CPC COOPERATIVE PATENT CLASSIFICATION

G PHYSICS
(NOTES omitted)

INSTRUMENTS

G01 MEASURING; TESTING
(NOTES omitted)

G01D MEASURING NOT SPECIALLY ADAPTED FOR A SPECIFIC VARIABLE; ARRANGEMENTS FOR MEASURING TWO OR MORE VARIABLES NOT COVERED IN A SINGLE OTHER SUBCLASS; TARIFF METERING APPARATUS; MEASURING OR TESTING NOT OTHERWISE PROVIDED FOR

NOTES

1. This subclass covers :
   - devices for indicating or recording the results of measurements, not peculiar to variables covered by a single other subclass;
   - analogous apparatus but in which the input is not a variable to be measured, e.g. a hand operation;
   - details of measuring instruments, which are of general interest;
   - measurement transducers not adapted solely for the measurement of a single specified variable and not provided for elsewhere, i.e. means for converting the output of a sensing member to another variable where the form or nature of the sensing member does not constrain the means for converting;
   - measuring or testing not otherwise provided for.
2. Attention is drawn to the Notes following the title of class G01.

WARNING

In this subclass non-limiting references (in the sense of paragraph 39 of the Guide to the IPC) may still be displayed in the scheme.

1/00 **Measuring arrangements giving results other than momentary value of variable, of general application** (G01D 3/00 takes precedence; in tariff metering apparatus G01D 4/00; transducers not specially adapted for a specific variable G01D 5/00)

1/02 . giving mean values, e.g. root means square values (measuring root mean square values of currents or voltages G01R 19/02)

1/04 . giving integrated values (giving mean values G01D 1/02)

1/06 . . by intermittent summation

1/08 . . . over fixed periods of time

1/10 . giving differentiated values

1/12 . giving a maximum or minimum of a value

1/14 . giving a distribution function of a value, i.e. number of times the value comes within specified ranges of amplitude

1/16 . giving a value which is a function of two or more values, e.g. product or ratio

1/18 . with arrangements for signalling that a predetermined value of an unspecified parameter has been exceeded (G01D 1/14 takes precedence)

3/00 **Indicating or recording apparatus with provision for the special purposes referred to in the subgroups**

3/02 . with provision for altering or correcting the law of variation

3/021 . . {using purely analogue techniques}

3/022 . . {having an ideal characteristic, map or correction data stored in a digital memory}

3/024 . . for range change; Arrangements for substituting one sensing member by another

3/028 . mitigating undesired influences, e.g. temperature, pressure

3/032 . . affecting incoming signal, e.g. by averaging; gating undesired signals

3/036 . . on measuring arrangements themselves

3/0365 . . . {the undesired influence being measured using a separate sensor, which produces an influence related signal}

3/06 . with provision for operation by a null method

3/063 . . {Comparing the measuring value with a reference value which periodically or incidentally scans the measuring range}

3/066 . . {Balancing a force which represents the measuring value, by means of a reference force}

3/08 . with provision for safeguarding the apparatus, e.g. against abnormal operation, against breakdown

3/10 . with provision for switching-in of additional or auxiliary indicators or recorders

4/00 **Tariff metering apparatus** (in taximeters G07B 13/00; apparatus actuated by coins, cards or the like with meter-controlled dispensing of liquid, gas, or electricity G07F 15/00)

4/002 . {Remote reading of utility meters}

4/004 . . {Remote reading of utility meters to a fixed location}
4/006 . . {Remote reading of utility meters to a non-fixed location, i.e. mobile location}
4/008 . {Modifications to installed utility meters to enable remote reading}
4/02 . Details
4/04 . . Resetting-mechanisms, e.g. for indicating members
4/06 . . Arrangement of clutches between driving and indicating member, e.g. of hysteresis clutch (G01D 4/04 takes precedence)
4/08 . . Transfer of indication from a counter into a summing counter
4/10 . Maximum indicating or recording apparatus, i.e. where the tariff for a period is based on a maximum demand within that period
4/12 . . Apparatus for indicating or recording progressive maximum
4/14 . . Fixed-demand indicating or recording apparatus, i.e. where indication is made when a predetermined quantity has been consumed during a time interval greater or less than a predetermined time interval
4/16 . Apparatus for indicating or recording maximum or minimum load hours
4/18 . Apparatus for indicating or recording overconsumption with opposing torque which comes into effect when a predetermined level is exceeded, e.g. subtraction meters

5/00 Mechanical means for transferring the output of a sensing member; Means for converting the output of a sensing member to another variable where the form or nature of the sensing member does not constrain the means for converting; Transducers not specially adapted for a specific variable (G01D 3/00 takes precedence; specially adapted for apparatus giving results other than momentary value of variable G01D 1/00)

NOTE

The subgroups of this main group are distinguished by the means which is of major importance. Thus the mere application of other means for giving a final indication does not affect the classification.

5/02 . using mechanical means
5/04 . . using levers; using cams; using gearing
5/06 . . acting through a wall or enclosure, e.g. by bellows, by magnetic coupling
5/08 . . Reducing the effects of friction, e.g. by applying vibrations
5/10 . . Applying external forces to increase force available for operation of indicating or recording part
5/12 . using electric or magnetic means (G01D 5/06 takes precedence)
5/125 . . {characterised by a first part whose movement represents the measuring value, and by a second part which is moved by an external force in order to follow the movement of the first part}
5/14 . . influencing the magnitude of a current or voltage
5/142 . . . {using Hall-effect devices (measuring magnetic variables using Hall-effect or other galvanomagnetic devices G01R 33/06)}
5/145 . . . . {influenced by the relative movement between the Hall device and magnetic fields (see G01R 33/06)}
5/147 . . . . {influenced by the movement of a third element, the position of Hall device and the source of magnetic field being fixed in respect to each other}
5/16 . . . by varying resistance
5/165 . . . . by relative movement of a point of contact {or actuation} and a resistive track
5/1655 . . . . . {more than one point of contact or actuation on one or more tracks}
5/18 . . . by varying effective impedance of discharge tubes or semiconductor devices
5/183 . . . . {Sensing rotation or linear movement using strain, force or pressure sensors}
5/185 . . . . . {using piezoelectric sensors}
5/20 . . . by varying inductance, e.g. by a movable armature
5/2006 . . . . {by influencing the self-induction of one or more coils (G01D 5/22 takes precedence)}
5/2013 . . . . . {by a movable ferromagnetic element, e.g. a core (G01D 5/2033 takes precedence)}
5/202 . . . . . {by movable a non-ferromagnetic conductive element (G01D 5/2033 takes precedence)}
5/2026 . . . . . {constituting a short-circuiting element}
5/2033 . . . . . {controlling the saturation of a magnetic circuit by means of a movable element, e.g. a magnet}
5/204 . . . . {by influencing the mutual induction between two or more coils (G01D 5/22 takes precedence)}
5/2046 . . . . . {by a movable ferromagnetic element, e.g. a core}
5/2053 . . . . . {by a movable non-ferromagnetic conductive element}
5/206 . . . . . {constituting a short-circuiting element}
5/2066 . . . . . {by movement of a single coil with respect to a single other coil}
5/2073 . . . . . {by movement of a single coil with respect to two or more coils}
5/208 . . . . . {using polyphase currents}
5/2086 . . . . . {by movement of two or more coils with respect to two or more other coils}
5/2093 . . . . . {using polyphase currents}
5/22 . . . . differentially influencing two coils
5/2208 . . . . . {by influencing the self-induction of the coils}
5/2216 . . . . . {by a movable ferromagnetic element, e.g. a core}
5/2225 . . . . . {by a movable non-ferromagnetic conductive element}
5/2233 . . . . . {constituting a short-circuiting element}
5/2241 . . . . . {by controlling the saturation of a magnetic circuit by means of a movable element, e.g. a magnet}
5/225 . . . . . {by influencing the mutual induction between the two coils}

5/2258 . . . . . {by a movable ferromagnetic element, e.g. core}
5/2266 . . . . . {specially adapted circuits therefor}
5/2275 . . . . . {by a movable non-ferromagnetic conductive element}
5/2283 . . . . . {constituting a short-circuiting element}
5/2291 . . . . {Linear or rotary variable differential transformers (LVDTs/RVDTs) having a single primary coil and two secondary coils}
5/24 . . . by varying capacitance
5/2403 . . . {by moving plates, not forming part of the capacitor itself, e.g. shields}
5/2405 . . . {by varying dielectric}
5/241 . . . by relative movement of capacitor electrodes
5/2412 . . . . {by varying overlap}
5/2415 . . . . . {adapted for encoders}
5/2417 . . . . {by varying separation}
5/242 . . . by carrying output of an electrodynamic device, e.g. a tachodynamo
5/243 . . influencing the phase or frequency of ac
5/244 . . influencing characteristics of pulses or pulse trains; generating pulses or pulse trains
5/24404 . . . {Interpolation using high frequency signals}
5/24409 . . . {Interpolation using memories}
5/24414 . . . {Encoders having selectable interpolation factors}
5/24419 . . . {Interpolation not coverd by groups G01D 5/24404, G01D 5/24409 or G01D 5/24414}
5/24423 . . . {Mounting means or means for restraining during shipping (G01D 5/24442 takes precedence)}
5/24428 . . . {Error prevention}
5/24433 . . . {by mechanical means}
5/24438 . . . {Special design of the sensing element or scale}
5/24442 . . . {by mounting means}
5/24447 . . . {by energy backup}
5/24457 . . . {Failure detection}
5/24461 . . . {by redundancy or plausibility}
5/24466 . . . {Comparison of the error value to a threshold}
5/24471 . . . {Error correction}
5/24476 . . . {Signal processing (G01D 5/2448 - G01D 5/24495 take precedence)}
5/2448 . . . {Correction of gain, threshold, offset or phase control}
5/24485 . . . {using other sensors}
5/2449 . . . {using hard-stored calibration data}
5/24495 . . . {using previous values}
5/245 . . . using a variable number of pulses in a train
5/2451 . . . {Incremental encoders (G01D 5/2454 takes precedence)}
5/2452 . . . . {incorporating two or more tracks having an (n, n+1, ...) relationship}
5/2454 . . . {Encoders incorporating incremental and absolute signals}
5/2455 . . . . {with incremental and absolute tracks on the same encoder}
5/2457 . . . . {Incremental encoders having reference marks}
5/2458 . . . . {with incremental and absolute tracks on separate encoders}
5/246 . . . by varying the duration of individual pulses
5/247 . . . using time shifts of pulses
5/248 . . . by varying pulse repetition frequency
5/249 . . . using pulse code
5/2492 . . . {Pulse stream}
5/2495 . . . . {Pseudo-random code}
5/2497 . . . {Absolute encoders (G01D 5/2454 takes precedence)}
5/25 . . Selecting one or more conductors or channels from a plurality of conductors or channels, e.g. by closing contacts
5/251 . . . one conductor or channel
5/2515 . . . {with magnetically controlled switches, e.g. by movement of a magnet}
5/252 . . . a combination of conductors or channels
5/2525 . . . {with magnetically controlled switches, e.g. by movement of a magnet}
5/26 . characterised by optical transfer means, i.e. using infrared, visible, or ultraviolet light
5/262 . . {with optical projection of a pointer or a scale}
5/264 . . {Mechanical constructional elements therefor (G01D 5/28, G01D 5/32, G01D 5/39 and G01D 5/40 take precedence); Mechanical adjustment thereof}
5/266 . . {by interferometric means (G01D 5/353 takes precedence)}
5/268 . . {using optical fibres (G01D 5/28 - G01D 5/38 take precedence)}
5/28 . . with deflection of beams of light, e.g. for direct optical indication (G01D 5/40 takes precedence; {mechanical adjustment G01D 5/264})
5/285 . . . {using a movable mirror}
5/30 . . . the beams of light being detected by photocells
5/305 . . . . {controlling the movement of a following part}
5/32 . . with attenuation or whole or partial obturation of beams of light (G01D 5/40 takes precedence {; mechanical adjustment G01D 5/264})
5/34 . . . the beams of light being detected by photocells
5/341 . . . . {controlling the movement of a following part}
5/342 . . . . {the sensed object being the obturating part}
5/344 . . . . {using polarisation (G01D 5/35303 takes precedence)}
5/345 . . . . . {Polarising encoders}
5/347 . . . . using displacement encoding scales
5/34707 . . . . . {Scales; Discs, e.g. fixation, fabrication, compensation}
5/34715 . . . . . {Scale reading or illumination devices}
5/34723 . . . . . {involving light-guides}
5/3473 . . . . . {Circular or rotary encoders}
5/34738 . . . . . {Axles; Driving or coupling means}
5/34746 . . . . . {Linear encoders}
5/34753 . . . . . {Carriages; Driving or coupling means}
5/34761 . . . . . {Protection devices, e.g. caps; Blowing devices}
5/34769 . . . . . {Sealing means}
5/34776 . . . . . {Absolute encoders with analogue or digital scales}

5/34784 . . . . . {with only analogue scales or both analogue and incremental scales}
5/34792 . . . . . {with only digital scales or both digital and incremental scales}
5/34794 . . . . . {Optical encoders using the Vernier principle, i.e. incorporating two or more tracks having a (n, n+1, ...) relationship}
5/353 . . . . influencing the transmission properties of an optical fibre
5/35303 . . . . . {using a reference fibre, e.g. interferometric devices}
5/35306 . . . . . {using an interferometer arrangement}
5/35309 . . . . . {using multiple waves interferometer}
5/35312 . . . . . {using a Fabry Perot}
5/35316 . . . . . {using a Bragg gratings}
5/35319 . . . . . {using other multiple wave interferometer}
5/35322 . . . . . {using interferometer with one loop with several directions of circulation of the light, e.g. Sagnac interferometer}
5/35325 . . . . . {using interferometer with two arms in reflection, e.g. Mickelson interferometer}
5/35329 . . . . . {using interferometer with two arms in transmission, e.g. Mach-Zender interferometer}
5/35332 . . . . . {using other interferometers}
5/35335 . . . . . {Aspects of emitters or receivers used by an interferometer in an optical fibre sensor arrangement (using multiple sensor devices using multiplexing techniques G01D 5/35383)}
5/35338 . . . . . {using other arrangements than interferometer arrangements}
5/35341 . . . . . {Sensor working in transmission}
5/35345 . . . . . {using Amplitude variations to detect the measured quantity}
5/35348 . . . . . {using stimulated emission to detect the measured quantity}
5/35351 . . . . . {using other means to detect the measured quantity}
5/35354 . . . . . {Sensor working in reflection}
5/35358 . . . . . {using backscattering to detect the measured quantity}
5/35361 . . . . . {using elastic backscattering to detect the measured quantity, e.g. using Rayleigh backscattering}
5/35364 . . . . . {using inelastic backscattering to detect the measured quantity, e.g. using Brillouin or Raman backscattering}
5/35367 . . . . . {using reflected light other than backscattered to detect the measured quantity}
5/3537 . . . . . {Optical fibre sensor using a particular arrangement of the optical fibre itself}
5/35374 . . . . . {Particular layout of the fiber}
5/35377 . . . . . {Means for amplifying or modifying the measured quantity}
5/3538 . . . . . {using a particular type of fiber, e.g. fibre with several cores, PANDA fiber, fiber with an elliptic core or the like}
5/35383 . . . . . {using multiple sensor devices using multiplexing techniques}
5/35387 . . . . . {using wavelength division multiplexing}
5/3539 . . . . . {using time division multiplexing}
5/35393 . . . . . {using frequency division multiplexing}
5/35396 . . . . . {using other forms of multiplexing}
5/36 . . . . Forming the light into pulses
5/363 . . . . . {Direction discrimination}
5/366 . . . . . {Particular pulse shapes}
5/38 . . . . . by diffraction gratings
5/39 . . Scanning a visible indication of the measured value and reproducing this indication at the remote place, e.g. on the screen of a cathode ray tube {(mechanical adjustment G01D 5/264)}
5/40 . . specially adapted for use with infrared light {(mechanical adjustment G01D 5/264)}
5/42 . using fluid means
5/425 . . {characterised by a first part whose movement represents the measuring value, and by a second part which is moved by an external force in order to follow the movement of the first part}
5/44 . . using jets of fluid
5/46 . . . by deflecting or throttling the flow
5/48 . using wave or particle radiation means (G01D 5/26 takes precedence)
5/485 . . {using magnetostrictive devices}
5/50 . . derived from a radioactive source
5/52 . . . detected by a counter tube
5/54 . using means specified in two or more of groups G01D 5/02, G01D 5/12, G01D 5/26, G01D 5/42, and G01D 5/48

NOTES

1. For a combination of two or more of the means specified, the first applicable one of the subgroups below takes precedence over any others of these groups.
2. Classification is made in this group only if no other group can be selected as being predominantly applicable.

5/56 . . using electric or magnetic means
5/58 . . using optical means, i.e. using infrared, visible or ultraviolet light
5/60 . . using fluid means
5/62 . . using wave or particle radiation means not covered by group G01D 5/58

7/00 Indicating measured values
7/002 . {giving both analog and numerical indication}
7/005 . {Indication of measured value by colour change}
7/007 . {Indication of measured value by tactile means}
7/02 . Indicating value of two or more variables simultaneously
7/04 . . using a separate indicating element for each variable
7/06 . . . Luminous indications projected on a common screen
7/08 . . using a common indicating element for two or more variables
7/10 . . . giving indication in co-ordinate form
7/12 . Audible indication of meter readings, e.g. for the blind

9/00 **Recording measured values**

9/005 . {Solid-state data loggers}

9/007 . . {Data loggers attached to transport containers for perishable products, e.g. food or medicines}

9/02 . Producing one or more recordings of the values of a single variable

9/04 . . with provision for multiple or alternative recording

9/06 . . . Multiple recording, e.g. duplicating

9/08 . . . . giving both graphical and numerical recording

9/10 . . the recording element, e.g. stylus, being controlled in accordance with the variable, and the recording medium, e.g. paper roll, being controlled in accordance with time

9/12 . . . recording occurring continuously

9/14 . . . . with provision for altering speed of recording medium in accordance with the magnitude of the variable to be recorded

9/16 . . . recording occurring at separated intervals, e.g. by chopper bar

9/18 . . . . recording element actuated only upon change in value of variable

9/20 . . the recording element, e.g. stylus, being controlled in accordance with time and the recording medium, e.g. paper roll, being controlled in accordance with the variable

9/22 . . . recording occurring continuously

9/24 . . . recording occurring at separated intervals, e.g. by chopper bar

9/26 . . either the recording element, e.g. stylus, or the recording medium, e.g. paper roll, being controlled in accordance with both time and the variable

9/28 . Producing one or more recordings, each recording being of the values of two or more different variables (G01D 9/38, G01D 9/40 take precedence)

9/285 . . {producing additional marks (e.g. reference lines time marks)}

9/30 . . there being a separate recording element for each variable, e.g. multiple-pen recorder

9/32 . . there being a common recording element for two or more variables

9/34 . . . the variables being recorded in a predetermined sequence

9/36 . . . . in separate columns

9/38 . Producing one or more recordings, each recording being produced by controlling the recording element, e.g. stylus, in accordance with one variable and controlling the recording medium, e.g. paper roll, in accordance with another variable

9/40 . Producing one or more recordings, each recording being produced by controlling either the recording element, e.g. stylus or the recording medium, e.g. paper roll, in accordance with two or more variables

9/42 . Recording indications of measuring instruments by photographic means, e.g. of counters

11/00 **Component parts of measuring arrangements not specially adapted for a specific variable** (G01D 13/00, G01D 15/00 take precedence)

11/02 . Bearings or suspensions for moving parts

11/04 . . Knive-edge bearings

11/06 . . Strip or thread suspensions, e.g. in tension

11/08 . Elements for balancing moving parts

11/10 . Elements for damping the movement of parts

11/12 . . using fluid damping

11/14 . . using magnetic induction damping

11/16 . Elements for restraining, or preventing the movement of, parts, e.g. for zeroising (caging of moving parts when not in use G01D 11/20)

11/18 . . Springs (G01D 11/06 takes precedence)

11/20 . Caging devices for moving parts when not in use

11/22 . . automatically actuated

11/24 . Housings {; Casings for instruments}

11/245 . . {Housings for sensors}

11/26 . . Windows; Cover glasses; Sealings therefor

11/28 . Structurally-combined illuminating devices

11/30 . Supports specially adapted for an instrument; Supports specially adapted for a set of instruments

11/305 . . {Panel mounting of instruments}

13/00 **Component parts of indicators for measuring arrangements not specially adapted for a specific variable**

13/02 . Scales; Dials

13/04 . . Construction

13/06 . . . Moving bands (G01D 13/10 takes precedence)

13/08 . . . Rotating drums (G01D 13/10 takes precedence)

13/10 . . . with adjustable scales; with auxiliary scales, e.g. vernier

13/12 . . Graduation

13/14 . . . for rotations of more than 360 degrees

13/16 . . . with staggered markings

13/18 . . . with raised or recessed markings

13/20 . . . with luminescent markings

13/22 . Pointers, e.g. settable pointer

13/24 . . for indicating a maximum or minimum

13/26 . . adapted to perform a further operation, e.g. making electrical contact

13/265 . . . {Pointers which conduct light}

13/28 . . with luminescent markings

15/00 **Component parts of recorders for measuring arrangements not specially adapted for a specific variable**

15/005 . {Effaceable recording}

15/02 . Styli or other recording elements acting to mechanically deform or perforate the recording surface (printing recording elements G01D 15/20)

15/04 . . acting to punch holes in the recording surface

15/06 . Electric recording elements, e.g. electrolytic

15/08 . . for spark erosion

15/10 . Heated recording elements acting on heatsensitive layers

15/12 . Magnetic recording elements

15/14 . Optical recording elements; Recording elements using X-or nuclear radiation

15/16 . Recording elements transferring recording material, e.g. ink, to the recording surface (printing recording elements G01D 15/20)

15/18 . . Nozzles emitting recording material

15/20 . Recording elements for printing with ink or for printing by deformation or perforation of the recording surface, e.g. embossing

15/22 . Chopper bars for bringing recording element into contact with recording surface

15/24 . Drives for recording elements and surfaces not covered by G01D 5/00

15/26 . . operating by clockwork
15/28 . Holding means for recording surfaces; Guiding means for recording surfaces; Exchanging means for recording surfaces
15/30 . . for foldable strip charts
15/32 . . for circular charts
15/34 . Recording surfaces
15/342 . . {of circular shape}
15/345 . . {of cylindrical shape}
15/347 . . {Strip or Tape}

18/00 Testing or calibrating apparatus or arrangements provided for in groups G01D 1/00 - G01D 15/00
18/001 . {Calibrating encoders}
18/002 . {Automatic recalibration (G01D 18/008 takes precedence)}
18/004 . . {Continuous recalibration}
18/006 . . {Intermittent recalibration}
18/008 . {with calibration coefficients stored in memory}

21/00 Measuring or testing not otherwise provided for
21/02 . Measuring two or more variables by means not covered by a single other subclass

2204/00 Indexing scheme relating to details of tariff-metering apparatus
2204/10 . Analysing; Displaying
2204/12 . . Determination or prediction of behaviour, e.g. likely power consumption or unusual usage patterns
2204/125 . . . Utility meter reading systems specially adapted for determining the environmental impact of user behaviour
2204/14 . . Displaying of utility usage with respect to time, e.g. for monitoring evolution of usage or with respect to weather conditions
2204/16 . . Displaying of utility pricing or cost
2204/18 . . Remote displaying of utility meter readings
2204/20 . Monitoring; Controlling
2204/22 . . Arrangements for detecting or reporting faults, outages or leaks
2204/24 . . Identification of individual loads, e.g. by analysing current/voltage waveforms
2204/26 . . Remote utility meter reading systems with control function, i.e. reading systems including mechanisms for turning on/off the supply
2204/28 . . Processes or tasks scheduled according to the power required, the power available or the power price
2204/30 . Remote utility meter reading systems specially adapted for metering the generated energy or power
2204/35 . . Monitoring the performance of renewable electricity generating systems, e.g. of solar panels
2204/40 . Networks; Topology
2204/43 . . Identification of a specific meter
2204/45 . . Utility meters networked together within a single building
2204/47 . . Methods for determining the topology or arrangement of meters in a network

2205/00 Indexing scheme relating to details of means for transferring or converting the output of a sensing member
2205/10 . Detecting linear movement
2205/14 . . by converting the linear movement into a rotary movement
2205/18 . . using magnetic means not otherwise provided for in this subclass
2205/20 . Detecting rotary movement
2205/22 . . by converting the rotary movement into a linear movement
2205/24 . . using magnetic means not otherwise provided for in this subclass
2205/26 . . Details of encoders or position sensors specially adapted to detect rotation beyond a full turn of 360°, e.g. multi-rotation
2205/28 . . The target being driven in rotation by additional gears
2205/40 . Position sensors comprising arrangements for concentrating or redirecting magnetic flux
2205/50 . Grounding or electrostatically shielding a position sensor or encoder
2205/60 . Means for precisely aligning or centering the disk of a rotary encoder, e.g. fitting jigs
2205/70 . Position sensors comprising a moving target with particular shapes, e.g. of soft magnetic targets
2205/73 . . Targets mounted eccentrically with respect to the axis of rotation
2205/77 . . Specific profiles
2205/771 . . . Toothed profiles
2205/772 . . . . Sawtooth profiles
2205/773 . . . Spiral profiles
2205/774 . . . Profiles with a discontinuity, e.g. edge or stepped profile
2205/775 . . . Tapered profiles
2205/776 . . . Cam-shaped profiles
2205/777 . . . Whorl-shaped profiles
2205/80 . Manufacturing details of magnetic targets for magnetic encoders
2205/85 . Determining the direction of movement of an encoder, e.g. of an incremental encoder
2205/90 . Two-dimensional encoders, i.e. having one or two codes extending in two directions
2205/95 . Three-dimensional encoders, i.e. having codes extending in three directions

2207/00 Indexing scheme relating to details of indicating measuring values
2207/10 . Displays which are primarily used in aircraft or display aircraft-specific information
2207/20 . Displays for vehicles in which information is superimposed on an external view, e.g. heads-up displays or enhanced reality displays
2207/30 . Displays providing further information, in addition to measured values, e.g. status

2213/00 Indexing scheme relating to constructional details of indicators
2213/10 . Drivers for gauges
2213/20 . Gauges having a single pointer and two or more scales

2218/00 Indexing scheme relating to details of testing or calibration
2218/10 . Testing of sensors or measuring arrangements