

Title (en)  
INDUSTRIAL ROBOT HAVING A PROTECTION DEVICE

Title (de)  
INDUSTRIEROBOTER MIT SCHUTZVORRICHTUNG

Title (fr)  
ROBOT INDUSTRIEL MUNI D'UN DISPOSITIF DE PROTECTION

Publication  
**EP 2483038 A1 20120808 (DE)**

Application  
**EP 10759799 A 20100922**

Priority  
• EP 09405173 A 20091001  
• CH 2010000229 W 20100922  
• EP 10759799 A 20100922

Abstract (en)  
[origin: EP2305437A1] The robot has a movable carriage (22) at which a working device (23.1) is supported in a vertically movable manner and is lowered from an area above a safety plane to another area below the plane. A protection device having a trough-shaped protection plate (28.3), is positioned in the plane in a position, such that the working device is prevented from lowering from the former area to the latter area. The plate is moved in another position so as to lower the working device from the former area into the latter area. The protection device is attached to the carriage and the working device.

IPC 8 full level  
**B25J 5/04** (2006.01); **B23Q 1/62** (2006.01); **B25J 9/00** (2006.01); **B25J 9/02** (2006.01); **B25J 19/06** (2006.01)

CPC (source: EP KR US)  
**B23Q 1/62** (2013.01 - KR); **B23Q 1/623** (2013.01 - EP US); **B23Q 1/628** (2013.01 - EP US); **B25J 5/04** (2013.01 - EP KR US); **B25J 9/0096** (2013.01 - EP US); **B25J 9/02** (2013.01 - KR); **B25J 9/026** (2013.01 - EP US); **B25J 19/06** (2013.01 - EP KR US)

Citation (search report)  
See references of WO 2011038518A1

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 SE SI SK SM TR

DOCDB simple family (publication)  
**EP 2305437 A1 20110406**; CA 2780281 A1 20110407; CN 102762343 A 20121031; EP 2483038 A1 20120808; KR 20120099661 A 20120911; US 2012328404 A1 20121227; WO 2011038518 A1 20110407

DOCDB simple family (application)  
**EP 09405173 A 20091001**; CA 2780281 A 20100922; CH 2010000229 W 20100922; CN 201080054712 A 20100922; EP 10759799 A 20100922; KR 20127011234 A 20100922; US 201013499614 A 20100922