

provide an easy-to-use design which simplifies user manipulation while avoiding assembly failures.

The combination of features stated in the independent claim is proposed to achieve this object. Advantageous embodiments and further developments of the invention are derived from the dependent claims.

The invention is based on the idea of improving user interaction by avoiding interfering contours or contact in the mechanical movement paths. Accordingly, it is proposed that wherein the snap connector has a release flap that can be actuated or pushed by the user to detach the medical module, wherein the release flap projects outwardly from the mounting plate and has an outer portion which at its bottom side maintains a clearance to avoid an interfering skin contact when used or pressed. In this way, the release flap is allowed to move prior to a skin contact, and the user is prevented from applying excessive forces against a skin abutment which may lead to material failure. Moreover, the effort and force for insertion of the medical module is reduced, as no movable part of the snap connector comes into skin contact, thus also avoiding a bending or deformation of the mounting plate. As a result, the user-device-interaction is improved, and the intended medical success is further supported.

An aspect of the present invention provides a skin-mountable medical device comprising a mounting plate having a bottom side attachable to the skin of a user preferably via an adhesive pad, a medical module, in particular an analyte sensing device or a drug administration pump, a snap connector adapted to releasably attach the medical module on an~~the~~ upper side of the mounting plate opposite to the bottom side,

wherein the snap connector has a latch that is connected to the mounting plate and engages with the medical module in a locking position,

wherein the snap connector has a release flap that can be actuated by the user to detach the medical module,

wherein the latch can be tilted outward by actuation of the release flap so as to disengage from the medical module in a release position,

and wherein the release flap projects outwardly from the mounting plate and has an outer portion which at its bottom side maintains a clearance to avoid an interfering contact in use.

## Patent Claims

1. Skin-mountable medical device comprising:  
a mounting plate having a bottom side attachable to the  
5 skin of a user preferably via an adhesive pad,  
a medical module, in particular an analyte sensing  
device or a drug administration pump,  
a snap connector adapted to releasably attach the  
10 medical module on ~~an~~the upper side of the mounting  
plate opposite to the bottom side,  
wherein the snap connector has a latch that is  
connected to the mounting plate and engages with the  
medical module in a locking position,  
wherein the snap connector has a release flap that can  
15 be actuated by the user to detach the medical module,  
wherein the latch can be tilted outward by actuation of  
the release flap so as to disengage from the medical  
module in a release position,  
and wherein the release flap projects outwardly from  
20 the mounting plate and has an outer portion which at  
its bottom side maintains a clearance to avoid an  
interfering contact in use.
2. The medical device of claim 1, wherein the bottom side  
25 of the mounting plate lies in a plane, and the outer  
portion of the release flap is arranged at a clearance  
distance of at least 2 mm, preferably at least 5 mm  
above the plane.
- 30 3. The medical device of claim 1 or 2, wherein the release  
flap has an inner portion connected to the mounting  
plate, and ~~a~~the distance of the inner portion to a  
plane which is defined by the bottom side of the

mounting plate is smaller than ~~at~~the distance of the outer portion to said plane.

4. The medical device according to any of claims 1 to 3,  
5 wherein the bottom sides of the mounting plate and of the release flap each define a plane, and wherein said planes include an acute angle.

5. The medical device of claim 4, wherein said acute angle  
10 is at least 5°, preferably at least 10°.

6. The medical device of claim 1 or 2, wherein the bottom side of the release flap runs parallel to the bottom side of the mounting plate.

15 7. The medical device according to any of claims 1 to 6, wherein the release flap has an upstanding circumferential rim which in use faces away from the skin.

20 ~~8. The medical device according to any of claims 1 to 7, wherein the snap connector has a latch that is connected to the mounting plate and engages with the medical module in a locking position, and wherein the~~  
25 ~~latch can be tilted outward by actuation of the release flap so as to disengage from the medical module in a release position.~~

30 ~~9.8.~~ The medical device of claim ~~according to any of claims~~  
~~1 to 79~~, wherein the latch has a hook portion which is adapted to snap into a recess of the medical module.

~~10.9.~~ The medical device according to any of claims 1 to ~~8~~9, wherein the snap connector has an inlet chamfer which is construed to guide the medical module into a locking position, wherein the inlet chamfer is arranged at an acute angle with respect to the bottom side of the mounting plate.

~~11.10.~~ The medical device according to any of claims 1 to ~~9~~10, further comprising a securing bracket for attaching the medical module, wherein the securing bracket and the snap connector are arranged at opposite ends of the mounting plate.

~~12.11.~~ The medical device according to any of claims 1 to ~~10~~11, wherein the mounting plate and the release flap are formed as an integral, preferably injection-moulded plastic part.

~~13.12.~~ The medical device according to any of claims 1 to ~~11~~12, further comprising a fitting arranged on the bottom plate to provide a skin access preferably for a cannula assembly of the medical module.