

PRESS RELEASE

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Dust and splash proof drives added to Mitsubishi Electric range

A new range of IP55 enclosed variable speed drives has been launched by Mitsubishi Electric that are ideally suited for use in harsher environments than conventionally packaged inverter drives.

The IP55 rated dust and splash proof units are the latest additions to the FR A800 series of drives and are designed to provide outstanding variable speed control in demanding applications and where the control architecture is decentralised. Designated FR-A846, they represent Mitsubishi Electric's latest drive technology and feature a state-of-the-art high speed processor in addition to extreme energy saving features and very low harmonics. The output range is from 400W up to 160kW.

An EMC filter, built in as standard, ensures full compliance with the EMC Directive (EN 61800-3, 1st

environment, category C2). A DC reactor – also integral to all units – ensures compliance with IEC 61000-3-12, reducing and limiting harmonic currents so that separate mitigation equipment is not required.

The IP55 series is suitable for operation with both standard asynchronous machines and IPM/SMP (interior permanent magnet/surface mounted permanent magnet) motor technology. A new auto tuning method also allows the increasingly popular permanent magnet motors to be set-up quickly and easily.

A key feature of the new FR-A846 units is their simple and intuitive operation. A built-in graphical user interface allows direct access to all parameters, while an LCD screen facilitates at a glance monitoring and setting. They can also be programmed using Mitsubishi Electric's iQ Works programming environment.

Other features include data logging functionality and a built in PLC, allowing the drive to form the heart of a full, standalone automation system.

Maximum speed and torque up to 590 Hz can be achieved using the sensorless vector control facility. An overload capacity of 200% during the start-up phase will ensure reliable starting cycles, even under demanding operating conditions. Minimum terminal cycle times of less than three milliseconds guarantee the fastest possible response, while speed rise times of less than 80 milliseconds help to ensure maximum performance and enhanced productivity.

Two overload scenarios optimise system planning, while functional safety up to PLd/SIL3 ensures operation in situations from simple emergency stops to complex operational requirements such as required for press actuation. Three slots are provided to allow for expansion cards such as extended input / outputs or network connectivity.



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An important feature of the new drives is their ability to be controlled over a network. The FR-A846 inverters offers many network options including CC-Link, SSCNET, Profibus-DP, Profinet, Ethernet/IP, EtherCAT, LONworks and Modbus RTU, enabling the drives to be used all over the world.

Like all Mitsubishi Electric inverters, the FR-A800 series has numerous protective, safety and overload functions, high quality temperature tolerant capacitors, permanently lubricated and encapsulated cooling fans and a protective coating conforming to IEC 60721-3-3.

Integrated maintenance counters forewarn of potential component fatigue and help reduce the overall maintenance requirements and associated costs. To further simplify maintenance, the new drives are available with a built in mains switch to power down the drive and lock it securely. At the same time they can be connected to an external power supply so that the parameters can still be set and network communications maintained.

About Mitsubishi Electric

With over 90 years of experience in providing reliable, high-quality products to both corporate clients and general consumers all over the world, Mitsubishi Electric Corporation 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, as well as in products for the energy sector, water and waste water, transportation and building equipment.

With around 124.000 employees the company recorded consolidated group sales of 39.3 billion US Dollar* in the fiscal year ended March 31, 2014.

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

Mitsubishi Electric Europe, Industrial Automation – UK Branch is located in Hatfield, United Kingdom. It is a part of the European Factory Automation Business

Group based in Ratingen, Germany which in turn is part of Mitsubishi Electric Europe B.V., a wholly owned subsidiary of Mitsubishi Electric Corporation, Japan.

The role of Industrial Automation – UK Branch is to manage sales, service and support across its network of local branches and distributors throughout United Kingdom.

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