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[54] **METHOD FOR ABSOLUTE POSITION DETERMINATION OF MULTI-SPEED DEVICES**

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Related U.S. Application Data

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[52] U.S. Cl. **364/550; 364/560; 318/565**

[58] Field of Search 364/550, 551.01, 551.02, 364/560, 581, 565; 318/565, 568.17, 571, 572, 652, 683, 67, 69, 71

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[57] ABSTRACT

In a system for controlling or monitoring an object, wherein a position of the object must be determined, the system includes a first and second multispeed sensor, the first sensor having a speed of N and the second sensor having a speed of N-1. A method for determining the position of the object comprises the steps of obtaining position data as measured by the first and second multispeed sensor, respectively. A parameter, N_A , a weighted difference between the obtained position data, is determined to ascertain whether a first or second case exists. If the first case exists, a first set of constants based on a first set of equations is generated; otherwise the first set of constants is generated based on a second set of equations. A second set of constants is then generated. Finally, the position of the object is determined by calculating the weighted average of the second constants, thereby obtaining the position of the object, utilizing the data provided by both sensors.

7 Claims, 3 Drawing Sheets

