SECTION H — ELECTRICITY

H02 GENERATION, CONVERSION, OR DISTRIBUTION OF ELECTRIC POWER

H02J CIRCUIT ARRANGEMENTS OR SYSTEMS FOR SUPPLYING OR DISTRIBUTING ELECTRIC POWER; SYSTEMS FOR STORING ELECTRIC ENERGY (power supply circuits for apparatus for measuring X-radiation, gamma radiation, corpuscular radiation or cosmic radiation G01T 1/175; electric power supply circuits specially adapted for use in electronic time-pieces with no moving parts G04G 19/00; for digital computers G06F 1/18; for discharge tubes H01J 37/248; circuits or apparatus for the conversion of electric power, arrangements for control or regulation of such circuits or apparatus H02M; interrelated control of several motors, control of a prime-mover/generator combination H02P; control of high-frequency power H03L; additional use of power line or power network for transmission of information H04B)

Note(s)

1. This subclass covers:
   - ac or dc mains or distribution networks;
   - circuit arrangements for battery supplies, including charging or control thereof, or co-ordinated supply from two or more sources of any kind;
   - systems for supplying or distributing electric power by electromagnetic waves.
2. This subclass does not cover:
   - control of a single motor, generator or dynamo-electric converter, of the types covered by subclass H01F or H02K, which is covered by subclass H02P;
   - control of a single motor or generator, of the types covered by subclass H02N, which is covered by that subclass.

Subclass index

1/00 Circuit arrangements for dc mains or dc distribution networks

1/02 • Arrangements for reducing harmonics or ripples (in converters H02M 1/14)

1/04 • Constant-current supply systems

1/06 • Two-wire systems

1/08 • Three-wire systems; Systems having more than three wires

1/10 • Parallel operation of dc sources (involving batteries H02J 7/34)

1/12 • • Parallel operation of dc generators with converters, e.g. with mercury-arc rectifier

1/14 • Balancing the load in a network (by batteries H02J 7/34)

1/16 • • using dynamo-electric machines coupled to flywheels

3/00 Circuit arrangements for ac mains or ac distribution networks

3/01 • Arrangements for reducing harmonics or ripples (in converters H02M 1/12) **[3]**

3/02 • using a single network for simultaneous distribution of power at different frequencies; using a single network for simultaneous distribution of ac power and of dc power

3/04 • for connecting networks of the same frequency but supplied from different sources

3/06 • • Controlling transfer of power between connected networks; Controlling sharing of load between connected networks

3/08 • • Synchronising of networks

3/10 • Constant-current supply systems

3/12 • for adjusting voltage in ac networks by changing a characteristic of the network load

3/14 • • by switching loads on to, or off from, network, e.g. progressively balanced loading

3/16 • • by adjustment of reactive power

3/18 • Arrangements for adjusting, eliminating, or compensating reactive power in networks (for adjustment of voltage H02J 3/12; use of Petersen coils H02H 9/08)

3/20 • • in long overhead lines

3/22 • • in cables
3/24 • Arrangements for preventing or reducing oscillations of power in networks (by control effected upon a single generator H02P 9/00)
3/26 • Arrangements for eliminating or reducing asymmetry in polyphase networks
3/28 • Arrangements for balancing the load in a network by storage of energy
3/30 • • using dynamo-electric machines coupled to flywheels
3/32 • • using batteries with converting means
3/34 • Arrangements for transfer of electric power between networks of substantially different frequency (frequency converters H02M)
3/36 • Arrangements for transfer of electric power between ac networks via a high-tension dc link
3/38 • Arrangements for parallelly feeding a single network by two or more generators, converters, or transformers
3/40 • • Synchronising a generator for connection to a network or to another generator
3/42 • • • with automatic parallel connection when synchronism is achieved
3/44 • • • with means for ensuring correct phase sequence
3/46 • • Controlling the sharing of output between the generators, converters, or transformers
3/48 • • • Controlling the sharing of the in-phase component
3/50 • • • Controlling the sharing of the out-of-phase component

4/00 Circuit arrangements for mains or distribution networks not specified as ac or dc [2]

5/00 Circuit arrangements for transfer of electric power between ac networks and dc networks (H02J 3/36 takes precedence)

7/00 Circuit arrangements for charging or depolarising batteries or for supplying loads from batteries
7/02 • for charging batteries from ac mains by converters
7/04 • • Regulation of the charging current or voltage
7/06 • • • using discharge tubes or semiconductor devices
7/08 • • • • using discharge tubes only
7/10 • • • • using semiconductor devices only
7/12 • • • using magnetic devices having controllable degree of saturation, i.e. transductors
7/14 • for charging batteries from dynamo-electric generators driven at varying speed, e.g. on vehicle
7/16 • • Regulation of the charging current or voltage by variation of field
7/18 • • • due to variation of ohmic resistance in field circuit, using resistance switching in or out of circuit step by step
7/20 • • • due to variation of continuously-variable ohmic resistor
7/22 • • • due to variation of make-to-break ratio of intermittently-operating contacts, e.g. using Tirrill regulator
7/24 • • • using discharge tubes or semiconductor devices
7/26 • • • using magnetic devices with controllable degree of saturation
7/28 • • • using magnetic devices with controllable degree of saturation in combination with controlled discharge tube or controlled semiconductor device
7/30 • • • using armature-reaction-excited machines
7/32 • for charging batteries from a charging set comprising a non-electric prime mover
7/34 • Parallel operation in networks using both storage and other dc sources, e.g. providing buffering (H02J 7/14 takes precedence) **[4]**
7/35 • • with light sensitive cells **[4]**
7/36 • Arrangements using end-cell switching

9/00 Circuit arrangements for emergency or stand-by power supply, e.g. for emergency lighting (with provision for charging standby battery H02J 7/00)
9/02 • in which an auxiliary distribution system and its associated lamps are brought into service
9/04 • in which the distribution system is disconnected from the normal source and connected to a standby source
9/06 • • with automatic change-over
9/08 • • • requiring starting of a prime-mover

11/00 Circuit arrangements for providing service supply to auxiliaries of stations in which electric power is generated, distributed, or converted (emergency or standby arrangements H02J 9/00)

13/00 Circuit arrangements for providing remote indication of network conditions, e.g. an instantaneous record of the open or closed condition of each circuitbreaker in the network; Circuit arrangements for providing remote control of switching means in a power distribution network, e.g. switching in and out of current consumers by using a pulse code signal carried by the network

15/00 Systems for storing electric energy (mechanical systems therefor F01-F04; in chemical form H01M) **[2]**

17/00 Systems for supplying or distributing electric power by electromagnetic waves [3]