

Title (en)

LENS COMPONENT OF A RAIN SENSOR, MODULAR SYSTEM, METHOD, AND TOOL FOR PRODUCING THE SAME

Title (de)

LINSENBAUTEIL EINES REGENSENSORS SOWIE BAUKASTENSYSTEM, VERFAHREN UND WERKZEUG ZUR HERSTELLUNG

Title (fr)

ÉLÉMENT LENTILLE DE CAPTEUR DE PLUIE AINSI QUE SYSTÈME MODULAIRE, PROCÉDÉ ET OUTIL DE FABRICATION

Publication

**EP 3359988 A1 20180815 (DE)**

Application

**EP 16778368 A 20161007**

Priority

- DE 102015117266 A 20151009
- EP 2016073984 W 20161007

Abstract (en)

[origin: WO2017060417A1] The invention relates to a lens component of an optical rain sensor (10), comprising transmitter lens (16) designed as a Fresnel lens, and a receiver lens (18) designed as a Fresnel lens, both of which, in top view, have a rectangular contour having first edges, and second edges extending at a right angle thereto. The center point (Ms) of the transmitter lens (16) and/or the center point (ME) of the receiver lens (18) is arranged eccentrically with regard to the lateral length of at least one of the edges (6), and the transmitter lens (16) and the receiver lens (18) are arranged side by side. The lens component (12) is produced using a molding process, in which a first and a second mold insert, each having a Fresnel lens shape, are arranged side-by-side, wherein the first and the second mold insert are arranged optionally rotated in each case by 0° or by 180°, and the mold inserts arranged in such a way form a negative form for the transmitter lens (16) and the receiver lens (18) of the lens component (12) during molding. In this way, a modular system for producing optical rain sensors (10) having lens components (12) is generated in a plurality of different configurations, which differ from one another with regard to the distance of the center points (MS, ME) of the transmitter lens (16) and the receiver lens (18). In order to produce the lens component (12), the mold inserts are arranged optionally rotated in each case by 0° or by 180°, and are molded using a suitable plastic. This is done in a tool for producing a lens component (12) having a receptacle, in which the mold inserts can be placed next to one another along the second edge, wherein the first and/or the second mold insert, each rotated by 0° or by 180°, can be inserted into the receptacle (44).

IPC 8 full level

**G02B 3/08** (2006.01); **B29D 11/00** (2006.01); **B60S 1/08** (2006.01); **G01N 21/552** (2014.01)

CPC (source: EP US)

**B29D 11/00269** (2013.01 - EP US); **B60S 1/0837** (2013.01 - EP US); **B60S 1/0844** (2013.01 - US); **B60S 1/0881** (2013.01 - US); **G01N 21/552** (2013.01 - EP US); **G02B 3/08** (2013.01 - EP US)

Citation (search report)

See references of WO 2017060417A1

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)

**WO 2017060417 A1 20170413**; CN 108139510 A 20180608; DE 102015117266 A1 20170413; DE 102015117266 B4 20170713; EP 3359988 A1 20180815; US 2018239064 A1 20180823

DOCDB simple family (application)

**EP 2016073984 W 20161007**; CN 201680058828 A 20161007; DE 102015117266 A 20151009; EP 16778368 A 20161007; US 201615760344 A 20161007