

Title (en)
SCANNING OBJECT LENS.

Title (de)
ABTASTOBJEKTIV.

Title (fr)
OBJECTIF DE BALAYAGE.

Publication
EP 0642676 A1 19950315 (DE)

Application
EP 92922848 A 19921103

Priority
• DE 4217298 A 19920525
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Abstract (en)
[origin: WO9324854A1] Scanning object lenses for the line or pointwise three-dimensional scanning of surfaces of objects are required to have a high resolution together with high examination rates. In order to be able to display the largest possible number of image points with high resolution, the scanning object lens must have a correspondingly high numeric aperture with, at the same time, a large image field. To this end it consists of three groups of lenses (1; 2; 3). The first and second groups (1; 2) provide both a reduction in the scanning angle and an increase in the pupil. The entrance pupil (61) is imaged in the entrance pupil (63) of the third group of lenses (3), which has a high numeric aperture of, for example, 0.6. In addition, the real intermediate image (5) is imaged into infinity by the second group of lenses (2) with positive refractive capacity and a greater focal distance (f) than the first group (1). A working distance of, for instance, 5 mm can be attained with a beam diameter (D) at the inlet of the scanning object lens of 7.5 mm, a scanning angle (THETA) of +/-16 DEG and a scanning distance of 3.5 mm.

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See references of WO 9324854A1

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