

Title (en)

SENSOR DEVICE AND METHOD OF DETECTING GASES OR FUMES IN AIR

Title (de)

SENSORVORRICHTUNG UND VERFAHREN ZUR DETEKTION VON IN LUFT ENTHALTENEN GASEN ODER DÄMPFEN

Title (fr)

DISPOSITIF CAPTEUR ET PROCEDE POUR LA DETECTION DE GAZ OU DE VAPEURS CONTENUS DANS L'AIR

Publication

EP 1165187 A1 20020102 (DE)

Application

EP 00925124 A 20000317

Priority

- DE 19911869 A 19990317
- DE 19911867 A 19990317
- EP 0002389 W 20000317

Abstract (en)

[origin: WO0054841A1] The invention relates to a sensor device comprising a sensor element for detecting gases and fumes in air, as well as to a method of operating such a sensor system. The sensor element is preferably a heated metal-oxide sensor having a heating structure and a gas-sensing layer whose temperature can be kept constant by means of the heating structure and a control device. To protect it against air currents the sensor element is positioned in a preferably heat-insulated casing into which gas is able to penetrate by passing through a gas-permeable diffusion layer. According to a method provided for by the invention the resistance of the heating structure, which serves as a measure of the temperature of the gas-sensing layer, is used as a reference for temperature control. The temperature of the sensor element is influenced in a targeted fashion by the addition of other disturbance quantities to the control quantity "sensor temperature". Evaluation is carried out by comparison of the current sensor signal with a reference value which is formed from the weighted average signal of the sensor values and can be adjusted to the prevailing situation.

IPC 1-7

A62B 9/00; **G01N 33/00**

IPC 8 full level

A62B 18/08 (2006.01); **A62B 9/00** (2006.01); **G01N 27/00** (2006.01); **G01N 27/04** (2006.01); **G01N 27/12** (2006.01); **G01N 33/00** (2006.01); **G08B 21/14** (2006.01); **G08B 21/16** (2006.01)

CPC (source: EP KR)

A62B 9/006 (2013.01 - EP KR); **G01N 27/124** (2013.01 - EP KR); **G08B 21/14** (2013.01 - EP KR)

Citation (search report)

See references of WO 0054841A1

Citation (third parties)

Third party :

- EP 0308455 B1 19930127
- EP 0293255 A2 19881130 - AMERICAN INTELL SENSORS CORP [US]
- US 4012692 A 19770315 - EICKER HARTMUT
- US 4882287 A 19891121 - HOELTER HEINZ [DE], et al
- EP 0032844 A2 19810729 - SIEGER J & S LTD [GB]
- EP 0779170 A2 19970618 - PARAGON SENSORIC GMBH & CO KG [DE]
- GB 2088559 A 19820609 - COAL INDUSTRY PATENTS LTD

Designated contracting state (EPC)

DE FR GB

DOCDB simple family (publication)

WO 0054841 A1 20000921; DE 50014087 D1 20070405; EP 1165186 A1 20020102; EP 1165186 B1 20070221; EP 1165187 A1 20020102; JP 2002539441 A 20021119; JP 2002539442 A 20021119; KR 20020001780 A 20020109; KR 20020001781 A 20020109; WO 0054840 A1 20000921

DOCDB simple family (application)

EP 0002389 W 20000317; DE 50014087 T 20000317; EP 0002371 W 20000317; EP 00920508 A 20000317; EP 00925124 A 20000317; JP 2000604912 A 20000317; JP 2000604913 A 20000317; KR 20017011836 A 20010917; KR 20017011837 A 20010917