

SENSOR FOR USE IN POWER-ASSISTED MOBILE OBJECT,
POWER-ASSISTED UNIT, POWER-ASSISTED MOBILE OBJECT, AND
TORQUE DETECTION METHOD

ABSTRACT

Provided is a highly-responsive sensor for use in a power-assisted mobile object.

The sensor for use in power-assisted mobile object includes: ring-shaped first and second magnets each having a north pole and a south pole along a circumferential direction, having a ring shape, and disposed so as to rotate with rotation of a drive shaft coaxially with each other; at least a pair of first hall elements and a pair of second hall elements that detect a magnetic field of the first magnet and the second magnet, respectively, and is disposed at a distance from each other in the circumferential direction; and a distortion unit that is configured to get distorted in the circumferential direction due to torque during rotation of the drive shaft and disposed such that the distortion changes relative positions of the first magnet and the second magnet in the circumferential direction.