Claims

1. A measuring device (1, 12, 22) which comprises

at least one transmitting part (2, 13, 25) which can be attached to objects to be measured (4, 30) and has at least one data memory (6, 31) and at least two first electrical contacts (5, 27) with respective surfaces which form respective sub-areas of a bearing face of the transmitting part (2, 13, 25),

at least one data reading part (3, 14, 26) with at least two second electrical contacts (7, 28) with respective surfaces which form respective sub-areas of a bearing face of the data reading part (3, 14, 26), and

at least one magnet (9, 29), wherein at least one data reading part (3, 14, 26) and/or at least one transmitting part (2, 13, 25) have/has at least one sensor and/or at least one sensor which can be attached to the object to be measured (4, 30) and has the purpose of acquiring at least one measured variable; and

the measuring device (1, 12, 22) is configured

to assume an uncoupled state in which the first electrical contacts (5, 27) are spaced apart from the second electrical contacts (7, 28), and

to assume a coupled state in which the data reading part (3, 14, 26) and the transmitting part (2, 13, 25) are coupled to one another owing to an attractive force which is brought about by the magnet (9, 29), wherein the bearing face of the transmitting part (2, 13, 25) and the bearing face of the data reading part (3, 14, 26) bear one against the other, and in each case one of the first electrical contacts (5, 27) bears with its surface against the surface of a respective one of the second electrical contacts (7, 28), as a result of which the electrically conductive connections exist between respective first contacts (5, 27) which bear one against the other and second contacts (7, 28) which permit the data reading part (3,

14, 26) to read data stored in the data memory (6, 31); and

wherein the measureing device (1, 12, 22) has three first electrical contacts (27) with respective surfaces and three second electrical contacts (28) with respective surfaces, wherein the surfaces of the first electrical contacts (27) are arranged with their area centroids at corners of a first triangle, and the surfaces of the second electrical contacts (28) are arranged with their area centroids at corners of a second triangle.

2. The measuring device (1, 12, 22) as claimed in claim 1, , in which the sensor is a temperature sensor (32) or an oscillation sensor or a monoaxial oscillation sensor or a triaxial oscillation sensor (8, 33) or an acceleration sensor or a high-frequency acceleration sensor (34) or a micromechanical acceleration sensor or a piezo-electric acceleration sensor.

3. The measuring device (1, 12, 22) as claimed in claim 1 or 2, in which the respective surfaces of the first electrical contacts (5, 27) are flat and parallel and aligned with respect to one another and in which the respective surfaces of the second electrical contacts (7, 28) are flat and parallel and aligned with respect to one another.

4. The measuring device (22) as claimed in claim 1, in which the first and second triangles are right-angled or equilateral triangles, wherein after the transmitting part (25) has been fitted onto a surface of the object to be measured (30), the sensor which is included in the data reading part (26) is, in the coupled state of the measuring device (22), at a distance from this surface which is shorter than a diameter or the radius of a circumscribed circle of the first or second triangle or which is shorter than a

longest side of the first or second triangle or which is shorter than a shortest side of the first or second triangle.

5. The measuring device (22) as claimed in one of the preceding claims, in which in the coupled state after the transmitting part (13, 25) has been fitted onto a surface of the object to be measured (4, 30), a total extent of the measuring device (12, 22), measured in the normal direction with respect to the surface of the object to be measured (4, 30), is shorter than or equal to a total extent of the measuring device (12, 22), measured parallel with respect to the surface of the object to be measured (4, 30).

6. The measuring device (22) as claimed in one of the preceding claims, in which both the data reading part (26) and the transmitting part (25) have at least one magnet (29), the magnetic fields of which center and/or align the data reading part (26) relative to the transmitting part (25) when the measuring device (22) is changed from the uncoupled state into the coupled state.

7. The measuring device (1, 12, 22) as claimed in one of the preceding claims, in which a mechanical damper (20) is provided on a side of the affected first contact (5, 27) or second contact (7, 28) facing away from the respective surface of at least one of the first contacts (5, 27) or second contacts (7, 28).

8. A system (21) having at least one measuring device (1, 12, 22) as claimed in one of the preceding claims and at least one operator control part or portable evaluation device (23) which is or can be connected to the data reading part (3, 14, 26) via a cable (11, 24) or in a wireless fashion.

9. A transmitting part (2, 13, 25) for a measuring device (1, 12, 22) as claimed in one of claims 1 to 7 or for a system (21) as claimed in claim 8.

10. A data reading part (3, 14, 26) for a measuring device (1, 12, 22) as claimed in one of claims 1 to 7 or for a system (21) as claimed in claim 8.