

**CPC****COOPERATIVE PATENT CLASSIFICATION****H02B**

**BOARDS, SUBSTATIONS, OR SWITCHING ARRANGEMENTS FOR THE SUPPLY OR DISTRIBUTION OF ELECTRIC POWER** (basic electric elements, their assembly, including the mounting in enclosures or on bases, or the mounting of covers thereon, see the subclasses for such elements, e.g. transformers [H01E](#), switches, fuses [H01H](#), line connectors [H01R](#); installation of lines, cables, or other conductors for supply or distribution [H02G](#))

**NOTE**

This subclass covers boards, switchyards, switchgear or their installation, or the association of switching devices with each other or with other devices, e.g. transformers, fuses, meters or distribution boards; such associations constitute substations or distribution points.

**H02B 1/00**

**Frameworks, boards, panels, desks, casings; Details of substations or switching arrangements**

- H02B 1/01 . Frameworks
- H02B 1/011 .. { Open support bases}
- H02B 1/012 .. { Details of mechanical connections}
- H02B 1/013 .. { Profiles for cabinet frames}
- H02B 1/014 .. { Corner connections for frameworks}
  
- H02B 1/015 . Boards, panels, desks; Parts thereof or accessories therefor
- H02B 1/03 .. for energy meters
- H02B 1/04 .. Mounting thereon of switches or of other devices in general, the switch or device having, or being without, casing
  - H02B 1/041 ... { Mechanical coupling for side-by-side mounted apparatus}
  - H02B 1/042 ... {Mounting on perforated supports by means of screws or locking members}
  - H02B 1/043 .... {the perforated support having openings distributed according to a pattern}
  - H02B 1/044 ... Mounting through openings
  - H02B 1/048 .... Snap mounting
  - H02B 1/052 ... Mounting on rails
    - H02B 1/0523 .... { locked into position by a sliding member}
    - H02B 1/0526 .... { locking or releasing devices actuated from the front face of the apparatus}
  - H02B 1/056 ... Mounting on plugboards
    - H02B 1/0565 .... {by means of an adapter carrying one or more apparatuses (holders with sockets [H01R 33/00](#))}
- H02B 1/06 .. having associated enclosures, e.g. for preventing access to live parts (shutters or guards for contacts [H02B 1/14](#))
  - H02B 1/063 ... {with tamper resistant sealing device}

- H02B 1/066 . . . {with hinged covers (covers for distribution boxes [H02G 3/14](#))}
- H02B 1/14 . Shutters or guards for preventing access to contacts (shielding of isolating-contacts in withdrawable switchgear [H02B 11/24](#))
- H02B 1/16 . Earthing arrangements (earthing arrangements for substations [H02B 5/01](#), for switchgear [H02B 11/28](#), [H02B 13/075](#); earth plates, pins, or other contacts [H01R 4/66](#))
- H02B 1/18 . Disposition or arrangement of fuses (for switchgear having a withdrawable carriage [H02B 11/26](#))
- H02B 1/20 . Bus-bar or other wiring lay-outs, e.g. in cubicles, in switchyards (installations of bus-bars [H02G 5/00](#))
- H02B 1/202 . . {Cable lay-outs}
- H02B 1/205 . . {for connecting electrical apparatus mounted side by side on a rail}
- H02B 1/207 . . {Cross-bar layouts}
- H02B 1/21 . . Bus-bar arrangements for rack-mounted devices with withdrawable units
- H02B 1/22 . . Layouts for duplicate bus-bar selection
- H02B 1/24 . Circuit arrangements for boards or switchyards (devices for displaying diagrams [H02B 15/00](#); service supply [H02J 11/00](#))

**NOTE**

In groups [H02B 1/26](#) to [H02B 1/56](#), in the absence of an indication to the contrary, an invention is classified in the last appropriate place.

- H02B 1/26 . Casings; Parts thereof or accessories therefor (adapted for a single switch [H01H](#); enclosures for cables, lines or bus-bars [H02G](#); distribution, connection or junction boxes [H02G 3/08](#); casings in general [H05K](#))
- H02B 1/28 . . dustproof, splashproof, drip-proof, waterproof or flameproof
- H02B 1/30 . . Cabinet-type casings; Parts thereof or accessories therefor
- H02B 1/301 . . . {mainly consisting of a frame onto which plates are mounted}
- H02B 1/303 . . . {Bases or feet}
- H02B 1/305 . . . {Cable entries}
- H02B 1/306 . . . {Accessories, e.g. windows}
- H02B 1/308 . . . {Mounting of cabinets together}
- H02B 1/32 . . . Mounting of devices therein
- H02B 1/34 . . . . Racks
- H02B 1/36 . . . . . with withdrawable units
- H02B 1/38 . . . Hinged covers or doors
- H02B 1/40 . . Wall-mounted casings; Parts thereof or accessories therefor
- H02B 1/42 . . . Mounting of devices therein
- H02B 1/44 . . . Hinged covers or doors
- H02B 1/46 . . Boxes; Parts thereof or accessories therefor
- H02B 1/48 . . . Mounting of devices therein

- H02B 1/50 . . Pedestal- or pad-mounted casings; Parts thereof or accessories therefor
- H02B 1/505 . . . {retractable installations}
- H02B 1/52 . . Mobile units, e.g. for work sites
  
- H02B 1/54 . Anti-seismic devices or installations (for buildings in general [E04B 1/98](#); {shock absorbers [F16F](#)})
  
- H02B 1/56 . Cooling; Ventilation
- H02B 1/565 . . {for cabinets}
  
- H02B 3/00 Apparatus specially adapted for the manufacture, assembly, or maintenance of boards or switchgear**
  
- H02B 5/00 Non-enclosed substations; Substations with enclosed and non-enclosed equipment**
  
- H02B 5/01 . Earthing arrangements, e.g. earthing rods
- H02B 5/02 . mounted on pole, e.g. pole transformer substation
- H02B 5/06 . gas-insulated
  
- H02B 7/00 Enclosed substations, e.g. compact substations**
  
- H02B 7/01 . gas-insulated
- H02B 7/06 . Distribution substations, e.g. for urban network ([H02B 7/01](#) takes precedence)
- H02B 7/08 . . Underground substations
  
- H02B 11/00 Switchgear having carriage withdrawable for isolation**
  
- H02B 11/02 . Details
- H02B 11/04 . . Isolating-contacts, e.g. mountings, shieldings (shutters or guards for isolating contacts [H02B 1/14](#), [H02B 11/24](#); switch contacts [H01H](#); line connectors in general [H01R](#))
  
- H02B 11/06 . Means for duplicate bus-bar selection ([layouts for duplicate bus-bar selection H02B 1/22](#))
- H02B 11/08 . . Oil-tank lowering means associated with withdrawal mechanism
- H02B 11/10 . . Indicating electrical condition of gear; Arrangement of test sockets
  
- H02B 11/12 . with isolation by horizontal withdrawal
- H02B 11/127 . . Withdrawal mechanism
- H02B 11/133 . . . with interlock ([interlock for switches in general H01H](#))
- H02B 11/167 . . truck type ([H02B 11/127](#) takes precedence)
- H02B 11/173 . . drawer type ([H02B 11/127](#) takes precedence)

- H02B 11/18 . with isolation by vertical withdrawal
- H02B 11/20 .. having an enclosure
- H02B 11/22 ... wherein front of enclosure moves with carriage upon horizontal withdrawal subsequent to isolation
  
- H02B 11/24 . Shutters or guards
  
- H02B 11/26 . Arrangements of fuses, resistors, voltage arresters or the like
  
- H02B 11/28 . Earthing arrangements
  
- H02B 13/00** **Arrangements of switchgear in which switches are enclosed in, or structurally associated with, a casing, e.g. cubicle** (in association with main transformer [H02B 5/00](#), [H02B 7/00](#); switchgear having carriage withdrawable for isolation [H02B 11/00](#))
  
- H02B 13/005 . {Electrical connection between switchgear cells}
  
- H02B 13/01 . with resin casing
  
- H02B 13/02 . with metal casing
  
- H02B 13/025 .. Safety arrangements, e.g. in case of excessive pressure or fire due to electrical defect (for buildings in general [E04B 1/94](#); devices for opening or closing safety wings [E05F 1/00](#); emergency protective circuit arrangements for distribution gear, e.g. bus-bar systems, or for switching devices [H02H 7/22](#))
  
- H02B 13/035 .. Gas-insulated switchgear
- H02B 13/0352 ... {for three phase switchgear}
- H02B 13/0354 ... {comprising a vacuum switch ([H02B 13/0352](#) takes precedence)}
- H02B 13/0356 ... {Mounting of monitoring devices, e.g. current transformers}
- H02B 13/0358 ... {Connections to in or out conductors (connectors in general [H01R](#))}
- H02B 13/045 ... Details of casing, e.g. gas tightness (gas reservoirs for switches [H01H 33/56](#))
- H02B 13/055 ... Features relating to the gas (selection of fluids for switches [H01H 33/22](#))
- H02B 13/065 ... Means for detecting or reacting to mechanical or electrical defects (for switches [H01H 9/50](#), [H01H 33/26](#), [H01H 33/53](#))
- H02B 13/0655 .... { through monitoring changes of gas properties}
- H02B 13/075 ... Earthing arrangements
  
- H02B 13/08 . with stone, brick or concrete casing
  
- H02B 15/00** **Supervisory desks or panels for centralised control or display** (desks in general [A47B](#))
  
- H02B 15/02 . with mimic diagrams
- H02B 15/04 .. consisting of building blocks

**H02B 2001/00 Frameworks, boards, panels, desks, casings; Details of substations or switching arrangements**

H02B 2001/015 . Boards, panels, desks; Parts thereof or accessories therefor

[H02B 2001/0155](#) .. Removable shutters for non-used openings