

Title (en)  
GLASS BREAKAGE DETECTOR

Publication  
**EP 0175002 B1 19881109 (DE)**

Application  
**EP 84104873 A 19840430**

Priority  
EP 84104873 A 19840430

Abstract (en)  
[origin: EP0175002A1] 1. Glass breakage detector, particularly for alarm systems, for monitoring against intrusions with a glass plate-fixed ultrasonic transmitter and ultrasonic receiver (30) for coupling in or receiving ultrasonic waves and with an evaluation circuit (34) with a memory (12, 18), into which is initially written the ultrasonic reception signal with the glass plate undisturbed in signal components and time-resolved form and during monitoring operation comparison takes place thereof with the continuously time-resolved-received current ultrasonic reception signals in a comparator circuit (10), a first evaluation signal being emitted in the case of non-coincidence between the two signals, characterized in that a single piezoelectric element (30) is provided as the ultrasonic receiver and transmitter, that a second piezoelectric element is fixed as a sensor (40) to the glass plate and by means of which mechanical vibrations of the glass plate are converted into electric signals from which type-specific breaking frequencies are selected and amplified and produce a second evaluation signal, that both evaluation signals are in each case fed into a collecting flip-flop (32, 42), which are set on reaching a preselectible evaluation signal amplitude, a central control unit (21) periodically resetting the flip-flops (32, 42) after given time intervals and that the first and second evaluation signals are combined in an AND circuit (50) for generating an alarm signal.

IPC 1-7  
**G08B 13/04**

IPC 8 full level  
**G08B 13/04** (2006.01)

CPC (source: EP)  
**G08B 13/04** (2013.01)

Cited by  
WO8806774A1

Designated contracting state (EPC)  
AT BE CH DE FR GB IT LI LU NL

DOCDB simple family (publication)  
**EP 0175002 A1 19860326; EP 0175002 B1 19881109; AT E38573 T1 19881115; DE 3475126 D1 19881215**

DOCDB simple family (application)  
**EP 84104873 A 19840430; AT 84104873 T 19840430; DE 3475126 T 19840430**