

Title (en)  
Electronic position sensor assembly and control system

Title (de)  
Elektronischer Winkelgeber mit Steuerungssystem

Title (fr)  
Capteur électronique de position associé à système de commande

Publication  
**EP 0879956 A1 19981125 (EN)**

Application  
**EP 98112946 A 19890420**

Priority  
• EP 95110314 A 19890420  
• EP 89107080 A 19890420  
• US 19423788 A 19880516

Abstract (en)  
An electronic position sensor assembly and engine control system (10) in which two sensing elements (13, 14) in a dual sensor (12) provide separate, independent position signals (A, B) related to multi-cylinder engine cycle position by sensing the angular position of a engine-rotated slotted wheel (11). The sensing elements provide identical sensing signals shifted from each other by a predetermined angular amount (d). In response to the simultaneous providing of a pulse by both sensing elements, a first reference signal (at 22) identifying a reference cylinder is provided for controlling electronic distribution of spark timing and/or fuel injection signals to engine cylinders (17-20). In response to a selected one of the sensing elements producing a pulse which has a predetermined longer duration than a preceding produced pulse, a second reference signal (after 50) is produced indicative of top-dead center engine cylinder cycle position for one of the cylinders. In response to detecting a fault in the position signal produced by the one selected sensing element, a switch (27) selects the other of the sensing elements for utilization in producing the second reference signal, and a substitute reference signal circuit (40) provides a substitute first reference signal. A less expensive and more reliable engine position sensor assembly and engine control system is provided since proper system operation is maintained despite a fault in one of the position signals. <IMAGE>

IPC 1-7  
**F02P 7/073**; **F02P 7/077**; **F02P 15/00**

IPC 8 full level  
**F02D 41/34** (2006.01); **F02P 7/073** (2006.01); **F02P 7/077** (2006.01); **F02P 15/00** (2006.01)

CPC (source: EP)  
**F02D 41/009** (2013.01); **F02P 7/073** (2013.01); **F02P 7/0775** (2013.01); **F02P 15/008** (2013.01)

Citation (search report)  
• [A] US 4442822 A 19840417 - KONDO TETSUYA [JP], et al  
• [A] FR 2374528 A1 19780713 - CII [FR]  
• [A] EP 0230560 A2 19870805 - AUDI AG [DE]

Designated contracting state (EPC)  
DE FR GB IT

DOCDB simple family (publication)  
**EP 0342376 A2 19891123**; **EP 0342376 A3 19910403**; **EP 0342376 B1 19960214**; AT E134251 T1 19960215; DE 68925658 D1 19960328; DE 68925658 T2 19960919; DE 68929420 D1 20020905; DE 68929420 T2 20021205; EP 0682180 A2 19951115; EP 0682180 A3 19960124; EP 0879956 A1 19981125; EP 0879956 B1 20020731

DOCDB simple family (application)  
**EP 89107080 A 19890420**; AT 89107080 T 19890420; DE 68925658 T 19890420; DE 68929420 T 19890420; EP 95110314 A 19890420; EP 98112946 A 19890420