I/We Claim:

1. A control modular assembly (130) for a switch, wherein the control modular assembly comprises:

a driving mechanism comprising an output shaft (122);

a control unit coupled to the driving mechanism and configured to receive and process a signal for controlling the switch so as to control a movement of the output shaft (122) of the driving mechanism; and

an operating member coupled to the output shaft (122);

wherein the control modular assembly (130) is detachably coupled to an internal functional assembly (160) of the switch, so that the operating member can be driven by the output shaft (122) to move within a given movement range in response to the signal for controlling the switch, such that the operating state of the switch is controlled by controlling the internal functional assembly (160);

wherein the control modular assembly (130) further comprises a transmission mechanism (121), the transmission mechanism (121) comprises a driving element and a driven element engaged with each other,

wherein the driving element is coupled to and driven by the output shaft (122), the driven element is coupled to the operating member to drive the operating member to move within a given movement range;

wherein the driving element and the driven element are gears, and wherein the driven element is integrated with the operating member, and wherein a rotation axis of the driven element coincides with a rotation axis of the operating member.

2. A control modular assembly (130) for a switch, wherein the control modular assembly comprises:

a driving mechanism comprising an output shaft (122);

a control unit coupled to the driving mechanism and configured to receive and process a signal for controlling the switch so as to control a movement of the output shaft (122) of the driving mechanism; and

an operating member coupled to the output shaft (122);

wherein the control modular assembly (130) is detachably coupled to an internal functional assembly (160) of the switch, so that the operating member can be driven by the

output shaft (122) to move within a given movement range in response to the signal for controlling the switch, such that the operating state of the switch is controlled by controlling the internal functional assembly (160);

wherein the control modular assembly (130) further comprises a transmission mechanism (121), the transmission mechanism (121) comprises a driving element and a driven element engaged with each other,

wherein the driving element is coupled to and driven by the output shaft (122), the driven element is coupled to the operating member to drive the operating member to move within a given movement range;

wherein the driving element is a gear and the driven element is a rack, and wherein the operating member is arranged on a side of the rack without teeth to enable a translational movement of the driven element to drive the operating member to rotate around a rotation axis within the given movement range.

3. A control modular assembly (130), wherein the control modular assembly comprises:

a driving mechanism comprising an output shaft (122);

a control unit coupled to the driving mechanism and configured to receive and process a signal for controlling the switch so as to control a movement of the output shaft (122) of the driving mechanism; and

an operating member coupled to the output shaft (122);

wherein the control modular assembly (130) is detachably coupled to an internal functional assembly (160) of the switch, so that the operating member can be driven by the output shaft (122) to move within a given movement range in response to the signal for controlling the switch, such that the operating state of the switch is controlled by controlling the internal functional assembly (160);

wherein the control modular assembly (130) further comprises a transmission mechanism (121), the transmission mechanism (121) comprises a driving element and a driven element engaged with each other,

wherein the driving element is coupled to and driven by the output shaft (122), the driven element is coupled to the operating member to drive the operating member to move within a given movement range; and

wherein the operating member comprises two contact arms (144), the two contact arms (144) are provided with at least one protrusion (145a, 145b, 145c, 145d) on opposite inner surfaces.

4. The control modular assembly according to Claim 3, wherein the two contact arms (144) incline to each other in a tapered manner so as to provide a clamping force.

5. The control modular assembly according to any one of Claims 1, 2 and 4, wherein the operating state of the switch comprises a circuit-on state, a circuit-off state and a current adjustment state.

6. The control modular assembly according to any one of Claims 1, 2 and 4, wherein the driving mechanism is a motor (132), and wherein the control modular assembly (130) further comprises a power source for supplying power to the motor (123).

7. The control modular assembly according to Claim 6, wherein the power source is a rechargeable battery (131), and wherein the control modular assembly (130) further comprises a charging port (132) for charging the battery.

8. The control modular assembly according to Claim 6, wherein the power source is a power-obtained device for obtaining power from the switch to supply power to the motor (132).

9. The control modular assembly according to any one of Claims 1, 2, and 4, wherein the control unit comprises a signal receiving sensor for receiving the signal for controlling the switch.

10. A switch (300), comprising:

the control modular assembly (130) according to Claim 1; and

an internal functional assembly (160) operable to control an operating state of the switch;

wherein the control modular assembly (130) is detachably coupled to the internal functional assembly (160) of the switch, so that the operating member of the control modular assembly (130) can be driven by the output shaft (122) of the driving mechanism to move

within a given movement range in response to the signal for controlling the switch, such that the operating state of the switch is controlled by controlling the internal functional assembly (160).

11. The switch (300) according to Claim 10, further comprises a panel (110) coupled to a control unit of the control modular assembly (130) and operable to input the signal for controlling the switch.

12. The switch (300) according to Claim 10, further comprises a base plate (150) coupled to the internal functional assembly (160) and comprising a through aperture (151), and wherein the operating member passes through the through aperture (151) to be coupled with the internal functional assembly (160).

13. The switch (300) according to Claim 12, wherein the internal functional assembly (160) comprises:

a swinging member (161) arranged to abut against the operating member to be driven by the operating member;

a contact rod (162) adapted to control the operating state of the switch by changing a position; and

a spring (165) arranged between the swinging member (161) and the contact rod (162) and adapted to provide a pressure to the swinging member (161) and the contact rod (162), thereby adjusting the position of the contact rod in response to a movement of the swinging member (161).

14. A switch (300), comprising:

a control modular assembly (130) comprising:

a driving mechanism comprising an output shaft (122);

a control unit coupled to the driving mechanism and configured to receive and process a signal for controlling the switch so as to control a movement of the output shaft (122) of the driving mechanism; and

an operating member coupled to the output shaft (122);

wherein the control modular assembly (130) is detachably coupled to an internal functional assembly (160) of the switch, so that the operating member can be driven by the output shaft (122) to move within a given movement range in response to the signal

for controlling the switch, such that the operating state of the switch is controlled by controlling the internal functional assembly (160);

wherein the control modular assembly (130) further comprises a transmission mechanism (121), the transmission mechanism (121) comprises a driving element and a driven element engaged with each other,

wherein the driving element is coupled to and driven by the output shaft (122), the driven element is coupled to the operating member to drive the operating member to move within a given movement range;

wherein the driving element is a gear and the driven element is a rack, and wherein the operating member is arranged on a side of the rack without teeth to enable a translational movement of the driven element to drive the operating member to rotate around a rotation axis within the given movement range; and

an internal functional assembly (160) operable to control an operating state of the switch;

wherein the control modular assembly (130) is detachably coupled to the internal functional assembly (160) of the switch, so that the operating member of the control modular assembly (130) can be driven by the output shaft (122) of the driving mechanism to move within a given movement range in response to the signal for controlling the switch, such that the operating state of the switch is controlled by controlling the internal functional assembly (160).