

ABSTRACT

Sensor device and position-determining method and their use for controlling a mounting robot

---

The sensor device comprises a planar code carrier (1) on one of the objects, and on the other object, a scanning device for an angle of view for determining a viewing direction lying therein, and also a computing circuit. A photodetector detects an illumination density during the course of the scanning of the angle of view according to the direction of light incidence.

On the code carrier (1) there is arranged a rectangular code field (6A-6D, 8AB-8CD) with its centre line parallel to the scanning plane. It comprises at least two rectangular positioning fields (6A-6D) and a rectangular interfield (8AB-8CD) lying in between. The positioning fields contain positional information on the objects which can be evaluated by the scanning device. In at least one interfield, the code comprises at least one boundary line obliquely intersecting the centre line, the scanning of which boundary line produces a distinct variation of the illumination density in dependence on the direction of light incidence, which corresponds to a viewing direction to be established. The interfield may be subdivided by a diagonal line into two optically identical interfield regions or by a boundary line diagonally into two optically different interfield regions, and this configuration may be mirror-symmetrically duplicated.

(Fig. 3)