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(54) **ELECTRICAL JUNCTION BOX**

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CPC ***H01R 13/74*** (2013.01); ***H02G 3/081*** (2013.01)

(57) **ABSTRACT**

The objectives of the present invention is to provide an electrical junction box that can sufficiently prevent the transmission of noises or vibrations emitted from an electrical component disposed inside of the electrical junction box. The electrical junction box includes: a relay having terminals; electrical wires connected to the terminals on the relay; and a casing body made of insulating resin containing the relay. The casing body is formed to have an accommodation portion that surrounds and contains the relay without contacting the same and a lead-out portion by which the electrical wires are led out of the accommodation portion. At least one of the following supporters is provided with: a first supporter for supporting the relay by an inner mold interposed between the relay and the inner face of the accommodation portion of the casing body; and a second supporter for supporting the relay via the electrical wires.

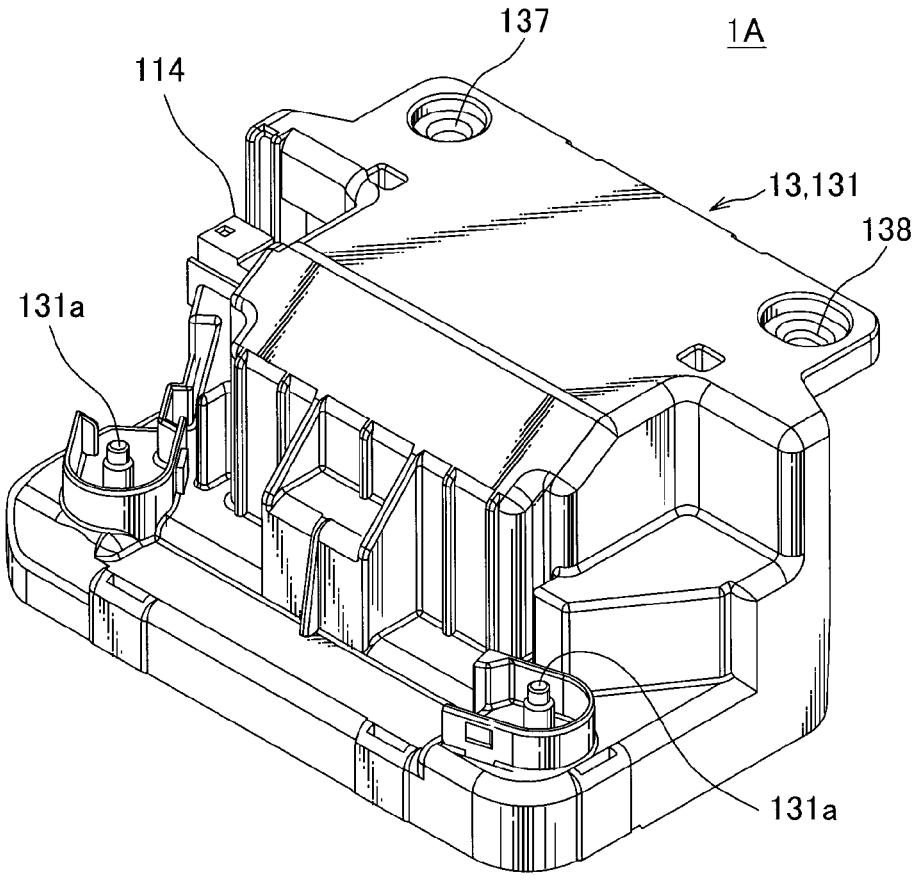


FIG. 1

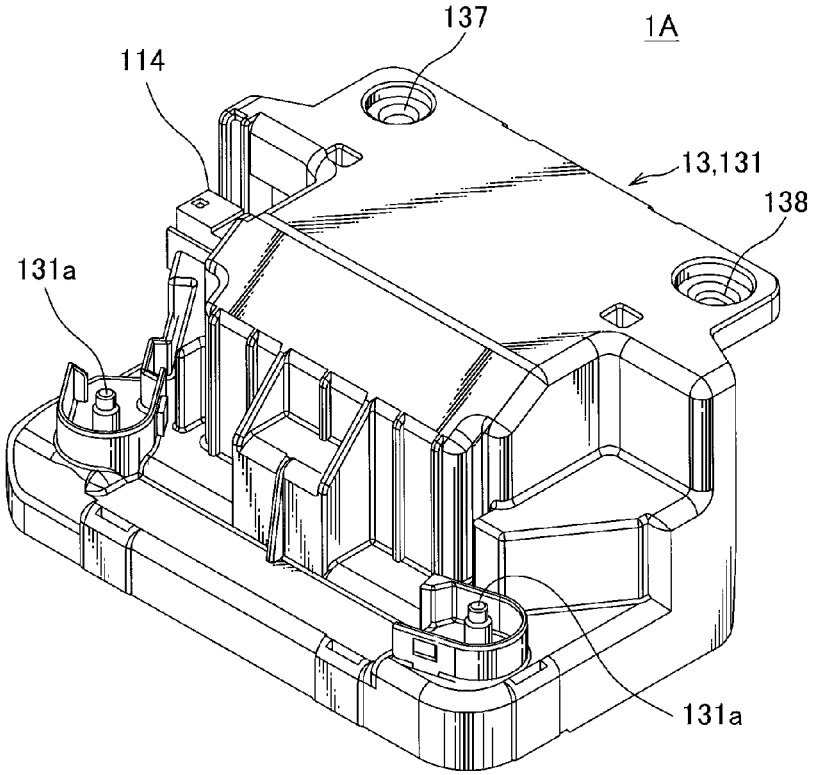


FIG. 2

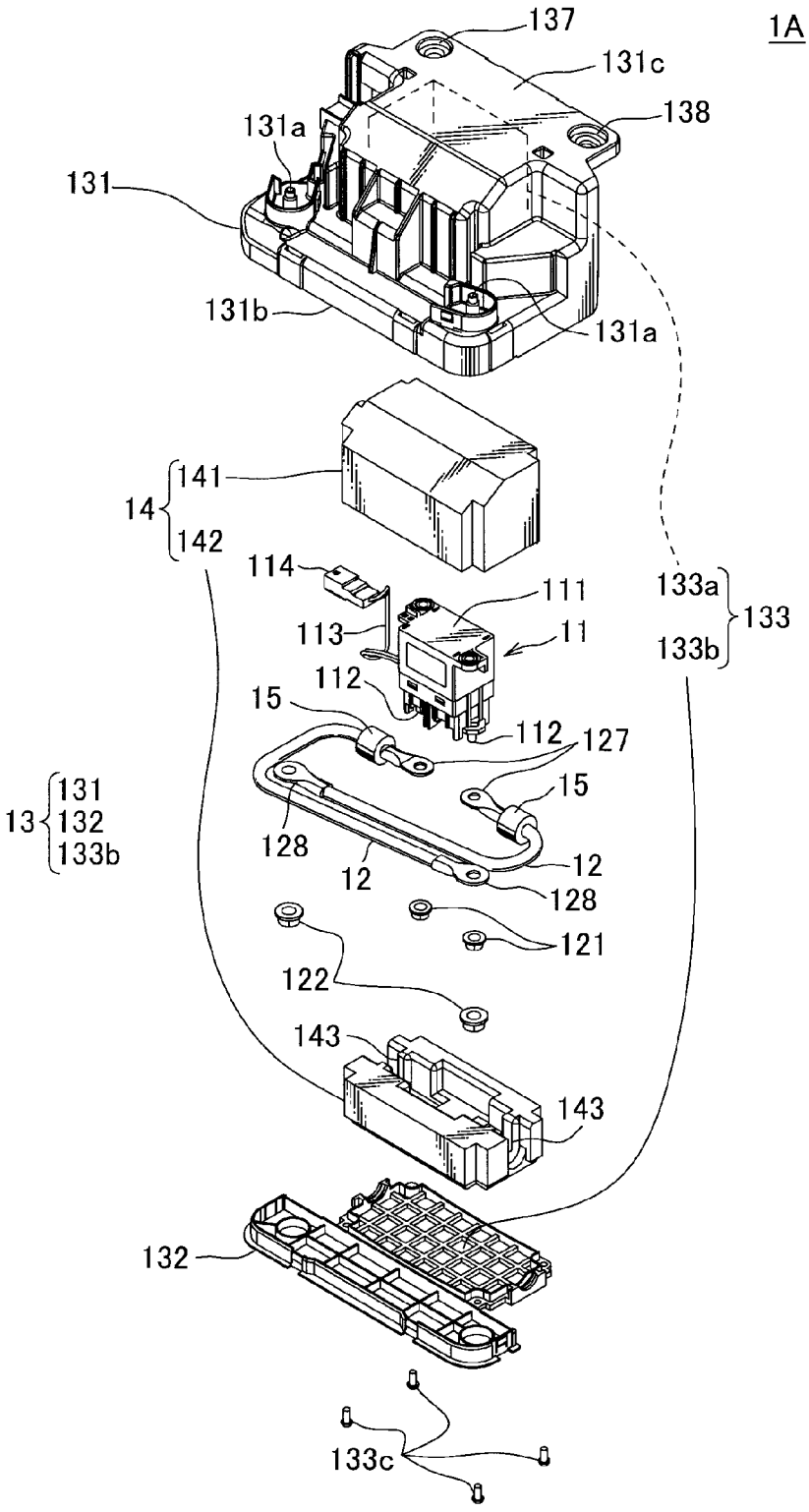

1A
137
131c
138
131a
131
131b
131a
141
14
142
114
111
133a
133
113
11
133b
112
15
112
127
15
131
13
132
133b
128
12
12
128
121
122
143
143
132
133c

FIG. 3

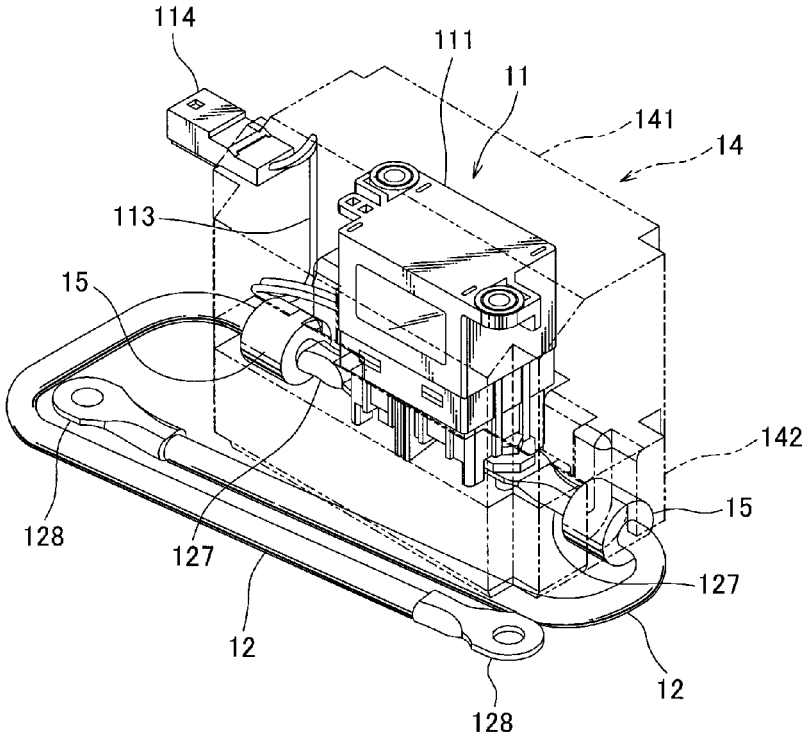


FIG. 4

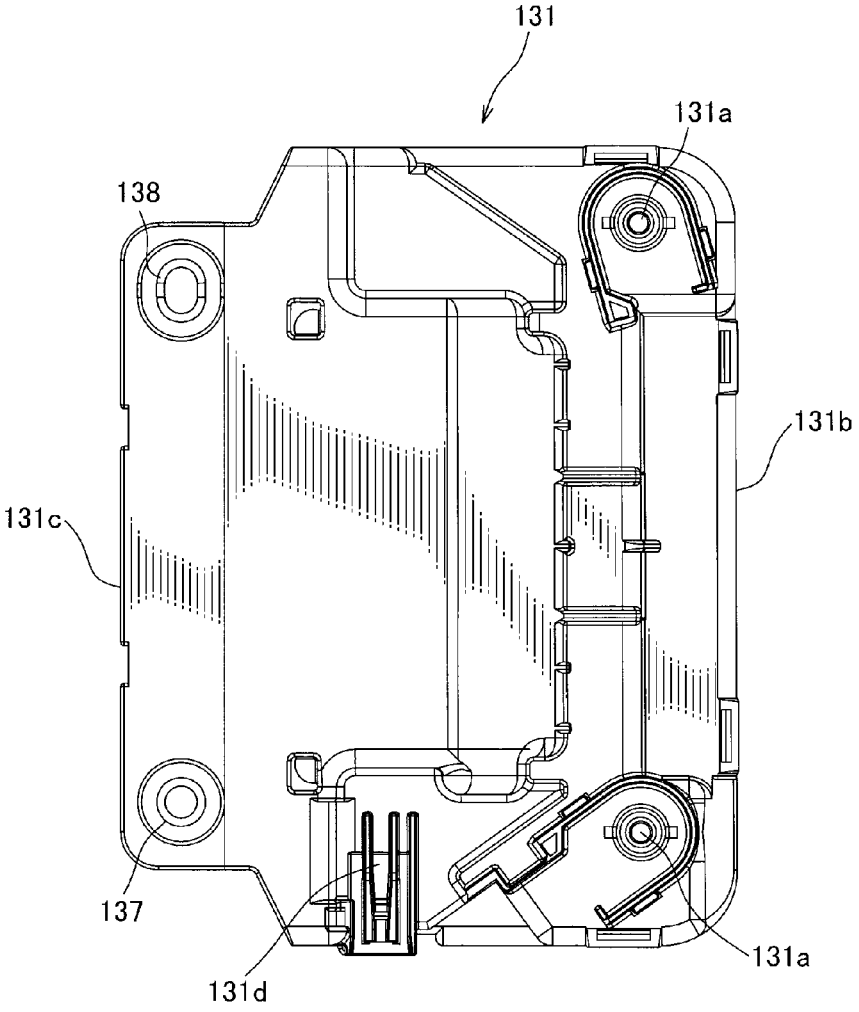


FIG. 5

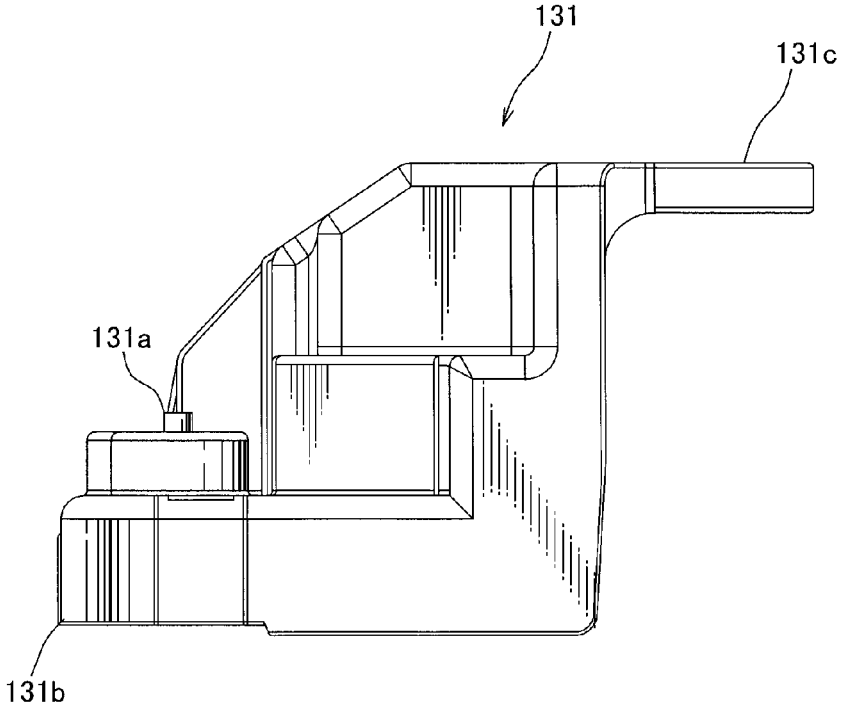


FIG. 6

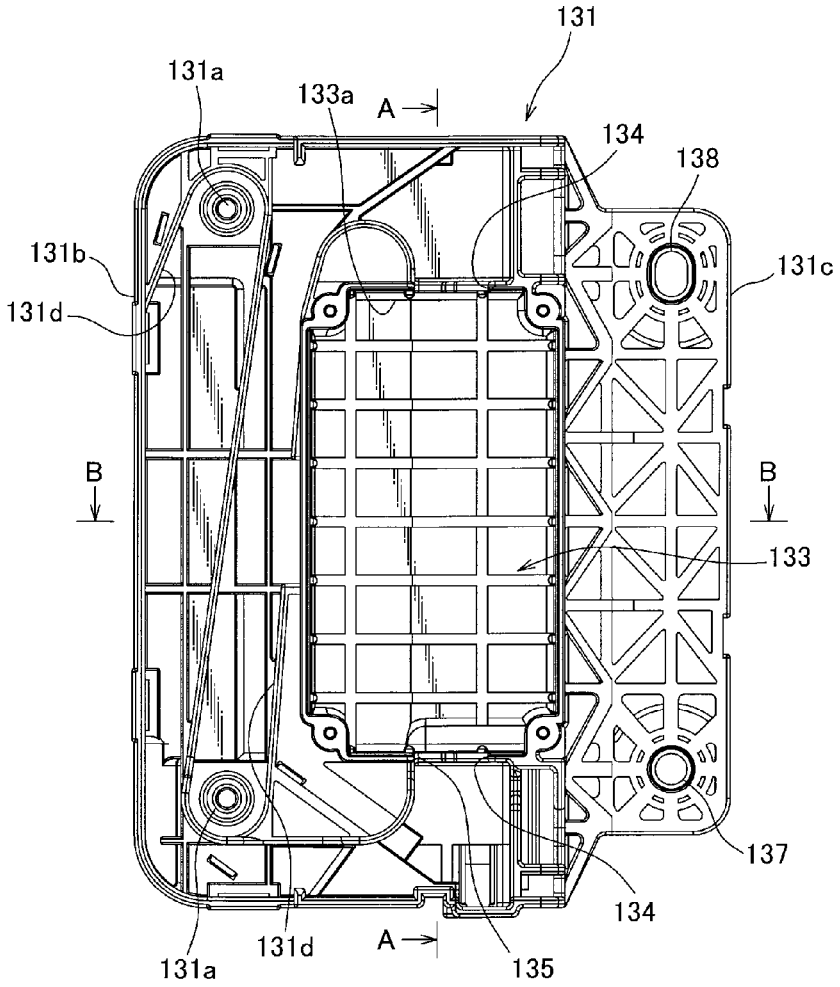

131
131a
133a
A
134
138
131b
131c
131d
B
B
133
137
134
131d
A
131a
135

FIG. 7

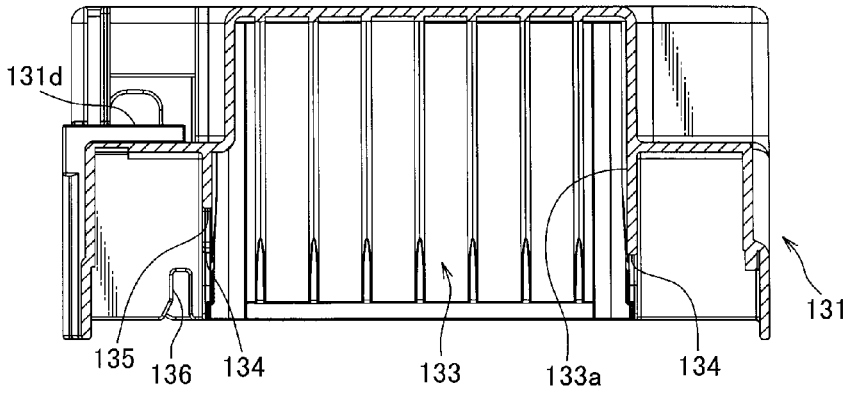

131d
131
135
136
134
133
133a
134

FIG. 8

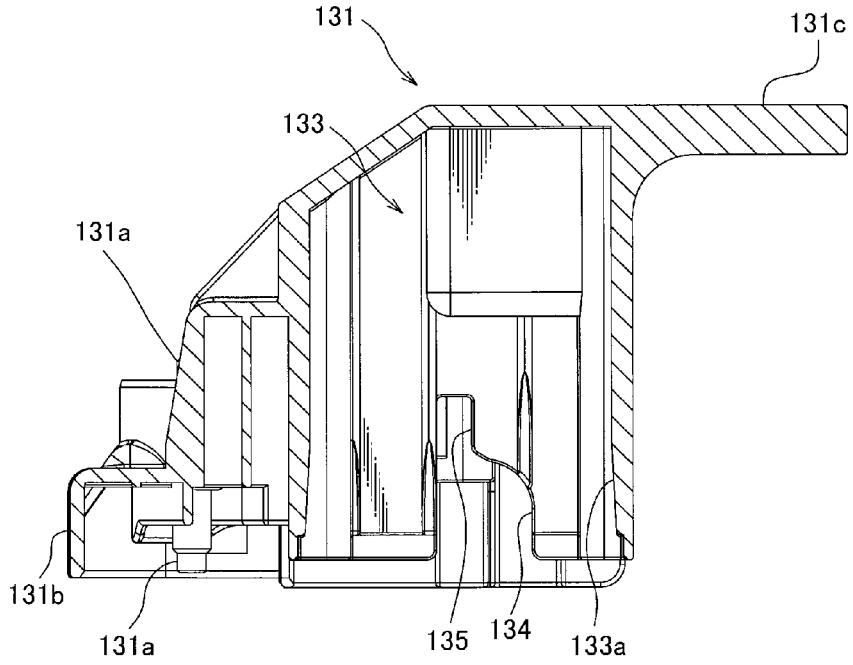

131
131c
133
131a
131b
131a
135
134
133a

FIG. 9

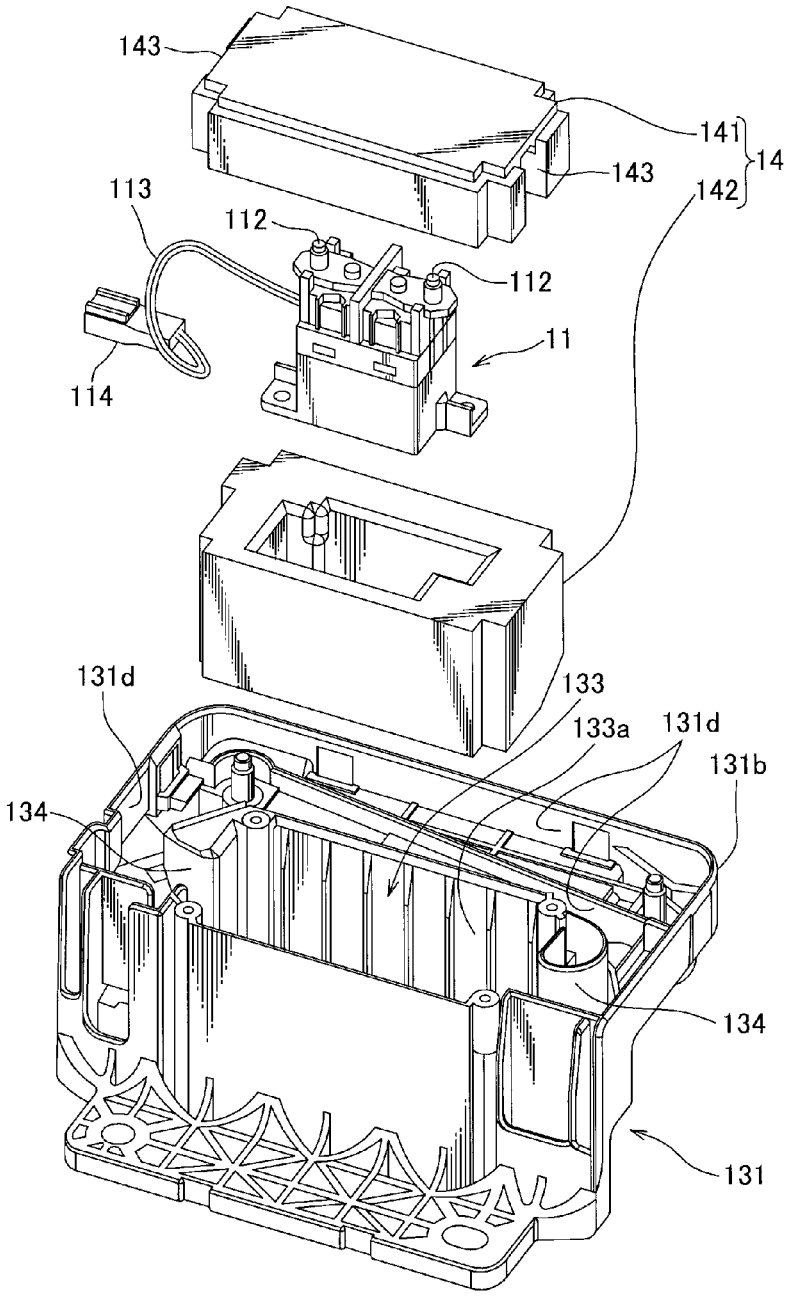

143
141
14
143
142
113
112
112
11
114
131d
133
133a
131d
131b
134
134
131

FIG. 10

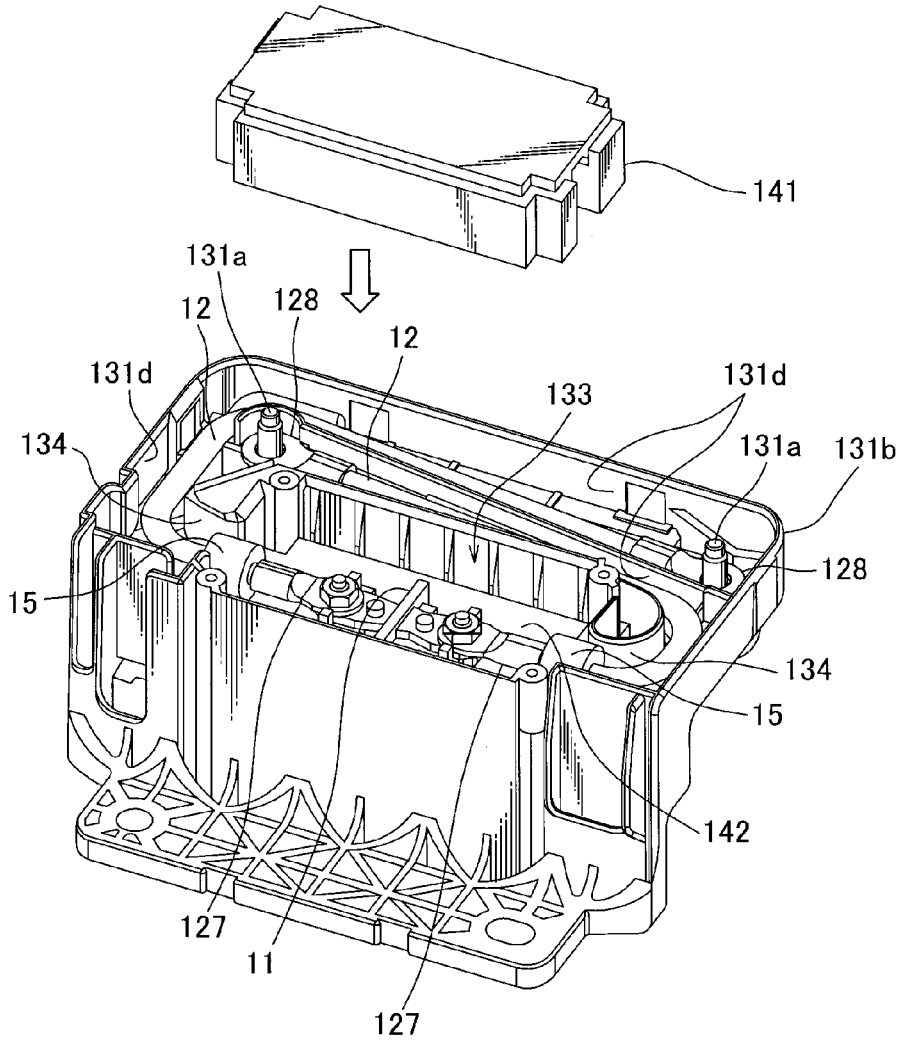
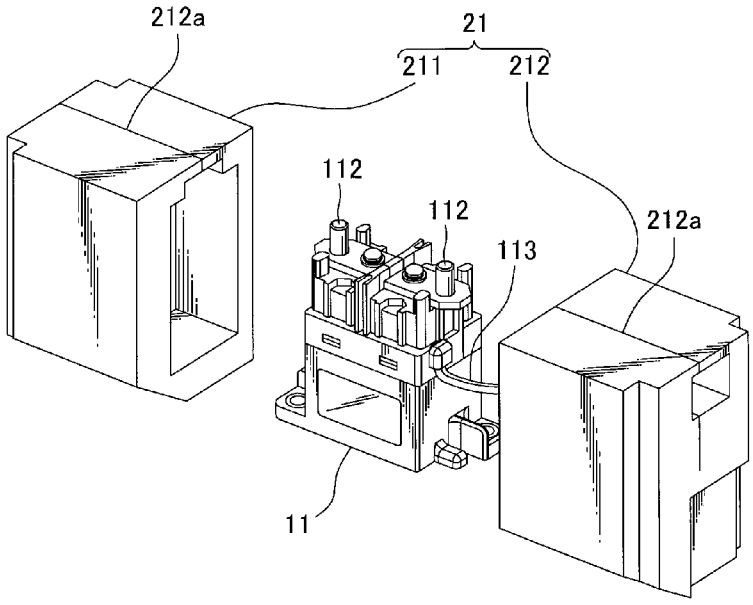

141
131a
12
128
12
131d
133
131d
134
131a
131b
128
15
134
15
142
127
11
127

FIG. 11



ELECTRICAL JUNCTION BOX

TECHNICAL FIELD

[0001] The present invention relates to electrical junction box mounted on vehicle.

BACKGROUND ART

[0002] The electrical junction box mounted on vehicles typically includes electrical components such as relays, fuses, fusible links or the like, a box body (casing body) made of insulation resin accommodating such electrical components, and external terminals electrically connecting the electrical components and external apparatuses. Further, an affixing portion provided in the box body is affixed on a vehicle panel by bolts. It is likely that when such an electrical junction box accommodates electrical components (i.e., relay) which generate noises or vibrations, the emitted noises or vibrations is transmitted to the vehicle body as solid-borne noises via the box body so as to make passengers feel uncomfortable. Under such a circumstance, the electrical junction box in which noise insulating properties are taken into account has been proposed (refer to PTL 1).

[0003] The electrical junction box described in PTL 1 is configured to include a relay, an electrical circuit substrate and an apparatus body (casing body), and the relay is mounted on the electrical circuit substrate via a cushion material by which the transmission of noises or vibrations are prevented.

CITATION LIST

Patent Literature

[0004] PTL 1: JP 2000-164097 A

SUMMARY OF INVENTION

Technical Problem

[0005] However, according to the conventional electrical junction box as described in PTL 1, noises or vibrations of the relays are transmitted to the electrical circuit substrate via bus bars which electrically connect the relay terminals and the electrical circuit substrates, and since the electrical circuit substrates are affixed to the apparatus body (casing body) with bolts in a contact condition, such a problem is caused as that the noises or vibrations transmitted to the electrical circuit substrates are directly transmitted to the casing body.

[0006] Under such a situation, the present invention aims to provide an electrical junction box which can effectively suppress the transmission of noises or vibrations generated at embedded electrical components.

Solution to Problem

[0007] To attain the above described objectives, the electrical junction box set forth in one aspect of the present invention includes: an electrical component equipped with a terminal; an electrical connection member connected to the terminal of the electrical component; a casing body made of insulation resin and accommodating the electrical components; and at least one of a first supporter supporting the electrical component by a first support member interposed between the electrical component and an inner face of an accommodation portion, and a second supporter supporting the electrical component via the electrical connection member, wherein the casing body is formed to include the accommodation portion which contactlessly accommodates the electrical component in a manner surrounding the electrical component, and a lead-out portion leading the electrical connection member out from the accommodation portion.

[0008] The electrical junction box in a first preferred aspect of the present invention is the electrical junction box according to the one aspect of the present invention, wherein the first support member is made of elastic material having vibration-free property and surrounds the electrical component with no gaps therebetween, and the electrical junction box is provided in close contact with the inner face of the accommodation portion, and wherein the first support member is provided with an insertion portion having the electrical connection member insert thereinto.

[0009] The electrical junction box in a second preferred aspect of the present invention is the electrical junction box according to the one aspect or the first preferred aspect of the present invention, wherein the second supporter is formed to include a second support member made of elastic material having vibration-free property, the second support member interposed between the electrical connection member and the lead-out portion, and wherein the second support member surrounds the electrical connection member with no gaps therebetween and is provided in close contact with an inner periphery of the lead-out portion.

[0010] The electrical junction box in a third preferred aspect of the present invention is the electrical junction box according to any one of the one aspect to the second preferred aspect of the present invention, wherein the accommodation portion is composed of a hole having an opening that opens toward one side, and a cover portion for covering the opening of the hole, and wherein the first support member is configured to include an innermost-side member provided at an innermost-side of the hole and an opening-side member provided at the opening-side of the hole as well as at the cover portion side.

Advantageous Effects of Invention

[0011] According to the invention in the one aspect of the present invention, since the electrical component is supported by at least one of the first supporter supporting the electrical component by the first support member interposed between the electrical component and the inner face of the accommodation portion, and the second supporter supporting the electrical component via the electrical connection member, the electrical component is contactlessly supported with respect to the accommodation portion, and the electrical component is accommodated in the accommodation portion in a manner surrounded by the accommodation portion. Thereby, even when noises or vibrations are generated at the electrical component, the noises or vibrations are prevented from being directly transmitted to the accommodation portion.

[0012] According to the invention in the first preferred aspect of the present invention, since the first support member is made of an elastic material having vibration-free property, noises or vibrations transmitted from the electrical component to the inner face of the accommodation portion via the first support member are attenuated. Thereby, noise insulating property and vibration-free property thereof can be further enhanced. Further, since the first support member surrounds the electrical component and the first support member is provided with the inner face of the accommodation portion

in close contact thereto, noises generated at the electrical component can be prevented from leaking out. Further, since the insertion portion is formed in the first support member and the electrical connection member is led out through the insertion portion, noises and vibrations leaked out by their propagation on the electrical wire can also be suppressed.

[0013] According to the invention recited in the second preferred aspect of the present invention, since the second supporter is configured to include the second support member made of elastic material having vibration-free property, the second support member interposed between the electrical connection member and the lead-out portion, noises or vibrations transmitted from electrical component to the lead-out portion via the electrical connection member and the second support member are attenuated. Thereby, noise insulating property and vibration-free property thereof can further be enhanced. Further, since the second support member surrounds the electrical connection member with no gaps therebetween and the second support member is provided in close contact with the inner periphery of the lead-out portion, noises generated at the electrical component and propagating via the electrical wire can be prevented from leaking out to the outside of the accommodation portion.

[0014] According to the invention recited in the third preferred aspect of the present invention, since the accommodation portion is composed of the hole and the cover portion, and the first support member is configured to include the innermost-side member and the opening-side member, that is, first support member is divided into two pieces by the innermost-side and opening-side of the hole. Thereby, the assembly procedures when accommodating the electrical component and the first support member in the accommodation portion can be optimized. Specifically, the innermost-side member is firstly set in the accommodation portion, subsequently, the electrical component are made supported therein. Next, the opening member is set in the accommodation portion in a state where the opening member is in close contact with the innermost-side member and the electrical component. Subsequently, the accommodation portion is closed by the cover portion. Thereby, the electrical component and the first support member can be securely assembled to the accommodation portion.

BRIEF DESCRIPTION OF THE DRAWINGS

[0015] FIG. **1** is a perspective view of the electrical junction box according to the first embodiment of the present invention.

[0016] FIG. **2** is an exploded perspective view of the electrical junction box.

[0017] FIG. **3** is a perspective view of the electrical component accommodated in the casing body.

[0018] FIG. **4** is an upper facial view of the casing body.

[0019] FIG. **5** is a right side facial view of the casing body.

[0020] FIG. **6** is a view of a bottom face of the casing body.

[0021] FIG. **7** is a sectional view indicated by arrow A line in FIG. **6**.

[0022] FIG. **8** is a sectional view indicated by arrow B line in FIG. **6**.

[0023] FIG. **9** is a view explaining assembly procedures of an electrical junction box.

[0024] FIG. **10** is a view explaining assembly procedures of an electrical junction box.

[0025] FIG. **11** is a view showing a first support member in an electrical junction box according to the second embodiment of the present invention.

DESCRIPTION OF EMBODIMENTS

First Embodiment

[0026] The electrical junction box according to a first embodiment of the present invention is described with reference to FIGS. **1** to **10**.

[0027] An electrical junction box **1**A is mounted, for example, on a vehicle having idling stop function, and in normal driving mode of the vehicle, as for a plurality of large-capacity batteries, the electrical junction box **1**A supplies electrical power to many types of electrical components from all of the batteries, while in idling mode of the same, the electrical junction box **1**A implements current-applying control by which supplying electrical power from the batteries is stopped, reserving a part of the electrical power for charging. The electrical junction box **1**A includes a relay **11** having a large capacity as an electrical component, an electrical wire **12** for electrification connected to a terminal **112** of the relay **11**, and a casing body **13** in which the relay **11** is accommodated. FIG. **1** is a perspective view of the electrical junction box **1**A, and FIG. **2** is an exploded perspective view of the electrical junction box **1**A. Further, FIG. **3** is a perspective view of the relay **11** accommodated in the casing body **13**. Further, FIGS. **4**-**8** are views explaining a casing body **131** constituting the casing body **13**, and FIGS. **9** and **10** are views explaining assembly procedures of the electrical junction box **1**A.

[0028] As shown in FIG. **2**, the relay **11** includes a relay body **111**, a pair of the terminals **112** to which electrical wire **12** is connected, and a control connector **114** connected to the relay body **111** via a control electrical wire **113**. The control connector **114** is, as shown in FIG. **1**, exposed to the outside of the electrical junction box **1**A in appearance. The control connector **114** is connected to a connector of an external control electrical wire which is not shown. Then, control signals are transmitted to the relay **11** via the control connector **114**, the control electrical wire **113**, and the external control electrical wire so as to open and close the inner contact of the relay **11**, and opening and closing operations of the inner contact of the relay **11** are performed in response to the control signal.

[0029] In the electrical wire **12**, first end round terminals **127** are connected to the terminals **112** of the relay **11** by nuts **121**, and second end round terminals **128** are connected to external connection terminals **131***a* by nuts **122**. The electrical junction box **1**A is provided with a pair of the electrical wires **12**.

[0030] The casing body **13** is configured with the casing body **131** made of synthetic resin, a cover member **132** made of synthetic resin partially covering the lower end portion of the casing body **131** and affixed to the casing body **131** by engagement of engaging claws, and a cover portion **133***b* covering a hole **133***a* that opens to a remaining part of the lower end portion of the casing body **131** and affixed to the casing body **131** by screws **133***c*. The hole **133***a* will be described later. The casing body **13** is formed to include an accommodation portion **133** which contactlessly accommodates the relay **11** in a manner surrounding the relay **11**, and lead-out portions **134** through which electrical wires **12** are led out from the accommodation portion **133**.

[0031] Hereinafter, the casing body **131** is described with reference to FIGS. **4** to **8**. FIG. **4** is a view of the upper face of the casing body **131**, FIG. **5** is a right side facial view of the casing body **131**, FIG. **6** is a view of the bottom face of the casing body **131**, FIG. **7** is a sectional view indicated by arrow A line in FIG. **6**, and FIG. **8** is a sectional view indicated by arrow B line in FIG. **6**.

[0032] The casing body **131** includes a lower periphery projection part **131***b* which is formed by the lower periphery located at the cover member **132** side and projecting forward. At each of the right and left end sides of the lower periphery projection part **131***b*, there is provided the external connection terminal **131***a*. The cover member **132** is affixed thereto with covering the lower face of the lower periphery projection part **131***b*. Further, the casing body **131** includes an upper periphery projection part **131***c* projecting in the rearward direction that is the opposite direction to the lower periphery projection part **131***b*. At the right and left end sides of the upper periphery projection part **131***c*, there are provided collar including penetration holes **137**, **138** through which bolts for affixing the electrical junction box **1**A to a predetermined attachment location are to pass. In this embodiment, among the two right and left penetration holes **137**, **138**, the penetration hole **138** which is shown in the upper area in FIGS. **4** and **6**, is formed in an elongated-hole shape. A dimensional tolerance at the positions of the penetration holes **137**, **138** is absorbed by this elongated-hole shape. Further, on the upper face of the casing body **131**, there is provided a connector retaining portion **131***d* in which the control connector **114** shown in FIGS. **2** and **3** is fitted and is retained thereby.

[0033] The accommodation portion **133** provided in the casing body **13**, is configured with the hole **133***a* which is provided at the casing body **131** and opens downwardly, and the cover portion **133***b* which closes the opening of the hole **133***a* as shown in FIGS. **6** to **8**. The relay **11** is received within the hole **133***a* which corresponds to the accommodation portion **133**, in a posture that the terminals **112** thereof are opposing to the cover portion **133***b*.

[0034] The lead-out portion **134** is a cylindrical cut-out portion provided at both of the side walls of the hole **133***a*. The electrical wire **12** in which the first end round terminal **127** is connected to the terminals **112** of the relay **11**, is led out to the outside of the hole **133***a* through the lead-out portion **134**. Further, in a rear face of the lower periphery projection part **131***b*, the rear face covered by the cover member **132**, there is provided a pair of right and left routing grooves **131***d* which introduces each of the right and left electrical wires **12** to the external connection terminal **131***a*. The electrical wire **12** is firstly led out from the lead-out portion **134**, and subsequently, the electrical wire **12** is introduced toward the external connection terminal **131***a* by passing through the inside of the routing groove **131***d*. At the location where the electrical wire **12** is introduced, a second end round terminal **128** is connected to the external connection terminal **131***a*. Electrical wires led out from the above-described batteries and not shown various electrical equipment are connected to the external connection terminal **131***a*.

[0035] Further, a first control lead-out portion **135** and a second control lead-out portion **136** are provided in a vicinity of the lead-out portion **134** shown in FIG. **8** among the right and left lead-out portions **134**. The first control lead-out portion **135** is a member which takes out the control electrical wire **113** shown in FIGS. **2** and **3** from the hole **133***a*. The first control lead-out portion **135** is formed to be a cut-out portion which is deeper than the lead-out portion **134**, the first control lead-out portion **135** being continued to the lead-out portion **134**. The second control lead-out portion **136** is a member which takes out the control electrical wire **113** down to a route extending to the control connector **114** that is retained by the connector retaining portion **131***d* via the outside of the casing body **131**. The second control lead-out portion **136** is formed to be a cut-out portion adjacent to the first control lead-out portion **135**. The control electrical wire **113** is led out to the outside of the casing body **131** via the first control lead-out portion **135** and the second control lead-out portion **136**, and the control connector **114** at the tip thereof is retained by the connector retaining portion **131***d*.

[0036] Here, as shown in FIGS. **2** and **3**, the electrical junction box **1**A is configured to include an inner mold **14** (first support member) in which the first supporter that supports the relay **11** is interposed between the relay **11** and the inner face of the accommodation portion **133**. Further, the second supporter is configured to include a soft tape **15** (second support member) that is interposed between the electrical wire **12** and the lead-out portion **134**. The second supporter supports the relay **11** via the electrical wire **12** and is wound by the electrical wire **12**.

[0037] In this embodiment, the inner mold **14** is configured to include an innermost-side member **141** provided at the innermost-side of the hole **133***a* in the accommodation portion **133**, and an opening-side member **142** provided at opening-side of the hole **133***a* and at the cover portion **133***b* side. Each of the members is made of urethane foam as elastic material and has a vibration-free property. In each of the members, there is provided a concave in which the relay **11** is fitted. As shown in FIG. **3**, the relay **11** is clamped from up and down by these two members and is accommodated in the accommodation portion **133** in a state where the relay **11** is surrounded by the inner mold **14** with no gaps therebetween. Further, when the relay **11** is being accommodated, the inner mold **14** is in close contact with the inner face of the accommodation portion **133**. Further, at the right and left side faces of the opening-side member **142** which serves as the inner mold **14**, an insertion portion **143** into which the electrical wire **12** is inserted, is formed in a cylindrical cut-out portion-like shape.

[0038] The soft tape **15** is a resilient member and is wound around a vicinity of the first end of the electrical wire **12** that is connected to the terminals **112** of the relay **11**. Then, the soft tape **15** is fitted into a space that is formed by the insertion portion **143** of the opening-side member **142** in the inner mold **14** and by the lead-out portion **134** in the casing body **13**.

[0039] According to the electrical junction box **1**A of this embodiment, the relay **11** are contactlessly supported with respect to the accommodation portion **133** by the two support members consisted of the inner mold **14** and the soft tape **15** that are elastic materials, each of which has vibration-free property. Further, the relay **11** is accommodated in the accommodation portion **133** in a manner surrounded by the accommodation portion **133**. Thereby, even when noises or vibrations are generated at the relay **11**, the noises or vibrations are prevented from being directly transmitted to the accommodation portion **133**, that is, the casing body **13**. Furthermore, since the two support members are made of elastic materials having vibration-free property, noises or vibrations transmitted to the inner face of the accommodation portion **133** from the relay **11** via the inner mold **14** are attenuated, and noises or vibrations transmitted to the lead-out portion **134** from the

relay **11** via the electrical wire **12** or the soft tape **15** are attenuated. Thereby, noise insulating property and vibration-free property thereof can be further enhanced.

[0040] Further, according to the electrical junction box **1**A of this embodiment, noises generated at the relay **11** can be prevented from leaking out by the inner mold **14** surrounding the relay **11** without creating any gaps therebetween, and by the inner mold **14** being provided with the inner face of the accommodation portion **133** in close contact thereto. Further, since the insertion portion **143** is formed in the inner mold **14** and the electrical wire **12** is led out through the insertion portion **143**, noises and vibrations leaked out by their propagation on the electrical wire **12** can also be suppressed.

[0041] Further, according to the electrical junction box **1**A of this embodiment, noises generated at the relay **11** and propagating via the electrical wire **12** can be prevented from leaking out to the outside of the accommodation portion **133** by letting the soft tape **15** surround the relay **11** without creating any gaps therebetween and by providing the soft tape **15** with the inner periphery of the lead-out portion **134** in close contact thereto.

[0042] Further, according to the electrical junction box **1**A of this embodiment, the accommodation portion **133** is composed of the hole **133***a* of the casing body **131** and the cover portion **133***b*, and the inner mold **14** is configured to include the innermost-side member **141** and the opening-side member **142**. That is, the inner mold **14** is at least divided into two pieces by the innermost-side and the opening-side of the hole **133***a*. Thereby, the assembly procedures when accommodating the relay **11** and the inner mold **14** in the accommodation portion **133** can be optimized. Specifically, the innermost-side member **142** is firstly set in the hole **133***a* of the casing body **131** as shown in FIGS. **9** and **10**. Subsequently, the relay **11** is fitted in the innermost-side member **142** and is supported therein. Next, the opening-side member **142** is set in the hole **133***a* in a state where the opening-side member **142** is in close contact with the innermost-side member **142** and the relay **11**. Subsequently, the hole **133***a* is closed by the cover portion **133***b* (refer to FIG. **2**), thereby, the relay **11** and the inner mold **14** can be securely and easily assembled to the accommodation portion **133**.

Second Embodiment

[0043] Next, the electrical junction box according to a second embodiment of the present invention is described with reference to FIG. **11**. Incidentally, the electrical junction box according to this second embodiment is equivalent to the electrical junction box **1**A of the first embodiment except for the inner mold as the first support member which supports the relay **11**. Hereinafter, the electrical junction box according to the second embodiment is described focusing on the inner mold which is a difference from the electrical junction box **1**A of the first embodiment. Further, as for the components shown in FIG. **11** that are the equivalent to the components of the electrical junction box **1**A shown in FIGS. **1** to **10** in accordance with the first embodiment, the same reference numbers as those are assigned to the components shown in FIG. **11**. Hence, the duplicate descriptions of the same components will be omitted hereinafter.

[0044] In the electrical junction box according to the second embodiment, as shown in FIG. **11**, an inner mold **21** is configured to include a first member **211** and a second member **212** which clamp the relay **11** from the right and left sides thereof. Also in this embodiment, each of these members is made of urethane foam as elastic material and possesses vibration-free property. Each member is provided with a concave in which the relay **11** is set, and the relay **11** is clamped from the right and left sides thereof and is accommodated in the accommodation portion **133** (refer to FIG. **2**) in a state surrounded by the inner mold **21** without creating any gaps therebetween. In this embodiment, the electrical junction box is assembled in the procedure in which the relay **11** is firstly clamped from the right and left sides thereof by the first member **211** and the second member **212**, subsequently, the clamped stuff is set in the hole **133***a* of the accommodation portion **133**, and in final, the hole **133***a* is covered by the cover portion **133***b*.

[0045] Further, in each of the first member **211** and the second member **212**, the control electrical wire **113** extending to the control connector **114** and slits **211***a*, **212***a* through which the electrical wire **12** (refer to FIG. **2**) connected to the terminals **112** are passed, is provided on an opposing surface opposed to the cover portion **133***b*, the opposing surface facing upward when the above-described assembly procedures are implemented. When assembling, the control electrical wire **113** and the electrical wire **12** can be easily routed by pushing them toward the slits **211***a*, **212***a* from upward. Further, since the control electrical wire **113** is supported in a state being sandwiched between the slits **211***a*, **212***a*, the generation of gaps at a passing part of the control electrical wire **113** is suppressed, and noises generated at the passing part and leaking out therefrom are also suppressed.

[0046] In the electrical junction box according to the above-described second embodiment, vibrations generated at the relay **11** are absorbed by the inner mold **21** and the soft tape **15** (refer to FIG. **2**), and the propagations of the vibrations toward the casing body **13** are suppressed. Thereby, strange noises caused by the vibrations generated at the relay **11** are suppressed.

[0047] The above-described embodiments are to merely show representative exemplifications of the present invention, the present invention is not limited to these embodiments. That is, the present invention can be implemented by various modifications without departing from the gist thereof.

[0048] For example, although in each of the embodiments, the electrical wire **12** has been exemplified as an electrical connection member which connects the terminals **112** and the external connection terminal **131***a*, the electrical connection member is not limited to an electrical wire, the electrical connection member may also be a bus bar, for example.

[0049] Further although in each of the embodiments, an aspect in which the relay **11** is supported by the two supporters consisted of the first supporter having the inner mold **21** and the second supporter having the soft tape **15** is exemplified, the supporter which supports the relay **11** may be solely consisted of the one of the supporter. Further, as for the support consisted of the second supporter solely, the resilient member such as the soft tape **15** may not be provided, and the electrical wire **12** may be affixed at a vicinity of the lead-out portion **134**. In this case, the relay **11** may be supported solely by elasticity of the electrical wire **12** with respect to the casing body **13** in a contactless manner.

[0050] Further, although in each of the embodiments, the inner mold **14** made of urethane foam is exemplified as the first support member interposed between the relay **11** and the inner face of the accommodation portion **133**, the first support member is not limited to be made of urethane foam. The first

support member may be made of rubber or resin, or may be made by blowing polyurethane onto the relay **11**, or may be made of/by the like.

[0051] Further, although in each of the embodiments, the electrical junction boxes **1**A, **1**B accommodating one relay have been exemplified for the electrical junction box, the electrical junction box may be the one which accommodates multiple relays, or may be the one which accommodates more than one relay, a fuse, and an electrical circuit substrate or the like. The electrical junction box may be the one which accommodates electrical components other than the relay.

REFERENCE SIGNS LIST

[0052] **1**A electrical junction box
[0053] **11** relay
[0054] **12** electrical wire
[0055] **13** casing body
[0056] **14**, **21** inner mold
[0057] **15** soft tape
[0058] **112** terminal
[0059] **131** casing body
[0060] **131***a* external connection terminal
[0061] **133** accommodation portion
[0062] **133***a* hole
[0063] **133***b* cover portion
[0064] **134** lead-out portion
[0065] **141** innermost-side member
[0066] **142** opening-side member
[0067] **211** first member
[0068] **212** second member

1. An electrical junction box comprising:
an electrical component equipped with a terminal;
an electrical connection member connected to the terminal of the electrical component;
a casing body made of insulation resin and accommodating the electrical components; and
at least one of a first supporter supporting the electrical component by a first support member interposed between the electrical component and an inner face of an accommodation portion, and a second supporter supporting the electrical component via the electrical connection member, wherein
the casing body is formed to include the accommodation portion which contactlessly accommodates the electrical component in a manner surrounding the electrical component, and a lead-out portion leading the electrical connection member out from the accommodation portion.

2. The electrical junction box according to claim **1**, wherein
the first support member is made of elastic material having vibration-free property and surrounds the electrical component with no gaps therebetween, and the electrical junction box is provided in close contact with the inner face of the accommodation portion, and wherein
the first support member is provided with an insertion portion having the electrical connection member insert thereinto.

3. The electrical junction box according to claim **1**, wherein
the second supporter is formed to include a second support member made of elastic material having vibration-free property, the second support member interposed between the electrical connection member and the lead-out portion, and wherein
the second support member surrounds the electrical connection member with no gaps therebetween and is provided in close contact with an inner periphery of the lead-out portion.

4. The electrical junction box according to claim **2**, wherein
the second supporter is formed to include a second support member made of elastic material having vibration-free property, the second support member interposed between the electrical connection member and the lead-out portion, and wherein
the second support member surrounds the electrical connection member with no gaps therebetween and is provided in close contact with an inner periphery of the lead-out portion.

5. The electrical junction box according to claim **1**, wherein
the accommodation portion is composed of a hole having an opening that opens toward one side, and a cover portion for covering the opening of the hole, and wherein
the first support member is configured to include an innermost-side member provided at an innermost-side of the hole and an opening-side member provided at the opening-side of the hole as well as at the cover portion side.

6. The electrical junction box according to claim **2**, wherein
the accommodation portion is composed of a hole having an opening that opens toward one side, and a cover portion for covering the opening of the hole, and wherein
the first support member is configured to include an innermost-side member provided at an innermost-side of the hole and an opening-side member provided at the opening-side of the hole as well as at the cover portion side.

7. The electrical junction box according to claim **3**, wherein
the accommodation portion is composed of a hole having an opening that opens toward one side, and a cover portion for covering the opening of the hole, and wherein
the first support member is configured to include an innermost-side member provided at an innermost-side of the hole and an opening-side member provided at the opening-side of the hole as well as at the cover portion side.

8. The electrical junction box according to claim **4**, wherein
the accommodation portion is composed of a hole having an opening that opens toward one side, and a cover portion for covering the opening of the hole, and wherein
the first support member is configured to include an innermost-side member provided at an innermost-side of the hole and an opening-side member provided at the opening-side of the hole as well as at the cover portion side.

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