DIN EN ISO 3611:2024-09 (E)

Geometrical product specifications (GPS) - Dimensional measuring equipment - Design and metrological characteristics of micrometers for external measurements (ISO 3611:2023)

Contents

Page

European foreword ... **3**

Foreword ... **4**

Introduction ... **5**

1 Scope ... **6**

2 Normative references ... **6**

3 Terms and definitions ... **6**

4 Design characteristics ... **7**
4.1 General design and nomenclature ... 7
4.2 Dimensions ... 8
4.3 Types of indicating device ... 8
4.3.1 General ... 8
4.3.2 Analogue indicating devices ... 8
4.3.3 Digital indicating devices ... 9
4.4 Frame ... 10
4.5 Measuring force limiting device ... 10

5 Metrological characteristics ... **10**
5.1 General ... 10
5.2 Rated operating conditions ... 10
5.3 Reference point ... 10
5.4 Test methods ... 10
5.5 Length measurement error, E (limited by E_{MPE}) ... 11
5.5.1 General ... 11
5.5.2 Test point selection ... 11
5.6 Variation in length measurement error, V (limited by V_{MPE}) ... 11
5.6.1 General ... 11
5.6.2 Number of tests ... 12
5.6.3 Testing with optical parallels ... 12
5.7 Measuring forces ... 12
5.8 Specifications ... 12
5.8.1 General ... 12
5.8.2 Classification system ... 12

6 Determination of conformity to specifications ... **15**
6.1 General ... 15
6.2 Measurement uncertainty ... 15
6.3 Decision rule ... 15

7 Marking ... **15**

Annex A (informative) **Calibration guidelines for metrological characteristics** ... **16**

Annex B (informative) **Notes on use** ... **17**

Annex C (informative) **Relation to the GPS matrix model** ... **18**

Bibliography ... **19**