

Title (en)  
Pressure switch apparatus.

Title (de)  
Druckschaltevorrichtung.

Title (fr)  
Dispositif d'interrupteur à pression.

Publication  
**EP 0642146 A3 19951115 (EN)**

Application  
**EP 94306490 A 19940902**

Priority  
IT RM930595 A 19930903

Abstract (en)  
[origin: EP0642146A2] Pressure switch is shown which is accommodated in a pressure vessel (1) filled with a gas at a first pressure (P1), such as for a safety air bag in a road vehicle. The device comprises a pressure container (12) filled with a gas at a second pressure (P2), which container has at one side a flexible diaphragm (18) which reacts to the difference in the two pressures and interacts with an electrical circuit. The container is fitted with one side adjacent to and opposite a wall portion (14, 106, 214, 238, 256) of the pressure vessel and a magnetic element (16, 26, 240, 246/248) is operatively coupled to the diaphragm. The wall portion of the pressure vessel is made of non-magnetic material, and near the other side of the wall portion a magnetic field sensitive switching element (40) is mounted opposite the diaphragm magnetic element. A window element (13) of magnetic material may be placed in the wall portion of non-magnetic material, in line with the magnetic element and the switching element. An armature (232, 254) extending through the wall portion may be used to concentrate the magnetic flux path. The armature can be arranged to function in a head-on mode (232) or on a slide by mode (254). The magnetic curve of the system can be adjusted by using a bias magnet (216). A two part assembly permits attachment of the switch to the vessel without problems associated with the heat of welding from adversely affecting associated electronics and a circuit (222) is shown for providing a two wire output having voltage levels indicative of selected conditions. <IMAGE>

IPC 1-7  
**H01H 35/34**

IPC 8 full level  
**H01H 35/24** (2006.01); **B60R 21/16** (2006.01); **H01H 35/34** (2006.01)

CPC (source: EP)  
**H01H 35/247** (2013.01); **H01H 35/34** (2013.01)

Citation (search report)  
• [DA] US 4049935 A 19770920 - GRUBER WILLIAM PAUL  
• [PA] US 5331126 A 19940719 - DWYER DANIEL [US], et al  
• [A] FR 1588592 A 19700417

Cited by  
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**EP 0642146 A2 19950308; EP 0642146 A3 19951115**; IT 1262406 B 19960619; IT RM930595 A0 19930903; IT RM930595 A1 19950303; JP H07182956 A 19950721

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**EP 94306490 A 19940902**; IT RM930595 A 19930903; JP 20376894 A 19940829