



(11) Publication number : **0 642 146 A3**

(12) **EUROPEAN PATENT APPLICATION**

(21) Application number : **94306490.7**

(51) Int. Cl.⁶ : **H01H 35/34, H01H 35/24**

(22) Date of filing : **02.09.94**

(30) Priority : **03.09.93 IT RM930595**

(43) Date of publication of application :
08.03.95 Bulletin 95/10

(84) Designated Contracting States :
DE FR GB IT NL

(88) Date of deferred publication of search report :
15.11.95 Bulletin 95/46

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(54) **Pressure switch apparatus.**

(57) 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.

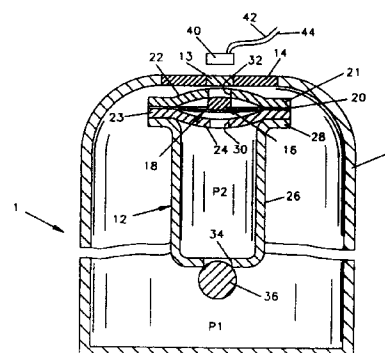


FIG. 2



European Patent
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EUROPEAN SEARCH REPORT

Application Number
EP 94 30 6490

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.CL.6)
D,A	US-A-4 049 935 (W. P. GRUBER) * column 2, line 10 - line 51; figure 1 * ---	1	H01H35/34 H01H35/24
P,A	US-A-5 331 126 (D. DWYER ET AL) * column 5, line 1 - line 56; figure 1 * ---	1	
A	FR-A-1 588 592 (ÉTABLISSEMENTS ED. JAEGER S.A.) * the whole document * -----	1	
			TECHNICAL FIELDS SEARCHED (Int.CL.6)
			H01H B60R
The present search report has been drawn up for all claims			
Place of search BERLIN		Date of completion of the search 8 September 1995	Examiner Ruppert, W
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document T : theory or principle underlying the invention E : earlier patent document, not published on, or after the filing date D : document cited in the application L : document cited for other reasons * : member of the same patent family, corresponding document			

EPO FORM 180 CL.62 (7/94/CH)