SUMMARY

[0004] According to some examples of the present disclosure, provided herein may be a socket. A socket may include a housing and a plug. At least one of a slot or a hole may be positioned on at least one side of the housing. A clamping conducting strip may be positioned in the housing. At least two elastic conducting contacts may be positioned on a surface of the plug. The elastic conducting contacts may be configured to connect to a power source, and the plug may be positioned outside the housing.

[0005] In some embodiments, a connecting groove may be positioned on a back side of the housing. An inner contact point may be positioned in the connecting groove. The inner contact point may be connected to the clamping conducting strip. A connector may be positioned in the plug. An external contact point may be positioned in on the connector. The external contact point may be connected to the elastic conducting contact. The connector may be configured to be inserted into the connecting groove.

[0006] In some embodiments, a retracting groove may be positioned on the back side of the housing. The connector may be configured to be inserted into the retracting groove to be in proximity to the back side of the housing.

[0007] In some embodiments, a connector may be positioned on the top of plug. A back plate may be positioned on a back end of the connector. A slot may be positioned on the back side of the housing. The connector may be configured to be inserted into the slot to

[0015] In some embodiments, the plug may be made of a mixture of polyamide 66 (PA66) and 30% glass fiber.

[0016] In some embodiments, a cross-sectional area of the elastic conducting contact may be within a range of 1.0mm^2~3.0mm^2.

[0017] In some embodiments, the housing may include a cavity configured to install an intelligent chip.

[0018] According to some examples of the present disclosure, provided herein may be a system. The system may include a socket. The A socket may include a housing and a plug. At least one of a slot or a hole may be positioned on at least one side of the housing. A clamping conducting strip may be positioned in the housing. At least two elastic conducting contacts may be positioned on a surface of the plug. The elastic conducting contacts may be configured to connect to a power source, and the plug may be positioned outside the housing. The system may include a power strip system. The power outlet strip may include at least two conductors. The elastic conducting contacts may be connected to the conductors when the plug is configured to be inserted into the power outlet strip.

[0019] In some embodiments, the power strip system may further include a strip connector. The strip connector may establish a connection between two or more power outlet strips.

[0028] In some embodiments, the fourth conductor may be a conducting bar.

[0029] In some embodiments, the conducting bar may comprise a lantern-shaped connector.

[0030] In some embodiments, the cross-sectional area of the conductor may be within a range of 5.0mm^2~7.0mm^2.

[0030a] In accordance with an aspect of the present disclosure, there is provided a socket, comprising: a housing having a front side, a back side, and a clamping conducting strip positioned inside of the housing; a plug releasably connected to the outside of the housing wherein the plug has a connector and at least two elastic conducting contacts positioned on a surface of the plug; a connecting groove positioned on the back side of the housing; an inner contact point positioned in the connecting groove and connected to the clamping conducting strip; an external contact point positioned on the connector and connected to the elastic conducting contacts; and at least one of a slot or a hole positioned on the front side of the housing, wherein the clamping conducting strip is accessible through the at least one of a slot or a hole positioned on the front side of the housing, configured to connect to a power source, and wherein the connector of the plug is configured to be inserted into the connecting groove such that the inner contact point forms contact with the external contact point to enable the clamping conducting strip to be conductive with the elastic conducing contacts.

[0030b] In accordance with another aspect of the present disclosure, there is provided a

socket, comprising: a housing having a front side, a back side, a clamping conducting strip positioned inside of the housing, and a slot positioned on the back side of the housing; a plug connected to the outside of the housing having a connector and at least two elastic conducting contacts positioned on a surface of the plug that are configured to be connected to the clamping conducting strip; a back plate positioned on one end of the connector; and at least one of a slot or a hole positioned on the front side of the housing and the clamping conducting strip is accessible through the at least one of a slot or a hole positioned on the front side of the housing; wherein the connector is positioned on a top end of the plug and configured to be inserted into the slot to place the back plate in the housing and the plug outside of the housing.

[0030c] In accordance with yet another aspect of the present disclosure, there is provided a power outlet system, comprising: a socket as described herein, and a power strip system, comprising: a power outlet strip that comprises at least two conductors that are connected to the elastic conducting contacts when the plug is inserted into the power outlet strip.

BRIEF DESCRIPTION OF THE DRAWINGS

[0031] The disclosed subject matter can be more fully appreciated with reference to the following detailed description of the disclosed subject matter when considered in connection with the following drawings. The exemplary embodiments and illustrations are set forth in order to provide a thorough understanding of the relevant disclosure and

is not intended to be limiting. The like reference numerals identify like elements in figures.

[0032] FIG. 1A illustrates an exemplary power outlet system in accordance with some embodiments of this disclosure.

[0033] FIG. 1B illustrates an exemplary power outlet system in accordance with some embodiments of this disclosure.

[0034] FIG. 2 illustrates an exemplary socket module in a power outlet system in accordance with some embodiments of this disclosure.

[0035] FIG. 3A illustrates a perspective view of an exemplary socket in accordance with some embodiments of this disclosure.

WHAT IS CLAIMED IS:

1. A socket, comprising:

a housing having a front side, a back side, and a clamping conducting strip positioned inside of the housing;

a plug releasably connected to the outside of the housing wherein the plug has a connector and at least two elastic conducting contacts positioned on a surface of the plug;

a connecting groove positioned on the back side of the housing;

an inner contact point positioned in the connecting groove and connected to the clamping conducting strip;

an external contact point positioned on the connector and connected to the elastic conducting contacts; and

at least one of a slot or a hole positioned on the front side of the housing, wherein the clamping conducting strip is accessible through the at least one of a slot or a hole positioned on the front side of the housing, configured to connect to a power source, and

wherein the connector of the plug is configured to be inserted into the connecting groove such that the inner contact point forms contact with the external contact point to enable the clamping conducting strip to be conductive with the elastic conducing contacts.

2. The socket of claim 1, further comprising:

a retracting groove positioned on the back side of the housing and the connector is configured to be inserted into the retracting groove such that the plug is in close proximity to the back side of the housing in a storage configuration.

3. A socket, comprising:

a housing having a front side, a back side, a clamping conducting strip positioned inside of the housing, and a slot positioned on the back side of the housing;

a plug connected to the outside of the housing having a connector and at least two elastic conducting contacts positioned on a surface of the plug that are configured to be connected to the clamping conducting strip;

a back plate positioned on one end of the connector; and

at least one of a slot or a hole positioned on the front side of the housing and the clamping conducting strip is accessible through the at least one of a slot or a hole positioned on the front side of the housing;

wherein the connector is positioned on a top end of the plug and configured to be inserted into the slot to place the back plate in the housing and the plug outside of the housing.

4. The socket of claim 1, wherein the plug comprises a connecting conduct strip having a first end that forms the elastic conducting contact and a second end that is configured to be conductive to the clamping conducting strip.

5. The socket of claim 1, wherein a surface of the elastic conducting contact is configured in a circular shape or a square shape.

6. A power outlet system, comprising:

a socket of claim 1, and

a power strip system, comprising:

a power outlet strip that comprises at least two conductors that are connected to the elastic conducting contacts when the plug is inserted into the power outlet strip.

7. The power outlet system of claim 6, further comprising a strip connector, wherein the strip connector establishes a connection between two or more of the power outlet strips.

8. The power outlet system of claim 7, wherein the strip connector comprises a connecting joint and a connecting interface.

9. The power outlet system of claim 8, wherein the connecting joint comprises a first conductor, and wherein the connecting interface comprises a second conductor matching the first conductor.

10. The power outlet system of claim 9, wherein the first conductor is a conducting bar and the second conductor is a conducting tube.

11. The power outlet system of claim 8, wherein the connecting joint comprises a first buckle and a first strip connector, and wherein the first buckle and the first strip connector are perpendicularly connected.

12. The power outlet system of claim 11, wherein the first strip connector is connected to the power outlet strip via a third conductor.

13. The power outlet system of claim 12, wherein the third conductor is a conducting bar.

14. The power outlet system of claim 8, wherein the connecting interface comprises a second buckle and a second strip connector, wherein the second strip conductor is positioned on a first end of the second buckle, and wherein a

second end of the second buckle and the second strip connector are perpendicularly connected.

15. The power outlet system of claim 14, wherein a first end of the second strip connector comprises a cavity, wherein a forth conductor configured to connect to the power outlet strip is positioned in the cavity, and wherein the second strip connector is connected to the power outlet strip via the cavity.

16. The power outlet system of claim 15, wherein the forth conductor is a conducting bar.

17. The power outlet system of claim 6, wherein a cross-sectional area of the conductor is within a range of 5.0 mm^2 ~ 7.0 mm^2.