

Title (en)

POSITION DETECTION DEVICE FOR A LIGHT SIGNAL DEFLECTION DEVICE OF AN OPTICAL MEASUREMENT APPARATUS FOR DETECTING OBJECTS, LIGHT SIGNAL DEFLECTION DEVICE, MEASUREMENT APPARATUS AND METHOD FOR OPERATING A POSITION DETECTION DEVICE

Title (de)

POSITIONSERFASSUNGSEINRICHTUNG FÜR EINE LICHTSIGNALUMLENKEINRICHTUNG EINER OPTISCHEN MESSVORRICHTUNG ZUR ERFASSUNG VON OBJEKTEN, LICHTSIGNALUMLENKEINRICHTUNG, MESSVORRICHTUNG UND VERFAHREN ZUM BETREIBEN EINER POSITIONSERFASSUNGSEINRICHTUNG

Title (fr)

DISPOSITIF DE DÉTECTION DE POSITION POUR UN DISPOSITIF DE DÉFLEXION DE SIGNAUX LUMINEUX D'UN DISPOSITIF DE MESURE OPTIQUE DESTINÉ À DÉTECTER DES OBJETS, DISPOSITIF DE DÉFLEXION DE SIGNAUX LUMINEUX, DISPOSITIF DE MESURE ET PROCÉDÉ PERMETTANT DE FAIRE FONCTIONNER UN DISPOSITIF DE DÉTECTION DE POSITION

Publication

**EP 3918365 A1 20211208 (DE)**

Application

**EP 20701730 A 20200122**

Priority

- DE 102019101966 A 20190128
- EP 2020051450 W 20200122

Abstract (en)

[origin: WO2020156892A1] The invention relates to a position detection device (60) for a light signal deflection device (34, 40) of an optical measurement apparatus (12) for detecting objects (18) in a monitored region (16), a light signal deflection device (34, 40), an optical measurement apparatus (12) and a method for operating a position detection device (60). The position detection device (60) is designed to provide at least one position signal (68) which corresponds to a deflection (72) of at least one deflection region (42a, 42b) of the light signal deflection device (34, 40). The at least one deflection region (42a, 42b) is used to deflect at least one light signal (20, 22) and is rotatable in at least one direction of rotation (48) over at least some of the circumference with respect at least one axis (46). The position detection device (60) has at least one position region (62), which is mechanically coupled to the at least one deflection region (42a, 42b) of the light signal deflection device (34, 40) in such a way that the at least one position region (62) can also carry out rotations of the at least one deflection region (42a, 42b). The at least one position region (62) is designed to provide at least one position signal (68) which corresponds to a deflection (72) of the at least one deflection region (42a, 42b). The at least one position region (62) has at least one diffractive structure (63), which is configured such that light signals (20) can be shaped to form position light signals (68) depending on the incidence (52, 53) thereof on the at least one position region (62).

IPC 8 full level

**G01S 7/481** (2006.01); **G01S 7/497** (2006.01); **G01S 17/42** (2006.01); **G01S 17/931** (2020.01); **G02B 26/10** (2006.01)

CPC (source: EP US)

**G01S 7/4814** (2013.01 - EP); **G01S 7/4817** (2013.01 - EP US); **G01S 7/4972** (2013.01 - EP); **G01S 17/42** (2013.01 - EP US); **G01S 17/931** (2020.01 - EP US); **G02B 26/105** (2013.01 - EP); **G02B 26/106** (2013.01 - EP)

Designated contracting state (EPC)

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)

BA ME

DOCDB simple family (publication)

**DE 102019101966 A1 20200730**; CN 113597564 A 20211102; CN 113597564 B 20240322; EP 3918365 A1 20211208; US 2022099806 A1 20220331; WO 2020156892 A1 20200806

DOCDB simple family (application)

**DE 102019101966 A 20190128**; CN 202080021551 A 20200122; EP 2020051450 W 20200122; EP 20701730 A 20200122; US 202017426348 A 20200122