

Title (en)

A control device for an electrical window regulator for motor vehicles

Title (de)

Vorrichtung zur Steuerung eines elektrischen Fensterhebers für ein Kraftfahrzeug

Title (fr)

Dispositif de commande d'un lève-vitre électrique pour un véhicule automobile

Publication

EP 0777029 A1 19970604 (EN)

Application

EP 96118840 A 19961125

Priority

IT TO950960 A 19951201

Abstract (en)

In order to control an electrical window regulator (11), the device (10; 40) comprises two electrical push-button switches (21, 22; 49, 50) for controlling the raising and the lowering of the window, and a control circuit (19; 36; 46) connected to those switches (21, 22; 49, 50) and designed to control the supply of current to the motor (12; 43) in accordance with predetermined methods. Each switch (21, 22; 49, 50) has a main terminal (21a, 22a; 49a, 50a) which is connected to the electric motor (12, 43) and which is connectable selectively to a first terminal (21c, 22c, 49c, 50c) connected to one pole (+) of the voltage source (14) and, respectively, to a second terminal (21b, 22b; 49b, 50b) in the actuated state and, respectively, in the resting state of the switch (21, 22; 49, 50). The control circuit comprises two controlled switches (23, 24; 54, 55) which are associated with the push-button switches (21, 49; 22, 50) and each of which has a main terminal (23a, 24a; 54a, 55a) which is connected to the second terminal (21b, 49b; 22b, 50b) of the associated push-button switch (21, 49; 22, 50) and which is connectable selectively to one pole (+) and, respectively, to the other pole (-) of the voltage source (14) in an energised state and, respectively, in the de-energised state of the controlled switch (23, 24; 54, 55). Sensor devices (R1, R2; R; R3, R4) detect the passage of current into the motor (12; 43). After the passage of current into the motor (12; 43) owing to the operation of a push-button switch (21, 22; 49, 50), a control circuit (27; 37; 56), which is connected to the sensor devices (R1, R2; R; R3, R4), energises the controlled switch (24, 23; 55, 54) associated with the other push-button switch (22, 21; 50, 49) so that the motor (12) remains connected to the two poles (+, -) of the voltage source (14) even after the operated push-button switch (21, 22; 49, 50) has been released. <IMAGE>

IPC 1-7

E05F 15/16

IPC 8 full level

E05F 15/16 (2006.01)

CPC (source: EP)

E05F 15/695 (2015.01); **E05Y 2900/55** (2013.01)

Citation (search report)

- [XA] DE 4324658 A1 19940203 - SIEMENS AG [DE]
- [A] EP 0595452 A1 19940504 - SUMITOMO WIRING SYSTEMS [JP]
- [A] GB 2013428 A 19790808 - TEKRON PATENTS LTD
- [A] GB 2026723 A 19800206 - TEKRON PATENTS LTD

Cited by

JP2016008466A; JP2016030975A; ES2156072A1; EP1443625A3; GB2430704A; GB2430704B; US6903522B2; US8665065B2; JP2016008467A; JP2015175139A; JP2016014292A; US7755223B2; US7855475B2; US8314509B2

Designated contracting state (EPC)

DE ES FR GB SE

DOCDB simple family (publication)

EP 0777029 A1 19970604; BR 9604641 A 19980623; IT 1280496 B1 19980120; IT TO950960 A0 19951201; IT TO950960 A1 19970601

DOCDB simple family (application)

EP 96118840 A 19961125; BR 9604641 A 19961202; IT TO950960 A 19951201