

# JIS

JAPANESE  
INDUSTRIAL  
STANDARD

Translated and Published by  
Japanese Standards Association

---

---

**JIS B 7518** : 2018

(JMA/JSA)

**Vernier, dial and digital depth  
gauges**

---

ICS 17.040.30

Reference number : **JIS B 7518 : 2018 (E)**

B 7518 : 2018

Date of Establishment: 1960-1-1

Date of Revision: 2018-01-22

Date of Public Notice in Official Gazette: 2018-01-22

Investigated by: Japanese Industrial Standards Committee

Standards Board for ISO area

Technical Committee on Basic Engineering

---

JIS B 7518:2018, First English edition published in 2018-04

Translated and published by: Japanese Standards Association  
Mita MT Building, 3-13-12, Mita, Minato-ku, Tokyo, 108-0073 JAPAN

---

In the event of any doubts arising as to the contents,  
the original JIS is to be the final authority.

© JSA 2018

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from the publisher.

Printed in Japan

HT/AT

PROTECTED BY COPYRIGHT

## Contents

	Page
Introduction .....	1
1 Scope .....	1
2 Normative references .....	1
3 Terms and definitions .....	2
4 Design specification (design characteristics) .....	2
4.1 General .....	2
4.2 Names of main parts .....	2
4.3 Dimensions .....	3
4.4 Types of indicating devices .....	4
4.5 Measuring faces .....	8
4.6 Construction and function .....	8
4.7 Hardness .....	8
5 Metrological characteristics and performance .....	9
5.1 General .....	9
5.2 Effect of beam locking .....	9
5.3 Maximum permissible error of indication (MPE) .....	9
5.4 Performance .....	11
6 Marking in product documentation .....	13
7 Proving conformance with specifications .....	13
7.1 General .....	13
7.2 Measurement standards for the calibration of metrological characteristics and performance .....	13
7.3 Standard reference temperature .....	13
8 Inspections .....	13
9 Marking .....	13
Annex A (informative) Notes on use .....	14
Annex B (informative) Typical data sheet for design specification (design characteristics), metrological characteristics and performance .....	15
Annex JA (informative) Marking in product documentation .....	16
Annex JB (informative) Comparison table between JIS and corresponding International Standard .....	17

## Foreword

This Japanese Industrial Standard has been revised by the Minister of Economy, Trade and Industry through deliberations at the Japanese Industrial Standards Committee as the result of proposal for revision of Japanese Industrial Standard submitted by Japan Precision Measuring Instruments Manufacturers Association (JMA)/Japanese Standards Association (JSA) with the draft being attached, based on the provision of Article 12 Clause 1 of the Industrial Standardization Law applicable to the case of revision by the provision of Article 14.

Consequently **JIS B 7518**:1993 is replaced with this Standard.

This **JIS** document is protected by the Copyright Law.

Attention is drawn to the possibility that some parts of this Standard may conflict with patent rights, applications for a patent after opening to the public or utility model rights. The relevant Minister and the Japanese Industrial Standards Committee are not responsible for identifying any of such patent rights, applications for a patent after opening to the public or utility model rights.

# Vernier, dial and digital depth gauges

## Introduction

This Japanese Industrial Standard has been prepared based on **ISO 13385-2:2011**, Edition 1, with some modifications of the technical contents to correspond to the actual situations of manufacturing industries and application.

The vertical lines on both sides and dotted underlines indicate changes from the corresponding International Standard. A list of modifications with the explanation is given in Annex JB.

## 1 Scope

This Standard specifies calliper depth gauges with analogue indication: vernier scale or circular scale (dial), and those with digital indication.

NOTE : The International Standard corresponding to this Standard and the symbol of degree of correspondence are as follows.

ISO 13385-2:2011 *Geometrical product specifications (GPS)—Dimensional measuring equipment—Part 2: Calliper depth gauges; Design and metrological characteristics* (MOD)

In addition, symbols which denote the degree of correspondence in the contents between the relevant International Standard and **JIS** are IDT (identical), MOD (modified) and NEQ (not equivalent) according to **ISO/IEC Guide 21-1**.

## 2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this Standard. The most recent editions of the standards (including amendments) indicated below shall be applied.

JIS B 0641-1 *Geometrical Product Specifications (GPS)—Inspection by measurement of workpieces and measuring equipment—Part 1: Decision rules for proving conformance or nonconformance with specifications*

NOTE : Corresponding International Standard: ISO 14253-1 *Geometrical Product Specifications (GPS)—Inspection by measurement of workpieces and measuring equipment—Part 1: Decision rules for proving conformance or non-conformance with specifications*

JIS B 0642 *Geometrical product specifications (GPS)—General concepts and requirements for GPS measuring equipment*

NOTE : Corresponding International Standard: ISO 14978 *Geometrical Product Specifications (GPS)—General concepts and requirements for GPS measuring equipment*

JIS B 0680 *Geometrical Product Specifications (GPS)—Standard reference temperature for geometrical product specification and verification*

JIS B 7503 *Mechanical dial gauges*