

ABSTRACT

The present invention provides a motor encoder with programmability and haptic feedback and an operation method therefor. The encoder comprises a rotatable knob; a motor used for providing virtual stop, virtual termination and virtual elastic loading when the knob is rotated, and generating haptic feedback and resistance in different events; a position sensor used for providing position information when the knob is stated and in the motion process; a controller with a motor driver, electrically connected to the motor and the position sensor respectively and used for obtaining position feedback from the position sensor and driving the motor to form closed-loop torque feedback control; and an input interface electrically connected to the controller and used for inputting instruction information to the controller. Compared with conventional encoders, the motor encoder of the present invention provides excellent user experience and improved functions, and can also program to provide various haptic feedback configuration files, so that more intuitive and customizable user experience is realized.

[Fig. 5]