SENSORLESS CLOSED-LOOP ACTUATOR UNLATCH

ABSTRACT OF THE DISCLOSURE

A first method for detecting movement of an actuator includes supplying a demand current to a voice coil motor of the actuator (A_1), sampling a voice coil motor voltage (B_1), performing a slope detection of a voice coil motor voltage function (C_1) and extrapolating the voice coil motor function (D_1) to identify a change in slope of the voice coil motor function.

A second method for detecting movement of an actuator includes supplying a continuously increasing current ramp to the voice coil motor of an actuator (A_2), measuring a back e.m.f. voltage of the voice coil motor (B_2), performing a change in slope detection of a back e.m.f. voltage function (C_2) and integrating the back e.m.f. voltage function (D_2) to determine movement of the actuator.

Fig.2