

Title (en)

Safety circuit for a fluid actuated user and method for using the same

Title (de)

Sicherheitsschaltung für medienbetriebene Verbraucher und Verfahren zum Betrieb derselben

Title (fr)

Circuit de sécurité pour un utilisateur à actionnement par fluide et méthode pour son utilisation

Publication

**EP 1630425 A3 20111102 (DE)**

Application

**EP 05016934 A 20050804**

Priority

DE 102004042891 A 20040831

Abstract (en)

[origin: EP1630425A2] The protection circuit has solenoid valves (1.2, 1.3) interconnected to another solenoid valve (1.1). Control valves e.g. cartridge valves, (2.1, 2.2, 3.1, 3.2) are connected in parallel to each other such that a large flow rate is controlled with their simultaneous opening through the controlled solenoid valves. The valve (2.1) affects an actuation bearing (9), by simultaneous control of the solenoid valves (1.2, 1.3). An independent claim is also included for a procedure for an operation of a protection circuit.

IPC 8 full level

**F15B 20/00** (2006.01); **F01D 21/18** (2006.01); **F01D 21/20** (2006.01); **F01K 13/02** (2006.01); **F02C 9/16** (2006.01); **F15B 11/08** (2006.01)

CPC (source: EP US)

**F01D 9/06** (2013.01 - EP US); **F01D 17/145** (2013.01 - EP US); **F15B 20/008** (2013.01 - EP US); **F15B 2211/31511** (2013.01 - EP US); **F15B 2211/329** (2013.01 - EP US); **F15B 2211/50536** (2013.01 - EP US); **F15B 2211/855** (2013.01 - EP US); **F15B 2211/87** (2013.01 - EP US); **F15B 2211/8755** (2013.01 - EP US)

Citation (search report)

- [X] US 5561976 A 19961008 - CHU HENRY G [US], et al
- [X] GB 2005866 A 19790425 - ALSTHOM ATLANTIQUE
- [X] EP 0020892 A1 19810107 - SULZER AG [CH]
- [X] DE 3138562 A1 19830421 - SIEMENS AG [DE]
- [A] EP 0641919 A1 19950308 - ABB MANAGEMENT AG [CH]

Cited by

FR3042581A1; WO2017064398A1

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 LV MC NL PL PT RO SE SI SK TR

Designated extension state (EPC)

AL BA HR MK YU

DOCDB simple family (publication)

**DE 102004042891 B3 20051006**; EP 1630425 A2 20060301; EP 1630425 A3 20111102; EP 1630425 B1 20121219; US 2006042250 A1 20060302; US 7322270 B2 20080129

DOCDB simple family (application)

**DE 102004042891 A 20040831**; EP 05016934 A 20050804; US 21403705 A 20050830