Title (en)

THERMAL EXPANSION ACTUATOR

Title (de)

THERMISCHER AUSDEHNUNGSAKTUATOR

Title (fr)

ACTIONNEUR D'EXPANSION THERMIQUE

Publication

EP 4074942 A1 20221019 (EN)

Application

EP 21168422 A 20210414

Priority

EP 21168422 A 20210414

Abstract (en)

A thermal expansion actuator includes a first actuation interface (18), configured to couple to a first body, a second actuation interface (20), configured to be moved toward or away from the first actuation interface (18) in an actuation direction (D), and a plurality of actuating members (21, 22), configured to expand and retract in the actuation direction (D) in response to temperature variations. The actuating members (21, 22) include first actuating members (21) and second actuating members (22) connected alternated in series between the first actuation interface (18) and the second actuation interface (20) and arranged so that expansion of the first actuating members (21) tends to move the second actuation interface (20) away from the first actuation interface (18) in the actuation direction (D) and expansion of the second actuating members (22) tends to retract the second actuation interface (20) toward the first actuation interface (18) in the actuation direction (D). The first actuating members (21) and the second actuating members (22) have respective different thermal expansion coefficients (K1, K2).

IPC 8 full level

F01D 11/18 (2006.01)

CPC (source: CN EP)

F01D 11/18 (2013.01 - CN EP); **F23R 3/28** (2013.01 - CN); F05D 2300/50212 (2013.01 - EP)

Citation (search report)

- [XI] US 2010054912 A1 20100304 - WILSON IAN DAVID [US], et al
- [A] US 2013101391 A1 20130425 - SZWEDOWICZ JAROSLAW LESZEK [CH], et al

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)

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DOCDB simple family (application)

EP 21168422 A 20210414; CN 202210390479 A 20220414