CPC COOPERATIVE PATENT CLASSIFICATION

H ELECTRICITY
(NOTE omitted)

H02 GENERATION; CONVERSION OR DISTRIBUTION OF ELECTRIC POWER

H02J CIRCUIT ARRANGEMENTS OR SYSTEMS FOR SUPPLYING OR DISTRIBUTING ELECTRIC POWER; SYSTEMS FOR STORING ELECTRIC ENERGY

NOTES

1. This subclass covers:
   • ac or dc mains or distribution networks;
   • circuit arrangements for battery supplies, including charging or control thereof, or coordinated supply from two or more sources of any kind;
   • circuit arrangements or systems for wireless supply or distribution of electric power.

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.

WARNING
In this subclass non-limiting references (in the sense of paragraph 39 of the Guide to the IPC) may still be displayed in the scheme.

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

WARNING
Group H02J 1/00 is incomplete pending reclassification of documents from group H02J 13/0003.

Group H02J 1/00 is also impacted by reclassification into group H02J 1/001.

Groups H02J 13/0003, H02J 1/00, and H02J 1/001 should be considered in order to perform a complete search.

1/001

1/001 Arrangements for hot plugging or unplugging of load or power modules to or from power distribution networks

WARNING
Group H02J 1/001 is incomplete pending reclassification of documents from groups H02J 1/00 and H02J 13/0003.

Groups H02J 1/00, H02J 13/0003, and H02J 1/001 should be considered in order to perform a complete search.

1/002 Intermediate AC, e.g. DC supply with intermediated AC distribution

WARNING
Group H02J 1/002 is incomplete pending reclassification of documents from group H02J 13/0003.

Groups H02J 13/0003 and H02J 1/002 should be considered in order to perform a complete search.

1/02 Arrangements for reducing harmonics or ripples

WARNING
Group H02J 1/02 is incomplete pending reclassification of documents from group H02J 13/0003.

Groups H02J 13/0003 and H02J 1/02 should be considered in order to perform a complete search.

1/04 Constant-current supply systems

WARNING
Group H02J 1/04 is incomplete pending reclassification of documents from group H02J 13/0003.

Groups H02J 13/0003 and H02J 1/04 should be considered in order to perform a complete search.

1/06 Two-wire systems

WARNING
Group H02J 1/06 is incomplete pending reclassification of documents from group H02J 13/0003.

Groups H02J 13/0003 and H02J 1/06 should be considered in order to perform a complete search.
Three-wire systems; Systems having more than three wires

**WARNING**

Group H02J 1/08 is incomplete pending reclassification of documents from group H02J 13/0003.

Groups H02J 13/0003 and H02J 1/08 should be considered in order to perform a complete search.

**WARNING**

Group H02J 1/082 is incomplete pending reclassification of documents from group H02J 13/0003.

Groups H02J 13/0003 and H02J 1/082 should be considered in order to perform a complete search.

**WARNING**

Group H02J 1/084 is incomplete pending reclassification of documents from group H02J 13/0003.

Groups H02J 13/0003 and H02J 1/084 should be considered in order to perform a complete search.

**WARNING**

Group H02J 1/10 is incomplete pending reclassification of documents from groups H02J 2001/104 and H02J 13/0003.

Groups H02J 2001/104, H02J 13/0003, and H02J 1/10 should be considered in order to perform a complete search.

**WARNING**

Group H02J 1/102 is incomplete pending reclassification of documents from groups H02J 2001/104 and H02J 13/0003.

Groups H02J 2001/104, H02J 13/0003, and H02J 1/102 should be considered in order to perform a complete search.

**WARNING**

Group H02J 1/106 is incomplete pending reclassification of documents from groups H02J 2001/104 and H02J 13/0003.

Groups H02J 2001/104, H02J 13/0003, and H02J 1/106 should be considered in order to perform a complete search.

**WARNING**

Group H02J 1/108 is incomplete pending reclassification of documents from groups H02J 2001/104 and H02J 13/0003.

Groups H02J 2001/104, H02J 13/0003, and H02J 1/108 should be considered in order to perform a complete search.

**WARNING**

Group H02J 1/109 is incomplete pending reclassification of documents from groups H02J 2001/104 and H02J 13/0003.

Groups H02J 2001/104, H02J 13/0003, and H02J 1/109 should be considered in order to perform a complete search.

**WARNING**

Group H02J 1/12 is incomplete pending reclassification of documents from groups H02J 2001/104 and H02J 13/0003.

Groups H02J 2001/104, H02J 13/0003, and H02J 1/12 should be considered in order to perform a complete search.
1/122  . . [Provisions for temporary connection of DC sources of essentially the same voltage, e.g. jumpstart cables]

**WARNING**

Group H02J 1/122 is incomplete pending reclassification of documents from groups H02J 2001/104 and H02J 13/0003.
Groups H02J 2001/104, H02J 13/0003, and H02J 1/122 should be considered in order to perform a complete search.

1/14  . . Balancing the load in a network

**WARNING**

Group H02J 1/14 is incomplete pending reclassification of documents from group H02J 13/0003.
Groups H02J 13/0003 and H02J 1/14 should be considered in order to perform a complete search.

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

**WARNING**

Group H02J 1/16 is incomplete pending reclassification of documents from group H02J 13/0003.
Groups H02J 13/0003 and H02J 1/16 should be considered in order to perform a complete search.

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

**WARNING**

Group H02J 3/00 is incomplete pending reclassification of documents from group H02J 13/0006.
Groups H02J 13/0006 and H02J 3/00 should be considered in order to perform a complete search.

3/001  . . [Methods to deal with contingencies, e.g. abnormalities, faults or failures]

**WARNING**

Group H02J 3/001 is impacted by reclassification into groups H02J 3/0012 and H02J 3/00125.
Groups H02J 3/001, H02J 3/0012, and H02J 3/00125 should be considered in order to perform a complete search.

3/002  . . [Flicker reduction, e.g. compensation of flicker introduced by non-linear load]

**WARNING**

Group H02J 3/002 is incomplete pending reclassification of documents from group H02J 13/0006.
Groups H02J 13/0006 and H02J 3/002 should be considered in order to perform a complete search.

3/003  . . [Load forecast, e.g. methods or systems for forecasting future load demand]

**WARNING**

Group H02J 3/003 is incomplete pending reclassification of documents from group H02J 13/0006.
Groups H02J 13/0006 and H02J 3/003 should be considered in order to perform a complete search.

3/004  . . [Generation forecast, e.g. methods or systems for forecasting future energy generation]

**WARNING**

Group H02J 3/004 is incomplete pending reclassification of documents from group H02J 13/0006.
Groups H02J 13/0006 and H02J 3/004 should be considered in order to perform a complete search.

3/005  . . [Arrangements for selectively connecting the load to one among a plurality of power lines or power sources (for providing uninterruptable power supply H02J 9/00)]

**WARNING**

Group H02J 3/005 is no longer used for the classification of documents as of January 1, 2020. The content of this group is being reclassified into groups H02J 3/0007 and H02J 3/0075.
Groups H02J 3/005, H02J 3/007, and H02J 3/0075 should be considered in order to perform a complete search.
3/007  .  { Arrangements for selectively connecting the load or loads to one or several among a plurality of power lines or power sources (for providing uninterruptable power supply H02J 9/00) }

**WARNING**

Group H02J 3/007 is incomplete pending reclassification of documents from groups H02J 3/005 and H02J 13/0006.

Groups H02J 3/005, H02J 13/0006, and H02J 3/007 should be considered in order to perform a complete search.

3/0073  .  .  { for providing alternative feeding paths between load and source when the main path fails, e.g. transformers, busbars }

**WARNING**

Group H02J 3/0073 is incomplete pending reclassification of documents from group H02J 13/0006.

Groups H02J 13/0006 and H02J 3/0073 should be considered in order to perform a complete search.

3/0075  .  .  { for providing alternative feeding paths between load and source according to economic or energy efficiency considerations, e.g. economic dispatch }

**WARNING**

Group H02J 3/0075 is incomplete pending reclassification of documents from groups H02J 3/005, H02J 13/0006, and H02J 3/0075 should be considered in order to perform a complete search.

3/008  .  { involving trading of energy or energy transmission rights }

**WARNING**

Group H02J 3/008 is incomplete pending reclassification of documents from group H02J 13/0006.

Groups H02J 13/0006 and H02J 3/008 should be considered in order to perform a complete search.

3/01  .  Arrangements for reducing harmonics or ripples

**WARNING**

Group H02J 3/01 is incomplete pending reclassification of documents from group H02J 13/0006.

Groups H02J 13/0006 and H02J 3/001 should be considered in order to perform a complete search.

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

**WARNING**

Group H02J 3/02 is incomplete pending reclassification of documents from groups H02J 13/0006, H02J 13/0093, and H02J 13/0096.

Groups H02J 13/0006, H02J 13/0093, and H02J 13/0096 should be considered in order to perform a complete search.

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

**WARNING**

Group H02J 3/04 is incomplete pending reclassification of documents from group H02J 13/0006.

Groups H02J 13/0006 and H02J 3/04 should be considered in order to perform a complete search.

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

**WARNING**

Group H02J 3/06 is incomplete pending reclassification of documents from group H02J 13/0006.

Groups H02J 13/0006 and H02J 3/06 should be considered in order to perform a complete search.

3/08  .  .  Synchronising of networks

**WARNING**

Group H02J 3/08 is incomplete pending reclassification of documents from group H02J 13/0006.

Groups H02J 13/0006 and H02J 3/08 should be considered in order to perform a complete search.

3/10  .  Constant-current supply systems

**WARNING**

Group H02J 3/10 is incomplete pending reclassification of documents from group H02J 13/0006.

Groups H02J 13/0006 and H02J 3/10 should be considered in order to perform a complete search.
for adjusting voltage in ac networks by changing a characteristic of the network load

**WARNING**
Group H02J 3/12 is incomplete pending reclassification of documents from group H02J 13/0006.
Groups H02J 13/0006 and H02J 3/12 should be considered in order to perform a complete search.

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

**WARNING**
Group H02J 3/14 is incomplete pending reclassification of documents from group H02J 13/0006.
Groups H02J 13/0006, H02J 3/14, and H02J 3/144 should be considered in order to perform a complete search.

[Demand-response operation of the power transmission or distribution network]

**WARNING**
Group H02J 3/144 is incomplete pending reclassification of documents from groups H02J 3/14 and H02J 13/0006.
Groups H02J 3/14, H02J 13/0006, and H02J 3/144 should be considered in order to perform a complete search.

by adjustment of reactive power

**WARNING**
Group H02J 3/16 is incomplete pending reclassification of documents from group H02J 13/0006.
Groups H02J 13/0006 and H02J 3/16 should be considered in order to perform a complete search.

Arrangements for adjusting, eliminating or compensating reactive power in networks (for adjustment of voltage H02J 3/16)

**WARNING**
Group H02J 3/18 is incomplete pending reclassification of documents from group H02J 13/0006.
Groups H02J 13/0006 and H02J 3/18 should be considered in order to perform a complete search.

[using series compensators]

**WARNING**
Group H02J 3/1807 is incomplete pending reclassification of documents from group H02J 13/0006.
Groups H02J 13/0006 and H02J 3/1807 should be considered in order to perform a complete search.

[wherein at least one reactive element is actively controlled by a bridge converter, e.g. unified power flow controllers [UPFC]]

**WARNING**
Group H02J 3/1814 is incomplete pending reclassification of documents from group H02J 13/0006.
Groups H02J 13/0006 and H02J 3/1814 should be considered in order to perform a complete search.

[using shunt compensators (H02J 3/1807, H02J 3/1878 take precedence)]

**WARNING**
Group H02J 3/1821 is incomplete pending reclassification of documents from group H02J 13/0006.
Groups H02J 13/0006 and H02J 3/1821 should be considered in order to perform a complete search.

[with stepwise control, the possibility of switching in or out the entire compensating arrangement not being considered as stepwise control]

**WARNING**
Group H02J 3/1828 is incomplete pending reclassification of documents from group H02J 13/0006.
Groups H02J 13/0006 and H02J 3/1828 should be considered in order to perform a complete search.

[with stepless control]

**WARNING**
Group H02J 3/1835 is incomplete pending reclassification of documents from group H02J 13/0006.
Groups H02J 13/0006 and H02J 3/1835 should be considered in order to perform a complete search.

[wherein at least one reactive element is actively controlled by a bridge converter, e.g. active filters]

**WARNING**
Group H02J 3/1842 is incomplete pending reclassification of documents from group H02J 13/0006.
Groups H02J 13/0006 and H02J 3/1842 should be considered in order to perform a complete search.
3/185 . . . . {wherein such reactive element is purely inductive, e.g. superconductive magnetic energy storage systems [SMES]}

**WARNING**

Group H02J 3/185 is incomplete pending reclassification of documents from group H02J 13/0006.

Groups H02J 13/0006 and H02J 3/185 should be considered in order to perform a complete search.

3/1857 . . . . {wherein such bridge converter is a multilevel converter}

**WARNING**

Group H02J 3/1857 is incomplete pending reclassification of documents from group H02J 13/0006.

Groups H02J 13/0006 and H02J 3/1857 should be considered in order to perform a complete search.

3/1864 . . . . {wherein the stepless control of reactive power is obtained by at least one reactive element connected in series with a semiconductor switch}

**WARNING**

Group H02J 3/1864 is incomplete pending reclassification of documents from group H02J 13/0006.

Groups H02J 13/0006 and H02J 3/1864 should be considered in order to perform a complete search.

3/1871 . . . {Methods for planning installation of shunt reactive power compensators}

**WARNING**

Group H02J 3/1871 is incomplete pending reclassification of documents from group H02J 13/0006.

Groups H02J 13/0006 and H02J 3/1871 should be considered in order to perform a complete search.

3/1878 . . . . {using tap changing or phase shifting transformers}

**WARNING**

Group H02J 3/1878 is incomplete pending reclassification of documents from group H02J 13/0006.

Groups H02J 13/0006 and H02J 3/1878 should be considered in order to perform a complete search.

3/1885 . . . . {using rotating means, e.g. synchronous generators}

**WARNING**

Group H02J 3/1885 is incomplete pending reclassification of documents from group H02J 13/0006.

Groups H02J 13/0006 and H02J 3/1885 should be considered in order to perform a complete search.

3/1892 . . . . {the arrangements being an integral part of the load, e.g. a motor, or of its control circuit}

**WARNING**

Group H02J 3/1892 is incomplete pending reclassification of documents from group H02J 13/0006.

Groups H02J 13/0006 and H02J 3/1892 should be considered in order to perform a complete search.

3/20 . . in long overhead lines

**WARNING**

Group H02J 3/20 is incomplete pending reclassification of documents from group H02J 13/0006.

Groups H02J 13/0006 and H02J 3/20 should be considered in order to perform a complete search.

3/22 . . in cables

**WARNING**

Group H02J 3/22 is incomplete pending reclassification of documents from group H02J 13/0006.

Groups H02J 13/0006 and H02J 3/22 should be considered in order to perform a complete search.

3/24 . Arrangements for preventing or reducing oscillations of power in networks (by control effected upon a single generator H02P 9/00)

**WARNING**

Group H02J 3/24 is incomplete pending reclassification of documents from group H02J 13/0006.

Group H02J 3/24 is also impacted by reclassification into groups H02J 3/241 and H02J 3/242.

Groups H02J 3/24, H02J 13/0006, H02J 3/241 and H02J 3/242 should be considered in order to perform a complete search.

3/241 . . (The oscillation concerning frequency)

**WARNING**

Group H02J 3/241 is incomplete pending reclassification of documents from groups H02J 3/24 and H02J 13/0006.

Groups H02J 3/24, H02J 13/0006, and H02J 3/241 should be considered in order to perform a complete search.
3/242  . . (using phasor measuring units [PMU])

**WARNING**

Group H02J 3/242 is incomplete pending reclassification of documents from groups H02J 3/24 and H02J 13/0006.

Groups H02J 3/24, H02J 13/0006, and H02J 3/242 should be considered in order to perform a complete search.

3/26  . Arrangements for eliminating or reducing asymmetry in polyphase networks

**WARNING**

Group H02J 3/26 is incomplete pending reclassification of documents from group H02J 13/0006.

Groups H02J 13/0006 and H02J 3/26 should be considered in order to perform a complete search.

3/28  . Arrangements for balancing of the load in a network by storage of energy

**WARNING**

Group H02J 3/28 is incomplete pending reclassification of documents from group H02J 13/0006.

Groups H02J 13/0006 and H02J 3/28 should be considered in order to perform a complete search.

3/30  . . using dynamo-electric machines coupled to flywheels

**WARNING**

Group H02J 3/30 is incomplete pending reclassification of documents from group H02J 13/0006.

Groups H02J 13/0006 and H02J 3/30 should be considered in order to perform a complete search.

3/32  . . using batteries with converting means

**WARNING**

Group H02J 3/32 is incomplete pending reclassification of documents from group H02J 13/0006.

Group H02J 3/32 is also impacted by reclassification into group H02J 3/322.

Groups H02J 13/0006, H02J 3/32, and H02J 3/322 should be considered in order to perform a complete search.

3/322  . . (the battery being on-board an electric or hybrid vehicle, e.g. vehicle to grid arrangements [V2G], power aggregation, use of the battery for network load balancing, coordinated or cooperative battery charging)

**WARNING**

Group H02J 3/322 is incomplete pending reclassification of documents from groups H02J 3/32, H02J 7/0027, and H02J 13/0006.

Groups H02J 3/322, H02J 3/32, H02J 7/0027, and H02J 13/0006 should be considered in order to perform a complete search.

3/34  . Arrangements for transfer of electric power between networks of substantially different frequency

**WARNING**

Group H02J 3/34 is incomplete pending reclassification of documents from group H02J 13/0006.

Groups H02J 13/0006 and H02J 3/34 should be considered in order to perform a complete search.

3/36  . Arrangements for transfer of electric power between ac networks via a high-tension dc link

**WARNING**

Group H02J 3/36 is incomplete pending reclassification of documents from group H02J 13/0006.

Groups H02J 13/0006 and H02J 3/36 should be considered in order to perform a complete search.

2003/365  . . (Reducing harmonics or oscillations in HVDC)

3/38  . Arrangements for parallely feeding a single network by two or more generators, converters or transformers

**WARNING**

Group H02J 3/38 is incomplete pending reclassification of documents from group H02J 13/0006.

Groups H02J 13/0006 and H02J 3/38 should be considered in order to perform a complete search.

3/381  . . (Dispersed generators)

**WARNING**

Group H02J 3/381 is incomplete pending reclassification of documents from group H02J 13/0006.

Groups H02J 13/0006 and H02J 3/381 should be considered in order to perform a complete search.
WARNING

Group H02J 3/382 is no longer used for the classification of documents as of January 1, 2020.


WARNING

Group H02J 3/386 is no longer used for the classification of documents as of January 1, 2020.


WARNING

Group H02J 3/388 is no longer used for the classification of documents as of January 1, 2020.


WARNING

Group H02J 3/383 is no longer used for the classification of documents as of January 1, 2020.


WARNING

Group H02J 3/385 is no longer used for the classification of documents as of January 1, 2020.


WARNING


Groups H02J 3/388, H02J 3/382, H02J 3/383, H02J 3/385, H02J 3/386, H02J 3/387, and H02J 13/0006 should be considered in order to perform a complete search.

WARNING


Groups H02J 3/388, H02J 3/382, H02J 3/383, H02J 3/385, H02J 3/386, H02J 3/387, and H02J 13/0006 should be considered in order to perform a complete search.

WARNING


Groups H02J 3/40, H02J 3/382, H02J 3/383, H02J 3/385, H02J 3/386, H02J 3/387, and H02J 13/0006 should be considered in order to perform a complete search.

WARNING


Groups H02J 3/40, H02J 3/382, H02J 3/383, H02J 3/385, H02J 3/386, H02J 3/387, and H02J 13/0006 should be considered in order to perform a complete search.

WARNING


Groups H02J 3/40, H02J 3/382, H02J 3/383, H02J 3/385, H02J 3/386, H02J 3/387, and H02J 13/0006 should be considered in order to perform a complete search.
... with automatic parallel connection when synchronisation is achieved

**WARNING**


... with means for ensuring correct phase sequence

**WARNING**


... Controlling of the sharing of output between the generators, converters, or transformers

**WARNING**


Group H02J 3/46 is also impacted by reclassification into groups H02J 3/466 and H02J 3/472.


... [Scheduling the operation of the generators, e.g. connecting or disconnecting generators to meet a given demand]

**WARNING**


... [For selectively connecting the AC sources in a particular order, e.g. sequential, alternating or subsets of sources]

**WARNING**


... Controlling the sharing of the in-phase component

**WARNING**


... Controlling the sharing of the out-of-phase component

**WARNING**


Circuit arrangements for mains or distribution networks not specified as ac or dc

**WARNING**

Group H02J 4/00 is incomplete pending reclassification of documents from group H02J 13/0096.

Groups H02J 13/0096 and H02J 4/00 should be considered in order to perform a complete search.

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

**WARNING**

Group H02J 5/00 is incomplete pending reclassification of documents from group H02J 3/36.

Groups H02J 5/00 and H02J 5/00 should be considered in order to perform a complete search.
WARNING

Group H02J 7/005 is no longer used for the classification of documents as of January 1, 2020. The content of this group is being reclassified into groups H02J 5/00, H02J 50/001, H02J 50/005, H02J 50/10, H02J 50/12, H02J 50/30, H02J 50/40, H02J 50/402, H02J 50/50, H02J 50/502, H02J 50/60, H02J 50/70, H02J 50/80, and H02J 50/90.

All groups listed in this Warning should be considered in order to perform a complete search.

7/00 Circuit arrangements for charging or depolarising batteries or for supplying loads from batteries

WARNING

Group H02J 7/00 is incomplete pending reclassification of documents from groups H02J 7/0077, H02J 7/0085, H02J 7/0088, and H02J 7/025.

Groups H02J 7/00, H02J 7/0077, H02J 7/0085, H02J 7/0088, and H02J 7/025 should be considered in order to perform a complete search.

7/0003 (Frozen) [with provision for charging different types of batteries]

WARNING

Group H02J 7/0003 is no longer used for the classification of documents as of January 1, 2020.

The content of this group is being reclassified into groups H02J 7/0032, H02J 7/0034, H02J 7/0045, and H02J 7/0047.

Groups H02J 7/0003, H02J 7/0032, H02J 7/0034, H02J 7/0045, and H02J 7/0047 should be considered in order to perform a complete search.

7/00032 (Frozen) [characterised by data exchange]

WARNING

Group H02J 7/00032 is incomplete pending reclassification of documents from group H02J 7/0003.

Groups H02J 7/0003 and H02J 7/00032 should be considered in order to perform a complete search.

7/00034 (Frozen) [Charger exchanging data with an electronic device, i.e. telephone, whose internal battery is under charge]

WARNING

Group H02J 7/00034 is incomplete pending reclassification of documents from group H02J 7/0003.

Groups H02J 7/0003 and H02J 7/00034 should be considered in order to perform a complete search.

7/00036 (Frozen) [Charger exchanging data with battery]

7/00038 [using passive battery identification means, e.g. resistors or capacitors (identification by mechanical connections H02J 7/0045)]

7/00041 [in response to measured battery parameters, e.g. voltage, current or temperature profile]

7/00043 [using switches, contacts or markings, e.g. optical, magnetic or barcode]

7/00045 [Authentication, i.e. circuits for checking compatibility between one component, e.g. a battery or a battery charger, and another component, e.g. a power source]

WARNING

Group H02J 7/00045 is incomplete pending reclassification of documents from group H02J 7/0003.

Groups H02J 7/0003 and H02J 7/00045 should be considered in order to perform a complete search.

7/00047 [with provisions for charging different types of batteries]

WARNING

Group H02J 7/00047 is incomplete pending reclassification of documents from group H02J 7/0003.

Groups H02J 7/0003 and H02J 7/00047 should be considered in order to perform a complete search.

7/0013 [acting upon several batteries simultaneously or sequentially (H02J 7/1423 takes precedence)]

WARNING

Group H02J 7/0013 is incomplete pending reclassification of documents from groups H02J 7/0021, H02J 7/0022, and H02J 7/0027.

Groups H02J 7/0013, H02J 7/0021, H02J 7/0022, and H02J 7/0027 should be considered in order to perform a complete search.

7/0014 [Circuits for equalisation of charge between batteries]

WARNING

Group H02J 7/0014 is incomplete pending reclassification of documents from groups H02J 7/0021, H02J 7/0022, and H02J 7/0027.

Groups H02J 7/0014, H02J 7/0021, H02J 7/0022, and H02J 7/0027 should be considered in order to perform a complete search.

7/0016 [using shunting, discharge or bypass circuits]

WARNING

Group H02J 7/0016 is incomplete pending reclassification of documents from groups H02J 7/0021, H02J 7/0022, and H02J 7/0027.

Groups H02J 7/0016, H02J 7/0021, H02J 7/0022, and H02J 7/0027 should be considered in order to perform a complete search.
WARNING

Group H02J 7/0018 is incomplete pending reclassification of documents from groups H02J 7/0021, H02J 7/0022, and H02J 7/0027.

Groups H02J 7/0018, H02J 7/0021, H02J 7/0022, and H02J 7/0027 should be considered in order to perform a complete search.

WARNING

Group H02J 7/0019 is incomplete pending reclassification of documents from groups H02J 7/0021, H02J 7/0022, and H02J 7/0027.

Groups H02J 7/0019, H02J 7/0021, H02J 7/0022, and H02J 7/0027 should be considered in order to perform a complete search.

WARNING

Group H02J 7/0021 is no longer used for the classification of documents as of January 1, 2020.

The content of this group is being reclassified into groups H02J 7/0047, H02J 7/0048, H02J 7/0049, H02J 7/0050, H02J 7/0013, H02J 7/0014, H02J 7/0016, H02J 7/0018, H02J 7/0019, H02J 7/0024, and H02J 7/0025.

All groups listed in this Warning should be considered in order to perform a complete search.

WARNING

Group H02J 7/0022 is no longer used for the classification of documents as of January 1, 2020.

The content of this group is being reclassified into groups H02J 7/0013, H02J 7/0014, H02J 7/0016, H02J 7/0018, H02J 7/0019, H02J 7/0024, and H02J 7/0025.

All groups listed in this Warning should be considered in order to perform a complete search.

WARNING

Group H02J 7/0025 is no longer used for the classification of documents as of January 1, 2020.

The content of this group is being reclassified into groups H02J 7/0013, H02J 7/0014, H02J 7/0016, H02J 7/0018, H02J 7/0019, H02J 7/0024, H02J 7/0025, H02J 7/0042, H02J 7/0044, H02J 7/0045, H02J 2310/22, H02J 2310/40, H02J 2310/42, H02J 2310/44, H02J 2310/46, and H02J 2310/48.

All groups listed in this Warning should be considered in order to perform a complete search.
WARNING

Group H02J 7/0029 is incomplete pending reclassification of documents from groups H02J 7/0026, H02J 7/0027, H02J 7/1461, and H02J 7/166.

Group H02J 7/0029 is also impacted by reclassification into groups H02J 7/00302, H02J 7/00304, H02J 7/00306, H02J 7/00308, and H02J 7/00309.

Groups H02J 7/0029, H02J 7/0026, H02J 7/027, H02J 7/1461, and H02J 7/166 should be considered in order to perform a complete search.

WARNING

Group H02J 7/00302 is incomplete pending reclassification of documents from groups H02J 7/0026, H02J 7/0029, H02J 7/027, H02J 7/1461, and H02J 7/166.

Groups H02J 7/00302, H02J 7/0026, H02J 7/0029, H02J 7/027, H02J 7/1461, and H02J 7/166 should be considered in order to perform a complete search.

WARNING

Group H02J 7/00304 is incomplete pending reclassification of documents from groups H02J 7/0026, H02J 7/0029, H02J 7/027, H02J 7/1461, and H02J 7/166.

Groups H02J 7/00304, H02J 7/0026, H02J 7/0029, H02J 7/027, H02J 7/1461, and H02J 7/166 should be considered in order to perform a complete search.

WARNING

Group H02J 7/00306 is incomplete pending reclassification of documents from groups H02J 7/0026, H02J 7/0029, H02J 7/027, H02J 7/1461, and H02J 7/166.

Groups H02J 7/00306, H02J 7/0026, H02J 7/0029, H02J 7/027, H02J 7/1461, and H02J 7/166 should be considered in order to perform a complete search.

WARNING

Group H02J 7/00308 is incomplete pending reclassification of documents from groups H02J 7/0026, H02J 7/0029, H02J 7/027, H02J 7/1461, and H02J 7/166.

Groups H02J 7/00308, H02J 7/0026, H02J 7/0029, H02J 7/027, H02J 7/1461, and H02J 7/166 should be considered in order to perform a complete search.

WARNING

Group H02J 7/00309 is incomplete pending reclassification of documents from groups H02J 7/0026, H02J 7/0029, H02J 7/027, H02J 7/1461, and H02J 7/166.

Groups H02J 7/00309, H02J 7/0026, H02J 7/0029, H02J 7/027, H02J 7/1461, and H02J 7/166 should be considered in order to perform a complete search.

WARNING

Group H02J 7/0031 is incomplete pending reclassification of documents from groups H02J 7/0026, H02J 7/0029, H02J 7/027, H02J 7/1461, and H02J 7/166.

Groups H02J 7/0031, H02J 7/0026, H02J 7/0029, H02J 7/027, H02J 7/1461, and H02J 7/166 should be considered in order to perform a complete search.

WARNING

Group H02J 7/0032 is incomplete pending reclassification of documents from groups H02J 7/0026, H02J 7/0029, H02J 7/027, H02J 7/1461, and H02J 7/166.

Groups H02J 7/0032, H02J 7/0026, H02J 7/0029, H02J 7/027, H02J 7/1461, and H02J 7/166 should be considered in order to perform a complete search.

WARNING

Group H02J 7/0034 is incomplete pending reclassification of documents from groups H02J 7/0026, H02J 7/0029, H02J 7/027, H02J 7/1461, and H02J 7/166.

Groups H02J 7/0034, H02J 7/0026, H02J 7/0029, H02J 7/027, H02J 7/1461, and H02J 7/166 should be considered in order to perform a complete search.

WARNING

Group H02J 7/0036 is incomplete pending reclassification of documents from groups H02J 7/0026, H02J 7/0029, H02J 7/027, H02J 7/1461, and H02J 7/166.

Groups H02J 7/0036, H02J 7/0026, H02J 7/0029, H02J 7/027, H02J 7/1461, and H02J 7/166 should be considered in order to perform a complete search.

WARNING

Group H02J 7/0042 is incomplete pending reclassification of documents from groups H02J 7/0027 and H02J 7/025.

Groups H02J 7/0042, H02J 7/0027, and H02J 7/025 should be considered in order to perform a complete search.

WARNING

Group H02J 7/0044 is incomplete pending reclassification of documents from groups H02J 7/0027 and H02J 7/025.

Groups H02J 7/0044, H02J 7/0027, and H02J 7/025 should be considered in order to perform a complete search.

WARNING

Group H02J 7/0045 is incomplete pending reclassification of documents from groups H02J 7/0027 and H02J 7/025.

Groups H02J 7/0045, H02J 7/0027, and H02J 7/025 should be considered in order to perform a complete search.
WARNING

Group H02J 7/0047 is incomplete pending reclassification of documents from groups H02J 7/0021, H02J 7/0027, H02J 7/1461, and H02J 7/166.

Groups H02J 7/0047, H02J 7/0021, H02J 7/0027, H02J 7/1461, and H02J 7/166 should be considered in order to perform a complete search.

WARNING

Group H02J 7/0048 is incomplete pending reclassification of documents from groups H02J 7/0021, H02J 7/0027, H02J 7/1461, and H02J 7/166.

Groups H02J 7/0048, H02J 7/0021, H02J 7/0027, H02J 7/1461, and H02J 7/166 should be considered in order to perform a complete search.

WARNING

Group H02J 7/0049 is incomplete pending reclassification of documents from groups H02J 7/0021, H02J 7/0027, H02J 7/1461, and H02J 7/166.

Groups H02J 7/0049, H02J 7/0021, H02J 7/0027, H02J 7/1461, and H02J 7/166 should be considered in order to perform a complete search.

WARNING

Group H02J 7/005 is incomplete pending reclassification of documents from groups H02J 7/0021, H02J 7/0027, H02J 7/1461, and H02J 7/166.

Groups H02J 7/005, H02J 7/0021, H02J 7/0027, H02J 7/1461, and H02J 7/166 should be considered in order to perform a complete search.

WARNING

Group H02J 7/0063 is impacted by reclassification into groups H02J 7/0025, H02J 7/007, H02J 7/0071, H02J 7/00711, H02J 7/00712, H02J 7/00714, H02J 7/00716, H02J 7/00718, H02J 7/007182, H02J 7/007184, H02J 7/007186, H02J 7/007188, H02J 7/007192, H02J 7/007194.

All groups listed in this Warning should be considered in order to perform a complete search.

2007/0067 (Frozen) (Discharge management, i.e. discharge current reduction at low state of charge, sequential battery discharge in systems with a plurality of battery)

WARNING

Group H02J 2007/0067 is no longer used for the classification of documents as of January 1, 2020.

The content of this group is being reclassified into groups H02J 7/0025, H02J 7/007, H02J 7/0071, H02J 7/00711, H02J 7/00712, H02J 7/00714, H02J 7/00716, H02J 7/00718, H02J 7/007182, H02J 7/007184, H02J 7/007186, H02J 7/007188, H02J 7/007192, and H02J 7/007194.

All groups listed in this Warning should be considered in order to perform a complete search.

7/0068 (Battery or charger load switching, e.g. concurrent charging and load supply (H02J 7/0013 takes precedence))

WARNING

Group H02J 7/0007 is incomplete pending reclassification of documents from groups H02J 7/0063, H02J 2007/0067, H02J 7/0042, H02J 2007/10, and H02J 7/125.

Group H02J 7/0007 is also impacted by reclassification into groups H02J 7/00712 and H02J 7/00718.

All groups listed in this Warning should be considered in order to perform a complete search.

7/0069 (Charging or discharging for charge maintenance, battery initiation or rejuvenation)

WARNING

Group H02J 7/0007 is incomplete pending reclassification of documents from groups H02J 7/0063, H02J 2007/0067, H02J 7/0042, H02J 2007/10, and H02J 7/125.

Groups H02J 7/0007, H02J 7/0063, H02J 2007/0067, H02J 7/0072, H02J 7/0042, H02J 2007/10, and H02J 7/125 should be considered in order to perform a complete search.

7/007 (Regulation of charging or discharging current or voltage)

WARNING

Group H02J 7/0007 is incomplete pending reclassification of documents from groups H02J 7/0063, H02J 2007/0067, H02J 7/0042, H02J 2007/10, and H02J 7/125.

Groups H02J 7/0007, H02J 7/0063, H02J 2007/0067, H02J 7/0072, H02J 7/0042, H02J 2007/10, and H02J 7/125 should be considered in order to perform a complete search.

7/0071 (with a programmable schedule)

WARNING

Group H02J 7/0071 is incomplete pending reclassification of documents from groups H02J 7/0063, H02J 2007/0067, H02J 7/0042, H02J 2007/10, and H02J 7/125.

Groups H02J 7/0071, H02J 7/0063, H02J 2007/0067, H02J 7/0072, H02J 7/0042, H02J 2007/10, and H02J 7/125 should be considered in order to perform a complete search.

7/00711 (with introduction of pulses during the charging process)

WARNING

Group H02J 7/00711 is incomplete pending reclassification of documents from groups H02J 7/0063, H02J 2007/0067, H02J 7/0042, H02J 2007/10, and H02J 7/125.

All groups listed in this Warning should be considered in order to perform a complete search.
7/00712 . . . (the cycle being controlled or terminated in response to electric parameters)

WARNING
Group H02J 7/00712 is incomplete pending reclassification of documents from groups H02J 7/0063, H02J 2007/0067, H02J 7/0072, H02J 7/0077, H02J 7/008, H02J 7/042, H02J 7/085, H02J 2007/10, and H02J 7/125.
All groups listed in this Warning should be considered in order to perform a complete search.

7/00714 . . . (in response to battery charging or discharging current)

WARNING
Group H02J 7/00714 is incomplete pending reclassification of documents from groups H02J 7/0063, H02J 2007/0067, H02J 7/0072, H02J 7/0078, H02J 7/008, H02J 7/042, H02J 7/045, H02J 7/085, H02J 2007/10, and H02J 7/125.
All groups listed in this Warning should be considered in order to perform a complete search.

7/00716 . . . (in response to integrated charge or discharge current)

WARNING
Group H02J 7/00716 is incomplete pending reclassification of documents from groups H02J 7/0063, H02J 2007/0067, H02J 7/0072, H02J 7/0078, H02J 7/008, H02J 7/042, H02J 7/045, H02J 7/085, H02J 2007/10, and H02J 7/125.
All groups listed in this Warning should be considered in order to perform a complete search.

7/00718 . . . (in response to charge current gradient)

WARNING
Group H02J 7/00718 is incomplete pending reclassification of documents from groups H02J 7/0063, H02J 2007/0067, H02J 7/0072, H02J 7/0078, H02J 7/008, H02J 7/042, H02J 7/045, H02J 7/085, H02J 2007/10, and H02J 7/125.
All groups listed in this Warning should be considered in order to perform a complete search.

7/007182 . . . (in response to battery voltage)

WARNING
Group H02J 7/007182 is incomplete pending reclassification of documents from groups H02J 7/0063, H02J 2007/0067, H02J 7/0072, H02J 7/0078, H02J 7/008, H02J 7/042, H02J 7/045, H02J 7/085, H02J 2007/10, and H02J 7/125.
All groups listed in this Warning should be considered in order to perform a complete search.

7/007184 . . . (in response to battery voltage gradient)

WARNING
Group H02J 7/007184 is incomplete pending reclassification of documents from groups H02J 7/0063, H02J 2007/0067, H02J 7/0072, H02J 7/0078, H02J 7/008, H02J 7/042, H02J 7/045, H02J 7/085, H02J 2007/10, and H02J 7/125.
All groups listed in this Warning should be considered in order to perform a complete search.

7/007186 . . . (obtained with the battery disconnected from the charge or discharge circuit)

WARNING
Group H02J 7/007186 is incomplete pending reclassification of documents from groups H02J 7/0063, H02J 2007/0067, H02J 7/0072, H02J 7/0078, H02J 7/008, H02J 7/042, H02J 7/045, H02J 7/085, H02J 2007/10, and H02J 7/125.
All groups listed in this Warning should be considered in order to perform a complete search.

7/007188 . . . (the charge cycle being controlled or terminated in response to non-electric parameters)

WARNING
Group H02J 7/007188 is incomplete pending reclassification of documents from groups H02J 7/0063, H02J 2007/0067, H02J 7/0072, H02J 7/0078, H02J 7/008, H02J 7/042, H02J 7/045, H02J 7/085, H02J 2007/10, and H02J 7/125.
All groups listed in this Warning should be considered in order to perform a complete search.
{ in response to degree of gas development in the battery }

**WARNING**

Group H02J 7/00719 is incomplete pending reclassification of documents from groups H02J 7/0063, H02J 7/0070/067, H02J 7/0072, H02J 7/042, H02J 7/087, H02J 2007/10, and H02J 7/125.

All groups listed in this Warning should be considered in order to perform a complete search.

{ in response to temperature }

**WARNING**

Group H02J 7/007192 is incomplete pending reclassification of documents from groups H02J 7/0063, H02J 2007/0067, H02J 7/0072, H02J 7/0091, H02J 7/042, H02J 7/087, H02J 2007/10, and H02J 7/125.

Group H02J 7/007192 is also impacted by reclassification into group H02J 7/007194.

All groups listed in this Warning should be considered in order to perform a complete search.

{ of the battery }

**WARNING**

Group H02J 7/007194 is incomplete pending reclassification of documents from groups H02J 7/0063, H02J 7/0070/067, H02J 7/0072, H02J 7/0091, H02J 7/042, H02J 7/087, H02J 2007/10, and H02J 7/125.

All groups listed in this Warning should be considered in order to perform a complete search.

{ using semiconductor devices only }

**WARNING**

Group H02J 7/0072 is no longer used for the classification of documents as of January 1, 2020.

The content of this group is being reclassified into groups H02J 7/0063, H02J 7/0070/067, H02J 7/00714, H02J 7/00716, H02J 7/00718, H02J 7/007182, H02J 7/007184, H02J 7/007192, H02J 7/007194, H02J 7/007196, and H02J 7/007198.

All groups listed in this Warning should be considered in order to perform a complete search.

{ the charge cycle being terminated in response to electric parameters (**H02J**7/0093 takes precedence) }

**WARNING**

Group H02J 7/0077 is no longer used for the classification of documents as of January 1, 2020.

The content of this group is being reclassified into groups H02J 7/0063 and H02J 7/00712.

Groups H02J 7/0077, H02J 7/0091, and H02J 7/00712 should be considered in order to perform a complete search.

{ in response to discharge current, e.g. using a coulometer, pilot cell }

**WARNING**

Group H02J 7/0078 is no longer used for the classification of documents as of January 1, 2020.

The content of this group is being reclassified into groups H02J 7/00714, H02J 7/00716, and H02J 7/00718.

Groups H02J 7/0070/078, H02J 7/00714, H02J 7/00716, and H02J 7/00718 should be considered in order to perform a complete search.

{ with the battery connected to the charge circuit }

**WARNING**

Group H02J 7/008 is no longer used for the classification of documents as of January 1, 2020.

The content of this group is being reclassified into groups H02J 7/00712, H02J 7/00714, H02J 7/00716, H02J 7/00718, H02J 7/007182, and H02J 7/007184.

All groups listed in this Warning should be considered in order to perform a complete search.

{ with the battery disconnected from the charge circuit }

**WARNING**

Group H02J 7/0085 is no longer used for the classification of documents as of January 1, 2020.

The content of this group is being reclassified into groups H02J 7/00/00 and H02J 7/007186.

Groups H02J 7/0085, H02J 7/0091, and H02J 7/007186 should be considered in order to perform a complete search.
Group H02J 7/0086 is no longer used for the classification of documents as of January 1, 2020. The content of this group is being reclassified into groups H02J 7/007182 and H02J 7/007184. Groups H02J 7/0086, H02J 7/007182, and H02J 7/007184 should be considered in order to perform a complete search.

Group H02J 7/0088 is no longer used for the classification of documents as of January 1, 2020. The content of this group is being reclassified into groups H02J 7/00 and H02J 7/007188. Groups H02J 7/0088, H02J 7/00, and H02J 7/007188 should be considered in order to perform a complete search.

Group H02J 7/0091 is no longer used for the classification of documents as of January 1, 2020. The content of this group is being reclassified into groups H02J 7/007192 and H02J 7/007194. Groups H02J 7/0091, H02J 7/007192, and H02J 7/007194 should be considered in order to perform a complete search.

Group H02J 7/002 is incomplete pending reclassification of documents from group H02J 7/022. Groups H02J 7/002 and H02J 7/02 should be considered in order to perform a complete search.

Group H02J 7/022 is no longer used for the classification of documents as of January 1, 2020. The content of this group is being reclassified into groups H02J 7/02, H02J 2207/20, H02J 7/022, H02J 7/02, and H02J 2207/20 should be considered in order to perform a complete search.
7/045 . . . [in response to voltage or current] 

**WARNING**

Group H02J 7/045 is no longer used for the classification of documents as of January 1, 2020.

The content of this group is being reclassified into groups H02J 7/00714, H02J 7/00718, H02J 7/00713, and H02J 7/00716. All groups listed in this Warning should be considered in order to perform a complete search.

7/06 . . . using discharge tubes or semiconductor devices

7/08 . . . using discharge tubes only

7/085 . . . [the charge cycle being terminated in response to electric parameters]

**WARNING**

Group H02J 7/085 is no longer used for the classification of documents as of January 1, 2020.

The content of this group is being reclassified into groups H02J 7/00714, H02J 7/00718, H02J 7/00713, and H02J 7/00716. All groups listed in this Warning should be considered in order to perform a complete search.

7/087 . . . [the charge cycle being terminated in response to non-electric parameters]

**WARNING**

Group H02J 7/087 is no longer used for the classification of documents as of January 1, 2020.

The content of this group is being reclassified into groups H02J 7/00718, H02J 7/00719, H02J 7/00712, and H02J 7/00714. All groups listed in this Warning should be considered in order to perform a complete search.

2007/10 . . . [using semiconductor devices only]

**WARNING**

Group H02J 2007/10 is no longer used for the classification of documents as of January 1, 2020.

The content of this group is being reclassified into groups H02J 7/007, H02J 7/0071, H02J 7/00714, H02J 7/00716, H02J 7/00718, H02J 7/00712, H02J 7/00713, H02J 7/00719, H02J 7/00716, and H02J 7/00714. All groups listed in this Warning should be considered in order to perform a complete search.

7/12 . . . using magnetic devices having controllable degree of saturation, i.e. transducers

7/125 . . . [in combination with discharge tube or semiconductor devices]

**WARNING**

Group H02J 7/125 is no longer used for the classification of documents as of January 1, 2020.

The content of this group is being reclassified into groups H02J 7/007, H02J 7/0071, H02J 7/00714, H02J 7/00716, H02J 7/00718, H02J 7/00712, H02J 7/00719, H02J 7/00716, and H02J 7/00714. All groups listed in this Warning should be considered in order to perform a complete search.

7/14 . . . for charging batteries from dynamo-electric generators driven at varying speed, e.g. on vehicle

7/1407 . . . [on vehicles not being driven by a motor, e.g. bicycles]

7/1415 . . . [with a generator driven by a prime mover other than the motor of a vehicle]

7/1423 . . . [with multiple batteries]

7/143 . . . [with multiple generators]

7/1438 . . . [in combination with power supplies for loads other than batteries]

7/1446 . . . [in response to parameters of a vehicle]

7/1461 . . . [with safety or indicating devices]

**WARNING**

Group H02J 7/1461 is no longer used for the classification of documents as of January 1, 2020.

The content of this group is being reclassified into groups H02J 7/009, H02J 7/005, H02J 7/0049, H02J 7/0047, H02J 7/00309, H02J 7/00304, H02J 7/00306, H02J 7/00308, H02J 7/0030, and H02J 7/005. All groups listed in this Warning should be considered in order to perform a complete search.

7/1469 . . . [Regulation of the charging current or voltage otherwise than by variation of field]

7/1476 . . . [by mechanical action on the generator]

7/1484 . . . [by commutation of the output windings of the generator]

7/1492 . . . [by means of controlling devices between the generator output and the battery]

7/16 . . . Regulation of the charging current or voltage by variation of field

7/163 . . . [with special means for initiating or limiting the excitation current]
Circuit arrangements for emergency or stand-by power supply, e.g. for emergency lighting

9/002 . . . [in which a reserve is maintained in an energy source by disconnecting non-critical loads, e.g. maintaining a reserve of charge in a vehicle battery for starting an engine]

9/005 . . . [using a power saving mode (for copiers G03G 15/5004)]

9/007 . . . [Detection of the absence of a load]

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 (e.g. UPS systems)]

9/061 . . . . [for DC powered loads]

9/062 . . . . [for AC powered loads]

9/063 . . . . [Common neutral, e.g. AC input neutral line connected to AC output neutral line and DC middle point]

9/065 . . . . [for lighting purposes]

9/066 . . . . [characterised by the use of dynamo-electric machines (H02J 9/08 takes precedence)]

9/067 . . . . [using multi-primary transformers, e.g. transformer having one primary for each AC energy source and a secondary for the loads]

9/068 . . . . [Electronic means for switching from one power supply to another power supply, e.g. to avoid parallel connection]

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

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

WARNING

Group H02J 13/00 is incomplete pending reclassification of documents from groups H02J 13/0003, H02J 13/0006, H02J 13/0013, H02J 13/0079, and H02J 13/0086.

Groups H02J 13/00, H02J 13/0003, H02J 13/0006, H02J 13/0013, H02J 13/0079, and H02J 13/0086 should be considered in order to perform a complete search.

13/00001 . [characterised by the display of information or by user interaction, e.g. supervisory control and data acquisition systems [SCADA] or graphical user interfaces [GUI]]

WARNING

Group H02J 13/00001 is incomplete pending reclassification of documents from groups H02J 13/0003, H02J 13/0006, H02J 13/0013, H02J 13/0079, H02J 13/0086, H02J 13/0093, and H02J 13/0096.

All groups listed in this Warning should be considered in order to perform a complete search.
13/00002  [characterised by monitoring]

**WARNING**

Group H02J 13/00002 is incomplete pending reclassification of documents from groups H02J 13/0003, H02J 13/0006, H02J 13/00079, H02J 13/00086, H02J 13/00093, and H02J 13/00096.

All groups listed in this Warning should be considered in order to perform a complete search.

13/00004  [characterised by the power network being locally controlled]

**WARNING**

Group H02J 13/00004 is incomplete pending reclassification of documents from groups H02J 13/0003, H02J 13/0006, H02J 13/00079, H02J 13/00086, H02J 13/00093, and H02J 13/00096.

All groups listed in this Warning should be considered in order to perform a complete search.

13/00006  [characterised by information or instructions transport means between the monitoring, controlling or managing units and monitored, controlled or operated power network element or electrical equipment]

**WARNING**

Group H02J 13/00006 is incomplete pending reclassification of documents from groups H02J 13/0003, H02J 13/0006, H02J 13/0013, H02J 13/00079, H02J 13/00086, H02J 13/00093, and H02J 13/00096.

All groups listed in this Warning should be considered in order to perform a complete search.

13/00009  [using pulsed signals]

**WARNING**

Group H02J 13/00009 is incomplete pending reclassification of documents from groups H02J 13/0003, H02J 13/0006, H02J 13/00093, H02J 13/00096, H02J 13/00096, H02J 13/00096, H02J 13/00096, H02J 13/00096, and H02J 13/00096.

All groups listed in this Warning should be considered in order to perform a complete search.

13/0001  [using modification of a parameter of the network power signal]

**WARNING**

Group H02J 13/0001 is incomplete pending reclassification of documents from groups H02J 13/0003, H02J 13/0006, H02J 13/0006, H02J 13/0006, H02J 13/0006, H02J 13/0006, H02J 13/0006, H02J 13/0006, and H02J 13/0006.

All groups listed in this Warning should be considered in order to perform a complete search.

13/00012  [using an auxiliary transmission line]

**WARNING**

Group H02J 13/00012 is incomplete pending reclassification of documents from groups H02J 13/0003, H02J 13/0006, H02J 13/0006, H02J 13/0006, H02J 13/0006, H02J 13/0006, H02J 13/0006, H02J 13/0006, and H02J 13/0006.

All groups listed in this Warning should be considered in order to perform a complete search.

13/00014  [carrying signals having the network frequency or DC signals]

**WARNING**

Group H02J 13/00014 is incomplete pending reclassification of documents from groups H02J 13/0003, H02J 13/0006, H02J 13/0006, H02J 13/0006, H02J 13/0006, H02J 13/0006, H02J 13/0006, H02J 13/0006, and H02J 13/0006.

All groups listed in this Warning should be considered in order to perform a complete search.
Using a wired telecommunication network or a data transmission bus

WARNING
Group H02J 13/00016 is incomplete pending reclassification of documents from groups H02J 13/0003, H02J 13/0006, H02J 13/0017, H02J 13/0062, H02J 13/0079, H02J 13/0086, H02J 13/0093, and H02J 13/0096.

All groups listed in this Warning should be considered in order to perform a complete search.

Using optical fiber

WARNING
Group H02J 13/00017 is incomplete pending reclassification of documents from groups H02J 13/0003, H02J 13/0006, H02J 13/0017, H02J 13/0062, H02J 13/0079, H02J 13/0086, H02J 13/0093, and H02J 13/0096.

All groups listed in this Warning should be considered in order to perform a complete search.

Using phone lines

WARNING
Group H02J 13/00018 is incomplete pending reclassification of documents from groups H02J 13/0003, H02J 13/0006, H02J 13/0017, H02J 13/0062, H02J 13/0079, H02J 13/0086, H02J 13/0093, and H02J 13/0096.

All groups listed in this Warning should be considered in order to perform a complete search.

Using optical means

WARNING
Group H02J 13/00019 is incomplete pending reclassification of documents from groups H02J 13/0003, H02J 13/0006, H02J 13/0017, H02J 13/0079, H02J 13/0086, H02J 13/0093, and H02J 13/0096.

All groups listed in this Warning should be considered in order to perform a complete search.

Using ultrasonic means

WARNING
Group H02J 13/0002 is incomplete pending reclassification of documents from groups H02J 13/0003, H02J 13/0006, H02J 13/0017, H02J 13/0079, H02J 13/0086, H02J 13/0093, and H02J 13/0096.

All groups listed in this Warning should be considered in order to perform a complete search.

Using wireless data transmission

WARNING
Group H02J 13/00022 is incomplete pending reclassification of documents from groups H02J 13/0003, H02J 13/0006, H02J 13/0017, H02J 13/0075, H02J 13/0079, H02J 13/0086, H02J 13/0093, and H02J 13/0096.

All groups listed in this Warning should be considered in order to perform a complete search.

By means of mobile telephony

WARNING
Group H02J 13/00024 is incomplete pending reclassification of documents from groups H02J 13/0003, H02J 13/0006, H02J 13/0017, H02J 13/0075, H02J 13/0079, H02J 13/0086, H02J 13/0093, and H02J 13/0096.

All groups listed in this Warning should be considered in order to perform a complete search.

Involving a local wireless network, e.g. Wi-Fi, ZigBee or Bluetooth

WARNING
Group H02J 13/00026 is incomplete pending reclassification of documents from groups H02J 13/0003, H02J 13/0006, H02J 13/0017, H02J 13/0075, H02J 13/0079, H02J 13/0086, H02J 13/0093, and H02J 13/0096.

All groups listed in this Warning should be considered in order to perform a complete search.

Involving the use of Internet protocols

WARNING
Group H02J 13/00028 is incomplete pending reclassification of documents from groups H02J 13/0003, H02J 13/0006, H02J 13/0017, H02J 13/0075, H02J 13/0079, H02J 13/0086, H02J 13/0093, and H02J 13/0096.

All groups listed in this Warning should be considered in order to perform a complete search.
WARNING

Group H02J 13/0003 is no longer used for the classification of documents as of January 1, 2020.

The content of this group is being reclassified into groups H02J 1/00, H02J 1/001, H02J 1/002, H02J 1/02, H02J 1/03, H02J 1/04, H02J 1/06, H02J 1/08, H02J 1/081, H02J 1/082, H02J 1/084, H02J 1/086, H02J 1/087, H02J 1/09, H02J 1/10, H02J 1/102, H02J 1/108, H02J 1/11, H02J 1/12, H02J 1/122, H02J 1/14, H02J 1/16, H02J 13/00, H02J 13/0001, H02J 13/0002, H02J 13/0004, H02J 13/0006, H02J 13/0007, H02J 13/0009, H02J 13/0001, H02J 13/0012, H02J 13/0014, H02J 13/0016, H02J 13/0017, H02J 13/0018, H02J 13/0019, H02J 13/002, H02J 13/0021, H02J 13/0022, H02J 13/0024, H02J 13/0026, H02J 13/0028, H02J 13/0032, H02J 13/0034, H02J 13/0036, H02J 13/0038, H02J 13/004, H02J 13/0044, H02J 13/005, and H02J 2213/10.

All groups listed in this Warning should be considered in order to perform a complete search.

13/00032 . . (Systems characterised by the controlled or operated power network elements or equipment, the power network elements or equipment not otherwise provided for (circuits specially adapted for remote switching of lighting via the power line H05B 47/185))

WARNING

Group H02J 13/00032 is incomplete pending reclassification of documents from groups H02J 13/0003, H02J 13/0006, H02J 13/0017, H02J 13/0079, H02J 13/0086, H02J 13/0093, and H02J 13/0096.

All groups listed in this Warning should be considered in order to perform a complete search.

13/00034 . . (the elements or equipment being or involving an electric power substation)

WARNING

Group H02J 13/00034 is incomplete pending reclassification of documents from groups H02J 13/0003, H02J 13/0006, H02J 13/0017, H02J 13/0079, H02J 13/0086, H02J 13/0093, and H02J 13/0096.

All groups listed in this Warning should be considered in order to perform a complete search.

13/00036 . . (the elements or equipment being or involving switches, relays or circuit breakers (circuits for indication of single switches H01H 9/167))

WARNING

Group H02J 13/00036 is incomplete pending reclassification of documents from groups H02J 13/0003, H02J 13/0006, H02J 13/0017, H02J 13/0079, H02J 13/0086, H02J 13/0093, and H02J 13/0096.

All groups listed in this Warning should be considered in order to perform a complete search.

13/0004 . . (involved in a protection system)

WARNING

Group H02J 13/0004 is incomplete pending reclassification of documents from groups H02J 13/0003, H02J 13/0006, H02J 13/0017, H02J 13/0079, H02J 13/0086, H02J 13/0093, and H02J 13/0096.

All groups listed in this Warning should be considered in order to perform a complete search.

13/0005 . . (the elements or equipment being or involving power plugs or sockets)

WARNING

Group H02J 13/0005 is incomplete pending reclassification of documents from groups H02J 13/0003, H02J 13/0006, H02J 13/0017, H02J 13/0079, H02J 13/0086, H02J 13/0093, and H02J 13/0096.

All groups listed in this Warning should be considered in order to perform a complete search.
WARNING

Group H02J 13/0006 is no longer used for the classification of documents as of January 1, 2020.
The content of this group is being reclassified into groups H02J 13/00001, H02J 13/00002,
H02J 13/00006, H02J 13/00009, H02J 13/00012, H02J 13/00014, H02J 13/00018, H02J 13/00022,
H02J 13/00024, H02J 13/00026, H02J 13/00028, H02J 13/00032, H02J 13/00034, H02J 13/00036,
H02J 13/0004, H02J 13/0005, and H02J 2213/10.

All groups listed in this Warning should be considered in order to perform a complete search.

WARNING

Group H02J 13/0013 is no longer used for the classification of documents as of January 1, 2020.
The content of this group is being reclassified into groups H02J 13/00007, H02J 13/00009,
H02J 13/00012, H02J 13/00014, H02J 13/00016, H02J 13/00017, H02J 13/00018, H02J 13/00019,
H02J 13/0002, H02J 13/00022, H02J 13/00024, H02J 13/00026, H02J 13/00028, H02J 13/00032,
H02J 13/00034, H02J 13/00036, H02J 13/0004, H02J 13/0005, and H02J 2213/10.

All groups listed in this Warning should be considered in order to perform a complete search.

WARNING

Group H02J 13/0062 is no longer used for the classification of documents as of January 1, 2020.
The content of this group is being reclassified into groups H02J 13/00016, H02J 13/00018,
H02J 13/0002, H02J 13/00022, H02J 13/00024, and H02J 13/00026 should be considered in order to perform a complete search.

WARNING

Group H02J 13/0075 is no longer used for the classification of documents as of January 1, 2020.
The content of this group is being reclassified into groups H02J 13/00022, H02J 13/00024,
H02J 13/00026, H02J 13/00028, and H02J 13/00036 should be considered in order to perform a complete search.
13/0079  . . . [with transmission using an intermediate treatment level between the control or monitoring unit and the controlled or monitored unit]

**WARNING**

Group H02J 13/0079 is no longer used for the classification of documents as of January 1, 2020.

The content of this group is being reclassified into groups H02J 13/0000, H02J 13/00001, H02J 13/00002, H02J 13/00004, H02J 13/00006, H02J 13/00007, H02J 13/00009, H02J 13/0001, H02J 13/00012, H02J 13/00014, H02J 13/00016, H02J 13/00017, H02J 13/00018, H02J 13/00019, H02J 13/0002, H02J 13/00021, H02J 13/00022, H02J 13/00023, H02J 13/00024, H02J 13/00026, H02J 13/00028, H02J 13/0003, H02J 13/00031, H02J 13/00032, H02J 13/00034, H02J 13/00036, H02J 13/0004, H02J 13/0005, and H02J 2213/10.

All groups listed in this Warning should be considered in order to perform a complete search.

13/0082  . . . [using the power network as transmission support]

**WARNING**

Group H02J 13/0082 is no longer used for the classification of documents as of January 1, 2020.

The content of this group is being reclassified into groups H02J 2213/10, H02J 13/00007, H02J 13/00009, and H02J 13/0001.

Groups H02J 13/0082, H02J 2213/10, H02J 13/00007, H02J 13/00009, and H02J 13/0001 should be considered in order to perform a complete search.

13/0086  . . . [with transmission using plurality of intermediate treatment level between the control or monitoring unit and the controlled or monitored unit]

**WARNING**

Group H02J 13/0086 is no longer used for the classification of documents as of January 1, 2020.

The content of this group is being reclassified into groups H02J 13/0000, H02J 13/00001, H02J 13/00002, H02J 13/00004, H02J 13/00006, H02J 13/00007, H02J 13/00009, H02J 13/0001, H02J 13/00012, H02J 13/00014, H02J 13/00016, H02J 13/00017, H02J 13/00018, H02J 13/00019, H02J 13/0002, H02J 13/00021, H02J 13/00022, H02J 13/00023, H02J 13/00024, H02J 13/00026, H02J 13/00028, H02J 13/0003, H02J 13/00031, H02J 13/00032, H02J 13/00034, H02J 13/00036, H02J 13/0004, H02J 13/0005, and H02J 2213/10.

All groups listed in this Warning should be considered in order to perform a complete search.

13/0089  . . . [using the power network as transmission support]

**WARNING**

Group H02J 13/0089 is no longer used for the classification of documents as of January 1, 2020.

The content of this group is being reclassified into groups H02J 2213/10, H02J 13/00007, H02J 13/00009, and H02J 13/0001.

Groups H02J 13/0089, H02J 2213/10, H02J 13/00007, H02J 13/00009, and H02J 13/0001 should be considered in order to perform a complete search.

13/0093  . . . [for AC networks with plurality frequencies]

**WARNING**

Group H02J 13/0093 is no longer used for the classification of documents as of January 1, 2020.

The content of this group is being reclassified into groups H02J 3/02, H02J 13/00001, H02J 13/00002, H02J 13/00004, H02J 13/00006, H02J 13/00007, H02J 13/00009, H02J 13/0001, H02J 13/00012, H02J 13/00014, H02J 13/00016, H02J 13/00017, H02J 13/00018, H02J 13/00019, H02J 13/0002, H02J 13/00022, H02J 13/00024, H02J 13/00026, H02J 13/00028, H02J 13/0003, H02J 13/00034, H02J 13/00036, H02J 13/0004, H02J 13/0005, and H02J 2213/10.

All groups listed in this Warning should be considered in order to perform a complete search.
13/0096  
(Frozen)  

(1) In this main group, the specific types of wireless technology used for the power transmission are covered in groups H02J 50/05, H02J 50/30, while aspects relevant to the circuit arrangements or systems thereof are covered in groups H02J 50/40, H02J 50/90. 

2. In this main group, multi-aspect classification is applied, so that subject matter characterised by aspects covered by more than one of its groups should be classified in each of those groups. 

WARNING 

Group H02J 50/00 is impacted by reclassification into groups H02J 50/001 and H02J 50/005. 

Groups H02J 50/00, H02J 50/001, and H02J 50/005 should be considered in order to perform a complete search. 

50/001  

(2) Energy harvesting or scavenging 

WARNING 

Group H02J 50/001 is incomplete pending reclassification of documents from groups H02J 5/005, H02J 7/025, and H02J 50/00. 

Groups H02J 50/001, H02J 5/005, H02J 7/025, and H02J 50/00 should be considered in order to perform a complete search. 

50/005  

(Mechanical details of housing or structure aiming to accommodate the power transfer means, e.g. mechanical integration of coils, antennas or transducers into emitting or receiving devices) 

WARNING 

Group H02J 50/005 is incomplete pending reclassification of documents from groups H02J 5/005, H02J 7/025, and H02J 50/00. 

Groups H02J 50/005, H02J 5/005, H02J 7/025, and H02J 50/00 should be considered in order to perform a complete search. 

50/05  

using capacitive coupling 

50/10  

using inductive coupling 

WARNING 

Group H02J 50/10 is incomplete pending reclassification of documents from groups H02J 5/005 and H02J 7/025. 

Groups H02J 5/005, H02J 7/025, and H02J 50/10 should be considered in order to perform a complete search. 

50/12  

of the resonant type 

WARNING 

Group H02J 50/12 is incomplete pending reclassification of documents from groups H02J 5/005 and H02J 7/025. 

Groups H02J 5/005, H02J 7/025, and H02J 50/12 should be considered in order to perform a complete search. 

50/15  

using ultrasonic waves 

50/20  

using microwaves or radio frequency waves 

50/23  

characterised by the type of transmitting antennas, e.g. directional array antennas or Yagi antennas 

50/27  

characterised by the type of receiving antennas, e.g. rectennas
using light, e.g. lasers

**WARNING**

Group H02J 50/30 is incomplete pending reclassification of documents from groups H02J 5/005 and H02J 7/025.

Groups H02J 5/005, H02J 7/025, and H02J 50/30 should be considered in order to perform a complete search.

using two or more transmitting or receiving devices (H02J 50/50 takes precedence)

**WARNING**

Group H02J 50/40 is incomplete pending reclassification of documents from groups H02J 5/005 and H02J 7/025.

Group H02J 50/40 is also impacted by reclassification into group H02J 50/402.

Groups H02J 50/40, H02J 5/005, H02J 7/025, and H02J 50/402 should be considered in order to perform a complete search.

 Groups H02J 50/40, H02J 5/005 and H02J 7/025 should be considered in order to perform a complete search.

using additional energy repeaters between transmitting devices and receiving devices

**WARNING**

Group H02J 50/50 is incomplete pending reclassification of documents from groups H02J 5/005 and H02J 7/025.

Group H02J 50/50 is also impacted by reclassification into group H02J 50/502.

Groups H02J 50/50, H02J 5/005, H02J 7/025, and H02J 50/502 should be considered in order to perform a complete search.

 Groups H02J 50/50, H02J 5/005, H02J 7/025, and H02J 50/50 should be considered in order to perform a complete search.

responsive to the presence of foreign objects, e.g. detection of living beings

**WARNING**

Group H02J 50/60 is incomplete pending reclassification of documents from groups H02J 5/005 and H02J 7/025.

Groups H02J 5/005, H02J 7/025, and H02J 50/60 should be considered in order to perform a complete search.

involving the reduction of electric, magnetic or electromagnetic leakage fields

**WARNING**

Group H02J 50/70 is incomplete pending reclassification of documents from groups H02J 5/005 and H02J 7/025.

Groups H02J 5/005, H02J 7/025, and H02J 50/70 should be considered in order to perform a complete search.

involving the exchange of data, concerning supply or distribution of electric power, between transmitting devices and receiving devices

**WARNING**

Group H02J 50/80 is incomplete pending reclassification of documents from groups H02J 5/005 and H02J 7/025.

Groups H02J 5/005, H02J 7/025, and H02J 50/80 should be considered in order to perform a complete search.

involving detection or optimisation of position, e.g. alignment

**WARNING**

Group H02J 50/90 is incomplete pending reclassification of documents from groups H02J 5/005 and H02J 7/025.

Groups H02J 5/005, H02J 7/025, and H02J 50/90 should be considered in order to perform a complete search.

Indexing scheme relating to details of circuit arrangements for AC mains or AC distribution networks

Power transmission or distribution systems management focussing at grid-level, e.g. load flow analysis, node profile computation, meshed network optimisation, active network management or spinning reserve management

**WARNING**

Group H02J 2203/10 is incomplete pending reclassification of documents from group H02J 13/0006.

Groups H02J 13/0006 and H02J 2203/10 should be considered in order to perform a complete search.
Simulating, e.g. planning, reliability check, modelling or computer assisted design [CAD]

**WARNING**

Group H02J 2203/20 is incomplete pending reclassification of documents from group H02J 13/0006.

Groups H02J 13/0006 and H02J 2203/20 should be considered in order to perform a complete search.

**Indexing scheme relating to details of circuit arrangements for charging or depolarising batteries or for supplying loads from batteries**

2207/10 . Control circuit supply, e.g. means for supplying power to the control circuit

2207/20 . Charging or discharging characterised by the power electronics converter

**WARNING**

Group H02J 2207/20 is incomplete pending reclassification of documents from group H02J 7/022.

Groups H02J 7/022 and H02J 2207/20 should be considered in order to perform a complete search.

**Indexing scheme relating to details of circuit arrangements for providing remote indication of network conditions or for circuit arrangements for providing remote control of switching means in a power distribution network**

2213/10 . using simultaneously two or more different transmission means

**WARNING**

Group H02J 2213/10 is incomplete pending reclassification of documents from groups H02J 13/0003, H02J 13/0006, H02J 13/0017, H02J 13/0079, H02J 13/0082, H02J 13/0086, H02J 13/0089, H02J 13/0093, and H02J 13/0096.

All groups listed in this Warning should be considered in order to perform a complete search.

**Systems for supplying or distributing electric power characterised by decentralized, dispersed, or local generation**

2300/20 . The dispersed energy generation being of renewable origin

**WARNING**

Group H02J 2300/20 is incomplete pending reclassification of documents from group H02J 3/382.

Groups H02J 3/382 and H02J 2300/20 should be considered in order to perform a complete search.

2300/22 . The renewable source being solar energy

**WARNING**

Group H02J 2300/22 is incomplete pending reclassification of documents from group H02J 3/382.

Groups H02J 3/382 and H02J 2300/22 should be considered in order to perform a complete search.

2300/24 . of photovoltaic origin

**WARNING**

Group H02J 2300/24 is incomplete pending reclassification of documents from group H02J 3/383.

Groups H02J 3/383 and H02J 2300/24 should be considered in order to perform a complete search.

2300/26 . involving maximum power point tracking control for photovoltaic sources (maximum power point systems in particular G05F 1/67)

**WARNING**

Group H02J 2300/26 is incomplete pending reclassification of documents from group H02J 3/385.

Groups H02J 3/385 and H02J 2300/26 should be considered in order to perform a complete search.

2300/28 . The renewable source being wind energy (wind motors F03D)

**WARNING**

Group H02J 2300/28 is incomplete pending reclassification of documents from group H02J 3/386.

Groups H02J 3/386 and H02J 2300/28 should be considered in order to perform a complete search.

2300/30 . The power source being a fuel cell

**WARNING**

Group H02J 2300/30 is incomplete pending reclassification of documents from group H02J 3/387.

Groups H02J 3/387 and H02J 2300/30 should be considered in order to perform a complete search.

2300/40 . wherein a plurality of decentralised, dispersed or local energy generation technologies are operated simultaneously
The network for supplying or distributing electric power characterised by its spatial reach or by the load

The network having a local or delimited stationary reach
The local stationary network supplying a household or a building
The load or loads being home appliances
The load or loads being an Information and Communication Technology [ICT] facility
The network being internal to a power source or plant
The network being internal to a load
The load being a portable electronic device

WARNING
Group H02J 2310/22 is incomplete pending reclassification of documents from group H02J 7/0027.
Groups H02J 7/0027 and H02J 2310/22 should be considered in order to perform a complete search.

The network being an on-board power network, i.e. within a vehicle
The load being a medical device, a medical implant, or a life supporting device
The network being an on-board power network, i.e. within a vehicle

WARNING
Group H02J 2310/40 is incomplete pending reclassification of documents from group H02J 7/0027.
Groups H02J 7/0027 and H02J 2310/40 should be considered in order to perform a complete search.

for ships or vessels

WARNING
Group H02J 2310/42 is incomplete pending reclassification of documents from group H02J 7/0027.
Groups H02J 7/0027 and H02J 2310/42 should be considered in order to perform a complete search.

for aircrafts

WARNING
Group H02J 2310/44 is incomplete pending reclassification of documents from group H02J 7/0027.
Groups H02J 7/0027 and H02J 2310/44 should be considered in order to perform a complete search.

for ICE-powered road vehicles

WARNING
Group H02J 2310/46 is incomplete pending reclassification of documents from group H02J 7/0027.
Groups H02J 7/0027 and H02J 2310/46 should be considered in order to perform a complete search.

for electric vehicles [EV] or hybrid vehicles [HEV]