

**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 [H01F](#), 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 2001/0155 .. {Removable shutters for non-used openings }
- 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	<ul style="list-style-type: none"> <li>Anti-seismic devices or installations (for buildings in general <a href="#">E04B 1/98</a>; {shock absorbers <a href="#">F16F</a>})</li> </ul>
H02B 1/56	<ul style="list-style-type: none"> <li>Cooling; Ventilation</li> </ul>
H02B 1/565	<ul style="list-style-type: none"> <li>.. {for cabinets}</li> </ul>
<b>H02B 3/00</b>	<b>Apparatus specially adapted for the manufacture, assembly, or maintenance of boards or switchgear</b>
<b>H02B 5/00</b>	<b>Non-enclosed substations; Substations with enclosed and non-enclosed equipment</b>
H02B 5/01	<ul style="list-style-type: none"> <li>Earthing arrangements, e.g. earthing rods</li> </ul>
H02B 5/02	<ul style="list-style-type: none"> <li>mounted on pole, e.g. pole transformer substation</li> </ul>
H02B 5/06	<ul style="list-style-type: none"> <li>gas-insulated</li> </ul>
<b>H02B 7/00</b>	<b>Enclosed substations, e.g. compact substations</b>
H02B 7/01	<ul style="list-style-type: none"> <li>gas-insulated</li> </ul>
H02B 7/06	<ul style="list-style-type: none"> <li>Distribution substations, e.g. for urban network (<a href="#">H02B 7/01</a> takes precedence)</li> </ul>
H02B 7/08	<ul style="list-style-type: none"> <li>.. Underground substations</li> </ul>
<b>H02B 11/00</b>	<b>Switchgear having carriage withdrawable for isolation</b>
H02B 11/02	<ul style="list-style-type: none"> <li>Details</li> </ul>
H02B 11/04	<ul style="list-style-type: none"> <li>.. Isolating-contacts, e.g. mountings, shieldings (shutters or guards for isolating contacts <a href="#">H02B 1/14</a>, <a href="#">H02B 11/24</a>; switch contacts <a href="#">H01H</a>; line connectors in general <a href="#">H01R</a>)</li> </ul>
H02B 11/06	<ul style="list-style-type: none"> <li>.. Means for duplicate bus-bar selection (layouts for duplicate bus-bar selection <a href="#">H02B 1/22</a>)</li> </ul>
H02B 11/08	<ul style="list-style-type: none"> <li>.. Oil-tank lowering means associated with withdrawal mechanism</li> </ul>
H02B 11/10	<ul style="list-style-type: none"> <li>.. Indicating electrical condition of gear; Arrangement of test sockets</li> </ul>
H02B 11/12	<ul style="list-style-type: none"> <li>with isolation by horizontal withdrawal</li> </ul>
H02B 11/127	<ul style="list-style-type: none"> <li>.. Withdrawal mechanism</li> </ul>
H02B 11/133	<ul style="list-style-type: none"> <li>... with interlock (interlock for switches in general <a href="#">H01H</a>)</li> </ul>
H02B 11/167	<ul style="list-style-type: none"> <li>.. truck type (<a href="#">H02B 11/127</a> takes precedence)</li> </ul>
H02B 11/173	<ul style="list-style-type: none"> <li>.. drawer type (<a href="#">H02B 11/127</a> takes precedence)</li> </ul>
H02B 11/18	<ul style="list-style-type: none"> <li>with isolation by vertical withdrawal</li> </ul>
H02B 11/20	<ul style="list-style-type: none"> <li>.. having an enclosure</li> </ul>
H02B 11/22	<ul style="list-style-type: none"> <li>... wherein front of enclosure moves with carriage upon horizontal withdrawal subsequent to isolation</li> </ul>
H02B 11/24	<ul style="list-style-type: none"> <li>Shutters or guards</li> </ul>
H02B 11/26	<ul style="list-style-type: none"> <li>Arrangements of fuses, resistors, voltage arresters or the like</li> </ul>
H02B 11/28	<ul style="list-style-type: none"> <li>Earthing arrangements</li> </ul>
<b>H02B 13/00</b>	<b>Arrangements of switchgear in which switches are enclosed in, or structurally associated with, a casing, e.g. cubicle (in association with main transformer <a href="#">H02B 5/00</a>, <a href="#">H02B 7/00</a>; switchgear having carriage withdrawable for isolation <a href="#">H02B 11/00</a>)</b>

- 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