 23B "Plugs, socket-outlets and switches" of IEC/TC 23 "Electrical accessories" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN IEC 63180:2020.

The following dates are fixed:

- latest date by which the document has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2021-04-29
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2023-07-29

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In the official version, for Bibliography, the following note has to be added for the standard indicated:

IEC 63044 (series) NOTE Harmonized as EN IEC 63044 (series)

IEC 63180

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INTERNATIONAL STANDARD

NORME INTERNATIONALE

colour inside

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Méthodes de mesure et qualification de la plage de détection des détecteurs – Détecteurs infrarouges passifs pour la détection de mouvements de forte et de faible amplitude

INTERNATIONAL ELECTROTECHNICAL COMMISSION

COMMISSION ELECTROTECHNIQUE INTERNATIONALE

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CONTENTS

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METHODS OF MEASUREMENT AND DECLARATION OF THE DETECTION RANGE OF DETECTORS –

Passive infrared detectors for major and minor motion detection

FOREWORD

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International Standard IEC 63180 has been prepared by subcommittee 23B: Plugs, socket-outlets and switches, of IEC technical committee 23: Electrical accessories.

The text of this International Standard is based on the following documents:

FDIS	Report on voting
23B/1319/FDIS	23B/1320/RVD

Full information on the voting for the approval of this International Standard can be found in the report on voting indicated in the above table.

This document has been drafted in accordance with the ISO/IEC Directives, Part 2.

The committee has decided that the contents of this document will remain unchanged until the stability date indicated on the IEC website under "http://webstore.iec.ch" in the data related to the specific document. At this date, the document will be

- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
- amended.

IMPORTANT – The 'colour inside' logo on the cover page of this publication indicates that it contains colours which are considered to be useful for the correct understanding of its contents. Users should therefore print this document using a colour printer.

INTRODUCTION

Passive infrared detectors are an important element in an energy efficient building. They allow for switching on and off and for controlling loads in order to achieve an optimum degree of comfort and energy efficiency.

The detectors covered in this document are motion detectors using passive infrared (PIR) technology in electronic control devices and appliance switches whether stand-alone (direct control of one or more applications) or as part of home and building electronic systems or building automation control systems (HBES/BACS) or similar. In the case of HBES/BACS, the resulting action depends on the programming of the relevant HBES/BACS.

The purpose of these detectors is to detect the movement of persons.

Detectors linked to a system may also be assigned other tasks: state reporting, power consumption, event reporting, scenarios, etc. These additional functions are not part of this document.

In order to achieve the energy efficiency targets and comfort, the detectors should operate accurately. In addition, the detection area will need to be provided with sufficient accuracy in order to allow integrators to choose the correct detectors for the needed action.

This document provides a methodology and test procedures for a manufacturer to declare and verify the detection performance of these devices with respect to the detection area.

METHODS OF MEASUREMENT AND DECLARATION OF THE DETECTION RANGE OF DETECTORS –

Passive infrared detectors for major and minor motion detection

1 Scope

This document provides a methodology and test procedures to be able to declare and verify the detection area for motion detectors using passive infrared technology in electronic control devices and appliance switches, whether stand-alone (direct control of one or more applications) or as part of home and building electronic systems or building automation control systems (HBES/BACS) or similar.

It also provides a uniform way to present the test results.

The purpose of these detectors is to detect the major and minor movements of persons.

2 Normative references

There are no normative references in this document.

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- IEC Electropedia: available at http://www.electropedia.org/
- ISO Online browsing platform: available at http://www.iso.org/obp

3.1
infrared
IR
optical radiation for which the wavelengths in vacuum are longer than those for visible radiation, that is approximately between 780 nm and 1 mm

[SOURCE: IEC 60050-731:1991, 731-01-05]

3.2
passive infrared detector
electronic detector that measures infrared (IR) light radiating from humans in its field of view

3.3
motion detector
unit detecting motion that can be part of an electronic control device or an appliance switch

Note 1 to entry: "Electronic control device" is used as a general term to cover electronic switches, HBES/BACS switches and electronic extension units.

3.4
major motion
movement of a person walking into an area or walking within an area

3.5
radial motion
motion directly toward the motion detector

EXAMPLE See the example given in Figure 1.

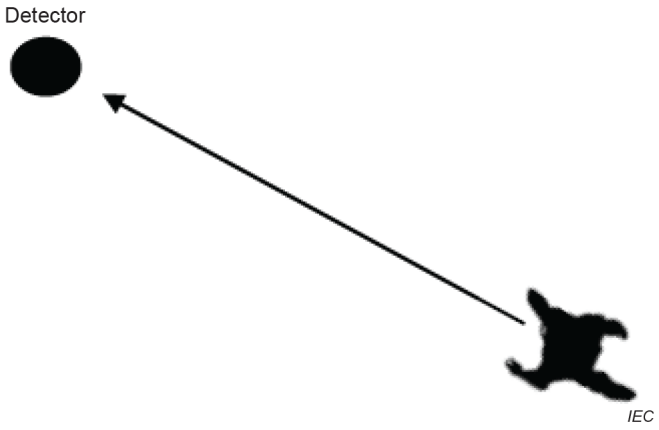

Figure 1 – Radial motion

3.6
tangential motion
motion laterally or obliquely to the motion detector

EXAMPLE See the example given in Figure 2.

Figure 2 – Tangential motion

3.7
minor motion
small movements of a person or a part of a person within an area

Note 1 to entry: Typical examples of minor motion are in working areas, for example, offices, classrooms, meeting rooms, where the attendance time is long, and the motions of the persons are small (e.g. sitting activities with arm movements).

Note 2 to entry: Non-standardized terms for a minor motion detector are "presence detector" or "occupancy detector".

3.8
detection area
surface area in which the detector is specified to detect the motion of a person

EXAMPLE See the example given in Figure 3.