DIN EN ISO 3611:2011-03 (E)

Geometrical product specifications (GPS) - Dimensional measuring equipment: Micrometers for external measurements - Des ign and metrological characteristics (ISO 3611:2010)

Contents

Page

Foreword 3

Introduction 4

1 Scope 5

2 Normative references 5

3 Terms and definitions 5

4 Design characteristics 6
4.1 General design and nomenclature 6
4.2 Main dimensions 7
4.3 Types of indicating devices 7
4.3.1 General 7
4.3.2 Analogue indicating devices 8
4.3.3 Digital indicating devices, with mechanical digital display 9
4.3.4 Digital indicating devices with electronic digital display 10
4.4 Protection for field use 10
4.5 Frame 11
4.6 Measuring faces 11
4.7 Measuring force limiting device 11
4.8 Adjustment devices 11
4.9 Design characteristics (manufacturer's specification) 11

5 Metrological characteristics 12
5.1 General 12
5.2 Effect of spindle clamp 12
5.3 Maximum permissible error of indication (limited by MPE) 12
5.3.1 General 12
5.3.2 Full surface contact error, J (limited by MPEJ) 12
5.3.3 Repeatability, R (limited by MPER) 12
5.3.4 Partial surface contact error, E (limited by MPEE) 12
5.4 Measuring forces (limited by MPL) 12
5.5 Instrument specification sheet 12

6 Proof of conformance with specifications 13

7 Marking 13

Annex A (informative) Example of an error-of-indication curve 14

Annex B (informative) Example of data sheet for micrometers for external measurements 15

Annex C (informative) Calibration of metrological characteristics 16

Annex D (informative) Error tests 17

Annex E (informative) Notes on use 19

Annex F (informative) Relation to the GPS matrix model 20

Bibliography 22