

Title (en)

Device for the monitoring of safety-relevant processes in machines

Title (de)

Vorrichtung zur Überwachung von sicherheitsrelevanten Vorgängen an Maschinen

Title (fr)

Dispositif pour la surveillance des processus sûreté-appropriés aux machines

Publication

**EP 1031420 B1 20040811 (DE)**

Application

**EP 99103804 A 19990226**

Priority

DE 19908230 A 19990225

Abstract (en)

[origin: EP1031420A1] The device has at least one field bus system (2) that connects an operating controller (1), a safety-relevant input/output device (4) and at least one safety monitoring controller (6). The safety input/output device and/or safety monitoring controller is/are mounted on the control/drive elements (9,10) performing the safety-relevant functions in a distributed manner. Independent claim is also included for a method of monitoring safety-relevant processes in drive/control arrangement in machines.

IPC 1-7

**B41F 33/00**

IPC 8 full level

**B41F 33/00** (2006.01); **B42D 15/00** (2006.01)

CPC (source: EP US)

**B41F 33/0009** (2013.01 - EP US); **B41F 33/0018** (2013.01 - EP US)

Cited by

DE102008001214B4; DE10227241A1; EP1375140A3; US9188970B2; US6725773B2; EP1375140A2; DE102008001214A1; WO0153099A1; WO2011033027A3; WO2009021901A1

Designated contracting state (EPC)

BE CH DE FR GB IT LI NL

DOCDB simple family (publication)

**EP 1031420 A1 20000830**; **EP 1031420 B1 20040811**; DE 19908230 A1 20000831; DE 59910196 D1 20040916; EP 1454747 A2 20040908; EP 1454747 A3 20071010; EP 1454747 B1 20140402; JP 2000246878 A 20000912; JP 5052710 B2 20121017; US 6832121 B1 20041214

DOCDB simple family (application)

**EP 99103804 A 19990226**; DE 19908230 A 19990225; DE 59910196 T 19990226; EP 04102212 A 19990226; JP 27891599 A 19990930; US 48873900 A 20000120