Automating the World



Mitsubishi Electric and Koenig & Bauer announce strategic partnership for quality control systems in electrode foil production for battery cell manufacturing

Joint letter of intent to develop high-quality machine vision components

Ratingen, Germany 14 February 2024

Mitsubishi Electric, a leading provider of contact image sensors (CIS), and Koenig & Bauer, a pioneer in industrial print applications and inline machine vision systems for various applications have signed a letter of intent for their future cooperation. The strategic partnership will combine the strengths of both companies to offer standardised, high quality machine vision components aimed at optimising the production of electrode foil for battery cells.



Image Caption: (from left to right) Julian Schubert, Vice President, Koenig & Bauer; Carsten Diederichs, Senior Manager, Koenig & Bauer and Martin Messy, Director CIS, Mitsubishi Electric Europe.

[Source: Mitsubishi Electric Europe, Germany]

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By combining Mitsubishi Electric's Line Scan Bar (CIS) as well as Koenig & Bauer's illumination units and embedded frame grabbers, the partners will create modules that can achieve perfect imaging conditions for electrode foil surfaces, which are challenging to inspect with conventional setups.

The modules will enable battery cell manufacturers to improve production efficiency, reduce failure rates, and ensure the safety and reliability of their products. Designed to simplify integration, the joint solution will also be compatible with electrode foils for various battery cell types, such as pouch, cylindrical, or prismatic, and can support different production processes.

Mitsubishi Electric and Koenig & Bauer's partnership is a response to the anticipated rise in demand for lithium-ion batteries due to the increasing popularity of electric vehicles as well as growing requirements in the consumer electronics industry and power grid. According to calculations by the Boston Consulting Group, the supply of lithium-ion batteries will have to increase tenfold by 2030 to meet the market needs. Machine vision is a key technology that can help battery manufacturers achieve this goal by enhancing quality control and automation capabilities while also reducing waste rates, and therefore contributing to sustainability targets and cost reduction.

"We are excited to partner with Koenig & Bauer and bring our innovative machine vision solutions to the battery cell production industry in standardised modules, as this will help to simplify integration," said Martin Messy, Director CIS at Mitsubishi Electric. "We believe that our Line Scan Bar (CIS), combined with Koenig & Bauer's illumination units, will offer a unique value proposition to our customers and help them overcome the challenges of inspecting electrode foil."

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"In partnership with Mitsubishi Electric, we are applying our extensive experience in the development and construction of printing machines as well as inline and offline machine vision systems for quality control to this application," said Julian Schubert, Vice President of Data, Vision and Authentication Solutions at Koenig & Bauer. "We are confident that our high-power illumination units and embedded frame grabbers, combined with Mitsubishi Electric's Line Scan Bar (CIS), will provide optimal imaging conditions for battery cell inspection and enable customers to produce safer and more reliable battery products."

Line Scan Bars (CIS) from Mitsubishi Electric are already being used successfully in combination with illumination units from Koenig & Bauer in various markets. The partnership is the next logical step in leveraging synergies and providing value-added solutions for a fast-growing market segment.

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With more than 100 years of experience in providing reliable, high-quality products, Mitsubishi Electric Corporation (TOKYO: 6503) is a recognized world leader in the manufacture, 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 a revenue of 5,003.6 billion yen (U.S.\$ 37.3 billion*) in the fiscal year ended March 31, 2023. For more information, please visit <u>www.MitsubishiElectric.com</u>

*U.S. dollar amounts are translated from yen at the rate of ¥134=U.S.\$1, the approximate rate on the Tokyo Foreign Exchange Market on March 31, 2023.

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Offering a vast range of automation and processing technologies, including controllers, drive products, power distribution and control products, electrical discharge machines, electron beam machines, laser processing machines, computerized numerical controllers, and industrial robots, Mitsubishi Electric helps bring higher productivity – and quality – to the factory floor. In addition, its extensive service networks around the globe provide direct communication and comprehensive support to customers. The global slogan "Automating the World" shows the company's approach to leverage automation for the betterment of society, through the application of advanced technology, sharing know how and supporting customers as a trusted partner.

For more about the story behind "Automating the World" please visit: www.MitsubishiElectric.com/fa/about-us/automating-the-world





Factory Automation EMEA

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For more information, please visit emea.mitsubishielectric.com/fa

About e-F@ctory

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In summary, e-F@ctory and the e-F@ctory Alliance enable customers to achieve integrated manufacturing but still retain the ability to choose the most optimal suppliers and solutions.

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Press contact: Mitsubishi Electric Europe B.V. Factory Automation EMEA Martin Messy **Director CIS Europe** Mitsubishi-Electric-Platz 1 40882 Ratingen, Germany Tel: +49 (0)2102 486-4681 martin.messy@meg.mee.com

Story/Editor: DMA Europa Ltd. **Philip Howe** Progress House, Great Western Avenue, Worcester, UK, WR5 1AQ Tel.: +44 (0)1905 917477 philip.howe@dmaeuropa.com www.dmaeuropa.com