

## G12 INSTRUMENT DETAILS

### G12B DETAILS OF INSTRUMENTS, OR COMPARABLE DETAILS OF OTHER APPARATUS, NOT OTHERWISE PROVIDED FOR

#### Notes

- (1) This subclass covers only details which are not restricted to measuring instruments or to any other apparatus covered by a single class.
- (2) This subclass does not cover:
  - details covered by any other subclass in section A, F, G or H. In particular, details restricted to the measuring instruments are covered by the relevant subclasses of class G01, e.g. G01D;
  - constructional details restricted to electric apparatus, e.g. casings, screenings, which are covered by subclass H05K or the relevant subclass in section H.
- (3) Attention is drawn to the Notes following the title of section G, especially as regards to the definition of the term “measuring” in Note (2) following the title of class G01.

#### Subclass Index

SENSITIVE ELEMENTS PRODUCING MOVEMENT OR DISPLACEMENT; DETAILS OF MOVEMENTS .....	1/00; 3/00	HOUSING, SUPPORTING; INDICATING ELEMENTS.....	9/00; 11/00
ADJUSTING POSITION OR ATTITUDE; COMPENSATING FOR TEMPERATURE EFFECTS .....	5/00; 7/00	CALIBRATING.....	13/00
		COOLING; SCREENING.....	15/00; 17/00
		DETAILS OF APPARATUS USING SCANNING-PROBE TECHNIQUES .....	21/00

<b>1/00 Sensitive elements capable of producing movement or displacement for purposes not limited to measurement; Associated transmission mechanisms therefor</b>	<b>9/08</b>	. Supports; Devices for carrying
<b>1/02</b> . Compound strips or plates, e.g. bimetallic (thermometers using bimetallic elements G01K 5/62)	<b>9/10</b>	. . Instrument boards; Panels; Desks; Racks; Frameworks
<b>1/04</b> . Hollow bodies having parts which are deformable or displaceable under pressure, e.g. Bourdon tube, bellows (bellows in general F16J 3/00)	<b>11/00</b>	<b>Indicating elements; Illumination thereof</b>
<b>3/00 Details of movements not otherwise provided for</b> (details of apparatus using scanning-probe techniques G12B 21/00; damping of shock or vibrations in general F16F; avoiding out-of-balance forces F16F 15/00; testing balance G01M) [1,7]	<b>11/02</b>	. Scales; Dials
<b>3/02</b> . Caging of movements, i.e. locking of movements when not in use	<b>11/04</b>	. Pointers; Setting-mechanisms therefor
<b>3/04</b> . Suspensions (bearings F16C)	<b>13/00</b>	<b>Calibrating of instruments or apparatus</b> (calibrating of measuring instruments G01)
<b>3/06</b> . Reducing effects of friction, e.g. by vibration (by lubrication F16N)	<b>15/00</b>	<b>Cooling</b> (by refrigeration, e.g. circulation of refrigerated fluid, F25D; heat-exchange or heat-transfer details of general application F28F)
<b>3/08</b> . Damping of movements, e.g. to promote rapid non-oscillatory movement to a final reading	<b>15/02</b>	. by closed-cycle fluid-circulating systems
<b>3/10</b> . . using eddy currents	<b>15/04</b>	. by currents of fluid, e.g. air, in open cycle
<b>5/00 Adjusting position or attitude, e.g. level, of instruments or other apparatus, or of parts thereof</b> (levels <i>per se</i> G01C 9/00); <b>Compensating for the effects of tilting or acceleration, e.g. for optical apparatus</b>	<b>15/06</b>	. by contact with heat-absorbing or radiating masses, e.g. heat-sink
<b>7/00 Compensating for the effects of temperature</b> (by cooling G12B 15/00)	<b>17/00</b>	<b>Screening</b> (insulation or other protection of buildings E04B; emergency protection of apparatus in general F16P 7/00; in connection with acoustic waves G10K 11/00; in connection with nuclear radiation G21F)
<b>9/00 Housing or supporting of instruments or other apparatus</b>	<b>Note</b>	
<b>9/02</b> . Casings; Housings; Cabinets (sealing arrangements for transmission members F16J, particularly F16J 15/50)	This group <u>covers</u> :	
<b>9/04</b> . . Details, e.g. cover	– the protection of instruments or other apparatus from external radiation or other influences;	
<b>9/06</b> . . . Metal casings	– the prevention of the emission of undesirable radiation or other influences by instruments or other apparatus.	
	<b>17/02</b>	. from electric or magnetic fields, e.g. radio waves
	<b>17/04</b>	. from ultra-violet, visible, or infra-red light (screening of lighting devices F21V; optical filters G02B 5/20)

## G12B

- 17/06 . from heat (G12B 17/04 takes precedence; cooling G12B 15/00)
- 17/08 . from influences producing mechanical damage, e.g. caused by blast, by external object, by person (G12B 17/02 to G12B 17/06 take precedence)

### 21/00 Details of apparatus using scanning-probe techniques [7]

#### Notes

- (1) In this group the following expression is used with the meaning indicated: [7]
  - “probe” means an interfacing device, e.g. a needle with a sharp tip, defining a transducing zone where an interaction, e.g. generation of a tunnelling current when in close proximity to a surface, is supported. [7]
- (2) Attention is drawn to the Notes following the titles of class B81 and subclass B81B relating to “micro-structural devices” and “micro-structural systems” and the Notes following the title of subclass B82B relating to “nano-structures”. [7]
- (3) The following is a list of places where specific applications using scanning-probe techniques are provided for: [7]
 

B82B	3/00	Manufacture or treatment of nano-structures
C23C		Surface treatment of metallic material

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|------|-------|---|
| G01B |       | Dimensional measurement   |
| G01N | 13/10 | Investigating or analysing surface structures in atomic ranges                                    |
| G11B | 9/12  |   |
| G11B | 11/24 |   |
| G11B | 13/08 | Recording or reproducing information  |
| H01J | 37/00 | Discharge tubes with provision for introducing objects or material to be exposed to the discharge |
| H01L |       | Processes or apparatus adapted for the treatment of semiconductors or solid state devices         |

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| 21/02 | . Probes [7]   |
| 21/04 | . . Tunnel effect probes [7]                                     |
| 21/06 | . . Near-field optical probes [7]                                |
| 21/08 | . . Atomic force probes [7]                                      |
| 21/10 | . . Magnetic force probes [7]                                    |
| 21/12 | . . Electrostatic force probes [7]                               |
| 21/20 | . Scanning or positioning arrangements [7]                       |
| 21/22 | . . Structural details [7]                                       |
| 21/24 | . . Compensation for temperature or vibration induced errors [7] |