**Claims**

1. Electronic proximity sensor with a capacitive sensor element placed below a decorative surface, ~~characterized in that~~wherein the decorative surface is coated with a thin semiconductor layer.

2. Electronic proximity sensor according to claim 1, ~~characterized in that~~wherein the thickness of the semiconductor layer is between 10nm and 100nm.

3. Electronic proximity sensor according to one of the claims 1 and 2, ~~characterized in that~~wherein the semiconductor layer comprises silicon as semiconductor material.

4. Electronic proximity sensor according to claim 3, ~~characterized in that~~wherein the semiconductor layer consists of silicon.

5. Electronic proximity sensor according to one of the preceding claims, ~~characterized in that~~wherein the semiconductor layer is a component of a layer system comprising at least one further layer, which is preferably an interference layer system.

6. Electronic proximity sensor according to claim 5, ~~characterized in that~~wherein the at least one other layer is a SiO2 layer.

7. Electronic proximity sensor according to claim 5 or 6, ~~characterized in that~~wherein the layer system is an alternating layer system.

8. Electronic proximity sensor according to one of the preceding claims, ~~characterized in that~~wherein between the component forming the decorative surface and the semiconductor layer, an intermediary layer is provided which comprises a polymer layer that preferably consists of a UV-hardened lacquer.

9. Electronic proximity sensor according to one of the preceding claims, ~~characterized in that~~wherein as a sealing layer against the environment a polymer coating is provided which preferably consists of a UV-hardened lacquer.

10. Proximity circuit with an electronic proximity sensor according to one of the preceding claims.

11. Method for producing an electronic proximity sensor, having the steps of:
- providing an electronic proximity sensor having a capacitive sensor element placed below a decorative surface
- coating the decorative surface with a semiconductor layer, the thickness of which is between 10nm and 100nm, wherein the coating is achieved by means of a vacuum process.

12. Method according to claim 11, ~~characterized in that~~wherein the vacuum process is preferably a PVD and/or a CVD process.