

FORCE SENSOR

Abstract

A sensor for electrically measuring a force acting on the sensor, which force is distributed unevenly across a measurement surface (10) of the sensor, wherein an electrical force measurement signal is generated, is set forth. An areally formed spring device (20) is provided between the measurement surface (10) and a counter-surface (11). A first measuring element is arranged in or on the measurement surface (10) and a second measuring element is arranged in or on the counter-surface (11), the elements substantially completely covering these surfaces in each case. The measuring elements, e.g. capacitor plates, are designed such that the measuring signal can be generated from a distance between the measuring elements. The spring device (20) has a large number of incompressible but elastically designed spring members (21 to 21₃) which are arranged spaced apart from each other by gaps (22) in such a way that each spring member (21 to 21₃) upon loading by the force or a fraction of this force can deform, into the gaps (22) and hence in a space-consuming manner. Due to this measuring arrangement, it is possible to measure unevenly distributed forces between bodies which may be of very different forms.

(Fig. 1)