Title (en)
CLOSE-RANGE RADAR SENSOR WITH PHASE-DIFFERENCE MEASUREMENT

Title (de)
NAHBEREICHS-RADARSENSOR MIT PHASENDIFFERENZ-MESSUNG

Title (fr)
DETECTEUR RADAR POUR COURTES DISTANCES, A MESURE DE DEPHASAGE

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Application
EP 02774333 A 20020911

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Abstract (en)
[origin: WO03027709A1] The invention relates to a radar sensor (1), with at least one transmitter device (2), for emitting an electromagnetic output signal (3), at least one receiver device (4), for receiving an electromagnetic input signal (5), produced by the output signal on at least one surface section (8) of an object (7) and an analytical unit (6), for determining a relative phase position between the output signal and the input signal. The radar sensor is characterised in that the output signal and/or the input signal is a selected high frequency signal in the range of 10 GHz to 110 GHz inclusive. An arrangement (11) with at least one said radar sensor and at least one object with at least one surface section is disclosed, whereby an absolute separation between radar sensor and the surface section of the object is selected in the range 0.001 m to 01 m inclusive. Furthermore, a method is disclosed by means of which a relative separation (9) between the radar sensor and the surface section of the object is determined. The radar sensor is universally applicable in the close range with a high resolution of 10 microm to 5 mm and is suitable for monitoring material thickness and material flow and the determination of static and dynamic data for a rotating body, for example a wheel or a shaft.

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