

Faster start-up with new MELFA FR robot series

Ratingen, Germany, 31st July 2018

Mitsubishi Electric's new industrial robot series combines reduced cycle times with scalable safety features and offers versatile connectivity options for easy integration into production systems. Companies who want to achieve a more flexible and productive working environment will also benefit from new capabilities created by the implementation of artificial intelligence.

Mitsubishi Electric's AI technology is adding efficiency to almost every phase of customer process, from design and start-up through to operation and maintenance. For example, unscheduled downtime can be avoided by implementing flexible servicing schedules: Live usage data is analysed by a preventive maintenance feature which compares the data to a dynamic model of the robot's component parts. Service life and maintenance requirements can then be predicted in real-time. In addition, the new MELFA FR-robot series offers functions that assist with automatic calibration which enables greater accuracy and shorter start-up times.

Increased productivity and profitability for manufacturing companies require the optimisation of available floor space and machine up-time. Safety features such as Safe Limited Speed (SLS), Safely-Limited Position (SLP) and Safe Torque Off (STO) achieve this by allowing personnel to work efficiently around robots. The scalable safety options mean that a robot can be optimised for occasional or regular human

access. Slowing down in stages rather than making an immediate stop and transitioning from high-speed to low-speed operation and back again quickly allows both the robot and the human to work efficiently without stops, and in a smaller space.

To deliver fast dynamic responses that reduce cycle times and offering productivity improvements, Mitsubishi Electric's latest servo motion control technologies are used. In addition to the time saved in operation, new MELFA FR robot series is also fast and simple to install offering users intuitive programming and extensive connectivity options. Before use, operators can set-up and test robot movement and interaction virtually using 3D CAD simulation software offered by Mitsubishi Electric's RT ToolBox3 programming environment.

With a focus on connectivity the new introduction offers a wide range of options from Profinet to CC-Link IE Field gigabit Ethernet. High-speed networking and convenient machine integration provide a seamless connection between robots and IT systems which allows simple and cost-effective integration into existing as well as new systems. In terms of control choices, both SCARA and articulated arm FR series robots are compatible with the latest Mitsubishi Electric controller series (CR800 and MELSEC iQ-R) which further facilitates the installation and integration process.

Complex assembly work or demanding dynamic tasks such as adhesive and sealant application can be handled by a combination of several robots: Mitsubishi Electric's MELSEC iQ-R programmable controller series includes a platform which can integrate different controller types - such as PLC, CNC or robot – onto a single backplane. Furthermore, this

technology offers an integrated anti-collision function which simplifies the coordination of multiple robots

The MELFA FR robot portfolio addresses a wide range of automation applications by offering both vertically articulated robotic arms and horizontally articulated SCARA robots. Each version employs the familiar double-arm structure securing maximum freedom of movement while delivering stability at high speeds. Depending on the model, the new robots are available with ranges of up to 1504 mm and 2 to 20 kg load capacity. The compact design with the option of wall or ceiling mounting allows maximum space utilization. MELFA FR robots maintain accuracies of up to ± 0.01 mm.

Oliver Giertz, Product Manager Servo/Motion/ Robots for EMEA region, commented: “The new MELFA FR robot series offers companies the latest advances in managing safety and using AI on the factory floor. When AI is applied to highly adaptable automation products such as FR robots, not only are they easier to use, but also fast and efficient to integrate within production and assembly systems. The result is a collaborative, versatile, safe and reliable solution that can boost productivity and slash production time and costs. “

Note:

See how Mitsubishi Electric is able to respond to today’s automation demands:

eu3a.mitsubishielectric.com/fa/en/solutions

Photo caption:



Photo 1: The new MELFA FR series robots from Mitsubishi Electric incorporate artificial intelligence among other new features such as flexible safety and intuitive programming which make them very easy to integrate and to work with.

[Source: Mitsubishi Electric Europe B.V.]

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With over 95 years of experience in providing reliable, high-quality products, Mitsubishi Electric Corporation is a recognised 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, as well as in products for the energy sector, transportation and building equipment.

With around 142,340 employees the company recorded consolidated group sales of Yen 4,431.1 billion (\$ 41,8 billion*) in the fiscal year that ended on March 31, 2018.

Our sales offices, research & development centres and manufacturing plants are located in over 30 countries.

Factory Automation – European Business Group

Mitsubishi Electric Europe B.V., Factory Automation - European Business Group (FA-EBG) has its European headquarters in Ratingen near Dusseldorf, Germany. It is a part of Mitsubishi Electric Europe B.V., a wholly owned subsidiary of Mitsubishi Electric Corporation, Japan.

The role of FA-EBG is to manage sales, service and support across its network of local branches and distributors throughout the EMEA region.

**Exchange rate 112 Yen = 1 US Dollars, last updated 31.03.2017 (Source: Tokyo Foreign Exchange Market)*

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