SECTION G — PHYSICS

G01 MEASURING; TESTING

G01B MEASURING LENGTH, THICKNESS OR SIMILAR LINEAR DIMENSIONS; MEASURING ANGLES; MEASURING AREAS; MEASURING IRREGULARITIES OF SURFACES OR CONTOURS

Note(s) [4]

1. This subclass covers measuring of position or displacement in terms of linear or angular dimensions.
2. In this subclass, the groups are distinguished by the measurement technique which is of major importance. Thus the mere application of other techniques or means for giving a final indication does not affect the classification.
3. Attention is drawn to the Notes following the title of class G01.
4. Machines operated on similar principles to the hand-held devices specified in this subclass are classified with these devices.
5. Measuring arrangements or details thereof covered by two or more of groups G01B 3/00-G01B 17/00 are classified in group G01B 21/00 if no single other group can be selected as being predominantly applicable.

Subclass index

1/00 Measuring instruments characterised by the selection of material therefor [1, 2006.01]

3/00 Measuring instruments characterised by the use of mechanical techniques [1, 2, 2006.01]

Note(s) [2023.01]

When classifying in this group, mechanical arrangements for measuring specific parameters can be further classified in group G01B 5/00.

3/02 • Rulers with scales or marks for direct reading (measuring tapes G01B 3/10) **[1, 2006.01, 2020.01]**
3/04 • • rigid **[1, 2006.01]**
3/06 • • • folding **[1, 2006.01]**
3/08 • • • extensible **[1, 2006.01]**
3/10 • Measuring tapes **[1, 2006.01, 2020.01]**
3/1003 • • characterised by structure or material; characterised by layout or indicia **[2020.01]**
3/1005 • • Means for controlling winding or unwinding of tapes **[2020.01]**
3/1007 • • • Means for locking **[2020.01]**
3/102 • • • Means for damping **[2020.01]**
3/1041 • • characterised by casings **[2020.01]**
3/1043 • • • Details of internal structure thereof, e.g. means for coupling separately moulded casing halves **[2020.01]**
3/1046 • • • Details of external structure thereof, e.g. shapes for ensuring firmer hold **[2020.01]**
3/1048 • • • • Integrated means for affixing or holding **[2020.01]**
3/1056 • • Tape end arrangements, e.g. end-hooks **[2020.01]**
3/1061 • • Means for displaying or assisting reading of length measurement **[2020.01]**
3/1069 • • • Electronic or mechanical display arrangements **[2020.01]**
3/1071 • • Separate means for supporting or affixing measuring tapes **[2020.01]**
3/1084 • • Tapes combined with arrangements for functions other than the measuring of lengths **[2020.01]**
3/1089 • • • for marking, drawing or cutting **[2020.01]**
3/1092 • • • for performing length measurements and at least one other measurement of a different nature, e.g. bubble-type level **[2020.01]**
3/1094 • • • for recording information or for performing calculations **[2020.01]**
3/11 • Chains for measuring length **[1, 2006.01]**
3/12 • Measuring wheels **[1, 2006.01]**
3/14 • Templates for checking contours **[1, 2006.01]**
3/16 • Compasses, i.e. with a pair of pivoted arms **[1, 2006.01]**
3/18 • Micrometers **[1, 2006.01]**
3/20 • Slide gauges **[1, 2006.01]**
3/22 • Feeler-pin gauges, e.g. dial gauges (for measuring contours or curvatures G01B 5/20) **[1, 2006.01]**
3/24 • • with open yoke, i.e. calipers **[1, 2006.01]**
3/26 • • Plug gauges **[1, 2006.01]**
3/28 • • Depth gauges **[1, 2006.01]**

3/30 • Bars, blocks, or strips in which the distance between a pair of faces is fixed, although it may be preadjustable, e.g. end measure, feeler strip **[1, 2006.01]**

3/32 • • Holders therefor **[1, 2006.01]**

3/34 • Ring or other apertured gauges, e.g. "go/no-go" gauge **[1, 2006.01]**

3/36 • • for external screw threads **[1, 2006.01]**

3/38 • Gauges with an open yoke and opposed faces, i.e. calipers, in which the internal distance between the faces is fixed, although it may be preadjustable **[1, 2006.01]**

3/40 • • for external screw threads **[1, 2006.01]**

3/42 • • of limit-gauge type, i.e. "go/no-go" (G01B 3/40 takes precedence) **[1, 2006.01]**

3/44 • • • preadjustable for wear or tolerance **[1, 2006.01]**

3/46 • Plug gauges for internal dimensions with engaging surfaces which are at a fixed distance, although they may be preadjustable **[1, 2006.01]**

3/48 • • for internal screw threads **[1, 2006.01]**

3/50 • • of limit-gauge type, i.e. "go/no-go" (G01B 3/48 takes precedence) **[1, 2006.01]**

3/52 • • • preadjustable for wear or tolerance **[1, 2006.01]**

3/56 • Gauges for measuring angles or tapers, e.g. conical calipers **[1, 2006.01]**

5/00 Measuring arrangements characterised by the use of mechanical techniques [1, 2, 2006.01]

Note(s) [2023.01]

When classifying in this group, specific mechanical measuring instruments can be further classified in group G01B 3/00.

5/004 • for measuring coordinates of points **[6, 2006.01]**

5/008 • • using coordinate measuring machines **[6, 2006.01]**

5/012 • • • Contact-making feeler heads therefor **[6, 2006.01]**

5/016 • • • • Constructional details of contacts **[6, 2006.01]**

5/02 • for measuring length, width, or thickness (G01B 5/004, G01B 5/08 take precedence) **[1, 6, 2006.01]**

5/04 • • specially adapted for measuring length or width of objects while moving **[1, 2006.01]**

5/06 • • for measuring thickness **[1, 2006.01]**

5/08 • for measuring diameters **[1, 2006.01]**

5/10 • • of objects while moving **[1, 2006.01]**

5/12 • • internal diameters **[1, 2006.01]**

5/14 • for measuring distance or clearance between spaced objects or spaced apertures (G01B 5/24 takes precedence) **[1, 2006.01]**

5/16 • • between a succession of regularly spaced objects or regularly spaced apertures **[1, 2006.01]**

5/18 • for measuring depth **[1, 2006.01]**

5/20 • for measuring contours or curvatures **[1, 2006.01]**

5/207 • • using a plurality of fixed, simultaneously operating transducers (G01B 5/213-G01B 5/22 take precedence) **[6, 2006.01]**

5/213 • • for measuring radius of curvature **[6, 2006.01]**

5/22 • • Spherometers **[1, 2006.01]**

5/24 • for measuring angles or tapers; for testing the alignment of axes **[1, 2006.01]**

5/245 • • for testing perpendicularity **[6, 2006.01]**

5/25 • • for testing the alignment of axes **[1, 2006.01]**

5/252 • • • for measuring eccentricity, i.e. lateral shift between two parallel axes **[6, 2006.01]**

5/255 • • for testing wheel alignment **[1, 2006.01]**

5/26 • for measuring areas, e.g. planimeters **[1, 2006.01]**

5/28 • for measuring roughness or irregularity of surfaces **[1, 2006.01]**

5/30 • for measuring the deformation in a solid, e.g. mechanical strain gauge **[1, 2006.01]**

7/00 Measuring arrangements characterised by the use of electric or magnetic techniques [1, 2006.01]

7/004 • for measuring coordinates of points **[6, 2006.01]**

7/008 • • using coordinate measuring machines **[6, 2006.01]**

7/012 • • • Contact-making feeler heads therefor **[6, 2006.01]**

7/016 • • • • Constructional details of contacts **[6, 2006.01]**

7/02 • for measuring length, width, or thickness (G01B 7/004, G01B 7/12 takes precedence) **[1, 6, 2006.01]**

7/04 • • specially adapted for measuring length or width of objects while moving **[1, 2006.01]**

7/06 • • for measuring thickness **[1, 2006.01]**

7/12 • for measuring diameters **[1, 2006.01]**

7/13 • • Internal diameters **[6, 2006.01]**

7/14 • for measuring distance or clearance between spaced objects or spaced apertures (G01B 7/30 takes precedence) **[1, 2006.01]**

7/15 • • being regularly spaced **[6, 2006.01]**

7/16 • for measuring the deformation in a solid, e.g. by resistance strain gauge **[1, 2006.01]**

7/24 • • using change in magnetic properties **[1, 2006.01]**

7/26 • for measuring depth **[1, 2006.01]**

7/28 • for measuring contours or curvatures **[1, 2006.01]**

7/287 • • using a plurality of fixed, simultaneously operating transducers (G01B 7/293 takes precedence) **[6, 2006.01]**

7/293 • • for measuring radius of curvature **[6, 2006.01]**

7/30 • for measuring angles or tapers; for testing the alignment of axes **[1, 2006.01]**

7/305 • • for testing perpendicularity **[6, 2006.01]**

7/31 • • for testing the alignment of axes **[1, 2006.01]**

7/312 • • • for measuring eccentricity, i.e. lateral shift between two parallel axes **[6, 2006.01]**

7/315 • • for testing wheel alignment **[1, 2006.01]**

7/32 • for measuring areas **[1, 2006.01]**

7/34 • for measuring roughness or irregularity of surfaces **[1, 2006.01]**

9/00 Measuring instruments characterised by the use of optical techniques [1, 2, 2006.01]

Note(s) [2023.01]

When classifying in this group, optical arrangements for measuring specific parameters can be further classified in group G01B 11/00.

9/02 • Interferometers **[1, 2006.01, 2022.01]**

9/02001 • • characterised by controlling or generating intrinsic radiation properties **[2022.01]**

9/02002 • • • using two or more frequencies **[2022.01]**

9/02003 • • • • using beat frequencies **[2022.01]**

9/02004 • • • • using frequency scans **[2022.01]**

9/02015 • • characterised by the beam path configuration **[2022.01]**

9/02017 • • • with multiple interactions between the target object and light beams, e.g. beam reflections occurring from different locations **[2022.01]**

9/02018 • • • • Multipass interferometers, e.g. double-pass **[2022.01]**
9/02055 • Reduction or prevention of errors; Testing; Calibration **[2022.01]**
9/02056 • • Passive reduction of errors **[2022.01]**
9/02061 • • • Reduction or prevention of effects of tilts or misalignment **[2022.01]**
9/0209 • Low-coherence interferometers **[2022.01]**
9/02091 • • Tomographic interferometers, e.g. based on optical coherence **[2022.01]**
9/02097 • Self-interferometers **[2022.01]**
9/02098 • • Shearing interferometers **[2022.01]**
9/021 • • using holographic techniques **[2, 2006.01]**
9/023 • • • for contour producing (G01B 9/025-G01B 9/029 take precedence) **[2, 2006.01]**
9/025 • • • Double-exposure technique **[2, 2006.01]**
9/027 • • • in real time **[2, 2006.01]**
9/029 • • • by time averaging **[2, 2006.01]**
9/04 • Measuring microscopes **[1, 2006.01]**
9/06 • Measuring telescopes **[1, 2006.01]**
9/08 • Optical projection comparators **[1, 2006.01]**
9/10 • Goniometers for measuring angles between surfaces **[1, 2006.01]**

11/00 Measuring arrangements characterised by the use of optical techniques [1, 2, 2006.01]

Note(s) [2023.01]

When classifying in this group, specific optical measuring instruments can be further classified in group G01B 9/00.

11/02 • for measuring length, width, or thickness (G01B 11/08 takes precedence) **[1, 2006.01]**
11/03 • • by measuring coordinates of points **[3, 2006.01]**
11/04 • • specially adapted for measuring length or width of objects while moving **[1, 2006.01]**
11/06 • • for measuring thickness **[1, 2006.01]**
11/08 • for measuring diameters **[1, 2006.01]**
11/10 • • of objects while moving **[1, 2006.01]**
11/12 • • internal diameters **[1, 2006.01]**
11/14 • for measuring distance or clearance between spaced objects or spaced apertures (G01B 11/26 takes precedence; rangefinders G01C 3/00) **[1, 2006.01]**
11/16 • for measuring the deformation in a solid, e.g. optical strain gauge **[1, 2006.01]**
11/22 • for measuring depth **[1, 2006.01]**
11/24 • for measuring contours or curvatures **[1, 2006.01]**
11/245 • • using a plurality of fixed, simultaneously operating transducers (G01B 11/255 takes precedence) **[7, 2006.01]**
11/25 • • by projecting a pattern, e.g. moiré fringes, on the object (G01B 11/255 takes precedence) **[7, 2006.01]**
11/255 • • for measuring radius of curvature **[7, 2006.01]**
11/26 • for measuring angles or tapers; for testing the alignment of axes **[1, 2006.01]**
11/27 • • for testing the alignment of axes **[1, 2006.01]**
11/275 • • for testing wheel alignment **[1, 2006.01]**
11/28 • for measuring areas **[1, 2006.01]**
11/30 • for measuring roughness or irregularity of surfaces **[1, 2006.01]**

13/00 Measuring arrangements characterised by the use of fluids [1, 2006.01]

13/02 • for measuring length, width, or thickness (G01B 13/08 takes precedence) **[1, 2006.01]**
13/03 • • by measuring coordinates of points **[3, 2006.01]**
13/04 • • specially adapted for measuring length or width of objects while moving **[1, 2006.01]**
13/06 • • for measuring thickness **[1, 2006.01]**
13/08 • for measuring diameters **[1, 2006.01]**
13/10 • • internal diameters **[1, 2006.01]**
13/12 • for measuring distance or clearance between spaced objects or spaced apertures (G01B 13/18 takes precedence) **[1, 2006.01]**
13/14 • for measuring depth **[1, 2006.01]**
13/16 • for measuring contours or curvatures **[1, 2006.01]**
13/18 • for measuring angles or tapers; for testing the alignment of axes **[1, 2006.01]**
13/19 • • for testing the alignment of axes **[1, 2006.01]**
13/195 • • for testing wheel alignment **[1, 2006.01]**
13/20 • for measuring areas, e.g. pneumatic planimeters **[1, 2006.01]**
13/22 • for measuring roughness or irregularity of surfaces **[1, 2006.01]**
13/24 • for measuring the deformation in a solid **[3, 2006.01]**

15/00 Measuring arrangements characterised by the use of electromagnetic waves or particle radiation, e.g. by the use of microwaves, X-rays, gamma rays or electrons (characterised by the use of optical techniques G01B 9/00, G01B 11/00) **[1, 4, 2006.01]**

15/02 • for measuring thickness **[1, 2006.01]**
15/04 • for measuring contours or curvatures **[1, 2006.01]**
15/06 • for measuring the deformation in a solid **[1, 2006.01]**
15/08 • for measuring roughness or irregularity of surfaces **[6, 2006.01]**

17/00 Measuring arrangements characterised by the use of infrasonic, sonic, or ultrasonic vibrations [1, 4, 2006.01]

17/02 • for measuring thickness **[1, 2006.01]**
17/04 • for measuring the deformation in a solid, e.g. by vibrating string **[1, 2006.01]**
17/06 • for measuring contours or curvatures **[6, 2006.01]**
17/08 • for measuring roughness or irregularity of surfaces **[6, 2006.01]**

21/00 Measuring arrangements or details thereof, where the measuring technique is not covered by the other groups of this subclass, unspecified or not relevant [3, 2006.01]

21/02 • for measuring length, width, or thickness (G01B 21/10 takes precedence) **[3, 2006.01]**
21/04 • • by measuring coordinates of points **[3, 2006.01]**
21/06 • • specially adapted for measuring length or width of objects while moving **[3, 2006.01]**
21/08 • • for measuring thickness **[3, 2006.01]**
21/10 • for measuring diameters **[3, 2006.01]**
21/12 • • of objects while moving **[3, 2006.01]**
21/14 • • internal diameters **[3, 2006.01]**
21/16 • for measuring distance or clearance between spaced objects **[3, 2006.01]**
21/18 • for measuring depth **[3, 2006.01]**
21/20 • for measuring contours or curvatures, e.g. determining profile **[3, 2006.01]**
21/22 • for measuring angles or tapers; for testing the alignment of axes **[3, 2006.01]**
21/24 • • for testing the alignment of axes **[3, 2006.01]**
21/26 • • for testing wheel alignment **[3, 2006.01]**
21/28 • for measuring areas **[3, 2006.01]**

21/30 • for measuring roughness or irregularity of surfaces **[3, 2006.01]**

21/32 • for measuring the deformation in a solid **[3, 2006.01]**