Nidec Instruments Corporation

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Nidec Instruments to Launch "S-FLAG DYNAMIC MOTION ™" MB Series AC Servo Motors

Nidec Instruments Corporation ("Nidec Instruments" or the "Company"), a subsidiary of Nidec Corporation, announced today that, from March 2025, it will accept orders for new "S-FLAG DYNAMIC MOTION ™" MB series motors, as an addition to the Company's S-FLAG AC servo motors currently on sale.

Nidec Instruments' "S-FLAG DYNAMIC MOTION ™" MB series motors

The "S-FLAG" models, which Nidec Instruments launched in 2014, are the upgraded version of its internally produced AC servo motors that the Company manufactured and sold for its transfer robots. These motors, advanced to be used for general-purpose products for industrial equipment, were further improved and released as "S-FLAG II" motors in 2019.

In addition to new motors that boast high accuracy, high output, and high-speed motions especially to meet the robot market's requirements, the "S-FLAG DYNAMIC MOTION ™" MB series motors to be launched this time feature Nidec Instruments' own **battery-less, magnetic absolute encoders with a resolution of 23 bits**, which can withstand a harsh production environment.

With their rated peak torque **enhanced from the usual 300% to 350%**, these products have had their cogging torque reduced from the rated torque ratio of 3% to 1.5% to enable more precise movements. While **the models' maximum rotating speed has been improved from** the existing standard of **6,000r/min. to 7,000r/min., their water- and dust-resistance properties were increased from the existing IP65 to IP67** to fulfill diverse requirements. In addition, the models' short-length designs, adopted for robots that are preferred to be miniaturized, satisfy the CE and UL safety standards.

Some markets and applications are witnessing increasing demands for absolute encoders, which continue to memorize the locations of devices even when they are switched off. So far, the conventional method for encoders to memorize location information has been to connect a backup battery to an encoder. However, amid the rising needs to reduce maintenance load on batteries in recent years, the Company has adopted battery-less encoders as well.

In developing its latest products, Nidec Instruments utilized its AC servo-related knowledge, together with the Nidec Group's technologies such as Nidec Corporation's motor magnetic circuit design and high-speed computer-based optimized calculation technologies.

The Nidec Group remains dedicated to providing products that meet its customers' needs via technological innovation, and contributing to the manufacturing industry.

For inquiries on the above products, please contact Sales Department 5 of Nidec Instruments Corporation's Sales Division at +81-3-5740-3006. Thank you.

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