

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
13 May 2004 (13.05.2004)

PCT

(10) International Publication Number
WO 2004/040745 A3

(51) International Patent Classification⁷: **H02P 6/16**,
G01P 3/46

(21) International Application Number:
PCT/US2003/035444

(22) International Filing Date: 21 October 2003 (21.10.2003)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
10/283,472 29 October 2002 (29.10.2002) US

(81) Designated States (*national*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZM, ZW.

(84) Designated States (*regional*): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

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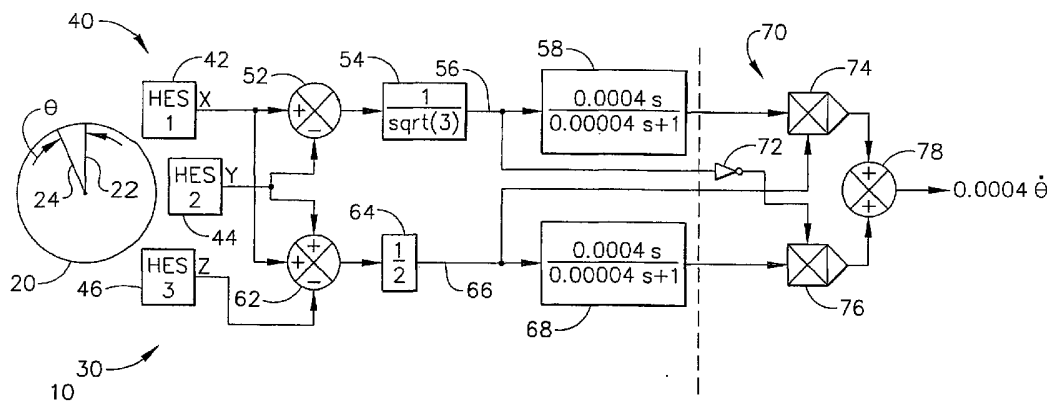
Published:

- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

(88) Date of publication of the international search report:
8 July 2004

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: METHOD AND APPARATUS FOR FINE RESOLUTION BRUSHLESS MOTOR CONTROL



(57) Abstract: A motor controller (30) includes three analog Hall-effect sensors (42, 44, 46) for forming continuous-time signals proportional to the sine and cosine of the position of the rotor (24) of a motor (20). The sine and cosine signals are differentiated to obtain signals proportional to the 4 rotor rate times the sine and cosine values. These integrated values are then multiplied by the cosine and inverse of the sine values, respectively, to obtain values equal to the rotor rate times 6 the square of the cosine and the rotor rate times the square of the sine. These latter two values 7 are summed to obtain an output signal proportional to the rotor rate based on the trigonometric identity $\sin^2(x) + \cos^2(x) = 1$. Since the motor controller (30) derives a high-resolution value for the rotor rate, it may be used for fine resolution control of brushless motors and the like.

INTERNATIONAL SEARCH REPORT

International Application No

PCT/US 03/35444

A. CLASSIFICATION OF SUBJECT MATTER
 IPC 7 H02P6/16 G01P3/46

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
 IPC 7 H02P G01P

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ

C. DOCUMENTS CONSIDERED TO BE RELEVANT

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A	abstract	5,9,13
	-/-	

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☒ Patent family members are listed in annex.

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Date of the actual completion of the international search

20 April 2004

Date of mailing of the international search report

03/05/2004

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INTERNATIONAL SEARCH REPORT

International Application No

PCT/US 03/35444

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

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