



International
Standard

ISO 24163-1

**Clamp-in tyre valves for tyre
pressure monitoring systems —**

Part 1:

**Definition, types, dimensions and
valve interface**

Valves à visser pour système de contrôle de la pression des pneus —

Partie 1: Définitions, types, dimensions et interface de valve

**First edition
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Foreword

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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 document 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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This document was prepared by Technical Committee ISO/TC 31, *Tyres, rims and valves*, Subcommittee SC 9, *Valves for tube and tubeless tyres*.

A list of all parts in the ISO 24163 series can be found on the ISO website.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

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Clamp-in tyre valves for tyre pressure monitoring systems —

Part 1:

Definition, types, dimensions and valve interface

1 Scope

This document specifies types of clamp-in TPMS tubeless valves and associated requirements. It applies to the tyre valves assembled on a valve hole of rim with diameter 11,3 mm for passenger cars and light commercial vehicles (M1 and N1 categories). This document does not include the design, development or requirements of the TPMS housing or the interface between said housing and the valve.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 9413, *Tyre valves — Dimensions and designation*

3 Terms and definitions

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

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

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

3.1

clamp-in valve

valve for tubeless tyre, designed to be used with a valve core, a cap, an O-ring or a rubber grommet and to be fixed with a hex nut and potentially a ring washer

3.2

retainer washer

washer mounted on valve body that retains sealing element

3.3

tyre pressure monitoring system

TPMS

system which directly monitors the tyre pressure and which alert in case of under pressure

3.4

traceability

code referring to production date

3.5

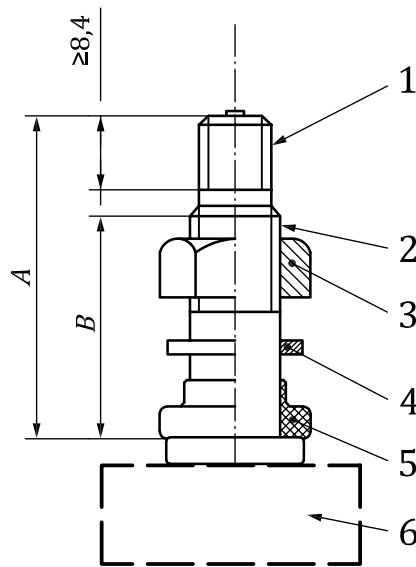
valve body

elongated part of valve usually with thread for nut and for cap in the external part and thread for inner core inside

4 Valve body dimensions

Main body dimensions are listed in [Table 1](#). Cap thread length should be a minimum of 8,4 mm but 5 mm as a minimum is also acceptable to improve nose resistance. See [Figures 1](#) and [2](#).

Dimensions in millimetres



Key

- 1 cap thread (8V1)
- 2 nut thread
- 3 nut (shape only illustrative)
- 4 nut washer (optional)
- 5 sealing (shape only illustrative)
- 6 TPMS housing

Figure 1 — Valve body scheme

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