

Title (en)

METHOD AND DEVICE FOR THE CONTACTLESS DETECTION OF PLANAR OBJECTS

Title (de)

VERFAHREN UND VORRICHTUNG ZUR BERÜHRUNGSLOSEN DETEKTION VON FLÄCHIGEN OBJEKTEN

Title (fr)

PROCEDE ET DISPOSITIF POUR LA DETECTION SANS CONTACT D'OBJETS PLANS

Publication

**EP 1701902 A1 20060920 (DE)**

Application

**EP 04804234 A 20041222**

Priority

- EP 2004014640 W 20041222
- DE 102004001314 A 20040107
- DE 102004056743 A 20041124

Abstract (en)

[origin: WO2005066051A1] The invention relates to a method and a device for the contactless detection of planar objects, particularly in the form of sheets, such as paper, films, metal sheets, and similar planar materials or packagings. The aim of the invention is to make it possible to reliably and accurately detect single sheets, missing sheets, or multiple sheets, especially double sheets, of the planar objects, in methods and devices used in the printing industry, for example. Said aim is achieved by a method and device that are very flexible and can be used across a great grammage range or surface density range, at least one characteristic curve being preset for the evaluation unit that is mounted downstream of the sensor device, particularly the receiver. Said characteristic curve is used for recreating the characteristic curve of the input voltage of the test signal in the receiver as a target characteristic curve according to the grammage or the surface density of the planar objects such that a linear or nearly linear dependence or a characteristic curve approaching the ideal characteristic curve for recognizing the single sheet is obtained as a target characteristic curve. In order to improve the reliability of detection and further increase the spectrum of materials to be used compared with a sensor utilized according to the corrective characteristic curve method, a combination of sensors and sensor devices are additionally provided.

IPC 8 full level

**B65H 7/02** (2006.01); **B65H 7/04** (2006.01); **B65H 7/12** (2006.01); **G01N 29/11** (2006.01); **G01N 33/34** (2006.01)

CPC (source: EP US)

**B65H 7/02** (2013.01 - EP US); **B65H 7/125** (2013.01 - EP US); **B65H 2511/51** (2013.01 - EP US); **B65H 2511/514** (2013.01 - EP US); **B65H 2511/524** (2013.01 - EP US); **B65H 2515/10** (2013.01 - EP US); **B65H 2553/30** (2013.01 - EP US); **B65H 2553/412** (2013.01 - EP US); **B65H 2557/24** (2013.01 - EP US); **B65H 2557/242** (2013.01 - EP US); **B65H 2557/31** (2013.01 - EP US); **B65H 2557/32** (2013.01 - EP US); **B65H 2701/192** (2013.01 - EP US)

Citation (search report)

See references of WO 2005066051A1

Designated contracting state (EPC)

AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LI LT LU MC NL PL PT RO SE SI SK TR

DOCDB simple family (publication)

**WO 2005066051 A1 20050721**; EP 1701902 A1 20060920; EP 1701902 B1 20140709; US 2007251311 A1 20071101; US 7526969 B2 20090505

DOCDB simple family (application)

**EP 2004014640 W 20041222**; EP 04804234 A 20041222; US 59702704 A 20041222