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(54) Controller for a switched reluctance machine

(57) An electric motor controller is disclosed that controls the torque of a switched reluctance motor by an angle controller that eliminates the need for a look-up table. The angle controller employs edge-triggered

monostables to generate a single pulse firing signal which is synchronized with rotor position and whose pulse length varies with torque demand. An angle firing circuit utilizing freewheeling is also disclosed.

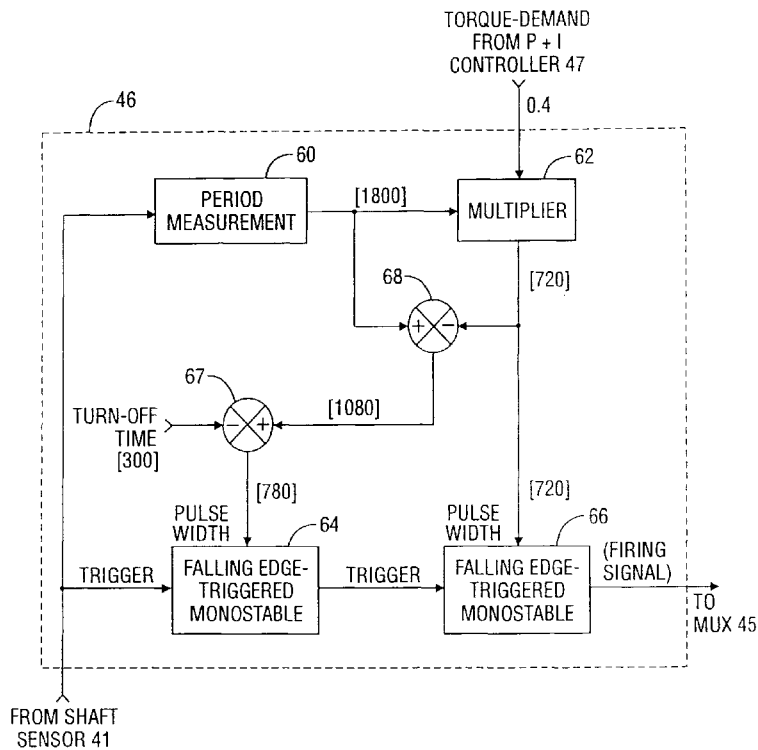


FIG. 7B

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EUROPEAN SEARCH REPORT

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EP 96 30 2134

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)		
X,D	PROCEEDINGS OF THE EUROPEAN CONFERENCE ON POWER ELECTRONICS AND APPLICATIONS. (EPE), AACHEN, 9 - 12 OCTOBER, 1989, vol. 1, 9 October 1989, LEONHARD W;HOLTZ J; SKUDELNY H C, pages 35-40, XP000143366 SUGDEN D M ET AL: "THE CONTROL OF SR DRIVES: REVIEW AND CURRENT STATUS" * page 36, column 2, paragraph 3-5; figure 5 *	1-7, 13-17,20	H02P7/05		
P,X	EP 0 692 865 A (SWITCHED RELUCTANCE DRIVES LTD) 17 January 1996 * column 7, line 5 - line 38; figures 4B-4C *	1,2,14	<table border="1"> <tr> <td>TECHNICAL FIELDS SEARCHED (Int.Cl.6)</td> </tr> <tr> <td>H02P</td> </tr> </table>	TECHNICAL FIELDS SEARCHED (Int.Cl.6)	H02P
TECHNICAL FIELDS SEARCHED (Int.Cl.6)					
H02P					
X	US 4 707 650 A (B.K.BOSE) 17 November 1987 * column 13, line 36 - line 53 *	1,2,14			
A	* column 7, line 28 - line 52; figures 4,8,10 *	3-7, 15-17			
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The present search report has been drawn up for all claims					
Place of search BERLIN		Date of completion of the search 31 January 1997	Examiner Leouffre, M		
<b>CATEGORY OF CITED DOCUMENTS</b> 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, but 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			

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