

Title (en)

TRANSPONDER FOR TRAIN CONTROL APPLICATIONS

Title (de)

TRANSPONDER FÜR ZUGSTEUERUNGSANWENDUNGEN

Title (fr)

TRANSPONDEUR POUR APPLICATIONS DE COMMANDE DE TRAIN

Publication

**EP 3461716 A1 20190403 (EN)**

Application

**EP 17194154 A 20170929**

Priority

EP 17194154 A 20170929

Abstract (en)

It is proposed to provide a transponder system for a rail application comprising a first radiation unit forming a first beam that radiates at a first angle with reference to a railway track, a second radiation unit forming a second beam that radiates at a second angle with reference to the railway track, wherein the first angle and the second angle are different. This allows the transponder to determine the position of a rail vehicle with high accuracy, it allows to cancel cross-talk and it allows determining the direction of movement. The transponder system may be used as or within a balise. Also, a method is provided to utilize this transponder in an efficient way.

IPC 8 full level

**B61L 3/12** (2006.01); **B61L 25/02** (2006.01)

CPC (source: EP)

**B61L 3/121** (2013.01); **B61L 25/025** (2013.01); **B61L 2003/123** (2013.01)

Citation (search report)

- [XY] WO 2008006803 A1 20080117 - SIEMENS AG [DE], et al
- [XY] DE 3337183 A1 19850425 - LICENTIA GMBH [DE]
- [Y] US 2009231103 A1 20090917 - GOBRECHT PHILIPPE [FR], et al
- [Y] US 2016001803 A1 20160107 - KIM JUNGTAI [KR], et al
- [Y] EP 2112045 A1 20091028 - BOMBARDIER TRANSP GMBH [DE]
- [Y] EP 3018841 A1 20160511 - ALSTOM TRANSP TECH [FR]

Cited by

CN111976790A; CN111098886A

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)

**EP 3461716 A1 20190403**

DOCDB simple family (application)

**EP 17194154 A 20170929**