

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 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