

Title (en)

ROBOT GRIPPER, AND METHOD FOR OPERATING A ROBOT GRIPPER

Title (de)

ROBOTERGREIFER SOWIE VERFAHREN ZUM BETRIEB EINES ROBOTERGREIFERS

Title (fr)

PRÉHENSEUR DE ROBOT ET PROCÉDÉ POUR FAIRE FONCTIONNER UN PRÉHENSEUR DE ROBOT

Publication

EP 3946829 A1 20220209 (DE)

Application

EP 20717767 A 20200319

Priority

- DE 102019107851 A 20190327
- EP 2020057544 W 20200319

Abstract (en)

[origin: WO2020193340A1] The invention relates to a robot gripper (100) and to a method for operating such a robot gripper (100). The robot gripper (100) comprises: at least one drive unit AE (101) for driving a powertrain AS (102) with a number N of active elements WEn (103), wherein each active element WEn (103) has a working region ABn which is arranged in a body-fixed manner relative to the robot gripper, in which each active element WEn can be moved, and which can be reached by each active element; a control unit (104) for controlling the at least one drive unit AE (101); and a sensor system (105) that is connected to the control unit (104) for ascertaining forces/moments $F_{ext,WEn}(t)$, where $n = 1, 2, \dots, N$ and $N \geq 1$, which are applied externally to the individual active elements WEn (103). The control unit (104) is designed such that a collision monitoring process can be carried out for the active elements WEn (103), and in the event of a detected collision event for an active element WEn (103), the drive unit AE (101) is actuated according to a specified operation, having the following steps: providing (201) a defined region Bn within the working region ABn for each active element WEn; carrying out (202) the collision monitoring process for the active elements WEn (103) only if the respective active element WEn (103) is located outside of the assigned region B; and deactivating the collision monitoring process for the active elements WEn when the respective active element WEn is located at least partly within the assigned region Bn.

IPC 8 full level

B25J 9/16 (2006.01); **B25J 15/02** (2006.01)

CPC (source: EP KR US)

B25J 9/1612 (2013.01 - EP KR); **B25J 9/1633** (2013.01 - KR); **B25J 9/1676** (2013.01 - EP KR US); **B25J 13/085** (2013.01 - EP US); **B25J 13/088** (2013.01 - US); **B25J 15/0253** (2013.01 - US); **B25J 19/02** (2013.01 - KR); **G05B 2219/39355** (2013.01 - EP); **G05B 2219/39487** (2013.01 - EP); **G05B 2219/39527** (2013.01 - EP); **G05B 2219/40269** (2013.01 - US); **G05B 2219/40559** (2013.01 - EP); **G05B 2219/50391** (2013.01 - US)

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 2020193340 A1 20201001; CN 113631331 A 20211109; DE 102019107851 A1 20201001; DE 102019107851 B4 20220623; EP 3946829 A1 20220209; JP 2022526351 A 20220524; JP 2024023695 A 20240221; KR 20220020249 A 20220218; US 2022184812 A1 20220616

DOCDB simple family (application)

EP 2020057544 W 20200319; CN 202080024704 A 20200319; DE 102019107851 A 20190327; EP 20717767 A 20200319; JP 2021557478 A 20200319; JP 2023212585 A 20231215; KR 20217034586 A 20200319; US 202017439936 A 20200319