CLAIMS

1. Contact lens (10) made of non-hydrophilized material, **characterized in that** it comprises at least one functional element (17) disposed in correspondence with a rear surface of said lens (10) and protruding with respect to said surface so as to be facing, during use, toward the eyeball, being configured as a sensor (30) suitable to detect the presence of one or more physiological parameters, or as a reservoir (40) suitable to deliver, onto the corneal surface, one or more liquids (L) for treating the eye,

wherein said contact lens (10) further comprises a connection device (20) for connecting said at least one functional element (17) to a communication device, incorporated in the thickness of said lens (10) so as to intersect said at least one functional element (17), wherein said connection device (20) comprises an annular support element (21) and a plurality of electrically conductive elements (22) connected to said support element (21) and to said communication device in order to communicate the data received from said sensors (30), and

wherein said sensor (30) comprises at least one body (31) protruding from the rear surface of said lens (10), an electrically conductive sensor element (32) associated with said body (31), at least one electrically conductive terminal (33) configured to be electrically connected to one of said plurality of said electrically conductive elements (22), said at least one terminal (33) being partly immersed in said at least one body (31) and electrically connected to said sensor element (32), and at least one removable joining member (35) suitable to electrically connect said at least one terminal (33) to said connection device (20).

2. Lens (10) as in claim 1, **characterized in that** it comprises a circular shaped internal sector (11) and an annular shaped external sector (12) which extends annularly outside said internal sector (11), **and in that** said at least one functional element (17) is disposed in said external sector (12).

3. Lens (10) as in claim 2, **characterized in that** it comprises a plurality of functional elements (17) homogeneously distributed in correspondence with the rear surface of said external sector (12) intended to contact the eyeball, each being disposed longitudinally parallel to a respective radial directrix exiting from the center of said lens (10).

4. Lens (10) as in claim 2 or 3, **characterized in that** said internal sector (11) has a first radius of curvature (R1) smaller than a second radius of curvature (R2) of said external sector (12).

5. Lens (10) as in claim 1, **characterized in that** said at least one body (31) is configured as a protuberance made in one piece with the lens (10).

6. Lens (10) as in claim 1 or 5, **characterized in that** said sensor element (32) is at least partly immersed in said at least one body (31).

7. Lens (10) as in claim 1, **characterized in that** said sensor (30) comprises a plurality of terminals (33), the number of which is equal to the number of electrically conductive elements (22), wherein each one of said plurality of terminals (33) is configured to be electrically connected to a respective electrically conductive element (22).

8. Lens (10) as in claim 1, **characterized in that** each one of said plurality of terminals (33) comprises a respective connection seating (34), **and in that** said joining member (35) is configured to be inserted into said connection seating (34).

9. Lens (10) as in any claim hereinbefore, **characterized in that** said reservoir (40) comprises a body (41) in which a containing space (42) for the liquid (L) to be delivered is made, provided with a lid (44) equipped with a plurality of through holes (45), and/or **in that** said reservoir (40) comprises a spongy matrix (43) disposed inside said containing space (42) and suitable to contain a liquid (L) to be delivered.

10. Lens (10) as in claim 9, **characterized in that** said body (41) is configured as a protuberance made in one piece with the lens (10).

11. Lens (10) as in any claim hereinbefore, **characterized in that** it comprises a plurality of micro-protuberances (16), which protrude from the rear surface of said lens (10) so as to be facing, during use, toward the eyeball and which are homogeneously distributed in a peripheral zone (15) of said internal sector (11), according to a regular geometric pattern defined by a plurality of rows radiating from a central axis of said lens (10).

12. Lens (10) as in claims 1 and 2, **characterized in that** said sensor (30) comprises at least one body (31) protruding from the rear surface of said lens (10) and an electrically conductive sensor element (32) associated with said body (31) and also **characterized by** comprising a groove (50) on the external surface of the lens (10), in correspondence with a space comprised between two parts of the body (31).

13. Lens (10) as in claim 12, **characterized in that** said groove (50) has a depth smaller than the thickness of the lens (10) in the same point, wherein said groove (50) has a width comprised between 60 and 300µm, for example 150µm, and a depth comprised between 5 and 60µm, for example 30µm.