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Optics and photonics — Vocabulary for telescopic systems —

Part 3: Terms for telescopic sights

Optique et photonique — Vocabulaire relatif aux systèmes télescopiques —
Partie 3: Termes pour lunettes de pointage

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Contents

Page

Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation on the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the WTO principles in the Technical Barriers to Trade (TBT) see the following URL: Foreword — Supplementary information.

The committee responsible for this document is ISO/TC 172, *Optics and photonics*, Subcommittee SC 4, *Telescopic systems*.

This second edition cancels and replaces the first edition (ISO 14132-3:2002), which has been technically revised.

ISO 14132 consists of the following parts, under the general title *Optics and photonics — Vocabulary for telescopic systems*:

— *Part 1: General terms and alphabetical indexes of terms in ISO 14132*

— *Part 2: Terms for binoculars, monoculars and spotting scopes*

— *Part 3: Terms for telescopic sights*

— *Part 4: Terms for astronomical telescopes*

— *Part 5: Terms for night vision devices*

Optics and photonics — Vocabulary for telescopic systems —

Part 3: Terms for telescopic sights

1 Scope

This part of ISO 14132 applies to telescopic sights used on hand-held firearms and airguns and gives terms and definitions for telescopic sights only.

The alphabetical indexes of terms in English, French, Russian, and German that are common for all published parts of ISO 14132 are published in ISO 14132-1.

The definitions can be changed, if required, by introducing derivative attributes into them, revealing the meanings of the terms used, showing the objects covered by the scope of the notion being defined. These changes will not affect the scope and contents of this part of ISO 14132.

NOTE In addition to terms used in the three official ISO languages (English, French, and Russian), this part of ISO 14132 gives the equivalent terms and definitions in the German language; these are published under the responsibility of the member body for Germany (DIN). However, only the terms and definitions given in the official languages can be considered as ISO terms and definitions.

2 Terms and definitions

2.1
telescopic sight
telescopic observational instrument which is mounted on hand-held firearms and airguns and used for sighting

2.2
main tube
main body of a *telescopic sight* (2.1)

2.3
central tube
in most cases slimmest part of a *telescopic sight* (2.1) located between eyepiece and objective cell

2.4
objective tube
straight, mostly cylindrical part of the *main tube* (2.2) in which the objective housing is mounted

2.5
parallax
angular deviation between the *aiming points* (2.12) for on-axis and off-axis observation

2.6
parallax-free distance
object distance for which the shift between the image of an object and the axial position of the reticle becomes imperceptible for on-axis and off-axis observations

Note 1 to entry: In the above case, the angular deviation for off-axis observation is zero.

2.7
elevation adjustment
system to adjust the relative position of the object image and the reticle in vertical direction

2.8
windage adjustment
system to adjust the relative position of the object image and the reticle in horizontal direction

2.9
reticle adjustment range
independent adjustment range for the relative position of object image and the reticle in each of the two perpendicular directions for windage and elevation corrections

2.10
reticle tracking
angular deviation between the reticle adjustment axes (elevation and windage) and the axes that are defined by the reticle lines

2.11
aiming mark
structural part of the reticle which is used for aiming

Note 1 to entry: Note that besides the term "aiming mark" in some languages (but not in English) there exists a special term for the hunting style type of aiming mark, e.g. in German "Absehen", "Abkommen".

2.12
aiming point
point on an object which corresponds with the *aiming mark* (2.11)

2.13
first image plane
image plane of the objective

2.14
second image plane
image plane of the erecting system

2.15
subtension value
subtension measure
equivalent of a measure of the *aiming mark* (2.11) in the object plane

2.16
point of impact
point where the bullet actually hits the target

2.17
shift of point of impact
sighting in
action to eliminate the deviation of *point of impact* (2.16) from line of sight

2.18
line of sight shift
displacement of the line of sight due to zooming or focusing

2.19
image jump
shift of the *aiming point* (2.12) due to a toggle of the position or change in the movement direction of the magnification changer

2.20
zoom riflescope
telescopic sight (2.1) with continuously changeable magnification

2.21
eye relief range
distance range from the vertex of the last optical surface to the eye's pupil over which the full field of view can be overlooked without noticeable vignetting

Note 1 to entry: For telescopic sights an eye pupil diameter of 3 mm (representing daylight conditions) is assumed.

Bibliography

[1] ISO 14132-1, *Optics and photonics — Vocabulary for telescopic systems — Part 1: General terms and alphabetical indexes of terms in ISO 14132*