

## Claims

1. A wearable physiological monitoring device, comprising:
  - a disposable component comprising:
    - a first electrode;
    - a second electrode;
    - a cradle, comprising:
      - a battery;
      - a first electrical contact and a second electrical contact, both the first and second electrical contacts being electrically coupled to the battery;
      - a third electrical contact electrically coupled to the first electrode;
      - a fourth electrical contact electrically coupled to the second electrode; and
      - a battery disconnect switch located between the first electrical contact and the battery to prevent live electrical connections from being present when a reusable component is not in place, said battery disconnect switch comprising:
        - a first trace electrically coupled to the first electrical contact, said first trace comprising a first free end;
        - a second trace electrically coupled to the battery, said second trace comprising a second free end, wherein the first free end is electrically isolated from the second free end;
        - a button that is spring-loaded comprising a bottom side in proximity to the first trace and to the second trace; and
        - a conductive plate located on the bottom side of the button, so that in a first configuration, the conductive plate is not in electrical contact with the first free end and the second free end, and in a second configuration when an amount of pressure is applied to the button by a reusable component connecting to the disposable component, the conductive plate comes into electrical contact with the first free end and the second free end so as to electrically couple the first free end to the second free end; and
  - the reusable component configured to be secured to the disposable component, the reusable component comprising:
    - an electronics module; and
    - an electrical interface associated with the electronics module, wherein the electrical interface of the reusable component comprises a fifth electrical contact for electrically coupling the electronics module to the first electrical contact, a sixth electrical contact for electrically coupling the electronics module to the second electrical contact, a seventh electrical contact for electrically coupling the electronics module to the third

electrical contact, and an eighth electrical contact for electrically coupling the electronics module to the fourth electrical contact.

2. The device of claim 1, wherein the reusable component is configured to apply pressure to the button when the reusable component is connected to the disposable component.
3. The device of claim 1, wherein the reusable component comprises a protrusion configured to apply pressure to the button when the reusable component is connected to the disposable component.
4. The device of claim 1, wherein the disposable component further comprises a disposable component latching system; and the reusable component further comprises a reusable component latching system configured to operably engage the disposable component latching system to thereby secure the disposable component to the reusable component.
5. The device of claim 1, further comprising:
  - a gasket, wherein the gasket comprises a first individual enclosure around the fifth electrical contact that does not enclose any other electrical contact, a second individual enclosure around the sixth electrical contact that does not enclose any other electrical contact, a third individual enclosure around the seventh electrical contact that does not enclose any other electrical contact, and a fourth individual enclosure around the eighth electrical contact that does not enclose any other electrical contact, in such a way that water cannot enter or exit any individual enclosures when the reusable component is engaged with the disposable component.
6. The device of claim 5, wherein the gasket comprises a top half attached to the reusable component and a bottom half attached to the disposable component.
7. The device of claim 5, wherein each one of the first, second, third, and fourth individual enclosure is cylindrical in shape.