

Title (en)  
INTERFACE AND METHOD FOR CONTROLLING A CONTROL INTERFACE WITH HAPTIC FEEDBACK FOR A MOTOR VEHICLE

Title (de)  
SCHNITTSTELLE UND VERFAHREN ZUR STEUERUNG EINER STEUERSCHNITTSTELLE MIT HAPTISCHER RÜCKMELDUNG FÜR EIN KRAFTFAHRZEUG

Title (fr)  
INTERFACE ET PROCEDE DE COMMANDE D'UNE INTERFACE DE COMMANDE A RETOUR HAPTIQUE POUR VEHICULE AUTOMOBILE

Publication  
**EP 3207440 A1 20170823 (FR)**

Application  
**EP 15763386 A 20150731**

Priority  
• FR 1401771 A 20140731  
• FR 2015000170 W 20150731

Abstract (en)  
[origin: WO2016016520A1] The invention concerns a control interface with haptic feedback for a motor vehicle comprising a magnetorheological fluid module (3) comprising a rotary element (6), a magnetorheological fluid (7) in contact with the rotary element (6) and a unit (8) for applying a magnetic field configured to apply a magnetic field to the magnetorheological fluid (7) and to modify the intensity of the magnetic field applied in order to generate haptic feedback to the user moving the rotary element (6) by modifying the magnetic field applied to the magnetorheological fluid (7), characterised in that it comprises an angular sensor (21) configured to measure the angular position of the rotary element (6) and a control unit (18) linked to the unit (8) for applying a magnetic field and to the angular sensor (21), the control unit (18) being configured to control the unit (8) for applying a magnetic field in order to index at least one indexing position ( $\Omega_0$ ;  $\Omega_1$ ,  $\Omega_2$ ), generating a braking force (F) on the rotary element (6) according to a force profile having: - a maximum braking force (M) at the indexing position ( $\Omega_0$ ;  $\Omega_1$ ,  $\Omega_2$ ), - a portion free of braking force (P2, P2'), and - a portion with a non-zero braking force (P1, P1', P3, P3'), the maximum braking force (M) being interposed between the non-zero braking force portion (P1, P1', P3, P3') and the portion free of braking force (P2, P2'). The invention also concerns a method for controlling a control interface with haptic feedback.

IPC 8 full level  
**G06F 3/01** (2006.01); **B60K 37/06** (2006.01); **G06F 3/0362** (2013.01)

CPC (source: EP)  
**B60K 35/00** (2013.01); **B60K 35/10** (2024.01); **B60K 35/25** (2024.01); **G05G 5/03** (2013.01); **G06F 3/016** (2013.01); **G06F 3/0362** (2013.01); **B60K 2360/126** (2024.01); **G05G 1/08** (2013.01)

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 2016016520 A1 20160204**; EP 3207440 A1 20170823; FR 3024562 A1 20160205; FR 3024562 B1 20171222

DOCDB simple family (application)  
**FR 2015000170 W 20150731**; EP 15763386 A 20150731; FR 1401771 A 20140731