

## PTM 200 CONTINUOUSLY PRESSED – Avoiding potential malfunction of the contact nipples

### PTM 200 is not developed for being continuously pressed

The PTM 200 module has been developed to realize remote switches with rockers or single pushbuttons. During the major product lifetime the rocker is in medial position or the pushbutton is not pressed, so the “contact nipples” are time dominantly not pressed.

### Possible failure after being pressed for a longer time

Using the PTM 200 in applications where the module is pressed a long time, e.g. several hours, a certain deformity can happen to the contact “tongue”. Depending on ambient temperature and pressing time the plastic of the contact tongue will get lasting out of shape. Depending on construction and single part tolerances the “rocker system” can fail in function.

Note: No fail function of the energy bow and the energy generator has been observed after long time pressed. So if the PTM switch is operated after a several days of being pressed, a valid PTM telegram will be send, but probably with a wrong rocker ID.

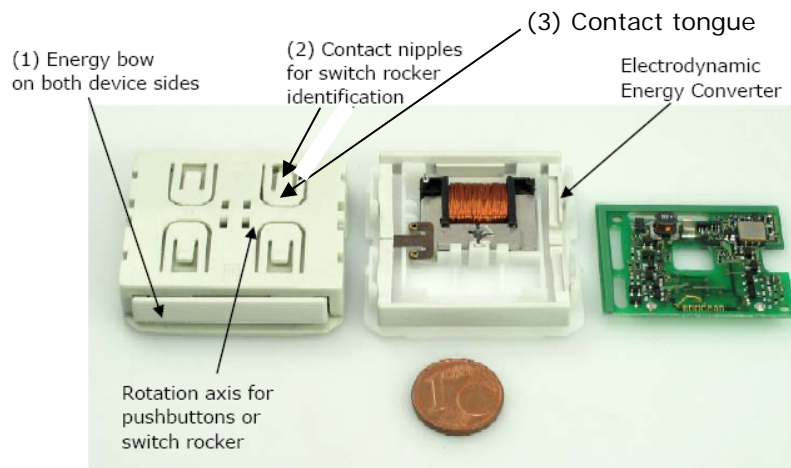


Figure 1: Electro-dynamic powered radio transmitter device PTM 200

### Workaround #1

A mechanical solution could be a sophisticated mechanical tuning of the rocker/module system without 100% functional guarantee for lasting correct rocker identification.

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### Workaround #2

Another workaround is to realize a system function where the receiver acts as desired without any interpretation of the rocker ID. In this case only “pressed” and “released” states are processed and the rocker ID value is neglected.

### Workaround #3

If the contact nipple interpretation is needed, another mechanical solution could be the following:

To avoid the deformation of the contact tongue, don't operate the contact tongue at the defined contact “nipple” (2 in fig 1) according to the PTM 200 user manual, but in the middle of the tongue (3 in fig 1) directly above the rubber contact mat.

Attention: Doing so you will get rid of the mechanical protection behaviour of the contact tongue: On the one hand the tongue offers during switch over of the energy bow a minimum contact mat pressure, on the other hand it avoids any “over pressure” of the rubber mat (mechanical defect of PCB or mat contact). In addition the deviation of the contact nipples also compensates tolerances and potential pressing deformation of the rocker to a certain degree.

**So realizing this workaround a suited elastic contact tongue must be urgently realized by the specific mechanical application design!** Both, the design of the mechanical interface and the right choose of material is important, to avoid lasting deformation and to emulate the elastic function of the contact tongue.

### Product Endurance Test

For any of the mentioned cases to secure long time functionality of product implementation we urgently recommend to do suited final product endurance tests with empiric reasonable lot sizes.

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