Claims

1. An electrical mount for installation in a panel assembly comprising a first panel and a second panel, the two panels are spaced apart and arranged in a face-to-face relation, where each of the two inside surfaces of said panel assembly has an electrical conductive layer, the mount comprising:
   a main body, its back end disposed in the space between the two panels and its front end extending out on the exposed surface of the second panel from an opening in said second panel;
   an electrical receptacle disposed in the front end of the main body; and
   two contact elements supported by said main body for power lead-in to said electrical receptacle, wherein said two contact elements define two substantially planar but spaced apart contact planes.

2. An electrical mount according to claim 1, wherein said electrical receptacle is a threaded standard light socket such as E26/27, E12, SES/E14, a bayonet connector such as BC/B22, pin-type connector or a quick coupling light fixture connector or any other types of customised sockets.

3. An electrical mount according to claim 1 or 2, wherein the first of the said two contact element is disposed at the back end of said main body and the second contact element is spaced apart from and in a plane parallel to the first contact element.

4. An electrical mount according to claim 3, wherein the first of the said two contact elements comprises a spring member.

5. An electrical mount according to claim 4, wherein said spring member is a leaf, arch-shaped, dome-shaped, coiled spring or other spring-like shape.

6. An electrical mount according to any of one of claims 3-5, wherein the second contact element is a fin integral to said main body, extending transversely from the main axis of the main body.

7. An electrical mount according to claim 6, wherein the second contact element is adapted to retain the electrical mount in the opening of the second panel.

8. An electrical mount according to any of one of claims 1-7, additionally comprising a fastener to fasten the second contact element to the conductive surface of the second panel.

9. An electrical mount according to claim 8, wherein said fastener couples with the front end of said main body of the electrical mount by screw thread or rachet and paw engagement.

10. An electrical mount according to claims 8 or 9, additionally comprising an insulator cap to insulate a user from physically contacting said fastener.

11. An electrical mount according to claim 10, wherein the insulator cap is provided with a gasket seal or O-ring for splash proof or waterproof installation.

12. An electrical mount according to claims 10 or 11, wherein the insulator cap is integrally formed with a light reflector.

13. An electrical mount according to claim 12, wherein the light reflector is in any form, shape, size or material.

14. An electrical mount according to claims 12 or 13, wherein the light reflector is sealed with a transparent cover for splash proof usage.

15. A conductive panel assembly comprising:
two spaced apart panels arranged in a face-to-face relation, where each of the two inside surfaces of said panel assembly has an electrically conductive layer, and
electrical mounts according to any of claims 1-14 such that an AC or DC power supply, connectable to said electrically conductive layers deliver electric power to electrical/electronic elements connected to said electrical receptacle.

16. A conductive panel assembly according to claim 15, wherein said panels comprise transparent glass, plastic, wood or any non-conductive materials.

17. A conductive panel assembly according to claims 15 or 16, wherein said electrical conductive layer is transparent, the conductive layer comprising transparent conductive oxide (TCO) coating such as indium tin oxide (ITO).

18. A conductive panel assembly according to claims 15 or 16, wherein said electrical conductive layer is conductive strip, tape, ink or glue.

19. A conductive panel assembly according to any of claims 15-18, wherein sections of said panel assembly that make contact with said electrical outlet mount is additionally coated with transparent conductive coating of higher conductivity, such as silver conductive frit.

20. Adapters for electrical mounts according to claims 2-14 to convert the receptacle of said electrical mount to cigarette lighter socket female or USB female receptacles.

21. A ceiling comprising conductive panel assembly according to any of claims 15-19.

22. An oven comprising conductive panel assembly according to any of claims 15-19.