



PRESS RELEASE

New 24-volt versions and expansion modules More additions to Mitsubishi Electric's growing family of MELSEC FX3 compact controllers

See Mitsubishi Electric at SPS/IPC/Drives: Hall 7, Booth 380

Ratingen, 24 November 2009. Mitsubishi Electric announces the addition of a range of new base units with 24-volt power supplies for its line of MELSEC FX3G compact controllers, which are used primarily in small mechanical and plant engineering applications. At the same time, the company is also releasing several new expansion and special function modules that significantly extend the functionality of the entire MELSEC FX3 controller family, including a versatile data logger module for the powerful MELSEC FX3U and FX3UC lines of compact controllers. Mitsubishi Electric is presenting the MELSEC FX3G compact controllers (originally launched in April 2009) and the latest additions to the MELSEC FX3 family to the public at large for the first time at the SPS/IPC/Drives trade show in Nuremberg.

The compact base units of the MELSEC FX3G series have 14, 24, 40 or 60 I/Os. They are now also available in versions for either 24V DC or 100-240V AC power supplies for easier international deployment. Customers can choose outputs with either digital relays or transistor technology. The base units can be expanded to a total of 128 I/Os with expansion modules, and up to 256 I/Os via the CC-Link fieldbus network. With a processing speed of just 0.21 microseconds per logical instruction and a large memory for up to 32,000 program steps, the controllers have ample capacity to handle standard applications in the mechanical and plant engineering industry. The MELSEC FX3 controllers of the current third technol-

ogy generation are backwardly compatible to their predecessors. This means your investment is protected and upgrading to the more powerful new class of controllers can be achieved with minimum engineering overheads.

The controllers have six integrated high-speed counters supporting frequencies of up to 60kHz for positioning tasks. There are also pulse outputs supporting frequencies of up to 100kHz for controlling up to three independent stepping or servo motors, two outputs in the smaller models (up to 24 I/Os) and three outputs in the larger models (from 40 I/Os). This makes it very inexpensive to implement applications with simple movement paths and adjustment axes and ready-to-use instructions are available for programming highly-accurate point positioning. You can program the controller with either the GX Developer or GX IEC Developer software packages, the latter supporting the international IEC 61131-3 standard. The instruction set includes standard basic instructions and over 130 ready-to-use application instructions that facilitate program development and significantly speed up implementation.

Like all controllers of the MELSEC FX3 family, the new 24-volt versions have a second system bus, in addition to the conventional system bus for up to eight expansion, special function and network modules. This second bus, known as the adapter bus, can accommodate up to four additional modules – two analog function adapters and two interface modules – making these small, compact PLCs extremely versatile. In addition to this there is also a third expansion option in the form of up to two card slots on the front panel of the chassis for serial communications ports and other functions. The controller can support up to four serial interfaces (RS-232, RS-422, RS-485, USB) simultaneously, and also supports data communications via a wide selection of network links (CC-Link, Profibus DP, Ethernet, CANopen).

New modules for more flexibility

Four new modules now complement the current product range, extending the functionality of the universal MELSEC FX3 controller family. The FX3U-3A-ADP combination analog module for the adapter bus is just 17.6mm wide and adds two inputs and one output with 12-bit resolution. This avoids unnecessary additional channels, saves space and cuts costs. The FX3U-4LC temperature control module can process the signals from thermo element and resistance temperature sensors. It has four channels for inputting temperature data and outputs for heating and cooling. Four independent PID (Proportional Integral Derivative) control circuits and a cascade controller ensure maximum precision. Both modules can be used with all the base units of the latest generation of controllers.

The other two new modules are a high-speed counter module for the conventional system bus and a data logger module for the adapter bus, both of which have been specially developed for Mitsubishi Electric's powerful compact PLC series. The MELSEC FX3U and FX3UC series are both exceptionally compact and designed for use in more demanding control applications, and they are also suitable for positioning tasks. Internal pulse outputs and high-speed counters and a flexibly-combinable choice of counter and positioning modules – all the way up to modules allowing control of 16 servo drives with data transfer rates of up to 50 megabits per second – extend the controllers' potential spectrum into the realm of motion control applications. The new FX3U-2HC counter module counts single-phase or two-phase pulses at frequencies of up to 200kHz and can be used together with the other matching adapter modules.

Data logging made simple

The FX3U-CF-ADP data logging module is ideal for applications where fast access to current data is important but for which com-

plex database solutions would be unwieldy and uneconomical. The module records data continuously, periodically or in response to a user-defined trigger event such as reaching a threshold data value or other special events, and can be configured for use in a few minutes with special instructions. It stores alarm, operational, machine and process data with timestamps on ordinary commercial CompactFlash cards with a capacity of up to 2 gigabytes. When connected to the optional Ethernet port of the compact PLC the data logger can also send the recorded data to a computer by email to inform the operators or service staff. Applications include automatic recording of environmental and machine data in pumping stations, performance data in solar power systems and data for tracking and quality assurance in the food and automotive industries.

A comprehensive family of controllers

With three series of devices and a wide range of special function and expansion modules to choose from, the MELSEC FX3 family is the ideal platform for customized automation solutions in the lower and medium performance range. All compact controllers of the latest technology generation are fully compatible to the existing FX controllers, ensuring protection of your investments in controller technology. For even more demanding manufacturing and process control automation tasks, Mitsubishi Electric's range of products continues on up seamlessly with the modular MELSEC System Q and iQ Platform systems.

Captions:

Completing the range: Ready-to-use base units with 24V power supply bring even more flexibility to the MELSEC FX3G line of compact controllers for small automation tasks in mechanical and plant engineering.

Useful additions: Four new modules, including a data logger with efficient recording features, extend the functionality of the MEL-SEC-FX3 family of controllers.

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