

# METHOD OF MINIATURE TWO AXES FOUR-WHEEL DRIVE CONTROL WITH PRECISION MAGNETIC ENCODER DESIGN

## Abstract

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This invention relates to a magnetic encoder for a driver installed to a moving object. The magnetic encoder has a permanent axial magnet, a magnet holder and a sensing element. The magnet holder has a cavity to receive the permanent magnet exposing a portion of the north pole and south pole. The sensing element is positioned apart from the magnet holder and facing an exposed portion of both north and south poles of the permanent axial magnet. The magnetic encoder is installed on a driver assembly which includes two wheels, a pinion arranged between the two wheels, and a motor for driving one of the two wheels. The magnetic encoder is connected to the pinion to obtain a feedback of the driver assembly.

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Figure 2