An experimental study of the characteristics of a contact resisting tact switch

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Abstract

This paper examines the characteristics of the contacting electric resistance of a tact switch, and its fundamental principles. Additionally, various mechanisms and categories of tact switches will be introduced. Moreover, a parametric analysis of the contacting electric resistance with respect to various materials, sizes, coating properties, and acting forces is experimentally accessed. Experimental results reveal that the contacting electric resistance is apparently independent of the material, size, coating property, and acting force parameters. Also, based on a qualified product with a contacting electric resistance of 100mΩ and below, a tact switch’s minimal normal force is 148 (g), which is 1/3.5 times the specification value.

Keywords: tact switch, contacting electric resistance