

H01H

ELECTRIC SWITCHES; RELAYS; SELECTORS; EMERGENCY PROTECTIVE DEVICES (contact cables H01B7/10; overvoltage protection resistors, resistive arresters H01C7/12, H01C8/04; electrolytic self-interrupters H01G9/18; switching devices of the waveguide type H01P; devices for interrupted current collection H01R39/00; overvoltage arresters using spark gaps H01T4/00; emergency protective circuit arrangements H02H; switching by electronic means without contact-making H03K17/00)

Definition statement

This subclass/group covers:

Electric switches, i.e. single points of mechanically operable electrical connection (or interruption). Types, details and manufacture thereof, as detailed below .

Relays, i.e. switching devices having contacts which are operated from electric inputs which supply, directly or indirectly, all the mechanical energy necessary to cause both the closure and the opening of the contacts. Types, details and manufacture thereof. Circuit arrangements not adapted to a particular application of the relay and designed to obtain desired operating characteristics or to provide energising current.

Selectors, i.e. arrays of electric switches which selectively connect some inputs out of a plurality of inputs to some outputs out of a plurality of outputs. Types, details, and manufacture thereof in groups [H01H 63/00](#), [H01H 65/00](#) and [H01H 67/00](#).

Protective devices like: circuit-breaking switches, protective switches, fuses, evaporation devices, details and manufacture thereof. This subclass also covers (in groups [H01H 69/00](#) - [H01H 87/00](#)) devices for the protection of electric lines or electric machines or apparatus in the event of undesired change from normal electric working conditions, the electrical condition serving directly as the input to the device.

Mechanical structural details of control members of switches or of keyboards such as keys, push-buttons, levers or other mechanisms for transferring the force to the activated elements, even when they are used for controlling electronic switches.

Circuit arrangements not adapted to a particular application of the switch and not otherwise provided for, e.g. for ensuring operation of the switch at a predetermined point in the ac cycle.

Relationship between large subject matter areas

Circuit arrangements for the automatic protection of electric lines or electric

machines or apparatus in the event of an undesired change from normal working conditions: [H02H](#)

References relevant to classification in this subclass

This subclass/group does not cover:

Electronic switching or gating, i.e. not by contact-making or -braking	H03K 17/00
Contact cables	H01B 7/10
Electrolytic self-interrupters	H01G 9/18
Bases, casings, or covers accommodating two or more switching devices or for accommodating a switching device as well as another electric component, e.g. bus-bar, line connector	H02B 1/26
Casings for electrical apparatus in general	H05K 5/00
Mechanical details directly producing electronic effects	H03K 17/94
Switches combined with plug-and-socket connectors	H01R 13/70
Controlling members for hand actuation by rotary movement, e.g. hand wheels	G05G 1/08
Circuit arrangements for providing remote indication of network conditions, e.g. an instantaneous record of the open or closed condition of each circuit-breaker in the network	H02J 13/00
Emergency protective circuit arrangements for automatic disconnection directly responsive to an undesired change from normal electric working condition with or without subsequent reconnection	H02H 3/00

Examples of places where the subject matter of this subclass/group is covered when specially adapted, used for a particular purpose, or incorporated in a larger system:

Switching arrangements for the supply or distribution of electric power	H02B
Mounting switch and fuse separately on, or in, common support	H02B
Frameworks for mounting two or more relays or for mounting a relay and another electrical component	H02B 1/01 H04Q 1/08
Arrangements of switchgear in which switches are enclosed in, or structurally associated with, a casing; Gas-insulated switchgear	H02B 13/035
Switches for telephonic communication	H04M 1/26
Keyboards for special applications, see the relevant subclasses or groups, e.g.	B41J , G06F 3/023 , H04L 15/00 , H04L 17/00 , H04M 1/00
Manually-actuated control mechanisms provided with one single controlling member co-operating with two or more controlled members, the controlling member being movable by hand about orthogonal axes, e.g. joysticks	G05G 9/047
Lever attached to steering wheel for controlling the lights of a car, e.g. steering column stalk switches	B60Q 1/1469
Switches mounted on the steering wheel	B60Q 1/0082

Informative references

Attention is drawn to the following places, which may be of interest for search:

Overvoltage protection resistors, resistive arresters	H01C 7/12 , H01C 8/04
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Switching devices of the waveguide type	H01P
Electric connections in general	H01R
Devices for interrupted current collection; Rotary current collectors, distributors, or interrupters	H01R 39/00
Overvoltage arresters using spark gaps	H01T 4/00
Arcing horns per se	H01T 4/14
Arrangements for locating electric faults; Testing of relays	G01R 31/00
Clocks with attached or built-in means operating any device at preselected times or after preselected time intervals	G04C 23/00
Processes or apparatus specially adapted for the manufacture or treatment of micro-structural devices or systems, e.g. in combination with electrical devices	B81C
Micro-mechanical devices, comprising flexible or deformable elements	B81B 3/00
Sensing elements for providing continuous conversion of a variable into mechanical displacement	G01
Measuring distances, levels or bearings	G01C
Measuring liquid level	G01F
Temperature-responsive elements in general	G01K
Measuring electric values	G01R
Magnets in general	H01F 7/00

Electromagnets; Actuators including electromagnets	H01F 7/06
Cores, Yokes, or armatures in general	H01F 3/00
Magnetic coils or windings in general	H01F 5/00
Circuit arrangements for obtaining desired operating characteristics	H01F 7/18
Variable transformers or inductances having provision for tap-changing without interrupting the load current	H01F 29/04
Disposition or arrangement of fuses on boards	H02B 1/18
Input arrangements for converting discrete items of information into a coded form; Programmable keyboards	G06F 3/023
Installations of electric cables or lines in or on buildings, equivalent structures or vehicles	H02G 3/00
Distribution boxes; Connection or junction boxes	H02G 3/08
Constructional features of telephone sets; Construction or mounting of dials or of equivalent devices	H04M 1/23
Capacitors in which the capacitance is varied by using variation of distance between electrodes	H01G 5/16
Selecting apparatus or arrangements in general	H04Q

Special rules of classification within this subclass

The use of the Indexing Code scheme [H01H 1/00](#) - [H01H 89/10](#) is mandatory to classify additional (non-invention) information.

The use of the deep indexing scheme [H01H 2201/00](#) - [H01H 2239/078](#) is mandatory whenever appropriate.

The following IPC groups are not used in the internal ECLA classification scheme. Subject matter covered by these groups is classified in the following ECLA groups:

[H01H 33/575](#) covered by [H01H 33/56](#)

[H01H 33/825](#) covered by [H01H 33/82](#)

[H01H 33/835](#) covered by [H01H 33/83](#)

[H01H 33/867](#) covered by [H01H 33/86](#)

[H01H 33/873](#) covered by [H01H 33/86](#)

[H01H 33/915](#) covered by [H01H 33/91](#)

[H01H 33/985](#) covered by [H01H 33/98](#)

[H01H 33/99](#) covered by [H01H 33/98](#)

Further information:

- Details only described with reference to, or clearly only applicable to, switching devices of a single basic type, are classified in the group appropriate to switching devices of that basic type, e.g. [H01H 19/02](#) or [H01H 75/04](#).

Details of an unspecified type of switching device, or disclosed as applicable to two or more kinds of switching devices designated by the terms or expressions "switches", "relays", "selector switches", and "emergency protective devices", are classified in groups [H01H 1/00](#) - [H01H 9/00](#).

Details of an unspecified type of switch, or disclosed as applicable to two or more types of switches as defined by groups [H01H 13/00](#) - [H01H 43/00](#) and subgroups [H01H 35/02](#), [H01H 35/06](#), [H01H 35/14](#), [H01H 35/18](#), [H01H 35/24](#) and [H01H 35/42](#), all hereinafter called basic types, are classified in groups [H01H 1/00](#) - [H01H 9/00](#).

Apparatus or processes specially adapted for manufacturing of electric switches of an unspecified type are classified in group [H01H 11/00](#).

Details of contact arrangements or operating mechanisms for tap changer devices are classified in the subgroup [H01H 9/0005](#).

- Mechanical structural details of control members specially adapted for rectilinearly movable switches such as keys or push-buttons having a plurality of operating members associated with different sets of contacts, e.g. keyboards, are classified in the subgroup [H01H 13/70](#).

Processes specially adapted for manufacturing of rectilinearly movable switches such as keys or push-buttons having a plurality of operating members associated with different sets of contacts, e.g. keyboards, are classified in the subgroup [H01H 13/88](#).

Earthing or grounding switching devices are classified in the subgroup [H01H 31/003](#).

Vacuum switches are classified in the subgroup [H01H 33/66](#). Combinations of vacuum switches with other type of switch, e.g. for load break switches are classified in the subgroup [H01H 33/6661](#).

- Switches actuated by change of magnetic field or of electric field are classified in the group [H01H 36/00](#).
- Thermally-actuated switches are classified in the group [H01H 37/00](#).

Details of an unspecified type of relay, or disclosed as applicable to two or more types of relays as defined by groups [H01H 51/00](#) - [H01H 61/00](#), hereinafter called basic types, are classified in group [H01H 45/00](#). Circuit arrangements not adapted to a particular application of the relay and designed to obtain desired operating characteristics or to provide energising current, are classified in group [H01H 47/00](#).

Apparatus or processes specially adapted for manufacturing of relays are classified in group [H01H 49/00](#).

- Details of an unspecified protective switch or protective relay, or applicable to two or more types of protective devices as defined by groups [H01H 73/00](#) - [H01H 83/00](#), hereinafter called basic types, are classified in group [H01H 71/00](#).

Apparatus or processes specially adapted for manufacturing of protective devices are classified in group [H01H 69/00](#).

Protective devices in which the current flows through a part of fusible material and this current is interrupted by displacement of the fusible material when this current becomes excessive are classified in group [H01H 85/00](#).

- The subgroup [H01H 9/54](#) covers circuit arrangements not adapted to a particular application of an unspecified type of switching device and for which no provision exists elsewhere, e.g. combinations of mechanical switches and static switches or for ensuring operation of the switch at a predetermined point in the ac cycle, and is residual with respect to the groups [H01H 1/00](#) - [H01H 9/00](#) and [H01H 69/00](#) - [H01H 87/00](#).
- The subgroup [H01H 33/59](#) covers circuit arrangements not adapted to a particular application of a high-tension or heavy-current switch and not otherwise provided for, e.g. for ensuring operation of the switch at a predetermined point in the ac cycle, and is residual with respect to the groups [H01H 31/00](#) - [H01H 33/00](#).

- Details only described with reference to, or clearly only applicable to, rectilinearly movable switches having operating members associated with different sets of contacts, e.g. keyboards, are classified in the deep indexing scheme for multilayer keyboard switches [H01H 2201/00](#) - [H01H 2239/078](#).
- Details of an unspecified type of switching device, or disclosed as applicable to several kinds of switching devices or relating to the application field of the switching device are classified in a separate orthogonal indexing scheme (pending).

Glossary of terms

In this subclass/group, the following terms (or expressions) are used with the meaning indicated:

Acting, actuating or action	self-induced, e.g. not manually caused, movement of parts at one stage of the switching. Apply to all parts of the verbs "to operate"; "to actuate", and "to act", and to words derived therefrom, e.g. to "actuation" or "actuating"
Contacts	necessary elementary components of a switch that ensure the electrical connection, each switch comprising at least two contacts, and possibly more than two
Driving mechanism	means by which an operating force applied to the switch is transmitted to the moving contact or contacts
Key	push button
Operating	broader sense than "actuating", including the manually caused movement of parts at one stage of the switching.
Push button	knob or button that allows the manual operation of a switch in order to e.g. close an electric circuit
Relay	switching device having contacts which are operated from electric inputs which supply, directly or indirectly, all the mechanical energy necessary to cause both the closure

	and the opening of the contacts
Selector	array of electric switches which selectively connect some inputs out of a plurality of inputs to some outputs out of a plurality of outputs
Switch	single point of mechanically operable electrical connection (or interruption)
Switch site	physical location where the contacts can touch each other

H01H 1/00

Contacts (liquid contacts H01H29/04)

References relevant to classification in this group

This subclass/group does not cover:

Liquid contacts	H01H 29/04
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Special rules of classification within this group

Subject matter classifiable in more than one of the groups [H01H 1/023](#) to [H01H 1/029](#) should be classified in all relevant groups.

H01H 1/021

Composite materials

Glossary of terms

In this subclass/group, the following terms (or expressions) are used with the meaning indicated:

Composite material	a material made of two or more different materials, e.g. coated material, layered materials or carbon fibres in a copper base or matrix
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H01H 1/20

Bridging contacts [N: (for circuit breakers H01H73/045)]

References relevant to classification in this group

This subclass/group does not cover:

Bridging contacts for circuit breakers	H01H 73/045
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H01H 1/36

by sliding (by rolling or wrapping H01H1/16)

Informative references

Attention is drawn to the following places, which may be of interest for search:

Rolling or wrapping	H01H 1/16
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H01H 1/54

by magnetic force [N: (combined with electrodynamic opening H01H77/101)]

References relevant to classification in this group

This subclass/group does not cover:

Magnetic force combined with electrodynamic opening	H01H 77/101
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H01H 1/56

Contact arrangements for providing make-before-break operation, e.g. for on-load tap changing [N: (for tap changers H01H9/0016)]

Informative references

Attention is drawn to the following places, which may be of interest for search:

Contact arrangements for tap changers	H01H 9/0016
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H01H 1/58

Electric connections to or between contacts; Terminals ([N: for high tension switches H01H33/025; for electromagnetic relays H01H50/14; for circuit breakers H01H71/08]; electric connections in general H01R)

References relevant to classification in this group

This subclass/group does not cover:

Terminals for high tension switches	H01H 33/025
Terminals for electromagnetic relays	H01H 50/14
Terminals for circuit breakers	H01H 71/08

Informative references

Attention is drawn to the following places, which may be of interest for search:

Electric connections in general	H01R
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H01H 1/60

Auxiliary means structurally associated with the switch for cleaning or lubricating contact-making surfaces (cleaning by normal sliding of contacts H01H1/18, H01H1/36)

Informative references

Attention is drawn to the following places, which may be of interest for search:

Cleaning by normal sliding of contacts	H01H 1/18 , H01H 1/36
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H01H 1/64

Protective enclosures, baffle plates, or screens for contacts (for arc-extinguishing H01H9/30; for mercury contacts H01H29/04)

References relevant to classification in this group

This subclass/group does not cover:

Protective enclosures, baffle plates, or screens for arc-extinguishing	H01H 9/30
Protective enclosures, baffle plates, or screens for mercury contacts	H01H 29/04

H01H 3/00

Mechanisms for operating contacts (snap-action arrangements H01H5/00; devices for introducing a predetermined time delay H01H7/00; [N: for tap changers H01H9/0027]; thermal actuating or release means H01H37/02)

References relevant to classification in this group

This subclass/group does not cover:

Snap-action arrangements	H01H 5/00
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Informative references

Attention is drawn to the following places, which may be of interest for search:

Devices for introducing a predetermined time delay	H01H 7/00
Devices for tap changers	H01H 9/0027
Thermal actuating or release means	H01H 37/02

H01H 3/24

using pneumatic or hydraulic actuator [N: (for storing energy in a spring motor H01H3/301)]

Informative references

Attention is drawn to the following places, which may be of interest for search:

Storing energy in a spring motor	H01H 3/301
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H01H 3/26

using dynamo-electric motor (for storing energy in a spring motor H01H3/30)

Informative references

Attention is drawn to the following places, which may be of interest for search:

Storing energy in a spring motor	H01H 3/301
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H01H 3/28

using electromagnet (for storing energy in a spring motor H01H3/30; for operating relays H01H45/00)

Informative references

Attention is drawn to the following places, which may be of interest for search:

Storing energy in a spring motor	H01H 3/301
Operating relays	H01H 45/00

H01H 3/32

Driving mechanisms, i.e. for transmitting driving force to the contacts (snap-action arrangements H01H5/00; introducing a predetermined time delay H01H7/00)

References relevant to classification in this group

This subclass/group does not cover:

Snap-action arrangements	H01H 5/00
Introducing a predetermined time delay	H01H 7/00

H01H 3/62

Lubricating means structurally associated with the switch (for lubricating contact-making surfaces H01H1/60)

References relevant to classification in this group

This subclass/group does not cover:

Lubricating contact-making surfaces	H01H 1/60
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H01H 5/00

Snap-action arrangements, i.e. in which during a single opening operation or a single closing operation energy is first stored and then released to produce or assist the contact movement

H01H 5/04

Energy stored by deformation of elastic members (by deformation of bimetallic elements in thermally-actuated switches H01H37/54)

Informative references

Attention is drawn to the following places, which may be of interest for search:

Energy stored by deformation of bimetallic elements in thermally-actuated switches	H01H 37/54
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H01H 7/00

Devices for introducing a predetermined time delay between the initiation of the switching operation and the opening or closing of the contacts (time or time-programme switches H01H43/00)

Informative references

Attention is drawn to the following places, which may be of interest for search:

Time or time-programme switches	H01H 43/00
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H01H 7/06

with thermal timing means (thermally actuated switches H01H37/00)

Informative references

Attention is drawn to the following places, which may be of interest for search:

Thermally actuated switches	H01H 37/00
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H01H 7/16

Devices for ensuring operation of the switch at a predetermined point in the AC cycle (circuit arrangements H01H9/56)

Informative references

Attention is drawn to the following places, which may be of interest for search:

Circuit arrangements	H01H 9/56
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H01H 9/00

Details of switching devices, not covered by groups H01H1/00 to H01H7/00 (casings for switchgear H02B1/26; casings for electrical apparatus in general H05K5/00)

References relevant to classification in this group

This subclass/group does not cover:

Casings for switchgear	H02B 1/26
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Informative references

Attention is drawn to the following places, which may be of interest for search:

Casings for electrical apparatus in general	H05K 5/00
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H01H 9/02

Bases, casings, or covers (accommodating more than one switch or a switch and another electrical component H02B1/26)

References relevant to classification in this group

This subclass/group does not cover:

Accommodating more than one switch or a switch and another electrical component	H02B 1/26
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H01H 9/10

Adaptation for built-in fuses (mounting switch and fuse separately on, or in, common support H02B)

Informative references

Attention is drawn to the following places, which may be of interest for search:

Mounting switch and fuse separately on, or in, common support	H02B
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H01H 9/20

Interlocking, locking, or latching mechanisms (contacts adapted to act as latches H01H1/52; by an auxiliary movement of the operating part of an attachment thereto H01H3/20; [N: for withdrawable switchgear H02B11/00])

Informative references

Attention is drawn to the following places, which may be of interest for search:

Contacts adapted to act as latches	H01H 1/52
Auxiliary movement of the operating part of an attachment thereto	H01H 3/20
Withdrawable switchgear	H02B 11/00

H01H 9/22

for interlocking between casing, cover, or protective shutter and mechanism for operating contacts [N: (explosion-proof cases H01H9/045; built-in fuses and interlocking mechanisms H01H9/104; by automatic release of circuit breakers H01H71/126)]

Informative references

Attention is drawn to the following places, which may be of interest for search:

Explosion-proof cases	H01H 9/045
Built-in fuses and interlocking mechanisms	H01H 9/104
By automatic release of circuit breakers	H01H 71/126

H01H 9/26

for interlocking two or more switches ([N: H01H13/568 takes precedence]; by a detachable member H01H9/28; [N: for electromagnetic relays H01H50/323])

References relevant to classification in this group

This subclass/group does not cover:

Contacts also returning by some external action, e.g. interlocking, protection, remote control	H01H 13/568
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Informative references

Attention is drawn to the following places, which may be of interest for search:

Detachables member	H01H 9/28
Electromagnetic relays	H01H 50/323

H01H 9/28

for locking switch parts by a key or equivalent removable member (switches operated by a key H01H27/00; locking by removable part of two-part coupling device H01R)

Informative references

Attention is drawn to the following places, which may be of interest for search:

Switches operated by a key	H01H 27/00
Locking by removable part of two-part coupling device	H01R

H01H 9/38

Auxiliary contacts on to which the arc is transferred from the main contacts (using arcing-horns H01H9/46)

Informative references

Attention is drawn to the following places, which may be of interest for search:

Arcing-horns	H01H 9/46
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H01H 9/40

Multiple main contacts for the purpose of dividing the current through, or potential drop along, the arc [N: (multiple parallel contact bars H01H1/226)]

References relevant to classification in this group

This subclass/group does not cover:

Multiple parallel contact bars	H01H 1/226
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H01H 9/46

using arcing-horn (using blow-out magnet H01H9/44; arcing-horns per se H01T4/14)

Informative references

Attention is drawn to the following places, which may be of interest for search:

Blow-out magnet	H01H 9/44
Arcing-horns per se	H01T 4/14)

H01H 9/52

Cooling of switch parts (cooling of contacts H01H1/62)

Informative references

Attention is drawn to the following places, which may be of interest for search:

Cooling of contacts	H01H 1/62
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H01H 11/00

Apparatus or processes specially adapted for manufacture of electric switches (processes specially adapted for manufacture of rectilinearly movable switches having a plurality of operating members associated with different sets of contacts, e.g. keyboards, H01H13/88; processes or apparatus specially adapted for the manufacture or treatment of micro-structural devices or systems, e.g. in combination with electrical devices, B81C)

Informative references

Attention is drawn to the following places, which may be of interest for search:

Processes specially adapted for manufacture of rectilinearly movable switches having a plurality of operating members associated with different sets of contacts, e.g. keyboards	H01H 13/88
Processes or apparatus specially adapted for the manufacture or treatment of micro-structural devices or systems, e.g. in combination with electrical devices	B81C

H01H 13/00

Switches having rectilinearly-movable operating part or parts adapted for pushing or pulling in one direction only, e.g. push-button switch (wherein the operating part is flexible H01H17/00)

References relevant to classification in this group

This subclass/group does not cover:

Switches wherein the operating part is flexible	H01H 17/00
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H01H 13/02

Details (specially adapted for rectilinearly movable switches having operating members associated with different sets of contacts, e.g. keyboards, H01H13/70)

References relevant to classification in this group

This subclass/group does not cover:

Specially adapted for rectilinearly movable switches having operating members associated with different sets of contacts, e.g. keyboards	H01H 13/70
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H01H 13/22

acting with snap action (depending upon deformation of elastic member H01H13/26)

References relevant to classification in this group

This subclass/group does not cover:

Snap action depending upon deformation of elastic member	H01H 13/26
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H01H 13/62

the contact returning to its original state upon manual release of a latch (latch released by second push-button H01H13/68)

Informative references

Attention is drawn to the following places, which may be of interest for search:

Latch released by second push-button	H01H 13/68
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H01H 13/68

having two operating members, one for opening and one for closing the same set of contacts (single operating member protruding from different sides of switch casing for alternate pushing upon opposite ends H01H15/22)

Informative references

Attention is drawn to the following places, which may be of interest for search:

Single operating member protruding from different sides of switch casing for alternate pushing upon opposite ends	H01H 15/22
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H01H 13/70

having a plurality of operating members associated with different sets of contacts, e.g. keyboard ([N: keyboards specially adapted for specific applications, see the relevant subclasses or groups, e.g. B41J, G06F3/023, H04L17/00, H04M1/00; multiple switches specially adapted for electromechanical clocks or watches G04C3/005]; mounting together a plurality of independent switches H02B)

Informative references

Attention is drawn to the following places, which may be of interest for search:

Keyboards specially adapted for specific applications, see the relevant subclasses or groups	B41J , G06F 3/023 , H04L 17/00 , H04M 1/00
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Multiple switches specially adapted for electromechanical clocks or watches	G04C 3/005
Mounting together a plurality of independent switches	H02B

H01H 13/704

characterised by the layers, e.g. by their material or structure (H01H13/703 takes precedence)

References relevant to classification in this group

This subclass/group does not cover:

Spacers between contact carrying layers	H01H 13/703
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H01H 13/84

characterised by ergonomic functions, e.g. for miniature keyboards; characterised by operational sensory functions, e.g. sound feedback (legends H01H13/83)

Informative references

Attention is drawn to the following places, which may be of interest for search:

Legends	H01H 13/83
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H01H 15/00

Switches having rectilinearly-movable operating part or parts adapted for actuation in opposite directions, e.g. slide switch

H01H 17/00

Switches having flexible operating part adapted only for pulling, e.g. cord, chain [N: (for emergency stop switches H01H3/0226)]

Informative references

Attention is drawn to the following places, which may be of interest for search:

Flexible operating part adapted for emergency stop switches	H01H 3/0226
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H01H 17/04

Stationary parts (guides H01H17/14)

Informative references

Attention is drawn to the following places, which may be of interest for search:

Guides	H01H 17/14
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H01H 17/06

Movable parts (guides H01H17/14)

Informative references

Attention is drawn to the following places, which may be of interest for search:

Guides	H01H 17/14
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H01H 19/00

Switches operated by an operating part which is rotatable about a longitudinal axis thereof and which is acted upon directly by a solid external to the switch, e.g. by a hand (rotary current collectors, distributors or interrupters H01R39/00)

References relevant to classification in this group

This subclass/group does not cover:

Rotary current collectors, distributors or interrupters	H01R 39/00
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H01H 19/63

Contacts actuated by axial cams (H01H19/6355 takes precedence)

References relevant to classification in this group

This subclass/group does not cover:

Axial cam devices for transforming the angular movement into linear movement along the axis of rotation	H01H 19/6355
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H01H 21/00

Switches operated by an operating part in the form of a pivotable member acted upon directly by a solid body, e.g. by a hand (tumbler or rocker switches H01H23/00; switches having an operating part movable angularly in more than one plane H01H25/04)

References relevant to classification in this group

This subclass/group does not cover:

Tumbler or rocker switches	H01H 23/00
Switches having an operating part movable angularly in more than one plane	H01H 25/04

H01H 23/00

Tumbler or rocker switches, i.e. switches characterised by being operated by rocking an operating member in the form of a rocker button

Glossary of terms

In this subclass/group, the following terms (or expressions) are used with the meaning indicated:

Rocking	as pivotal motion in one plane about an axis parallel to the switch faceplate and located substantially centrally between the ends of the rocker button
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H01H 25/00

Switches with compound movement of handle or other operating part

H01H 27/00

Switches operated by a removable member, e.g. key, plug, plate; Switches operated by setting members according to a single predetermined combination out of several possible settings (locking switch parts to prevent operation H01H9/28; combined with plug-and-socket connectors H01R; with current-carrying plug H01R31/08)

References relevant to classification in this group

This subclass/group does not cover:

Locking switch parts to prevent operation	H01H 9/28
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Informative references

Attention is drawn to the following places, which may be of interest for search:

Switches combined with plug-and-socket connectors	H01R
Switches with current-carrying plug	H01R 31/08

H01H 29/00

Switches having at least one liquid contact (solid contacts wetted or soaked with mercury H01H1/08)

Informative references

Attention is drawn to the following places, which may be of interest for search:

Solid contacts wetted or soaked with mercury	H01H 1/08
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H01H 29/20

operated by tilting contact-liquid container (centrifugal mercury switches H01H29/26)

References relevant to classification in this group

This subclass/group does not cover:

Centrifugal mercury switches	H01H 29/26
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H01H 29/32

with contact made by a liquid jet, e.g. earthing switch with contact made by jet of water (operated by direct electrodynamic action H01H53/00)

References relevant to classification in this group

This subclass/group does not cover:

Switches operated by direct electrodynamic action	H01H 53/00
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H01H 31/00

Air-break switches for high tension without arc-extinguishing or arc-preventing means (in combination with high tension or heavy-current switches with arc-extinguishing or arc-preventing means H01H33/00; switching arrangements for the supply or distribution of electric power H02B)

References relevant to classification in this group

This subclass/group does not cover:

Air-break switches in combination with high tension or heavy-current switches with arc-extinguishing or arc-preventing means	H01H 33/00
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Informative references

Attention is drawn to the following places, which may be of interest for search:

Switching arrangements for the supply or distribution of electric power	H02B
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H01H 31/04

Interlocking mechanisms (for interlocking with high-tension or heavy-current switches having arc-extinguishing or arc-preventing means H01H33/52)

References relevant to classification in this group

This subclass/group does not cover:

Interlocking with high-tension or heavy-current switches having arc-extinguishing or arc-preventing means	H01H 33/52
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H01H 31/10

for interlocking two or more switches (for interlocking with high-tension or heavy-current switches having arc-extinguishing or arc-preventing means H01H33/52)

References relevant to classification in this group

This subclass/group does not cover:

Interlocking with high-tension or heavy-current switches having arc-extinguishing or arc-preventing means	H01H 33/52
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H01H 33/00

High-tension or heavy-current switches with arc-extinguishing or arc-preventing means

H01H 33/04

Means for extinguishing or preventing arc between current-carrying parts (for switches in general H01H9/30)

Informative references

Attention is drawn to the following places, which may be of interest for search:

Means for extinguishing or preventing arc between current-carrying parts for switches in general	H01H 9/30
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H01H 33/12

Auxiliary contacts on to which the arc is transferred from the main contacts (using arcing horns H01H33/20)

Informative references

Attention is drawn to the following places, which may be of interest for search:

Auxiliary contacts using arcing horns	H01H 33/20
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H01H 33/18

using blow-out magnet [N: (for vacuum switches H01H33/664; pressure-generated arcs rotated by a magnetic field H01H33/982)]

References relevant to classification in this group

This subclass/group does not cover:

Vacuum switches	H01H 33/664
Pressure-generated arcs rotated by a magnetic field	H01H 33/982

H01H 33/20

using arcing horns (using blow-out magnet H01H33/18; arcing horns per se H01T4/14)

Informative references

Attention is drawn to the following places, which may be of interest for search:

Using blow-out magnet	H01H 33/18
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Arcing horns per se	H01T 4/14
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H01H 33/36

using dynamo-electric motor (for storing energy in a spring motor H01H33/40)

Informative references

Attention is drawn to the following places, which may be of interest for search:

Storing energy in a spring motor	H01H 33/40
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H01H 33/38

using electromagnet (for storing energy in a spring motor H01H33/40)

Informative references

Attention is drawn to the following places, which may be of interest for search:

Storing energy in a spring motor	H01H 33/40
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H01H 33/44

Devices for ensuring operation of the switch at a predetermined point in the ac cycle (circuit arrangements H01H33/59)

Informative references

Attention is drawn to the following places, which may be of interest for search:

Circuit arrangements	H01H 33/59
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H01H 33/53

Cases (for switchgear H02B1/26); Reservoirs, tanks, piping or valves, for arc-extinguishing fluid; Accessories therefor, e.g.

safety arrangements, pressure relief devices

Informative references

Attention is drawn to the following places, which may be of interest for search:

Cases for switchgear	H02B 1/26
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H01H 33/55

Oil reservoirs or tanks; Lowering means therefor (associated with withdrawal mechanism for isolation of switch H02B11/08)

Informative references

Attention is drawn to the following places, which may be of interest for search:

Lowering associated with withdrawal mechanism for isolation of switch	H02B 11/08
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H01H 33/64

wherein the break is in gas (in air at atmospheric pressure H01H33/62; vacuum switches H01H33/66)

References relevant to classification in this group

This subclass/group does not cover:

Breaks in air at atmospheric pressure	H01H 33/62
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Informative references

Attention is drawn to the following places, which may be of interest for search:

Vacuum switches	H01H 33/66
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H01H 33/74

wherein the break is in gas (in air at atmospheric pressure H01H33/73)

References relevant to classification in this group

This subclass/group does not cover:

Breaks in air at atmospheric pressure	H01H 33/73
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H01H 33/78

wherein the break is in gas (in air at atmospheric pressure H01H33/77)

References relevant to classification in this group

This subclass/group does not cover:

Breaks in air at atmospheric pressure	H01H 33/77
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H01H 33/94

this movement being effected solely due to the pressure caused by the arc itself or by an auxiliary arc [N: (H01H33/903 takes precedence)]

References relevant to classification in this group

This subclass/group does not cover:

The movement being effected by or in conjunction with the contact-operating mechanism making use of the energy of the arc or an auxiliary arc and assisting the operating mechanism	H01H 33/903
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H01H 33/98

the flow of arc-extinguishing fluid being initiated by an auxiliary arc or a section of the arc, without any moving parts for producing or increasing the flow [N: (H01H33/901 takes precedence)]

References relevant to classification in this group

This subclass/group does not cover:

The movement being effected by or in	H01H 33/901
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conjunction with the contact-operating mechanism making use of the energy of the arc or an auxiliary arc	
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H01H 35/00

Switches operated by change of a physical condition (operated by change of magnetic or electric field H01H36/00; thermally-actuated switches H01H37/00; time switches H01H43/00; relays H01H45/00 to H01H61/00; sensing elements for providing continuous conversion of a variable into mechanical displacement G01)

References relevant to classification in this group

This subclass/group does not cover:

Operated by change of magnetic or electric field	H01H 36/00
Thermally-actuated switches	H01H 37/00
Time switches	H01H 43/00
Relays	H01H 45/00 - H01H 61/00

Informative references

Attention is drawn to the following places, which may be of interest for search:

Sensing elements for providing continuous conversion of a variable into mechanical displacement	G01
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Special rules of classification within this group

A switching device is classified according to that physical condition which, when changed, acts as input to the device, e.g. external explosion causing pressure wave to act upon switch is classified in group [H01H 35/24](#), an explosion produced within the switch in group [H01H 37/00](#) if initiated by heat, in group [H01H 39/00](#) if initiated electrically, and in group [H01H 35/14](#) if initiated by an external blow.

H01H 35/06

Switches operated by change of speed (operated by change of fluid flow H01H35/24)

Informative references

Attention is drawn to the following places, which may be of interest for search:

Switches operated by change of fluid flow	H01H 35/24
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H01H 35/10

Centrifugal switches (level of mercury displaced by centrifugal action H01H29/26)

Informative references

Attention is drawn to the following places, which may be of interest for search:

Level of mercury displaced by centrifugal action	H01H 29/26
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H01H 35/14

Switches operated by change of acceleration, e.g. by shock or vibration, inertia switch [N: (wherein the liquid constitutes a contact of the switch H01H29/002)]

References relevant to classification in this group

This subclass/group does not cover:

Switches operated by change of acceleration, wherein the liquid constitutes a contact of the switch	H01H 29/002
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H01H 35/18

Switches operated by change of liquid level or of liquid density, e.g. float switch (wherein the liquid constitutes a contact of the switch H01H29/00; by magnet carried on a float

H01H36/02)

References relevant to classification in this group

This subclass/group does not cover:

Switches operated by change of acceleration, wherein the liquid constitutes a contact of the switch	H01H 29/002
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Informative references

Attention is drawn to the following places, which may be of interest for search:

Switches operated by magnet carried on a float	H01H 36/02
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H01H 35/24

Switches operated by change of fluid pressure, by fluid pressure waves, or by change of fluid flow (wherein the change of pressure is caused by change of temperature H01H37/36)

References relevant to classification in this group

This subclass/group does not cover:

Switches operated by change of fluid pressure, by fluid pressure waves, or by change of fluid flow wherein the change of pressure is caused by change of temperature	H01H 37/36
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H01H 36/00

Switches actuated by change of magnetic field or of electric field, e.g. by change of relative position of magnet and switch, by shielding [N: (specially adapted for electromechanical clocks or watches G04C3/004)]

Informative references

Attention is drawn to the following places, which may be of interest for search:

Switches specially adapted for electromechanical clocks or watches	G04C 3/004
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H01H 37/00

Thermally-actuated switches (electrothermal relays operated by electrical input H01H61/00; protective switches with electrothermal release or actuation H01H73/00 to H01H83/00

References relevant to classification in this group

This subclass/group does not cover:

Electrothermal relays operated by electrical input	H01H 61/00
Protective switches with electrothermal release or actuation	H01H 73/00 - H01H 83/00

H01H 37/04

Bases; Housings; Mountings [N: H01H37/5427 takes precedence]

References relevant to classification in this group

This subclass/group does not cover:

Encapsulated in sealed miniaturised housing	H01H 37/5427
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H01H 37/32

Thermally-sensitive members (temperature responsive elements in general G01K)

Informative references

Attention is drawn to the following places, which may be of interest for search:

Temperature responsive elements in general	G01K
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H01H 37/36

actuated due to expansion or contraction of a fluid with or without vaporisation (the fluid forming a contact of the switch H01H29/04, H01H29/30)

References relevant to classification in this group

This subclass/group does not cover:

Fluid forming a contact of the switch	H01H 29/04 , H01H 29/30
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H01H 37/46

actuated due to expansion or contraction of a solid (deflection of a bimetallic element H01H37/52)

References relevant to classification in this group

This subclass/group does not cover:

Deflection of a bimetallic element	H01H 37/52
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H01H 37/60

Means for producing snap action (inherent in bimetallic element H01H37/54; caused by a magnet H01H37/66)

References relevant to classification in this group

This subclass/group does not cover:

Inherent in bimetallic element	H01H 37/54
Snap action caused by a magnet	H01H 37/66

H01H 37/70

Resetting means [N: (H01H37/5409 takes precedence)]

References relevant to classification in this group

This subclass/group does not cover:

Bistable switches; Resetting means for Bistable switches	H01H 37/5409
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H01H 37/74

Switches in which only the opening movement or only the closing movement of a contact is effected by heating or cooling (for the electrical protection of electric lines or electric apparatus H01H73/00 to H01H83/00)

Informative references

Attention is drawn to the following places, which may be of interest for search:

Electrical protection of electric lines or electric apparatus	H01H 73/00 - H01H 83/00
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H01H 37/76

Contact member actuated by melting of fusible material, actuated due to burning of combustible material or due to explosion of explosive material (fuses H01H85/00)

Informative references

Attention is drawn to the following places, which may be of interest for search:

Fuses	H01H 85/00
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H01H 39/00

Switching devices actuated by an explosion produced within the device and initiated by an electric current

H01H 41/00

Switches providing a selected number of consecutive operations of the contacts by a single manual actuation of the operating part (for telephone communication H04M1/26)

References relevant to classification in this group

This subclass/group does not cover:

Switches for telephone communication	H04M 1/26
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H01H 43/00

Time or time-programme switches providing a choice of time intervals for executing one or more switching actions and automatically terminating their operations after the programme is completed (clocks with attached or built-in means operating any device at preselected times or after preselected time-intervals G04C23/00; [N: apparatus which can be set and started to measure-off predetermined intervals G04F3/06]; programme-control systems G05B19/00)

Informative references

Attention is drawn to the following places, which may be of interest for search:

Clocks with attached or built-in means operating any device at preselected times or after preselected time-intervals	G04C 23/00
Apparatus which can be set and started to measure-off predetermined intervals	G04F 3/06
Programme-control systems	G05B 19/00

H01H 45/00

Details of relays (electric circuit arrangements H01H47/00; of electromagnetic relays H01H50/00; details of electrically-operated selector switches H01H63/00; [N: testing of relays G01R31/00; relays for emergency protective circuit arrangements H02H])

References relevant to classification in this group

This subclass/group does not cover:

Electric circuit arrangements of electromagnetic relays	H01H 50/00
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Relays for emergency protective circuit arrangements	H02H
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Informative references

Attention is drawn to the following places, which may be of interest for search:

Electric circuit arrangements	H01H 47/00
Details of electrically-operated selector switches	H01H 63/00
Testing of relays	G01R 31/00

H01H 45/02

Bases; Casings; Covers (frames for mounting two or more relays or for mounting a relay and another electric component H02B1/01, H04Q1/08,H05K)

Informative references

Attention is drawn to the following places, which may be of interest for search:

Frames for mounting two or more relays or for mounting a relay and another electric component	H02B 1/01 , H04Q 1/08 , H05K
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H01H 45/10

Electromagnetic or electrostatic shielding (casings H01H45/02; [N: screening in general H05K9/00])

Informative references

Attention is drawn to the following places, which may be of interest for search:

Casings	H01H 45/02
Screening in general	H05K 9/00

H01H 45/12

Ventilating; Cooling; Heating (for operating electrothermal relays H01H61/013)

References relevant to classification in this group

This subclass/group does not cover:

Operating electrothermal relays	H01H 61/013
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H01H 47/00

Circuit arrangements not adapted to a particular application of the relay and designed to obtain desired operating characteristics or to provide energising current (circuit arrangements for electro-magnets in general H01F7/18)

Informative references

Attention is drawn to the following places, which may be of interest for search:

Circuit arrangements for electro-magnets in general	H01F 7/18
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H01H 47/04

for holding armature in attracted position, e.g. when initial energising circuit is interrupted; for maintaining armature in attracted position, e.g. with reduced energising current [N: (with switching regulator H01H47/325)]

References relevant to classification in this group

This subclass/group does not cover:

Switching regulators	H01H 47/325
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H01H 47/18

for introducing delay in the operation of the relay (short-circuited conducting sleeves, bands or discs)

H01H50/46)

Informative references

Attention is drawn to the following places, which may be of interest for search:

Short-circuited conducting sleeves, bands or discs	H01H 50/46
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H01H 47/34

Energising current supplied by magnetic amplifier [N: (magnetic amplifiers H03F9/00)]

Informative references

Attention is drawn to the following places, which may be of interest for search:

Magnetic amplifiers	H03F 9/00
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H01H 49/00

Apparatus or processes specially adapted to the manufacture of relays or parts thereof

H01H 50/00

Details of electromagnetic relays ([N: H01H51/28 takes precedence;] electric circuit arrangements H01H47/00; details of electrically-operated select or switches H01H63/00; [N: testing of relays G01R31/00; electromagnets in general H01F7/06; relays for emergency protective circuit arrangements H02H])

References relevant to classification in this group

This subclass/group does not cover:

Relays having both armature and contacts within a sealed casing outside which the operating coil is located, e.g. contact carried by a magnetic leaf spring or reed	H01H 51/28
Relays for emergency protective circuit arrangements	H02H

Informative references

Attention is drawn to the following places, which may be of interest for search:

Electric circuit arrangements	H01H 47/00
Details of electrically-operated select or switches	H01H 63/00
Testing of relays	G01R 31/00
Electromagnets in general	H01F 7/06

H01H 50/02

Bases; Casings; Covers (frames for mounting two or more relays or for mounting a relay and another electric component H02B1/01, H04Q1/08, H05K)

Informative references

Attention is drawn to the following places, which may be of interest for search:

Frames for mounting two or more relays or for mounting a relay and another electric component	H02B 1/01 , H04Q 1/08 , H05K
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H01H 50/10

Electromagnetic or electrostatic shielding (casings H01H50/02; [N: screening in general H05K9/00])

Informative references

Attention is drawn to the following places, which may be of interest for search:

Casings	H01H 45/02
Screening in general	H05K 9/00

H01H 50/12

Ventilating; Cooling; Heating (for operating electrothermal relays H01H61/013)

References relevant to classification in this group

This subclass/group does not cover:

Operating electrothermal relays	H01H 61/013
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H01H 50/14

Terminal arrangements [N: (for coils H01H50/443)]

References relevant to classification in this group

This subclass/group does not cover:

Terminal arrangements for coils	H01H 50/443
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H01H 50/16

Magnetic circuit arrangements (cores, yokes, or armatures in general H01F3/00; magnets in general H01F7/00)

Informative references

Attention is drawn to the following places, which may be of interest for search:

Cores, yokes, or armatures in general	H01F 3/00
Magnets in general	H01F 7/00

H01H 50/44

Magnetic coils or winding (circuit arrangements H01H47/00; in general H01F5/00)

Informative references

Attention is drawn to the following places, which may be of interest for search:

Circuit arrangements	H01H 47/00
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Magnetic coils or winding in general	H01F 5/00
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H01H 50/46

Short-circuited conducting sleeves, bands, or discs [N: (for electromagnets H01F7/1205)]

References relevant to classification in this group

This subclass/group does not cover:

Sleeves, bands, or discs for electromagnets	H01F 7/1205
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H01H 50/54

Contact arrangements (contacts for switches in general H01H1/00)

Informative references

Attention is drawn to the following places, which may be of interest for search:

Contacts for switches in general	H01H 1/00
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H01H 50/60

moving contact being rigidly combined with movable part of magnetic circuit [N: (for polarised relays H01H51/2254, H01H51/2281)]

References relevant to classification in this group

This subclass/group does not cover:

Contacts for polarised relays	H01H 51/2254 , H01H 51/2281
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H01H 50/64

Driving arrangements between movable part of magnetic circuit and contact (structurally associated with contact

spring sets H01H50/58)

Informative references

Attention is drawn to the following places, which may be of interest for search:

Driving arrangements structurally associated with contact spring sets	H01H 50/58
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H01H 50/86

Means for introducing a predetermined time delay between the initiation of the switching operation and the opening or closing of the contacts (circuit arrangements for introducing delay H01H47/18; short-circuited conducting sleeves, bands, or discs H01H50/46)

Informative references

Attention is drawn to the following places, which may be of interest for search:

Circuit arrangements for introducing delay	H01H 47/18
Short-circuited conducting sleeves, bands, or discs	H01H 50/46

H01H 50/92

Thermal means (inherent in electrothermal relays H01H61/00)

References relevant to classification in this group

This subclass/group does not cover:

Thermal means inherent in electrothermal relays	H01H 61/00
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H01H 51/00

Electromagnetic relays (relays using the dynamo-electric effect H01H53/00)

Informative references

Attention is drawn to the following places, which may be of interest for search:

Relays using the dynamo-electric effect	H01H 53/00
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H01H 51/01

Relays in which the armature is maintained in one position by a permanent magnet and freed by energisation of a coil producing an opposing magnetic field [N: (H01H51/02 to H01H51/26 take precedence)]

Special rules of classification within this group

[H01H 51/02](#) to [H01H 51/26](#) take precedence over [H01H 51/01](#).

H01H 51/06

Armature is movable between two limit positions of rest and is moved in one direction due to energisation of an electromagnet and after the electromagnet is de-energised is returned by energy stored during the movement in the first direction, e.g. by using a spring, by using a permanent magnet, by gravity [N: (motors with armature moved one way and returned by spring in general H02K33/02)]

Informative references

Attention is drawn to the following places, which may be of interest for search:

Motors with armature moved one way and returned by spring in general	H02K 33/02
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H01H 51/12

Armature is movable between two limit positions of rest and is moved in both directions due to the energisation of one or the other of two electromagnets without the storage of energy to effect the return movement [N: (motors with armature moved one way and returned by spring in general H02K33/02)]

Informative references

Attention is drawn to the following places, which may be of interest for search:

Motors with armature moved one way and returned by spring in general	H02K 33/02
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H01H 51/22

Polarised relays [N: (H01H51/28 takes precedence)]

References relevant to classification in this group

This subclass/group does not cover:

Relays having both armature and contacts within a sealed casing outside which the operating coil is located, e.g. contact carried by a magnetic leaf spring or reed	H01H 51/28
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H01H 51/28

Relays having both armature and contacts within a sealed casing outside which the operating coil is located, e.g. contact carried by a magnetic leaf spring or reed (H01H51/27 takes precedence)

References relevant to classification in this group

This subclass/group does not cover:

Relays with armature having two stable magnetic states and operated by change from one state to the other	H01H 51/27
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H01H 51/29

Relays having armature, contacts, and operating coil within a sealed casing (H01H51/27 takes precedence)

References relevant to classification in this group

This subclass/group does not cover:

Relays with armature having two stable magnetic states and operated	H01H 51/27
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by change from one state to the other	
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H01H 51/32

Frequency relays; Mechanically-tuned relays [N: (switched devices for electric time devices G04C; electromechanical resonators H03H9/00; telegraph circuits with oscillating relay H04L25/205); mechanical means for producing a desired natural frequency of operation of the contacts H01H50/74)]

Informative references

Attention is drawn to the following places, which may be of interest for search:

Switched devices for electric time devices	G04C
Electromechanical resonators	H03H 9/00
Telegraph circuits with oscillating relay	H04L 25/205
Mechanical means for producing a desired natural frequency of operation of the contacts	H01H 50/74

H01H 53/00

Relays using the dynamo-electric effect, i.e. relays in which contacts are opened or closed due to relative movement of current-carrying conductor and magnetic field caused by force of interaction between them

H01H 53/10

Induction relays, i.e. relays in which the interaction is between a magnetic field and current induced thereby in a conductor [N: (parts of protective circuit arrangements H02H1/00)]

Informative references

Attention is drawn to the following places, which may be of interest for search:

Parts of protective circuit	H02H 1/00
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arrangements	
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H01H 53/14

Contacts actuated by an electric motor through fluid-pressure transmission, e.g. using a motor-driven pump [N: (switches using dynamo-electric motor H01H3/26)]

Informative references

Attention is drawn to the following places, which may be of interest for search:

Switches using dynamo-electric motor	H01H 3/26
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H01H 55/00

Magnetostrictive relays

H01H 57/00

Electrostrictive relays; Piezo-electric relays

H01H 59/00

Electrostatic relays; Electro-adhesion relays ([N: electrostatic measuring instruments G01R5/28]; clutches in general using the Johnson-Rahbek effect H02N13/00; [N: electrostatic transducers H04R19/00; systems for preventing the formation of electrostatic charges H05F])

Informative references

Attention is drawn to the following places, which may be of interest for search:

Electrostatic measuring instruments	G01R 5/28
Clutches in general using the Johnson-Rahbek effect	H02N 13/00
Electrostatic transducers	H04R 19/00
Systems for preventing the formation of electrostatic charges	H05F

H01H 61/00

Electrothermal relays (thermal switches not operated by electrical input, thermal switches with anticipating electrical input H01H37/00; thermally-sensitive members H01H37/32)

References relevant to classification in this group

This subclass/group does not cover:

Thermal switches not operated by electrical input, thermal switches with anticipating electrical input	H01H 37/00
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Informative references

Attention is drawn to the following places, which may be of interest for search:

Thermally-sensitive members	H01H 37/32
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H01H 63/00

Details of electrically-operated selector switches (details of relays H01H45/00)

Informative references

Attention is drawn to the following places, which may be of interest for search:

Details of relays	H01H 45/00
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H01H 63/34

Bases; Cases; Covers; Mountings (racks for mounting selectors with or without other exchange equipment H04Q1/04); Mounting of fuses on selector switch

Informative references

Attention is drawn to the following places, which may be of interest for search:

Racks for mounting selectors with or without other exchange equipment	H04Q 1/04
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H01H 65/00

Apparatus or processes specially adapted to the manufacture of selector switches or parts thereof

H01H 67/00

Electrically-operated selector switches (details thereof H01H63/00; selecting in general H04Q)

References relevant to classification in this group

This subclass/group does not cover:

Details of electrically-operated selector switches	H01H 63/00
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Informative references

Attention is drawn to the following places, which may be of interest for search:

Selecting in general	H04Q
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H01H 69/00

Apparatus or processes for the manufacture of emergency protective devices (manufacture of switches in general H01H11/00; manufacture of relays in general H01H49/00)

Informative references

Attention is drawn to the following places, which may be of interest for search:

Manufacture of switches in general	H01H 11/00
Manufacture of relays in general	H01H 49/00

H01H 69/01

for calibrating or setting of devices to function under

predetermined conditions (measuring electric values G01R)

Informative references

Attention is drawn to the following places, which may be of interest for search:

Measuring electric values	G01R
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H01H 71/00

Details of the protective switches or relays covered by groups H01H73/00 to H01H83/00

H01H 71/04

Means for indicating condition of the switching device [N: (by means of an auxiliary contact H01H71/46)]

References relevant to classification in this group

This subclass/group does not cover:

Means for indicating condition of the switching device by means of an auxiliary contact	H01H 71/46
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H01H 71/08

Terminals; Connections (in general H01R)

Informative references

Attention is drawn to the following places, which may be of interest for search:

Terminals and Connections in general	H01R
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H01H 71/14

Electrothermal mechanisms [N: (combined with a electro-thermal time delay relay H01H61/002)]

References relevant to classification in this group

This subclass/group does not cover:

Electrothermal mechanisms combined with a electro-thermal time delay relay	H01H 61/002
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H01H 71/16

with bimetal element [N: (combined with detection of imbalance of two or more currents H01H83/223)]

References relevant to classification in this group

This subclass/group does not cover:

Bimetal elements combined with detection of imbalance of two or more currents	H01H 83/223
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H01H 71/26

with windings acting in opposition [N: (H01H71/2436 takes precedence)]

References relevant to classification in this group

This subclass/group does not cover:

Windings acting in opposition	H01H 71/2436
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H01H 71/44

having means for introducing a predetermined time delay (by short-circuited winding H01H71/30; by additional armature H01H71/34)

References relevant to classification in this group

This subclass/group does not cover:

Short-circuited winding	H01H 71/30
Additional armature	H01H 71/34

H01H 73/00

Protective overload circuit-breaking switches in which excess current opens the contacts by automatic release of mechanical energy stored by previous operation of a hand reset mechanism

H01H 73/08

Plug-in housings [N: (for a plurality of juxtaposed housings H02B1/056)]

References relevant to classification in this group

This subclass/group does not cover:

Plug-in housings for a plurality of juxtaposed housings	H02B 1/056
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H01H 73/12

Means for indicating condition of the switch [N: (by means of an auxiliary contact H01H71/46)]

References relevant to classification in this group

This subclass/group does not cover:

Indicating condition of the switch by means of an auxiliary contact	H01H 71/46
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H01H 73/18

Means for extinguishing or suppressing arc [N: (in general H01H9/30 to H01H9/46; magnet coil acting as blow-out device H01H71/38)]

Informative references

Attention is drawn to the following places, which may be of interest for search:

Means for extinguishing or suppressing arc in general	H01H 9/30 - H01H 9/46
Magnet coil acting as blow-out device	H01H 71/38

H01H 73/20

Terminals; Connections (in general H01R)

Informative references

Attention is drawn to the following places, which may be of interest for search:

Terminals and Connections in general	H01R
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H01H 73/22

having electrothermal release and no other automatic release (cartridge type H01H73/62)

References relevant to classification in this group

This subclass/group does not cover:

Cartridge type	H01H 73/62
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H01H 73/36

having electromagnetic release and no other automatic release (cartridge type H01H73/64)

References relevant to classification in this group

This subclass/group does not cover:

Cartridge type	H01H 73/64
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H01H 73/48

having both electrothermal and electromagnetic automatic release (cartridge type H01H73/66)

References relevant to classification in this group

This subclass/group does not cover:

Cartridge type	H01H 73/66
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H01H 75/00

Protective overload circuit-breaking switches in which excess current opens the contacts by automatic release of mechanical energy stored by previous operation of power reset mechanism

H01H 75/04

Reset mechanisms for automatically reclosing a limited number of times (circuit arrangements H02H3/06)

Informative references

Attention is drawn to the following places, which may be of interest for search:

Circuit arrangements	H02H 3/06
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H01H 77/00

Protective overload circuit-breaking switches operated by excess current and requiring separate action for resetting (H01H73/00, H01H75/00 take precedence)

References relevant to classification in this group

This subclass/group does not cover:

Protective overload circuit-breaking switches in which excess current opens the contacts by automatic release of mechanical energy stored by previous operation of a hand reset mechanism	H01H 73/00
Protective overload circuit-breaking switches in which excess current opens the contacts by automatic release of mechanical energy stored by previous operation of power reset mechanism	H01H 75/00

H01H 77/06

with electromagnetic opening [N: (combined with electromagnetic release mechanism H01H71/2409)]

References relevant to classification in this group

This subclass/group does not cover:

Electromagnetic opening combined with electromagnetic release mechanism	H01H 71/2409
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H01H 77/10

with electrodynamic opening [N: (combined with electromagnetic release mechanism H01H71/2418)]

References relevant to classification in this group

This subclass/group does not cover:

Electrodynamic opening combined with electromagnetic release mechanism	H01H 71/2418
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H01H 79/00

Protective switches in which excess current causes the closing of contacts, e.g. for short-circuiting the apparatus to be protected [N: (H01H39/004 takes precedence)]

References relevant to classification in this group

This subclass/group does not cover:

Protective switches in which excess current causes the closing of contacts, e.g. for short-circuiting the apparatus to be protected	H01H 39/004
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H01H 81/00

Protective switches in which contacts are normally closed but

are repeatedly opened and reclosed as long as a condition causing excess current persists, e.g. for current limiting

H01H 83/00

Protective switches, e.g. circuit-breaking switches, or protective relays operated by abnormal electrical conditions otherwise than solely by excess current

H01H 83/02

operated by earth fault currents (H01H83/14 takes precedence)

References relevant to classification in this group

This subclass/group does not cover:

Operated by unbalance of two or more currents or voltages, e.g. for differential protection	H01H 83/14
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H01H 85/00

Protective devices in which the current flows through a part of fusible material and this current is interrupted by displacement of the fusible material when this current becomes excessive (switches actuated by melting of fusible material H01H37/76; automatic release of protective switches due to fusion of a mass H01H73/00 to H01H83/00; disposition or arrangement of fuses on boards H02B1/18)

References relevant to classification in this group

This subclass/group does not cover:

Switches actuated by melting of fusible material	H01H 37/76
Automatic release of protective switches due to fusion of a mass	H01H 73/00 - H01H 83/00

Informative references

Attention is drawn to the following places, which may be of interest for search:

Disposition or arrangement of fuses on boards	H02B 1/18
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H01H 85/044

General constructions or structure of low voltage fuses, i.e. below 1000 V, or of fuses where the applicable voltage is not specified (H01H85/046 to H01H85/048 take precedence)

Special rules of classification within this group

[H01H 85/046](#) to [H01H 85/048](#) take precedence over [H01H 85/044](#).

H01H 85/0445

fast or slow type (H01H85/045 to H01H85/048 take precedence)

Special rules of classification within this group

[H01H 85/045](#) to [H01H 85/048](#) take precedence over [H01H 85/0445](#).

H01H 85/06

characterised by the fusible material (H01H85/11 takes precedence)

References relevant to classification in this group

This subclass/group does not cover:

M-effect devices	H01H 85/11
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H01H 85/10

with constriction for localised fusing (H01H85/11 takes precedence)

References relevant to classification in this group

This subclass/group does not cover:

M-effect devices	H01H 85/11
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H01H 85/165

Casings (electrical contacts H01H85/143; fillings H01H85/18)

Informative references

Attention is drawn to the following places, which may be of interest for search:

Electrical contacts	H01H 85/143
Fillings	H01H 85/18

H01H 85/20

Bases for supporting the fuse; Separate parts thereof (bases, casings for connectors, in general H01R)

Informative references

Attention is drawn to the following places, which may be of interest for search:

Bases, casings for connectors, in general	H01R
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H01H 85/25

Safety arrangements preventing or inhibiting contact with live parts, including operation of isolation on removal of cover (interlocking between casing or protective shutter of a switch and mechanism for operating its contacts H01H9/22)

Informative references

Attention is drawn to the following places, which may be of interest for search:

Interlocking between casing or protective shutter of a switch and mechanism for operating its contacts	H01H 9/22
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H01H 85/38

Means for extinguishing or suppressing arc (by powder filling

H01H85/18; by mechanical tension applied to fusible member H01H85/36)

References relevant to classification in this group

This subclass/group does not cover:

Means for extinguishing or suppressing arc by powder filling	H01H 85/18
Means for extinguishing or suppressing arc by mechanical tension applied to fusible member	H01H 85/36

H01H 85/40

using an arc-extinguishing liquid (characterised by the composition of the liquid H01H33/22)

References relevant to classification in this group

This subclass/group does not cover:

Arc-extinguishing liquid characterised by the composition of the liquid	H01H 33/22
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H01H 85/42

using an arc-extinguishing gas (characterised by the composition of the gas H01H33/22)

References relevant to classification in this group

This subclass/group does not cover:

Arc-extinguishing gas characterised by the composition of the gas	H01H 33/22
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H01H 87/00

Protective devices in which a current flowing through a liquid or solid is interrupted by the evaporation of the liquid or by the melting and evaporation of the solid when the current becomes excessive, the circuit continuity being

re-established on cooling

H01H 89/00

Combinations of two or more different basic types of electric switches, relays, selectors and emergency protective devices, not covered by a single one of the preceding main groups