

THE NEW EM-A MOTOR SERIES

Hard bones for tough working environments

Ratingen, 12.11.2024

There are many working environments that are dusty, dirty and demanding. This calls for a special motor that does its job reliably and for a long time. With the EM-A motor, Mitsubishi Electric has developed a series that meets exactly these specific conditions and at the same time positions itself with precise performance.

In industrial environments, dust, dirt and other contaminants can severely impair the functionality of motors. Conventional drive systems often rely on encoders and sensors that often fail under these conditions. With the EM-A motor series, this does not happen so quickly. This is because it consists of a new, patented permanent-magnet motor without encoders and is complemented by the optimally matched FR-E800 series frequency inverter from Mitsubishi Electric. This encoderless design makes the motor less susceptible to external influences. This makes it ideal for use in dirty production environments.

The EM-A motor series is also an interesting, cost-effective alternative to expensive servo motors. It combines the efficiency of a servo motor with the robustness of an asynchronous motor. It offers high performance with 200 pulses per revolution, a deviation of only $\pm 0.05\%$. The design

also enables savings of up to 50 % in terms of space and weight compared to conventional asynchronous motors. This means easier installation and a smaller footprint.

IE5 Energy Efficiency Class

Another advantage of EM-A motors is their high energy efficiency. With energy efficiency class IE5, they help to reduce energy consumption and support companies in meeting increasing energy efficiency requirements. These features make the EM-A motor series a cost-effective choice that not only optimizes performance but also significantly reduces operating costs.

Mitsubishi Electric believes that the EM-A motor series is an important response to the challenges of dirty working environments. Companies operating in these difficult conditions can benefit from the robust and reliable performance of these motors while avoiding the high cost of expensive servo motors.

Further information on the topic

https://www.t-de1.com.web.melco.co.jp/fa/de_en/lp/em-a-motor

The video about the engine

<https://youtu.be/eAJawncvCp0?si=PW7jIUIC2CqGlfjw>

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Pictures



Caption: The size comparison between a servo motor, an EM-A motor and an asynchronous motor speaks for itself.

[Source: Mitsubishi Electric]



Caption: Best buddies - the FR-E800 frequency inverter and the EM-A Series encoderless permanent-magnet motor.

[Source: Mitsubishi Electric]

About Mitsubishi Electric Corporation

Mitsubishi Electric Corporation (TOKYO: 6503) has more than 100 years of experience in manufacturing reliable, high-quality products and is a recognized world leader in the manufacturing, marketing and sales of electrical and electronic equipment used in information processing and communications, space development and satellite communications, consumer electronics, industrial technology, energy, transportation and building equipment. Mitsubishi Electric enriches society with technology in the spirit of its "Changes for the Better". The company recorded sales of 5,257.9 billion yen (34.8 billion US dollars*) in the fiscal year ending March 31, 2024.

Further information can be found at www.MitsubishiElectric.com.

**Amounts in US dollars are converted from yen at the rate of ¥151=US\$1, the approximate rate on the Tokyo foreign exchange market on March 31, 2024.*

About the Mitsubishi Electric Factory Automation Business Group

Mitsubishi Electric offers a wide range of automation and processing technologies, including controls, drive products, power distribution and control products, electrical discharge machines, electron beam machines, laser processing machines, computer numerical controls and industrial robots, contributing to higher productivity - and quality - in manufacturing. In addition, the extensive service networks around the globe provide direct communication and

comprehensive support for customers. The global slogan "Automating the World" illustrates the company's approach of using automation for the benefit of society by using advanced technologies, sharing know-how and supporting customers as a trusted partner.

You can find more information about the history of "Automating the World" here:

www.MitsubishiElectric.com/fa/about-us/automating-the-world

Factory Automation EMEA

Mitsubishi Electric Europe B.V., Factory Automation EMEA has its European headquarters in Ratingen near Düsseldorf, Germany. It is part of Mitsubishi Electric Europe B.V., a wholly owned subsidiary of Mitsubishi Electric Corporation, Japan, which has been present in Germany since 1978. The task of Factory Automation EMEA is to manage sales, service and support via the network of local subsidiaries and distributors throughout the EMEA region.

Further information can be found at emea.mitsubishielectric.com/fa

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en.mitsubishielectric.com

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